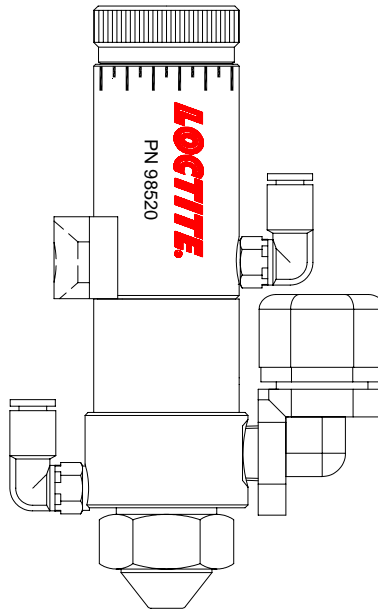


LOCTITE®

EQUIPMENT Operation Manual



Loctite® Spray Valve Part Number 98520



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1 Please Observe The Following

1.1 Emphasized Sections

Warning!

Refers to safety regulations and requires safety measures that protect the operator or other persons from injury or danger to life.


Caution!


Emphasizes what must be done or avoided so that the unit or other property is not damaged.

Notice:


Gives recommendations for better handling of the unit during operation or adjustment as well as for service activities.


1.2 For Your Safety


 For safe and successful operation of the unit, read these instructions completely. If the instructions are not observed, the manufacturer can assume no responsibility.


 Do not operate this unit in excess of maximum ratings/settings.


 Always wear appropriate personal protective eyewear, clothing or apparel when operating or cleaning/servicing the equipment.

 The fluid being dispensed may be toxic and/or hazardous. Refer to Material Safety Data Sheet for proper handling and safety precautions

 Use only original equipment replacement parts.

 Always disconnect the power supply before servicing the unit.

 Observe general safety regulations for the handling of chemicals such as Loctite[®] adhesives and sealants. Observe the manufacturer's instructions as stated in the Material Safety Data Sheet (MSDS).

 *While under warranty, the unit may be repaired only by an authorized Loctite service representative.*

1.3 Unpacking and Inspection

Carefully unpack the Loctite[®] Spray Valve and examine the items contained in the carton. Inspect the unit for any damage that might have occurred in transit. If such damage has occurred, notify the carrier immediately. Claims for damage must be made by the consignee to the carrier and should be reported to the manufacturer.

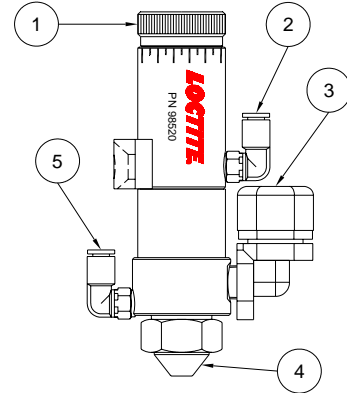
1 Please Observe The Following (continued)

1.4 Items supplied

Loctite® Spray Valve 98520
Spray Nozzle Kit .046 orifice 989270
Hose Connections 2 x 48”
Mounting Bracket –985281 with screw and hex key
Air and product fittings – attached to valve at factory

1.5 Features

Items #	Description
1	Stroke Control Adjustment Knob
2	Valve-actuating Air Inlet Port
3	Fluid Inlet Port
4	Removable Spray Cap
5	Atomize Air Inlet Port



2 Description

Loctite® Spray Valve provides an effective solution to automatic spraying of low viscosity primers, lubricants, and compatible fluids up to 1200 cp. The valve is best operated in conjunction with the Loctite® Spray Valve Controller 98521 for providing consistent spray coverage over a wide range of operating conditions.

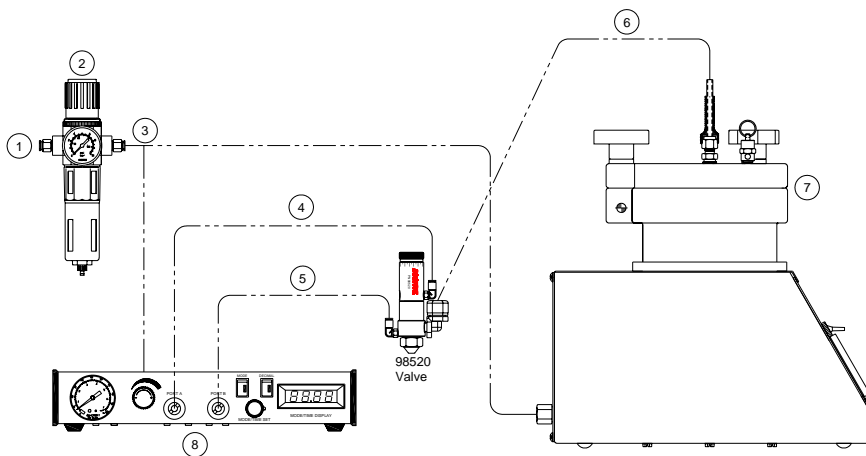
3 Technical Data

Size	104.1 x 25.4 mm (4.1" x 1.0")
Weight	331g (0.73lb)
Fluid Inlet Port	1/8" NPT female
Air Inlet Port	10-32 UNF-2B
Atomize Air Inlet Port	10-32 UNF-2B
Fluid Pressure	100 psi (6.9 bar) maximum
Activation Pressure	70 psi (4.8 bar) minimum
Wetted Parts	303 stainless steel, Acetal, PTFE
Air Cylinder Material	303 stainless steel
Operating Frequency	Exceeds 400 cycles/min.

4 Installation

4.1 Connecting The Valve

Item #	Description
1	From air source
2	Air Filter -985397
3	Constant air flow
4	Valve Air Hose (included)
5	Atomize Air Hose (included)
6	Fluid Feed Hose (optional)
7	Bond-A-Matic 3000 (optional)
8	Spray Valve Controller (98521 optional)



5 Operation

5.1 Operating Instructions

1. Set valve air pressure at Valve Controller to 70 psi (4.8 bar).
2. Set the atomize air pressure at Valve Controller according to the viscosity of fluid being spray.
3. Set fluid pressure at Fluid Reservoir according the viscosity of fluid being sprayed; do not exceed 100 psi (6.9 bars).
4. Place a waste bucket under the valve spray nozzle and purge the valve until the fluid flows steadily.

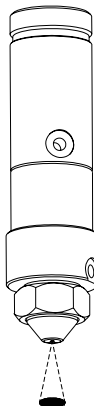
Spray coverage is determined by:

- Stroke control adjustment – Rotate Stroke Control Knob clockwise to decrease flow rate and counterclockwise to increase flow rate. DO NOT rotate the knob beyond the “Line Marker” which is labeled on the knob shaft.
- Length of actuation as set at Valve Controller (the “valve-on” time)
- Fluid reservoir pressure
- Fluid viscosity
- Distance between the spray nozzle and the sprayed surface

5.2 Spray Area Coverage By Round Nozzle

Nozzle size	Distance from Sprayed Surface					
	1" (25.40mm)	2" (50.80mm)	3" (76.20mm)	4" (101.60mm)	5" (101.60mm)	6" (152.40mm)
	<i>Spray area coverage (diameter)</i>					
0.046" (1.17mm)	0.25" (6.35mm)	0.50" (12.70mm)	0.75" (19.05mm)	1.00" (25.40mm)	1.25" (31.75mm)	1.50" (38.10mm)
0.028" (0.71mm)	0.20" (5.08mm)	0.40" (10.16mm)	0.60" (15.24mm)	0.80" (20.32mm)	1.00" (25.40mm)	1.20" (30.48mm)
0.014" (0.36mm)	0.17" (4.32mm)	0.34" (8.64mm)	0.50" (12.70mm)	0.65" (16.51mm)	0.85" (21.59mm)	1.00" (25.40mm)

*Spray area coverage shown in above charts is for reference only. Actual coverage area depends on fluid viscosity and characteristics.



6 Troubleshooting

6.1 Troubleshooting Guide

PROBLEM	POSSIBLE CAUSE	CORRECTION
No fluid flow	Fluid pressure too low	Increase fluid pressure at Fluid Reservoir
	Operating pressure too low	Increase air pressure to 70 psi (4.8 bars) at Valve Controller
	Valve is not actuating	Check Valve Controller for air pressure level to valve
	Fluid cured in valve chamber	Disassemble and clean valve thoroughly
	Stroke control adjustment not activating or engaged	Engage by rotating the Stroke Control Adjustment Knob counter-clockwise (but not beyond the "Line Marker")
Inconsistent fluid flow	Fluid pressure fluctuating	Make sure fluid pressure is constant
	Valve operating pressure is too low	Increase valve pressure to 70 psi (4.8 bars) at Valve Controller
	Valve opening time is not consistent	Check to make sure the Valve Controller is providing a consistent air pressure output
	Air trapped in Fluid Housing	Purge air from valve
Fluid drools after the valve closes, eventually stopping	Air trapped in Fluid Housing	Purge air from valve
	Post-spray time is too short	Increase post-spray time at Valve Controller
Fluid flows through nozzle but will not spray	Atomize pressure is too low	Increase atomizing pressure at Valve Controller
Steady drip	Dirty Needle and Acetal Seat	Thoroughly clean Needle and Seat
	Acetal Seat is worn or damaged	Replace worn or damaged part
	Fluid pressure exceeds 100 psi (6.9 bars)	Lower fluid pressure at Fluid Reservoir until dripping stops
	Valve reassembled incorrectly	Disassemble and reassemble valve according to instructions

7 Care and Maintenance

Tool/Material required (one each): open-end wrench, snap-ring pliers, soft brush, o-ring grease, wooden dowel and thumb screw (included). **Cleaning agent recommended:** Isopropyl Alcohol or equivalent solvent.

7.1 Cleaning – (See Section 9)

(Repair kit 989271 recommended)

1. Release fluid pressure at Fluid Reservoir.
2. Disconnect fluid line and valve air hoses from valve.
3. Remove Stroke Control Adjustment Knob (19) by rotating it counterclockwise beyond the “Line Marker;” the knob is loosen as it is pushed by the Compression Spring.
4. Remove the Compression Spring (1) and the two Mylar Washers (18) on each end of the Compression Spring.
5. Using the open-end wrench to remove the Locking Cap (8) and then pull the Air Cap (11) out from the Fluid Housing (7).
6. Using the open-end wrench to remove the Nozzle (9) along with the Spacer (13); replace O-ring if it is damaged.
7. Hold Fluid Housing (7) and rotate the Air Cylinder/Needle Assembly (2) counterclockwise. When completely un-threaded, pull the two valve segments straight apart to separate.
8. Using the soft brush to clean Fluid Housing (7), Needle/Piston Assembly (17) and Nozzle (9) with Isopropyl Alcohol.
9. If the valve is leaking, using the Thumb Screw (TSD1113-28) to remove the Seat (10) and replace it with a new one; refer to Section 7.4 “Seat Replacement” for instructions.
10. Reinstall Nozzle (9), Spacer (13), Air Cap (11) and Locking Cap (8) into Fluid Housing (7).
11. Lubricate O-ring (6) with grease then reassemble the Air Cylinder/Needle Assembly (2) into Fluid Housing (7).
12. To reinstall Compression Spring (1) by first placing one Mylar Washer over the Needle/Piston Assembly (17), then the other Mylar Washer into the Stroke Control Adjustment Knob (18) and followed by the Compression Spring.
13. Reinstall the Stroke Control Adjustment Knob (19) by rotating it clockwise until it stops and then counterclockwise to the desired setting BUT NOT beyond the “Line Marker” on the knob shaft.

7 Care and Maintenance (continued)

7.2 Needle/Piston Assembly and Seal Replacement (See Section 9) (Repair Kit 989273 required)

1. Follow Step# 1-7 in previous section (Section 7.1).
2. Replace O-ring (6) if damaged.
3. Remove Cup Seal (14) from Fluid Housing (7).
4. Use the snap-ring pliers to remove the first Retaining Ring (3).
5. Pull the Needle/Piston Assembly (17) straight out from the Air Cylinder (2).
6. Use the Snap-ring pliers to remove the second Retaining Ring (15).
7. Remove the Nylon Washer (16) and O-ring (5); replace these parts if damaged.
8. Reinstall O-ring (5), Nylon Washer (16) and secure with a Retaining Ring (14).
9. Reinstall Needle/Piston Assembly (17) and secure with the other Retaining Ring (3).
10. Reinstall Cup Seal (14) into Fluid Housing (7) using a soft rod (such as a wooden dowel).
11. Follow Step# 9-13 in previous section (Section 7.1).

7.3 Nozzle and Air Cap Replacement (See Section 9) (Nozzle kits –989268, 989269, 989270)

1. Remove Stroke Control Adjustment Knob (19) by rotating it counterclockwise and beyond the “Line Marker” position.
2. Remove the Compression Spring (1) and the two Mylar Washers (18) on each end of the Compression Spring.
3. Using the open-end wrench to remove the Locking Cap (8) and then pull the Air Cap (11) out from the Fluid Housing (7).
4. Using the open-end wrench to remove the old Nozzle (9) and Spacer (13).
5. Reinstall Spacer (13) and using the open-end wrench to reinstall new Nozzle (9), make sure the O-ring is on the Nozzle; do not over tighten the Nozzle.
6. Install new Air Cap (11) and then secure it with the Locking Cap (8).

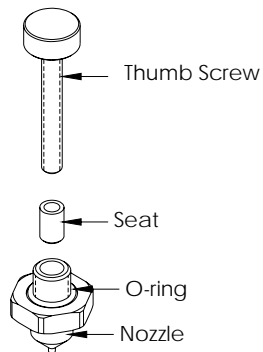
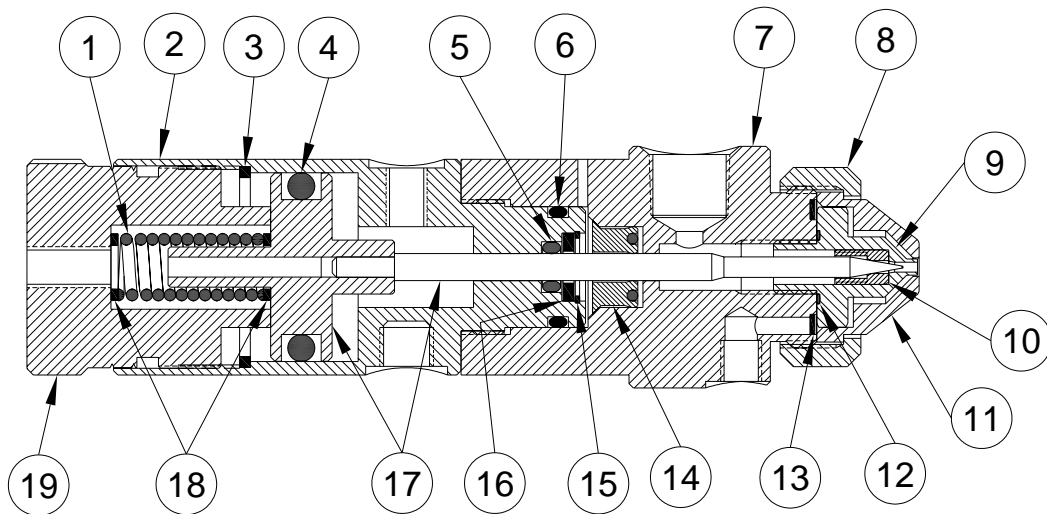
7.4 Seat Replacement (See Section 9) (1 replacement seat is included with kit 989271 and 1 with each spray nozzle orifice kit, 989268, 989269, or 989270)

1. Insert the Thumb Screw inside the Nozzle (9) and rotate clockwise to attach to the Seat (10).
2. Secure the Nozzle on a “soft jaw” vise and then pull the Thumb Screw, with the Seat attached, straight out.
3. Install the new Seat on the Thumb Screw and then insert the Thumb Screw straight into the Nozzle. To ensure proper seat alignment, it is recommended that the seat installation is done on an Arbor Press.

8 Accessories and Spare Parts

Spray Nozzle Kit -.014" Orifice	Item 989268
Spray Nozzle Kit - .028" Orifice	Item 989269
Spray Nozzle Kit -.046" Orifice	Item 989270
Spray Valve Seal Kit	Item 989271
Spray Valve Hose and Fitting Kit	Item 989272
Spray Valve Piston Repair Kit	Item 989273
Spray Valve Air Actuator	Item 989371

9 Valve Illustrations



10 Warranty

Henkel expressly warrants that all products referred to in this Instruction Manual for (Loctite® **98520** Spray Valve) (hereafter called “Products”) shall be free from defects in materials and workmanship. Liability for Henkel shall be limited, as its option, to replacing those Products which are shown to be defective in either materials or workmanship or to credit the purchaser the amount of the purchase price thereof (plus freight and insurance charges paid therefor by the user). The purchaser’s sole and exclusive remedy for breach of warranty shall be such replacement or credit.

A claim of defect in materials or workmanship in any Products shall be allowed only when it is submitted in writing within one month after discovery of the defect or after the time the defect should reasonably have been discovered and in any event, within (12) months after the delivery of the Products to the purchaser. This warranty does not apply to perishable items, such as, but not limited to: (o-rings, seals, washers, filters, lights, etc.). No such claim shall be allowed in respect of products which have been neglected or improperly stored, transported, handled, installed, connected, operated, used or maintained. In the event of unauthorized modification of the Products including, where products, parts or attachments for use in connection with the Products are available from Henkel, the use of products, parts or attachments which are not manufactured by Henkel, no claim shall be allowed.

No Products shall be returned to Henkel for any reason without prior written approval from Henkel. Products shall be returned freight prepaid, in accordance with instructions from Henkel.

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