



INSTRUCTIONS

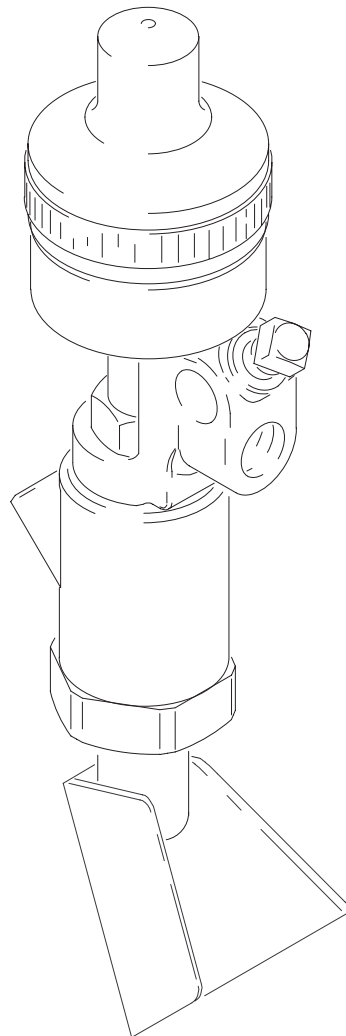
This manual contains important warnings and information.
READ AND KEEP FOR REFERENCE.

Stainless Steel, Air-Operated

Bead Spray Gun

200 psi (13.8 bar) Maximum Working Pressure

Model 238338, Series A



05949

Table of Contents

Warnings	2	Troubleshooting	8
Installation	4	Parts	10
Operation	5	Technical Data	12
Maintenance	7	Graco Phone Number	12
Service	7	Warranty	12

Symbols

Warning Symbol



This symbol alerts you to the possibility of serious injury or death if you do not follow the instructions.

Caution Symbol



This symbol alerts you to the possibility of damage to or destruction of equipment if you do not follow the instructions.

! WARNING



PRESSURIZED EQUIPMENT HAZARD

Beads sprayed from the gun, leaks or ruptured components can splash in the eyes and cause serious injury.

- Do not point the gun at anyone or at any part of the body.
- Do not put your hand or fingers over the spray tip.
- Do not stop or deflect leaks with your hand, body, glove or rag.
- Follow the **Pressure Relief Procedure** on page 5 if the spray tip clogs and before cleaning, checking or servicing the equipment.
- Tighten all fluid connections before operating the equipment.
- Check the hoses, tubes, and couplings daily. Replace worn or damaged parts immediately.

WARNING



INSTRUCTIONS

EQUIPMENT MISUSE HAZARD

Equipment misuse can cause the equipment to rupture or malfunction and result in serious injury.

- This equipment is for professional use only.
- Read all instruction manuals, tags, and labels before operating the equipment.
- Use the equipment only for its intended purpose. If you are not sure, call your distributor.
- Do not alter or modify this equipment.
- Check equipment daily. Repair or replace worn or damaged parts immediately.
- Do not exceed the maximum working pressure of the lowest rated system component. Refer to the **Technical Data** on page 12 for the maximum working pressure of this equipment.
- Do not use hoses to pull equipment.
- Route hoses away from traffic areas, sharp edges, moving parts, and hot surfaces. Do not expose Graco hoses to temperatures above 82°C (180°F) or below -40°C (-40°F).
- Do not lift pressurized equipment.
- Comply with all applicable local, state, and national fire, electrical, and safety regulations.

Installation

NOTE: Reference numbers in parentheses in the text refer to the numbers in the **Parts**.

Accessories are available from Graco. Be sure all accessories are properly sized to withstand the pressures in the system.

Mount Valve

Mount the valve on a 0.50 in. (12.7 mm) diameter rod on a mounting fixture or a dispensing machine. The bead gun has a clamping set screw (6) for mounting.

Connect the Air Lines

Clean all lines and connections of dirt, burrs, etc. and blow them out with clean air before connecting them to the system. Install an air filter in the air supply line to remove harmful dirt and moisture from the compressed air.

Grounding

Proper grounding is essential to maintaining a safe system.


To reduce the risk of static sparking, ground the pump, bead spray gun, paint spray gun and all other system equipment.

1. *Pump:* use a ground wire and clamp.
2. *Air compressors and hydraulic power supplies:* follow manufacturer's recommendations.
3. *Air and fluid hoses connected to the pump:* use only grounded hoses with a maximum of 500 feet (150 m) combined hose length to ensure grounding continuity.
4. *Dispensing valve:* obtain grounding through connection to a properly grounded fluid hose, frame and pump.
5. *Fluid supply container:* according to local code.
6. *All solvent pails used when flushing:* ground according to local code. *Use only metal pails*, which are conductive. Do not place the pail on a non-conductive surface, such as paper or cardboard, which interrupts the grounding continuity.

Operation

Pressure Relief Procedure

⚠ **WARNING**



FLUID INJECTION HAZARD

To reduce the risk of serious bodily injury, including fluid injection, splashing in the eyes or on the skin, or injury from moving parts, always follow this procedure whenever you shut off the pump, when checking or servicing any part of the dispensing system, when installing, cleaning, or changing part of the valve, and whenever you stop dispensing.

1. Shut off the air supply to the bead tank. Bleed the bead tank.
2. Close the bleed-type master air valve (required with air-powered pumps).
3. Actuate the dispensing valve to relieve pressure.
4. Leave the drain valve(s) open until you are ready to dispense again.

If you suspect that the dispensing valve or hose is completely clogged, or that pressure has not been fully relieved after following the steps above, **very slowly** loosen the hose end coupling and relieve pressure gradually, then loosen completely. Now clear the valve or hose.

Adjustments

Set the actuating air to at least 50 psi (3.5 bar) and start the pump. Set the glass bead supply tank pressure between 30 psi and 75 psi for desired flow rate.

Note: Bead delivery will vary with each application. Always test the system for actual delivery and adjust air pressure or nozzle size as needed.

Application Data

See Road Lazer System Manual 308611.

Nozzle Size Selection

Use the Nozzle Size Selection and Bead Delivery Tables to select the size of nozzle for the travel speed and bead coverage to be used. These tables are based on a 15 mil paint application.

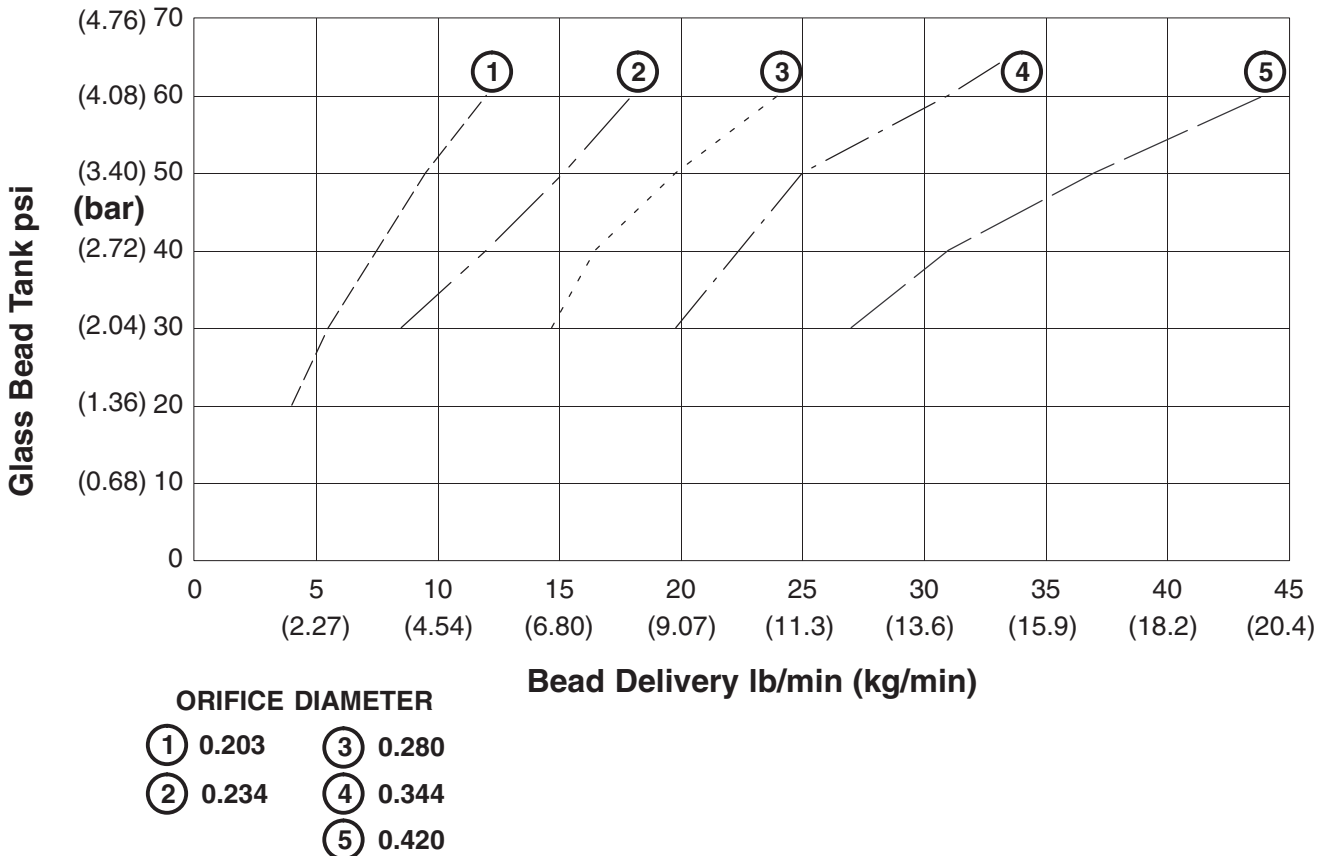
1. Go to **Bead Delivery (Lb/Min)** Table and select:
 - a. Speed in **MPH** or **KPH** row.
 - b. Bead coverage in **Pounds Per Gallon** column.
 - c. Value at intersection of MPH row and Pounds Per column is bead delivery in lb/min.
2. Go to **Nozzle Size Selection** Table and select:
 - a. **Bead Delivery (lb/min)** column determined by Bead delivery (lb/min) value.
 - b. Psi value **Glass Bead Tank psi** row.
 - c. Curve (1, 2, 3 or 4) at intersection of Glass Bead Tank psi row and Bead Delivery (lb/min) column is nozzle size value.
 - d. Select nozzle size that allows range of adjustment for more or less flow.

Operation

Bead Delivery Lb/Min (kg/Min)

Speed		Bead Coverage in Pounds Per Gallon (kg/L)					
MPH	KPH	4 (.48)	5 (.60)	6 (.72)	7 (.84)	8 (.96)	9 (1.08)
2	3.2	2.4 (1.09)	3.0 (1.36)	3.6 (1.63)	4.1 (1.86)	4.7 (2.13)	5.3 (2.40)
3	4.8	3.6 (1.63)	4.4 (2.0)	5.3 (2.40)	6.2 (2.81)	7.1 (3.22)	8.0 (3.62)
4	6.4	4.7 (2.13)	5.9 (2.68)	7.1 (3.22)	8.3 (3.76)	9.5 (4.31)	10.7 (4.85)
5	8	5.9 (2.68)	7.4 (3.36)	8.9 (4.04)	10.4 (4.72)	11.9 (5.40)	13.3 (6.03)
6	9.6	7.1 (3.22)	8.9 (4.04)	10.7 (4.85)	12.4 (5.62)	14.2 (6.44)	16.0 (7.26)
7	11.2	8.3 (3.76)	10.4 (4.72)	12.4 (5.62)	14.5 (6.58)	16.6 (7.53)	18.7 (8.48)
8	12.8	9.5 (4.31)	11.9 (5.40)	14.2 (6.44)	16.6 (7.53)	19.0 (8.62)	21.3 (9.66)
9	14.4	10.7 (4.85)	13.3 (6.03)	16.0 (7.26)	18.7 (8.48)	21.3 (9.66)	24.0 (10.9)
10	16	11.9 (5.40)	14.8 (6.71)	17.8 (8.07)	20.7 (9.39)	23.7 (10.8)	26.7 (12.1)
11	17.6	13.0 (5.90)	16.3 (7.39)	19.6 (8.89)	22.8 (10.3)	26.1 (11.8)	29.3 (13.3)
12	19.2	14.2 (6.44)	17.8 (8.07)	21.3 (9.66)	24.9 (11.3)	28.4 (12.9)	32.0 (14.5)

Nozzle Size Selection



Maintenance

Clean Dispensing Valve and System Daily

CAUTION

Be sure that the solvent you use is compatible with the fluid being dispensed, to avoid clogging the valve's fluid passages.

An important part of the care and maintenance of your automatic dispensing valve is proper flushing. Flush the valve daily with a compatible solvent until all traces of fluid are removed from the valve passages. Follow the **Pressure Relief Procedure** on page 5 before flushing.

Clean the outside surfaces of the valve by wiping with a soft cloth dampened with a compatible solvent.

CAUTION

Never immerse the entire dispensing valve in solvent. Immersing in solvent removes lubricants and tends to damage packings.

To remove a hardened particle from the orifice, blow air through the orifice from the front.

Service

Needle, Seat and Packings

To clean or replace the needle (18), its seat (17) or packings (19 or 15), proceed as follows:

1. Follow **Pressure Relief Procedure** on page 5
2. Remove retaining nut (3).
3. Remove valve housing (4).
4. Remove valve seat (2) and o-ring (19) from valve housing (4). Remove o-ring.
5. Remove gun needle (18).
6. Remove seal nut (21).
7. Remove o-ring (15).
8. Clean all parts.
9. Lubricate o-ring (15) with one drop of oil. Install o-ring.

10. Install seal nut (21).

11. Install gun needle (18).

12. Install o-ring (19) on valve seat (2) and insert into valve housing (4).

13. Install retaining nut (3).

Air Piston, Spring and Seals

Follow the **Pressure Relief Procedure** on page 5, then remove the valve as explained, preceding. Remove the air cylinder cap (7), take out the spring (8) and pull the piston (10) out. Clean and inspect all parts. Check the piston o-rings (11, 12) carefully. Lubricate all parts with a light waterproof grease and reassemble the valve using new parts as necessary.

Repair Kit

Repair Kit 238340 includes the parts listed with an * in **Parts** on page 11.

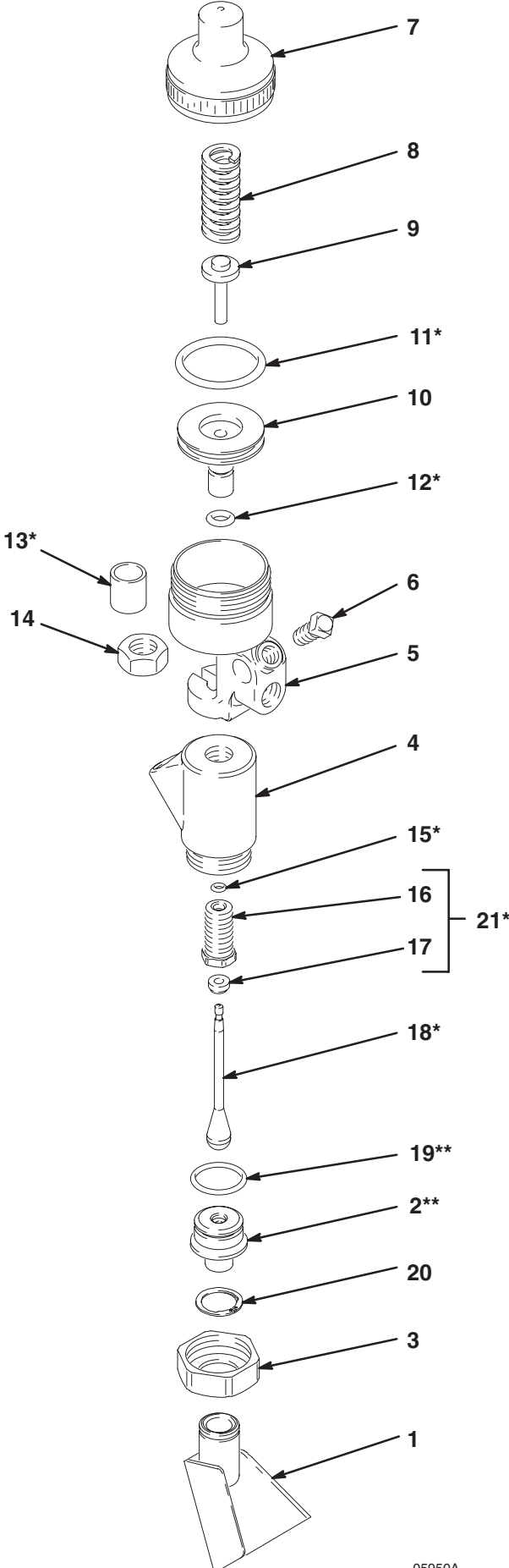
Troubleshooting

NOTE: Check all possible solutions before disassembling the pump.

Problem	Cause	Solution
Uneven spray pattern	Bead pressure too low	Increase pressure to bead tank, or adjust bead pressure regulator
Spray gun will not stop spraying	Gun needle binding	Clean, repair
	Obstructed or worn needle seat	Clean or replace
Spray gun will not spray	Bead line clogged	Clear
	Bead valve closed	Open
	Clogged orifice or needle seat	Clean
	No trigger or actuator air pressure	Check, clean air lines
	Wet beads	Drain beads from tank and replace with dry beads.

Parts

Model 238338



Parts

Model 238338

Ref. No.	Part No.	Description	Qty.
1	238330	DEFLECTOR	1
2	191201**	SEAT, valve	1
3	191196	NUT, retaining	1
4	191206	HOUSING, valve	1
5	166847	HOUSING, valve	1
6	101554	SET SCREW, 3/8-16 x 3/4 in.	1
7	191197	CAP, air cylinder	1
8	164739	SPRING, helical compression	1
9	164740	GUIDE, spring	1
10	164741	PISTON, air	1
11	156593*	O-RING; nitrile rubber	1
12	155685*	PACKING, O-ring	1
13	191195*	TUBE, protection	1
14	102300	NUT, jam, 7/8 in. hex; 9/16-18 nf	1
15	158486*	PACKING, O-ring	1
16		NUT, packing	1
17		SEAT, needle	1
18	191192*	NEEDLE, gun	1
19	166702**	O-RING	1
20	113463	RING, retaining, external	1
21	238341*	NUT, seal (Includes 16 and 17)	1

* Included in Repair Kit 238340. Order separately.

** The Road Lazer ships with the three Valve Seat & O-ring Kits listed in the following table:

Ref. No.	Part No.	Description	Qty.
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Valve Seat & O-ring Kits	
Valve Seat Nozzle Size	Kit (Includes O-ring)
0.203	238663
0.234	238666
0.281	238664
0.334	238665
0.420†	243668
† Nozzle size 0.420 is optional; order separately	

Accessories

Wide Bead Deflector Kit

239695

Allows application of 12 in. wide beaded lines.

Technical Data

Maximum working pressure 200 psi (12 bar)
Operating pressure of air actuated trigger
 Minimum 50 psi (3 bar)
 Maximum 200 psi (12 bar)
Air connection 1/4 npt(f) air inlet
Bead connection 3/4 npt(f) bead inlet
Glass bead output 2 to 40 lb/min (.9 to 18 kg/min)
Air consumption 2 to 7 cfm
Spray width 2 to 12 in (50 to 304 mm)

Graco Phone Number

TO PLACE AN ORDER, contact your Graco distributor, or call this number to identify the distributor closest to you: **1-800-690-2894 Toll Free**

Graco Warranty

Graco warrants all equipment manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Graco distributor to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

Graco makes no warranty, and disclaims all implied warranties of merchantability and fitness for a particular purpose in connection with accessories, equipment, materials or components sold but not manufactured by Graco. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

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ADDITIONAL WARRANTY COVERAGE

Graco does provide extended warranty and wear warranty for products described in the "Graco Contractor Equipment Warranty Program".

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