

GL-1 X™, GL-1 XL™ Injectors

335023F

EN

For Single-Line Parallel Automatic Lubrication Systems



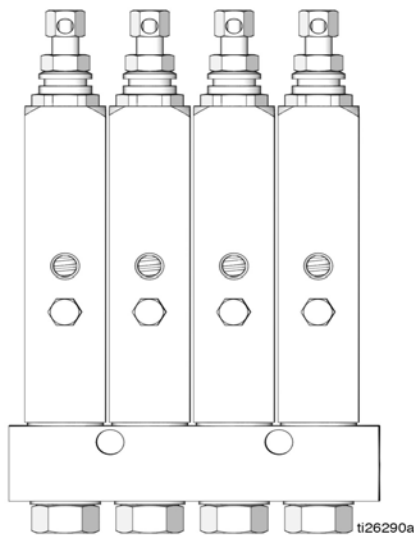
Important Safety Instructions

Read all warnings and instructions in this manual and in related Automatic Lubrication System instruction manuals. Save all instructions.

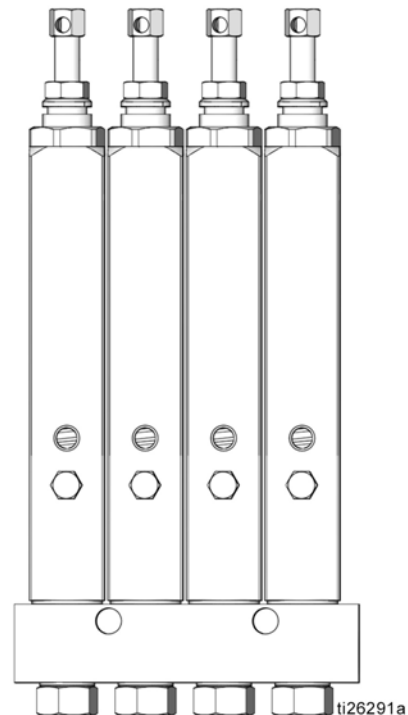
Maximum Working Pressure: 6000 psi (41 MPa, 414 bar)

Models:

See page 2



GL-1 X Model



GL-1 XL Model

Models

GL-1 X Injector Models

| Part No. | Description | Dimension A* | Dimension B* | Bare Manifold Part No. |
|----------|-------------------------------|---------------------|---------------------|------------------------|
| 24X801 | Injector, GL-1 X, one point | | 2.48 in. (63.0 mm) | 114911 |
| 24X802 | Injector, GL-1 X, two point | | 3.00 in. (76.0 mm) | 114912 |
| 24X803 | Injector, GL-1 X, three point | 1.25 in. (31.7 mm) | 4.23 in. (107.5 mm) | 114913 |
| 24X804 | Injector, GL-1 X, four point | 2.50 in. (63.4 mm) | 5.47 in. (139.0 mm) | 114914 |
| 24X805 | Injector, GL-1 X, five point | 3.75 in. (95.1 mm) | 6.71 in. (170.5 mm) | 114915 |
| 24X806 | Injector, GL-1 X, six point | 5.00 in. (126.8 mm) | 7.98 in. (202.7 mm) | 118206 |
| 24X807 | Injector, GL-1 X, replacement | | | |






GL-1 XL Injector Models

| Part No. | Description | Dimension A* | Dimension B* | Bare Manifold Part No. |
|----------|--------------------------------|---------------------|---------------------|------------------------|
| 24X811 | Injector, GL-1 XL, one point | | 2.48 in. (63.0 mm) | 114911 |
| 24X812 | Injector, GL-1 XL, two point | | 3.00 in. (76.0 mm) | 114912 |
| 24X813 | Injector, GL-1 XL, three point | 1.25 in. (31.7 mm) | 4.23 in. (107.5 mm) | 114913 |
| 24X814 | Injector, GL-1 XL, four point | 2.50 in. (63.4 mm) | 5.47 in. (139.0 mm) | 114914 |
| 24X815 | Injector, GL-1 XL, five point | 3.75 in. (95.1 mm) | 6.71 in. (170.5 mm) | 114915 |
| 24X816 | Injector, GL-1 XL, six point | 5.00 in. (126.8 mm) | 7.98 in. (202.7 mm) | 118206 |

*See Dimensions, page 11

Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual or on warning labels, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

|  WARNING | |
|---|--|
|    | <p>SKIN INJECTION HAZARD</p> <p>High-pressure fluid from injector, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. Get immediate surgical treatment.</p> <ul style="list-style-type: none"> • Do not put your hand over the fluid outlet. • Do not stop or deflect leaks with your hand, body, glove, or rag. • Relieve pressure before cleaning, checking, or servicing equipment. • Tighten all fluid connections before operating the equipment. |
|  | <p>PERSONAL PROTECTIVE EQUIPMENT</p> <p>Wear appropriate protective equipment when in the work area to help prevent serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns. This protective equipment includes but is not limited to:</p> <ul style="list-style-type: none"> • Protective eyewear, and hearing protection. • Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer. |
| | <p>CALIFORNIA PROPOSITION 65</p> <p>This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm. Wash hands after handling.</p> |

Installation Instructions



Reference letters used in the following instructions, refer to FIG. 1.

NOTICE

Contaminants can damage the seal packing. To prevent damage to the seal, a filter should be installed in the grease supply line.

- Group injectors to minimize feed line length.
- Install injectors in locations that allow easy servicing access.
- To avoid injector damage install injectors in areas away from moving equipment.
- Injector outputs can be combined for a common bearing point with a large grease requirement but the output for a single injector cannot be split into multiple bearing points.
- Graco recommends using steel tubing instead of pipe and hose for supply lines when possible. Pipe is often contaminated with scale and requires proper cleaning prior to use. Hose lines expand under pressure which leads to longer pump cycle time.

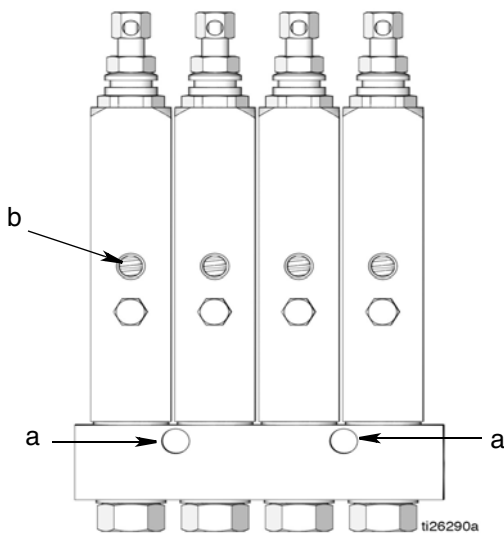


FIG. 1: GL-1 X model injector shown

NOTE: The equipment may be pressurized by an automatic lube cycle initiated by a lubrication controller (timer).

1. Before installing the injectors, disconnect and isolate the power supplies to the lubrication controller and to the pump.
2. Relieve pressure. See the pressure relief procedure provided in the pump manual for your system.
3. Install injectors on a flat, hard surface using holes (a) (FIG. 1) in manifold.
4. Connect fluid supply line to injectors.
5. Connect lube point feed lines to outlet (b).
6. Flush the system with low viscosity oil or mineral spirits to remove contamination introduced during installation.
7. Use a purge gun or run the pump until clean lubricant is dispensed at the end of each feed line to purge the system of flushing fluid or air.
8. Run the system at full output and verify that all injectors are cycling.
9. Adjust injector volume output. (See Volume Adjustment page 5.)
10. Connect feed lines to lubrication points.

Injector Cap (FIG. 2)

1. Apply a light coating of transparent lubricant to the inside of cap (c).
2. Slide the o-ring (d) over the indicator stem of the injector and into the groove.
3. Slide cap (c) down over the indicator stem of the injector.

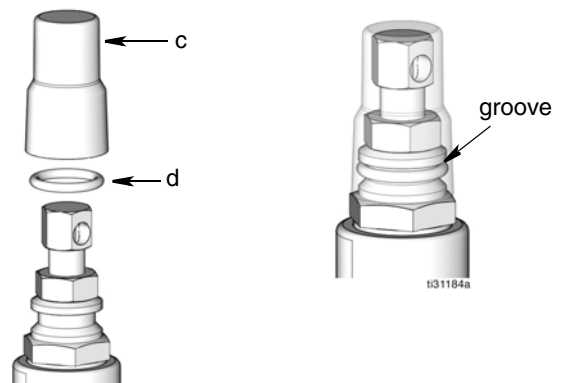


FIG. 2

Volume Adjustment (FIG. 3)

Maximum adjustment setting is when adjusting screw (2) is just making contact with the indicator pin (8), (inside, not shown) with no inlet pressure. Turn adjusting screw (2) clockwise, to reduce output. To adjust, loosen lock nut (3) and turn adjusting screw (2) the number of turns indicated on the GL-1 X or GL-1 XL Volume Output Guide to obtain the desired volume. Tighten lock nut (3) when desired volume setting is reached.

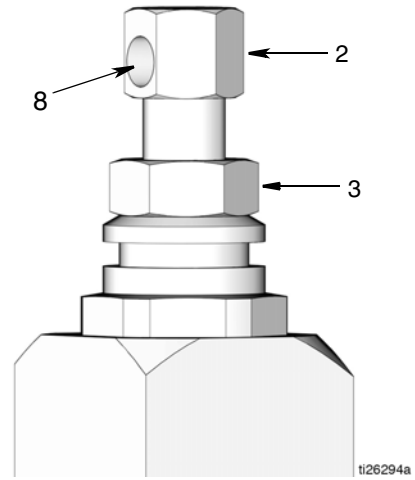
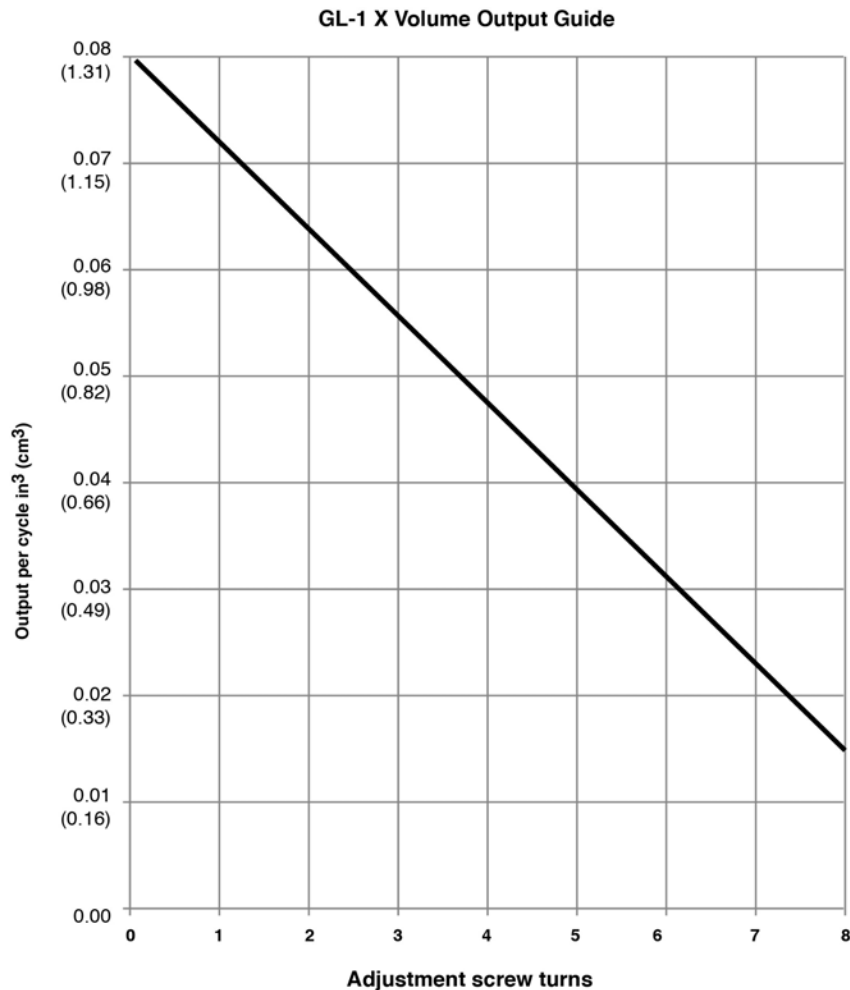
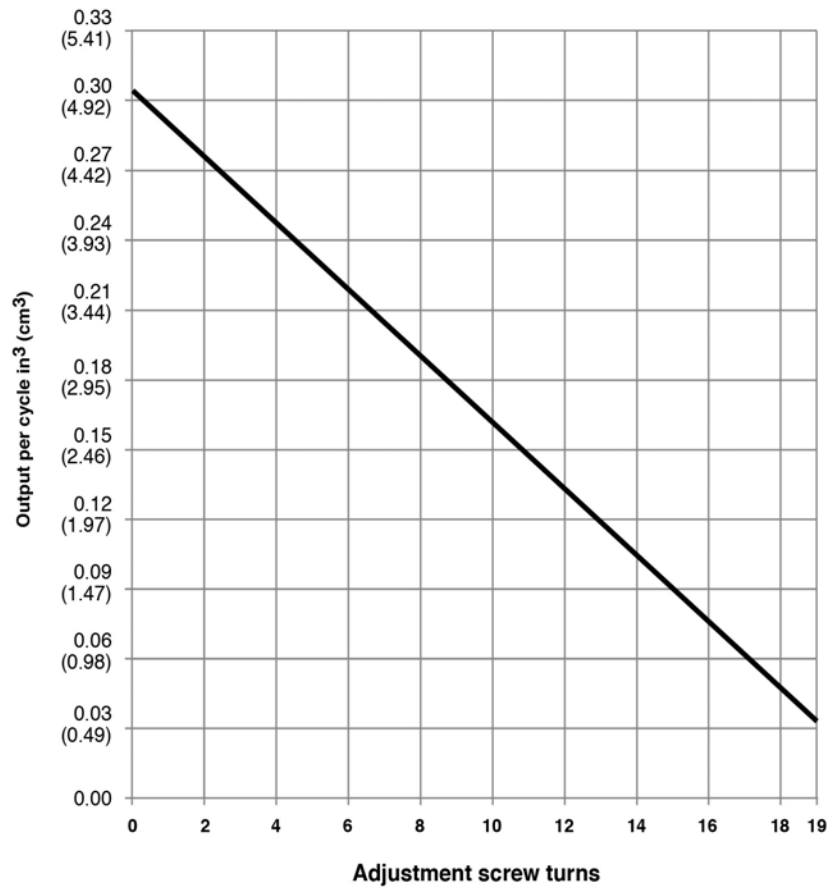


FIG. 3

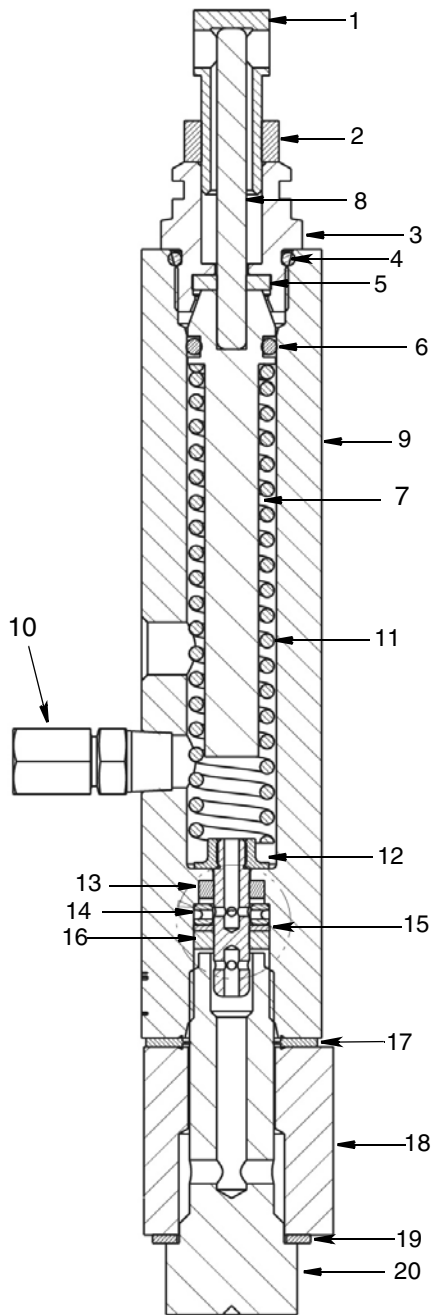
Volume Output Guide



GL-1 XL Volume Output Guide



Injector Service Parts



| Item | Description | Qty | Part No. |
|------|-------------------------------------|-----|----------|
| 1 | Adjusting screw with adjusting nut | 1 | |
| 2 | Lock nut | 1 | |
| 3 | Packing housing | 1 | |
| 4 | O-ring, FKM, 910 (GL-1 XL models) | 1 | |
| 4 | O-ring, FKM, 908 (GL-1 X models) | 1 | |
| 5 | Packing, FKM | 1 | ★◆ |
| 6 | O-ring, FKM, 113 | 1 | ◆ |
| 6 | O-ring, FKM, 112 | 1 | ★ |
| 7 | Displacement piston | 1 | |
| 8 | Indicator pin | 1 | |
| 9 | Injector body | 1 | |
| 10 | Zerk fitting and cap assembly | 1 | 114916 |
| 11 | Compression spring (GL-1 XL models) | 1 | ★◆ |
| 12 | Plunger with guide (GL-1 XL models) | | ◆ |
| 12 | Poppet valve (GL-1 X models) | 1 | ★ |
| 13 | Packing, FKM | 1 | ★◆ |
| 14 | Inlet valve | 1 | ★◆ |
| 15 | Backup ring, UHMWPE | 1 | ★ |
| 16 | Packing, FKM | 1 | ★◆ |
| 17 | Bonded washer | 1 | |
| 18 | Manifold | 1 | |
| 19 | Steel gasket | 2 | ★◆ |
| 20 | Adapter bolt | 1 | |

★ Included in GL-1 XL Injector Repair Kit 25A080
 ◆ Included in GL-1 X Injector Repair Kit 25A081

Available Kits

Use Only Genuine Graco Repair Parts

Graco Part No. 17L754: Clear Polycarbonate Injector Cover, GL-1X models (see page 4 for installation instructions)

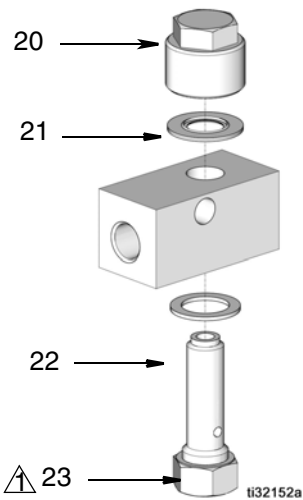
Graco Part No. 17L755: Clear Polycarbonate Injector Cover, GL-1XL models (see page 4 for installation instructions)

Graco Part No. 115120: Crossover Kit (for connecting the outlets of injectors for increased output)

Graco Part No. 25D336: GL-1X cap kit (see page 4 for installation instructions)

Cap Kit 25D336 Parts

| Ref | Description | Qty |
|-----|----------------------------------|-----|
| 20 | PLUG | 1 |
| 21 | WASHER, bonded 13.8 I.D. | 1 |
| 22 | GASKET, steel, 18.3 ID x 26.5 OD | 1 |
| 23 | BOLT, adapter | 1 |



Torque to 50 to 55 ft-lbs (67.8 to- 74.6 N•m)

Spacer Kits - 10 Pack: See below for Graco Part No. and Page 9 for Spacer Installation Instructions

GL1-X Spacer Kit Table

| Part No. | color | Output Target | | Output Target Ratio | |
|----------|--------|---------------|-----|---------------------|----------|
| | | cu. in. | cc | From minimum | From max |
| NA | NA | 0.01 | 0.1 | 1.0 | 0.10 |
| 17K601 | Red | 0.03 | 0.5 | 2.0 | 0.50 |
| 17K602 | Sliver | 0.05 | 0.8 | 3.0 | 0.60 |
| 17K603 | Gold | 0.06 | 1.0 | 4.0 | 0.80 |
| 17K604 | Green | 0.08 | 1.3 | 5.0 | 1.00 |

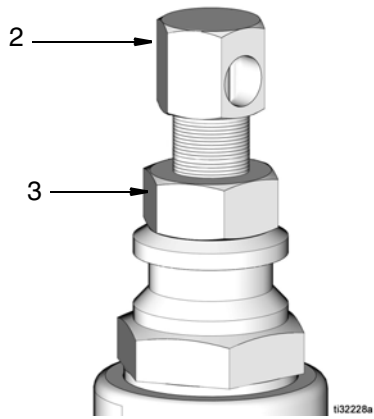
GL1-XL Spacer Kit Table

| Part No. | color | Output Target | | Output Target Ratio | |
|----------|--------|---------------|-----|---------------------|----------|
| | | cu. in. | cc | From minimum | From max |
| NA | NA | 0.01 | 0.1 | 1.0 | 0.10 |
| 17K601 | Red | 0.03 | 0.5 | 2.0 | 0.50 |
| 17K602 | Sliver | 0.05 | 0.8 | 3.0 | 0.60 |
| 17K603 | Gold | 0.06 | 1.0 | 4.0 | 0.80 |
| 17K604 | Green | 0.08 | 1.3 | 5.0 | 1.00 |
| 17N453 | Black | 0.13 | 2.1 | 3.9 | 0.45 |
| 17N454 | Purple | 0.15 | 2.5 | 4.3 | 0.50 |
| 17N455 | Blue | 0.18 | 3.0 | 5.4 | 0.60 |
| 17N456 | Orange | 0.21 | 3.5 | 6.4 | 0.75 |
| 17N457 | Brown | 0.24 | 4.0 | 7.5 | 0.90 |
| 17N458 | Yellow | 0.30 | 5.0 | 8.6 | 1.00 |

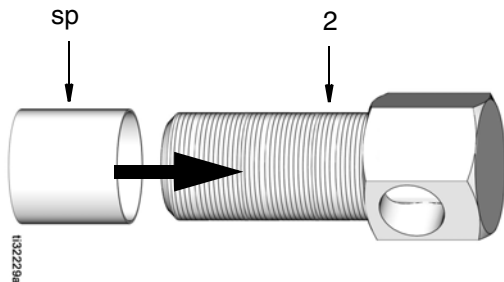
Spacer Installation Instructions



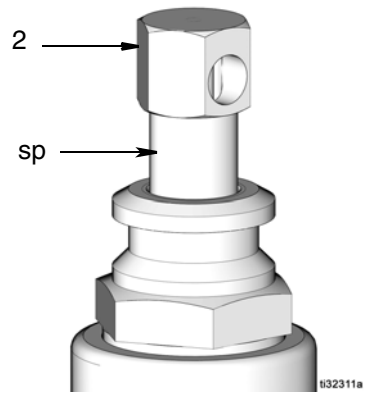
1. Relieve pressure. See **Pressure Relief Procedure**, in the pump instruction manual included with your automatic lubrication system.
2. Remove adjusting screw (2) and jam nut (3) from injector. Discard jam nut.



3. Insert color-coded spacer (sp) for desired output (see Spacer Kit Table).



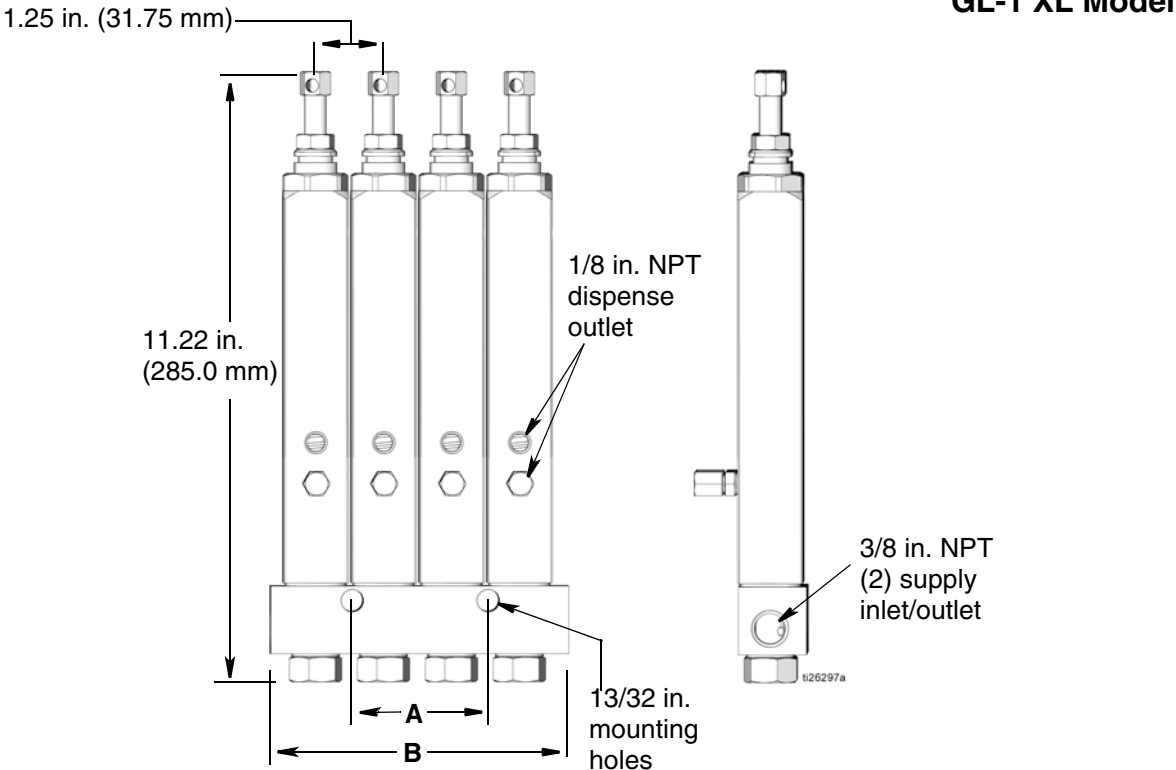
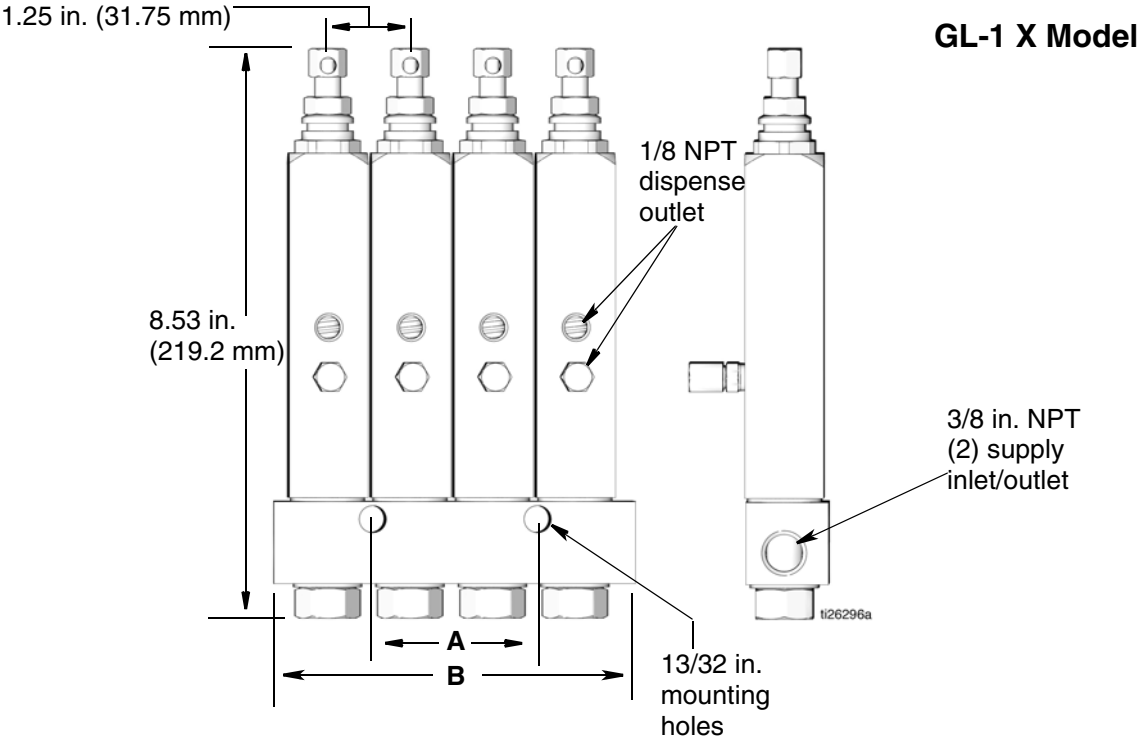
4. Reinstall adjusting screw in injector. Hand tighten securely.



Technical Data

| | |
|------------------------------|--|
| Maximum operating pressure | 6000 psi (41 MPa, 414 bar) |
| Suggested operating pressure | 2500 psi (17 MPa, 172 bar) |
| Reset pressure | 1000 psi (6.9 MPa, 69 bar) |
| Output volume per cycle | |
| GL-1 X | adjustable 0.015 to 0.08 in. ³ |
| GL-1 XL | adjustable 0.035 to 0.305 in. ³ |
| Wetted parts | carbon steel, stainless steel, fluoroelastomer, UHMWPE |
| Recommended fluids | N.L.G.I. #2 grease down to 32° F (0° C) |

Dimensions



Graco GL-1 X / GL-1 XL Injectors Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale 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 twenty-four months from the date of sale or up to 100,000 lube cycles, which ever comes first, 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, use of grease with solid lubricants, contaminated grease, 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.

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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.

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For the latest information about Graco products, visit www.graco.com.

For patent information, see www.graco.com/patents.

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