

G3 Pro Automatic Lubrication Pump

332298E

EN

For dispensing of NLGI Grades #000 to #2 greases and oil with at least 40cSt. For Professional Use Only.

Not approved for use in explosive atmospheres or hazardous locations.

Part Nos., page 3

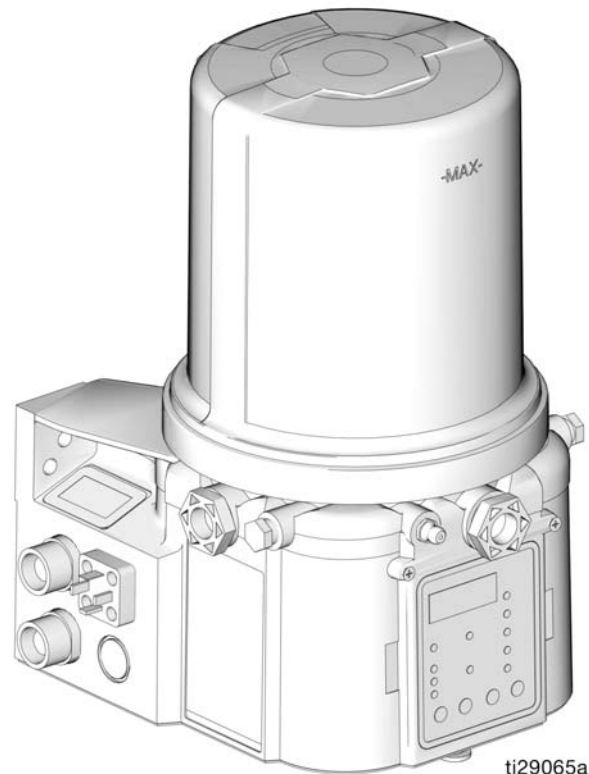
5100 psi (35.1 MPa, 351.6 bar) Pump Output Pressure

5000 psi (34.4 MPa, 344.7 bar) Fill Inlet Pressure



Important Safety Instructions

Read all warnings and instructions in this manual. Save all instructions.



Conforms to ANSI/UL 73
Certified to CAN/CSA
Std. 22.2 No 68-09



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Part / Model Numbers

The Part Number is a six-digit unique number that is only used to order the G3 Pump. Directly related to this six digit Part Number is the configured Graco Model Number. This configured number identifies the distinct features of a specific G3 Pump. To help you understand each component that makes up the Model Number see Understanding Your Model Number, page 4. The tables below shows the relationship between each Part Number and its related Model Number.

2 Liter Models

Part Numbers	Model Numbers
96G011	G3-G-24PR-2L0L00-R0C00000
96G012	G3-G-24PR-2LFL00-R0C00000
96G013	G3-G-ACPR-2L0L00-0D000000
96G014	G3-G-ACPR-2LFL00-0D000000
96G027	G3-G-12PR-2L0000-00C00000
96G028	G3-G-24PR-2L0000-00C00000
96G029	G3-G-ACPR-2L0000-0D000000
96G033	G3-G-12PR-2L0L05-00C00000
96G034	G3-G-24PR-2L0L05-00C00000
96G070	G3-A-24PR-2L0L00-R0C00000
96G079	G3-A-ACPR-2L0L00-0D000000

8 Liter Models

Part Numbers	Model Numbers
96G069	G3-G-24PR-8L0L00-R0C00000
96G072	G3-A-24PR-8L0L00-R0C00000
96G076	G3-G-ACPR-8L0L00-0D000000
96G081	G3-A-ACPR-8L0L00-0D000000
96G136	G3-G-12PR-8L0000-00C00000
96G138	G3-G-24PR-8L0000-00C00000
96G140	G3-G-ACPR-8L0000-0D000000
96G148	G3-G-12PR-8L0L05-00C00000
96G150	G3-G-24PR-8L0L05-00C00000
96G208	G3-G-ACPR-8LAL00-0D000000
96G214	G3-G-24PR-8LAL05-00C00000

4 Liter Models

Part Numbers	Model Numbers
96G068	G3-G-24PR-4L0L00-R0C00000
96G071	G3-A-24PR-4L0L00-R0C00000
96G073	G3-G-24PR-4LFL00-R0C00000
96G075	G3-G-ACPR-4L0L00-0D000000
96G080	G3-A-ACPR-4L0L00-0D000000
96G082	G3-G-ACPR-4LFL00-0D000000
96G135	G3-G-12PR-4L0000-00C00000
96G137	G3-G-24PR-4L0000-00C00000
96G139	G3-G-ACPR-4L0000-0D000000
96G147	G3-G-12PR-4L0L05-00C00000
96G149	G3-G-24PR-4L0L05-00C00000
96G211	G3-G-24PR-4LAL05-00C00000

12 Liter Models






Part Numbers	Model Numbers
96G077	G3-G-ACPR-120L00-0D000000
96G163	G3-G-24PR-120L05-00C00000

16 Liter Models

Part Numbers	Model Numbers
96G078	G3-G-ACPR-160L00-0D000000
96G167	G3-G-24PR-160L05-00C00000










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.

 <h2 style="margin: 0;">WARNING</h2>	
 	<p>ELECTRIC SHOCK HAZARD</p> <p>This equipment must be grounded. Improper grounding, setup, or usage of the system can cause electric shock.</p> <ul style="list-style-type: none"> • Turn off and disconnect power at main switch before disconnecting any cables and before servicing or installing equipment. • Connect only to grounded power source. • All electrical wiring must be done by a qualified electrician and comply with all local codes and regulations.
 	<p>EQUIPMENT MISUSE HAZARD</p> <p>Misuse can cause death or serious injury.</p> <ul style="list-style-type: none"> • Do not operate the unit when fatigued or under the influence of drugs or alcohol. • Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See Technical Data in all equipment manuals. • Use fluids and solvents that are compatible with equipment wetted parts. See Technical Data in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS from distributor or retailer. • Turn off all equipment and follow the Pressure Relief Procedure when equipment is not in use. • Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only. • Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards. • Make sure all equipment is rated and approved for the environment in which you are using it. • Use equipment only for its intended purpose. Call your distributor for information. • Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces. • Do not kink or over bend hoses or use hoses to pull equipment. • Keep children and animals away from work area. • Comply with all applicable safety regulations.



WARNING

  	<p>SKIN INJECTION HAZARD</p> <p>High-pressure fluid from dispensing device, 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 point dispensing device at anyone or at any part of the body. • Do not put your hand over the fluid outlet. • Do not stop or deflect leaks with your hand, body, glove, or rag. • Follow the Pressure Relief Procedure when you stop dispensing and before cleaning, checking, or servicing equipment. • Tighten all fluid connections before operating the equipment. • Check hoses and couplings daily. Replace worn or damaged parts immediately.
 	<p>PRESSURIZED EQUIPMENT HAZARD</p> <p>Over-pressurization can result in equipment rupture and serious injury.</p> <ul style="list-style-type: none"> • A pressure relief valve is required at each pump outlet. • Follow Pressure Relief Procedure in this manual before servicing.
	<p>PLASTIC PARTS CLEANING SOLVENT HAZARD</p> <p>Many solvents can degrade plastic parts and cause them to fail, which could cause serious injury or property damage.</p> <ul style="list-style-type: none"> • Use only compatible water-based solvents to clean plastic structural or pressure-containing parts. • See Technical Data in this and all other equipment instruction manuals. Read fluid and solvent manufacturer's MSDSs and recommendations.
 	<p>MOVING PARTS HAZARD</p> <p>Moving parts can pinch, cut or amputate fingers and other body parts.</p> <ul style="list-style-type: none"> • Keep clear of moving parts. • Do not operate equipment with protective guards or covers removed. • Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the Pressure Relief Procedure and disconnect all power sources.
	<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

Installation

Component Identification

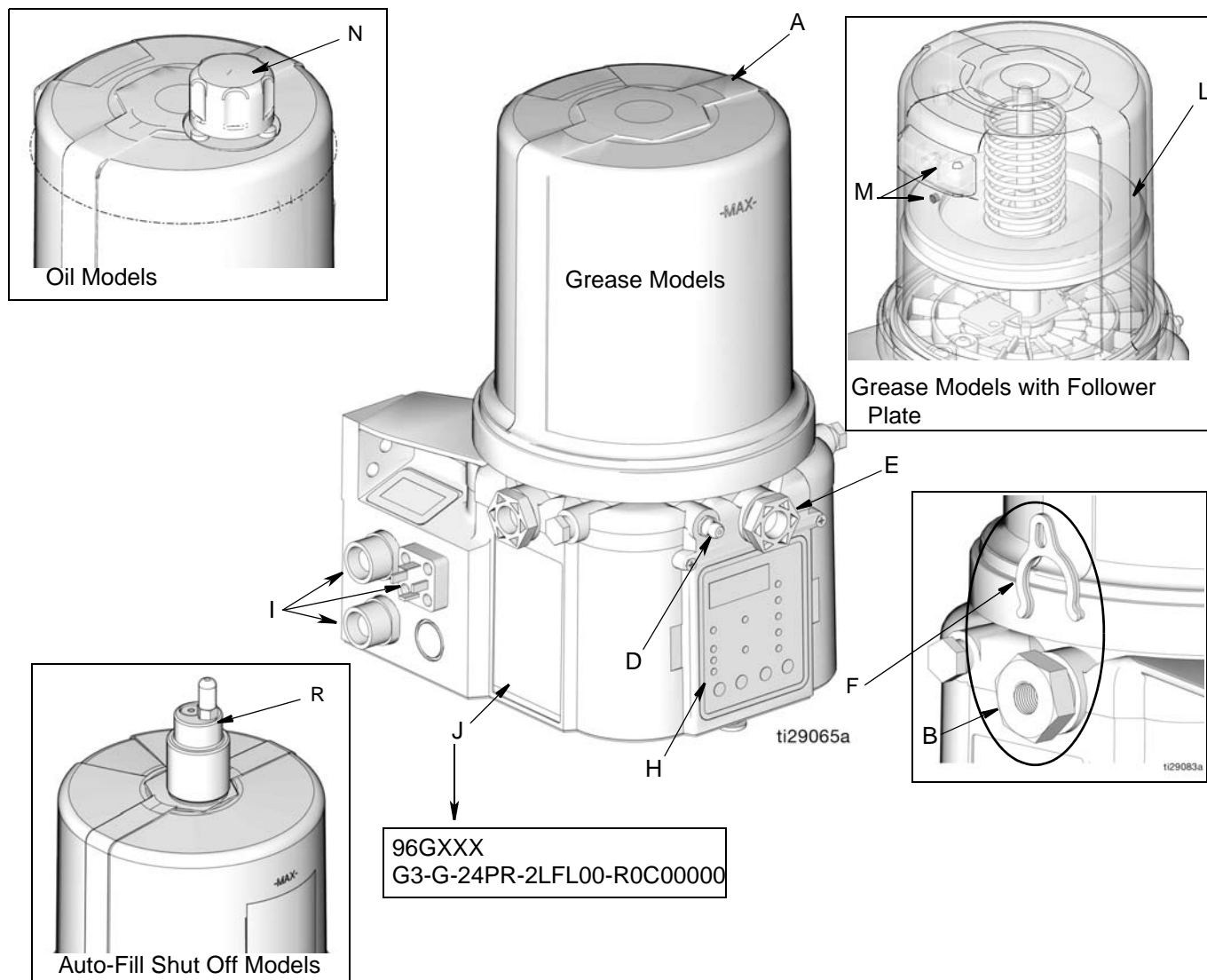


FIG. 2:

Key:

- | | |
|--|---|
| <p>A Reservoir</p> <p>B Pump Element (1 included. Can accommodate 3 total)</p> <p>C Pressure Relief Valve (Not included / required for each outlet - Available from Graco. See Parts, page 40.)</p> <p>D Zerk Inlet Fill Fitting (1 included / grease models only)</p> <p>E Pump Outlet Plug (2 included)</p> <p>F Volume Control Spacers (2 included. More spacers = less output volume per stroke) (also see FIG. 15, page 18)</p> <p>G Fuse (DC models only - Not included, not shown. Available from Graco. See Parts, page 39.)</p> <p>H Control Panel</p> <p>I Power / Sensor Panel (both sides; only one side shown)</p> <p>J Part Number / Model Number example only shown, (see pages 4, Understanding the Model Number, for details)</p> <p>K Power Cord (DIN shown)</p> | <p>L Follower Plate (grease models only / not available on all grease models)</p> <p>M Vent Hole for Follower Plate (grease models only / not available on all grease models)</p> <p>N Fill cap (oil models only)</p> <p>R Auto-Fill Shut Off</p> |
|--|---|

Typical Installation

Series Progressive Divider Valve Installations

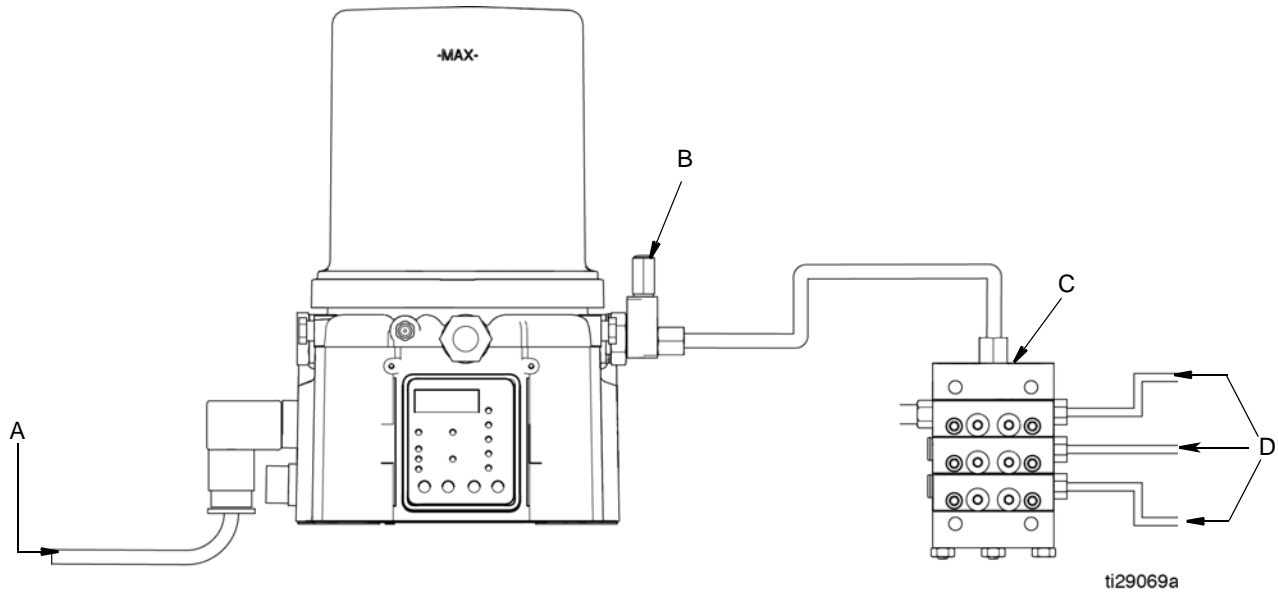


FIG. 3

- A Connected to fused power source
- B Pressure relief valve (Not included/required for each outlet - user supplied. See Parts, page 40)
- C Series progressive divider valves (Divider Installations)
- D To lube points

Typical Installation - With Remote Fill Manifold

The installation shown is only a guide for selecting and installing system components. Contact your Graco distributor for assistance in planning a system to suit your needs.

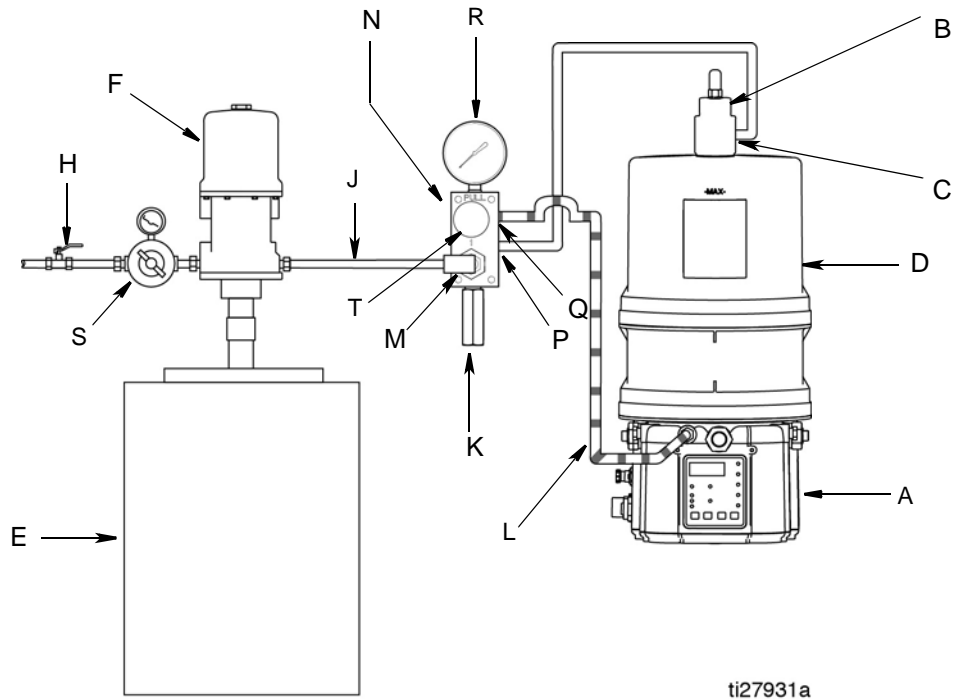


FIG. 4

Key:

- A G3 Pump
- B Auto-Fill Shut Off Valve
- C Auto-Fill Inlet
- D G3 Reservoir
- E Remote Fill Reservoir
- F Remote Fill Pump
- G Supply Hose (user supplied)
- H Air Supply to Refill Pump
- J Supply Hose (user supplied)
- K Pressure Relief Valve
- L Drain Hose
- M Fill Coupler/Inlet (quick disconnect)
- N Fill Manifold❖
- P Fill Manifold Outlet
- Q Fill Manifold Vent Port
- R Pressure Gauge
- S Pressure Regulator and Gauge
- T Pressure Relief Knob

❖ To relieve the stall pressure in the fill line a fill manifold (N) **must** be installed in the system.

Optional Installation - Without Remote Fill Manifold

The installation shown is only a guide for selecting and installing system components. Contact your Graco distributor for assistance in planning a system to suit your needs.

NOTE: The remote filling station pump stalls (dead-heads) when the reservoir is full. If the pump does not stall (dead-head) there is a leak in the system.

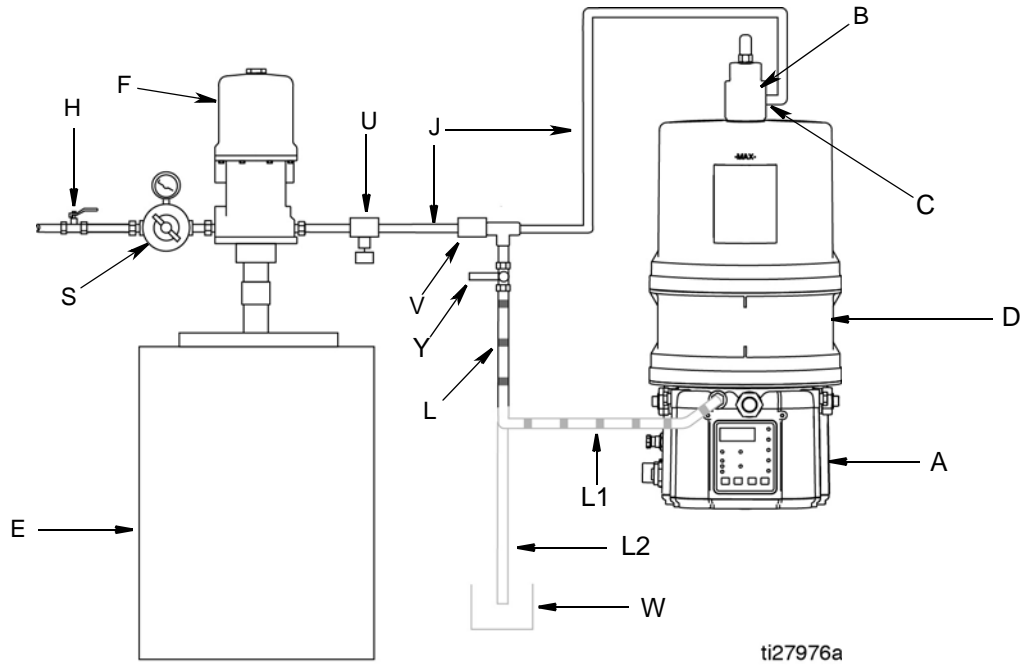


FIG. 5

Key:

- A G3 Pump
- B Auto-Fill Shut Off Valve
- C Auto-Fill Inlet
- D G3 Reservoir
- E Remote Fill Reservoir
- F Remote Fill Pump
- H Relief Valve
- J Supply Hose (user supplied)
- L Drain Tube
- L1 Option - To reservoir
- L2 Option - To overflow container

- S Pressure Regulator and Gauge
- U Pressure Relief Valve
- V Quick Disconnect
- W Overflow Container
- Y Supply Hose Pressure Relief Valve❖

❖ To relieve the stall pressure in the fill line a ball valve (Y) **must** be installed in the system.

Choosing an Installation Location



AUTOMATIC SYSTEM ACTIVATION HAZARD

If the system is equipped with has an automatic timer (user supplied) that activates the pump lubrication system when power is connected or when exiting the programming function, unexpected activation of the system could result in serious injury, including skin injection and amputation.

Before you install or remove the lubrication pump from the system, disconnect and isolate all power supplies and relieve all pressure.




- Select a location that will adequately support the weight of the G3 Pump and lubricant, as well as all plumbing and electrical connections.
- Refer to the mounting hole layouts provided in the Mounting Pattern section of this manual, page 42. No other installation configuration should be used.

- Use designated mounting holes and provided configurations only.
- Always mount the G3 oil models upright.
- If the G3 grease model is going to be operated in a tilted or inverted position for any period of time, you must use a model that includes a follower plate, otherwise the G3 must be mounted upright. Refer to your model number to confirm if a follower plate was installed on your pump. See page 4, Understanding the Model Number to identify this character in your model number.
- Use the three fasteners (included) to secure the G3 to the mounting surface.
- Some installations may require an additional reservoir support bracket. See Table below for bracket information

Part No	Description
571159	Reservoir bracket and strap
125910	L-Bracket for pump
127665	USP to G-Series mounting bracket

System Configuration and Wiring

Grounding

				
<p>The equipment must be grounded to reduce the risk of static sparking and electric shock. Electric or static sparking can cause fumes to ignite or explode. Improper grounding can cause electric shock. Grounding provides an escape wire for the electric current.</p> <p>Improper installation of the grounding conductor may result in a risk of electric shock. This product must be installed by a qualified electrician in compliance with all state and local codes and regulations.</p>				

If the product is permanently connected:

- It must be installed by a qualified electrician or serviceman.
- It must be connected to a grounded, permanent wiring system.

If an attachment plug is required in the end use application:

- It must be rated for the product electrical specifications.
- It must be an approved, 3-wire grounding type attachment plug.
- It must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.
- When repair or replacement of the power cord or plug is required, do not connect the grounding wire to either flat blade terminal.

Fuses

NOTICE
<p>Fuses (user supplied) are required on all DC models. To avoid equipment damage:</p> <ul style="list-style-type: none"> • Never operate G3 Pump DC models without a fuse installed. • A fuse of the correct voltage must be installed in line with the power entry to the system.

Fuse Kits are available from Graco. The following Table identifies the correct fuse to use for your input voltage and the corresponding Graco Kit number.

Input Voltage	Fuse Value	Graco Kit No.
12 VDC	7.5 A	571039
24 VDC	4 A	571040

Recommendations for Using Pump in Harsh Environments

- Use pump with CPC style power cable.
- If using a DIN style power or alarm harness with a right angle mating connector, make sure the connector does not exit the unit in the UP direction.
- Use a corrosion preventative electrical grease on all contacts.

Remote Illumination Response


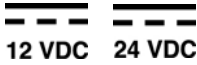
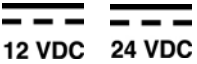

The following tables include graphical representations of the connector as it appears on the unit, a pin-out associated with the connector and a typical installation wiring diagram. An internal representative wiring diagram is included where it is deemed useful.

Wire colors provided on these pages only refer to the power cable provided by Graco with this product.

	Standard Remote Illumination (via 5 wire CPC power cable)	Tri-Color Remote Illumination (M12 Connector)
Unit in OFF Mode	Off	Off
Unit in ON Mode	On	Green
Warning Condition	Toggles On and Off once per second	Yellow
Fault Condition	Toggles On and Off once per second	Red

Wiring and Installation Diagrams

The following Table identifies the wiring and installation diagrams provided in this manual.

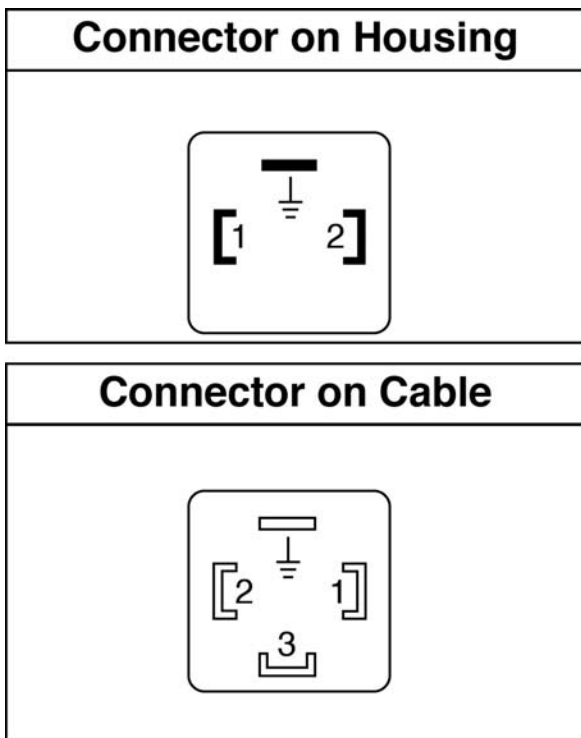
Diagram	Symbol	Page #
Power DIN AC	 AC	14
Power DIN DC	 12 VDC 24 VDC	14
Power CPC DC	 12 VDC 24 VDC	15
Illuminated Manual Run Input		Kits: 571030, 571031, 571032, 571033



Power DIN AC - 15 foot

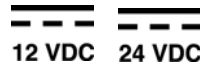
Pin and Related Wire Color (FIG. 6)

Pin	Pin Name	Color
1	Line	Black
2	Neutral	White
3	Not Used	Not Used
	Ground	Green



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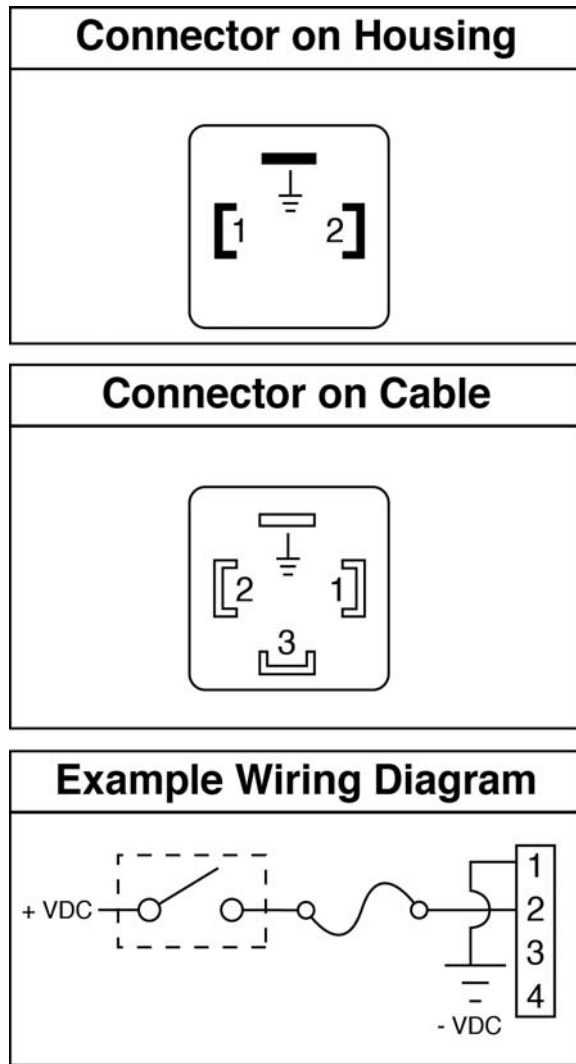
FIG. 6



12 VDC 24 VDC Power DIN DC - 15 Foot

Pin and Related Wire Color (FIG. 7)

Pin	Pin Name	Color
1	-VDC	Black
2	+VDC	White
3	Not Used	Not Used
	Not Used	Green



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FIG. 7

12 VDC 24 VDC Power CPC DC -15 foot

12 VDC 24 VDC Power CPC DC - 5 Wire

Pin and Related Wire Color (Fig. 8)

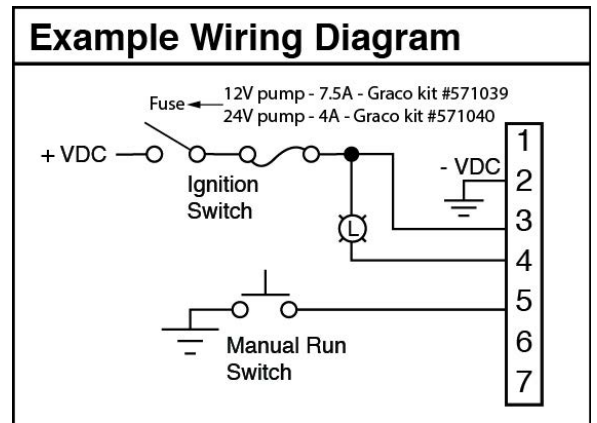
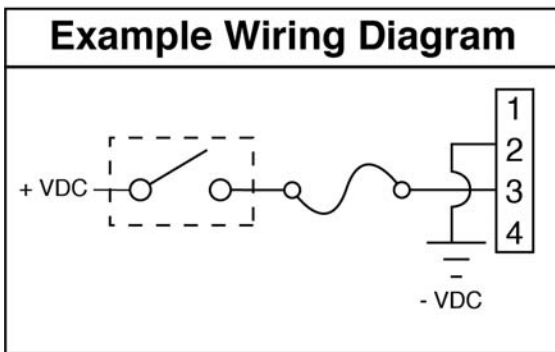
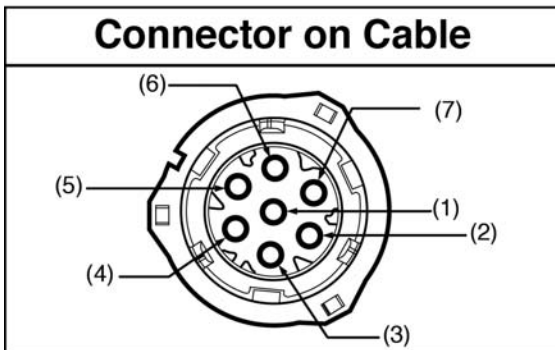
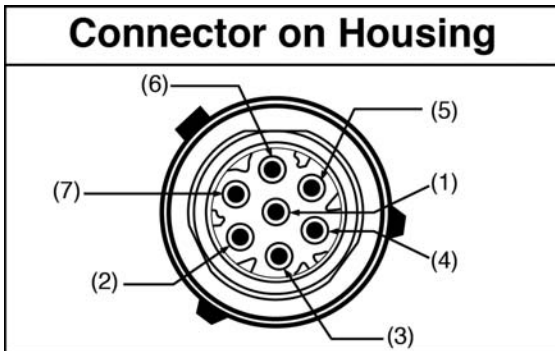
Pin	Pin Name	Color
1	Not Used	Not Used
2	-VDC	Black
3	+VDC	White
4	Not Used	Not Used
5	Not Used	Not Used
6	Not Used	Not Used
7	Not Used	Green

Part No.: 127780: 15 ft (4.5 m)
Part No.: 127781: 20 ft (6.1 m)
Part No.: 127782: 30 ft (9.1 m)

An Illuminated Remote Run Button Kit: 571030, 571031 for starting a manual run cycle if used in conjunction with a 5-wire CPC cable, is available from Graco. Contact your local Graco distributor or Graco Customer Service for additional information about these kits.

Pin and Related Wire Color (Fig. 9)

Pin	Pin Name	Color
1	Not Used	Not Used
2	-VDC	Black
3	+VDC	Red
4	LIGHT	White
5	Manual Run Switch	Orange
6	Not Used	Not Used
7	Not Used	Green



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FIG. 9

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FIG. 8

Part No. 124333: Cable Pin Out (M12)

Wire Colors (FIG. 10)

Item No.	Color
1	Brown
2	White
3	Blue
4	Black

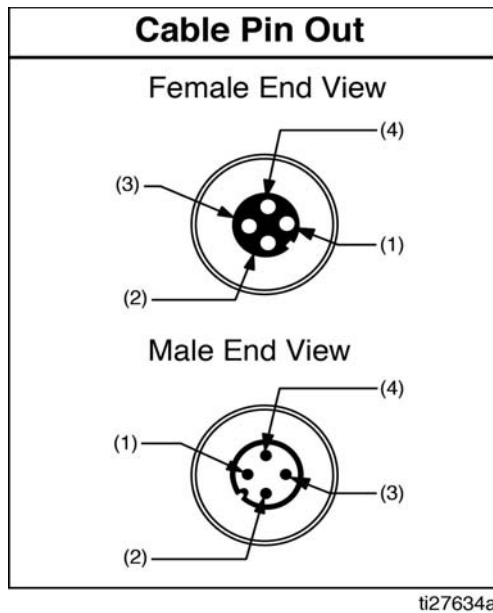


FIG. 10

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Part No. 124595: 5 Pin Eurofast Field Wireable Connector

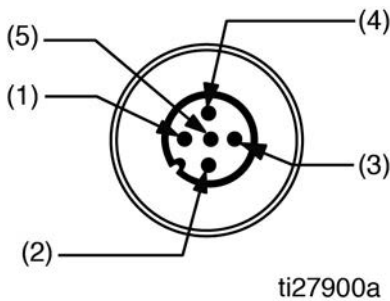


FIG. 11

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Part No. 124300: Field Wireable Pin Out (M12)

Wire Colors (FIG. 12)

Item No.	Color
1	Brown
2	White
3	Blue
4	Black

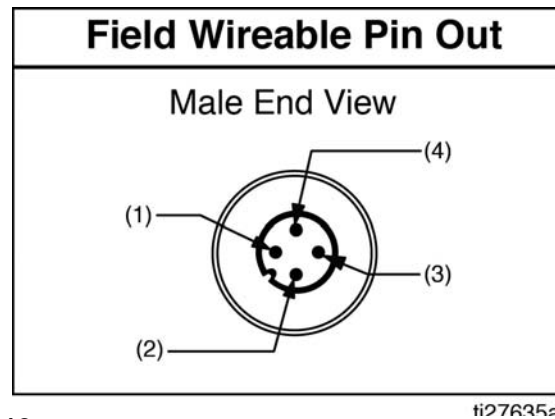


FIG. 12

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Part No. 124594: 4 Pin Eurofast Field Wireable Connector

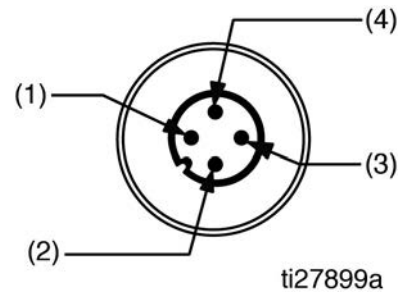


FIG. 13

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Setup

Pressure Relief



Follow the Pressure Relief Procedure whenever you see this symbol.



This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection, splashing fluid and moving parts, follow the Pressure Relief Procedure when you stop dispensing and before cleaning, checking, or servicing the equipment.

Relieve pressure in system using two wrenches working in opposite directions on pump element and pump element fitting to **slowly loosen fitting only** until fitting is loose and no more lubricant or air is leaking from fitting.

NOTE: When loosening pump element fitting, do NOT loosen **pump element**. Loosening pump element will change the output volume.

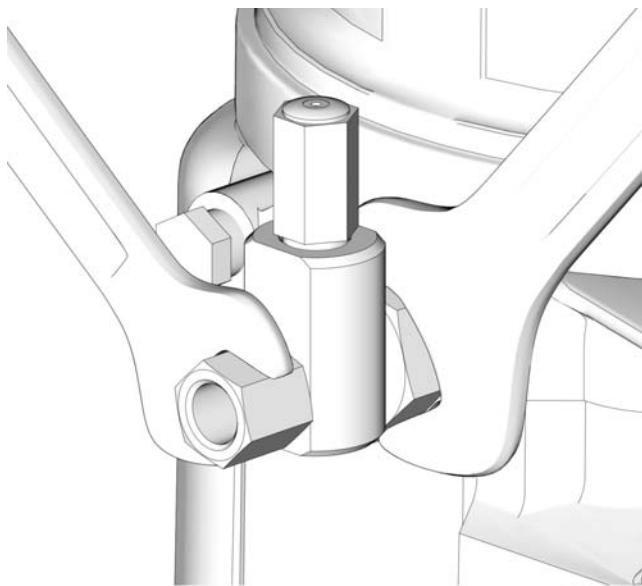
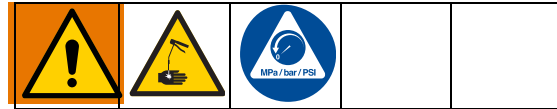


FIG. 14

Connecting to Auxiliary Fittings



NOTICE

Do not attach unsupported equipment to auxiliary fittings such as fill ports and pump element. Attaching unsupported equipment to these fitting can result in irreparable housing damage.

- Always use two wrenches working in opposite directions when connecting anything to pump element or auxiliary fittings. See FIG. 14 for an example.
- Torque pump element fittings to 50 in. lbs (5.6 N•m).
- When connecting pump element into housing torque to 50 in. lbs (5.6 N•m).

Pressure Relief Valves



To prevent over-pressurization, which can result in equipment rupture and serious injury, a pressure relief valve appropriate for the lubrication system must be installed close to every pump outlet to alleviate unintended pressure rises in the system and protect the G3 pump from damage.

- Only use a pressure relief valve that is rated for no more than the working pressure of any component installed in the system. See Technical Data, page 37.
- Install a pressure relief valve close to every pump outlet; before any auxiliary fitting.

NOTE: A pressure relief valve can be purchased from Graco. See Parts, page 40.

Setting Pump Outlet Volume



NOTE:

- Before making any adjustments to pump volume, **Relieve Pressure** following procedure on page 17.
 - Only use Graco supplied spacers to control output volume.
1. Use a wrench to turn pump element counter-clockwise to loosen. Do not remove entire pump element. Only back pump element out enough to allow spacer to be slid on or off.

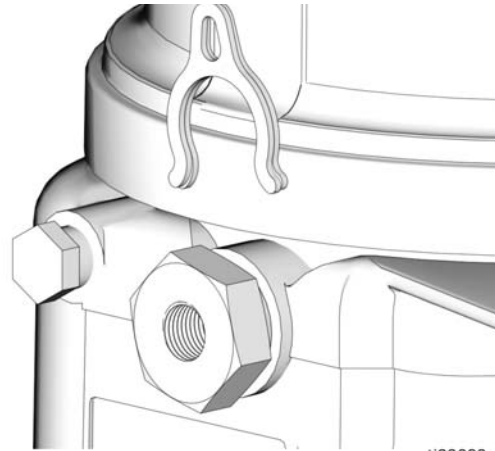
If needed, remove or insert spacers to achieve required pump output volume. A tool may be needed to facilitate removal.

Pump volume control is set using either no (0) spacers, 1 or 2 spacers (FIG. 15).

Do not use more than 2 spacers to adjust output volume.

No. Spacers	Output Volume / Minute	
	cubic inches	cubic cm
2	0.12	2
1	0.18	3
0	0.25	4

- The amount of dispensed volume can vary depending on external conditions such as lubricant temperature and back pressure from downstream connections.
 - Use of these volume adjustment in conjunction with setting the ON time of the pump will allow for control of the output volume.
 - Use these volume adjustments as a starting point and adjust as necessary to ensure desired lubrication dispense.
2. Tighten pump element fitting. Torque fitting to 50 in. lbs (5.6 N•m).



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FIG. 15

Loading Grease

To ensure optimal performance from the G3:

- Only use NLGI #000 - #2 greases appropriate for your application, automatic dispensing, and the equipment's operating temperature. Consult with machine and lube manufacturer for details.
- The reservoir can be filled using a hand operated pump, pneumatic pump or electric transfer pump.
- Do not overfill (FIG. 18).
- Do not operate G3 without reservoir attached.

NOTICE

- Always clean inlet fitting (D) (FIG. 16) with a clean dry cloth prior to filling reservoir. Dirt and/or debris can damage pump and/or lubrication system.
- Care must be used when filling the reservoir using a pneumatic or electric transfer pump to not pressurize and break the reservoir.

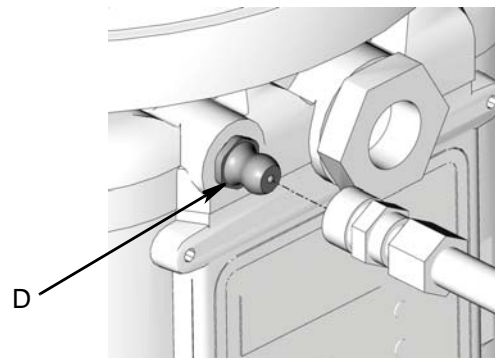
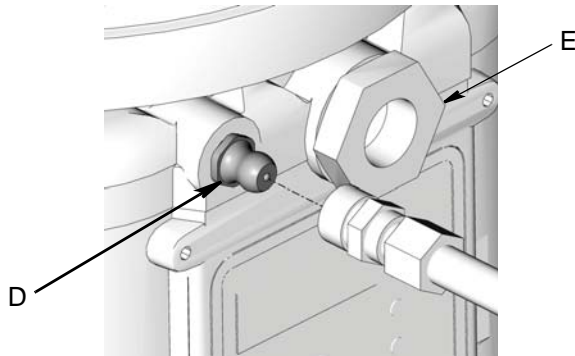


FIG. 16

Models without a follower plate:

1. Connect fill hose to inlet fitting (D) (FIG. 17).

**FIG. 17**

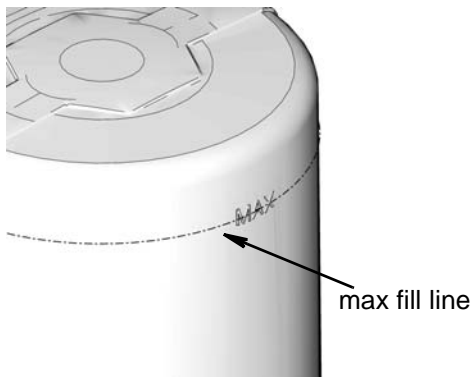
2. For higher viscosity fluids, start pump to rotate stirring paddle during fill to prevent air pockets from forming in grease.

Start pump by pressing the manual run button.



3. Fill reservoir with NLGI grease to max fill line.

NOTE: Vent port, located in rear of reservoir, should not be used as an overfill port/indicator.

**FIG. 18**

4. Remove fill hose.

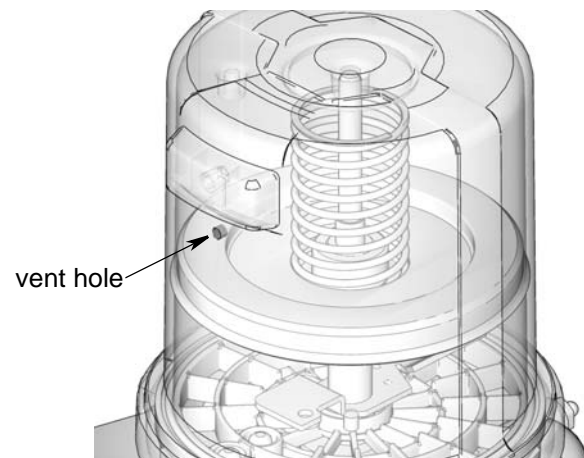
Models with a follower plate:

1. Connect fill hose to inlet fitting (D) (FIG. 17).
2. For higher viscosity fluids, start pump to rotate stirring paddle during fill to prevent air pockets from forming in grease.

Start pump by pressing the manual run button.



3. Fill reservoir with grease until seal of follower plate breaches the vent hole (FIG. 19) and the majority of air is expelled from the reservoir.

**FIG. 19**

NOTE: Vent port, located in rear of reservoir, should not be used as an overfill port/indicator.

4. Remove fill hose.

Changing Greases

When changing greases, always use compatible fluids or greases.

Auto-Fill Shut Off

Loading Grease

To ensure optimal performance from the G3:

- Only use NLGI #000 - #2 greases appropriate for your application, automatic dispensing, and the temperature. Consult with machine and lube manufacturer for details.
- Do not overfill.
- Do not operate G3 without reservoir attached.

NOTICE

Care must be used when filling the reservoir using a pneumatic or electric transfer pump to not pressurize and break the reservoir.

Changing Greases

When changing greases, always use compatible fluids or greases.

The Auto-Fill Shut Off is used for refilling the G3 reservoir in an automatic lubrication system. As fluid is added to the reservoir, it pushes the plate valve up to the top of the reservoir. The plate valve then pushes the valve pin and closes the inlet fluid path.

When the fluid refilling path closes, the refilling line pressurizes and brings the refilling pump to a pressurized stall condition.

NOTE: The operator must monitor system while filling the reservoir to prevent overfilling.



The remote filling station pump stalls (dead-heads) when the reservoir is full, causing the supply system pressure to rise to the maximum output pressure of the filling station pump. To help prevent equipment damage or serious injury caused by pressurized fluid, such as skin injection or injury from splashing fluid, always use a remote filling station pump with a maximum output pressure of 5100 psi (35.1 MPa, 351.6 bar) and use supply hoses with a minimum pressure rating of 5100 psi (35.1 MPa, 351.6 bar).



COMPONENT RUPTURE HAZARD

The maximum working pressure of each component in the system may not be the same. To reduce the risk of over-pressurizing any component in the system, be sure you know the maximum working pressure of each component. **Never** exceed the maximum working pressure of the lowest rated component in the system. Over-pressurizing any component can result in rupture, fire, explosion, property damage and serious injury.

Regulate input pressure to the remote fill pump so that no fluid line, component or accessory is over pressurized.

Remote Fill with Remote Fill Manifold

The reference letters used in the following instructions refer to the Typical Installation diagram, page 9.

The fill valve is used to relieve pressure in the refill line and to reset the Auto Fill Shut Off. See Fill Valve instruction manual 333393. Graco fill valve, part no. 77X542 is available. Contact your local Graco distributor.

1. Pull out and hold the Pressure Relief Knob (T) long enough to relieve line pressure between Fill Manifold (N) and Auto-Fill Shut Off Valve (B).
2. Verify the Auto-Fill Shut Off (B) pin is down, indicating it is reset (FIG. 20).

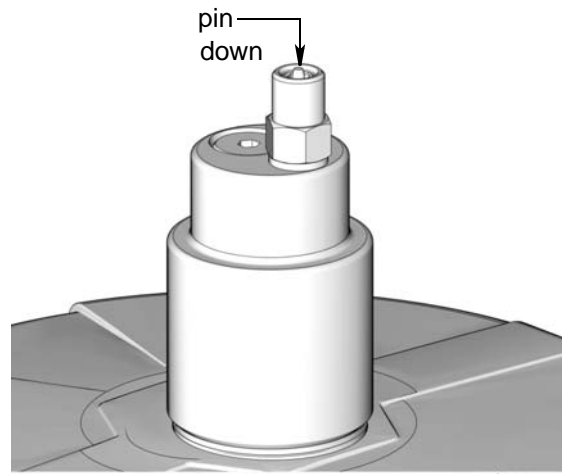


FIG. 20

ti28218a

3. Remove yellow Dust Cover from Fill Coupler (M).

4. Connect Supply Hose (J) between the Remote Filling Station Pump (F) and Fill Coupler port marked with an "I".
5. Start Remote Filling Station Pump (F).
6. When the G3 Reservoir (D) is filled:
 - the Remote Filling Station Pump (F) stalls (dead-heads),
 - the Auto-Fill Shut Off (B) pin pops up as shown in FIG. 21,
 - the Pressure Gauge (R) rises to the fill pump's set pressure.

NOTE: If the pump does not stall (dead-head) there is a leak in the system.

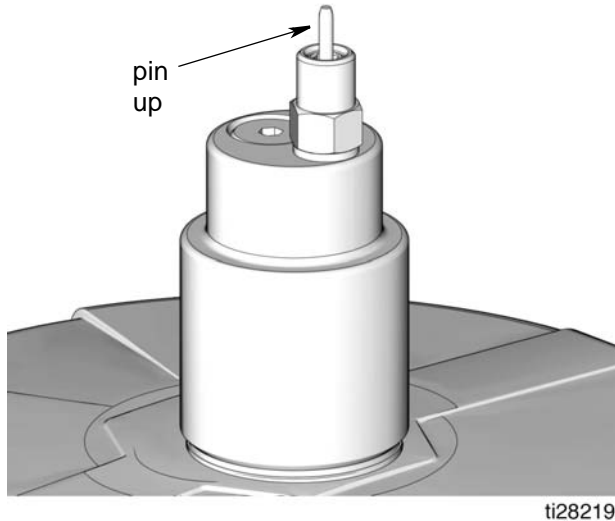


FIG. 21

7. Turn off the Remote Filling Station Pump (F).
8. Pull out and hold the Pressure Relief Knob (T) long enough to relieve line pressure between Fill Manifold (N) and Auto-Fill Shut Off Valve (B) and between Remote Filling Station Pump (F) and Fill Manifold (N).

NOTE: The length of time it takes to vent varies depending on the system design and installation. In some installations it may be necessary to repeat Step 8 to ensure pressure is relieved.

9. Disconnect Supply Hose (J) at Fill Coupler (M).
10. Replace yellow Dust Cover over Fill Coupler (M).

Remote Fill without Remote Fill Manifold

The reference letters used in the following instructions refer to the Typical Installation diagram, page 10.

1. A supply hose pressure relief valve (Y) and overflow container (W) (for collecting excess fluid that drains during pressure relief) **must** be installed in an easily accessible location between the remote filling station pump (F) and the Auto-Fill Shut Off (B). This pressure relief valve is used to relieve pressure in the refill line and to reset the Auto-Fill Shut Off. See Typical Installation, starting on page 8.

A Pressure Relief Kit: 247902 is available from Graco. Contact your distributor or Graco Customer Service for additional information about this kit.

2. Connect Supply Hose (J) at Quick Connect (V).
3. Turn on remote filling station pump (F) and fill the G3 reservoir (D) until the indicator pin on the Auto-Fill Valve pushes up as shown in FIG. 22. The pressure in the refill pump (F) builds and the pump stalls.

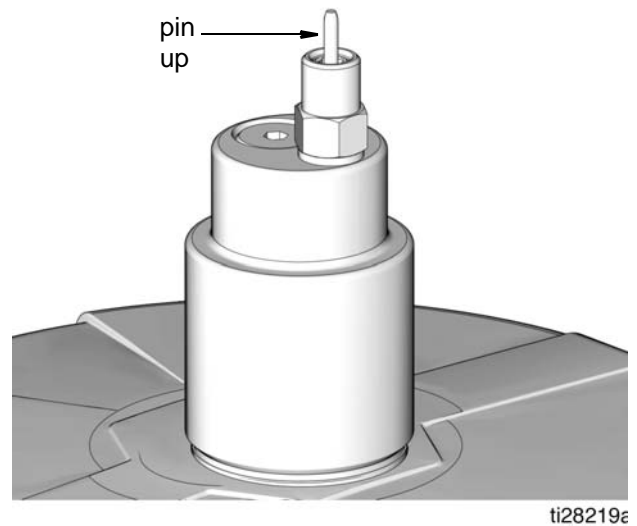









FIG. 22

4. Turn off the air supply (H) to pump (F).
5. Relieve remote filling station pump pressure using the following Remote Filling Station Pressure Relief procedure:

Remote Filling Station Pressure Relief

The reference letters used in the following instructions refer to the Typical Installation diagrams starting on page 8.

 The following Pressure Relief Procedure is only used with the Auto-Fill Shut Off Valve to relieve remote filling station and lubricant supply line pressure.

This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection, splashing fluid and moving parts, follow the Pressure Relief Procedure when you stop dispensing and before cleaning, checking, or servicing the equipment.

- a. To relieve pressure between the Refill Pump (F) and Auto-Fill Shut Off (B), open ball valve (bv) (FIG. 23). Pressure will be released and excess fluid will drain out of the drain tube (L) and into the lubrication overflow container (W).

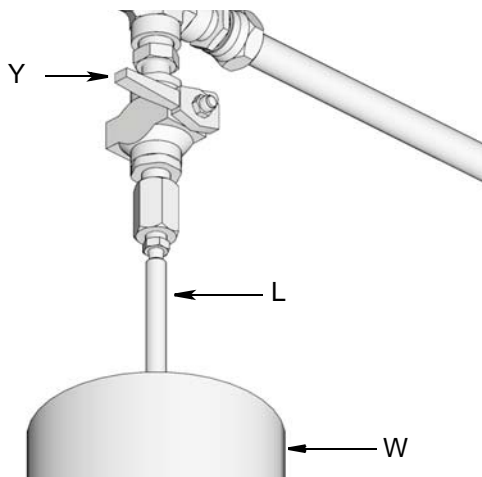


FIG. 23:

- b. Close supply hose pressure relief valve (Y) when all pressure has been relieved.
6. Disconnect the supply hose (J) from Quick Connect (V).

Filling Oil Unit

- Only use oil appropriate for your application, automatic dispensing, and the equipment's operating temperature. Consult with machine and lube manufacturer for details.
- Do not overfill (FIG. 24).
- Do not operate G3 without reservoir attached.
- Only use oils with viscosity at least 40 cSt.

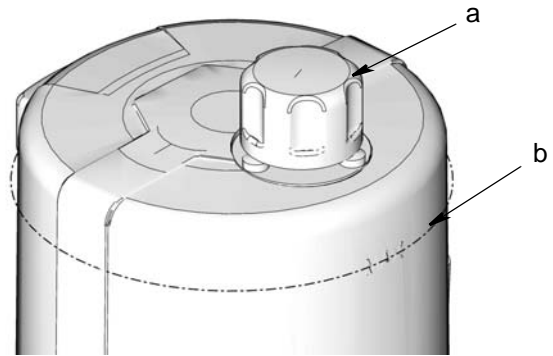


FIG. 24

1. Remove fill cap (a).
2. Pour oil into reservoir to max fill line (b).
3. Replace fill cap. Hand tighten cap, securely.

Priming

NOTE: It is not necessary to prime pump every time pump is filled with lubricant.

Pump only requires priming the first time it is used or if it is allowed to run dry.

1. Loosen pump element fitting (FIG. 25).

NOTE: When loosening pump element fitting, do NOT loosen **pump element**. Loosening pump element will change the output volume

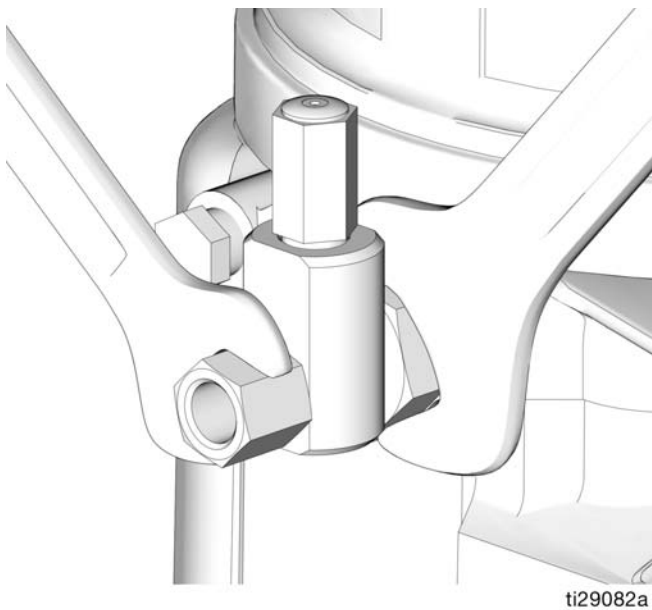


FIG. 25

2. Only run pump until air is no longer dispensed with the lubricant coming out of element fitting (FIG. 26).

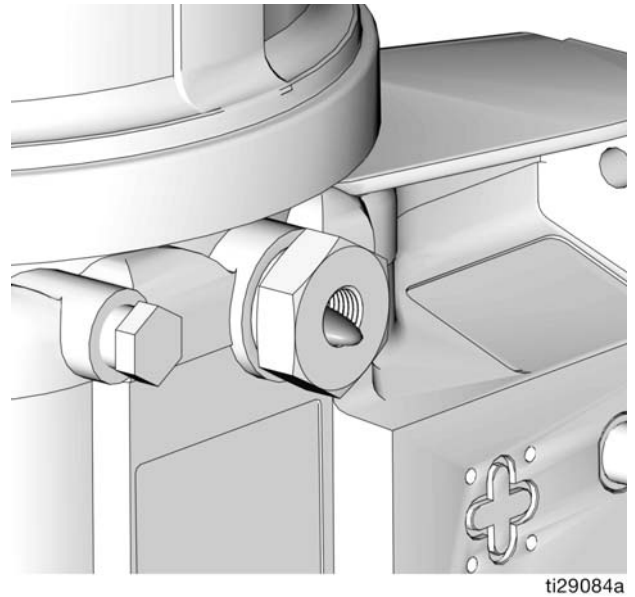
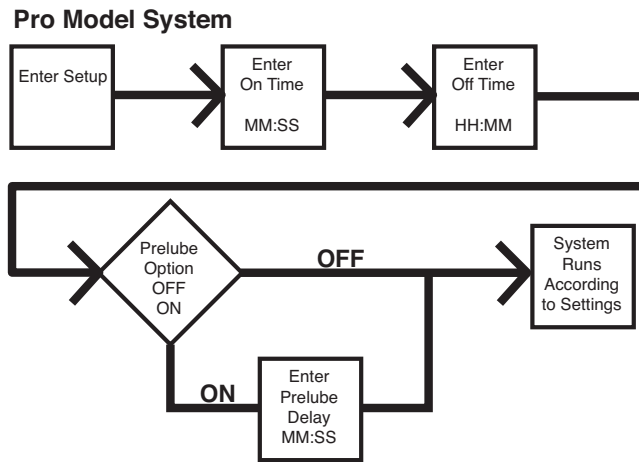


FIG. 26

3. Tighten pump element fitting using two wrenches working in opposite directions (FIG. 25).

Quick Setup Guide



Pro Model Setup

Control Panel Overview (FIG. 27)

NOTE: Programming instructions begin on page 26.

DISPLAY

- A blinking LED under HH, MM, SS or ## indicates type of measurement unit you are setting; i.e., HH is hours.
- A blinking number on the display indicates the G3 is in SETUP MODE.
- In RUN MODE displayed numbers count up or down. See Time ON and Time OFF.

ON TIME

- LED lights when ON Time sequence is running.
- Display shows time as MM:SS (minutes and seconds). i.e., 08:30 is 8 minutes: 30 seconds.
- Times lubrication cycle.

LEFT DIRECTION ARROW / RESET

- In SETUP MODE: moves cursor in display one field to the left.
- In RUN MODE: single press clears warning.
- In RUN MODE: pressing for one second ends run cycle if there are no warnings.
- In ALARM MODE: pressing and holding for 3 seconds clears fault / warning and switches cycle to OFF MODE.

UP and DOWN ARROW

- Hold both the UP and DOWN ARROW buttons down together for 3 seconds to enter SETUP MODE.
- In SETUP MODE, increases or decreases number values shown in display.

OFF TIME

- LED lights when OFF Time sequence is running.
- Value is entered in HH:MM.
- Displays in HH:MM (hours and minutes) when > 1 hour.
- Displays in MM:SS (minutes and second)

ALARM ICONS

LED next to icon lights when a fault / warning event occurs during a run cycle. See page 33 for a complete description of these alarm scenarios.

LOCK ICON

- LED next to icon lights indicating PIN is required to enter setup.
- In SETUP MODE LED lights when setting up the

PRELUBE

LED next to icon lights indicating Prelube function is enabled.

RIGHT DIRECTION ARROW / MANUAL RUN / ENTER:

- In SETUP MODE: saves entry, moves cursor in display one field to the right or to the next setup step.
- In RUN MODE: starts a manual run cycle.

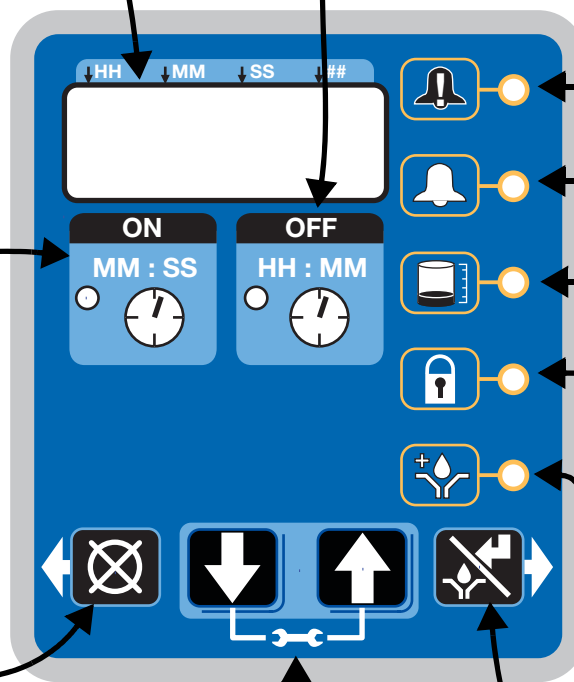


Fig. 27

Instructions

Powering Units With Controllers

By default, units with controllers are set to operate in a timed mode with 1 minute of ON time and 8 hours of OFF time. The unit should be powered up in OFF mode, counting down from the 8 hours. If the unit powers up in ON mode and has not been primed, hold the reset button located on the control panel (example shown on the right) for 1 second to move to the OFF mode.



The Pro Model uses a timer to regulate how long a pump cycle runs and the length of time the pump rests between cycles.

NOTE:

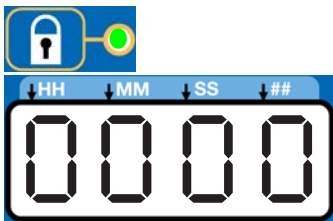
- A blinking number on the display indicates the G3 is in SETUP MODE.
- In RUN MODE numbers on the display do not blink.
- After 60 seconds of no activity, the device returns to RUN MODE in the OFF Time cycle and the OFF Time restarts counting down the total programmed amount of time. It does **not** resume the countdown from the point where the cycle was interrupted when you entered SETUP MODE.

Entering Setup Mode

Press both the UP and DOWN ARROW buttons together for 3 seconds to enter the SETUP MODE.



NOTE: If the lock LED is lit after entering Setup Mode and four 0000's are displayed, the unit has a PIN Code lock out enabled. See Entering a PIN Code to Access Setup Mode for instructions on entering a value.



Entering a PIN Code to Access Setup Mode

The G3 controller does not require a user to provide a PIN code to access the programming features of the unit. However, Graco understands that some users may want to protect the program settings and therefore, an option for adding PIN Code authorization is available. The instructions for setting a PIN Code are provided in the Advanced Programming section of this manual. See page 29.

To enter the PIN Code:

1. Press both the UP and DOWN ARROW buttons for 3 seconds.



2. The LED next to the LOCK ICON on the display lights and the 4 zeros appear on the display indicating the system requires a PIN Code entry to access the G3 in SETUP MODE.



3. The cursor is automatically positioned to enter the first character of the PIN Code. Use the UP and DOWN ARROW buttons to move up and down through the numbers 0-9 until the first number in the PIN code is displayed in the field.



4. Press the ENTER button to set the number. The cursor automatically moves to the next number field.



5. Repeat steps 3 and 4 for each PIN Code prompt field.

If the PIN Code you entered is correct, the first editable character on the display will flash.

NOTE: A blinking field on the display indicates the G3 is in SETUP MODE. In RUN MODE numbers on the display will not blink.

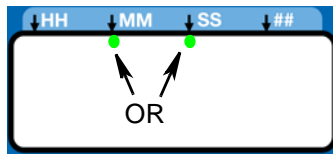
ON Time

- The LED next to the clock in the ON field lights, indicating you are setting the ON Time parameters.

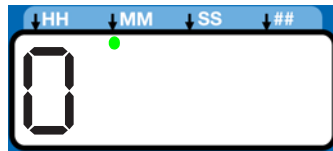


- ON Time is set in Minutes and Seconds (MM: SS).

- An LED flashes under either MM when programming minutes **OR** SS when programming seconds.



- In SETUP MODE, the number displayed in the first field, on the left side of display blinks, indicating the device is ready to program the ON Time minutes.



- The total amount of ON Time cannot exceed 30 minutes. If a value greater than 30 minutes is entered, the RED alarm LED lights and the value must be updated.



If this time does not meet the application needs, contact Graco Customer Support.

Programming ON Time

NOTE: When programming a time of less than 10 minutes you **must** program a leading zero in the first number field and press the ENTER button to save the zero selection.

- To set the ON Time use the UP or DOWN ARROW button to scroll through numerals 0 to 5 until the desired number appears in the first MM (minutes) field.



- Press the ENTER button to lock in the selection. The next MM number field to the right flashes indicating it is ready for programming.



- Use the UP or DOWN ARROW button to scroll through numerals 0 to 9 until the desired number appears in the second MM number field.



- Press the ENTER button to lock in the selection.



The next number field to the right flashes and the LED lights under SS; indicating it is ready to program the seconds fields.

- Repeat steps 1 - 4 to set the SS (seconds) fields.
- After pressing the ENTER button to set the last SS field, all the programmed ON Time information is saved.



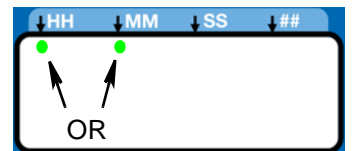
The G3 automatically switches to the OFF Time SETUP MODE.

OFF Time

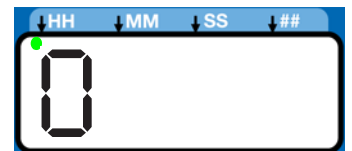
- The LED next to the clock in the OFF field lights, indicating you are setting the OFF Time parameters.
- OFF Time is set in Hours and Minutes (HH: MM).



- An LED flashes under either HH when programming hours **OR** MM when programming minutes.



- In SETUP MODE the number displayed in the first field, on the left side of display blinks, indicating the device is ready to program the OFF Time hours.



- The total amount of OFF Time must be at least twice as long as the programmed ON Time. If a value less than twice the ON Time is entered, the RED alarm LED lights and the value must be updated.




If this time does not meet the application needs, contact Graco Customer Support.


Programming OFF Time


NOTE: When programming a time of **less than 10 hours** you **must** program a leading zero in the first number field and press the ENTER button to save the zero selection.

- To set the OFF Time use the UP or DOWN ARROW button to scroll through numerals 0 to 9 until the desired number appears in the first HH (hour) field.




2. Press the ENTER button to lock in the selection. The next HH number field to the right flashes indicating it is ready for programming. 

3. Use the UP or DOWN ARROW button to scroll through numerals 0 to 9 until the desired number appears in the second HH number field. 

4. Press the ENTER button to lock in the selection. 

The next number field to the right flashes and the LED lights under MM; indicating it is ready to program the minutes fields.

5. Repeat steps 1 - 4 to set the next MM (minutes) fields.

6. After pressing the ENTER button to set the last MM field, the OFF Time information is saved. 

Prelube


The Prelube function determines operation of the pump when power is applied. It can be set to OFF or ON.

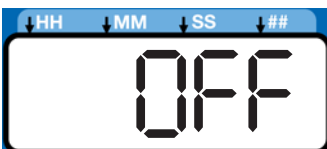
OFF (default) - The unit resumes its lubrication cycle at the point it was at when power was removed.


ON - The unit begins a pump cycle.

Setting Prelube

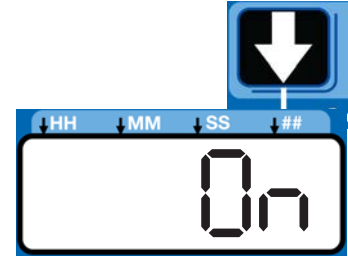
1. After you set the OFF Time information and press the ENTER button, the G3 automatically switches to the Prelube setup.

Notice the LED next to the prelube icon on the G3 display lights indicating you are now in the Prelube setup mode. 

2. OFF displays. If you want the prelube cycle to begin immediately, leave this set to OFF. 

3. Press the ENTER button to set the selection. 


4. If you want to set a prelube delay time, press the DOWN ARROW button to change OFF to ON on the display.




Prelube Delay


Prelube Delay can be entered to delay the start of the pump's cycle on power up. If prelube is set to ON, a prelube delay time in MM:SS must be entered. By default, the delay is set to 0 (begin an ON cycle immediately).


Delaying the prelube function may be desired if other critical functions or systems of your machine or vehicle are also coming on line during power up.

1. Prelube Delay is set in MM:SS (minutes and seconds). To set the time use the UP or DOWN ARROW button to scroll through numerals 0 to 5 until the desired number appears in the first MM (minutes) field. 

The maximum length of time Prelube Delay can be set to is 59:59 (59 minutes:59 seconds).


2. Press the ENTER button to lock in the selection. The next MM number field to the right flashes indicating it is ready for programming. 

3. Use the UP or DOWN ARROW button to scroll through numerals 0 to 9 until the desired number appears in the second MM number field. 

4. Press the ENTER button to lock in the selection. 

The next number field to the right flashes and the LED lights under SS; indicating it is ready to program the seconds fields.

5. Repeat steps 1 - 4 to set the SS (seconds) fields.

6. After pressing the ENTER button to set the last SS field the G3 automatically switches to the RUN MODE. 

Advanced Programming

There are 2 Advanced Programming options. The following Table identifies each option and when it is used.

Advanced Option	Setting	Format/ Description	Why Use This?
A1	Lockout Code (Optional)	Secures setup modes with PIN	Prevents unauthorized users to adjusting settings.
A2	Low Level Alarm Time	MM:SS (minutes:seconds) sets amount of time between Low Level Warning to Low Level Fault. Default = 3 minutes	To accommodate most lubrication situations, a conservative amount of time is programmed between the low level warning and fault to help protect unit from running dry. If necessary the amount of time the unit runs before stopping due to a low level fault can be adjusted.

Entering a PIN Code for the First Time

A1-Setting Up PIN Code

A PIN Code can be programmed into the G3 to protect the settings from inadvertently being changed by unauthorized users.

1. Press the UP ARROW button for 10 seconds.



The LED next to the LOCK ICON on the display lights, indicating you have entered the PIN Mode.



2. The word OFF appears in the display. Press the UP or DOWN ARROW button to change this to ON.



3. Press the ENTER button to enter the PIN Code.



4. The cursor automatically is positioned to entered the first character of the PIN Code. Use the UP and DOWN ARROW buttons to move up and down through the numbers 0-9 until the first number in the PIN code is displayed in the field.



5. Press the ENTER button to set the number. The cursor automatically moves to the next number field.



6. Repeat steps 4 and 5 for each PIN Code prompt field.

7. Press the ENTER button to save the PIN Code and exit Advanced Setup.



Entering Advanced Setup

Press the UP ARROW button for 10 seconds.



If the G3 was previously set up to require a PIN Code, the LED next to the LOCK ICON lights, indicating a PIN Code is required.

1. The cursor is automatically positioned to enter the first character of the PIN Code. Use the UP and DOWN ARROW buttons to move up and down through the numbers 0-9 until the first number in the PIN code is displayed in the field.



2. Press the ENTER button to set the number. The cursor automatically moves to the next number field.



3. Repeat steps 1 and 2 for each PIN Code prompt field.

If the PIN Code you entered is correct, the first editable character on the display will flash.

Selecting Advanced Setup Options

1. Press the UP or DOWN ARROW button to move up or down through Advanced Options A1 and A2.



2. Press the ENTER button to set the selection.



A2 - Low Level Alarm Time *Pump ON mode only.*

Programs the amount of time in MM: SS (minutes and seconds) the pump can run between a Low Level Warning and a Low Level Fault to help protect unit from running dry.

The maximum recommended length of time is 3:00 minutes.

Fault, and Low Level LED illuminate.

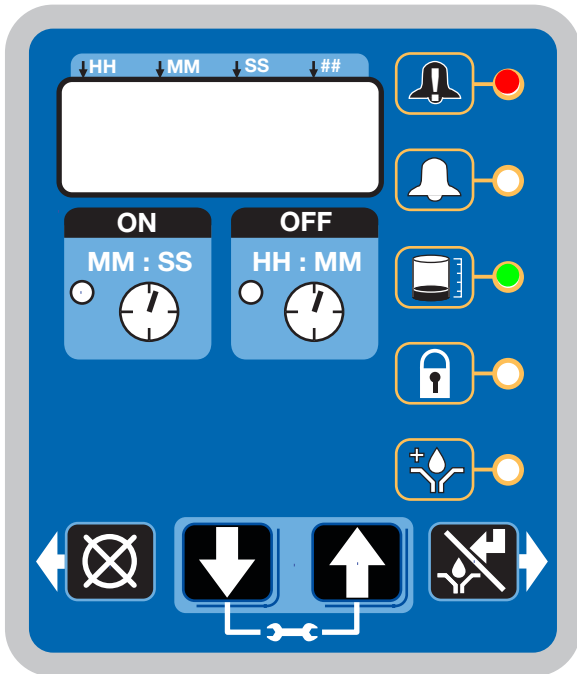


FIG. 28

1. To set the time use the UP or DOWN ARROW button to scroll through numerals 0 to 9 until the desired number appears in the first MM (minutes) field.



2. Press the ENTER button to lock in the selection. The next MM number field to the right flashes indicating it is ready for programming.



3. Use the UP or DOWN ARROW button to scroll through numerals 0 to 9 until the desired number appears in the second MM number field.



4. Press the ENTER button to lock in the selection.



The next number field to the right flashes and the LED lights under SS; indicating it is ready to program the seconds fields.

5. Repeat steps 1 - 4 to set the SS (seconds) fields.

6. After pressing the ENTER button to set the last SS field, all the programmed ON Time information is saved.



Unit exits Advanced Programming.

NOTE: When programming a time of less than 10 minutes you **must** program a leading zero in the first number field and press the ENTER button to save the zero selection.

Run Mode

Time Control

After setup is complete, the G3 automatically begins to run the OFF Time sequence (FIG. 29).

- The G3 runs the programmed OFF sequence.

(Notice the OFF Time LED on the display lights and the OFF Time counts down on the display.)

- The example shown in FIG. 29 shows an OFF Time of 1 hour and 32 minutes before the lubrication cycle begins.



FIG. 29

- When the OFF Time count reaches zero, the G3 Automatic Lubrication Pump turns the pump on and it runs for the programmed ON Time cycle (FIG. 30).

(Notice the ON Time LED is now illuminated on the display.)

- The example shown in FIG. 30 shows an ON Time of 8 minutes and 42 seconds before the lubrication cycle ends.

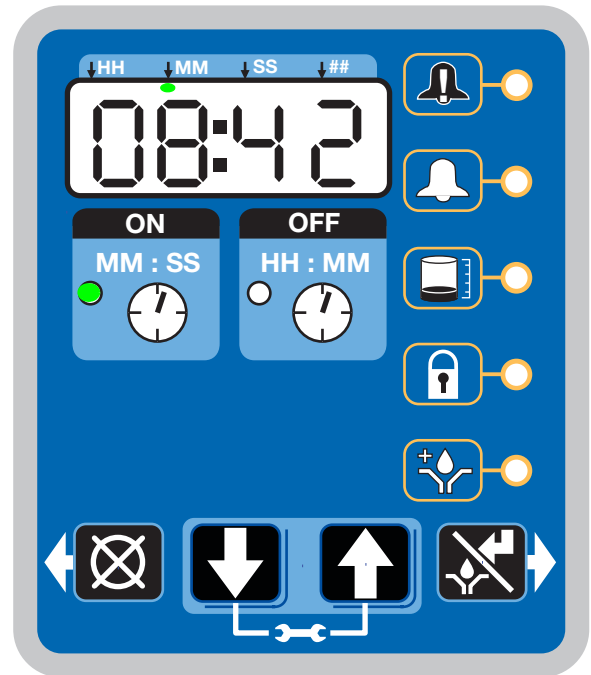


FIG. 30

- When the ON Time count reaches zero, the pump shuts off again and the system again runs OFF Time cycle and the OFF Time LED is now again illuminated (FIG. 29).

This sequence repeats itself until the device is reprogrammed or an alarm occurs.

Manual Run Cycle



To run an extra (non-programmed) lubrication cycle, push the Manual Start button.

Additional Controls

Prelube / Prelube Delay

In all models a power OFF/ON cycle can be controlled with the Prelube and Prelube Delay functions.

Prelube

The Prelube function has been selected. Prelube delay is set to 00:00:

- Power to the unit cycles OFF then ON.
- Unit immediately begins a lubrication cycle.
- Pro Model - display shows ON Time (See Time Control, page 31).

Prelube Delay

The Prelube function has been selected. Prelube delay is set to something other than 00:00:

- Power to the unit cycles OFF then ON.
- Unit immediately begins the Prelube Delay count down until the lubrication cycle begins.
- The LED next to the clock in the OFF field is illuminated (FIG. 31).
- The Prelube LED lights (FIG. 31).
- The display shows time remaining until lubrication cycle begins. The example shown in FIG. 31 shows 8 minutes and 14 seconds left until a lubrication cycle begins.



FIG. 31

Manual Run Cycle



To run an extra (non-programmed) lubrication cycle, push the Manual Start button.

NOTE: Manual Run option is not available while unit is in Vent Mode.

Alarms

Any time a Fault / Warning occurs, a combination of LED's will illuminate to notify you there is a problem and help identify the kind of Fault / Warning has occurred.

- Faults and Warnings will not automatically clear.

- To clear an fault, press and hold the RESET button on the display button pad for 3 seconds.



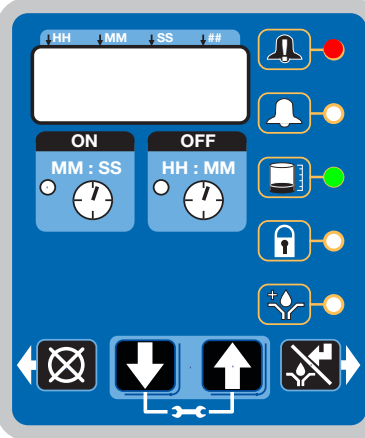



- To clear a warning press and immediately release the RESET button.

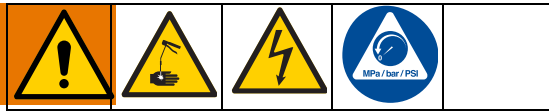


Fault / Warning Scenarios

The following pages describe the most likely fault / warnings you could receive.

Alarm Type	What it Looks Like	What it Indicates	Solution
<p>Low Level Warning</p>		<p>Level of lubricant in reservoir is low and additional lubricant needs to be added.</p> <p>Unit continues to operate as normal for a limited period of time until a low level alarm is triggered.</p>	<p>Add lubricant to reservoir.</p> <p>After lubricant is added, press the RESET button to clear the warning.</p> 
<p>Low Level Fault</p>		<p>Level of lubricant in reservoir is low and additional lubricant needs to be added.</p> <p>Unit stops pumping and displays amount of accumulated time since the alarm was triggered.</p>	<p>Add lubricant to reservoir.</p> <p>After lubricant is added press and hold the RESET button to clear fault.</p> <p>If repriming pump is required, the low level alarm time should be decreased. See A-2: Advanced Programming, Low Level Alarm Time page 30.</p> 

Troubleshooting

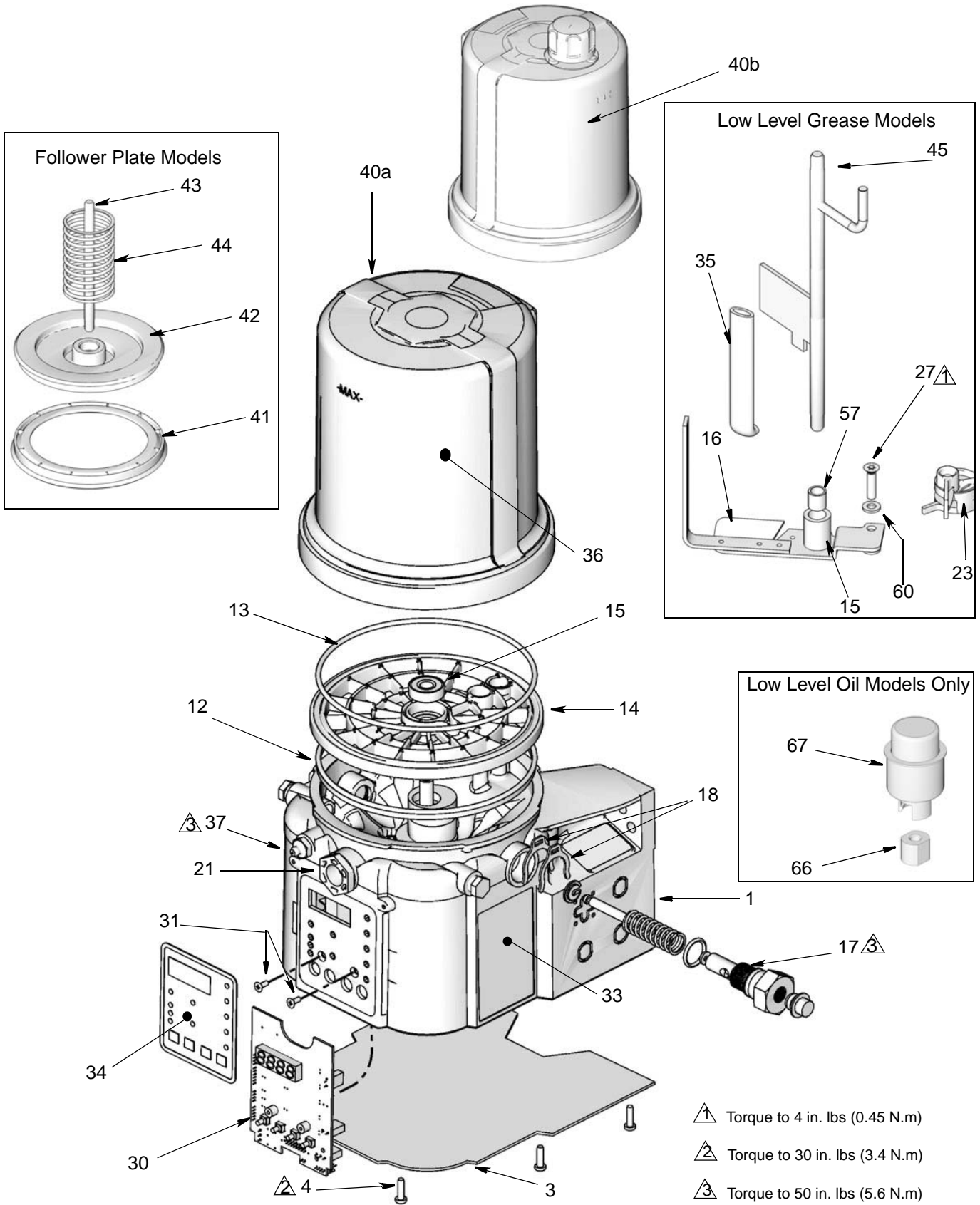


Problem	Cause	Solution
Unit does not power on	Incorrect/loose wiring	Refer to Installation instructions, page 7.
Unit does not power on (DC models only)	Tripped external fuse due to internal component failure	Contact Graco Customer Service.
	Tripped external fuse due to pumping non-cold weather lubricant in cold weather -13°F (-25°C)	Replace lubricant with pumpable lubricant, rated for environmental conditions and application. Replace fuse.
Unit does not power on (AC models only)	Tripped internal power supply fuse due to power supply failure	Contact Graco Customer Service.
Can't set desired ON/OFF times	Maximum duty cycle is 33% (2 minutes OFF for each minute ON)	Adhere to allowable duty cycle. Contact Graco Customer Support if other duty cycles are required for application.
Unit is not operating based on the time that was programmed	Time entered was misinterpreted as MM:SS instead of HH:MM (or visa versa)	Verify the unit was programmed as intended, referencing programming instructions. Note the dot designation for hours, minutes, seconds on the top row of the display.
Lubricant leaks past seal located on the bottom of the reservoir	Reservoir retaining tabs are cracked or broken	Replace reservoir.
	Reservoir is being pressurized during filling	Ensure vent hole is not plugged. If problem persists, contact Graco Customer Service or your local Graco distributor for assistance.
Unit not pumping during ON cycle, but controller lights and functions	Failed motor	Replace unit.
Follower plate is not going down	Air is trapped in the reservoir between the follower plate and lubricant	Add grease following Loading Grease instructions, page 18. Ensure air is purged.
Pump takes several minutes before it begins pumping at the highest pump volume setting (no stroke adjust spacers installed)	Pumping non-cold weather lubricant in cold weather -13°F (-25°C)	Add 1 stroke adjust spacer and adjust lube cycle time to accommodate the difference in pump volume per stroke.
Dim display, unit is not operating	Tripped internal, resettable fuse due to internal component failure or sensor short circuit condition	Verify sensor and manual run inputs have not created a short circuit condition. Cycle power.

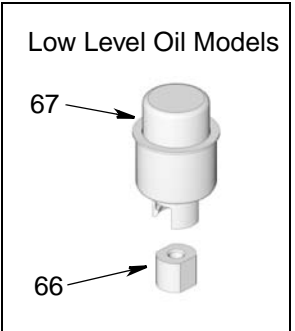
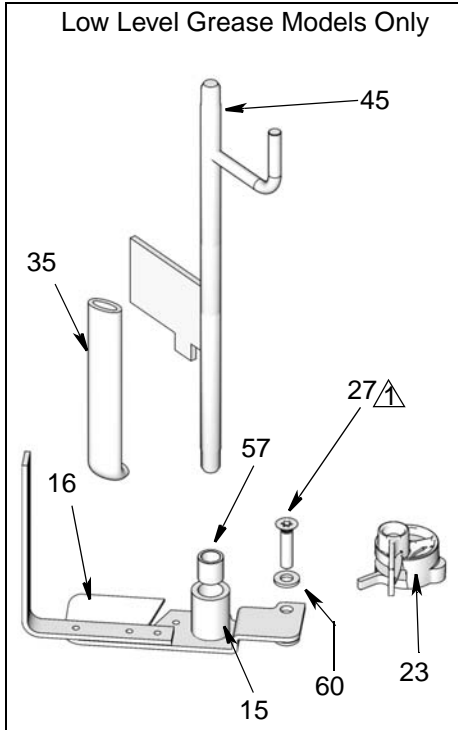
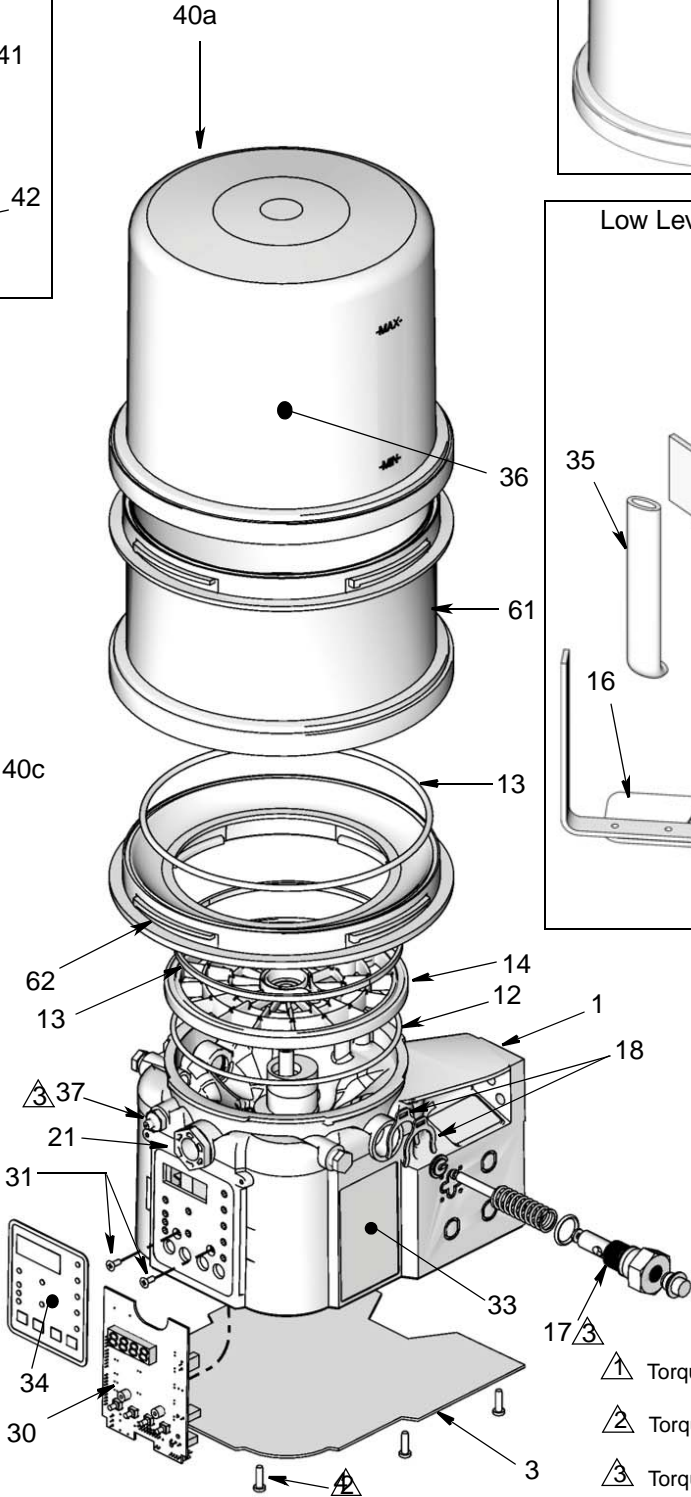
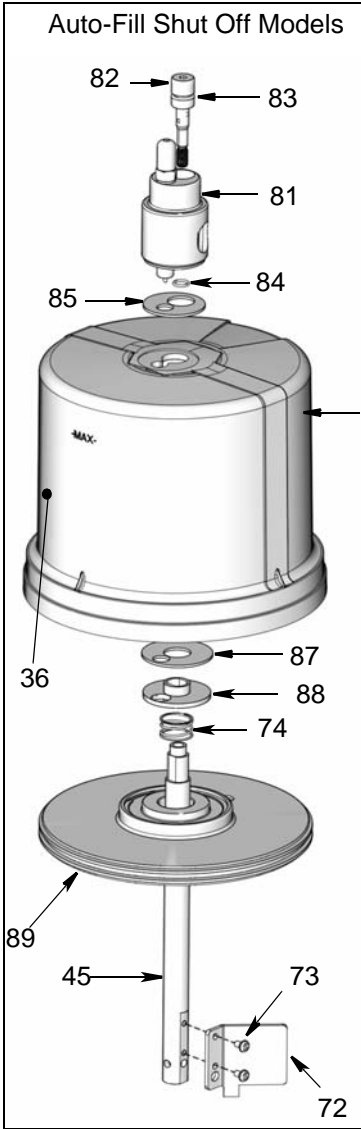
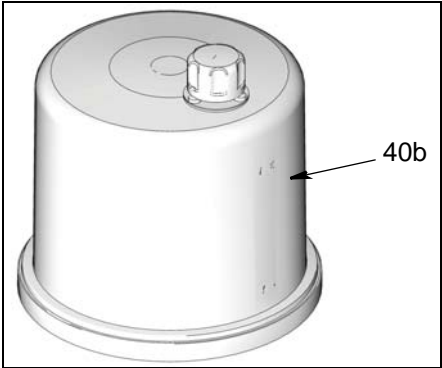
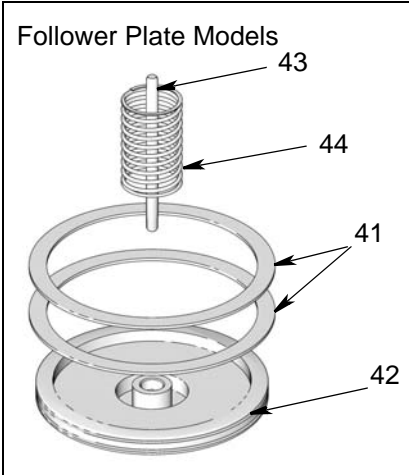
Maintenance

Frequency	Component	Required Maintenance
Daily and at refill	Zerk Fittings	Keep all fittings clean using a clean dry cloth. Dirt and/or debris can damage pump and/or lubrication system.
Daily	G3 Pump Unit and Reservoir	Keep pump unit and reservoir clean using a clean dry cloth.
Daily	Display	Keep display clean using a clean dry cloth.
Monthly	External Wiring Harness	Verify external harnesses are secure.

Parts - 2 Liter Models



Parts - 4 Liter and Larger Models



- Torque to 4 in. lbs (0.45 N.m)
- Torque to 30 in. lbs (3.4 N.m)
- Torque to 50 in. lbs (5.6 N.m)

Parts

Ref	Part	Description	Qty
1		BASE, three pump housing	1
3	278142	COVER, bottom, with seal	1
4	115477	SCREW, mach, torx pan hd	9
12	127079	RECT-RING, included in Kit 571042, 571069, 571179	1
13	124396	O-RING, 258, included in Kit 571042, 571044, 571045, 571069, 571179	2
14		PLATE, ricer	1
15		BEARING, ball	1
16		PADDLE, stirring, 2 Liter models without follower plate, included in Kit 571044, 96G178	1
		PADDLE, stirring, 4 Liter and Larger models without follower plate	1
		PADDLE, stirring, 2 Liter models with follower plate, included in Kit 571045	1
		PADDLE, stirring, 4Liter models with follower plate	1
17		PUMP, element, included in Kit 571041	1
18	16F368	SPACER, stroke adjust, included in Kit 571041	2
21	278145	PLUG, pump, 3/4-16	2
23❖	278136	PADDLE, low level models	1
27	123025	SCREW, M6	1
30 ‡⚙	258760	BOARD, circuit, Pro	1
31	119228	SCREW, machine, flat head	2
33▲	16A579	LABEL, safety	1
34	16A578	LABEL, overlay	1
35		WIPER, stirring, models without follower plate, included in Kit 571044	1
		WIPER, stirring, models with follower plate, included in Kit 571045	1
36		LABEL, brand	1
37	123741	FITTING, Zerk, grease (not included on models)	1
40a	24E984	RESERVOIR, 2 Liter, grease, included in Kit 571042, 571069	1

Ref	Part	Description	Qty
40b	16G021	RESERVOIR, 2 Liter, oil, included in Kit 571179	1
40a	24B702	RESERVOIR, 4 Liter, grease, included in Kit 571183	1
40b	16G020	RESERVOIR, 4 Liter, oil, included in kit 571182	1
40c	17F484	RESERVOIR, 4 Liter, G3 AFSO	1
41	278139	SEAL, follower plate, 2 Liter models	1
	16F472	SEAL, follower plate, 4 Liter models	2
42		PLATE, follower	1
43		ROD, follower plate	1
44		SPRING, compression	1
45†	24D838	BAFFLE, low level, 2 Liter models	1
	24E246	BAFFLE, low level, 4 Liter models	1
	24F836	BAFFLE, low level, 8 Liter models	1
	24F923	BAFFLE, low level, 12 Liter models	1
	24F924	BAFFLE, low level, 16 Liter models	1
57	117156	BEARING, sleeve	1
58▲	196548	LABEL	1
60	16D984	WASHER, low level models	2
61	278135	RESERVOIR, mid-section (see quantity by size / model below)	
		8 Liter models	1
		2 Liter models	2
		16 Liter	3
62		ADAPTER, reservoir, 4Liter models and larger	1
66	126417	NUT, oil	
67	24N806	FLOAT, oil	
72		PLATE, baffle, low level	1
73		SCREW, machine	2
74		SPRING, plate, valve, reset	1

Ref	Part	Description	Qty
81		VALVE, AFSO	1
82		BOLT, mounting	1
83		PACKING, o-ring	1
84		PACKING, o-ring	1
85		SEAL, upper, reservoir	1
87		SEAL, lower, reservoir	1
88		SPACER, seal, base	1
89		PLATE, valve	1
200	127783	CABLE, 15 ft (4.5 m), SOOW w/7pos, 3 pin, 90 deg (See Wiring Diagram, page 14)	1
	127780	CABLE, 15 ft (4.5 m), SOOW w/7 pos, 5 pin, 90 deg, (See Wiring Diagram, page 15)	1
	127781	CABLE, 20 ft (6.1 m), SOOW, w/7 pos, 5 pin, 90 deg, (See Wiring Diagram, page 15)	1
	127782	CABLE, 30 ft (9.1m) SOOW, w/7 pos, 5 pin, 90 deg, (See Wiring Diagram, page 15)	
	16U790	CABLE, DIN, bare, (See Wiring Diagram, page 14)	1
201	124300	CABLE, M12, 15 ft., 4 wire, straight male to flying leads (See Wiring Diagram, page 16)	1
	124333	CABLE, M12, 15 ft., 4 wire, straight male to female (See Wiring Diagram, page 16)	1
202	124301	CONNECTOR, Eurofast, fem, straight, 4 Pin	1
	124594	CONNECTOR, Eurofast, 4 Pin (see wiring diagram, page 16)	1
	124595	CONNECTOR, Eurofast, 5 Pin (see wiring diagram, page 16)	1

▲ Replacement Danger and Warning labels, tags and cards are available at no cost.

❖ Also order Ref 27, Part No. 123025 and Ref 60, Part No. 16D984

‡ For Pro Models Only - Also order Ref 31, Part No. 119228 and Ref 34, Part No. 16A578

† Also order Ref. 57, Part No. 117156 when ordering this part.

Installation and Repair Kits

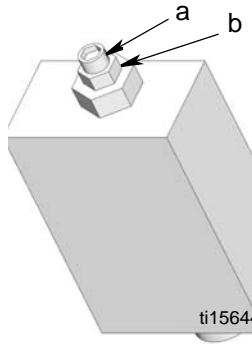
Kit No.	Description	Manual Number
571026	KIT, output union, 3 pump	3A0523
571063	KIT, output union, 2 pump	
571028	KIT, return to reservoir NPT, includes pressure relief valve 16C807	3A0525
571071	KIT, return to reservoir BSPP, includes pressure relief valve 16C807	
571030	KIT, remote manual run, 12 volt DC	3A0528
571031	KIT, remote manual run, 24 volt DC	
571032	KIT, remote manual run, 12 volt DC, with cable	
571033	KIT, remote manual run, 24 volt DC with cable	
571036	KIT, cover with "G" label	NA
571041	KIT, pump element, includes Ref 17, 18, 33	3A0533
571042	KIT, repair, 2 liter reservoir, includes Ref 13, 36, 40	3A0534
571069	KIT, repair, 2 liter reservoir, for models with follower plate, includes Ref 13, 36, 40	
571044	KIT, replacement, paddle, 2 liter, for models without follower plate, includes Ref 13, 16, 35, 57	3A0535
571045	KIT, replacement, paddle, 2 liter, for models with follower plate, includes Ref 13, 16, 35, 40a, 42, 57	
571046	KIT, replacement, paddle, 4-16 liter, for models without follower plate, includes Ref 13, 16, 35, 57	
571047	KIT, replacement, paddle, 4 liter, for models with follower plate, includes Ref 13, 16, 35, 57	
571058	KIT, output adapter, NPT	3A0522
571070	KIT, output, adapter, BSPP	
571060	KIT, fill, zerk, leakproof	NA
571179	KIT, repair, reservoir oil, 2 liter models, includes Ref 13, 36, 40b	3A0534
571182	KIT, repair, reservoir, oil 4 liter models, includes Ref 13, 36, 40b	
571183	KIT, repair, reservoir, grease, 4 liter models, includes Ref 13, 36, 40b	

Pressure Relief Valves

Important Information regarding Pressure Relief Valve 16C807.

◆ **Pressure Relief Valve 16C807 can only be used on the G3 Pump.** It is not intended for use with any other products.

The pressure relief valve uses a pressure adjustment screw (a) to set the pressure release point. **It is not intended as a way to relieve pressure during normal operation,** but as a protective measure in the event there is an unintended pressure increase in the system. Do not use this pressure relief valve as a means of relieving pressure in day-to-day, normal cycle operation.



a = adjustment screw
b = locking nut

The pressure adjustment screw will require periodic adjustments.

Whenever the valve is set/adjusted (after the set point is found) it is important to ensure that the valve is not bottomed out and there is at least 1/2 turn of adjustment remaining. This is determined by turning the screw (a) 1/2 turn and then back turning it out again.

NOTE: Turning adjustment screw (a) clockwise increases pressure.

Fuses

Part	Description	Qty
571039	FUSE, 12 volt DC	1
571040	FUSE, 24 volt DC	1

Part	Description	Qty
16C807◆	VALVE, pressure relief, 500-3500 psi (3.44 MPa, 34.4 bar - 24.1 MPa, 241 bar), Set pressure 3000 psi ± 10% (20.68 MPa, 206.8 bar ± 10%) Included in Kit 571028, 571071	1
563156	VALVE, pressure relief, 750 psi (5.17 MPa, 51.71 bar)	1
563157	VALVE, pressure relief, 1000 psi (6.89 MPa, 68.95 bar)	1
563158	VALVE, pressure relief, 1500 psi (10.34 MPa, 103.42 bar)	1
563159	VALVE, pressure relief, 2000 psi (13.78 MPa, 137.89 bar)	1
563160	VALVE, pressure relief, 2500 psi (17.23 MPa, 172.36 bar)	1
563161	VALVE, pressure relief, 3000 psi (20.68 MPa, 206.84 bar)	1

Technical Data

Pump Output Pressure	5100 psi (35.1 MPa, 351.6 bar)
Fill Inlet Pressure	5000 psi (34.4 MPa, 344.7 bar)
Power	
100-240 VAC	88 - 264 VAC; 0.8 A current, 90 VA Power, 47/63 Hz, Single phase, inrush/locked rotor, max 40A (1ms)
12 VDC	9 - 16 VDC; 5 A current, 60 W, inrush/locked rotor 12 A
24 VDC	18 - 32 VDC; 2.5 A current, 60 W, inrush/locked rotor 6 A
Fluid	
Grease Models	Grease NLGI 000 - #2
Oil Models	At least 40 cSt oil.
Pumps	Up to 3
Pump Output	0.12 in. ³ (2 cm ³) / minute per outlet - 2 spacers 0.18 in. ³ (3 cm ³) / minute per outlet - 1 spacer 0.25 in. ³ (4 cm ³) / minute per outlet - 0 spacers
Pump Outlet	1/4-18 NPSF. Mates with 1/4-18 NPT male fittings
Reservoir Size	2, 4, 8, 12, 16 Liters
IP Rating	IP69K
Ambient Temps	-40°F - 158°F (-40°C to 70°C)
Weight (Dry - includes power cord and plug)	
Without follower plate	13.3 lbs (6.03 kg)
With follower plate	14.2 lbs (6.44 kg)
Wetted Parts	nylon 6/6 (PA), zinc plated steel, carbon steel, alloy steel, stainless steel, nitrile rubber (buna-N), bronze, nickel plated alnico, chemically lubricated acetal, aluminum, PTFE amorphous polyamide
Sound Data	<60 dB

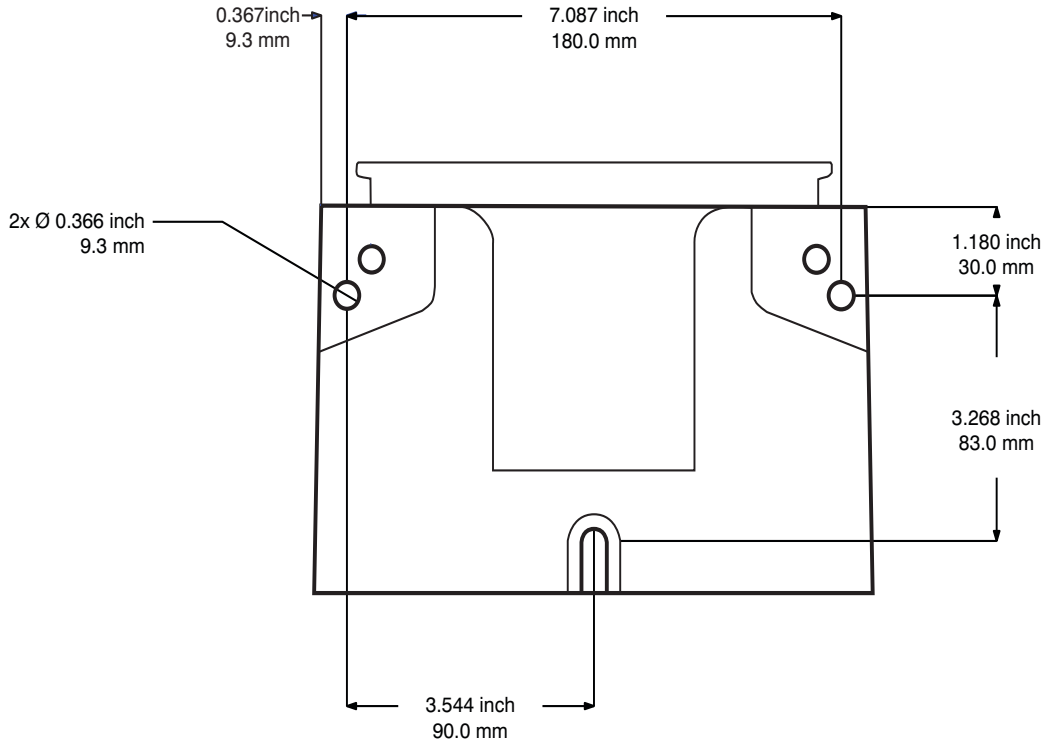
Dimensions

Model	Height		Width		Depth	
	Inches	cm	Inches	cm	Inches	cm
2L	13.25	33.65	8.00	20.32	9.00	22.86
4L	14.50	36.83	9.25	23.50	10.00	25.40
8L	18.50	47.00	9.25	23.50	10.00	25.40
12L	23.00	58.42	9.25	23.50	10.00	25.40
16L	27.50	69.85	9.25	23.50	10.00	25.40

Mounting Pattern

(For correct mounting configuration, choose either Option 1 or Option 2). See P/N 126916 template.

Option 1



Option 2

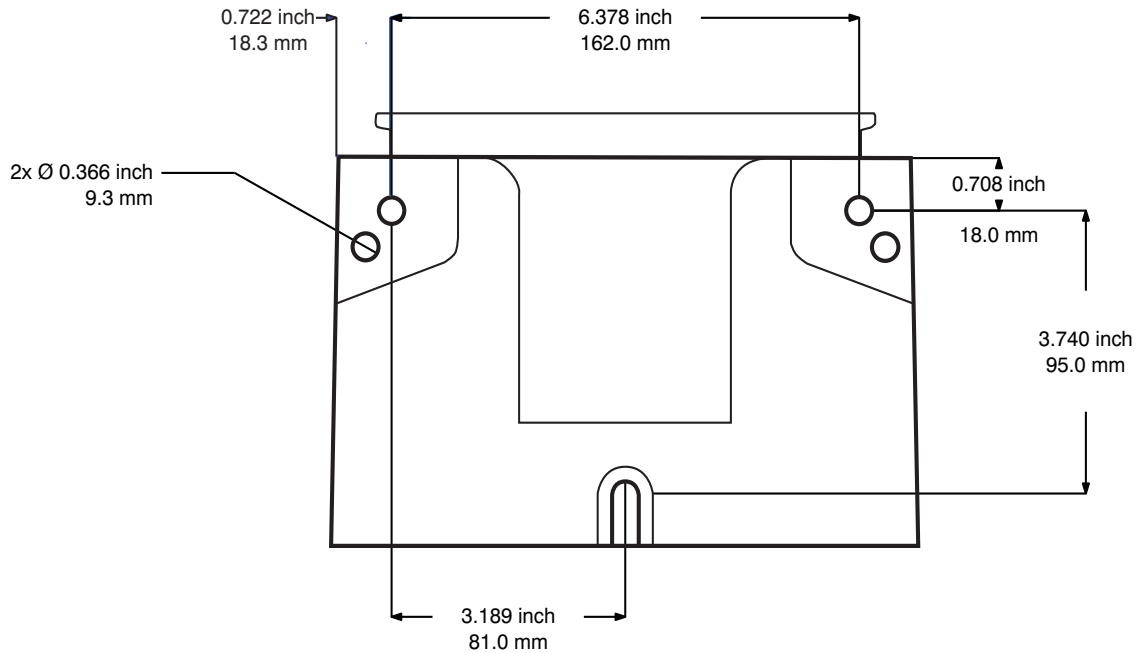


FIG. 32

Graco Standard 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 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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International Offices: Belgium, China, Japan, Korea

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