

Compact Dyna-Star® Auto-Fill Shut Off Kit

3A6932D

EN

For use with Compact Dyna-Star Electric Pump to automatically stop filling Graco grease tanks. For grease lubrication systems only. For professional use only.

Not approved for use in explosive atmospheres or hazardous (classified) locations.

Model

25P686 Auto-Fill Shut Off

**25P687 Auto-Fill Shut Off with Follower Plate
(12 and 20 liter)**

**25U218 Auto-Fill Shut Off with Follower Plate
(60 lbs)**

3500 psi (24.1 MPa, 241.3 bar) Maximum Working Pressure



Important Safety Instructions

Read all warnings and instructions in this manual and the Compact Dyna-Star Pump instructions manual before using the equipment. Save all instructions.



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Related Manuals

3A6941 - Compact Dyna-Star Electric Pump Manual

333393 - Fill Valve

Contents

Warnings	3
Installation	5
Pressure Relief Procedure	5
Auto-Fill Shut Off Installation	5
Follower Plate Installation (Part 25P687)	8
Auto-Fill Shut Off Overview	11
Operation	12
Fill/Refill the Tank	12
Troubleshooting	14
Technical Specifications	15
Graco Standard Warranty	16

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.

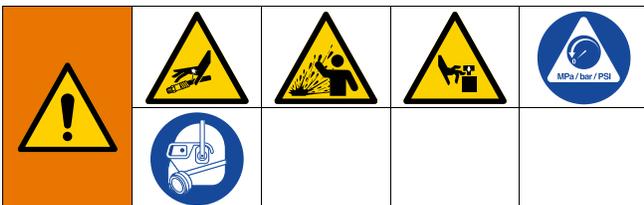
 <h1 style="margin: 0;">WARNING</h1>	
 	<p>FIRE AND EXPLOSION HAZARD</p> <p>When flammable fluids are present in the work area, such as gasoline and windshield wiper fluid, be aware that flammable fumes can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> • Use equipment only in well ventilated area. • Eliminate all ignition sources, such as cigarettes and portable electric lamps. • Ground all equipment in the work area. • Keep work area free of debris, including rags and spilled or open containers of solvent and gasoline. • Do not plug or unplug power cords or turn lights on or off when flammable fumes are present. • Use only grounded hoses. • Stop operation immediately if static sparking occurs or you feel a shock. Do not use equipment until you identify and correct the problem. • Keep a working fire extinguisher in the work area.
    	<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.

WARNING

 	<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 Specifications in all equipment manuals. • Use fluids and solvents that are compatible with equipment wetted parts. See Technical Specifications in all equipment manuals. Read fluid and solvent manufacturer’s warnings. For complete information about your material, request Safety Data Sheet (SDS) 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.
 	<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. 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.

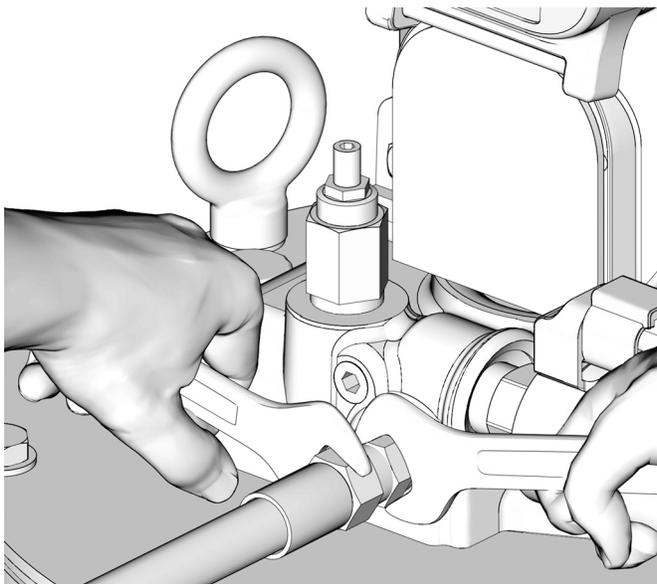
Installation

Pressure Relief Procedure



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.

To relieve pressure in the system, use two wrenches working in opposite directions on the pump outlet fitting to slowly loosen the fitting only until no more lubricant or air is leaking from the fitting (FIG. 1).

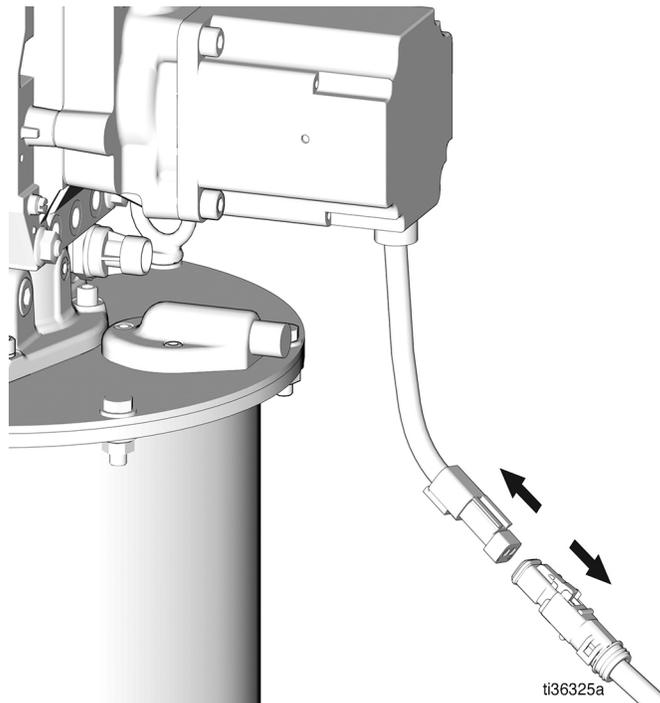


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FIG. 1

Auto-Fill Shut Off Installation

1. Disconnect power to the system (FIG. 2).



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FIG. 2

2. Relieve pressure in the system following the **Pressure Relief Procedure**, see page 5.

3. Disconnect the main line from the pump outlet (FIG. 3).

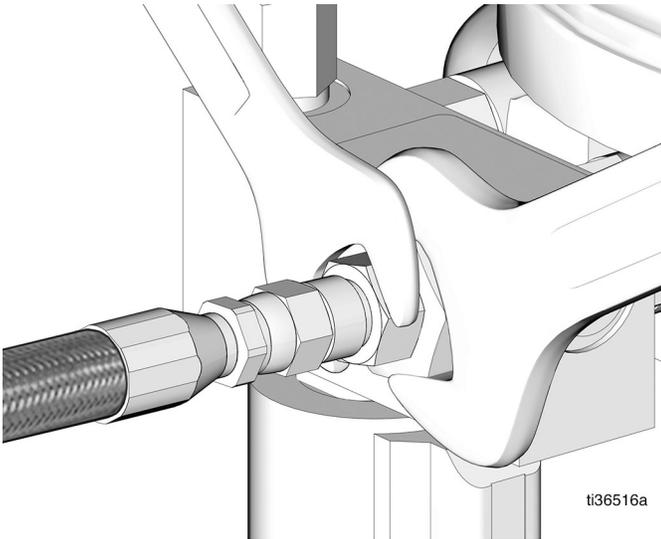


FIG. 3

4. Loosen and remove the Compact Dyna-Star Auto-Fill Shut Off plug. Dispose of the plug according to local regulations (FIG. 4 and FIG. 5).

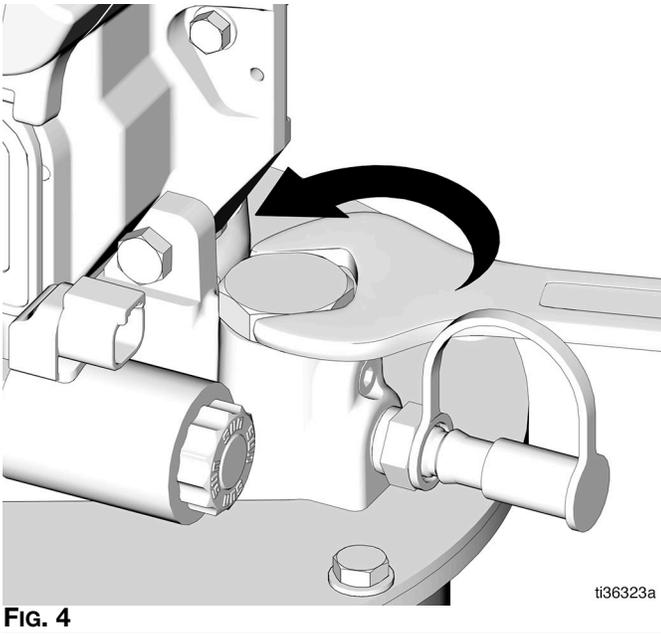


FIG. 4

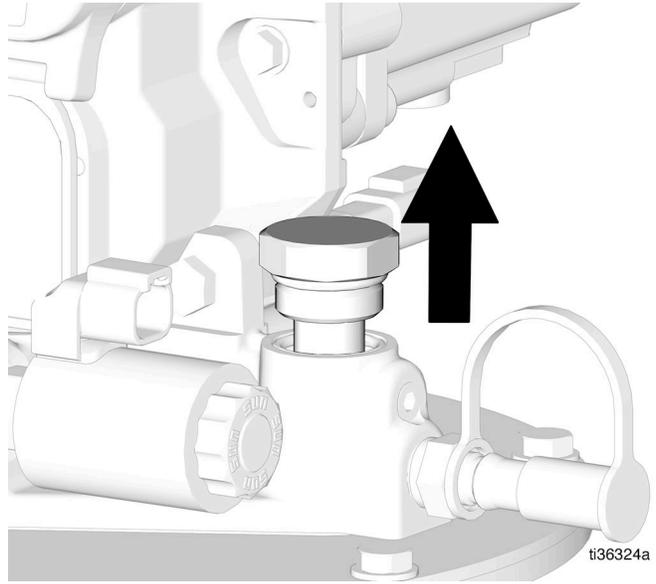


FIG. 5

5. Grease the outside of the three (3) o-rings on the Compact Dyna-Star Auto-Fill Shut Off cartridge (FIG. 6).
6. Install the Compact Dyna-Star Auto-Fill Shut Off cartridge (FIG. 6).

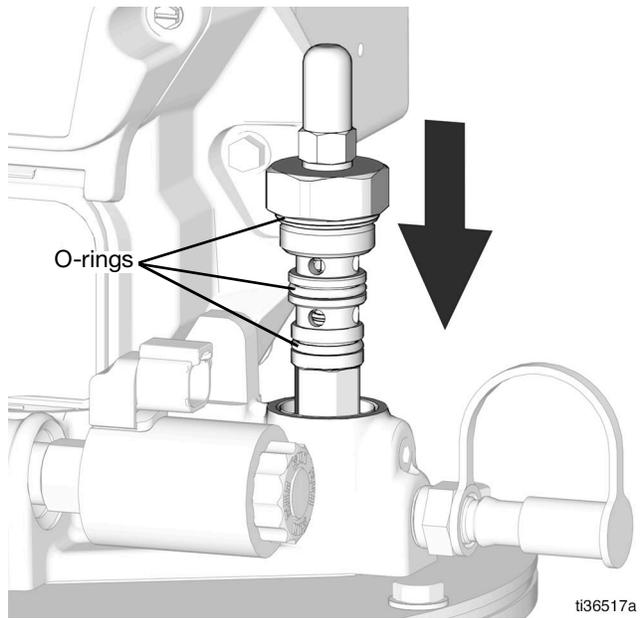


FIG. 6

- 7. Tighten the Compact Dyna-Star Auto-Fill Shut Off cartridge (torque 45-55 ft-lb/61-74.5 N•m) (FIG. 7).

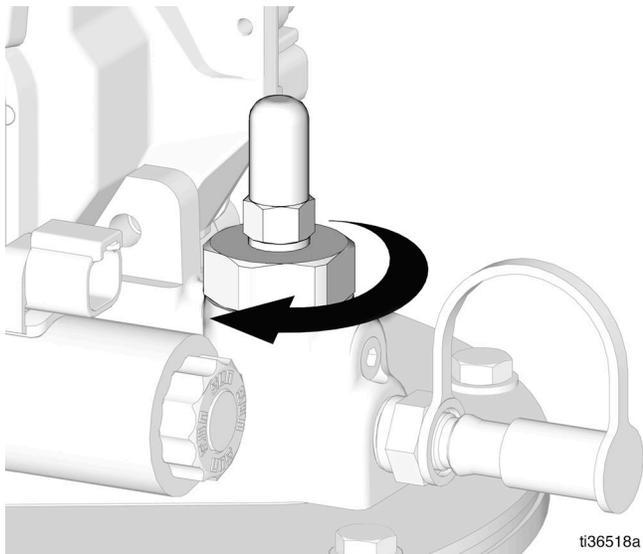


FIG. 7

- 8. If the system currently has a follower plate, installation is complete. For systems without a follower plate, see **Follower Plate Installation (Part 25P687)**, page 8.
- 9. Use two wrenches working in opposite directions on the pump outlet fitting to tighten (FIG. 1).
- 10. Reconnect the main line (FIG. 8).

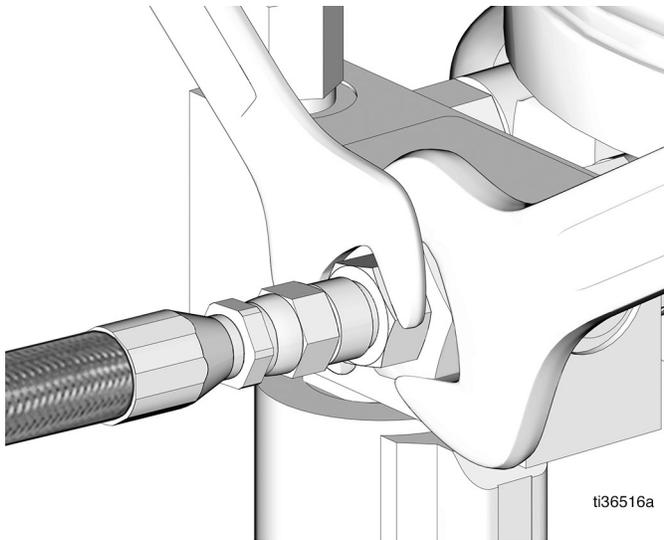


FIG. 8

- 11. Reconnect the power to the system (FIG. 9).

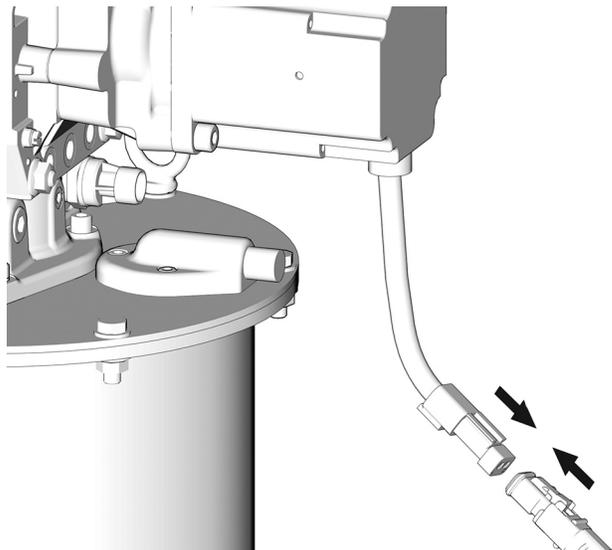


FIG. 9

Follower Plate Installation (Part 25P687)

1. Disconnect power to the system (FIG. 10).

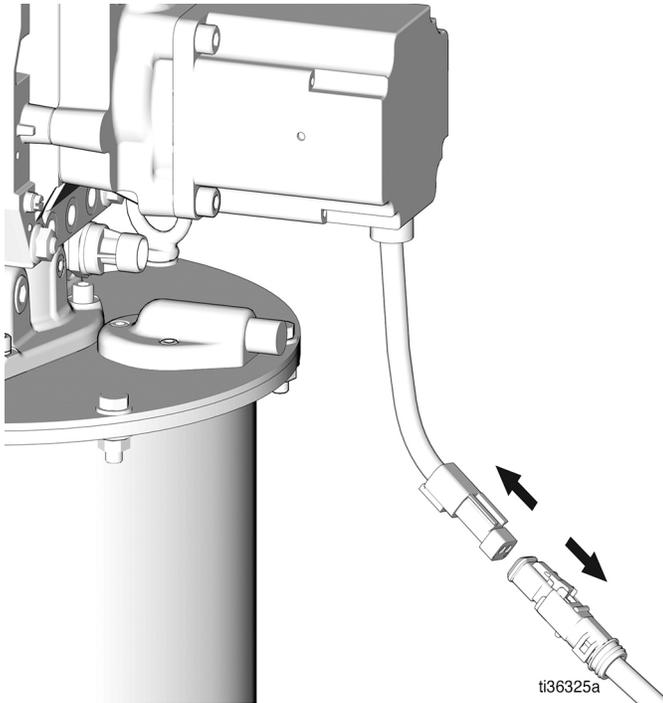


FIG. 10

2. Relieve pressure in the system following the **Pressure Relief Procedure**, see page 5.
3. Remove the nuts, bolts and the lifting hook from the top of the tank and retain (FIG. 11).

NOTE: The lift ring for the 60 lbs tank is welded on to the can and is not removable.

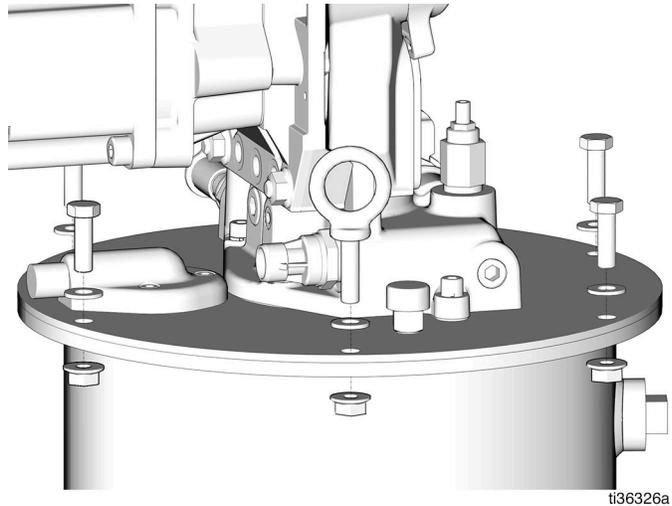


FIG. 11

4. Lift the cover, tank gasket, and pump off of the tank and set aside.
5. In a new installation, the center o-ring of the follower plate and the tank walls should be greased to allow for easier follower plate movement (FIG. 12).
6. Place the follower plate inside of the tank with the follower plate top (marked "top") facing upward (FIG. 12).

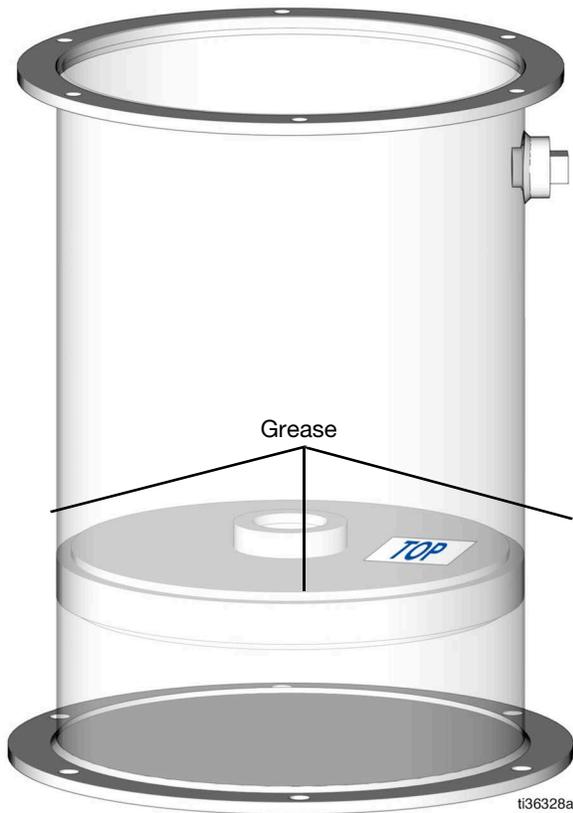


FIG. 12

7. Replace the cover, tank gasket, and pump on to the tank (FIG. 13).

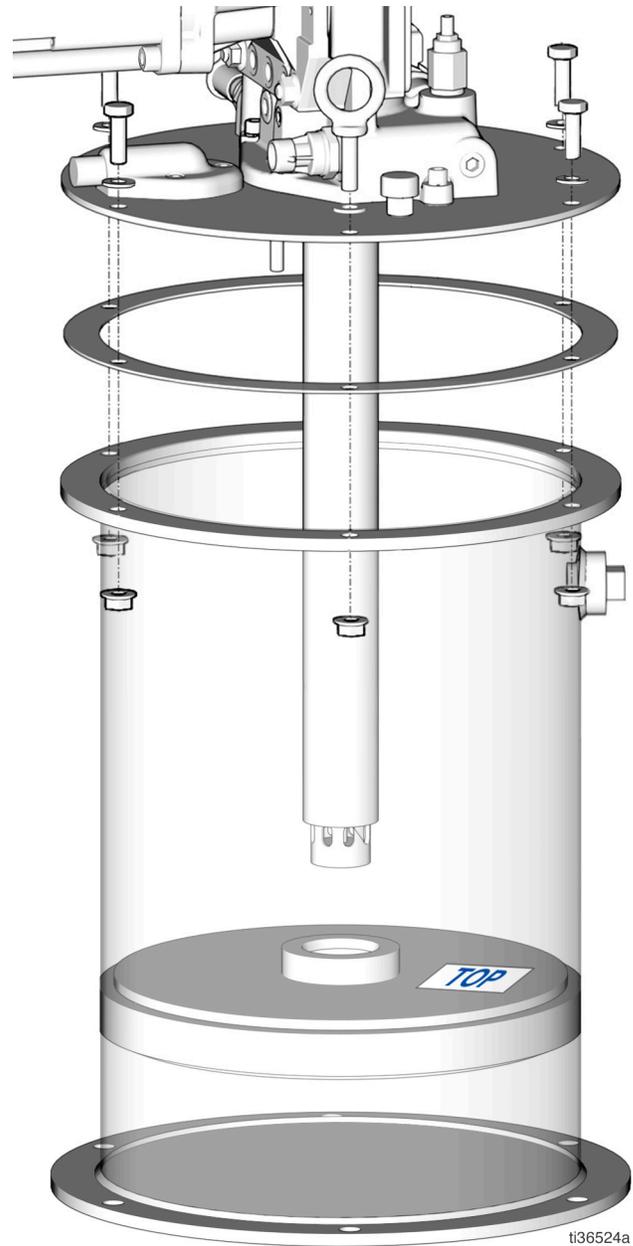
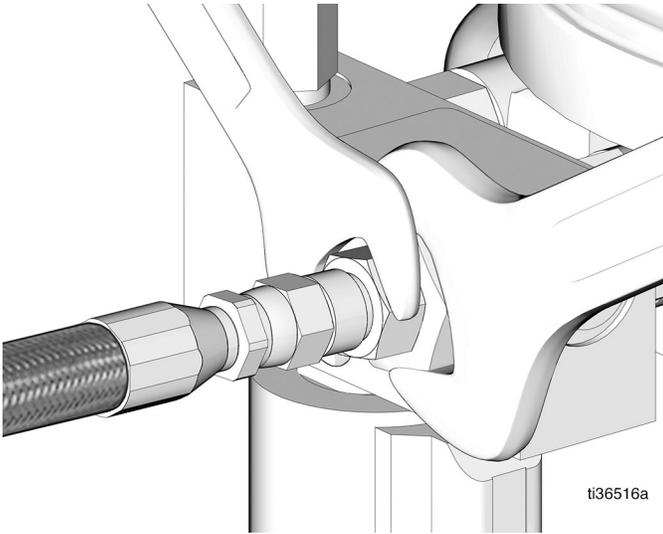


FIG. 13

8. Replace the nuts, bolts, and lifting ring.

NOTE: The lift ring for the 60 lbs tank is welded onto the cover and is not removable.

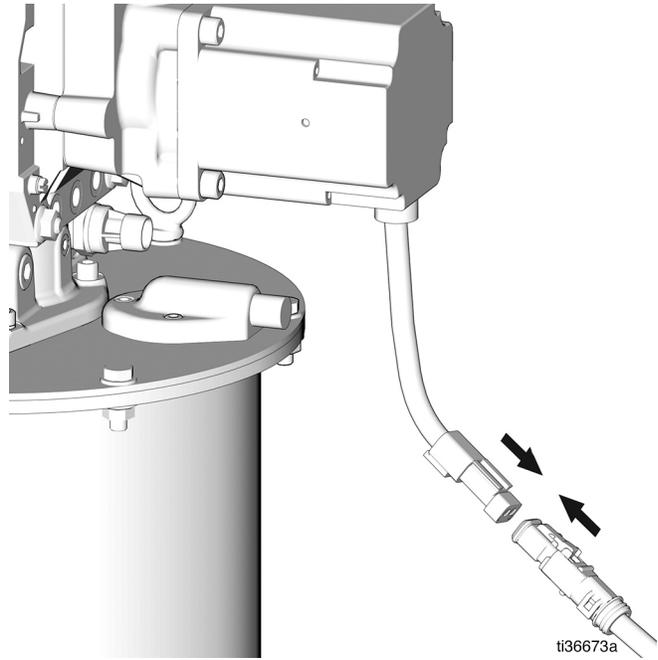
9. Tighten (torque 10-12 ft-lb/13.6-16.3 N•m).
10. Reconnect the main line to the pump outlet (FIG. 14).



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FIG. 14

11. Reconnect the power to the system (FIG. 15).



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FIG. 15

Auto-Fill Shut Off Overview

The Compact Dyna-Star Auto-Fill Shut Off fills and refills grease tanks in an automatic lubrication system. As grease is added to the tank, it pushes the follower plate to the top of the tank where the valve pin actuates and closes the inlet fluid path.

Note: The remote fill station pump stalls (dead-heads) when the tank is full. If this does not occur, there is a leak in the system.

Note: The fill pump pressure can be as high as 2000 psi, depending upon the lengths and diameters of Refilling line (GG) and Supply hose (JJ). Graco recommends using a 36:1 ratio, or higher, air operated fill pump.

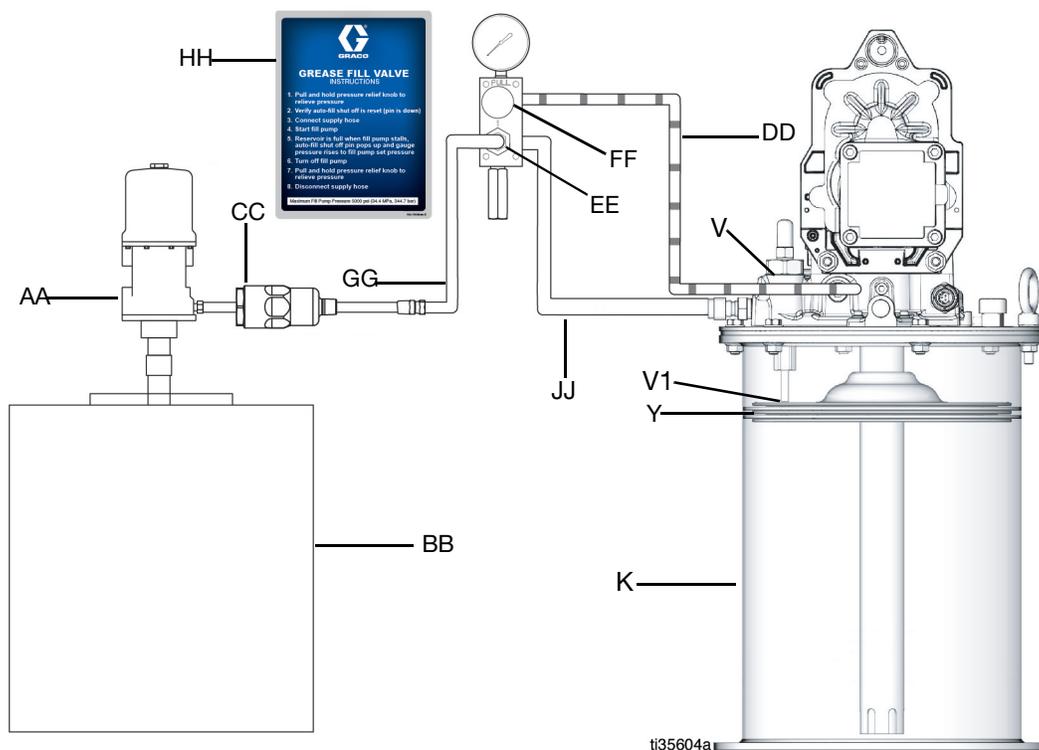


FIG. 16

Key:

- AA Remote fill station pump*
 - BB Remote fill station tank*
 - CC Filter*
 - DD Pressure relief line*
 - EE Fill valve* [Graco Part No. 77X542]
 - FF Fill valve pressure relief knob* [Part of Fill Valve 77X542]
 - GG Refilling line*
 - HH Instruction label* [Included with Fill Valve 77X542]
 - JJ Supply hose*
 - V Auto-Fill Shut Off
 - V1 Auto-Fill Shut Off valve pin
 - Y Follower plate
 - K Tank
- *User provided

Operation

The Compact Dyna-Star Auto-Fill Shut Off (V) refills the grease tank (K) in a lubrication system. When the grease level in the tank is full, the Compact Dyna-Star Auto-Fill Shut Off automatically ends the filling operation.

NOTE: Always fill the tank (K) to full during refilling.

As grease is added to the tank, it pushes the follower plate (Y) up to the top of the tank (K). The follower plate then pushes up the valve pin (V1) which closes the inlet fluid path. Pin (V2) pops up once the tank is full.

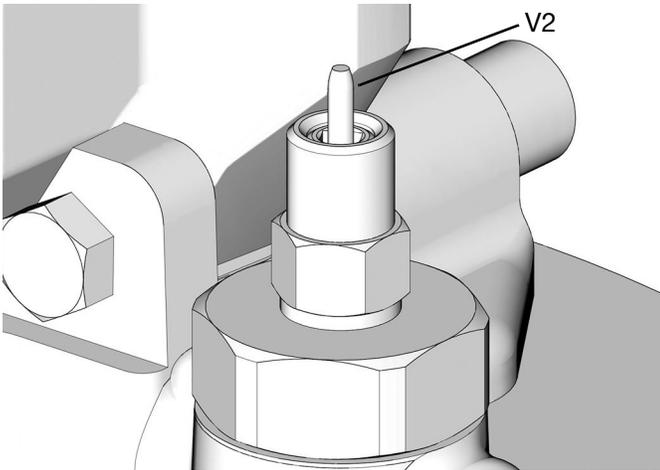


FIG. 17

When the fluid refilling path closes, the refilling line (GG) pressurizes and brings the remote fill station pump (AA) to a pressurized stall condition.

Fill/Refill the Tank

1. Pull and hold the fill valve pressure relief knob (FF) long enough to relieve line pressure between the fill valve (EE) and the Auto-Fill Shut Off valve (V) (FIG. 19).
2. Verify the Auto-Fill Shut Off pin (V2) is down, indicating it is reset (FIG. 18).

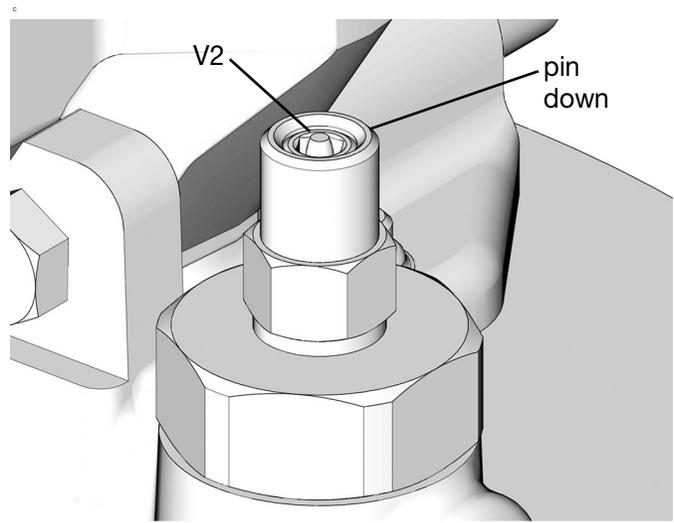


FIG. 18

3. Remove the dust cover (DC) from the fill coupler (FC) on the fill valve (EE) (FIG. 19).

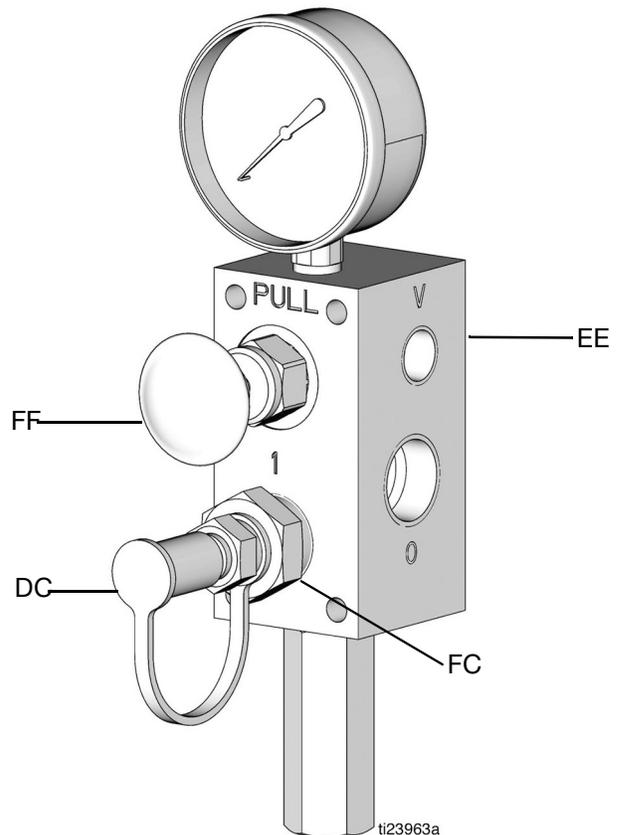


FIG. 19

4. Connect the supply hose (GG) between the remote fill station pump (AA) and the fill coupler (FC) port marked with an "I" (FIG. 16).
5. Start the remote fill station pump (AA).
6. When the tank (K) is filled:
 - The remote fill station pump (AA) stalls (dead-heads),
 - The Auto-Fill Shut Off pin (V2) pops up (FIG. 20),
 - The pressure gauge needle rises to the set pressure (FIG. 19).

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

7. Turn off the remote fill station pump (AA) (FIG. 16).
8. Pull and hold the fill valve pressure relief knob (FF) long enough to relieve line pressure between the fill valve (EE) and the Auto-Fill Shut Off valve (V) and between the remote fill station pump (AA) and the fill valve (EE) (FIG. 19).

NOTE: The length of time to vent the pressure varies upon system design and installation. In some installations, Step 8 may need to be repeated until pressure is relieved.

9. Disconnect the supply hose (GG) from the fill coupler (FC) (FIG. 19).
10. Replace the dust cover (DC) over fill coupler (FC) (FIG. 19).

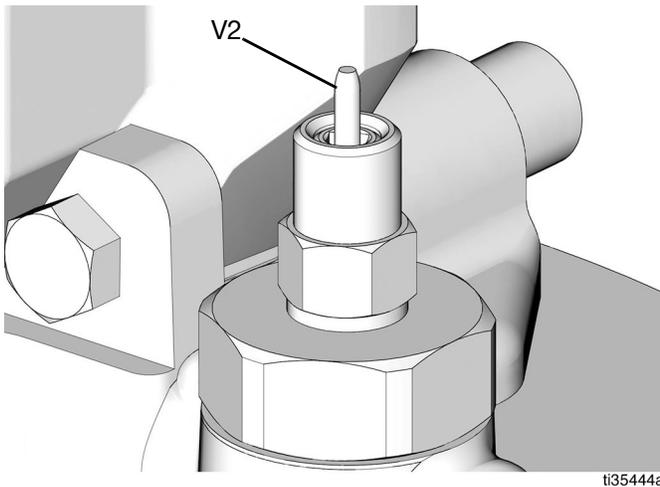
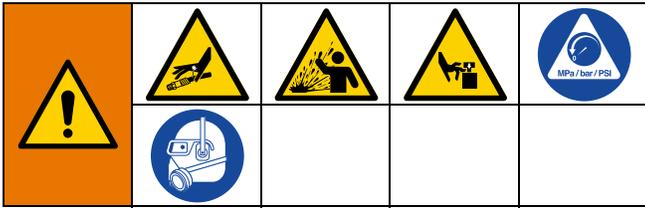


FIG. 20

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Troubleshooting



1. Follow **Pressure Relief Procedure**, page 5, before checking or repairing the pump.

Problem	Cause	Solution
<p>The refilling pump stalls and pressurized, but it is not filling the tank.</p>	<p>The Auto-Fill Shut Off valve is in the closed position and has not been reset.</p>	<ol style="list-style-type: none"> 1. Disconnect the refilling line. 2. Pull and hold the fill valve pressure relief knob (FF) long enough to relieve line pressure between the fill valve (EE) and the Auto-Fill Shut Off valve (V) and between the remote fill station pump (AA) and the fill valve (EE). 3. Verify the valve pin is down. See Fill/Refill the Tank, page 12.
	<p>The filter (CC) in the refilling line (GG) is clogged.</p>	<p>Remove and clean the filter (CC). If the filter is damaged, replace with a new filter.</p>

Technical Specifications

Compact Dyna-Star Electric Pump	US	Metric
Maximum Working Pressure	3500 psi	24.1 MPa, 241.3 bar
Materials of Construction	zinc plated steel parts, buna-N, polyethylene, PTFE, fluoroelastomer	

California Proposition 65

 **WARNING:** This product can expose you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65warnings.ca.gov.

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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Graco Information

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

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

TO PLACE AN ORDER, contact your Graco distributor or call to identify the nearest distributor.

Phone: 612-623-6928 **or Toll Free:** 1-800-533-9655, **Fax:** 612-378-3590

All written and visual data contained in this document reflects the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.

Original instructions. This manual contains English. MM 3A6932

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