

# Inflatable Wiper Retrofit Kit

309549 rev.B

**For Sanitary Ram Plates**

**Part No. 15B111, for 21-1/2 in. Plate**

**Part No. 15B114, for 22-1/2 in. Plate**



**Read warnings and instructions.**

**⚠ CAUTION**

**WIPER SEAL LUBRICATION**

The wiper seal must be lubricated with a compatible sanitary grease to ensure minimal friction between the tube, plate and sides of the container. The sides of the container will be lubricated by the material. Failure to lubricate the seal will result in wiper seal damage.

PROVEN QUALITY. LEADING TECHNOLOGY.

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# Contents

Warning .....	3	Operation .....	9
Scope .....	4	Cleaning .....	10
Installation .....	5	Warranty .....	12
		Graco Phone Numbers .....	12

## Manual Conventions

### Warning


**WARNING**



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


Symbols, such as moving parts (shown above), alert you to a specific hazard and direct you to read the indicated hazard warnings (page 3) for detailed information.

### Caution

**CAUTION**

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

### Note



A note calls attention to additional helpful information.



## WARNING



### EQUIPMENT MISUSE HAZARD

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

- This equipment is for professional use only.
- Read all instruction manuals, tags, and labels before operating the equipment.
- Use the equipment only for its intended purpose. If you are not sure, call your Graco distributor.
- Do not alter or modify this equipment. Use only genuine Graco parts and accessories.
- Check equipment daily. Repair or replace worn or damaged parts immediately.
- Do not exceed the maximum working pressure of the lowest rated system component. Refer to the separate component manuals for the maximum working pressure of this equipment.
- Use fluids and solvents which are compatible with the equipment wetted parts. Refer to the Technical Data section of all equipment manuals. Read the fluid and solvent manufacturer's warnings.
- Route hoses away from traffic areas, sharp edges, moving parts, and hot surfaces. Do not expose Graco hoses to temperatures above 82°C (180°F) or below -40°C (-40°F).
- Wear hearing protection when operating this equipment.
- Comply with all applicable local, state, and national fire, electrical, and safety regulations.



### MOVING PARTS HAZARD

Moving parts can pinch or amputate fingers or other body parts. Pressurized equipment can start accidentally and cause serious injury.

- Keep clear of moving parts.
- Do not operate equipment with protective guards or covers removed.
- Before checking or servicing equipment, follow the **Pressure Relief Procedure** on page 9. Disconnect power or air supply.
- Do not move or lift pressurized equipment.

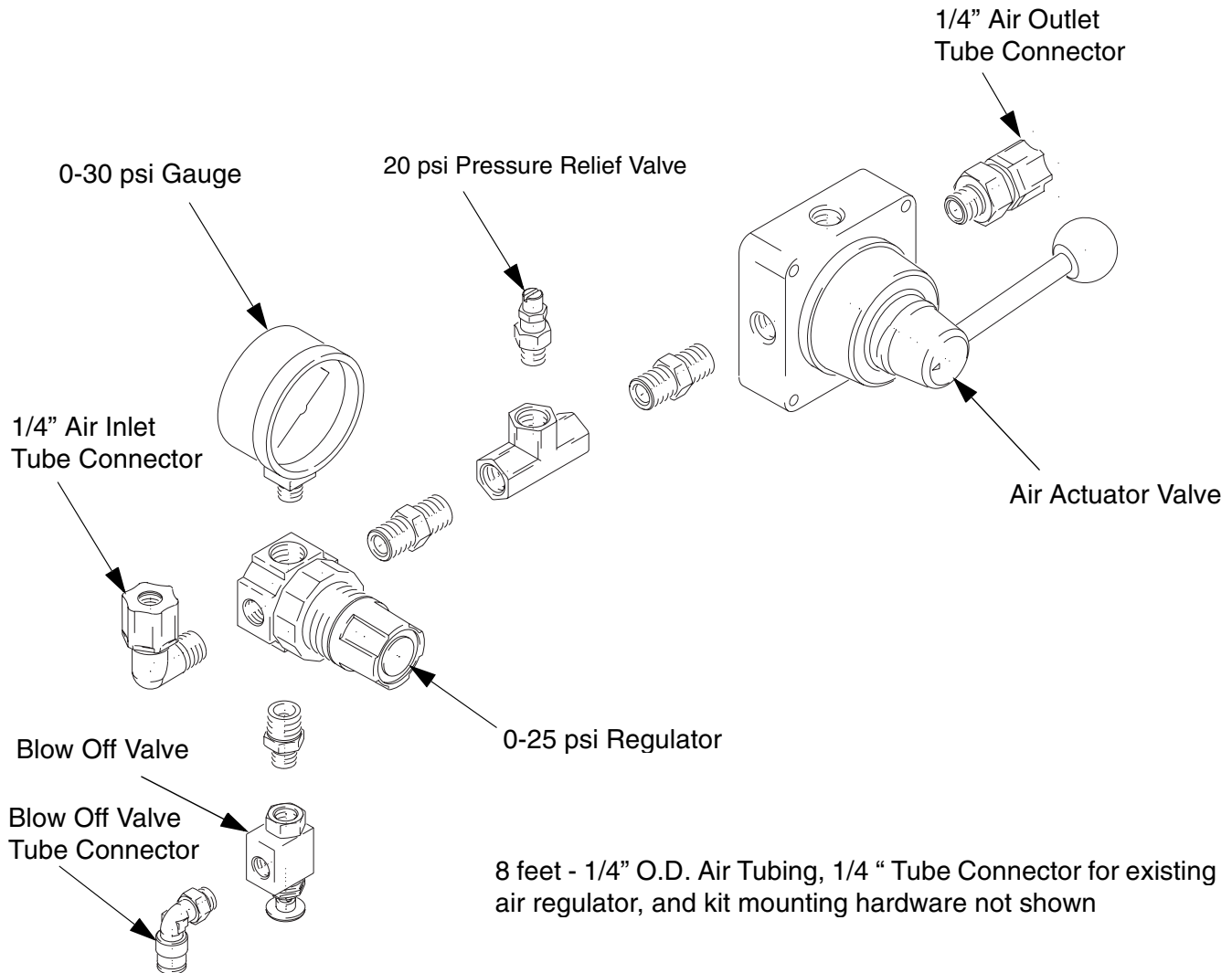
# Scope

The Retrofit Kit for ram plates with inflatable wipers can be field installed in less than one hour. Tools required include:

- Standard blade screw driver

- Adjustable wrench
- Electric drill with 1/8" drill bit

The Retrofit Kit assembly consists of the parts shown in FIG. 1.



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**FIG. 1. Retrofit Kit**

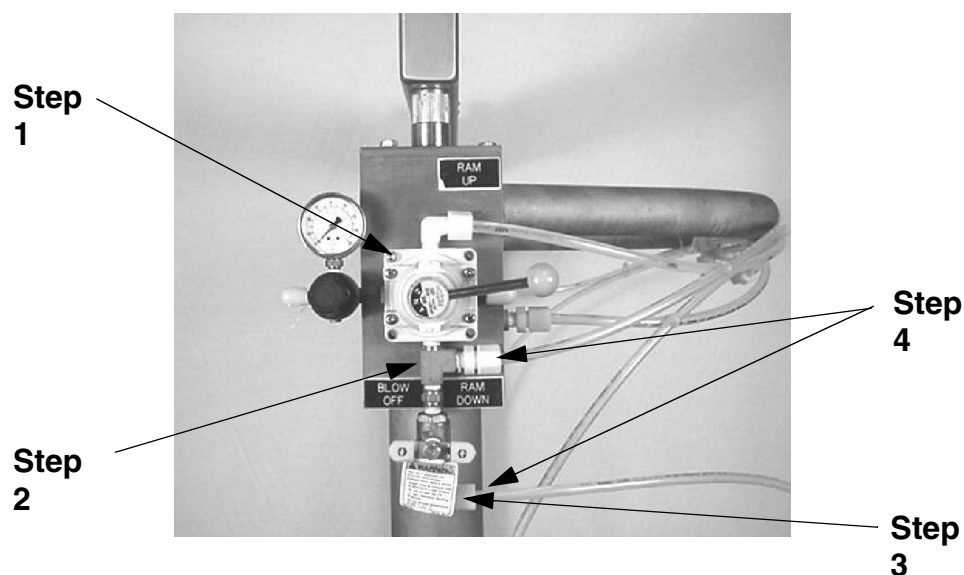
# Installation

Handle all parts carefully when removing them from their shipping packaging.

Relieve the pressure (page 9), and remove air supply to unit prior to installing this kit.

**See FIG. 2 for steps 1-4.**

1. Remove mounting screws.
2. Remove remaining fittings from bottom of air actuator.
3. Remove air tube elbow.
4. Remove tubing connections from bottom of actuator valve.



**FIG. 2. Standard Graco Ram Control**

See FIG. 3 for steps 5-7.

5. Remove 3 legend plates from bracket (pry off with screw driver).
6. Reinstall air tube elbow into bottom port of air actuator valve.
7. Remove plug from bottom of air regulator. Install supplied air tube connector (1/8 npt(m) x 1/4" tube O.D.).

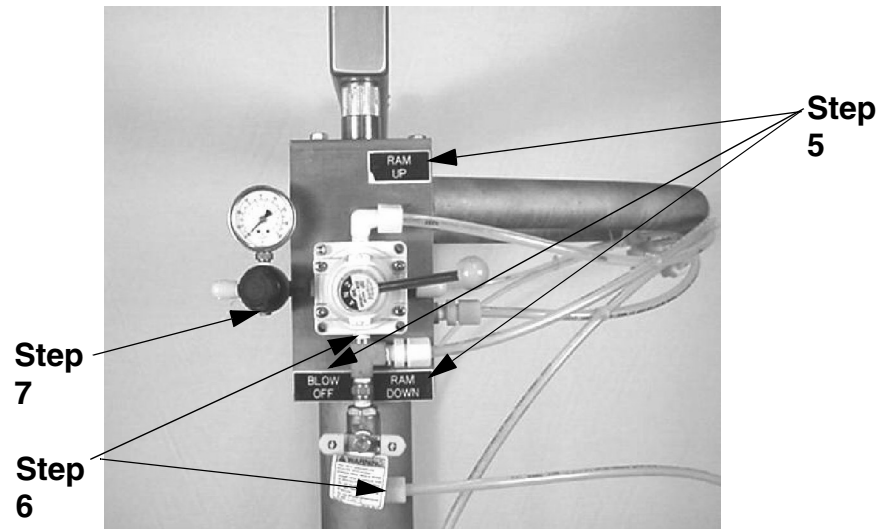
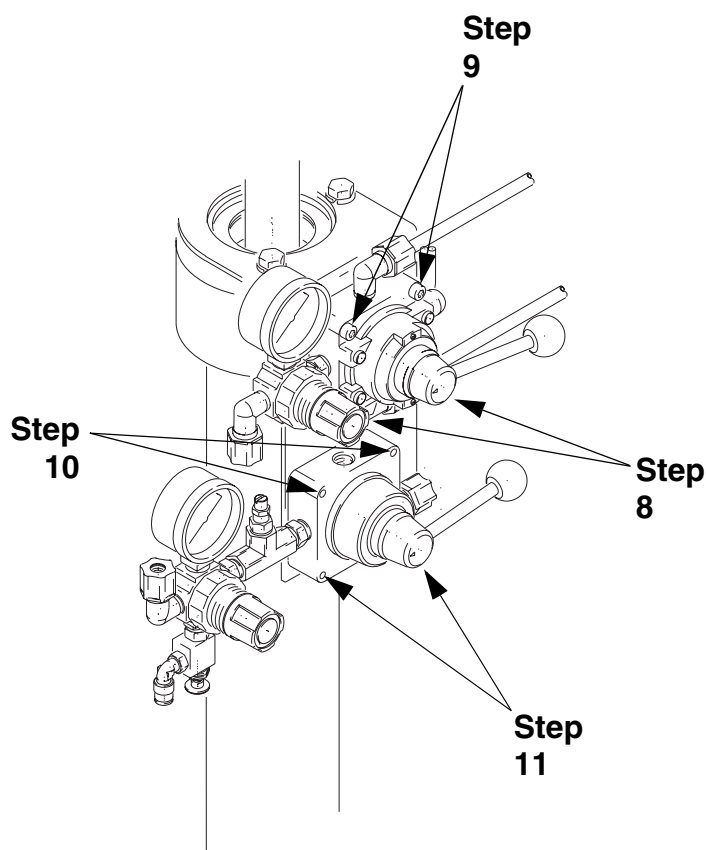


FIG. 3. Standard Graco Ram Control

See FIG. 4 for steps 8-11.

8. To remount existing ram air actuator, align bottom two holes of actuator with top two holes of mounting plate. Use one screw and nut to anchor to the plate.
9. Drill holes through the mounting plate by using the top two holes of the actuator as a guide. Secure actuator to plate with remaining screws and nuts.
10. To mount the new kit, align the top holes of the actuator with the bottom holes of the mounting plate. Use one screw and nut (provided with kit) to anchor to the plate.
11. Drill two holes through the mounting plate by using the bottom two holes of the actuator as a guide. Secure actuator to plate with remaining screws and nuts (supplied).



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**FIG. 4. New Control Panel (with inflatable wiper regulation)**

See FIG. 5 for steps 12-14.

12. Cut 1/4" tubing (supplied with kit) to length and install between the tube connector at ram regulator and wiper air control inlet.

13. Connect 1/4" tubing from blow off valve to the ram plate blow off fitting. When cutting tubing to length, leave adequate amount to ensure proper operation throughout ram travel.

14. Connect 1/4" tubing from wiper air control outlet to the ram plate wiper. When cutting tubing to length, leave adequate amount to ensure proper operation throughout ram travel.

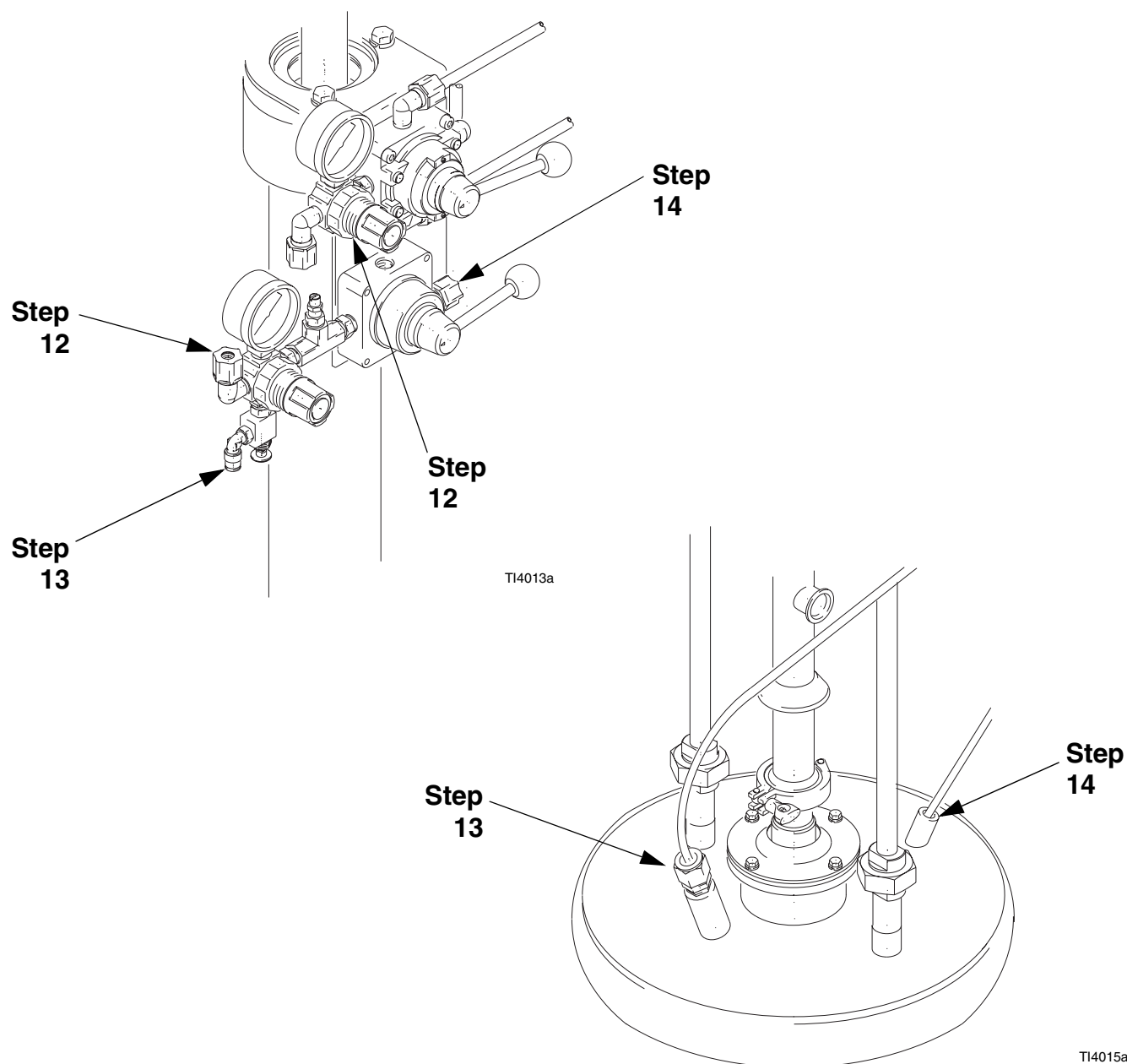


FIG. 5. New Control Panel (with inflatable wiper regulation)



# Operation

Your new sanitary ram plate offers greater versatility and value-added features over conventional versions:

- When deflated, the seal retracts inside the outer diameter of the plate weldment.
- The plate has no loose parts to be misplaced during cleaning.
- The seal can be removed with little effort.
- The weldment is constructed of 316 SST and contains a universal mount for pumps.

The seal pressure must be adjusted to meet your process requirements. Process material viscosity, ram pressure, drum diameter, and pumping rate are key factors in determining the proper seal pressure. **Typically, for standard 55-gallon drum applications, set the pressure regulator between 10 and 14 psi.** The maximum pressure rating for the seal is 25 psi. The safety relief valve is set to 20 psi to prevent over-pressurization.

Use trial and error to find the right combination of ram pressure and seal pressure. To minimize seal wear, use the lowest possible air pressure while still preventing material blow-by.

- If both ram and seal pressure are too high, the seal will fail prematurely.
- If ram and/or seal pressure is too low, the pump may not prime or the drum will not be sealed properly.

## Pressure Relief Procedure



### WARNING



Read the warnings on page 3.

1. Relieve the pressure as explained in your separate pump or system manual.
2. Turn off the air to the ram.

## Sequence of Operation

### Initial Conditions:

1. The ram is fully raised.
2. The seal is deflated.
3. The seal is lubricated with appropriate sanitary grease.
4. The pump is off.

### At the Operator Control Station:

1. Position a new process drum under the ram. If bag liner is present, secure top of bag to outside of drum.
2. Slowly lower the ram plate into the drum.
3. When plate to material contact is made, inflate the ram seal.
4. Turn the pump on.
5. When drum is empty, turn pump off.
6. Deflate ram seal.
7. If a vacuum has formed between the ram plate and the drum, push the button on the blow off valve to activate blow off.
8. Raise plate out of drum.



The blow off valve is typically used with highly viscous materials.

# Cleaning

Flush the unit before taking it apart for cleaning. Flush the system with an over-sized container of cleaning solution around the ram plate. Run the pump at low speed and circulate the cleaning solution through the system.

## Flushing Safety

To reduce the risk of fluid injection injury, static sparking, or splashing, follow the Pressure Relief Procedure (page 9) and remove the spray tip (spray guns or spray valves only) before flushing. Hold a metal part of the gun firmly to the side of a metal pail and use the lowest possible fluid pressure during flushing.

## Remove the Inflatable Seal

The inflatable seal must be removed from the **bottom** of the ram plate. The bottom lip diameter is smaller than the top. **Do not use sharp objects to remove the seal.** Clean the seal and the ram plate.

1. Disconnect the air tube (A) from the seal fitting. The fitting must be removed to allow passage of the stem through the plate access tunnel.

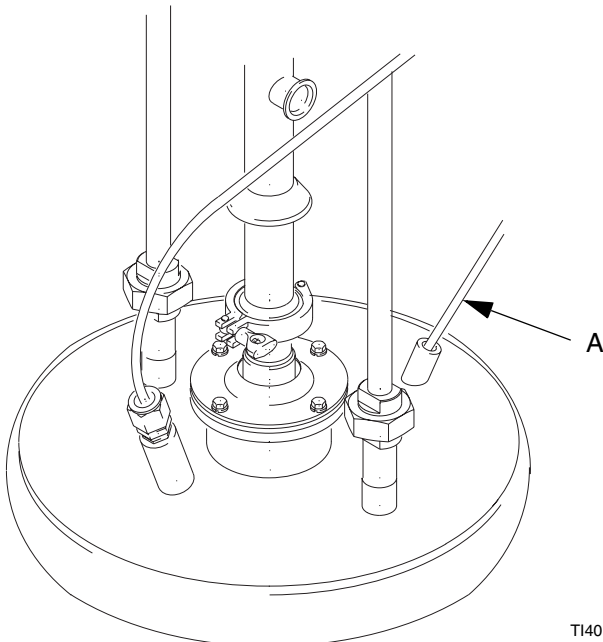


FIG. 6

2. On the side opposite the stem and starting with the top edge, peel the seal downward. The bottom side of the plate has a smaller diameter than the top to facilitate easy removal and installation.



FIG. 7

3. Continue peeling the top edge of the seal along the diameter of the plate. Note that the top edge is twisted downward. Once the seal is loose, gently pull the stem from the tunnel.



FIG. 8

## Install the Inflatable Seal

Liberally lubricate the ram plate channel and seals with sanitary grease before reassembly, checking that the inflatable seal is evenly positioned within the channel.

1. Insert the stem into the tunnel first. The base of the stem must be properly aligned with the access hole. ***Failure to properly align the stem base may result in stem damage and/or faulty operation.***



FIG. 9

2. Continue sliding the top edge of the seal over the lower edge of the plate. Be sure to maintain the seal stem position relative to the plate. The seal is designed to stretch a small amount to fit snugly inside the plate groove.



FIG. 10

3. Reconnect the air tube to the seal fitting. Temporarily inflate the seal to ensure proper operation.

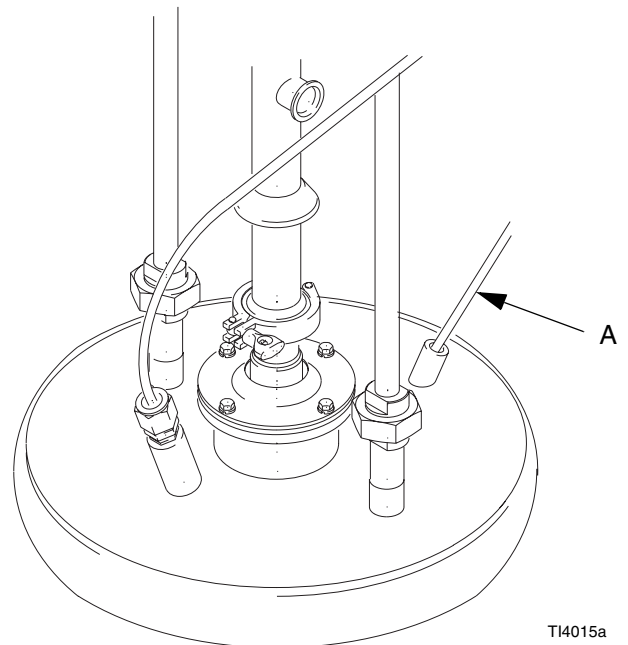


FIG. 11

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

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

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

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**1-800-367-4023 Toll Free**

**612-623-6921**

**612-378-3505 Fax**

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Printed in USA 309549B

08/2003