

# Displacement Pump

311485K

EN

**- Use with Architectural Coatings, Paints, Roof Coatings  
and Below Grade Coatings -**

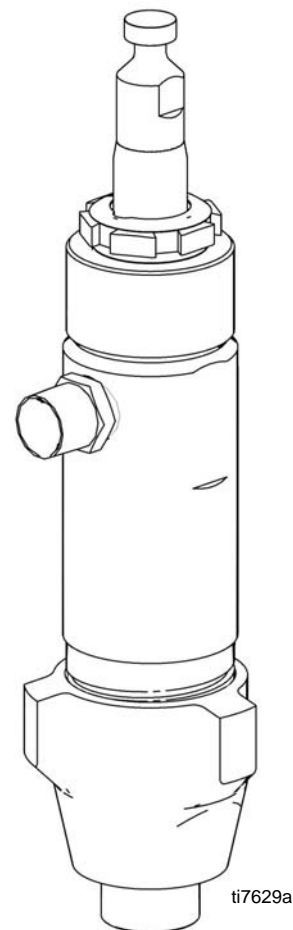
## Model 287834

4000 psi (27.6 MPa, 275.8 bar) Maximum Working Pressure



### Important Safety Instructions

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








ti7629a



# 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, 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.

 <b>WARNING</b>	
 	<b>EQUIPMENT MISUSE HAZARD</b> Misuse can cause death or serious injury. <ul style="list-style-type: none"> <li>• Do not operate the unit when fatigued or under the influence of drugs or alcohol.</li> <li>• Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See <b>Technical Data</b> in all equipment manuals.</li> <li>• Use fluids and solvents that are compatible with equipment wetted parts. See <b>Technical Data</b> in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS from distributor or retailer.</li> <li>• Do not leave the work area while equipment is energized or under pressure. Turn off all equipment and follow the <b>Pressure Relief Procedure</b> when equipment is not in use.</li> <li>• Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.</li> <li>• Do not alter or modify equipment.</li> <li>• Use equipment only for its intended purpose. Call your distributor for information.</li> <li>• Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.</li> <li>• Do not kink or over bend hoses or use hoses to pull equipment.</li> <li>• Keep children and animals away from work area.</li> <li>• Comply with all applicable safety regulations.</li> </ul>
 	<b>MOVING PARTS HAZARD</b> Moving parts can pinch, cut or amputate fingers and other body parts. <ul style="list-style-type: none"> <li>• Keep clear of moving parts.</li> <li>• Do not operate equipment with protective guards or covers removed.</li> <li>• Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the <b>Pressure Relief Procedure</b> and disconnect all power sources.</li> </ul>

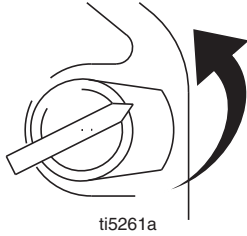
# Operation

## Pressure Relief Procedure

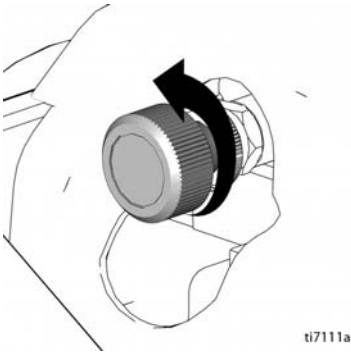
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System pressure must be manually relieved to prevent it from starting or spraying accidentally. Fluid under high pressure can be injected into the skin and cause serious injury. To reduce risk of injury from injection, follow this procedure whenever you are instructed to relieve pressure, stop spraying, service equipment or install or clean spray tip (read **Warnings**, page 2).

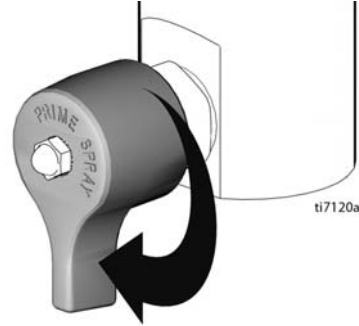
1. Set pump valve OFF. Turn engine OFF.



2. Turn pressure to lowest setting. Trigger gun into pail to relieve pressure.



3. Open prime valve (vertical).

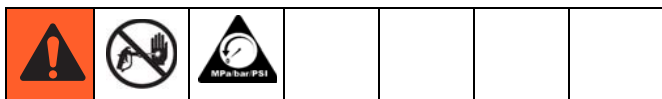


If you suspect that the spray tip or hose is completely clogged, or that pressure has not been fully relieved after following the steps above, **VERY SLOWLY**, loosen tip guard retaining nut or hose end coupling to relieve pressure gradually, then loosen completely. Then clean tip and hose.

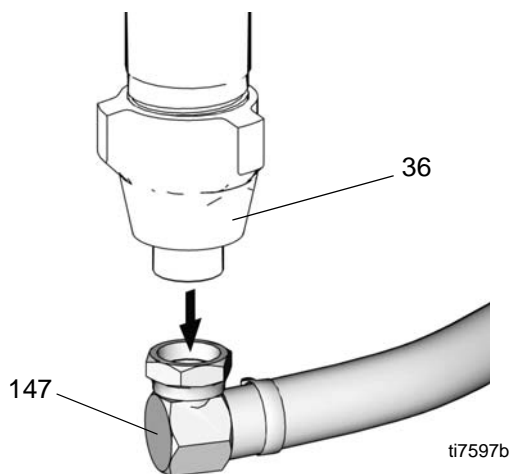
# Service

## Removal

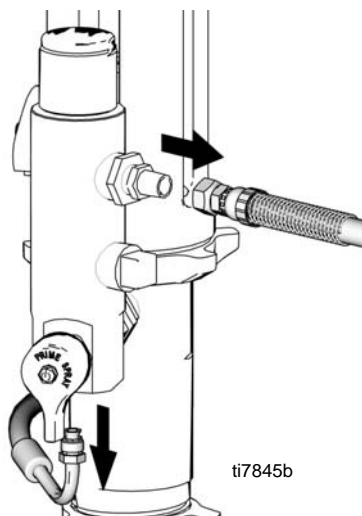
1. Flush pump (36). Stop pump on down stroke if possible.



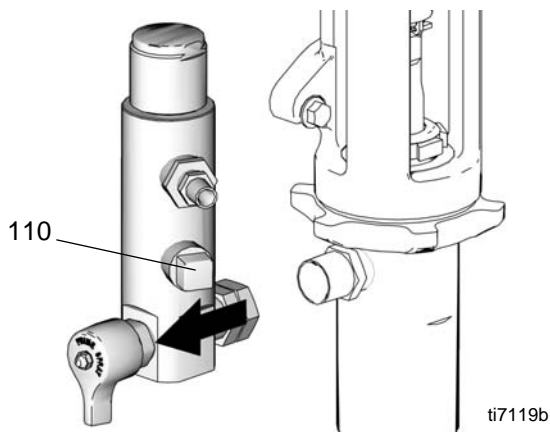
2. Perform **Pressure Relief Procedure**, page 3.
3. Remove suction set (147) from pump (36).



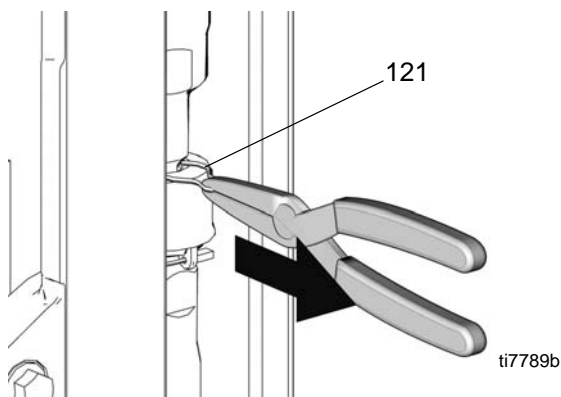
4. Remove paint and drain lines from filter housing.



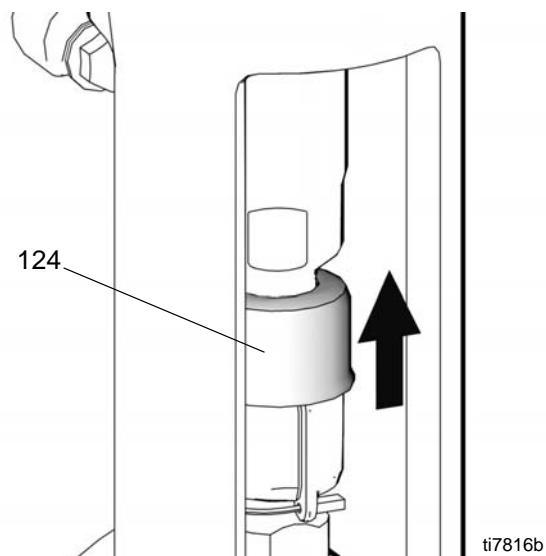
5. Using a wrench, loosen filter housing fitting (110) and remove housing from pump.



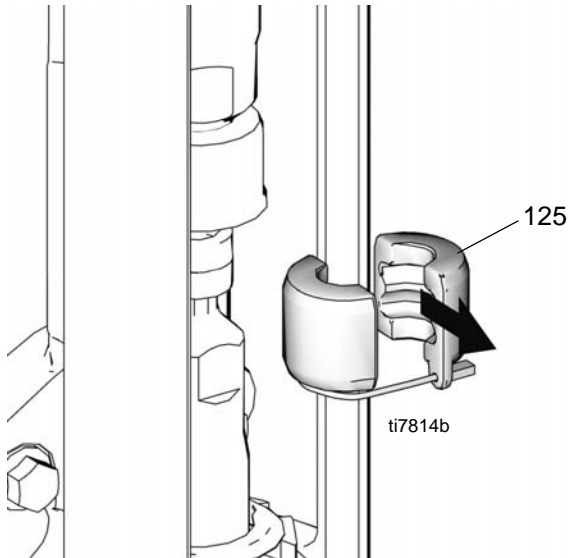
6. Using a pliers, remove clip (121).



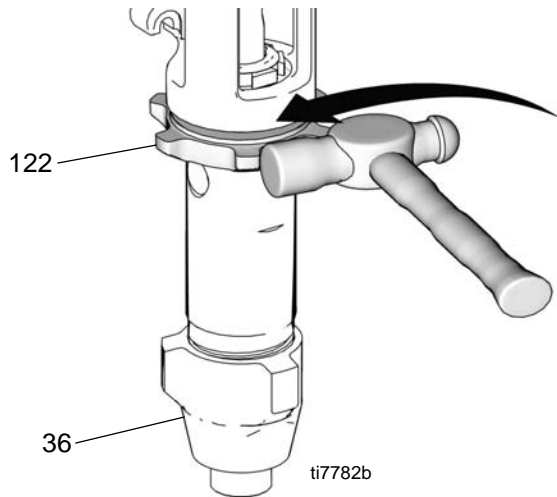
7. Slide cover (124) up.



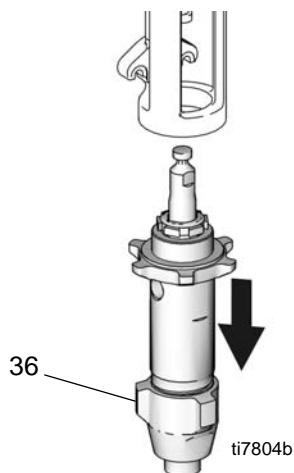
8. Separate coupling (125) and remove.



9. Using a hammer, loosen jam nut (122). Unscrew pump (36) from power head.

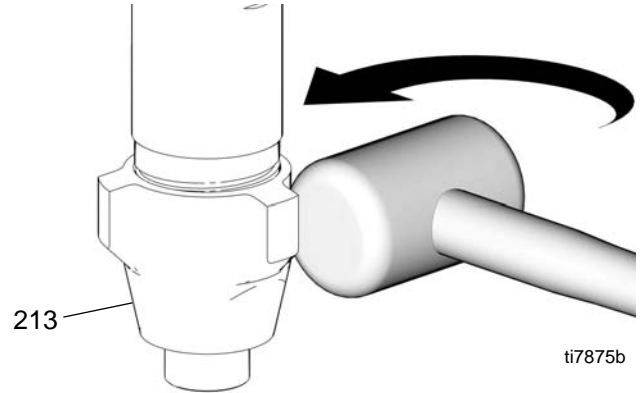


10. Remove pump (36).

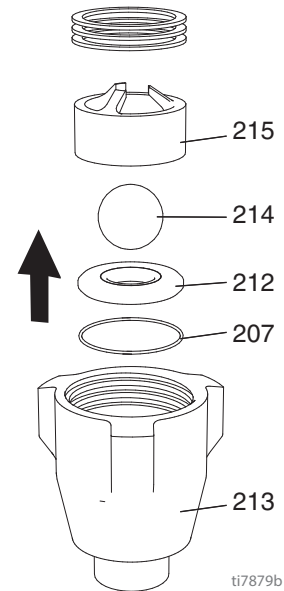


## Ball Adjustment

1. Using a hammer, loosen and remove intake valve (213).

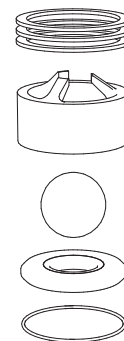


2. Disassemble and clean all parts and o-rings (207).

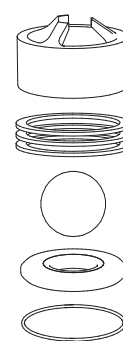


3. Select proper ball travel for material sprayed. Reassemble as shown.

Shortest Ball Travel  
(for light material)



Longest Ball Travel  
(for heavy material)

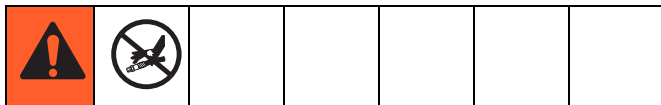
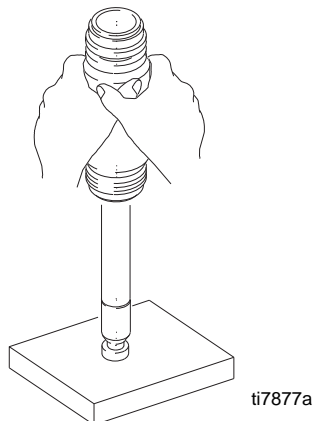


## Piston Rod Assembly

1. Tap piston rod out of cylinder with a hammer or flip over and tap piston rod out against bench.

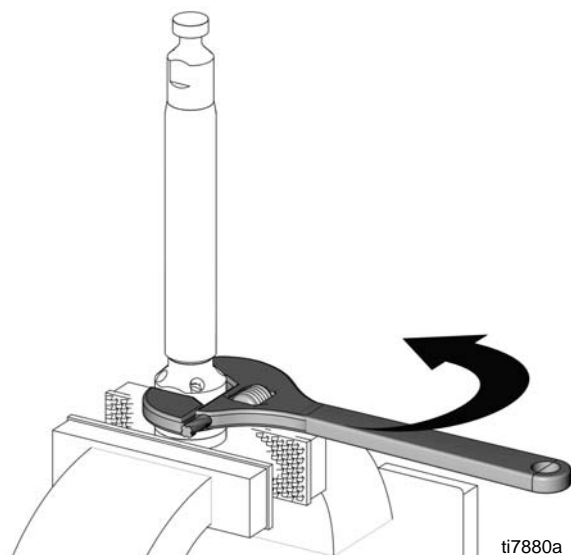
**NOTE:** Sleeve may come out of cylinder with piston rod.

2. If piston rod and sleeve did not separate, invert piston rod (222) and sleeve (220) and pound on hard surface until piston rod comes out of sleeve.

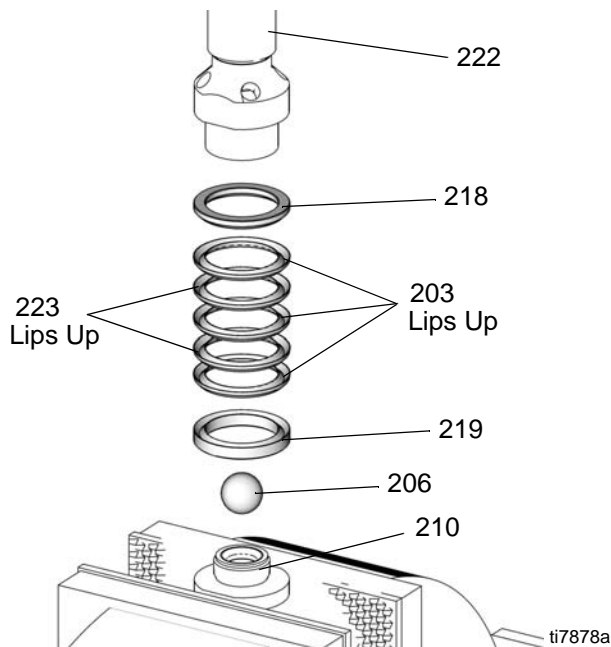


**Component Rupture Hazard.** Do not clean or wipe piston valve threads. Cleaning the piston valve threads could destroy the special sealing patch and cause the piston valve to come loose during operation, causing pump bursting and possible serious bodily injury.

3. Hold piston valve (210) securely in vice. Using a wrench, separate piston valve (210) from rod (222).



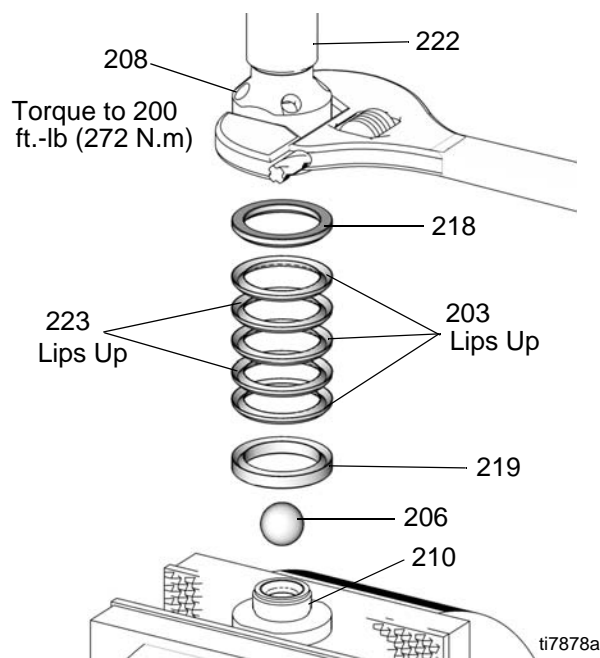
4. Remove parts. Note orientation of parts for reassembly.



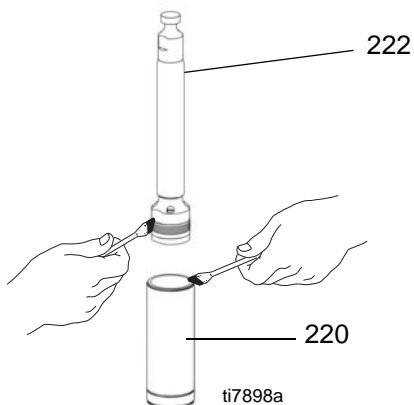
5. Clean all parts with a compatible solvent and inspect them for wear or damage. Replace any worn parts.

## Reassembly

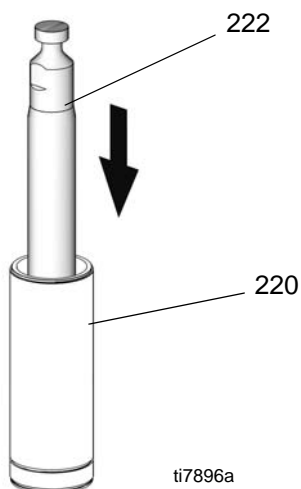
1. Soak all leather packings (237) in SAE 30W oil for at least 1 hour prior to assembly.
2. Alternately stack V-Packings (203) and V-Packings (223).



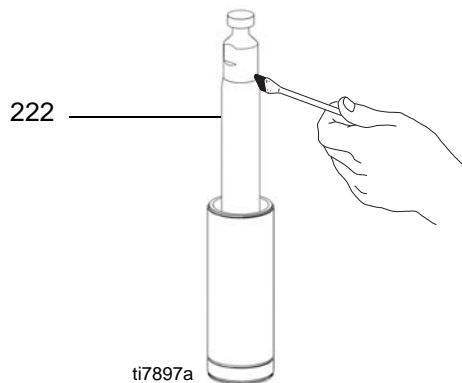
3. Grease piston rod (222) packings and top edge of sleeve (220).



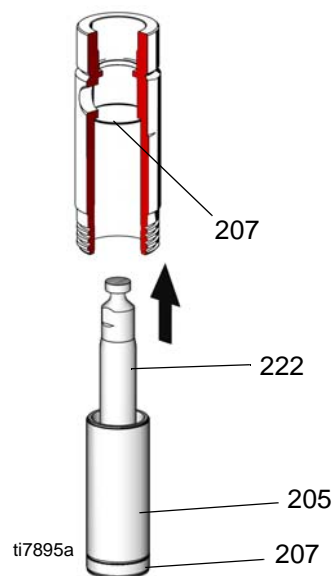
4. Carefully slide piston rod assembly (222) into top edge of sleeve (220).



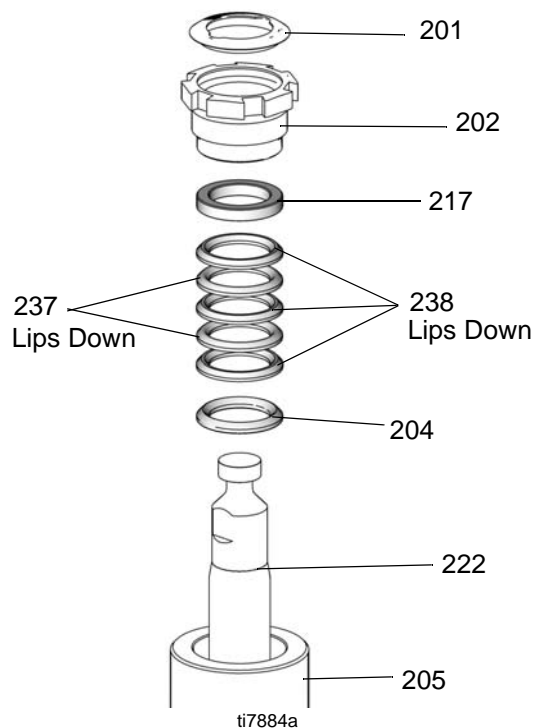
5. Grease top inch or two of piston rod (222) that will go through the cylinder throat packings.



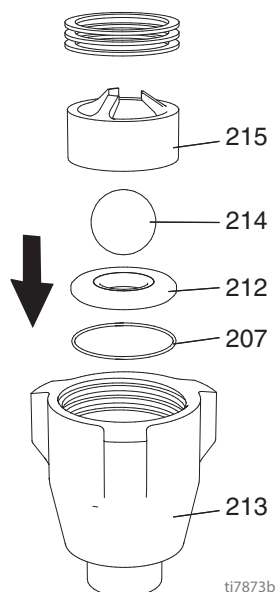
6. Grease o-ring (207) and place on sleeve. Slide one o-ring (207) inside cylinder (205). Slide sleeve/piston rod assembly (222) into bottom of cylinder.



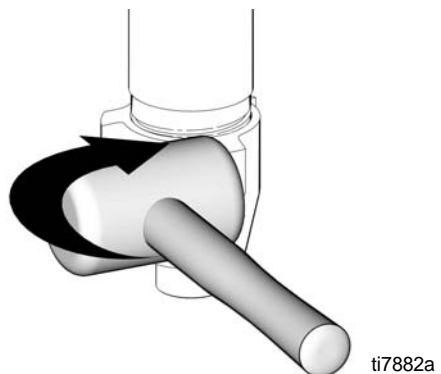
7. Install male gland (204) in cylinder (205).
8. Alternately stack UHMWPE packings (238) and leather packings (237) (note orientation).
9. Place female gland (217) in top of cylinder. Loosely install packing nut (202) and plug (201).



10. Reassemble intake valve (213) as shown.

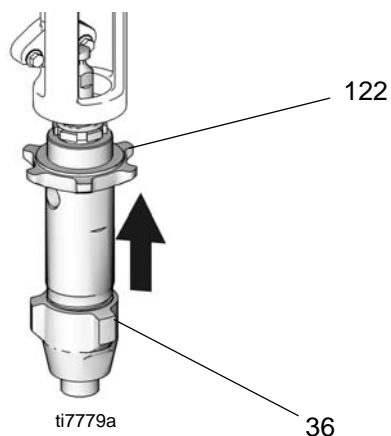


11. Place intake valve (213) assembly in vice. Install cylinder (205) assembly to intake valve. Torque to 350 ft-lb (475 N•m).

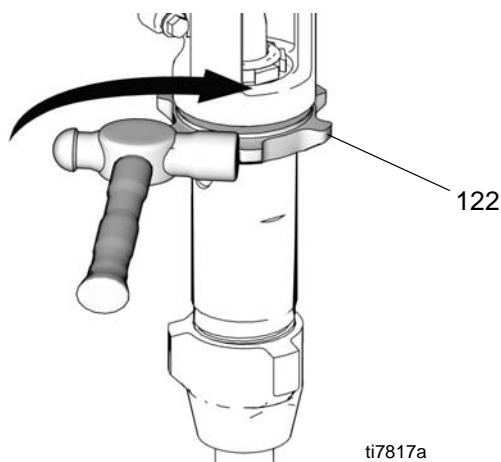


12. Torque packing nut (202) down to 50 ft-lb (68 N•m).

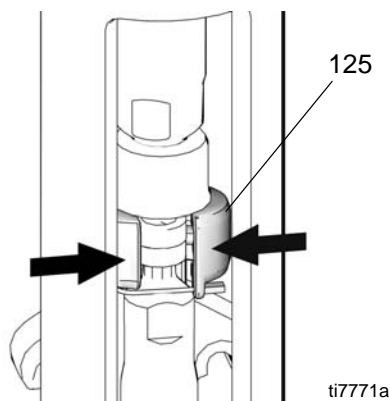
13. Screw jam nut (122) to bottom of pump threads (36). Screw pump completely up into power head.



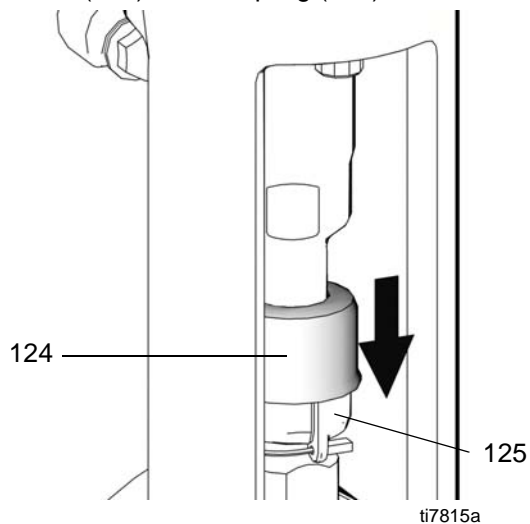
14. Hand tighten jam nut (122). Then tighten securely 1/8 to 1/4 turn with hammer or torque to 330 ft-lb (447.4 N•m).



15. Install coupling (125) around pump rod.

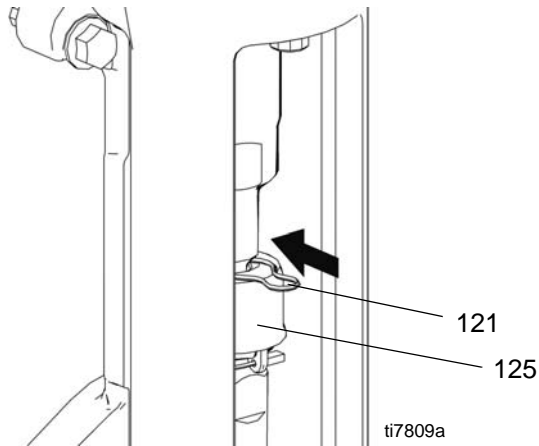


16. Slide cover (124) over coupling (125).

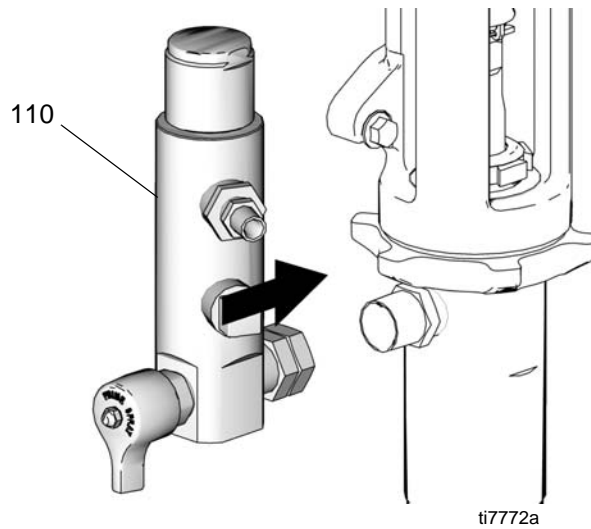




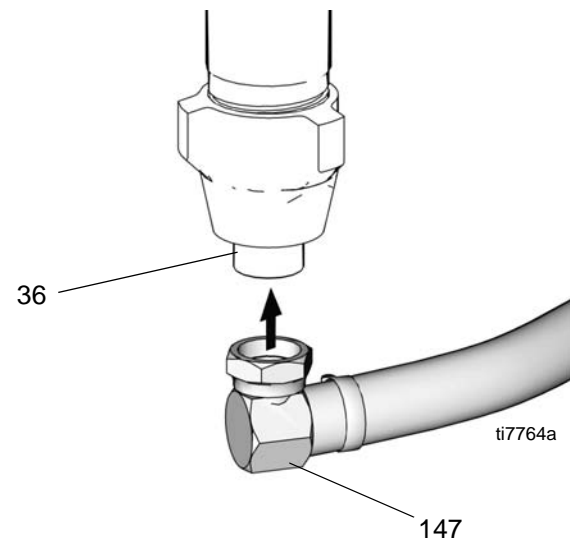
17. Replace clip pin (121) to secure.



18. Reinstall filter housing (110).



19. Connect suction hose (147) to pump outlet (36).

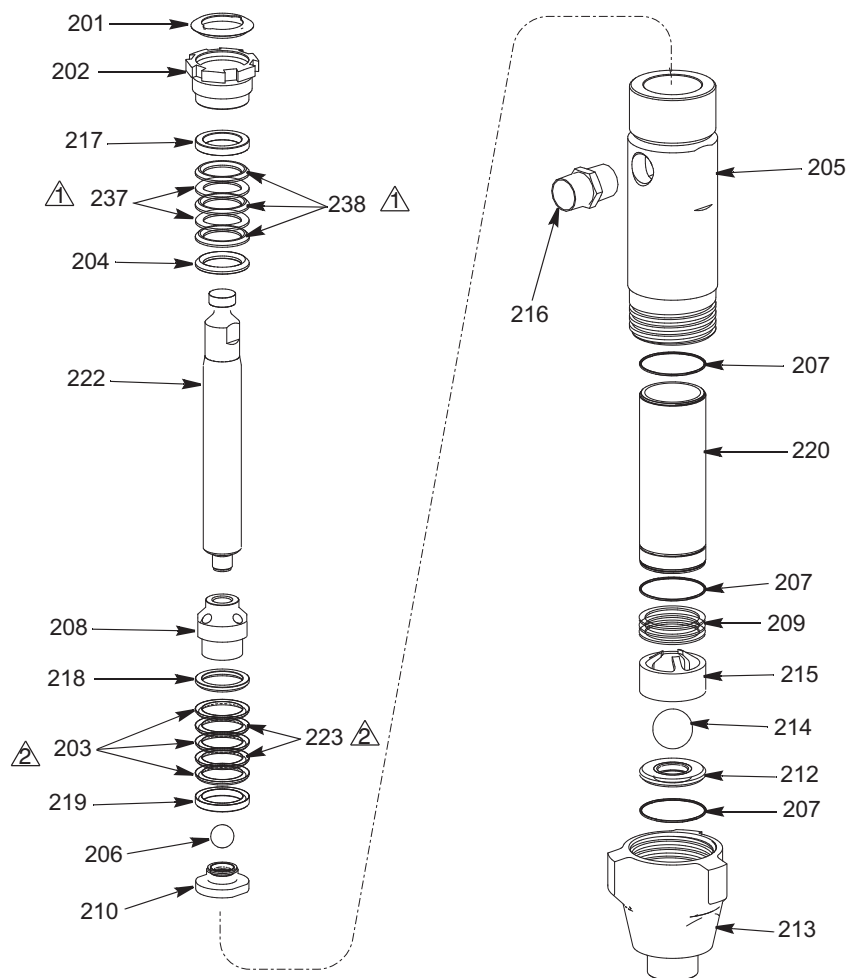


# Parts

Ref.	Part	Description	Qty	Ref.	Part	Description	Qty
201*	116385	PLUG	1	216	15H335	FITTING, nipple, 1 inch NPT	1
202	15G198	NUT, packing	1	217*	15H251	GLAND, female, piston steel	1
203*	15G285	V-PACKING, UHMWPE, blue	3	218*	15G282	GLAND, male	1
204*	15H250	GLAND, male, throat	1	219*	15G283	GLAND, female	1
205	287836	CYLINDER, pump	1	220	287833	SLEEVE, cylinder	1
206*	102972	BALL, sst, 0.875 in.	1	222	287832	ROD, piston	1
207*†	116377	PACKING, o-ring	3	223*	15G284	V-PACKING, brown	2
208	15G196	GUIDE, ball	1	237*	184307	PACKING, vee, leather	2
209	197306	SHIM, inlet	3	238*	108451	PACKING, vee, (UHMWPE)	3
210	287837	VALVE, piston	1	* These parts are included in repair kit 287835, which may be purchased separately.			
212†	287838	SEAT, carbide, includes 214 and 207	1				
213	15G195	HOUSING, intake (foo)	1	† These parts are also included in Carbide Seat Kit 287838, which may be purchased separately.			
214*†	108001	BALL, sst, 1.5 in.	1				
215	15G199	GUIDE, ball	1				

⚠ Assemble with lips facing up

⚠ Assemble with lips facing down



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## Notes

[illegible]

# 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](http://www.graco.com).

**TO PLACE AN ORDER**, contact your Graco distributor or call 1-800-690-2894 to identify the nearest distributor.

*All written and visual data contained in this document reflects the latest product information available at the time of publication.  
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*For patent information, see [www.graco.com/patents](http://www.graco.com/patents).*

*Original instructions. This manual contains English. MM 311485*

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