

Displacement Pump

311845J

EN

**For portable spray application of architectural paints and coatings.
For professional use only.
Not approved for use in European explosive atmosphere locations.**

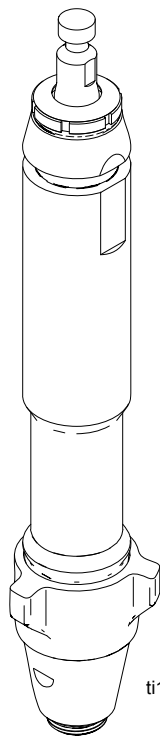
Model 24B748, 288467, 288468, 288819, 24M629

3300 psi (22.8 MPa, 25 bar) Maximum Working Pressure



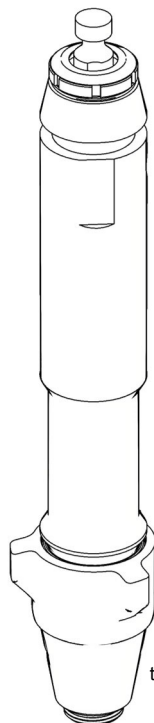
Important Safety Instructions

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



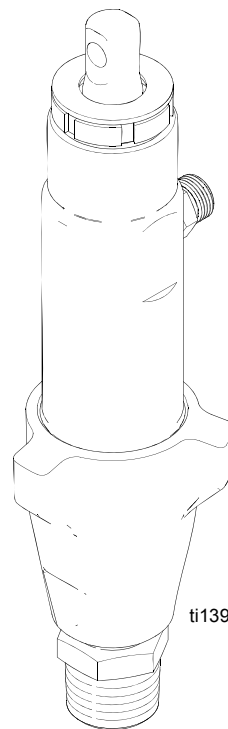
ti18706a

Model 24M629



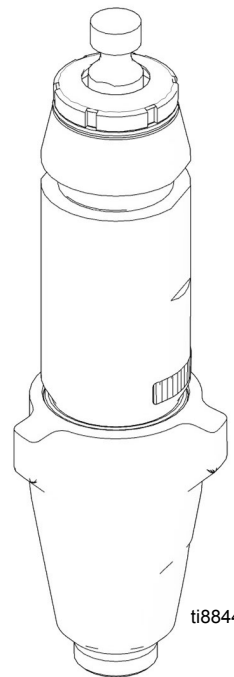
ti9568a

Model 288819



ti13921a

Model 24B748






ti8844a

Model 288467/288468







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 symbol refers to procedure-specific risk. Refer back to these warnings. Additional, product-specific warnings may be found throughout the body of this manual where applicable.

|  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 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 forms from distributor or retailer. • Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer’s replacement parts only. • Do not alter or modify equipment. • 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 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 in this manual. Disconnect power or air supply. |
| | <p>CALIFORNIA PROPOSITION 65</p> <p>This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm. Wash hands after handling.</p> |

Service

Pressure Relief Procedure

| | | | | | | |
|---|---|---|---|--|--|--|
|  |  |  |  | | | |
| <p>The system pressure must be manually relieved to prevent the system from starting or spraying accidentally. To reduce the risk of an injury from accidental spray from the gun, splashing fluid, or moving parts, follow the Pressure Relief Procedure whenever you,</p> <ul style="list-style-type: none"> are instructed to relieve the pressure stop spraying check or service any of the system equipment install or clean the spray nozzle. | | | | | | |



1. Engage trigger lock.
2. Turn engine ON/OFF switch to OFF.
3. Move pump switch to OFF and turn pressure control knob fully clockwise.
4. Unlock trigger lock. Hold metal part of gun firmly to side of grounded metal pail and trigger gun to relieve pressure.
5. Engage the trigger lock.
6. Open all fluid drain valves in the system, having a waste container ready to catch drainage. Leave drain valve(s) open until you are ready to spray again.

If you suspect the spray tip or hose is 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. Clear hose or tip obstruction.

Tools Needed

- Vise
- 12-inch adjustable, open-end wrench (2)
- Hammer, 20 oz. maximum
- Small screwdriver
- Throat Seal Liquid
- Pick or long small screwdriver

Cleaning and Inspecting Parts

| | | | | | | |
|--|--|--|--|--|--|--|
|  |  | | | | | |
| <p>Never use a sharp or pointed tool to remove sleeve or other components which could result in pump rupture and cause serious bodily injury. If the sleeve cannot be removed easily, return the sleeve and cylinder to an authorized Graco distributor for removal.</p> | | | | | | |

- Clean and inspect all parts. Replace worn or damaged parts.

| Component | What to look for |
|---------------------------------------|-------------------|
| Ball seats in intake valve and piston | Nicks or wear |
| Inside sleeve | Worn or scratched |
| Piston rod | Worn or scratched |

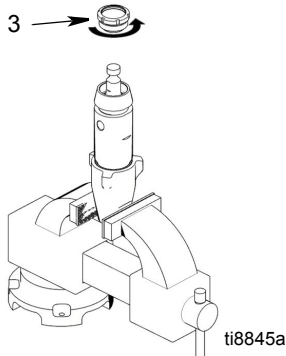
- Remove and clean the sleeve when you are repacking the pump.

Repair

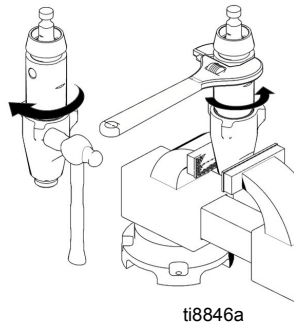
See your sprayer instruction manual for complete instructions for removing and installing the pump in your sprayer.

Disassembly

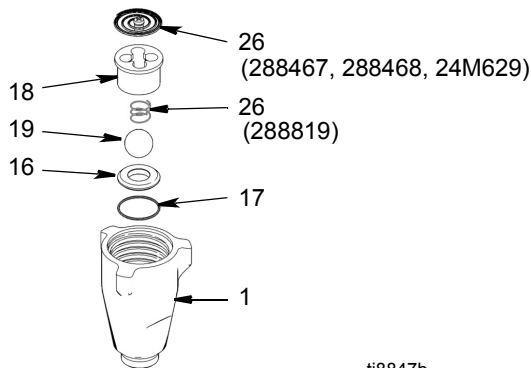
1. Remove packing nut (3).



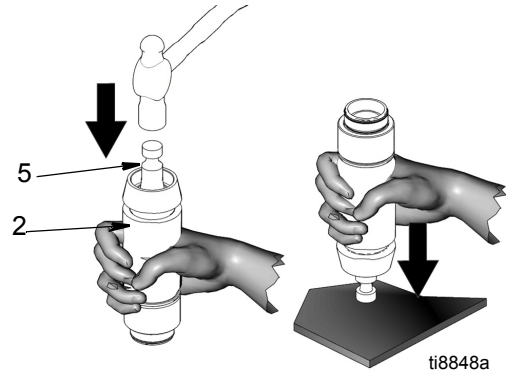
2. Unscrew intake valve from cylinder.



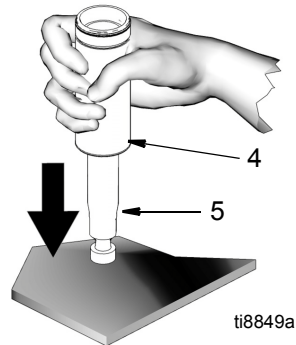
3. Disassemble intake valve. Clean and inspect o-ring (17). You may need to use a pick to remove o-ring. **NOTE:** Spring (26) for model 288819 is optional and is not included with the pump.





4. Use a hammer to tap piston rod (5) out of cylinder (2), or flip pump over and tap piston rod out against work bench.

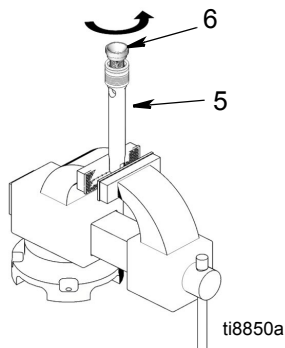


5. Remove piston rod (5) from sleeve (4).

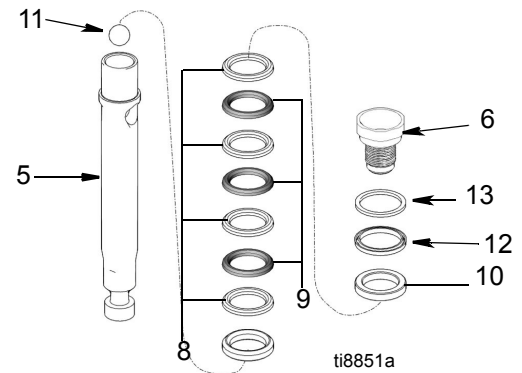


| | | | | | | |
|--|---|--|--|--|--|--|
|  |  | | | | | |
| <p>Do not clean or wipe piston valve (6) threads. Cleaning the piston valve threads could destroy the special sealing patch and cause the piston valve to come loose during operation.</p> | | | | | | |

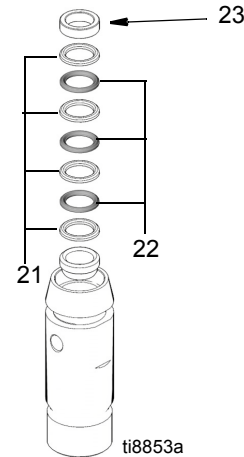
- Unscrew piston valve (6) from piston rod (5). Clean and inspect parts. The piston has a special thread locking/sealing patch. Do not remove the patch. The patch allows for disassembly/assembly procedures before it is necessary to apply thread sealant to the threads.



- Remove packing and glands from piston rod. Note orientation for installation.



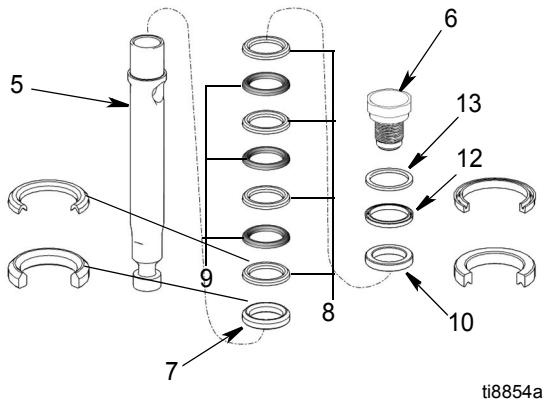
- Remove throat packings and glands from cylinder. Discard throat packings and glands.



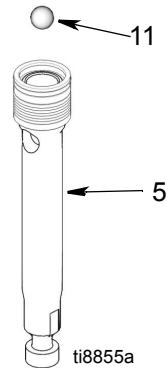
Reassembly

1. Stack male gland (7) on piston rod (5).
2. Alternately stack blue UHMWPE (8) and brown UHMWPH (9) (24B748, 288467, 2884680, 24M629) or leather (288819) packings on piston rod. Note orientation.
3. Install female gland (10).
4. Install backup washer (13) and piston wiper (12) on piston valve (6). Note orientation.

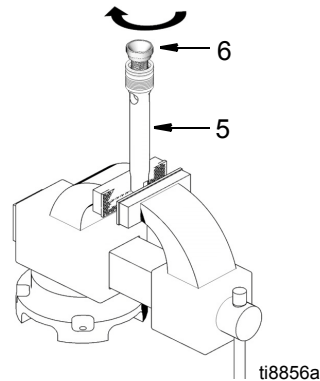
The special sealing patch on piston valve threads is good for 4 repackings. Use thread sealant on piston valve threads after 4 repackings.



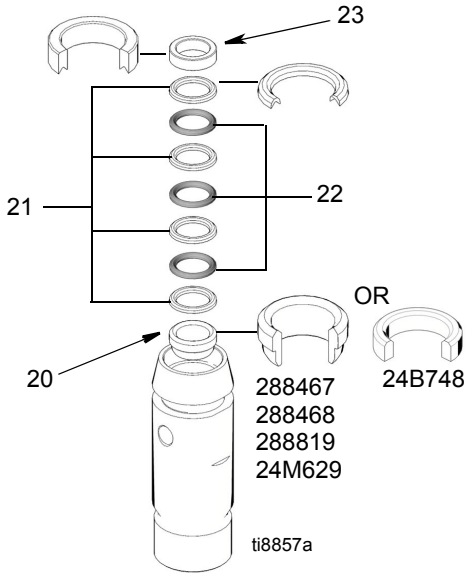
5. Install ball (11) in piston rod (5). If thread sealant is applied to piston valve threads, ensure that none gets on ball.



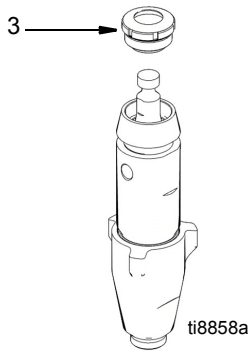
6. Install piston valve (6) to piston rod (5). Torque to 55 +/- 3 ft-lb (74.57 +/- 4 N•m).



7. Soak all leather packings in SAE 30W oil for 1 hour minimum prior to assembly.
8. Place male gland (20) in cylinder.
9. Alternately stack UHMWPE (21) and leather packings (22). Note orientation.
10. Place female gland (23) in top of cylinder. Seat packings.



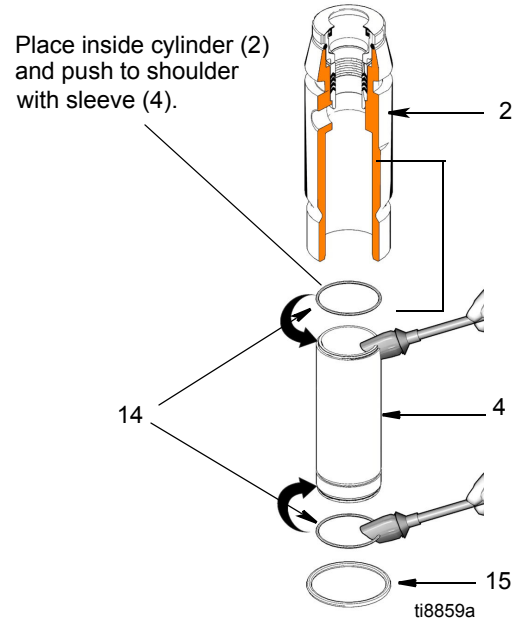
11. Install packing nut (3) into cylinder and hand tighten.



NOTICE

Never slide piston assembly (5) into top of sleeve (4) as this may damage piston packings.

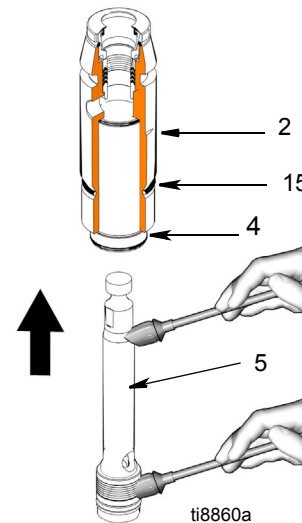
12. Install o-rings (14) inside cylinder (2) and on sleeve (4). Slide sleeve (4) into bottom of cylinder (2). Replace o-ring (15) if desired.



NOTE: O-ring (15) is not required for safe pump operation.

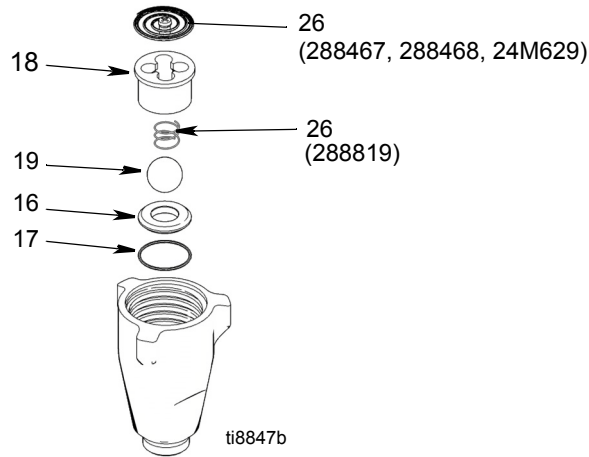
13. Grease top inch or two of piston rod (5) that goes through the sleeve/cylinder assembly throat packings. Grease piston packings at bottom of piston pump.

Carefully slide piston assembly (5) into bottom of sleeve/cylinder assembly (2) until pump rod protrudes out the top and piston packings are totally inside the sleeve (4).



Repair

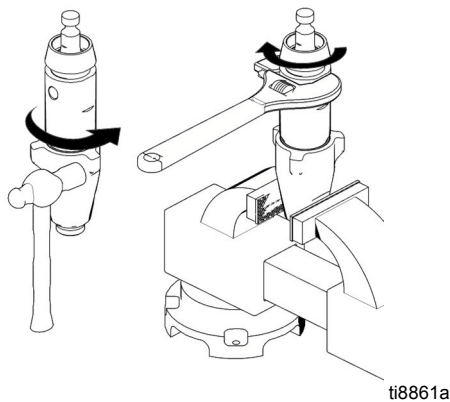
14. Reassembly intake valve with new o-ring (17), seat (16) and ball (19). Seat may be flipped over and used on the other side. Clean seat thoroughly. **NOTE:** Spring (26) for model 288819 is optional and is not included with the pump.



16. Torque packing nut to:
140 +/- 10 in-lb (15 +/- 1 N•m) 288467, 288468,
288819, 24M629.
125 +/- 10 in-lb (14 +/- 1 N•m) 24B748

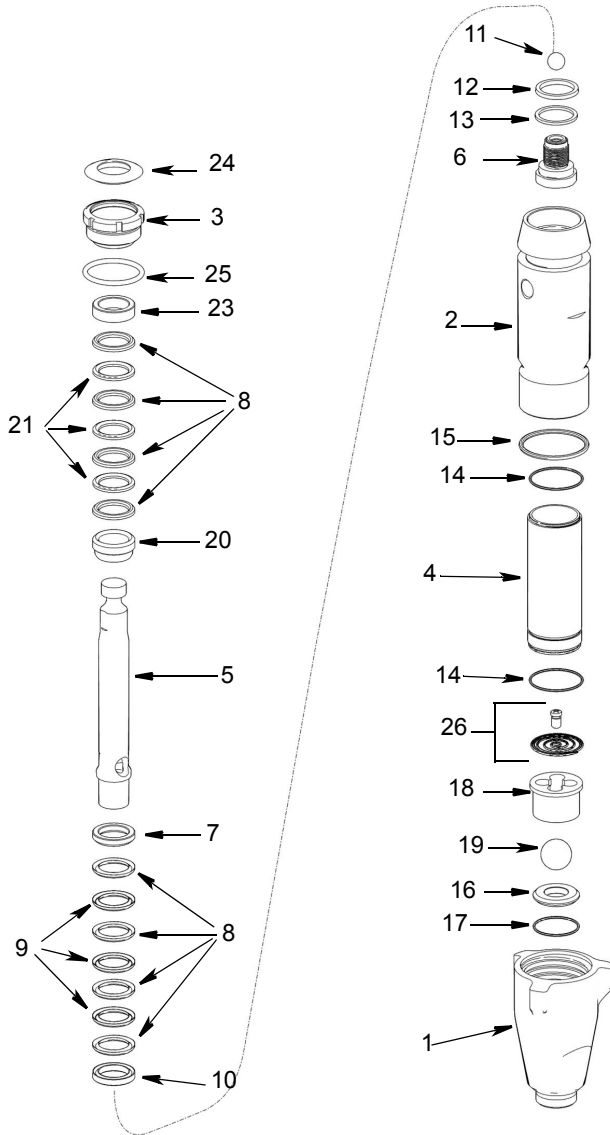
When pump packings begin to leak, tighten packing nut down until leakage stops or lessens. This allows approximately 100 gallons of additional operation before repacking is required.

15. Install intake valve on cylinder. Torque to: 200 +/- 15 ft-lb (271 +/- 20 N•m) for 288467, 288468, 288819, 24M629; 110 +/- 5 ft-lb (149 +/- 7 N•m) for 24B748.



Parts

Model 288467/288468



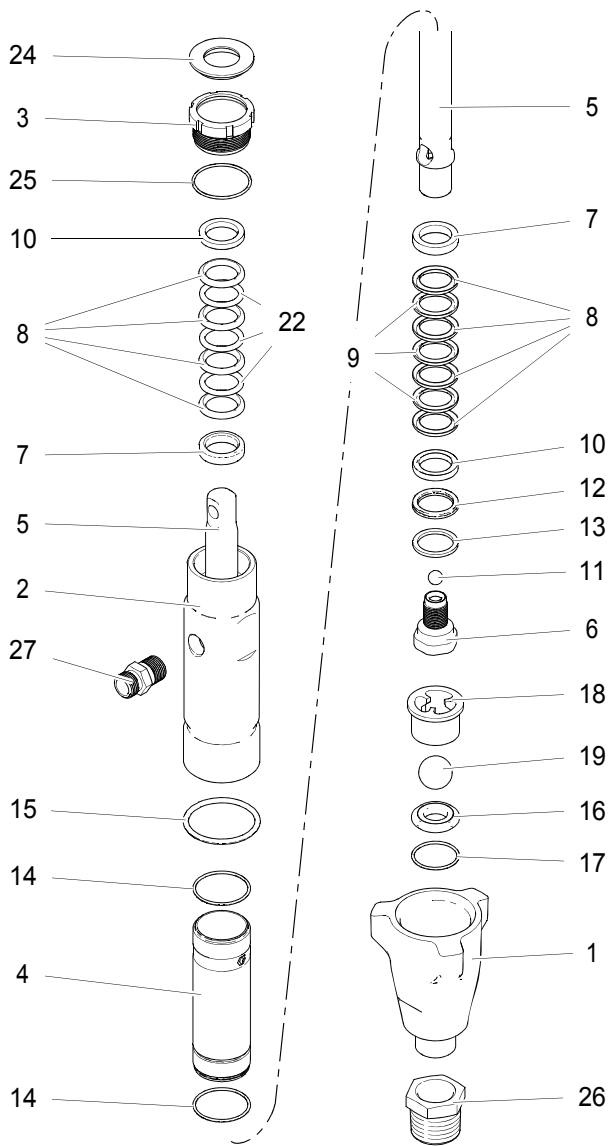
| Ref | Part | Description | Qty |
|------|--------|---------------------------------|-----|
| 1 | 15E655 | HOUSING | 1 |
| 2 | 288482 | CYLINDER (model 288467) | 1 |
| | 288483 | CYLINDER (model 288468) | 1 |
| 3 | 15J792 | NUT, packing | 1 |
| 4 | 249121 | SLEEVE, cylinder (model 288467) | 1 |
| | 287817 | SLEEVE, cylinder (model 288468) | 1 |
| 5 | 288469 | ROD, piston (model 288467) | 1 |
| | 288470 | ROD, piston (model 288468) | 1 |
| 6 | 249177 | VALVE, piston | 1 |
| 7* | 189585 | GLAND, packing, male | 1 |
| 8* | | PACKING, VEE (blue) | 8 |
| 9* | | PACKING, VEE (brown) | 3 |
| 10* | 189588 | GLAND, packing, female | 1 |
| 11* | 107203 | BALL, valve, check | 1 |
| 12* | 119636 | WIPER, piston | 1 |
| 13* | 15J800 | WASHER, back up | 1 |
| 14* | 108822 | PACKING, o-ring | 2 |
| 15* | 160325 | PACKING, o-ring | 1 |
| 16† | 240918 | SEAT, carbide | 1 |
| 17†* | 107098 | PACKING, o-ring | 1 |
| 18 | 198505 | GUIDE, ball | 1 |
| 19†* | 107167 | BALL, SST | 1 |
| 20* | 15G658 | GLAND, male | 1 |
| 21* | | PACKING, VEE (leather) | 3 |
| 23* | 15G657 | GLAND, female | 1 |
| 24* | 112590 | PLUG, throat, seal | 1 |
| 25* | 157195 | PACKING, o-ring | 1 |
| 26 | 233698 | SPRING, intake ball | 1 |

* Included in Repair Kit 287813

† Included in Repair Kit 240918

ti8826a

Model 24B748



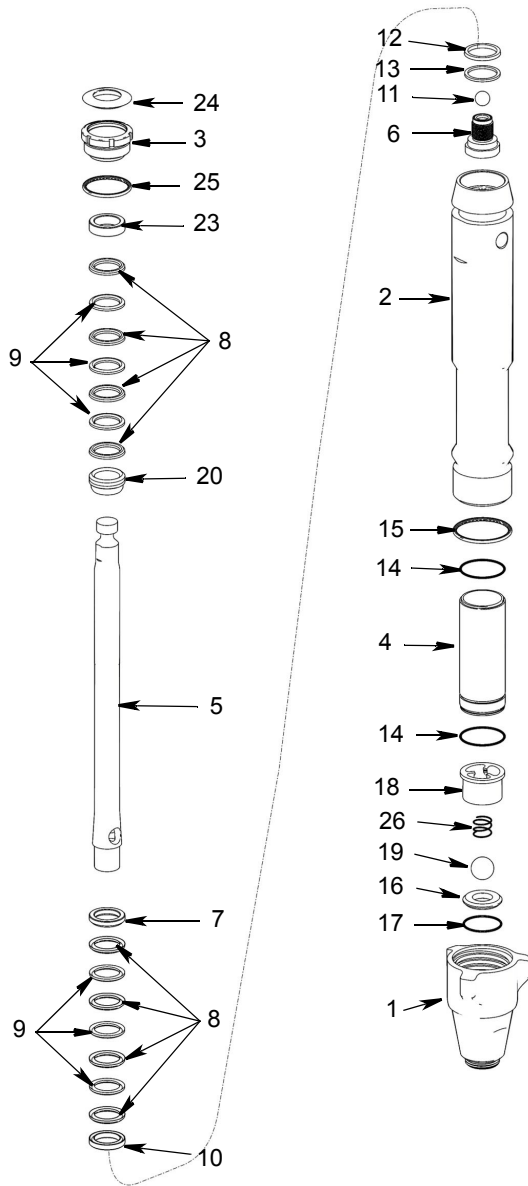
ti13922a

| Ref | Part | Description | Qty |
|------|--------|-------------------------------------|-----|
| 1 | 195894 | HOUSING, intake | 1 |
| 2 | 288727 | CYLINDER | 1 |
| 3 | 193032 | NUT, packing | 1 |
| 4 | 248210 | SLEEVE, cylinder | 1 |
| 5 | 288479 | ROD, piston | 1 |
| 6 | 24U993 | VALVE, piston | 1 |
| 7* | 183178 | GLAND, packing, male | 2 |
| 8* | | PACKING (blue) | 8 |
| 9* | | PACKING, VEE (brown) | 3 |
| 10* | 183185 | GLAND, packing, female | 2 |
| 11* | 101947 | BALL, bearing | 1 |
| 12* | 118504 | WIPER, piston | 1 |
| 13* | 15C998 | WASHER, backup | 1 |
| 14* | 107098 | PACKING, o-ring | 2 |
| 15* | 106556 | PACKING, o-ring | 1 |
| 16† | 244199 | SEAT, carbide | 1 |
| 17† | 108526 | PACKING, o-ring | 1 |
| 18 | 193027 | GUIDE, ball | 1 |
| 19†* | 102972 | BALL | 1 |
| 22* | | PACKING, VEE (leather) | 3 |
| 24* | 183171 | PLUG | 1 |
| 25* | C20987 | PACKING, o-ring | 1 |
| 26 | 15Y463 | BUSHING | 1 |
| 27 | 196178 | FITTING, nipple, 3/8 npt x 3/8 npsm | 1 |

*Included in Repair Kit 288471

†Included in Repair Kit 244199

Model 288819



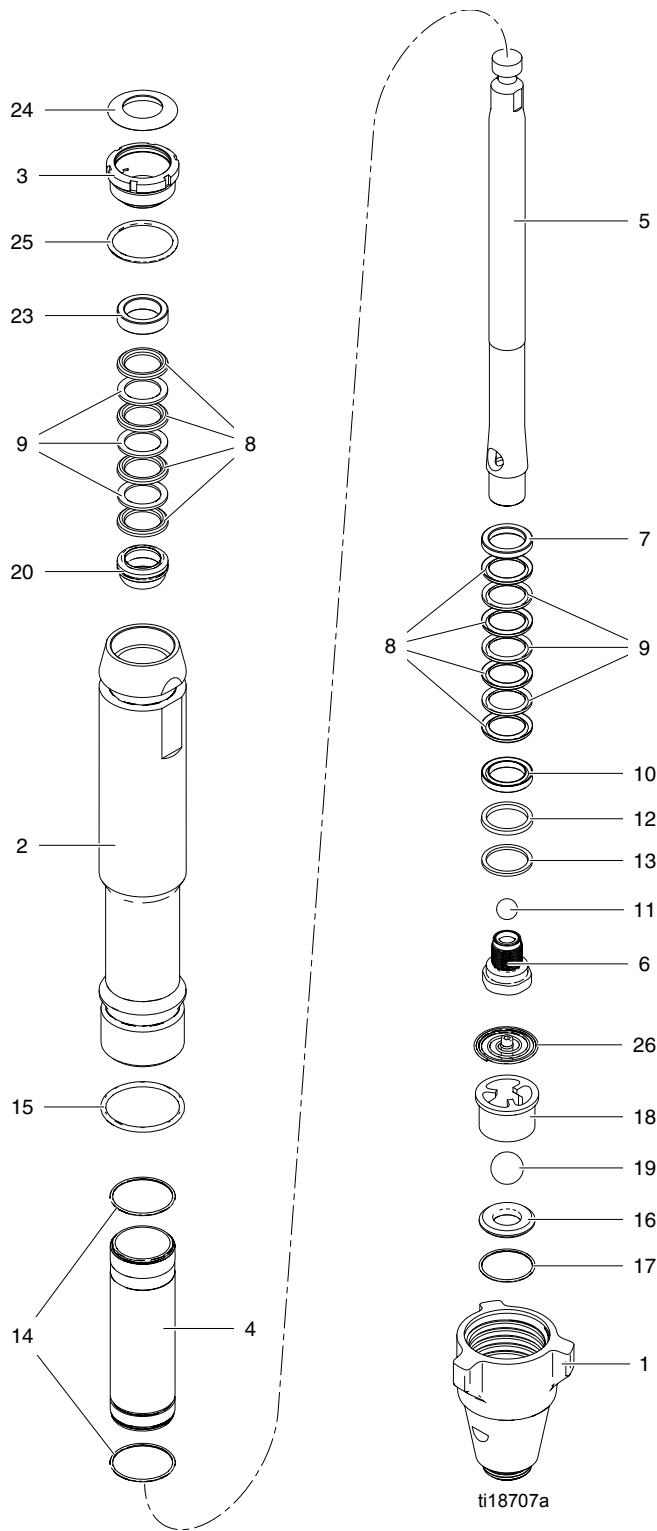
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| Ref | Part | Description | Qty |
|------|--------|--|-----|
| 1 | 15A303 | HOUSING, intake | 1 |
| 2 | 288822 | CYLINDER, pump | 1 |
| 3 | 15J792 | NUT, packing | 1 |
| 4 | 248979 | SLEEVE, cylinder | 1 |
| 5 | 288821 | ROD, piston | 1 |
| 6 | 249177 | VALVE, piston | 1 |
| 7* | 189585 | GLAND, packing, male | 1 |
| 8* | | PACKING, vee, blue | 8 |
| 9* | | PACKING, vee, leather | 6 |
| 10* | 189588 | GLAND, packing, female | 1 |
| 11* | 118601 | BALL, ceramic, 0.5625 dia | 1 |
| 12* | 119636 | WIPER, piston | 1 |
| 13* | 15F183 | WASHER, backup | 1 |
| 14* | 108822 | PACKING, o-ring | 2 |
| 15* | 107306 | PACKING, o-ring | 1 |
| 16† | 245885 | SEAT, carbide | 1 |
| 17†* | 107098 | PACKING, o-ring | 1 |
| 18 | 15D158 | GUIDE, ball | 1 |
| 19†* | 118602 | BALL, ceramic, 0.875 dia | 1 |
| 20* | 15G658 | GLAND, packing, male | 1 |
| 23 | 15G657 | GLAND, female | 1 |
| 24* | 112590 | PLUG, throat seal | 1 |
| 25* | 108832 | PACKING, o-ring | 1 |
| 26† | 118600 | SPRING, compression; optional, not included with pump | 1 |

* Included in Repair Kit 288820

† Included in Repair Kit 245885

Model 24M629



| Ref. | Part | Description | Qty |
|------|--------|----------------------------------|-----|
| 1 | 15A303 | HOUSING, intake | 1 |
| 2 | 24N062 | CYLINDER, pump, EH/GH 200/300 DI | 1 |
| 3 | 15J792 | NUT, packing | 1 |
| 4 | 248980 | SLEEVE, cylinder, chrome | 1 |
| 5 | 288821 | ROD, piston | 1 |
| 6 | 249177 | VALVE, piston | 1 |
| 7◆ | 189585 | GLAND, packing, male | 1 |
| 8◆ | | PACKING, vee, blue | 8 |
| 9◆ | | PACKING, vee, leather | 6 |
| 10◆ | 189588 | GLAND, packing, female | 1 |
| 11◆ | 118601 | BALL, ceramic, .5625 dia | 1 |
| 12◆ | 119636 | WIPER, piston | 1 |
| 13◆ | 15F183 | WASHER, backup | 1 |
| 14◆ | 108822 | PACKING, o-ring, ptfe | 2 |
| 15◆ | 160325 | PACKING, o-ring, buna-n | 1 |
| 16† | 15J038 | SEAT, carbide | 1 |
| 17†◆ | 107098 | PACKING, o-ring | 1 |
| 18 | 193391 | GUIDE, ball | 1 |
| 19†◆ | 118602 | BALL, ceramic, .875 dia | 1 |
| 20◆ | 15G658 | GLAND, male | 1 |
| 23◆ | 15G657 | GLAND, female | 1 |
| 24◆ | 112590 | PLUG, throat seal | 1 |
| 25◆ | 157195 | PACKING, o-ring, buna-n | 1 |
| 26† | 24E027 | SPRING, intake ball | 1 |

† Included in Repair Kit 24N013.

◆ Includes in Repair Kit 24N012.

Technical Data

| | |
|--------------------------|---|
| Maximum working pressure | 3300 psi, 25 bar, 22.8 MPa |
| Fluid inlet size | 1-5/16 UN (m) models 288467/288468 1-11 1/2 NPSM (M) models 24M629/288819 3/4-14 npt (m) model 24B748 |
| Fluid outlet size | 3/8 npt (f) |
| Wetted parts | stainless steel, PTFE, leather, nylon, zinc-plated carbon steel, tungsten carbide, brass, fluorelastomer, acetal, polyethylene, ceramic |

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.

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Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

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

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

Original instructions. This manual contains English. MM 311845

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International Offices: Belgium, China, Japan, Korea

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Revised November 2014