



GRACO

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quality counts.™*

Rev. F
Supersedes Rev. E



This manual contains important
warnings and information.
READ AND KEEP FOR REFERENCE.

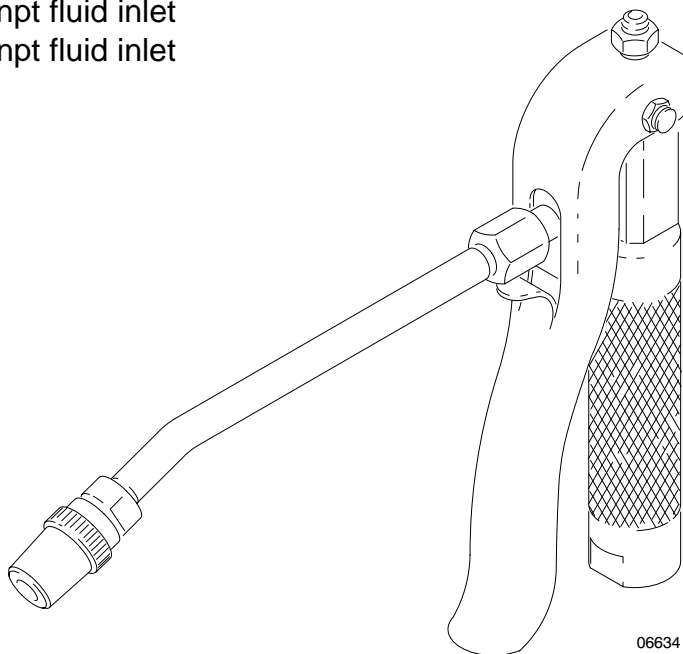
INSTRUCTIONS

High Pressure Dispense Valve

8000 psi (55 MPa, 552 bar) Maximum Working Pressure

Model 223-903 Series B, 1/4 npt fluid inlet

Model 224-132 Series B, 3/8 npt fluid inlet



06634

Table of Contents

Warnings	2	Graco Warranty	8
Operation	4	Graco Phone Number	8
Parts	5		

Symbols

Warning Symbol



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

Caution Symbol



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

! WARNING



INSTRUCTIONS

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.
- Do not exceed the maximum working pressure of the lowest rated system component. This equipment has a 8000 psi (55 MPa, 552 bar) maximum working pressure.
- Check equipment daily. Repair or replace worn or damaged parts immediately.
- Handle hoses carefully. Do not pull on hoses to move equipment.
- Route hoses away from traffic areas, sharp edges, moving parts, and hot surfaces. Do not expose Graco hoses to temperatures above 66°C (150°F) or below -40°C (-40°F).
- Comply with all applicable local, state, and national fire, electrical, and safety regulations.
- Do not use a low pressure flexible extension on a high pressure dispensing valve.
- Do not attempt to force lubricant into a fitting.

! WARNING



INJECTION HAZARD

Spray from the valve, leaks or ruptured components can inject fluid into your body and cause extremely serious injury, including the need for amputation. Fluid splashed in the eyes or on the skin can also cause serious injury.

- Fluid injected into the skin might look like just a cut, but it is a serious injury. **Get immediate medical attention.**
- Do not point the valve at anyone or at any part of the body.
- Do not put your hand or fingers over the grease fitting coupler.
- Do not stop or deflect leaks with your hand, body, glove or rag.
- Tighten all fluid connections before operating the equipment.
- Check the hoses, tubes, and couplings daily. Replace worn or damaged parts immediately. Do not repair high pressure couplings; you must replace the entire hose.
- Use only Graco approved hoses.



TOXIC FLUID HAZARD

Hazardous fluid or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, inhaled, or swallowed.

- Know the specific hazards of the fluid you are using.
- Store hazardous fluid in an approved container. Dispose of hazardous fluid according to all local, state and national guidelines.
- Always wear protective eyewear, gloves, clothing and respirator as recommended by the fluid and solvent manufacturer.

Pressure Relief Procedure

! WARNING



INJECTION HAZARD

Fluid under high pressure can be injected through the skin and cause serious injury. To reduce the risk of an injury from injection, splashing fluid, or moving parts, follow the **Pressure Relief Procedure** whenever you:

- are instructed to relieve the pressure,
- stop dispensing,
- check or service any of the system equipment,
- or install or clean the nozzle.

1. Turn off the power supply to the pump.
2. Trigger the valve into a waste container to relieve pressure.
3. Open any bleed-type master air valves and fluid drain valves in the system.
4. Leave the drain valve open until you are ready to dispense again.

Operation/Service

This dispense valve provides positive control of high pressure lubricants. When supplied with air, the pump will start when the valve is triggered and will stall against pressure when the trigger is released.

NOTE: Check all parts thoroughly when disassembling, and carefully replace any that are worn or damaged.

1 0.187" (4.7 mm) clearance

2 Torque to 30–35 ft-lb (40–47 N•m)

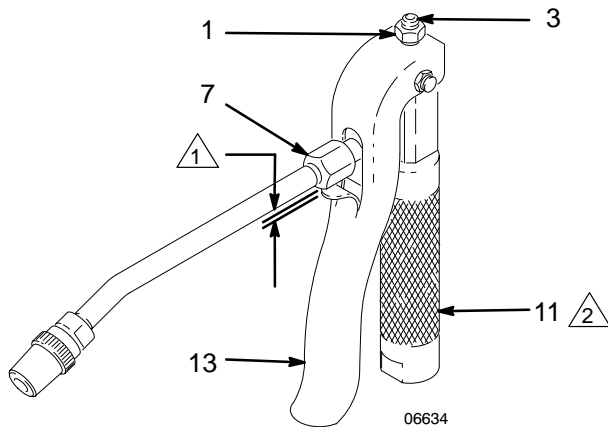


Fig. 1

PROBLEM A: Grease continues to flow after the trigger is released.

CAUSE 1: Valve may be out of adjustment.

⚠ WARNING

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 3.

1. Relieve the pressure.
2. Check for a minimum 0.187 in. (4.7 mm) clearance between the trigger (13) and the outlet adapter (7). See Fig. 1.
3. To adjust the clearance, loosen the locknut (1) and turn the adjusting screw (3) in or out as needed. Hold the adjusting screw in place and securely tighten the locknut.

CAUSE 2: Valve ball or seat may be obstructed, or spring may be weakened.

1. Relieve the pressure.
2. Disconnect the hose from the valve.
3. Unscrew the lower body (11) from the upper body (14). Remove the ball (2) and valve seat (10). The valve seat may be reversed at reassembly to provide a new seat.
4. If the spring (6) needs to be replaced, unscrew the outlet adapter (7) and insert the new spring. See the **Parts Drawing** on page 5.
5. Reassemble the valve in the reverse order of disassembly. Torque the lower body (11) to 30–35 ft-lb (40–47 N•m).

PROBLEM B: Grease leaks past the valve stem o-ring and backup.

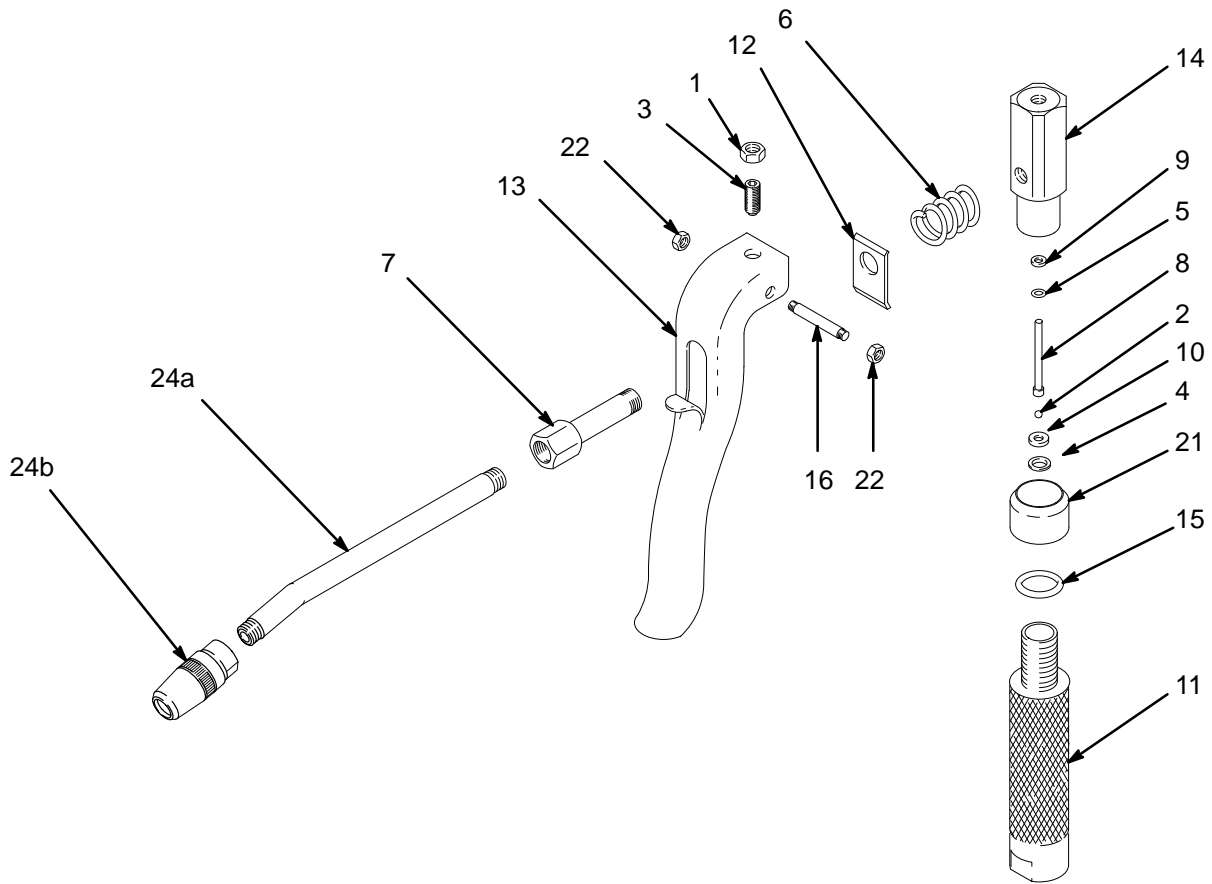
CAUSE: Valve stem or o-ring may be worn or damaged.

1. Relieve the pressure.
2. Disconnect the hose from the valve.
3. Unscrew the lower body (11) from the upper body (14). Remove the ball (2).
4. Loosen the locknut (1) and remove the adjusting screw (3). Insert a small diameter rod through the adjusting screw hole and push the valve stem (8) out of the body. Use a hooked wire to remove the o-ring (5) and backup (9) from the body, if necessary.

NOTE: Do not lose the small ball when removing the stem.

5. Use a 0.25 in. (6.4 mm) diameter rod to position the backup and o-ring, one at a time, all the way up into the cavity. Insert the valve stem so that it is flush with to top of upper body (14). Install the ball. Replace the adjusting screw. Continue reassembling the valve. Torque the lower body (11) to 30–35 ft-lb (40–47 N•m). Adjust the trigger clearance. See **Problem A** at left.

Parts List and Drawing



06635

Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1	100-015	NUT, hex; 1/4-20	1	14	165-594	BODY, upper	1
2†	111-519	BALL, steel, 1/8 (3.2 mm) dia	1	15	109-018	O-RING, nitrile rubber	1
3	101-618	SETSCREW, soc hd; 1/4-20 x 5/8	1	16	186-523	PIN, pivot	1
4†	151-222	GASKET, copper	1	22	111-280	NUT, locking	2
5†	157-628	O-RING, nitrile rubber	1	24	200-389	ADAPTER	1
6	160-804	SPRING, compression	1			Includes items 24a, 24b	1
7*	160-805	ADAPTER, outlet; 1/8 npt	1	24a		. TUBE, adapter (not sold separately)	1
8†	160-806	STEM, valve	1	24b	200-325	. COUPLER	1
9†	160-807	BACK-UP; leather	1			See manual 306-708 for parts	1
10†	191-603	SEAT, valve	1				
11		BODY, lower					
	186-525	<i>Model 223-903 only</i>	1				
	186-786	<i>Model 224-132 only</i>	1				
12	164-386	PLATE, scuff	1				
13	186-651	TRIGGER, valve	1				

* Recommended tool box spare parts. Keep these spare parts on hand to reduce down time.

† Parts included in repair kit 204-161.

Manual Change Summary

This manual went from Rev. E to Rev. F to change the indicated pressure rating from *8000 psi (55 MPa, 550 bar)* to *8000 psi (55 MPa, 552 bar)*.

Graco Warranty and Disclaimers

WARRANTY

Graco warrants all equipment listed in this manual 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. 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.

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In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or for 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.

Graco Phone Number

TO PLACE AN ORDER, contact your Graco distributor, or call this number to identify the distributor closest to you: **1-800-367-4023 Toll Free**

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