

## SDV15 and XDV20 Dispense Valve

312789H  
EN

*- For non-metered dispensing of petroleum and synthetic-based oil -*

### Models: Pages 2 and 3

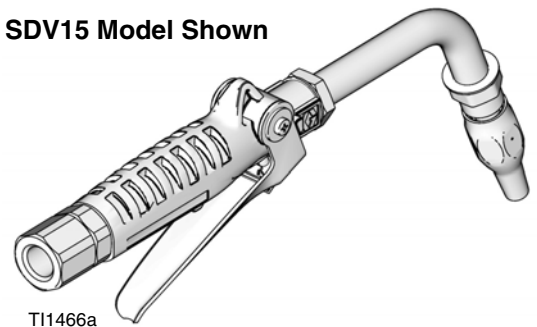
*1500 psi (10 MPa, 103.4 bar) Maximum Working Pressure*



### Important Safety Instructions

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

SDV15 Model Shown



# Models

## SDV15 Dispense Valve Models

All models include: 1/2 npt(f) swivel with locking-open trigger

Part No.	Extension	Nozzles	Fluid Type
247712	Rigid	Automatic non-drip, quick close	Oil
247713	Flexible	Automatic non-drip, quick close	Oil
247714	Gear Lube	Automatic, non-drip, quick close	Gear Lube
247715	Rigid	Automatic, non-drip, quick close	Anti-freeze
247716	Flexible	Automatic, non-drip, quick close	Anti-freeze
247717	NONE	NONE	All

All models include: 1/2 - 14 BSPP swivel with locking-open trigger

Part No.	Extension	Nozzles	Fluid Type
24H384	Rigid	Automatic non-drip, quick close	Oil
24H385	Flexible	Automatic non-drip, quick close	Oil
24H386	Gear Lube	Automatic, non-drip, quick close	Gear Lube
24H387	Rigid	Automatic, non-drip, quick close	Anti-freeze
24H388	Flexible	Automatic, non-drip, quick close	Anti-freeze
24H389	NONE	NONE	All

All models include: 1/2 - 14 BSPT swivel with locking-open trigger

Part No.	Extension	Nozzles	Fluid Type
24H390	Rigid	Automatic non-drip, quick close	Oil
24H391	Flexible	Automatic non-drip, quick close	Oil
24H392	Gear Lube	Automatic, non-drip, quick close	Gear Lube
24H393	Rigid	Automatic, non-drip, quick close	Anti-freeze
24H394	Flexible	Automatic, non-drip, quick close	Anti-freeze
24H395	NONE	NONE	All

## XDV20 Non-metered Valve Models

NPT Models - All models include locking-open and closed trigger

Part No.	Swivel	Extension	Nozzles	Fluid Type
247718	1/2" npt (f)	Rigid	High flow, non-drip, quick close	Oil / Anti-freeze
247721	1/2" npt (f)	Flexible	High flow, non-drip, quick-close	Oil / Anti-freeze
247722	3/4" npt (f)	Rigid	High flow, non-drip, quck close	Oil / Anti-freeze
247723	3/4" npt (f)	Flexible	High flow, non-drip, quick close	Oil / Anti-freeze
247724	1/2" npt (f)	NONE	NONE	Oil / Anti-freeze
247725	3/4" npt (f)	NONE	NONE	Oil / Anti-freeze

BSPP Models - All models include locking-open and closed trigger





Part No.	Swivel	Extension	Nozzles	Fluid Type
24H407	1/2" - 14 BSPP	Rigid	High flow, non-drip, quick close	Oil / Anti-freeze
24H408	1/2" - 14 BSPP	Flexible	High flow, non-drip, quick-close	Oil / Anti-freeze
24H409	3/4" - 14 BSPP	Rigid	High flow, non-drip, quck close	Oil / Anti-freeze
24H410	3/4" - 14 BSPP	Flexible	High flow, non-drip, quick close	Oil / Anti-freeze
24H411	1/2" - 14 BSPP	NONE	NONE	Oil / Anti-freeze
24H412	3/4" - 14 BSPP	NONE	NONE	Oil / Anti-freeze

BSPT Models - All models include locking-open and closed trigger

Part No.	Swivel	Extension	Nozzles	Fluid Type
24H413	1/2" - 14 BSPT	Rigid	High flow, non-drip, quick close	Oil / Anti-freeze
24H414	1/2" - 14 BSPT	Flexible	High flow, non-drip, quick-close	Oil / Anti-freeze
24H415	3/4" - 14 BSPT	Rigid	High flow, non-drip, quck close	Oil / Anti-freeze
24H416	3/4" - 14 BSPT	Flexible	High flow, non-drip, quick close	Oil / Anti-freeze
24H417	1/2" - 14 BSPT	NONE	NONE	Oil / Anti-freeze
24H418	3/4" - 14 BSPT	NONE	NONE	Oil / Anti-freeze

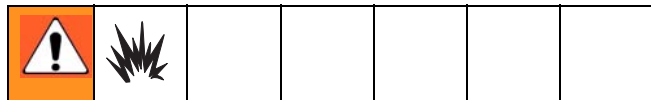
# Warnings

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.

 <b>WARNING</b>	
	<p><b>FIRE AND EXPLOSION HAZARD</b></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"> <li>• Use equipment only in well ventilated area.</li> <li>• Eliminate all ignition sources, such as cigarettes and portable electric lamps.</li> <li>• Keep work area free of debris, including rags and spilled or open containers of solvent and gasoline.</li> <li>• Do not plug or unplug power cords or turn lights on or off when flammable fumes are present.</li> <li>• Ground all equipment in the work area.</li> <li>• Use only grounded hoses.</li> <li>• If there is static sparking or you feel a shock, <b>stop operation immediately</b>. Do not use equipment until you identify and correct the problem.</li> <li>• Keep a working fire extinguisher in the work area.</li> </ul>
	<p><b>EQUIPMENT MISUSE HAZARD</b></p> <p>Misuse can cause death or serious injury.</p> <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 forms from distributor or retailer.</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>
	<p><b>SKIN INJECTION HAZARD</b></p> <p>High-pressure fluid from dispense valve, 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. <b>Get immediate surgical treatment.</b></p> <ul style="list-style-type: none"> <li>• Do not point dispense valve at anyone or at any part of the body.</li> <li>• Do not put your hand over the end of the dispense nozzle.</li> <li>• Do not stop or deflect leaks with your hand, body, glove, or rag.</li> <li>• Follow <b>Pressure Relief Procedure</b> in this manual, when you stop spraying and before cleaning, checking, or servicing equipment.</li> </ul>

# Installation

## Grounding



**NOTICE**

Do not use PTFE tape on pipe joints; it may cause a loss of ground across the pipe joint.

The equipment must be grounded. Grounding reduces the risk of static and electric shock by providing an escape wire for the electrical current due to static build up or in the event of a short circuit.

**Pump:** follow manufacturer’s recommendations.

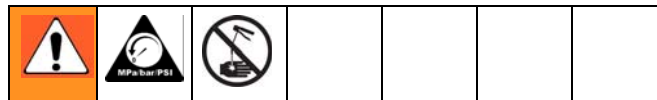
**Air and fluid hoses:** use only grounded hoses.

**Air compressor:** follow manufacturer’s recommendations.

**Fluid supply container:** follow local code.

*To maintain grounding continuity when flushing or relieving pressure, always hold metal part of valve firmly to side of grounded metal pail, then trigger valve.*

## Pressure Relief Procedure



The equipment stays pressurized until pressure is manually relieved. To reduce the risk of serious injury from pressurized fluid, accidental spray from the dispense valve or splashing fluid, follow this Pressure Relief procedure whenever you:

- Are instructed to relieve pressure
- Check, clean or service any system component
- Install or clean fluid nozzles

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

*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.*

## Pre-Installation Procedure

1. **Relieve pressure** as described in Pressure Relief Procedure.
2. Close fluid shut-off valve (A, FIG. 1).
3. Ground hose, reel and console (See **Grounding**).

## Typical Installation

FIG. 1 shows a typical installation. The installation is only a guide. The components shown are typical; however, it is not a complete system design. Contact your Graco distributor for assistance in designing a system to suit your particular needs.

Dispense valves can also be installed on a console.

<b>NOTICE</b>	
<ul style="list-style-type: none"> <li>Do not use this dispense valve on non-Graco consoles. Such use could result in trigger becoming inadvertently pressed while valve is stowed.</li> <li>To prevent line contamination, which can cause equipment damage or malfunction, flush the lines before you install the equipment in the system.</li> </ul>	

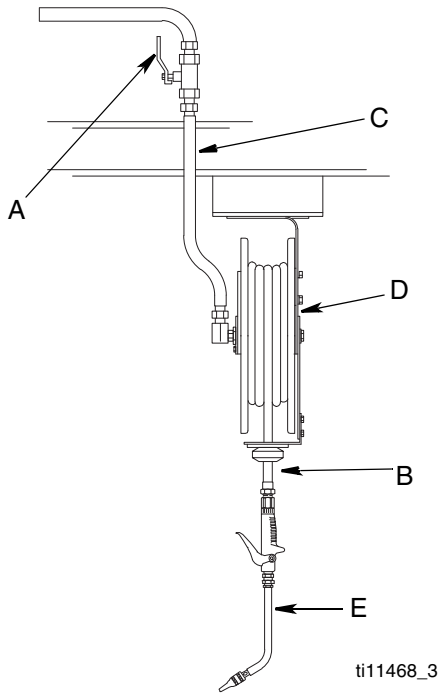
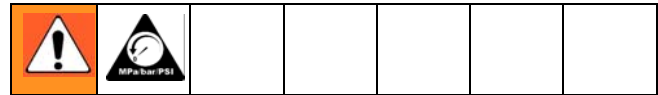


FIG. 1

## Installation Procedure

<b>NOTICE</b>	
If this is a new installation, or if the lines are contaminated, flush the lines before you install dispensing valve.	



1. **Relieve pressure**, page 5.

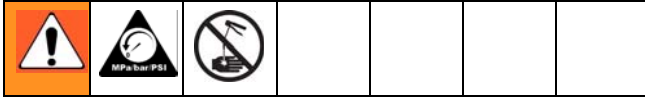
*Steps 2 - 6 are the Flushing Procedure.*

2. Close fluid shut-off valve (A) at each dispense position.
3. Make sure main fluid outlet valve at pump is closed, the air pressure to the pump motor is adjusted, and the air valve is open. Slowly open main fluid valve.
4. Place hose end (with no dispense valve connected) into a container of waste oil. Secure hose in container so it will not come out during flushing. If you have multiple dispense positions, flush the dispense position farthest from pump first and work your way toward the pump.
5. Slowly open fluid shut off valve (A) at dispense position. Flush out a sufficient amount of oil to ensure the entire system is clean. Close valve.
6. Repeat Step 5 for all dispense positions.

Key	Description
A	Fluid shutoff valve
B	Hose
C	Hose reel fluid inlet hose
D	Hose reel
E	Dispense valve

*A Thermal Relief Kit (not shown) is required. The Kit required will vary by pump selected. See Parts, page 16 for a list of available kits.*

## Existing Installation



1. **Relieve pressure**, page 5.
2. Loosen and disconnect hose from old dispense valve (the one you are replacing).

## Existing or New Installation

For Steps 3 - 5 see FIG. 2.

3. Thread extension (11) into outlet of the dispense valve handle (1). Tighten securely.

### NOTICE

- Do not overtighten extension.
- Thread extension in at least three full turns. Position extension for proper alignment with valve handle (1) and tighten nut (11a).

4. Apply thread sealant to male threads of hose fitting. Thread hose fitting into swivel (6). Tighten firmly.
5. Thread nozzle (12) or nozzle adapter onto extension and tighten firmly.
6. Open all dispense position shut-off valves. Start pump to pressurize system.

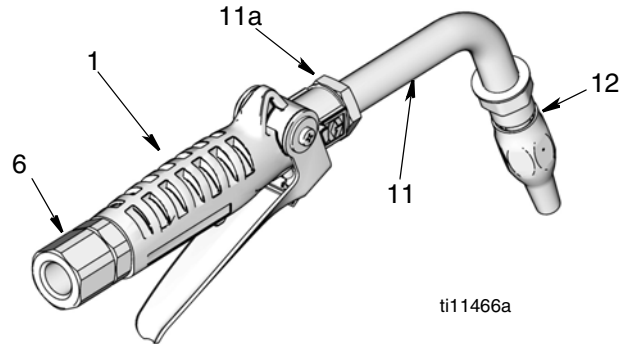
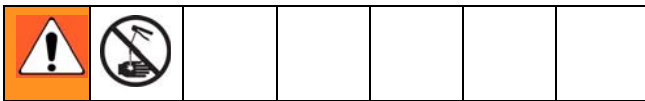



FIG. 2

## Operation

For part numbers referenced in these instructions, see *Parts*, page 10.



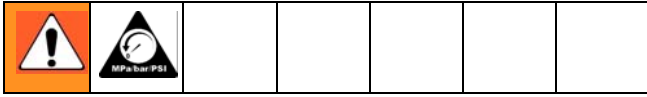
To reduce the risk of a serious bodily injury, including fluid injection, **never** exceed the maximum working pressure of the valve you are using or of the lowest rated component in your system.

 The XDV20 dispense valve trigger automatically locks whenever you release the trigger and must be unlocked each time you begin a new dispense.

## Dispensing Procedure

1. Open (or unlock) nozzle.
2. Pull trigger (15) toward the valve handle (1) to open valve and begin dispensing.
3. Lock valve open by keeping trigger (15) squeezed and depressing trigger lock button (14). Then you can release trigger.
4. To release trigger lock (14), pull trigger (15) toward valve handle (1).
5. Release trigger (15) to stop dispensing.
6. Close (lock) nozzle.

# Troubleshooting



**Relieve pressure** before you check or repair dispense valve. Be sure all other valves and controls and the pump are operating properly.


Problem	Cause	Solution
Slow or no fluid flow	Screen is clogged	<b>1. Relieve pressure.</b> 2. Clean or replace strainer (4a) and washer 4b. <i>Order Filter Kit 256164.</i> 3. If the problem remains, contact your Graco distributor for repair or replacement.
	Pump pressure is low	
	Shutoff valve is not full open	
Oil leaks from swivel	Swivel is loose	Torque the swivel (6) to 15-20 ft-lb (20-27 N.m).  If the problem remains, contact your Graco distributor for repair or replacement.
	O-ring is worn or damaged	Replace swivel (6). Torque swivel to 15-20 ft-lb (20-27 N.m).  If the problem remains, contact your Graco distributor for repair or replacement.
Oil drips from nozzle*	Nozzle is damaged or obstructed	Inspect nozzle for damage or obstructions. Replace if damaged.
Valve leaks	O-rings or valve seat are worn or damaged	Replace seals (9) and/or valve seat (2).

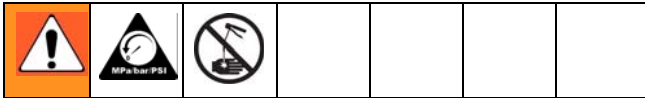
\*Some fluid seepage is possible in applications where thermal expansion of fluid is possible.




# Service

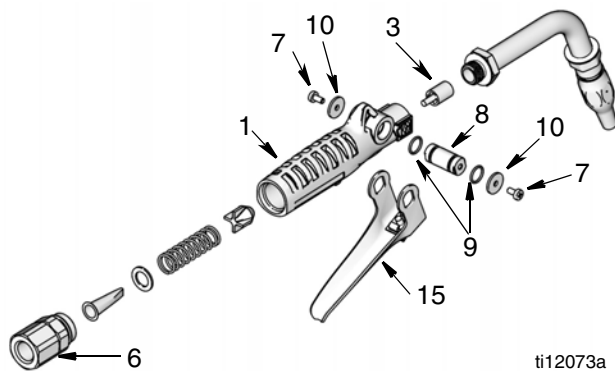
## Valve Handle Repair

 The large end of the push rod (3) fits into a notch in the cam (8) which is part of the trigger assembly. It is important you know this before you remove or install parts.



1. **Relieve pressure**, page 5.
2. If you are replacing the seals (9), the cam (8) or the push rod (3), remove the swivel (6) and remove the internal pieces. **You must remove the cam in order to get the push rod out of the valve end.**
3. Remove screws (7) and washers (10) and remove trigger (15).
4. Push cam (8) out of valve handle (1).
5. Replace seals (9) and/or cam (8).
6. Replace any worn or broken parts.
7. Reassembly internal parts. Refer to FIG. 3 for correct installation order and orientation of parts.

 The push rod (3) must be inserted through the outlet end of the valve handle before cam (8) is installed.



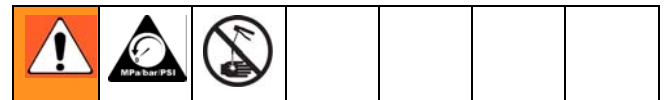
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FIG. 3

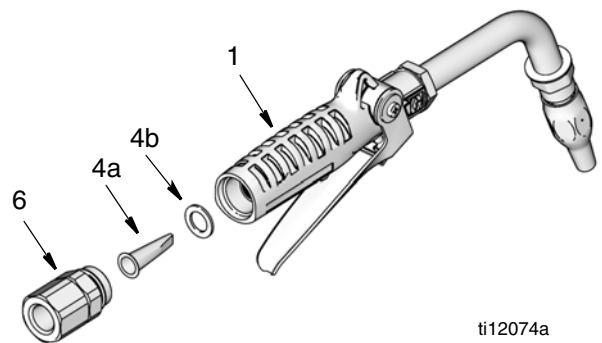
8. Lubricate the cam (8) and slide it into the valve handle (1), making sure the notch is oriented as shown in FIG. 3, with the large end of the push rod (3) resting in the notch of the cam.
9. Replace the screws (7) and seals (9). Torque screws to 15 -25 in-lb (1.7 to 2.8 N•m).
10. Replace swivel (6). Torque to 15-20 ft-lb (20-27 N.m).

## Filter Replacement

Order Filter Kit 256164.



1. **Relieve pressure**, page 5.
2. Unscrew hose fitting from swivel (6).
3. Remove swivel (6) from valve handle (1).
4. Remove strainer (4a) and washer (4b) from inside of swivel (6).
5. Replace washer (4b) and strainer (4a). Refer to FIG. 4 to ensure correct orientation of filter in swivel.



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FIG. 4

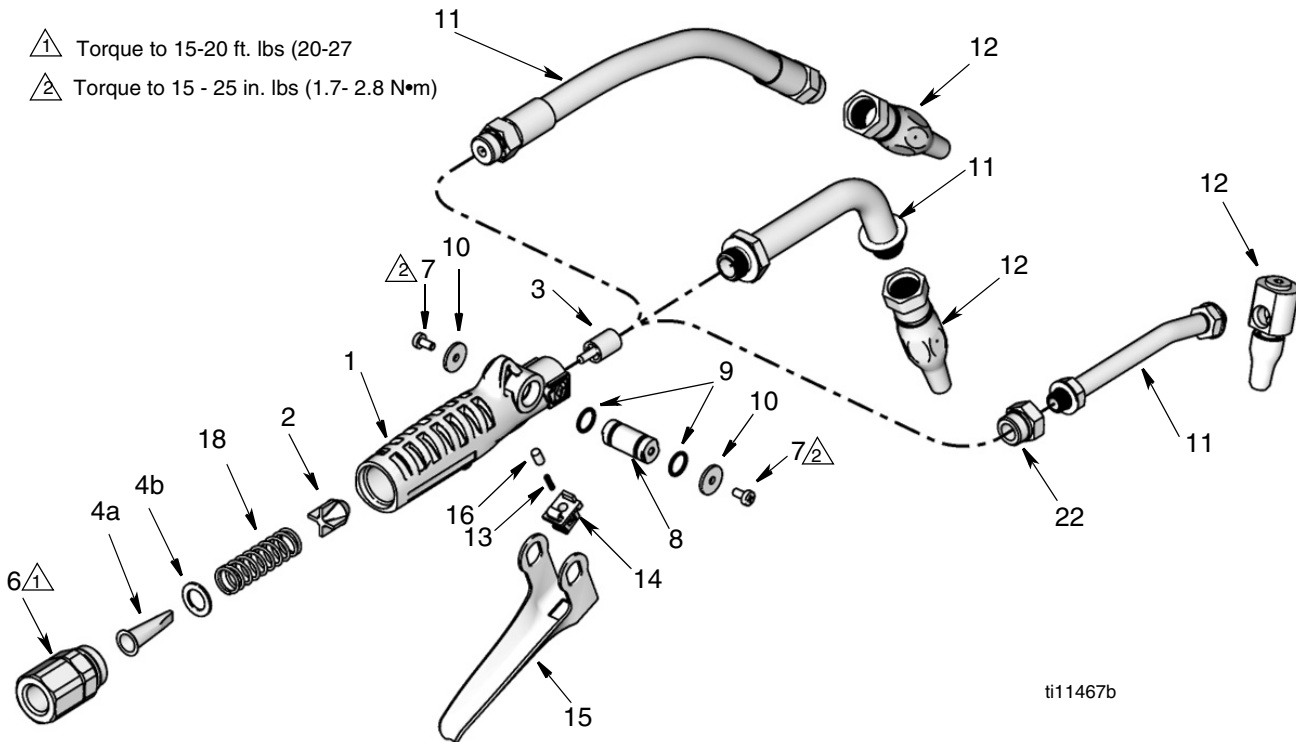
6. Thread hose fitting into swivel (6) and tighten. Torque swivel to 15-20 ft-lb (20-27 N.m).

# Parts

## SDV15 Dispense Valves

FN	Part No.	Description	Qty	FN	Part No.	Description	Qty
1		HANDLE, valve, standard duty	1	11*		KIT, nozzle and extension, page 12	1
2	191313	SEAT, valve	1	12*			1
3	277673	ROD, push	1	13	113924	SPRING, compression	1
4	256164	KIT, filter, includes 4a and 4b	1	14	15R526	LOCK, trigger	1
4a		STRAINER	10	15	191320	TRIGGER	1
4b		WASHER, plain	10	16	192106	GUIDE, spring	1
6	238399	SWIVEL, straight, NPT	1	18	113493	SPRING, compression	1
	24H382	SWIVEL, straight, BSPP	1	20†	172479	TAG, warning	1
	24H383	SWIVEL, straight, BSPT	1	22	15K672	ADAPTER, o-ring, model 247714	1
7	110637	SCREW, machine, pan head	2	25†	290180	TAG, caution	1
8	191315	CAM	1				
9	113574	SEAL, quad ring	2				
10	191552	WASHER, flat	2				

\*These parts are not included on model 247717  
 † Not shown



# Parts

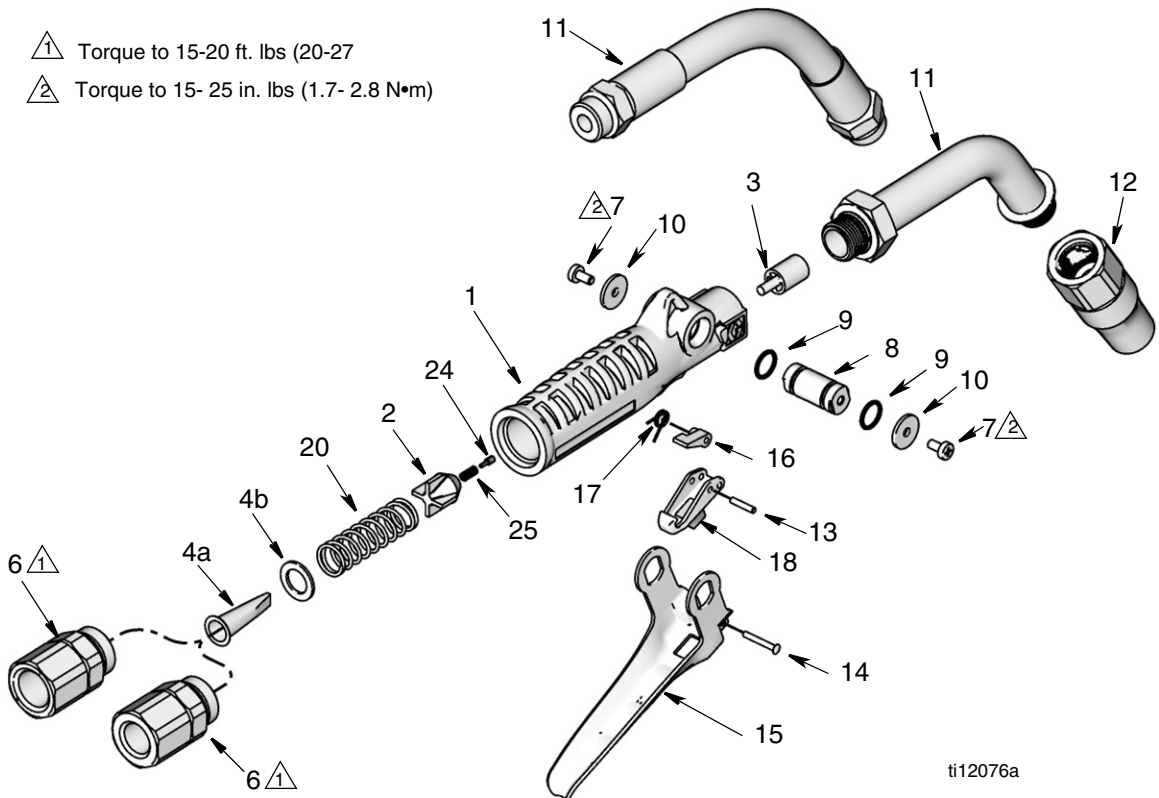
## XDV20 Non-metered Valves

FN	Part No.	Description	Qty	FN	Part No.	Description	Qty
1		HANDLE, valve, medium duty	1	9	113574	SEAL, quad ring	2
2	15U704	SEAT, valve	1	10	191552	WASHER, flat	2
3	277673	ROD, push	1	11*		KIT, nozzle and extension, page 12	1
4	256164	KIT, filter, includes 4a and 4b	1	12*			1
4a		STRAINER	10	13	114680	PIN, dowel	1
4b		WASHER, plain	10	14	15R016	LATCH, pin	1
6	247344	SWIVEL, straight, 1/2 NPT models 247718, 247721, 247724	1	15	15M886	TRIGGER	1
	24H097	SWIVEL, straight, 1/2 BSPT, mod- els 24H413, 24H414, 24H417	1	16	15R015	LATCH, arm	1
	24H098	SWIVEL, straight, 1/2 BSPP, mod- els 24H407, 24H408, 24H411	1	17	15R014	LATCH, spring	1
	247345	SWIVEL, straight, 3/4 NPT models 247722, 247723, 247725	1	18	15R013	LATCH, lever	1
	24H099	SWIVEL, straight, 3/4 BSPT, mod- els 24H415, 24H416, 24H418	1	20	113493	SPRING, compression	1
	24H100	SWIVEL, straight, 3/4 BSPP, mod- els 24H409, 24H410, 24H412	1	22†	172479	TAG, warning	1
7	110637	SCREW, machine, pan head	2	24	15U700	PLUNGER, trigger, lift	1
8	191315	CAM	1	25	15U701	SPRING, secondary	1
				26†	290180	TAG, caution	1

\* These parts are not included on models 247724 or 247725

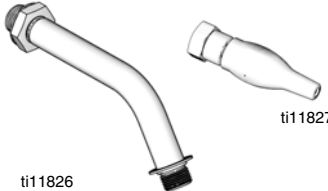
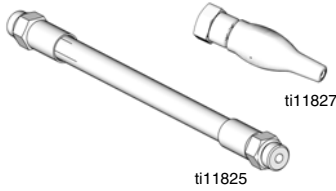
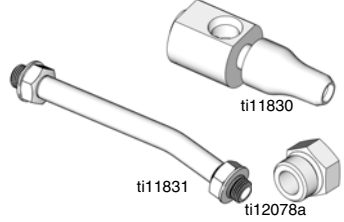
† Not shown

- 1 Torque to 15-20 ft. lbs (20-27)
- 2 Torque to 15- 25 in. lbs (1.7- 2.8 N•m)



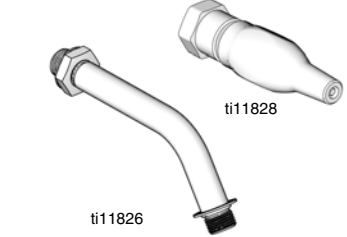
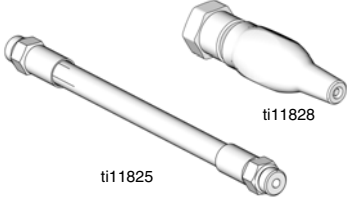
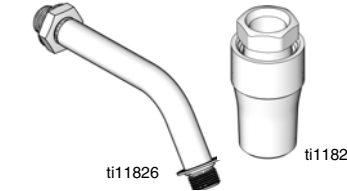
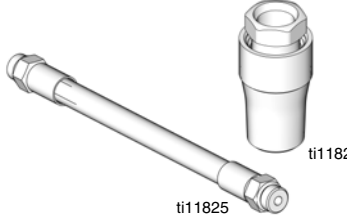
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## SDV15 Nozzle Extension Kits

Part No.	Description	Fluid Type	<i>*illustration note</i>
255852*	Automatic, non-drip quick close nozzle with rigid extension.	Oil	
255853*	Automatic, non-drip quick close nozzle with flexible extension	Oil	
255854	Non-drip, quick close nozzle with rigid extension	Gear Lube	

\*Used for dispensing 5gpm (22.7 lpm) or less.

*continued*

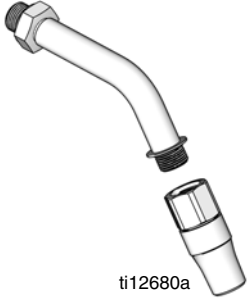
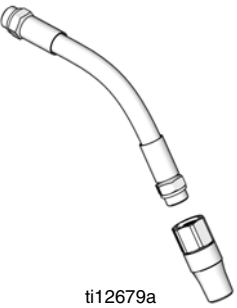
Part No.	Description	Fluid Type	<i>*illustration note</i>
255855*	Non-drip, quick close nozzle with rigid extension	Anti-freeze	
255856*	Non-drip, quick close nozzle with flexible extension	Anti-freeze	
255857	Non-drip, quick close, high-flow nozzle with rigid extension	Oil and Anti-freeze	
255858	Non-drip, quick close, high flow nozzle with flexible extension	Oil and Anti-freeze	

\*Used for dispensing 5gpm (22.7 lpm) or less.

## SDV15 Nozzle Kits

Part No.	Description	Qty	Fluid Type
255459*	Automatic, non-drip, quick-close nozzle		Oil
	• BODY, nozzle	1	
	• O-RING, packing	1	
	• SPRING, compression	1	
	• O-RING, packing	1	
	• STEM, nozzle, valve	1	
	• SEAT, valve	1	
255460*	Automatic, non-drip, quick-close nozzle		Anti-freeze
	• BODY, nozzle	1	
	• SPRING, compression	1	
	• O-RING, packing	1	
	• STEM, nozzle, valve,	1	
	• O-RING, packing	1	
	• SEAT, valve	1	
255461	Automatic, non-drip, high-flow nozzle		Oil and Anti-freeze
a	• STEM, nozzle, qty 1		
b	• BODY, nozzle, qty 1		
c	• O-RING, packing, qty1		
d	• O-RING, packing, qty 1		
e	• O-RING, packing, qty 1		
255470	Non-drip, quick-close nozzle		Gear Lube
	• Housing	1	
	• Body, nozzle	1	
	• O-RING, packing	1	
	• O-RING, packing,	1	
	• Plug, Hollow, hex	1	
*Used for dispensing 5gpm (22.7 lpm) or less.			

## XDV20 Nozzle Extension Kits

Part No.	Description	Fluid Type	<i>*illustration note</i>
255921	Non-drip quick close, high flow nozzle with rigid extension.	Oil and Anti-freeze	 <p>ti12680a</p>
255859	Non-drip quick close, high flow nozzle with flexible extension.	Oil and Anti-freeze	 <p>ti12679a</p>

## XDV20 Nozzle Kits

Part No.	Description	Qty	Fluid Type
255793	Non-drip, quick close, high flow nozzle		Oil and Anti-freeze
	• O-RING, packing	1	
	• O-RING, packing	1	
	• BODY, nozzle, high flow	1	
	• O-RING, packing	1	
	• STEM, nozzle, heavy duty	1	

## Thermal Relief Kits

<b>Part No.</b>	<b>Description</b>	<b>PSI (bar) Rating</b>
112353	Diaphragm pump for fuel dispense, valve only	50 psi (3.4 bar)
235998	Mini Fire-Ball™ 225, 3:1	600 psi (41 bar)
237601	Fire-Ball 425, 3:1	600 psi (41 bar)
237893	Fire-Ball 300, 5:1 and Fire-Ball 425, 6:1	900 psi (62 bar)
248296	(same as 237893 minus bung adapter and swivel. Includes 6-foot hose)	900 psi (62 bar)
238899	Diaphragm pump	150 psi (10.4 bar)
240429	Fire-Ball 425, 10:1	1600 psi (110 bar)
248324	Fire-Ball 425, 10:1 (same as 240429 minus bung adapter and swivel. Includes 6-foot hose)	1600 psi (110 bar)

## Technical Data

### Maximum Flow Range

SDV15 15 gpm (56.8 lpm)

XDV20 20 gpm (75 lpm)

Maximum Working Pressure SDV15/XDV20 1500 psi (102 bar)

SDV15/XDV20 Weight 0.4 lbs (0.18 kg)

Inlet See pages 2 and 3 for models and configuration information

### Outlet

SDV15 3/4 - 16 straight thread o-ring boss

XDV20 7/8 - 14 straight thread o-ring

Operating temperature range -40°F to 180°F (-40°C to 82°C)

Wetted parts Aluminum, Stainless Steel, CS, Acetal, Nitrile Rubber, TPE

Fluid compatibility Antifreeze, gear lube, oil





# Graco 7-Year Meter and Valve 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 from the date of sale as defined in the table below, repair or replace equipment covered by this warranty and 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.

<b>Graco 7-Year Meter and Valve Extended Warranty</b>	
<b>Components</b>	<b>Warranty Period</b>
Structural Components	7 years
Electronics	3 years
Wear Parts - including but not limited to o-rings, seals and valves	1 year

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 Information

**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

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*Original instructions. This manual contains English. MM 312789*

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**Graco Headquarters:** Minneapolis

**International Offices:** Belgium, China, Japan, Korea

**GRACO INC. P.O. BOX 1441 MINNEAPOLIS, MN 55440-1441**

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