

Instructions-Parts



High Flow Severe Duty Shutoff Check Valve

313343A

For recirculation valves, shutoff check valves, or outlet shutoff check valves on XM plural-component sprayers.

Part No. 255278

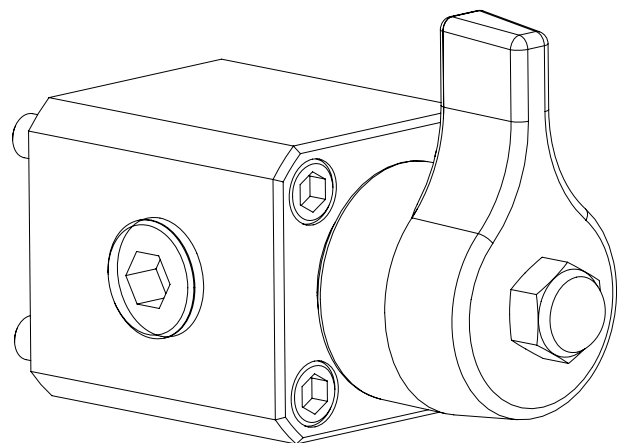
Complete high flow severe duty shutoff check valve assembly

*7250 psi (50 MPa, 500 bar) Maximum Working Pressure
160°F (71°C) Maximum Fluid Temperature*



Important Safety Instructions

Read all warnings and instructions in this manual and manuals 312359 and 313289. Save these instructions.



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Related Manuals

Component Manuals in U.S. English:

Manual	Description
312359	XM Operation
313289	XM Repair
313292	XM OEM, Instructions-Parts
313342	Dosing Valve, Instructions-Parts
312749	XM Mix Manifold Kits Instructions-Parts

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>FIRE AND EXPLOSION HAZARD</p> <p>Flammable fumes, such as solvent and paint fumes, in work area can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> • Use equipment only in well ventilated area. • Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc). • Keep work area free of debris, including solvent, rags and gasoline. • Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present. • Ground all equipment in the work area. See Grounding instructions. • Use only grounded hoses. • Hold gun firmly to side of grounded pail when triggering into pail. • If there is static sparking or you feel a shock, stop operation immediately. Do not use equipment until you identify and correct the problem. • Keep a working fire extinguisher in the work area.
	<p>PRESSURIZED EQUIPMENT HAZARD</p> <p>Fluid from the gun/dispense valve, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.</p> <ul style="list-style-type: none"> • Follow Pressure Relief Procedure in this manual, when you stop spraying and before cleaning, checking, or servicing equipment. • Tighten all fluid connections before operating the equipment. • Check hoses, tubes, and couplings daily. Replace worn or damaged parts immediately.
	<p>TOXIC FLUID OR FUMES HAZARD</p> <p>Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.</p> <ul style="list-style-type: none"> • Read MSDS's to know the specific hazards of the fluids you are using. • Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines. • Always wear impervious gloves when spraying or cleaning equipment.
	<p>PERSONAL PROTECTIVE EQUIPMENT</p> <p>You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, inhalation of toxic fumes, burns, and hearing loss. This equipment includes but is not limited to:</p> <ul style="list-style-type: none"> • Protective eyewear • Clothing and respirator as recommended by the fluid and solvent manufacturer • Gloves • Hearing protection

Overview

The high flow severe duty shutoff check valve is a valve that acts as a spring loaded one-way check valve when the valve is in the open position. When the handle is turned to the closed position, the ball is held against the seat closing flow in either direction. The valve can be manifold mounted with four screws and an o-ring face seal on the inlet, or it can be plumbed in place with 1/2 in. npt (f) threads on the inlet and two outlets.

NOTE:

It is recommended that this valve be used in the fully open and fully closed positions. To control the flow rate on a circulation line, use adjustable restriction valve 222200. See **Accessories** on page 8.

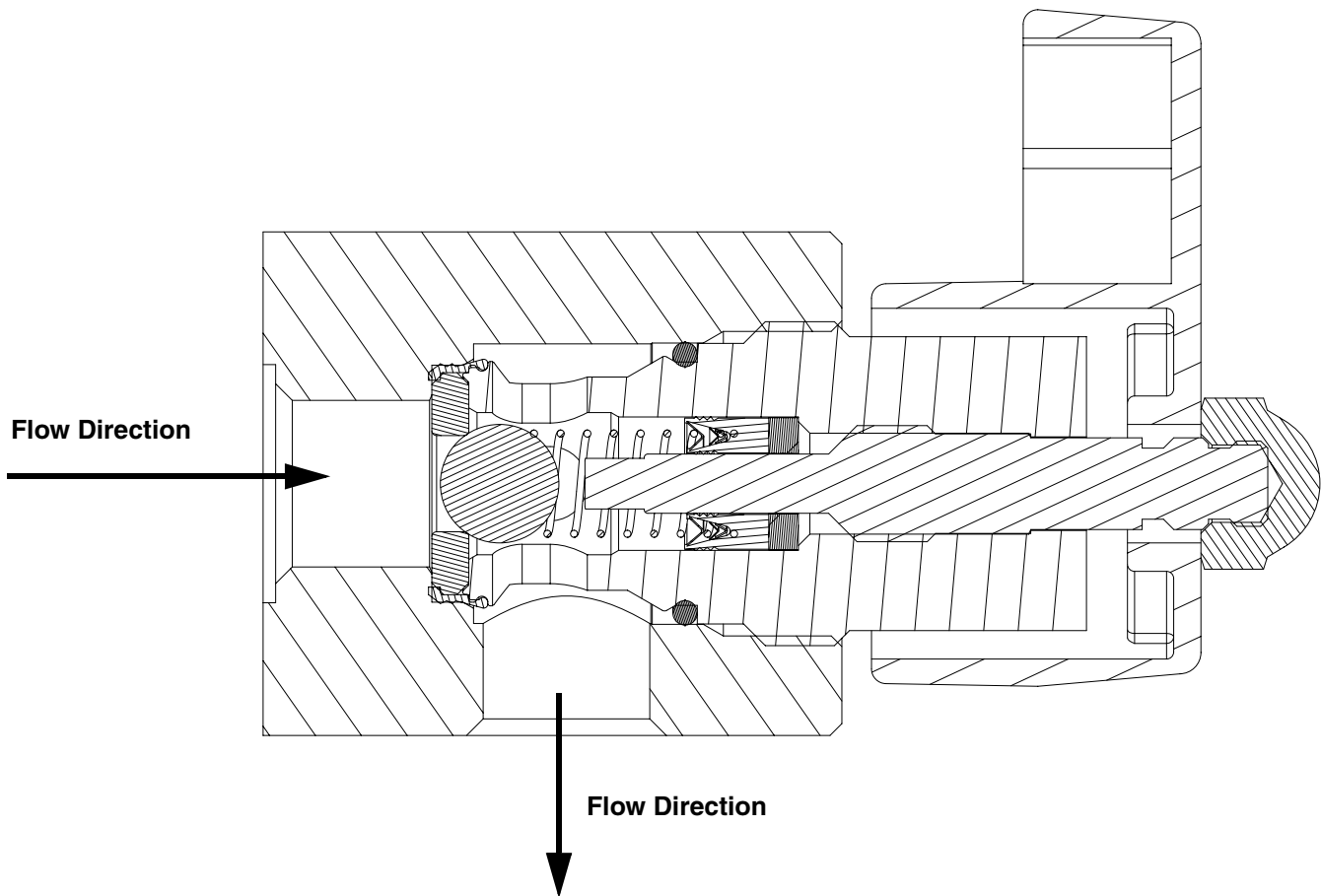


FIG. 1: Cutaway View

Setup

Reference parts illustration on page 7.

1. Mount the valve in place with two outlet ports pointed in the desired direction using o-ring (14) and four screws (11).
2. Plug the un-used outlet port with plug (15). Use thread tape or sealant on the npt threads.
3. Use handle (12) to close the valve stem (8) clockwise. Position handle (12) to point in the direction you want to show as "closed".
4. Secure handle (12) in place on stem (8) with crown nut (11).

Repair



Disassemble

Reference parts illustration on page 7.

1. Relieve upstream and downstream pressure. See operation manual 312359 for **Pressure Relief Procedure**. Leave stem (8) in open position.
2. Clamp housing (1) in a vice. Remove nut (13) and handle (12) from top check valve housing (10).
3. Remove cartridge assembly (10) from housing (1).
4. Remove ball (4), and spring (5).
5. Use plastic tool (110) provided in repair kit 256239 to remove seat (3) and seal (2).

NOTE:

If valve housing (10) is still mounted on a machine, use a 90° hex key to grab under seat (3) and remove from housing (1).

6. Place handle (12) upside down on stem (8). Turn clockwise and remove stem (8) from cartridge (10). The seal (6) and spacer (7) will come out with the stem. Remove seal (6) and spacer (7) from stem (8).

7. Clean and inspect parts for wear and damage. Replace damaged parts from repair kit 256239.

Assemble

Reference parts illustration on page 7.

1. Install o-ring (9) in groove of check valve housing (10).

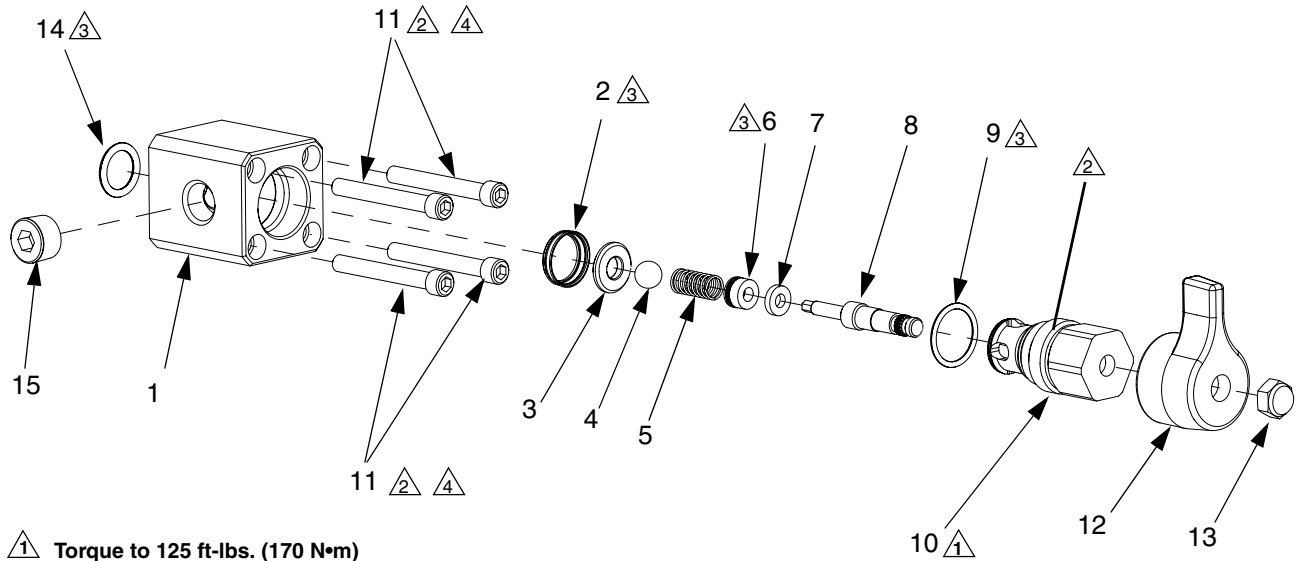
NOTICE

Do not install seal (6) and spacer (7) at this time to prevent damage to seal.

2. Start to thread stem (8) by hand into bottom of cartridge (10). Place handle (12) on stem (8) and turn counter-clockwise to fully thread stem (8) through top of cartridge (10) to full open position.
3. Insert spacer (7). Use plastic tool (110) and hammer (not provided) to install seal (6) with lips facing away from spacer (7) on to stem (8) until it stops against spacer (7).
4. Place cartridge (10) in vice with bottom facing upward. Place spring (5) and ball (4) on stem (8). Firmly press seal (2) over lip of cartridge until it snaps into place and holds all the parts in place.
5. Apply blue thread lock, from repair kit 256239, on cartridge (10) external threads and insert cartridge assembly into check valve housing (1).
6. Place housing (1) in vice and torque to 125 ft-lbs.
7. Mount valve and position handle as described in **Setup**.

Parts

255278, Complete Shutoff Check Valve Shown



- ① Torque to 125 ft-lbs. (170 N•m)
- ② Apply blue threadlock.
- ③ Apply lithium grease.
- ④ Torque to 16-20 ft-lbs. (22-27 N•m)

Ref.	Part	Description	Qty.
1	15J594	HOUSING, check valve	1
2*	15K692	SEAL, retainer, acetal	1
3*	15A968	SEAT, footvalve, carbide	1
4*	116166	BALL, carbide	1
5*	15M530	SPRING	1
6*	15M529	SEAL, u-cup; UHMWPE	1
7*	15M189	SPACER, backup, seal	1
8*	15K347	STEM	1
9*	121138	O-RING; PTFE	1
10*	15K199	HOUSING, top, check valve	1
11	121295	SCREW, cap, shcs; 5/16-18 x 2.5 in.	4
12	15R381	HANDLE, black	1
13	117623	NUT, cap (3/8-16)	1
14	121139	O-RING; PTFE	1
15	100361	PLUG, pipe; 1/2 npt	1

* Included in shutoff check valve cartridge 255747.

◆ Included in shutoff check valve repair kit 256239 (purchase separately). See page 8 for parts included in kit.

Troubleshooting

Problem	Cause	Solution
Handle is hard to turn under pressure.	Cartridge (10) is not tightened completely into housing (1).	Torque cartridge (10) to 125 ft-lbs. (170 N•m).

Repair Kit

256239, Shutoff Check Valve Repair Kit

See parts illustration on page 7.

Ref	Part	Description	Qty.
2	15K692	SEAL, retainer, carbide	1
6	15M529	SEAL	1
9	121138	O-RING	1
110†	15T630	TOOL, u-cup and manifold	1
111†	113500	ADHESIVE, anaerobic	1

† Not shown.

Accessories

Handles

Part	Description	Qty.
247789	HANDLE, blue	1
15R380	HANDLE, green	1
247788	HANDLE, red	1

15R529, Fluid Inlet Block

Used on XM outlet to mount high flow severe duty shut-off check valve when mix manifold is remote. See manual 312749 for parts.

256980, XM Remote Mix Manifold Conversion Kit

See manual 312749.

222200, Restriction Valve

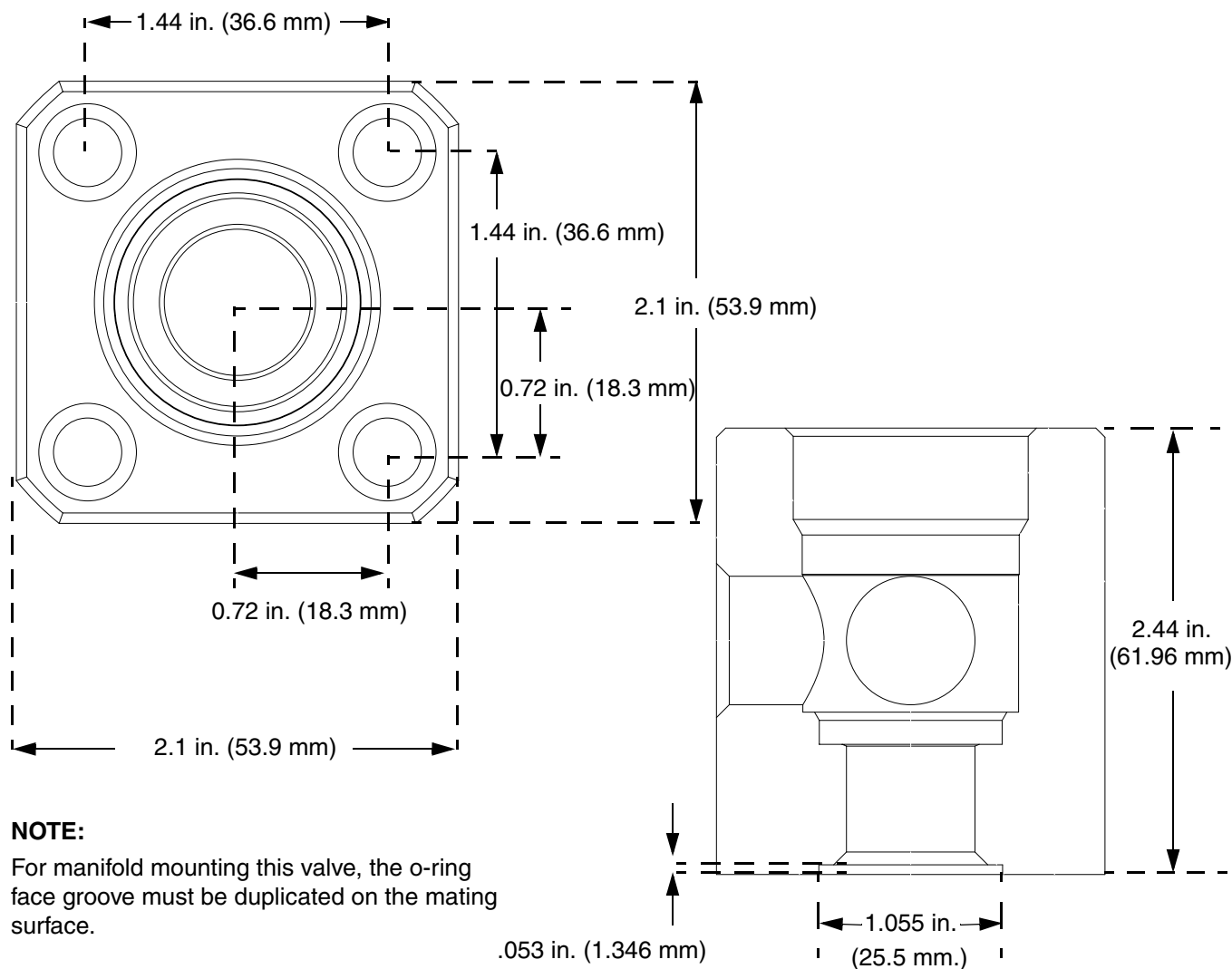
Used to control flow rate in circulation lines. See manual 307892.

Technical Data

Maximum Fluid Working Pressure	7250 psi (50 MPa, 500 bar)
Maximum Fluid Temperature	160°F (71°C)
Check Valve Housing Fluid Ports	1/2 in. npt
Wetted Parts	carbide ball, carbide seat, sst stem, nickel plated steel, PTFE o-rings, UHMWPE u-cup, acetal end cup seal.
Full turns from closed to open position.	1.5 turns

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Mounting Dimensions



NOTE:

For manifold mounting this valve, the o-ring face groove must be duplicated on the mating surface.

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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