Instructions/Parts List

Low Pressure

Fluid Regulators

309474N

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Important Safety Instructions
Read all warnings and instructions in this manual.
Save these instructions.

Model 233757 Shown

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PROVEN QUALITY. LEADING TECHNOLOGY.

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Manual Conventions

Warning

WARNING

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

Symbols, such as fire and explosion (shown above), alert you to a specific hazard and direct you to read the indicated hazard warnings (pages 4-5) for detailed information.

Caution

CAUTION

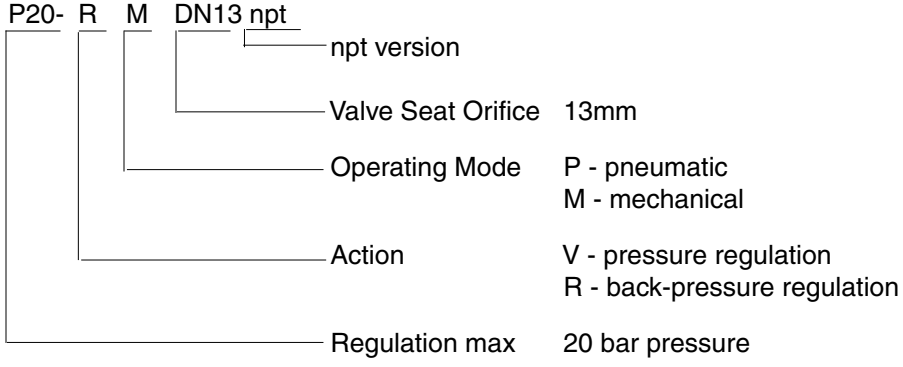
A caution alerts you to the possibility of damage to or destruction of equipment if you do not follow the instructions.

List of Models

Fluid Pressure Regulators					
Part No.	**Series**	**Model**	**Type**	**Maximum Fluid Inlet Pressure**	**Regulated Pressure Range**
233757 234263	B B	P20-VM P20-VM npt	Mechanical, fluid pressure	580 psi (4000 kPa, 40 bar)	15-290 psi (100-2000 kPa, 1-20 bar)
24Z112	A	P20-VM npt	Mechanical, fluid pressure	580 psi (4000 kPa, 40 bar)	15-290 psi (100-2000 kPa, 1-20 bar). Preset to 185 psi (1275 kPa, 13 bar).
233759 234267	B B	P50-VM P50-VM npt	Mechanical, fluid pressure	1015 psi (7000 kPa, 70 bar)	145-725 psi (1000-5000 kPa, 10-50 bar)
233773 234272	B B	P10-VP P10-VP npt	Pneumatic, fluid pressure	580 psi (4000 kPa, 40 bar)	6-145 psi (40-1000 kPa, 0.4-10 bar)
233774 234273	B B	P10-VM P10-VM npt	Mechanical, fluid pressure	580 psi (4000 kPa, 40 bar)	15-145 psi (100-1000 kPa, 1-10 bar)
233809 234256	B B	P10-VP, OEM P10-VP, OEM npt	Pneumatic, fluid pressure	580 psi (4000 kPa, 40 bar)	6-145 psi 40-1000 kPa, 0.4-10 bar)
Back Pressure Regulators					
Part No.	**Series**	**Model**	**Type**	**Maximum Permanent Supply Pressure**	**Regulated Pressure Range**
233758 234262	B B	P10-RM P10-RM npt	Mechanical, back pressure	145 psi (1000 kPa, 10 bar)	15-145 psi (100-1000 kPa, 1-10 bar)
233810 234257	B B	P10-RP P10-RP npt	Pneumatic, back pressure	145 psi (1000 kPa, 10 bar)	15-145 psi (100-1000 kPa, 1-10 bar)
233811 234255	B B	P20-RM DN13 P20-RM DN13 npt	Mechanical, back pressure	290 psi (2000 kPa, 20 bar)	29-290 psi (200-2000 kPa, 2-20 bar)
233812 234258	B B	P50-RM P50-RM npt	Mechanical, back pressure	725 psi (5000 kPa, 50 bar)	73-725 psi (500-5000 kPa, 5-50 bar)
233950 234261	B B	P20-RM DN1 P20-RM DN1 npt	Mechanical, back pressure	290 psi (2000 kPa, 20 bar)	15-290 psi (100-2000 kPa, 1-20 bar)

Key to Model Designation

Pressure regulation valve e.g. P20- R M DN13 npt



⚠ WARNING

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. Use only genuine Graco parts and accessories.
- Check equipment daily. Repair or replace worn or damaged parts immediately.
- Do not exceed the maximum working pressure of the lowest rated system component. Refer to the **Technical Data** on page 20 for the maximum working pressure of this equipment.
- Use fluids and solvents which are compatible with the equipment wetted parts. Refer to the **Technical Data** section of all equipment manuals. Read the fluid and solvent manufacturer's warnings.
- Route hoses away from traffic areas, sharp edges, moving parts, and hot surfaces. Do not expose Graco hoses to temperatures above 180°F (82°C) or below -40°F (-40°C).
- Wear hearing protection when operating this equipment.
- Never use 1,1, 1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in pressurized aluminum equipment. Such use could result in a chemical reaction, with the possibility of explosion.
- Comply with all applicable local, state, and national fire, electrical, and safety regulations.

⚠ WARNING

PRESSURIZED EQUIPMENT HAZARD

Spray from the gun, hose leaks, or ruptured components can splash fluid in the eyes or on the skin and cause serious injury.

- Do not point the gun at anyone or at any parts of the body.
- Do not stop or deflect leaks with your hand, body, glove, or rag.
- Follow the **Pressure Relief Procedure** on page 11 whenever you are instructed to relieve pressure; stop spraying; clean, check, or repair the equipment; and install or clean the spray nozzle.
- Tighten all fluid connections before operating the equipment.
- Check the hoses, tubes, and couplings daily. Replace worn, damaged, or loose parts immediately. Permanently coupled hoses cannot be repaired; replace the entire hose.

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. Read the fluid manufacturer's warnings.
- 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.

Introduction

A fluid pressure regulator is used in air spray systems to ensure accurate, positive control of fluid pressure to an air spray gun or to a low pressure dispensing valve or atomizing head.

A regulator installed at a circulating line take-off or pump reduces main line pressure to maintain the desired fluid pressure to the air spray gun or to a low pressure dispensing valve or atomizing head.

Back Pressure Regulators

Models 233810, 233811, 233812, 233950, 234255, 234257, 234258, 233758, 234261, and 234262, are back pressure regulators that limit the supply pressure to a set value by opening an outlet and guiding back excess material when the predetermined pressure has been achieved. These valves are used in circulating systems. Model 233810 pneumatic back pressure regulator is shown in FIG. 1.

Fluid Pressure Regulators

Models 233757, 233759, 233774, 234263, 234267, 234273, and 24Z112 (FIG. 2.) are mechanically operated fluid pressure regulators designed primarily for use with low to medium viscosity fluids.

Models 233773, 233809, 234256, and 234272 (FIG. 3.) are pneumatically operated fluid pressure regulators designed primarily for use with highly viscous coatings.

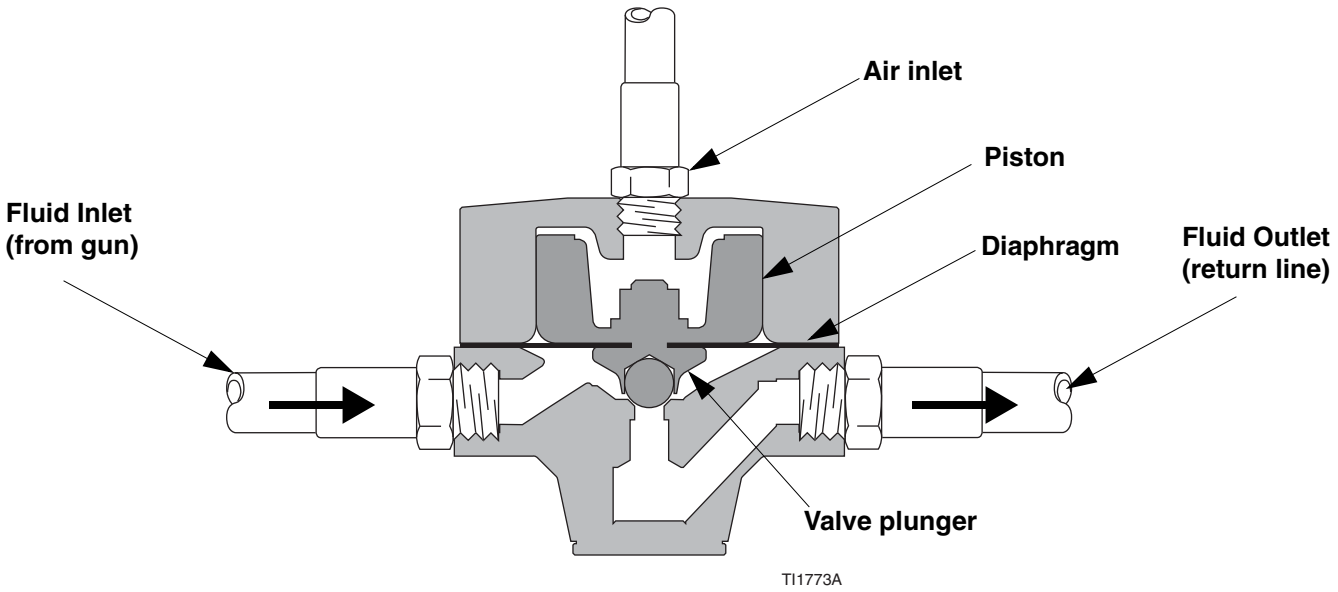


Fig. 1. Cutaway of Pneumatic Back Pressure Regulator

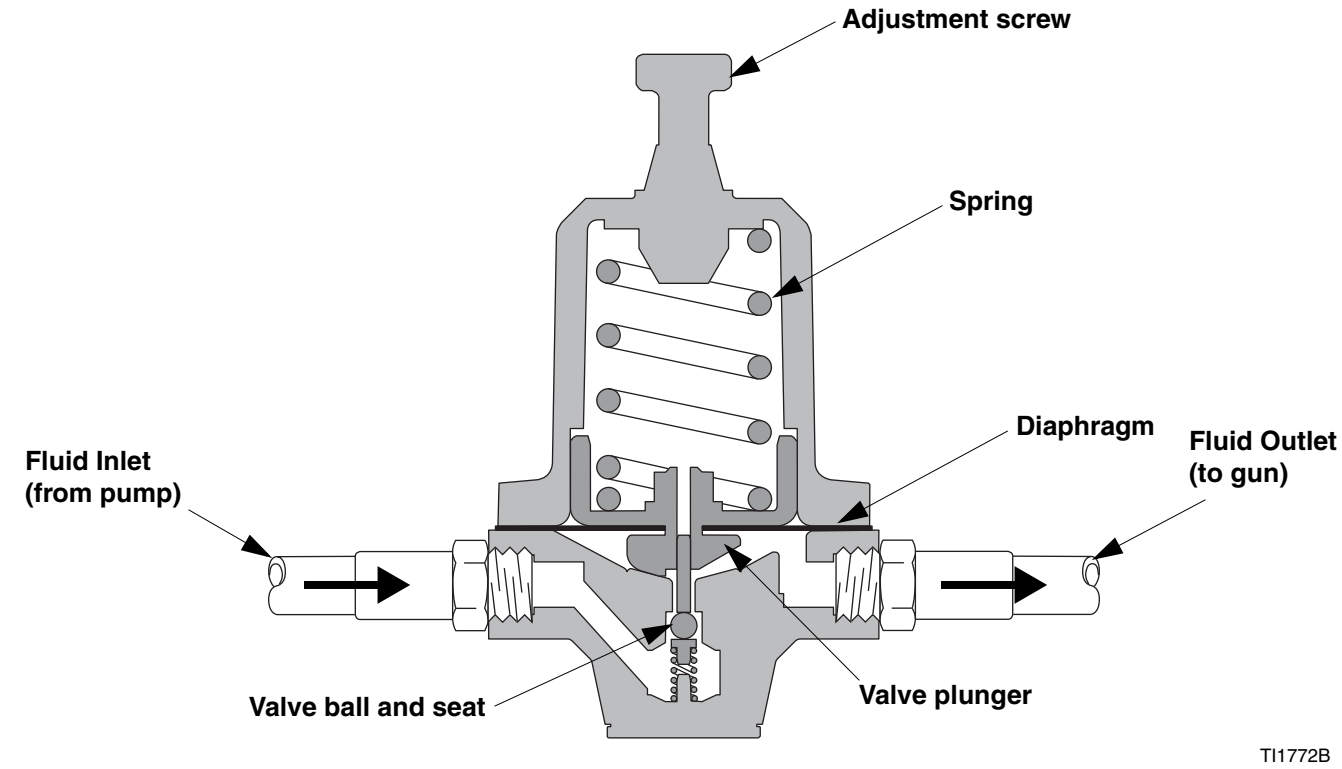


Fig. 2. Cutaway of Mechanical Fluid Pressure Regulator

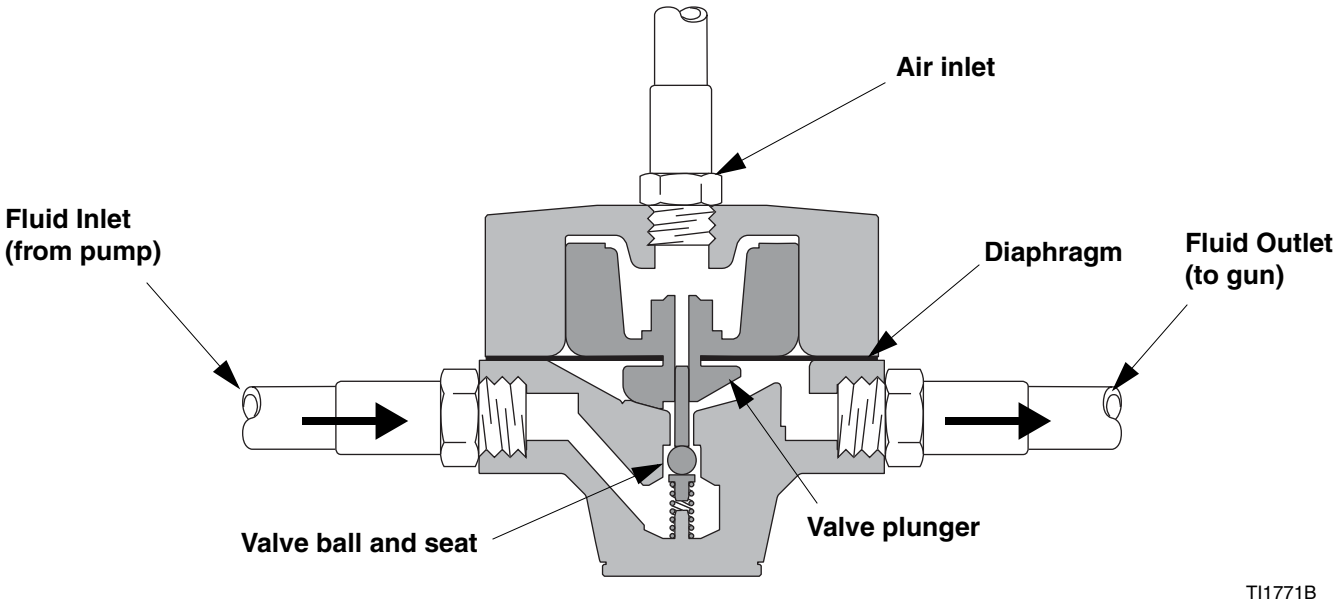


Fig. 3. Cutaway of Pneumatic Fluid Pressure Regulator

Installation

1. Install one regulator for each spray gun.
2. Apply thread sealant to connections as necessary.
3. Make sure that the direction of fluid flow agrees with the flow direction markings on the regulator body.
   a. Install a fluid pressure regulator *upstream* of the gun: Connect the fluid line from the pump to the inlet of the fluid regulator. Connect the fluid line to the gun to the regulator's outlet.
   b. Install a back pressure regulator *downstream* of the gun. Connect the fluid return line from the gun to the inlet of the back pressure regulator. Connect the fluid return line to the pump to the regulator's outlet.
4. Flush and test the entire system.

FIG. 4., FIG. 5., and FIG. 6. show possible configurations for installing a system. They do not depict actual system designs. Consult your Graco distributor for assistance in designing a system that meets your specific requirements.

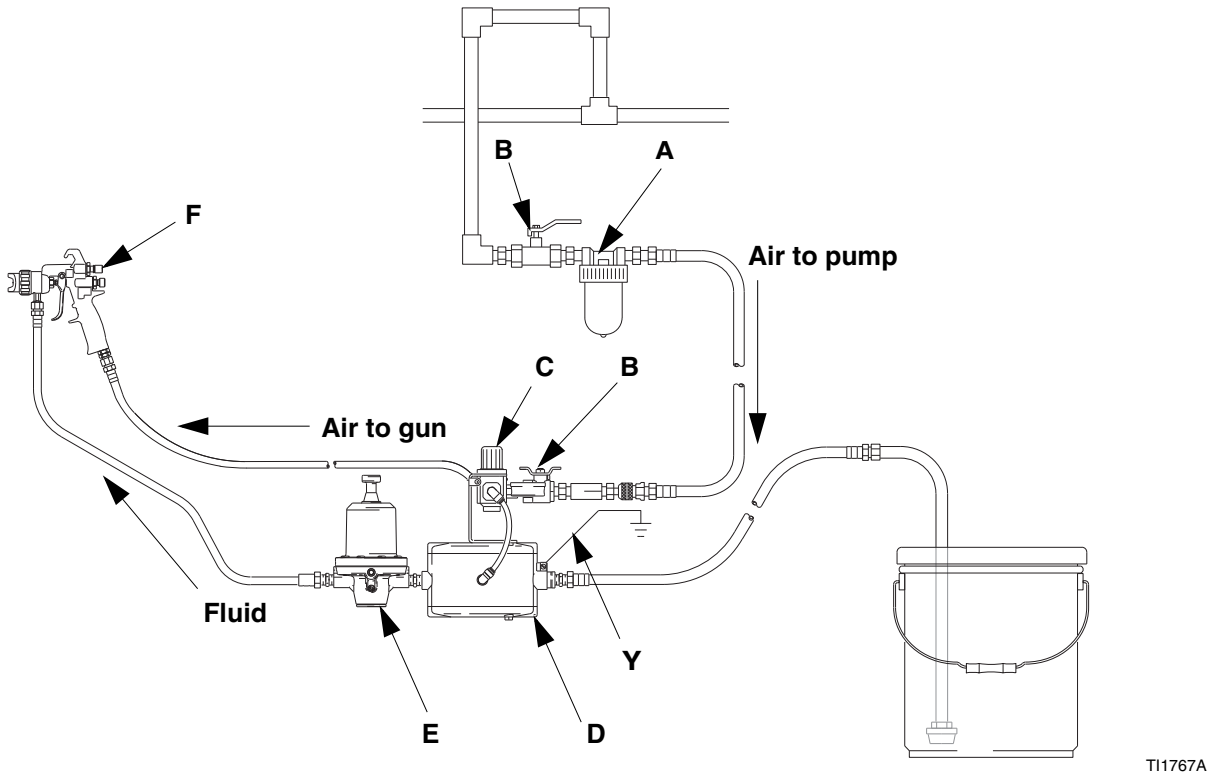


Fig. 4. Low pressure, non-circulating system, mechanical fluid regulator

Key

A	Air line filter
B	Bleed-type air shut-off valve
C	Air regulator for pump and gun
D	Pump

E	Fluid regulator
F	Air spray gun
Y	Pump ground wire

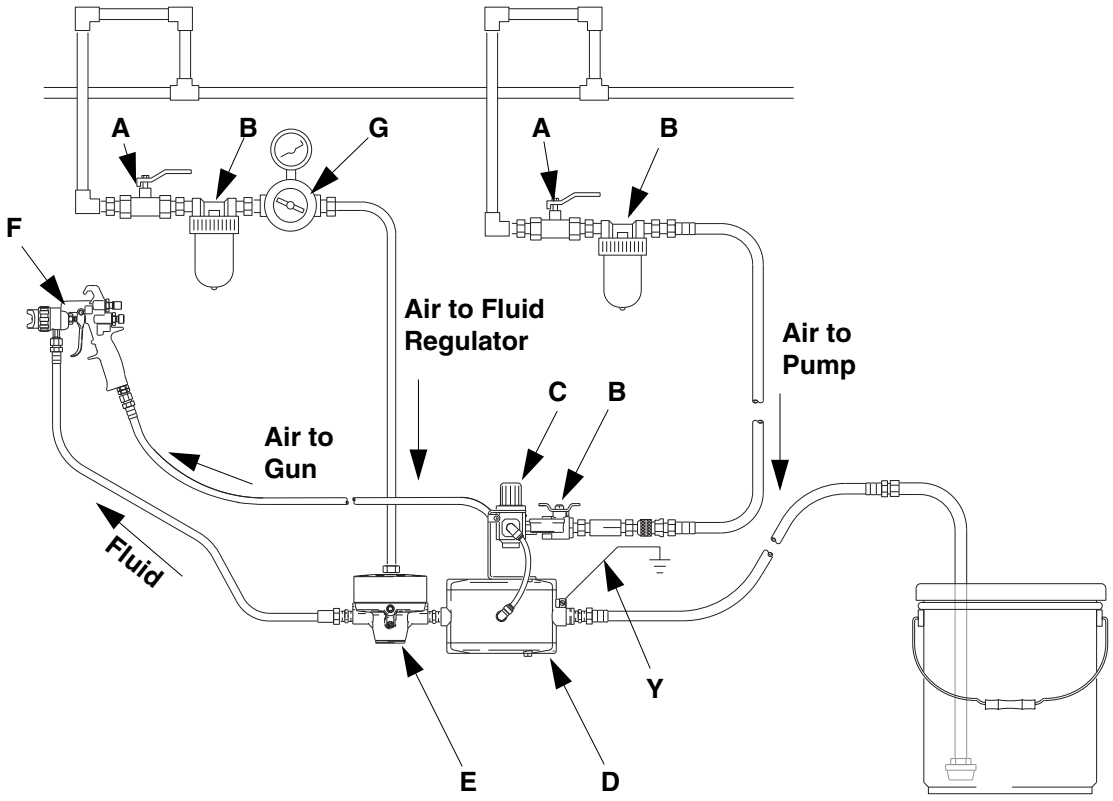


Fig. 5. Low pressure, non-circulating system, pneumatic fluid regulator

Key

A	Air line filter
B	Bleed-type air shut-off valve
C	Air regulator for pump and gun
D	Pump

E	Fluid regulator
F	Air spray gun
G	Air regulator for fluid regulator
Y	Pump ground wire

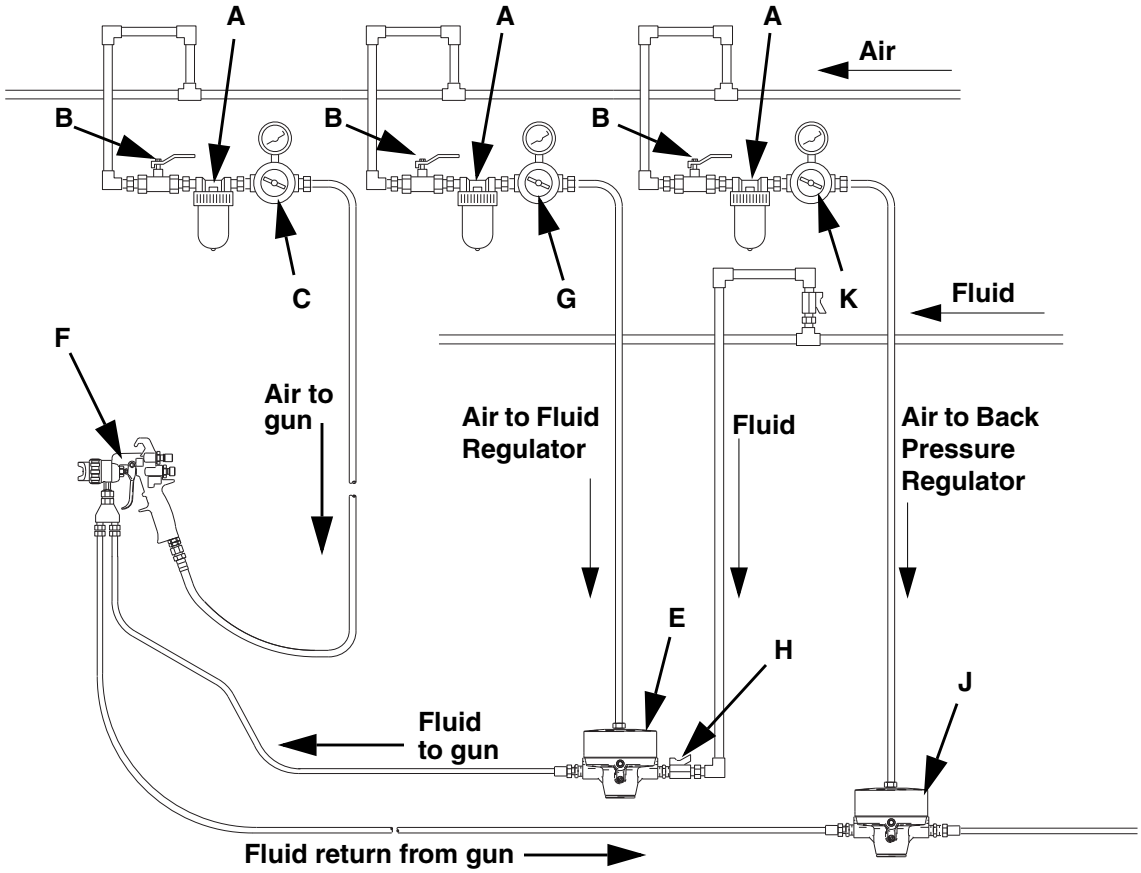


Fig. 6. Low Pressure circulating system, pneumatic fluid regulator and back pressure regulator

Key

A	Air line filter
B	Bleed-type air shut-off valve
C	Air regulator for pump and gun
E	Fluid regulator
F	Air spray gun

G	Air regulator for fluid regulator
H	Fluid shutoff valve
J	Back pressure regulator
K	Air regulator for back pressure regulator
Y	Pump ground wire

Operation

Flush Before First Use

Your pressure regulator has been tested in the factory with an anti-corrosion liquid. Before using the regulator, thoroughly flush the system with a solvent to remove residue of this liquid as well as any contaminants that have been introduced during assembly of the system.

Pressure Relief Procedure

WARNING

Read the warnings on page 5, and follow the Pressure Relief Procedure below whenever you:

- are instructed to relieve pressure
- stop spraying
- check or service any of the equipment
- install or clean the fluid nozzle.

1. Shut off the air to the pump.
2. Trigger the air spray gun to relieve the fluid pressure.
3. Open the fluid drain valve to relieve all fluid pressure, having a container ready to catch the drainage.

Adjusting the Regulator

The fluid pressure regulator controls pressure downstream from its outlet. The inlet fluid pressure should always be higher than the outlet fluid pressure.

If you are using an accessory fluid pressure gauge, trigger the air spray gun to relieve pressure in the line when reducing the pressure, to ensure a correct gauge reading.

Adjust the pump air pressure and the fluid pressure regulator for the best spraying combination.

In a circulating system, the back pressure valve controls the fluid pressure upstream of its inlet in the same way.

Mechanical Regulator

1. Back out the adjustment screw until there is no spring pressure.
2. Turn on the fluid supply, to admit fluid to the regulator.
3. Turn the screw clockwise to adjust fluid pressure to the desired level.

Pneumatic Regulator

1. With the fluid supply shut off, turn on the air pressure to the regulator.
2. Turn on the fluid supply, to admit fluid to the regulator.
3. Increase the fluid inlet pressure. When the fluid outlet pressure is at the desired level, shut off the air to the fluid regulator.

Troubleshooting

Relieve the pressure (page 11) before checking or repairing the equipment.

To repair the regulator, refer to page 13.

Problem	Cause	Solution
Drop in fluid outlet pressure.	Ruptured diaphragm (15).	Replace diaphragm.
	Air escaping (pneumatic regulators only).	Check air hose and connections. Replace piston seal (21).
Fluid outlet pressure increases to level of fluid inlet pressure.	Valve ball (5) and seat (2) are worn or stuck open.	Clean ball and seat. Replace worn or damaged parts.
Fluid leaking from upper housing.	Ruptured diaphragm (15).	Replace diaphragm.

Maintenance

Flushing

Flush before changing colors, at the end of the day, before storing, and before repairing the equipment.

Flush with a fluid that is compatible with the fluid you are pumping and with the wetted parts of your system. Check with your fluid manufacturer or supplier for recommended flushing fluids and flushing frequency. Relieve the pressure after flushing.

Do not allow paint or solvent to sit in the system for extended periods. Fluid could dry in the regulator and cause leakage. If leakage occurs, relieve pressure, then disassemble and clean the regulator.

Cleaning and Repair

When changing fluids or colors, the regulator should be disassembled and cleaned. Regular cleaning and inspection of the internal parts is necessary to keep the fluid regulator working properly.

1. Relieve all air and fluid pressure in the system.
2. Remove the regulator from the system.
3. Disassemble the regulator (see the parts drawings on pages 14 through 19).
4. Clean and inspect all parts.

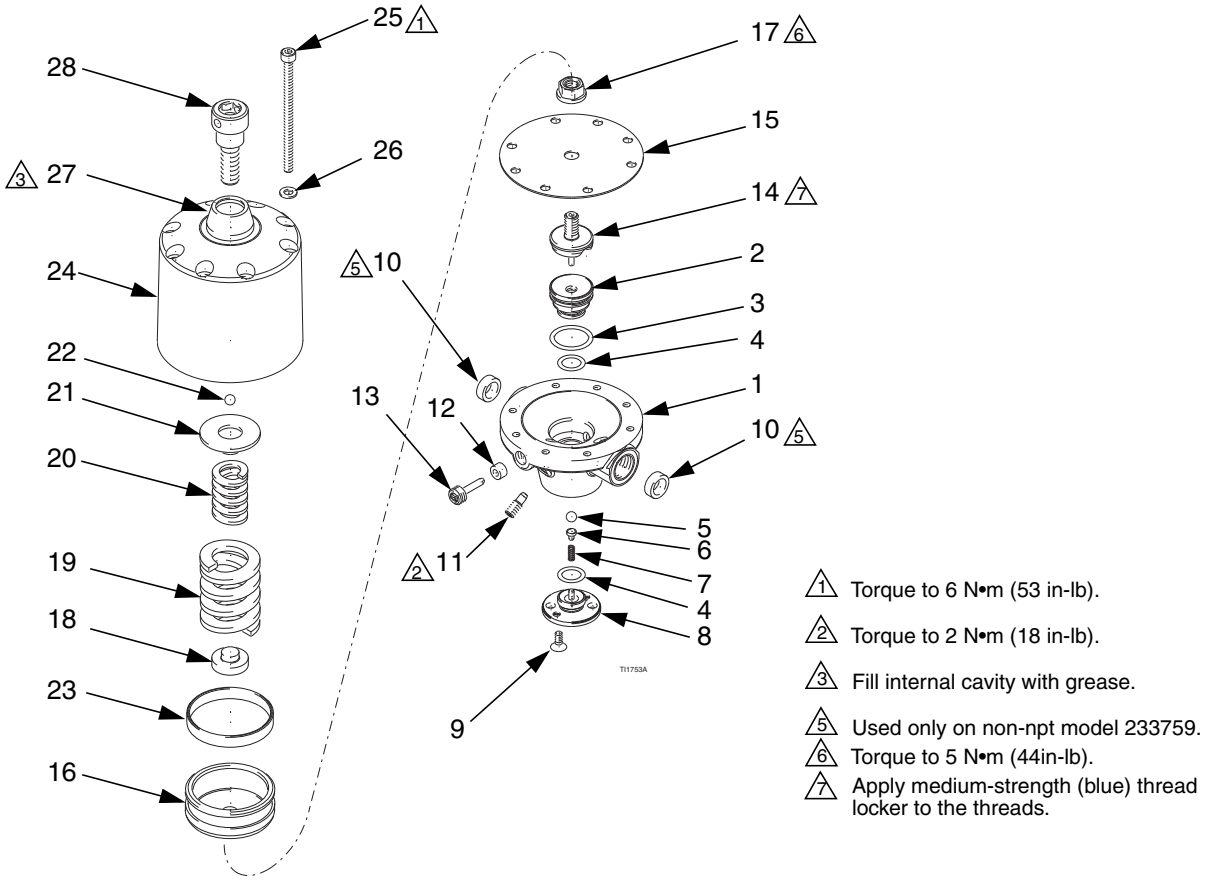
CAUTION

Be very careful when handling the carbide balls and seats. Damage will cause poor operation and leakage.

5. Inspect the diaphragm, packings, o-rings, and seals for wear. Check the ball and seat for nicks, wear, or other damage.
6. Lubricate packings, o-rings and seals when reassembling the regulator.

Parts

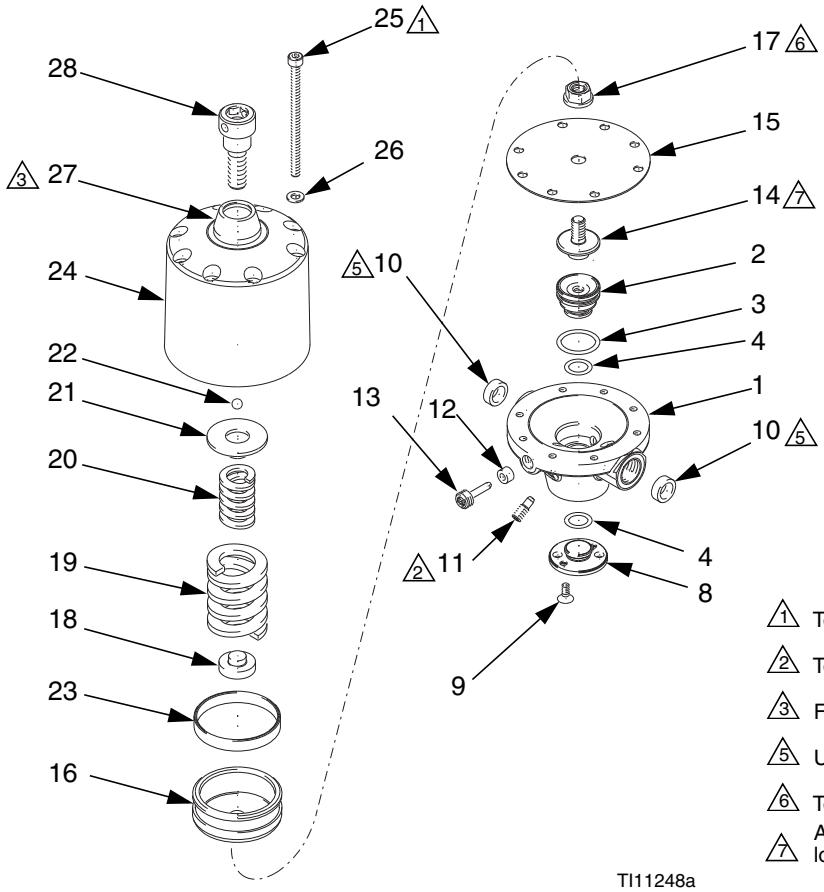
Mechanical Fluid Pressure Regulators
Part Nos. 233759 and 234267



Ref. No.	Part No.	Description	Qty
1		HOUSING, lower, for 233759	1
		HOUSING, lower, for 234267	1
2	245368	SEAT, valve	1
3	15Y036	O-RING	1
4	15Y035	O-RING	2
5	117106	BALL, 6 mm, carbide	1
6	15A205	SUPPORT, ball	1
7	117090	SPRING, compression	1
8	15A144	COVER	1
9	117123	SCREW, fhms, M4x10	2
10	15A219	RING, for non-npt model 233759 only	2
11	117101	PLUG, threaded	2
12	117085	SEAL, ring	1
13	117099	PLUG, threaded	1

Ref. No.	Part No.	Description	Qty
14	245372	PLUNGER, valve	1
15	15A179	DIAPHRAGM	1
16	15A173	CAP, spring	1
17	117122	NUT, seal-lock	1
18	15A175	PLATE, spring, bottom	1
19	117096	SPRING, compression	1
20	117092	SPRING, compression	1
21	15A176	PLATE, spring, top	1
22	117105	BALL, 6 mm	1
23	15A186	PACKING, PTFE with carbon	1
24	245366	HOUSING, upper	1
25	117129	SCREW, shcs, M5x80	8
26	117017	WASHER	8
27	15A141	BONNET, cover	1
28	15A242	SCREW, custom	1

Mechanical Back Pressure Regulators
Part Nos. 233812 and 234258



TI11248a

1 Torque to 6 N•m (53 in-lb).

2 Torque to 2 N•m (18 in-lb).

3 Fill internal cavity with grease.

5 Used only on non-npt model 233812.

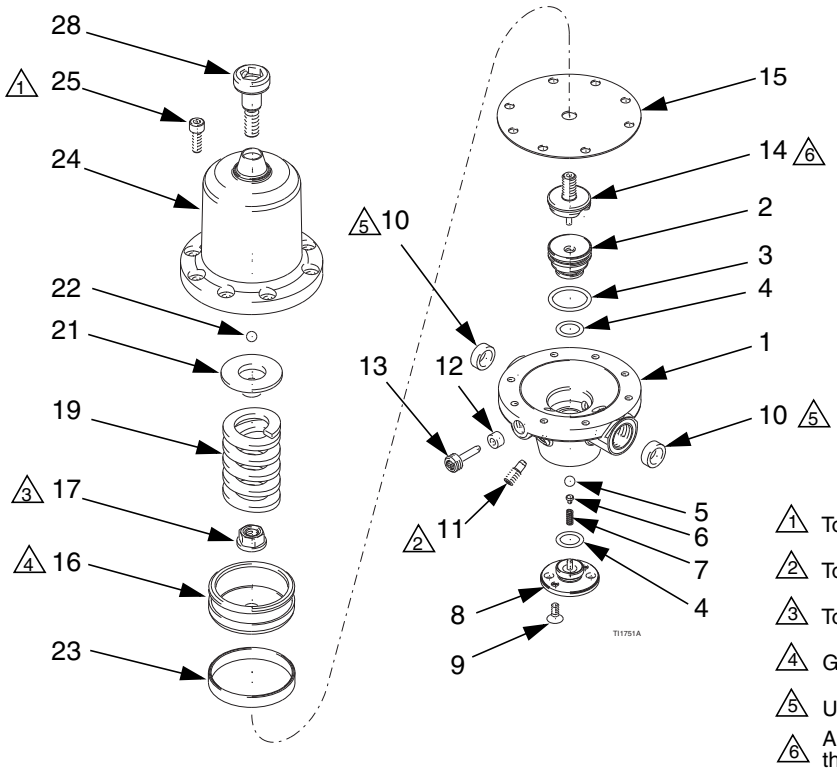
6 Torque to 5 N•m (44in-lb).

7 Apply medium-strength (blue) thread locker to the threads.

Ref. No.	Part No.	Description	Qty
1		HOUSING, lower, for 233812	1
		HOUSING, lower, for 234258	1
2	245369	SEAT, valve	1
3	15Y036	O-RING	1
4	15Y035	O-RING	2
8	15A143	COVER	1
9	117123	SCREW, fhms, M4x10	2
10	15A219	RING, for non-npt model 233812 only	2
11	117101	PLUG, threaded	2
12	117085	SEAL, ring	1
13	117099	PLUG, threaded	1
14	245373	PLUNGER, valve	1

Ref. No.	Part No.	Description	Qty
15	15A179	DIAPHRAGM	1
16	15A173	CAP, spring	1
17	117122	NUT, seal-lock	1
18	15A175	PLATE, spring, bottom	1
19	117096	SPRING, compression	1
20	117092	SPRING, compression	1
21	15A176	PLATE, spring, top	1
22	117108	BALL, 8 mm	1
23	15A186	PACKING, PTFE with carbon	1
24	245366	HOUSING, upper	1
25	117129	SCREW, shcs, M5x80	8
26	117017	WASHER	8
27	15A141	BONNET, cover	1
28	15A242	SCREW, custom	1

Mechanical Fluid Pressure Regulators
Part Nos. 233757, 233774, 234263, 234273 and 24Z112



1 Torque to 4-5 N•m (35-44 in-lb).

2 Torque to 2 N•m (18 in-lb).

3 Torque to 5 N•m (44 in-lb).

4 Grease OD.

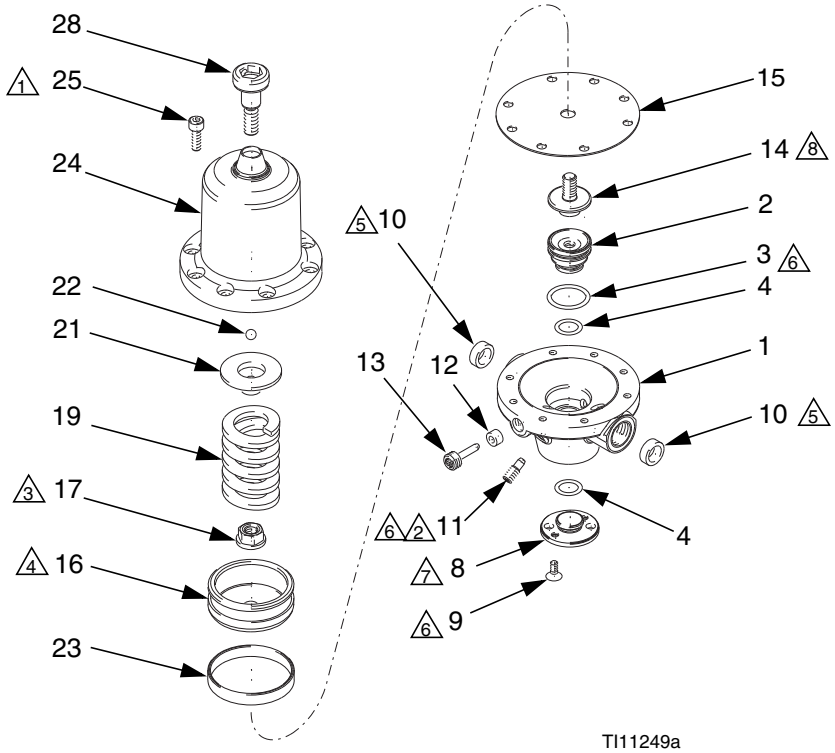
5 Used only on non-npt models 233757 and 233774.

6 Apply medium-strength (blue) thread locker to the threads.

Ref. No.	Part No.	Description	Qty
1		HOUSING, lower, for 233757 and 233774	1
		HOUSING, lower, for 234263, 234273, and 24Z112	1
2	245368	SEAT, valve	1
	24Z180	SEAT, valve, for 24Z112 only	1
3	15Y036	O-RING	1
4	15Y035	O-RING	2
5	117106	BALL, 6 mm, carbide	1
	17L570	BALL, 6mm, tungsten carbide, for 24Z112 only	1
6	15A205	SUPPORT, ball	1
7	117090	SPRING, compression	1
8	15A144	COVER	1
9	117123	SCREW, fhms, M4x10	2
10	15A219	RING, for non-npt models 233757 and 233774 only	2
11	117101	PLUG, threaded	2
12	117085	SEAL, ring	1

Ref. No.	Part No.	Description	Qty
13	117099	PLUG, threaded	1
14	245372	PLUNGER, valve	1
15	15A179	DIAPHRAGM	1
16	15A172	CAP, spring	1
17	117122	NUT, seal-lock	1
19	117087	SPRING, compression, for 233774 and 234273	1
	117095	SPRING, compression, for 233757, 234263, and 24Z112	1
21	15A177	PLATE, spring, top	1
22	117105	BALL, 6 mm	1
23	15A185	PACKING, PTFE with carbon	1
24	245365	HOUSING, upper	1
25	117126	SCREW, shcs, M5x16	8
28	15A241	SCREW, custom	1

Mechanical Back Pressure Regulators
Part Nos. 233758, 233811, 233950, 234255, 234261, and 234262



1 Torque to 4-5 N•m (35-44 in-lb).

2 Torque to 2 N•m (18 in-lb).

3 Torque to 5 N•m (44 in-lb).

4 Grease OD.

5 Used only on non-npt models 233758, 233950, and 233811.

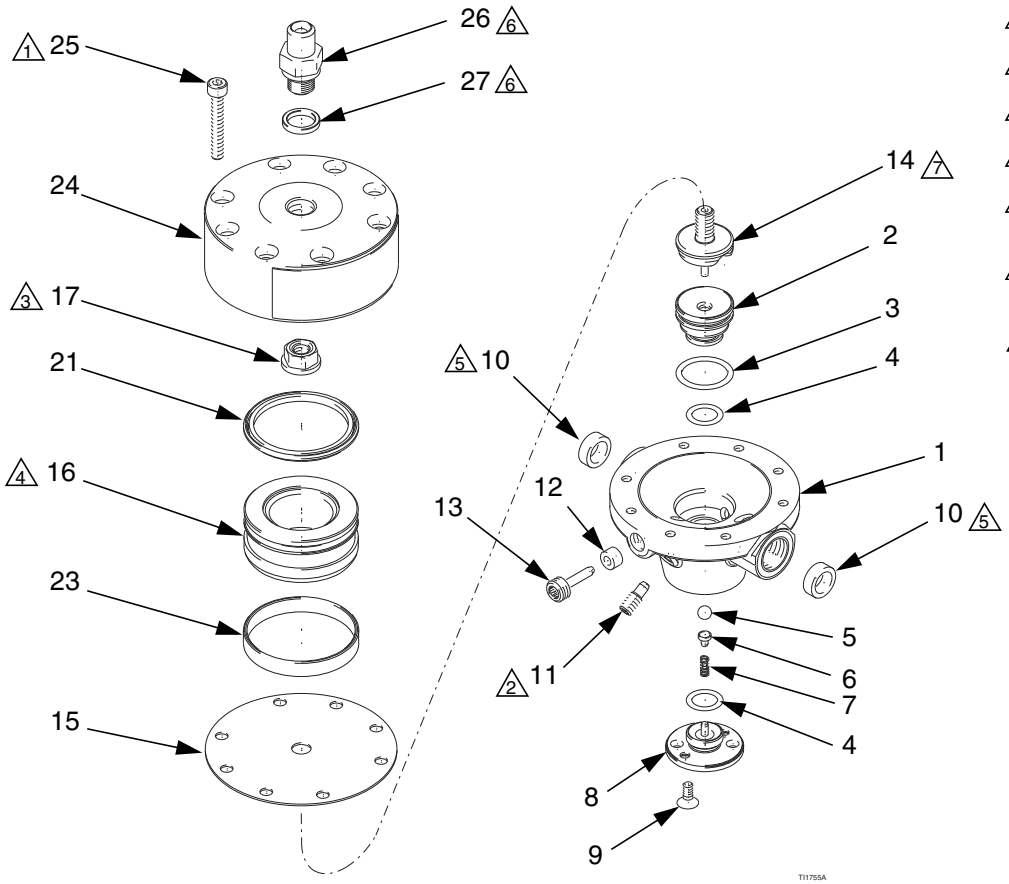
6 Not used on models 233811 and 234255.

7 Models 233811 and 234255 use a plug and retaining ring (not shown).

8 Apply medium-strength (blue) thread locker to the threads.

Ref. No.	Part No.	Description	Qty
1		HOUSING, lower, for 233758 and 233950	1
		HOUSING, lower for 234262 and 234261	1
	15A198	HOUSING, lower, for 233811	1
	15C303	HOUSING, lower, for 234255	1
2	245369	SEAT, valve, for 233758, 233950, 234261, and 234262	1
	15A228	SEAT, valve, for 233811 and 234255	1
3	15Y036	O-RING, not used on models 233811 and 234255	1
4	15Y035	O-RING, for 233758, 233950, 234261, and 234262	2
	15Y031	O-RING, for 233811 and 234255	2
8	15A143	COVER, for 233758, 233950, 234261, and 234262	1
	15A222	PLUG, for 233811 and 234255	1
9	117123	SCREW, fhms, M4x10, not used on models 233811 and 234255	2
10	15A219	RING, for non-npt models 233758, and 233950	2
	15A221	RING, for non-npt model 233811	2
11	117101	PLUG, threaded, not used on models 233811 and 234255	2
12	117085	SEAL, ring	1
13	117099	PLUG, threaded	1
14	245373	PLUNGER, valve, for 233758, 233950, 234261, and 234262	1
	245378	PLUNGER, valve, for 233811 and 234255	1
15	15A179	DIAPHRAGM	1
16	15A172	CAP, spring	1
17	117122	NUT, seal-lock	1
19	117087	SPRING, compression, for 233758 and 234262	1
	117095	SPRING, compression, for 233811, 233950, 234261, and 234255	1
21	15A177	PLATE, spring, top	1
22	117105	BALL, 6 mm	1
23	15A185	PACKING, PTFE with carbon	1
24	245365	HOUSING, upper	1
25	117126	SCREW, shcs, M5x16	8
28	15A241	SCREW, custom	1
29	117124	RING, retaining, 233811 and 234255 only	1

Pneumatic Fluid Pressure Regulators
Part Nos. 233773, 233809, 234272, and 234256



1 Torque to 4-5 N•m (35-44 in-lb).

2 Torque to 2 N•m (18 in-lb).

3 Torque to 5 N•m (44 in-lb).

4 Grease OD.

5 Used only on non-npt models 233773 and 233809.

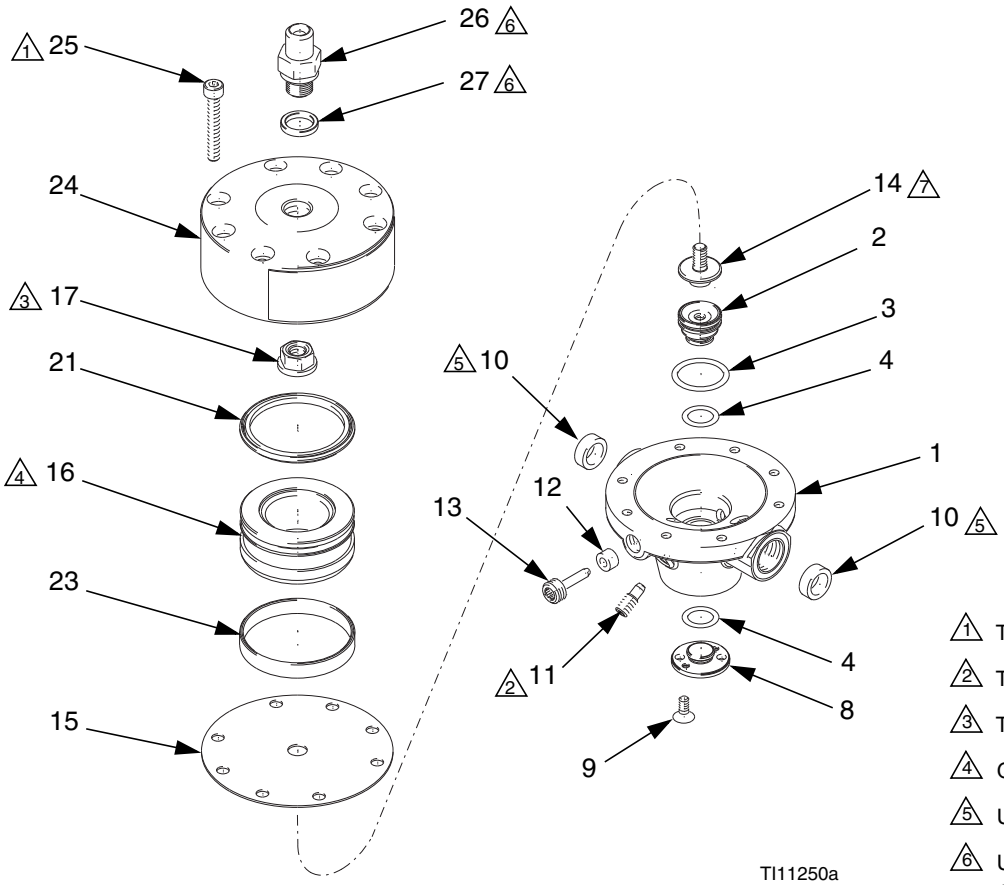
6 Used only on npt models 234272 and 234256.

7 Apply medium-strength (blue) thread locker to the threads.

Ref. No.	Part No.	Description	Qty.
1		HOUSING, lower, for 233773 and 233809	1
		HOUSING, lower, for 234272 and 234256	1
2	245368	SEAT, valve, for 233773 and 234272	1
	245371	SEAT, valve, for 233809 and 234256	1
3	15Y036	O-RING	1
4	15Y035	O-RING	1
5	117106	BALL, 6 mm, carbide, for 233773 and 234272	1
	117110	BALL, 6 mm, for 233809 and 234256	1
6	15A205	SUPPORT, ball	1
7	117090	SPRING, compression	1
8	15A144	COVER	1

Ref. No.	Part No.	Description	Qty.
9	117123	SCREW, fhms, M4x10	2
10	15A219	RING, for non-npt models 233773 and 233809	2
11	117101	PLUG, threaded	2
12	117085	SEAL, ring	1
13	117099	PLUG, threaded	1
14	245372	PLUNGER, valve	1
15	15A179	DIAPHRAGM	1
16	15A204	PISTON	1
17	117122	NUT, seal-lock	1
21	117102	SEAL, flat	1
23	15A185	PACKING, PTFE with carbon	1
24	15A191	HOUSING, upper	1
25	117127	SCREW, shcs, M5x35	8
26	15C332	FITTING, for npt models 234272 and 234256 only	1
27	15C333	WASHER, for npt models 234272 and 234256 only	1

Pneumatic Back Pressure Regulators
Part Nos. 233810 and 234257



1 Torque to 4-5 N•m (35-44 in-lb).

2 Torque to 2 N•m (18 in-lb).

3 Torque to 5 N•m (44 in-lb).

4 Grease OD.

5 Used only on non-npt model 233810.

6 Used only on npt model 234257.

7 Apply medium-strength (blue) thread locker to the threads.

Ref. No.	Part No.	Description	Qty.
1		HOUSING, lower, for 233810	1
		HOUSING, lower, for 234257	1
2	245369	SEAT, valve	1
3	15Y036	O-RING	1
4	15Y035	O-RING	1
8	15A143	COVER	1
9	117123	SCREW, fhms, M4x10	2
10	15A219	RING, for non-npt model 233810	2
11	117101	PLUG, threaded	2
12	117085	SEAL, ring	1
13	117099	PLUG, threaded	1
14	245373	PLUNGER, valve	1

Ref. No.	Part No.	Description	Qty.
15	15A179	DIAPHRAGM	1
16	15A204	PISTON	1
17	117122	NUT, seal-lock	1
21	117102	SEAL, flat	1
23	15A185	PACKING, PTFE with carbon	1
24	15A191	HOUSING, upper	1
25	117127	SCREW, shcs, M5x35	8
26	15C332	FITTING, for npt model 234257 only	1
27	15C333	WASHER, for npt model 234257 only	1

Technical Data

Category	Data
Maximum Fluid Inlet Pressure (Fluid Pressure Regulators)	*233757, 233773, 233774, 233809, 234256, 234263, 234272, 234273, 24Z112:* 580 psi (4000 kPa, 40 bar) *233759, 234267:* 1015 psi (7000 kPa, 70 bar)
Maximum Permanent Supply Pressure (Back Pressure Regulators)	*233758, 233810, 234257, 234262:* 145 psi (1000 kPa, 10 bar) *233811, 233950, 234255, 234261:* 290 psi (2000 kPa, 20 bar) *233812*, 234258: 725 psi (5000 kPa, 50 bar)
Pressure Range	*233773, 233809, 234272, 234256:* 6-145 psi (40-1000 kPa, 0.4-10 bar) *233758, 233774, 233810, 234257,234262, 234273:* 15-145 psi (100-1000 kPa, 1-10 bar) *233757, 234263:* 15-290 psi (100-2000 kPa, 1-20 bar) *24Z112:* 15-290 psi (100-2000 kPa, 1-20 bar). Preset to 185 PSI (1275 kPa, 13 bar). *233811, 233950, 234255, 234261:* 29-290 psi (200-2000 kPa, 2-20 bar) *233812, 234258:* 73-725 psi (500-5000 kPa, 5-50 bar) *233759, 234267:* 145-725 psi (1000-5000 kPa, 10-50 bar)
Maximum Operating Air Pressure (Pneumatic Regulators Only)	145 psi (1 MPa, 10 bar)
Maximum Flow Rate	See chart on page 21.
Temperature Range	*233757, 233758, 233759, 233773, 233774, 233809, 233810, 233811, 233950, 234255, 234256, 234261, 234262, 234263, 234273, 24Z112:* 32-194°F (0-90°C) *233812, 234258:* 50-176°F (10-80°C)
Fluid inlet and outlet	*233757, 233758, 233759, 233773, 233774, 233809, 233810, 233812, 233950:* 3/8 in. BSPP(F) 234256, 234257, 234258, 234261, 234262, 234263, 234267, 234272, 234273, 24Z112: 3/8 in. npt(f) *233811:* 1 in. BSPP(F) 234255: 1 in. npt(f)
Air inlet	*233773, 233809, 233810:* 1/4 in. BSPP(F) 234256, 234257, 234272: 1/4 in. npt(m)
*Gauge port	1/8 in. BSPP(F)
Wetted Parts	Stainless steel, tungsten carbide, PTFE, chemically resistant fluoroelastomer, PEEK *(233809 and 234256 only)*

* Accessory gauges available.

Accessory Gauges

Part No.	Gauge
233774	118338
243273	118338
233757	118338
234262	118338
233759	118339
234267	118339
234773	118338
234272	118338
233809	118338
234273	118338

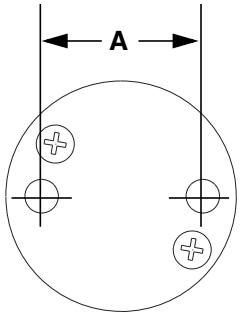
Part No.	Gauge
233758	118338
234262	118338
233950	118338
234261	118338
233811	118338
234255	118338
233812	118339
234258	118339
233810	118338
234257	118338

Flow Rate Data

Maximum fluid flow with 10 weight oil, regulator wide open and no downstream restrictions.

Part No.	Inlet Fluid Test Pressure	Inlet/Outlet Size	Seat Size	Fluid Flow
233757 234263 24Z112	580 psi (4000 kPa, 40 bar)	3/8 BSPP(F) 3/8 npt(f)	5 mm	7.0 gpm (26.6 lpm)
233758 234262	145 psi (1000 kPa, 10 bar)	3/8 BSPP(F) 3/8 npt(f)	6.5 mm	4.6 gpm (17.5 lpm)
233759 234267	1015 psi (7000 kPa, 70 bar)	3/8 BSPP(F) 3/8 npt(f)	5 mm	9.8 gpm (37.2 lpm)
233773 234272	580 psi (4000 kPa, 40 bar)	3/8 BSPP(F) 3/8 npt(f)	5 mm	7.0 gpm (26.6 lpm)
233774 234273	580 psi (4000 kPa, 40 bar)	3/8 BSPP(F) 3/8 npt(f)	5 mm	7.0 gpm (26.6 lpm)
233809 234256	580 psi (4000 kPa, 40 bar)	3/8 BSPP(F) 3/8 npt(f)	5 mm	7.0 gpm (26.6 lpm)
233810 234257	145 psi (1000 kPa, 10 bar)	3/8 BSPP(F) 3/8 npt(f)	6.5 mm	4.6 gpm (17.5 lpm)
233811 234255	290 psi (2000 kPa, 20 bar)	1 in. BSPP(F) 1 in. npt(f)	13 mm	7.8 gpm (29.6 lpm)
233812 234258	725 psi (5000 kPa, 50 bar)	3/8 BSPP(F) 1 in. npt(f)	6.5 mm	11.5 gpm (43.7 lpm)
233950 234261	290 psi (2000 kPa, 20 bar)	3/8 BSPP(F) 1 in. npt(f)	6.5 mm	5.7 gpm (21.7 lpm)

Mounting Dimensions



Part No.	Thread	Dimension A
233757 234263 24Z112	M5	24 mm (0.95 in.)
233758 234262	M5	24 mm (0.95 in.)
233759 234267	M5	24 mm (0.95 in.)
233773 234272	M5	24 mm (0.95 in.)
233774 234273	M5	24 mm (0.95 in.)
233809 234256	M5	24 mm (0.95 in.)
233810 234257	M5	24 mm (0.95 in.)
233811 234255	M5	36 mm (1.42 in.)
233812 234258	M5	24 mm (0.95 in.)
233950 234261	M5	24 mm (0.95 in.)

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