

## HGB-609-A FLUID REGULATOR



### **IMPORTANT! DO NOT DESTROY**

It is the Customer's responsibility to have all operators and service personnel read and understand this manual. Contact your local DeVilbiss representative for additional copies of this manual.

**READ ALL INSTRUCTIONS BEFORE OPERATING THIS DEVILBISS PRODUCT.**

In this part sheet, the words **WARNING**, **CAUTION** and **NOTE** are used to emphasize important safety information as follows:

## **WARNING**

Hazards or unsafe practices which could result in severe personal injury, death or substantial property damage.

## **CAUTION**

Hazards or unsafe practices which could result in minor personal injury, product or property damage.

## **NOTE**

Important installation, operation or maintenance information.

## **WARNING**

### Read the following warnings before using this equipment.



#### READ THE MANUAL

Before operating finishing equipment, read and understand all safety, operation and maintenance information provided in the operation manual.



#### OPERATOR TRAINING

All personnel must be trained before operating finishing equipment.



#### EQUIPMENT MISUSE HAZARD

Equipment misuse can cause the equipment to rupture, malfunction, or start unexpectedly and result in serious injury.



#### LOCK OUT / TAG-OUT

Failure to de-energize, disconnect, lock out and tag-out all power sources before performing equipment maintenance could cause serious injury or death.



#### AUTOMATIC EQUIPMENT

Automatic equipment may start suddenly without warning.



#### PRESSURE RELIEF PROCEDURE

Always follow the pressure relief procedure in the equipment instruction manual.



#### KEEP EQUIPMENT GUARDS IN PLACE

Do not operate the equipment if the safety devices have been removed.



#### KNOW WHERE AND HOW TO SHUT OFF THE EQUIPMENT IN CASE OF AN EMERGENCY



#### WEAR SAFETY GLASSES

Failure to wear safety glasses with side shields could result in serious eye injury or blindness.



#### INSPECT THE EQUIPMENT DAILY

Inspect the equipment for worn or broken parts on a daily basis. Do not operate the equipment if you are uncertain about its condition.



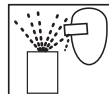
#### NEVER MODIFY THE EQUIPMENT

Do not modify the equipment unless the manufacturer provides written approval.



#### NOISE HAZARD

You may be injured by loud noise. Hearing protection may be required when using this equipment.



#### PROJECTILE HAZARD

You may be injured by venting liquids or gases that are released under pressure, or flying debris.



#### PINCH POINT HAZARD

Moving parts can crush and cut. Pinch points are basically any areas where there are moving parts.



#### STATIC CHARGE

Fluid may develop a static charge that must be dissipated through proper grounding of the equipment, objects to be sprayed and all other electrically conductive objects in the dispensing area. Improper grounding or sparks can cause a hazardous condition and result in fire, explosion or electric shock and other serious injury.



#### WEAR RESPIRATOR

Toxic fumes can cause serious injury or death if inhaled. Wear a respirator as recommended by the fluid and solvent manufacturer's Safety Data Sheet.



#### TOXIC FLUID & FUMES

Hazardous fluid or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, inhaled, injected or swallowed. LEARN and KNOW the specific hazards or the fluids you are using.



#### FIRE AND EXPLOSION HAZARD

Improper equipment grounding, poor ventilation, open flame or sparks can cause a hazardous condition and result in fire or explosion and serious injury.



#### MEDICAL ALERT

Any injury caused by high pressure liquid can be serious. If you are injured or even suspect an injury:

- Go to an emergency room immediately.
- Tell the doctor you suspect an injection injury.
- Show the doctor this medical information or the medical alert card provided with your airless spray equipment.
- Tell the doctor what kind of fluid you were spraying or dispensing.



#### GET IMMEDIATE MEDICAL ATTENTION

To prevent contact with the fluid, please note the following:

- Never point the gun/valve at anyone or any part of the body.
- Never put hand or fingers over the spray tip.
- Never attempt to stop or deflect fluid leaks with your hand, body, glove or rag.
- Always have the tip guard on the spray gun before spraying.
- Always ensure that the gun trigger safety operates before spraying.



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#### PROP 65 WARNING

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

**IT IS THE RESPONSIBILITY OF THE EMPLOYER TO PROVIDE THIS INFORMATION TO THE OPERATOR OF THE EQUIPMENT. FOR FURTHER SAFETY INFORMATION REGARDING THIS EQUIPMENT, SEE THE GENERAL EQUIPMENT SAFETY BOOKLET (77-5300).**

## HGB-609-A FLUID REGULATOR

### SPECIFICATIONS

Model No.	Inlet Thread	Outlet Thread	Max Inlet Pr.	Max Outlet Pr.	Max Flow
HGB-609-A	Male 3/8	Male 3/8	220 PSI	100 PSI	3.4 GPM

### **⚠ WARNING**

**Do not use with fluids hotter than 130 degrees Fahrenheit.  
Not suitable for concentrated acids or bases.**

### **NOTE**

**All fluid passages are stainless steel. Diaphragm is PTFE and acetal. Ensure tightness of all connections.  
The riser tube, gauge, and fittings must have no leaks for proper functioning.**

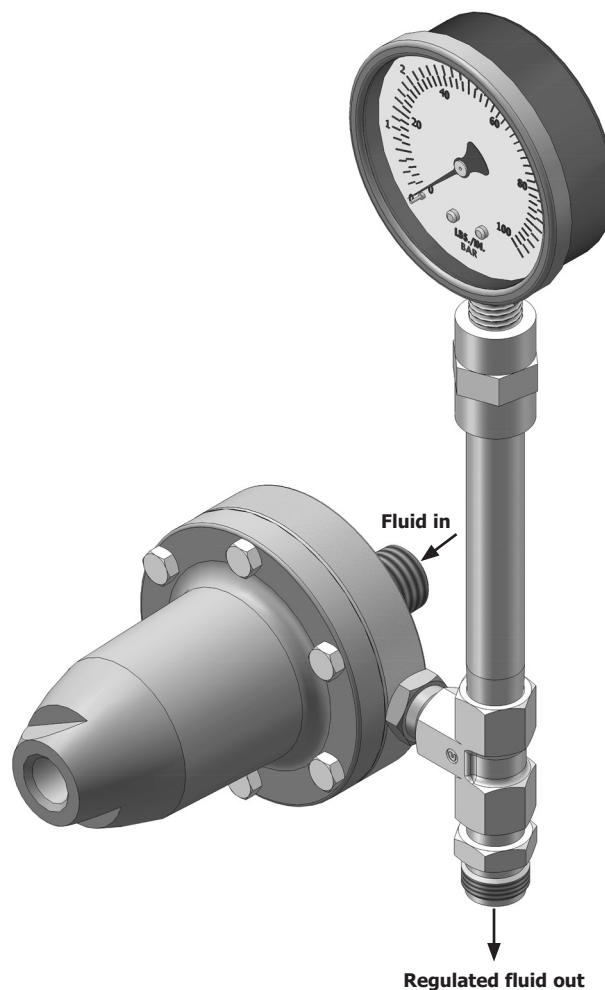
### INSTALLATION

#### **NOTE**

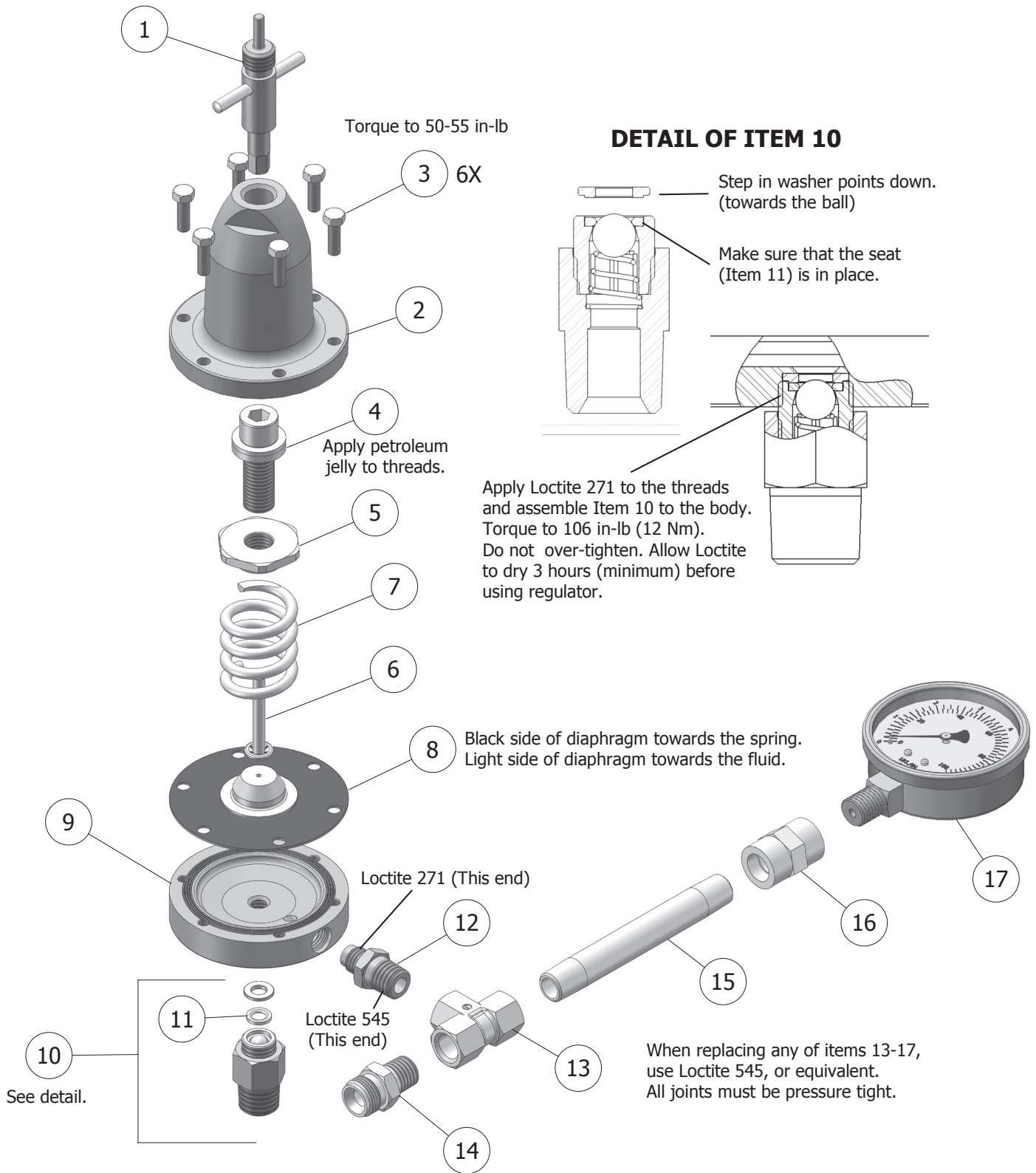
**Install vertically or horizontally for solvents or thin (low viscosity) materials.  
Install horizontally with heavy or high viscosity materials to ensure complete flushing. If installing horizontally, the riser tube must be configured so that it is vertical.**

1. Shut off supply line from pump or tank.
2. Connect the fluid supply line to the inlet connector on the back of the regulator.
3. Connect the regulated fluid line to the outlet port of the regulator.
4. Ensure all hose connections are tight.
5. The regulator must be grounded to dissipate any electrostatic charges which may be created by fluid flows. This can be achieved by attaching a grounding wire to one of the bonnet screws (Item 3) and also connecting the grounding wire to earth. A resistance of less than 106 ohms is recommended when checked with an ohmmeter.
6. Open supply line valve.
7. Adjust regulator pressure with the hex side of the adjustment key. Screw in to increase pressure; screw out to decrease pressure. (See p. 5)

Regulator shown in vertical configuration for solvents and thin viscosity materials.



# HGB-609-A FLUID REGULATOR



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ITEM. NO.	PART NO.	DESCRIPTION	QTY.
1	HGB-404-1	ADJUSTMENT KEY	1
2	HGB-28	BONNET	1
3	S-1309-H	SCREW, M5 X 16mm LG	6
4	HGB-408-H	ADJUSTING SCREW ASSEMBLY	1
5	HGB-7	SPRING FOLLOWER	1
6	HGB-403-H	PIN ASSEMBLY	1
7	HGB-43	SPRING	1
8	HGB-422	DIAPHRAGM ASSEMBLY	1
9	HGB-48	REGULATOR BODY	1
10	HGB-426-A	FLUID INLET KIT	1
11	S-28216 •	SEAL, D-SHAPE (SEAT)	1
12	HGB-82	ADAPTER	1
13	S-3006	TEE	1
14	H-1580-H	DM NIPPLE	1
15	S-3007	NIPPLE, 100 mm LG	1
16	S-3008	COUPLING	1
17	83-2571	PRESSURE GAUGE	1

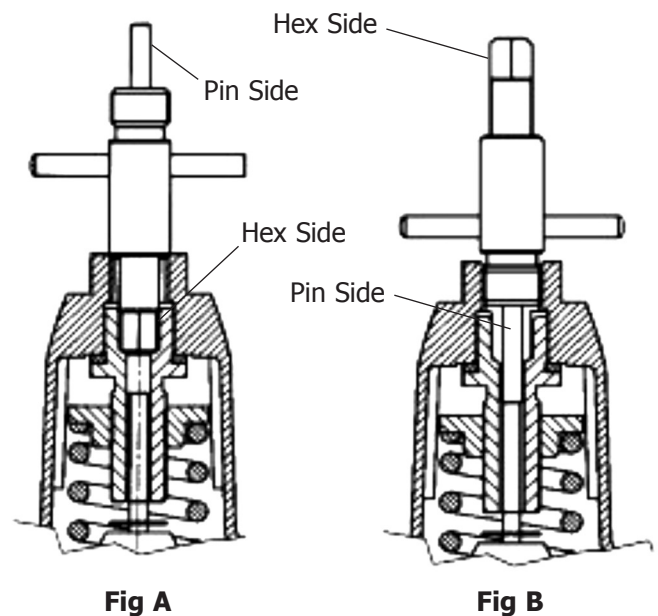
- Item is also included in: HGB-426-A Fluid Inlet Kit

### FLUID PRESSURE ADJUSTMENT

To adjust fluid pressure, insert the hex side of the adjustment key into the front of the bonnet. See Fig A. Screw in to increase pressure; screw out to decrease pressure.

### FLUSHING

To flush the regulator, use the pin side of the adjustment key. See Fig B. The pin will hold the valve open for full flushing. Remove the adjustment key when flushing is complete.



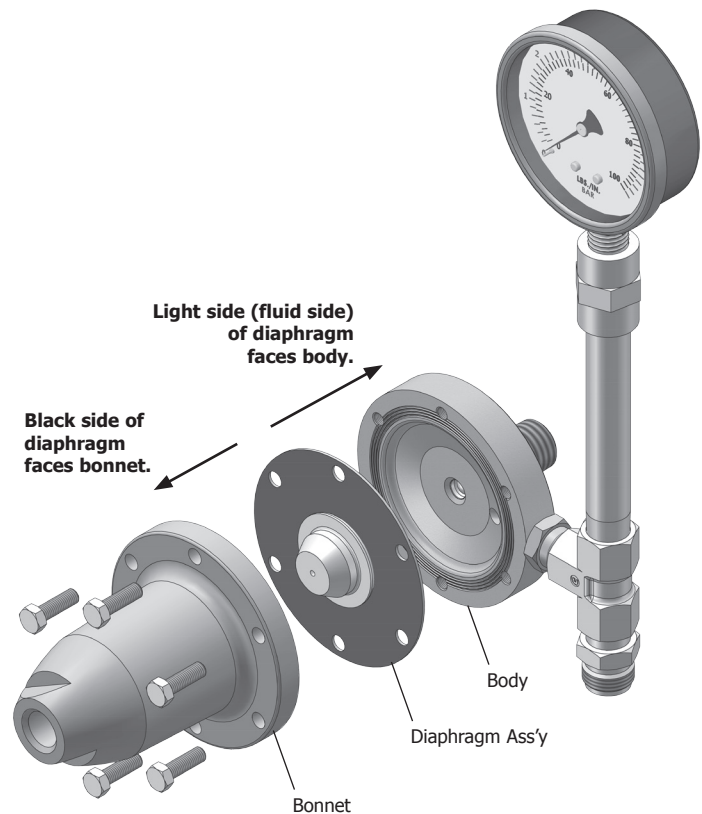
## HGB-609-A FLUID REGULATOR

CONDITION	CAUSE	CORRECTION
Regulated pressure creep	Improper seating of valve on seat.	Be sure that seat and ball are not damaged, worn, or dirty. Replace as necessary.
	Diaphragm leaking.	Replace.
Regulated pressure drop	Restriction in main material line or at valve seat inlet.	Clear obstruction.
	Diaphragm damaged.	Replace.
Fluid leakage from under bonnet	Loose cap screws.	Tighten to 55 in-lbs.
	Diaphragm damaged.	Replace.

### EASY DIAPHRAGM REPLACEMENT

The diaphragm can be replaced without removing the regulator from its installed position.

1. Flush the regulator, if necessary. (See p. 5)
2. Shut off the supply line to the regulator inlet.
3. Remove the six screws that hold the bonnet to the base and pull away the bonnet, spring, adjusting screw, and pin assembly.
4. Remove the worn/damaged diaphragm assembly.
5. Install the new diaphragm assembly. Make sure that the light side (fluid side) of the diaphragm faces the body. The black side (with SS center piece) will face the bonnet/spring. (See p. 4)
6. Inspect spring, adjusting screw, and pin assembly. Replace if required.
7. Re-attach the bonnet including spring, adjustment screw, and pin assembly. Tighten screws to 50-55 in-lbs. (See p. 4)
8. Ensure all fluid connections are tight.
9. Re-open supply line to regulator.



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**NOTES**

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## WARRANTY POLICY

DeVilbiss products are covered by Carlisle Fluid Technologies one year materials and workmanship limited warranty. The use of any parts or accessories, from a source other than Carlisle Fluid Technologies, will void all warranties. For specific warranty information please contact the closest Carlisle Fluid Technologies location listed below.

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