



sMart Vent™

Owner's Manual

GS09086 to GS10007 (GEN. 1)

GS07980 to GS08060 (GEN. 2)



The sMart Vent™ protects intermediate bulk containers (IBCs) against excessive pressure and vacuum buildup. Engineered for low maintenance and easy cleaning, this vent offers superior protection for metal IBCs. Additional features include manual venting that can be achieved with a press of the hand.

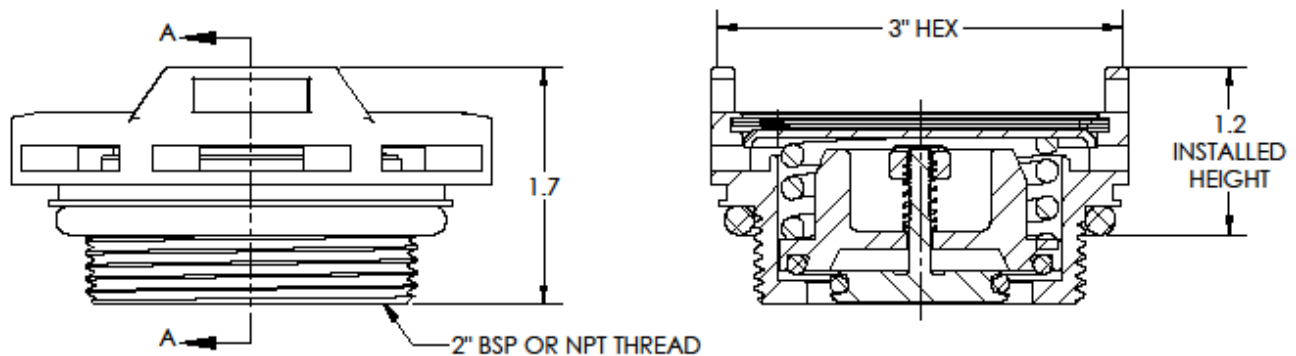
Patent Number 8, 561, 637

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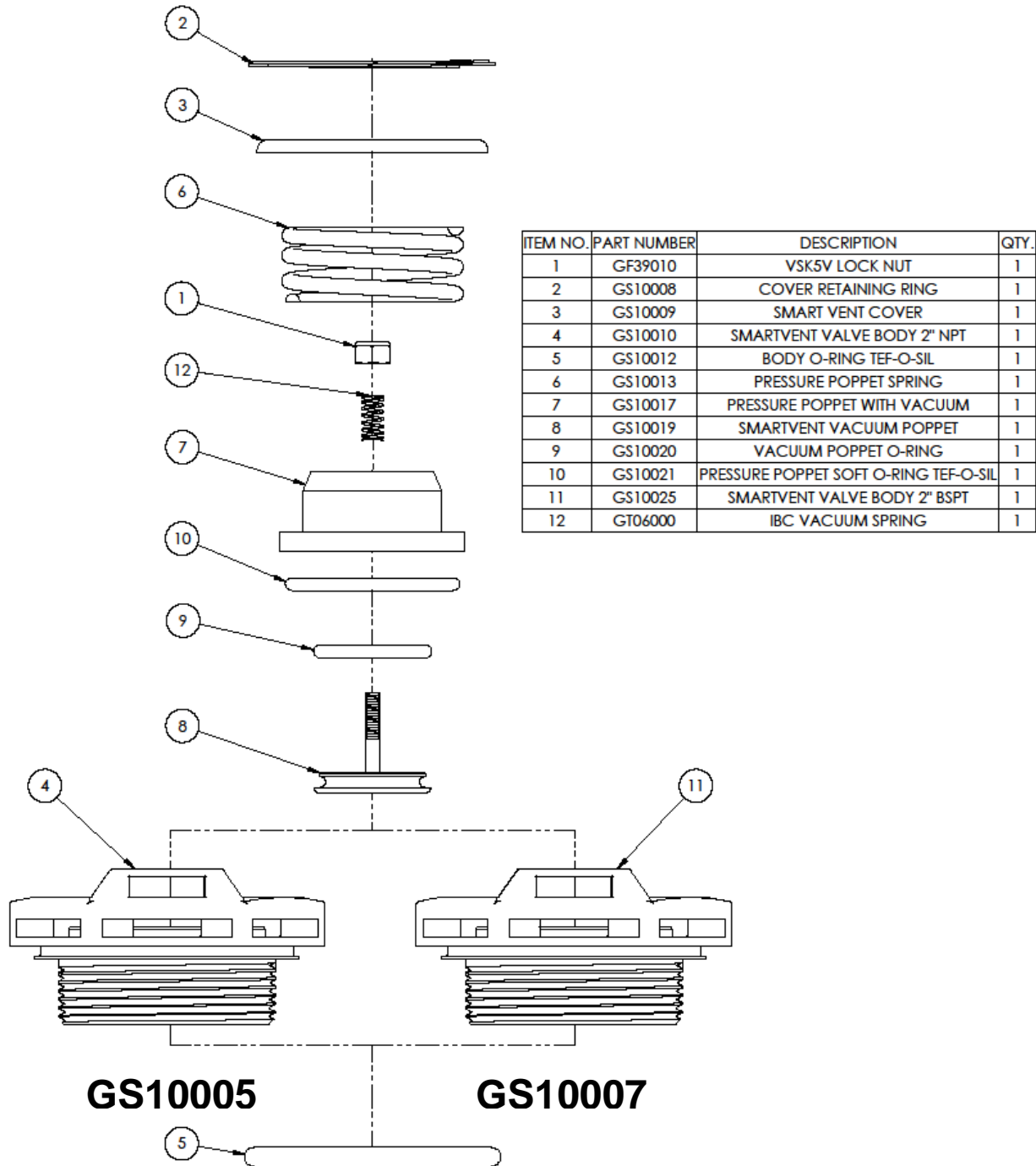
Technical Data

- 1) Patent Number 8, 561, 637
- 2) All pressure bearing components are constructed of corrosion resistant 316 stainless steel.
- 3) Standard Tef-O-Sil (Teflon® encapsulated O-Ring) seals are compatible with all ladings for packing groups 1 & 2.
- 4) Relieves pressure at 3.5, 5, or 10 PSIG.
- 5) Relieves vacuum at 1 or 2"Hg.
- 6) This product can be adapted to any application that requires low pressure venting with a 2" male BSP or NPT connection.
- 7) Design features tamper-evident seal tabs.



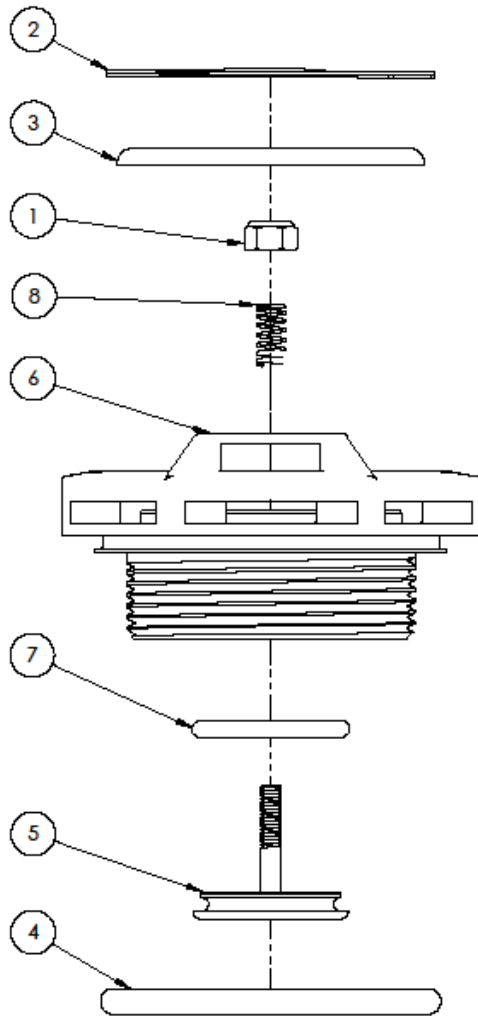
Exploded View of Product

sMart Vent™ 5 PSIG Generation 1 Pressure/Vacuum Relief Vent



Exploded View of Product

sMart Vent™ 5 PSIG Generation 1 Vacuum Only Relief Vent

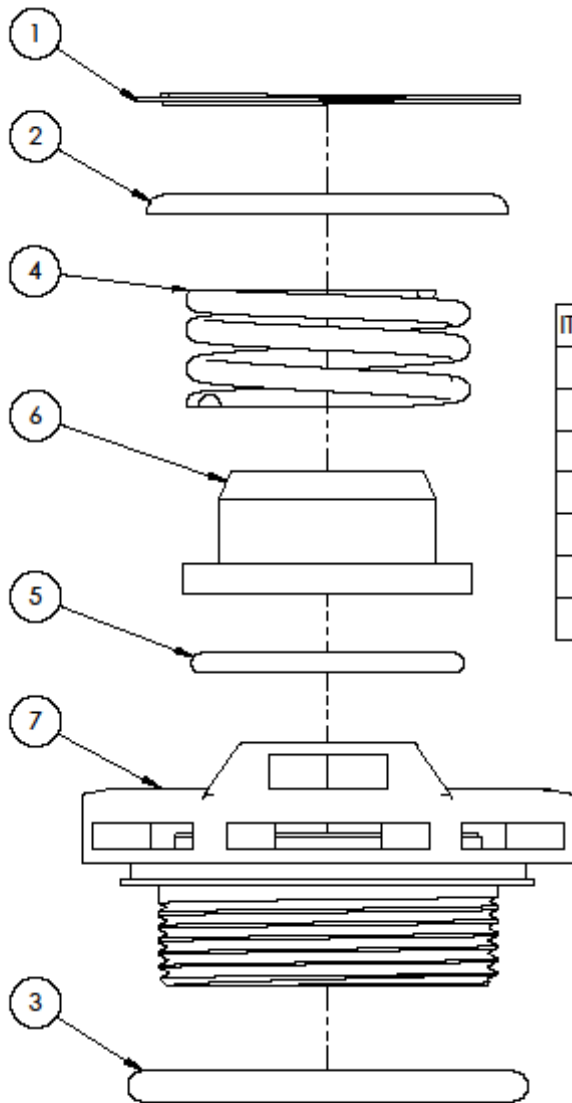


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GF39010	VSK5V LOCK NUT	1
2	GS10008	COVER RETAINING RING	1
3	GS10009	SMART VENT COVER	1
4	GS10012	BODY O-RING TEF-O-SIL	1
5	GS10019	SMARTVENT VACUUM POPPET	1
6	GS10024	SMART VENT BODY AND POPPET WELDMENT	1
7	GS10020	VACUUM POPPET O-RING	1
8	GT06000	IBC VACUUM SPRING	1

GS10004

Exploded View of Product

sMart Vent™ 5 PSIG Generation 1 Pressure Only Relief Vent

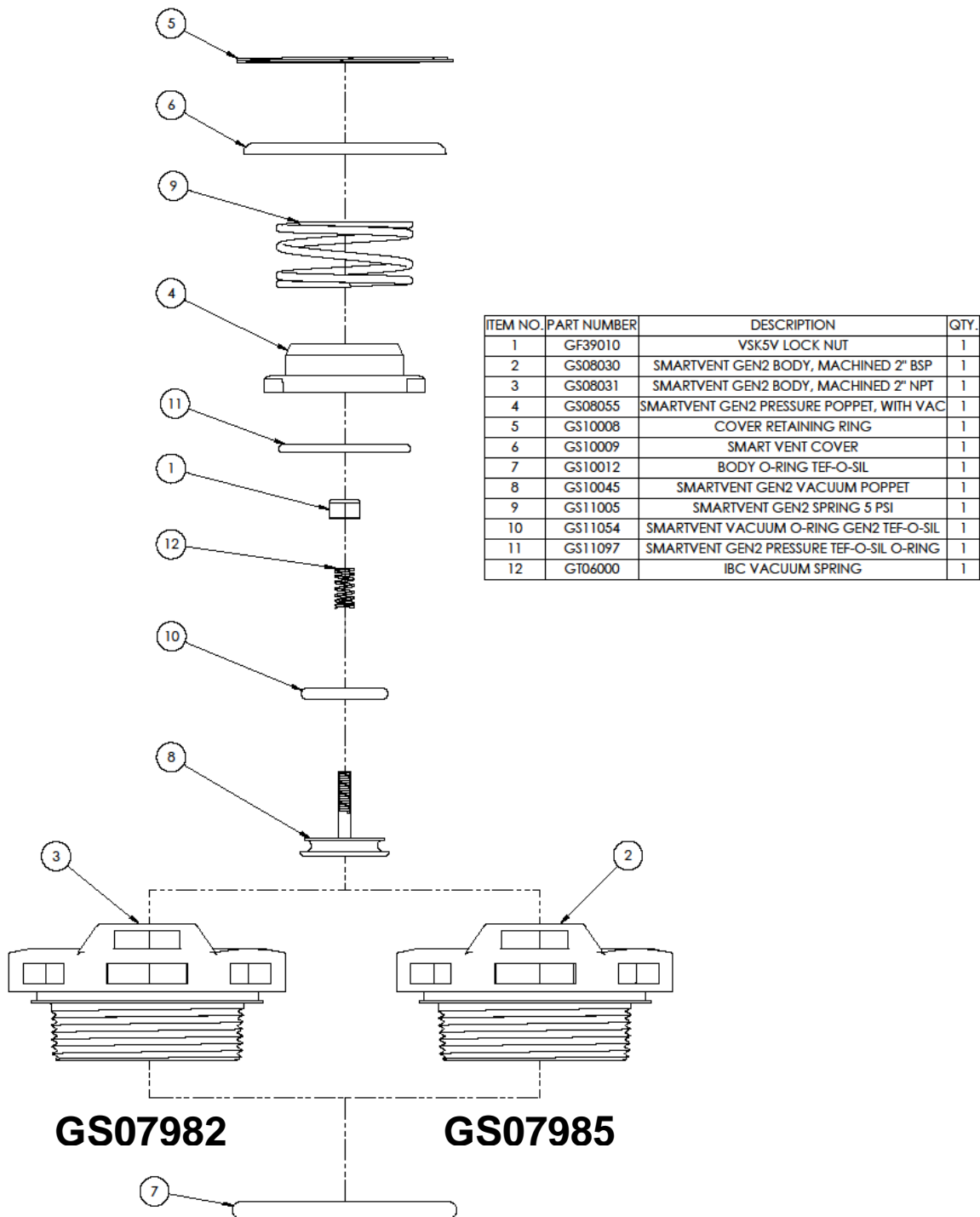


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GS10008	COVER RETAINING RING	1
2	GS10009	SMART VENT COVER	1
3	GS10012	BODY O-RING TEF-O-SIL	1
4	GS10013	PRESSURE POPPET SPRING	1
5	GS10021	PRESSURE POPPET SOFT O-RING TEF-O-SIL	1
6	GS10022	PRESSURE POPPET, W/VAC	1
7	GS10025	SMARTVENT VALVE BODY 2" BSPT	1

GS10006

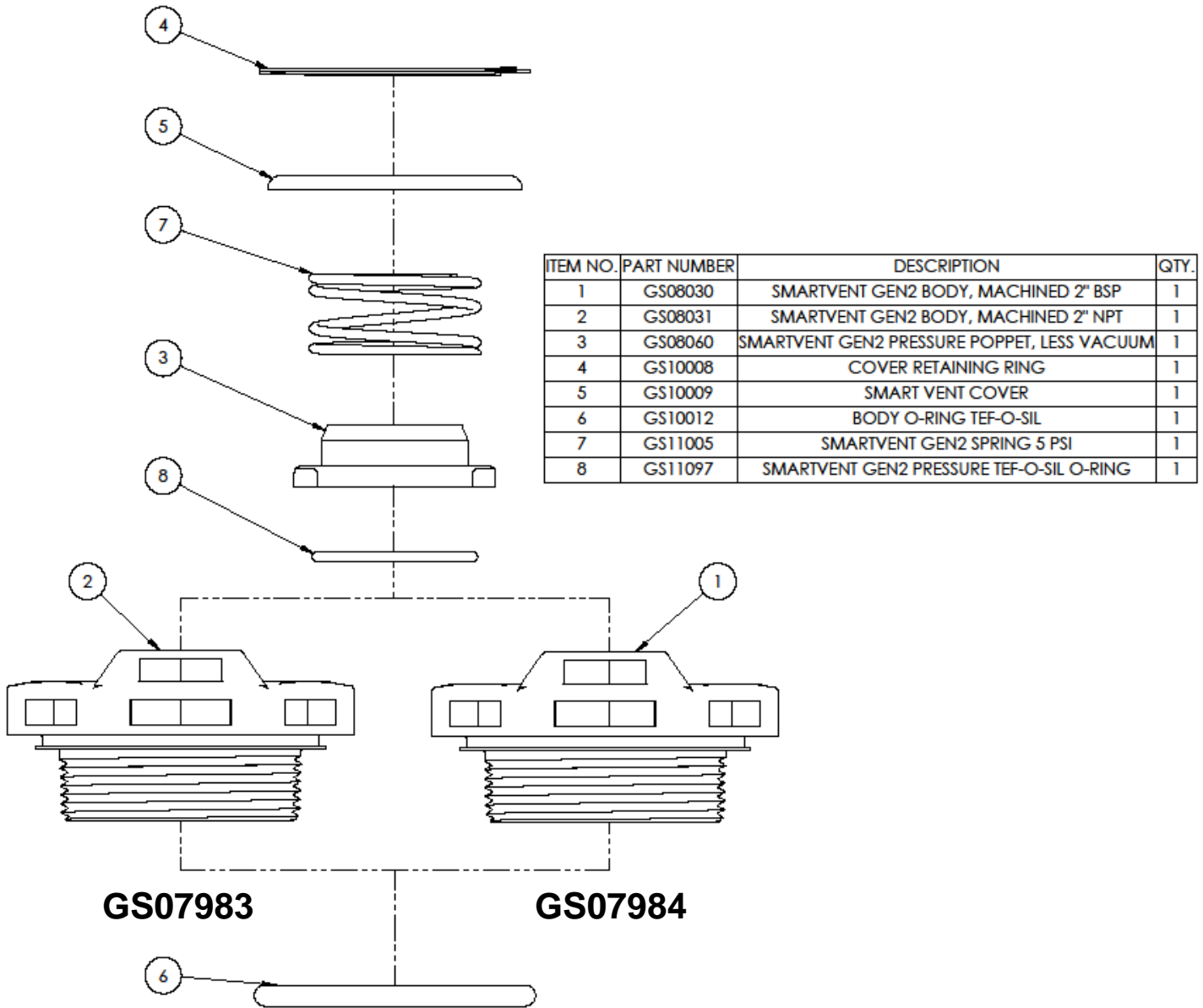
Exploded View of Product

sMart Vent™ 5 PSIG Generation 2 Pressure/Vacuum Relief Vent



Exploded View of Product

sMart Vent™ 5 PSIG Generation 2 Pressure Only Relief Vent



Safety

General Safety Information



WARNING: This device is under pressure that could cause injury. Do not attempt to disassemble this device unless you have been properly trained by a Girard Equipment representative. Follow all installation, maintenance, and repair instructions set forth in this manual to avoid injury.

Product Storage

- Temperature Range: -40°F to 250°F
- Humidity Range: N/A
- Altitude Range: N/A

Store device upright and in its original container to maintain a dust-free environment. We recommend that stored valves be retested every six months. The initial test date will be listed on the valve certificate.

Product Handling

Follow OSHA practices for lifting.

Disposal Requirements

Due to spring pressure, authorized personnel must disassemble the device before disposal. Use caution when disassembling the device. If authorized personnel are not present, please contact Girard Equipment.

Installation Instructions

- 1) Remove valve from packaging.
- 2) Align the valve with the tank mount.
- 3) Use Girard Equipment's GT60002 3-in-1 combination IBC spanner wrench to screw the sMart Vent™ to its port.

Operation Instructions

Push sMart Vent™ cover to manually vent pressure. This safety relief valve opens and reseats automatically.

Maintenance Instructions



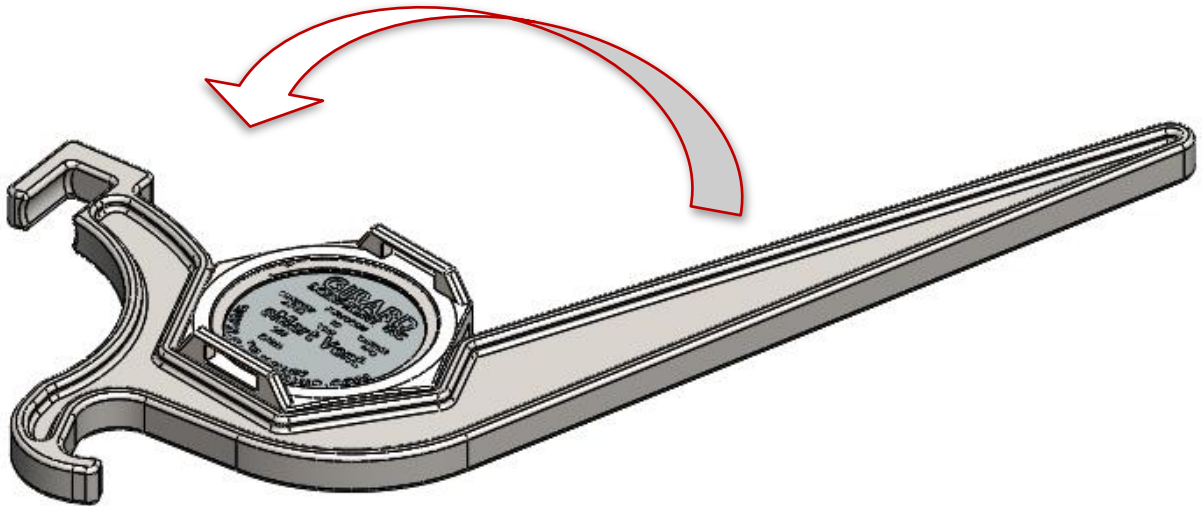
Warning: This device is under pressure that could cause injury. Do not attempt to disassemble this device unless you have been properly trained by a Girard Equipment representative. Follow all installation, maintenance, and repair instructions set forth in this manual to avoid injury.

O-Ring and Gasket Maintenance

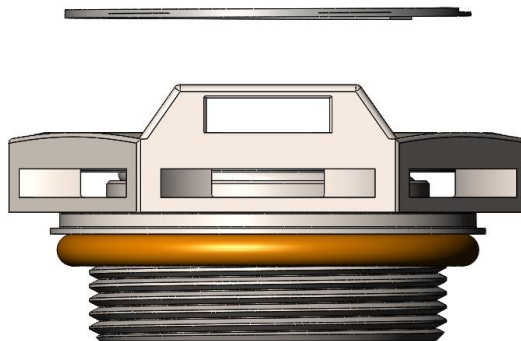
All soft goods should be replaced during regular maintenance and requalification, or if device fails an in-service STD (Start to Discharge) pressure test.

To replace the O-Rings:

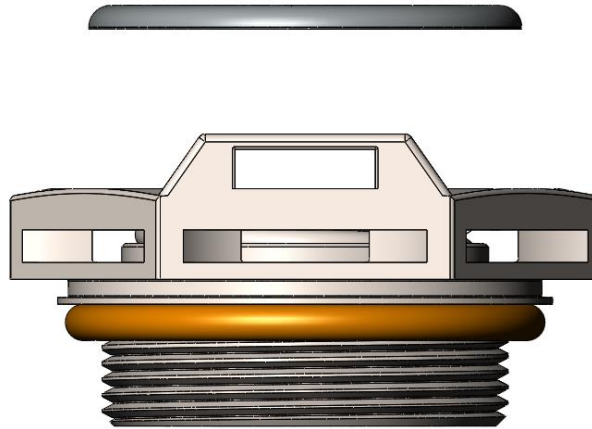
- 1) Use GT60002 3-in-1 combination IBC spanner wrench to unscrew the sMart Vent™ from its port.



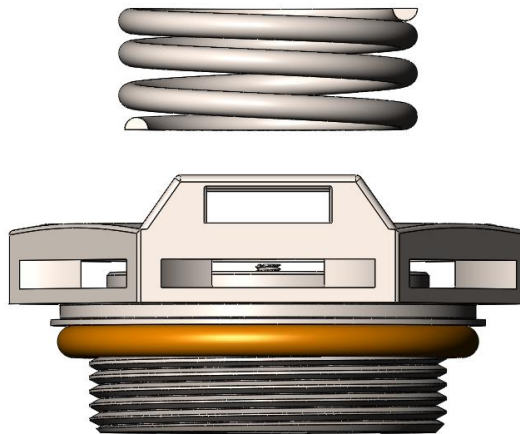
- 2) Remove GS10008 retaining ring. **Warning:** the sMart Vent™ cover is under pressure. To prevent injury, the sMart Vent™ cover should be handled with care while the retaining ring is removed. The pressure from the spring may cause the cover to rapidly exit the assembly.



- 3) Remove the GS10009 sMart Vent™ cover carefully as it may still be under pressure from the pressure spring.

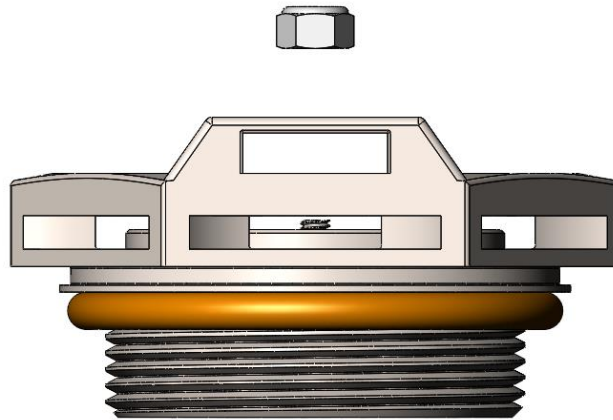


- 4) Remove the pressure poppet spring (not applicable for a vacuum only sMart Vent™).

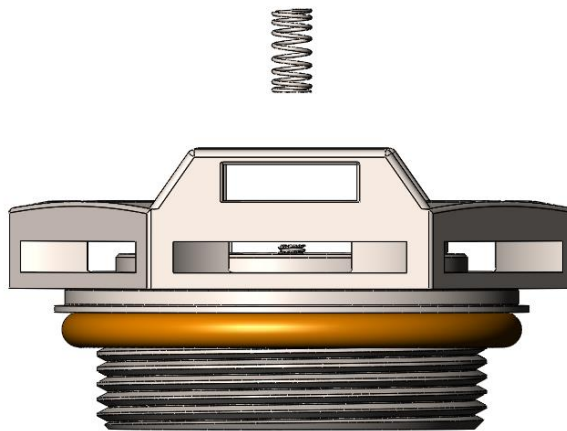


Ignore steps 5-8 for pressure only sMart Vent™.

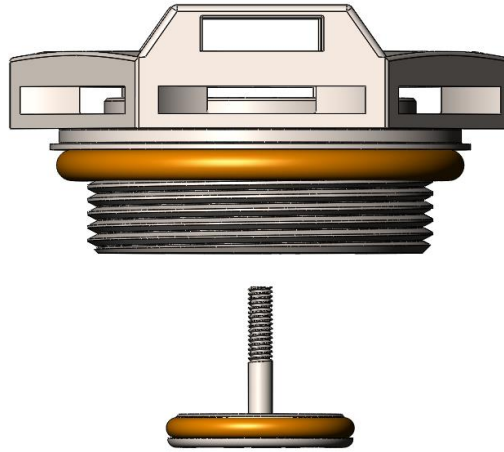
- 5) Remove the GF39010 lock nut from the vacuum poppet.



- 6) Remove the GT06000 vacuum spring.



- 7) Remove the vacuum poppet assembly from the lower housing assembly.

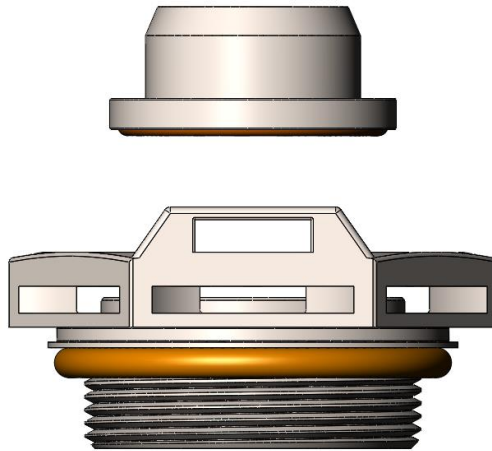


- 8) Remove and replace the vacuum O-Ring.

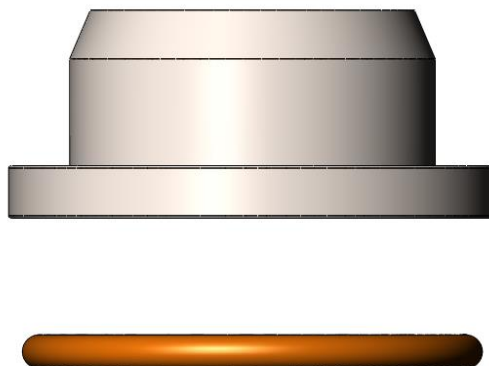


Ignore steps 9-10 for vacuum only sMart Vent™.

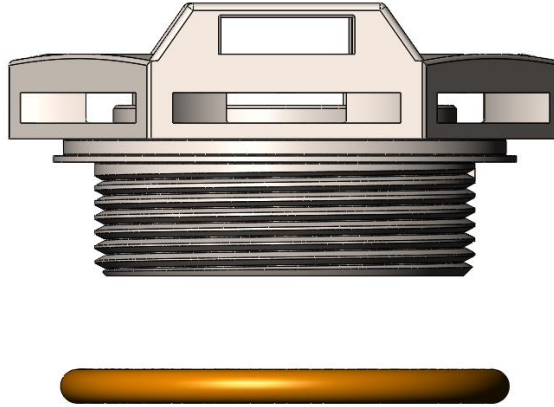
- 9) Remove the pressure poppet from the lower housing assembly.



- 10) Remove and replace the pressure poppet O-Ring.



11) Remove and replace the body O-Ring from the lower housing, if required.



12) Re-assemble following steps 1-11 in reverse order.

Test Instructions

Vacuum Testing:

- Mount assembly to test fixture.
- Vacuum is to be set at max and valve opened all the way.
- If target vacuum is not met, adjust vacuum nut as needed and retest.

Set Pressure Testing:

- Mount assembly to test fixture.
- Rapidly increase gas pressure and blow out the assembly, assure that the O-ring does not unseat.
- Remove all pressure and bleed off.
- Slowly increase gas pressure until the valve opens, this is the set pressure. For example, a 5 PSIG sMart Vent may set between 4 – 6 PSIG.
- Close air supply off and wait for valve to reseat and hold pressure for 30 seconds. For example, a 5 PSIG sMart Vent may reseat between 3.2 – 6 PSIG.

Troubleshooting & Repair

If device fails STD (Start to Discharge) test:

1. Replace O-Ring as shown in the Maintenance Instructions section, Step 1-12.
2. Clean ceiling of poppet with industrial strength degreasing cleaner.

If device fails vacuum set pressure test:

1. Tighten or loosen the vacuum spring to reach desired pressure setting.

If device fails to reseat:

1. Clean ceiling of poppet with industrial strength degreasing cleaner.

If device doesn't seal properly:

1. Wipe sealing area with clean rag.
2. Install new pressure or vacuum O-Ring.
3. If problem cannot be corrected, contact a Girard Equipment representative.

Replacement Parts

Body O-Rings for generation 1 and 2 sMart Vents:

TEF-O-SIL	VITON-A	VITON	VITON-A FDA	VITON EXTREME	EPDM
GS10012	GS10072	GS10088	GS10110	GS10096	GS10140

Generation 1:

Pressure O-Rings:

FDA TEF-O-SIL	TEF-O-SIL	VITON-A	VITON	VITON-A FDA	EPDM
GS10122	GS10021	GS10076	GS10098	GS10112	GS10142

Vacuum O-Rings:

FDA TEF-O-SIL	TEF-O-SIL	VITON-A	VITON	VITON-A FDA
GS10124	GS10020	GS10074	GS10030	GS10114

Generation 2:

Pressure O-Rings:

FDA TEF-O-SIL	TEF-O-SIL	VITON	VITON FDA
GS11095	GS11097	GS11098	GS11099

Vacuum O-Rings:

FDA TEF-O-SIL	TEF-O-SIL	VITON	VITON FDA
GS11056	GS11054	GS10054	GS10056

***For additional materials and options, contact Girard Equipment's Engineering Department.**

Warranty

All goods manufactured by Girard Equipment, Inc. from “genuine” Girard parts are warranted to be free from defects and will be replaced free of charge if failure occurs within 1 year of date of shipment, provided that these parts have been used in accordance with seller’s recommendations. Our liability in any case shall be limited to the sale price of the product and will not extend to any consequential damage.

Contact Information

GIRARD
EQUIPMENT, INC.

4360 Old Dixie Hwy
Vero Beach, FL 32967
(908) 862-6300

www.GirardEquip.com

