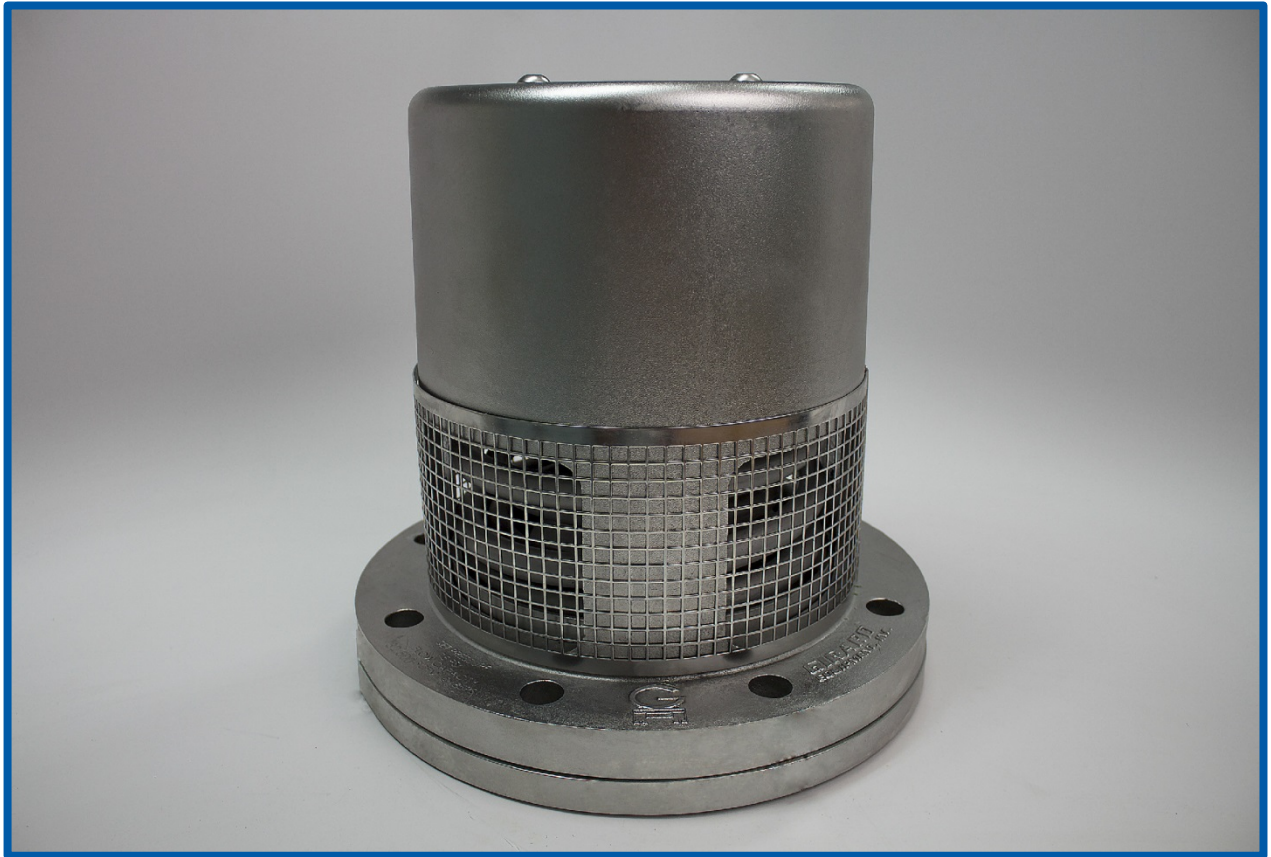




Hi-Flow Pressure Relief Valve

Owner's Manual

GX11000, GX11005, GX11008, GX11010



Reclosing pressure relief device approved by the Association of American Railroads for use with commodities requiring high flow pressure relief, especially packing group 1 & 2.

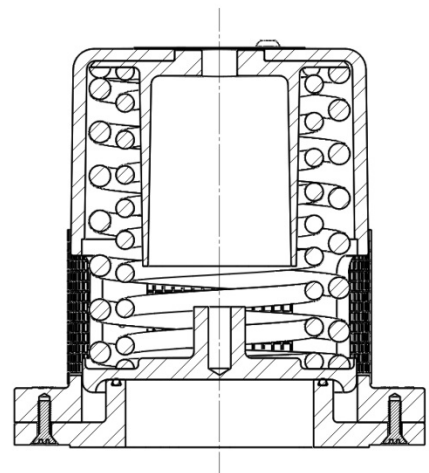
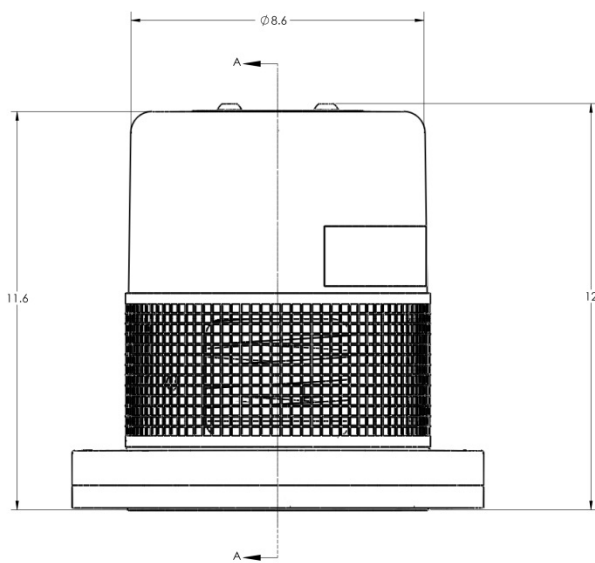
Patent Pending

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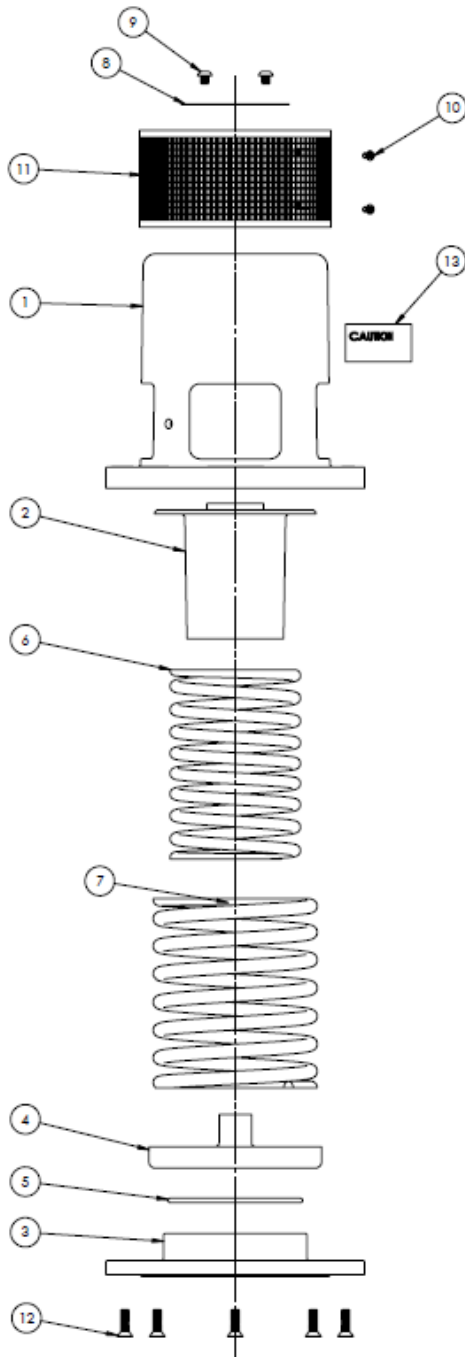
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Technical Data

- 1) AAR approval # PRD149500
- 2) Overall height : 12"
- 3) Set pressure : 75 ± 3 psi
- 4) Flow capacity : 32,000 SCFM at 85 psi
- 5) External springs design
- 6) All standard components constructed from corrosion resistant 316 Stainless Steel
- 7) Debris screen is standard
- 8) Mounts to AAR standard $10\frac{1}{4}$ " bolt circle, as displayed in Appendix E of the AAR manual
- 9) Tamper proof security fasteners
- 10) Designed with raised face with serrations in accordance with ASME B16.5 to ensure proper gasket seal
- 11) Tef-O-Sil seals (Teflon encapsulated O-ring) compatible with all ladings for packing groups 1 & 2
- 12) Constructed from casting hand poured in the USA
- 13) Flange design exceeds ASME section 8 requirements
- 14) Conforms to repetitive vibration testing (ASTM D7387) and random vibration testing (ASTM D4728). Test reports available upon request.



Exploded View of Product



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GX11100	UPPER HOUSING	1
2	GX11122	INNER SPRING GUIDE	1
3	GX11200	LOWER HOUSING	1
4	GX11300	PALLET	1
5	GX11421	O-RING TEF-O-SIL	1
6	GX11440	RR SPRING INNER	1
7	GX11460	RR SPRING OUTER	1
8	GX99020	DUST COVER	1
9	GX99025	SS BUTTON-HEAD SCREW	2
10	GX99055	BUTTON HEAD SOCKET CAP SCREW	2
11	GX99050	DEBRIS SCREEN	1
12	GX99060	FLAT HEAD SECURITY FASTENER	8
13	GO40130	GE CAUTION LABEL, SPRING, PEEL & STICK	1
14	GX99170	EYEBOLT	2

Eyebolts are not shown and are shipped separately.

ETFE coating or Hastelloy®
components available upon request.

NOTE: TORQUE SCREWS 25 FT/LBS +/- 4 FT/LBS

**DO NOT ATTEMPT TO REMOVE FLAT HEAD SAFETY FASTENERS.
THIS COULD RESULT IN SERIOUS INJURY OR DEATH**

Safety

General Safety Information



WARNING: This device is under extreme high pressure that could cause serious injury or death. Follow maintenance instructions as set forth in this manual to avoid serious injury. Do not attempt to disassemble the device unless you have been properly trained by a Girard Equipment representative. Tamper proof security fasteners have been installed to prevent disassembly by unauthorized personnel.

Product Storage

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

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

Product Handling

Product weight exceeds OSHA requirements for handling by one person. Do not attempt to lift by yourself. The device may be lifted by two people or with the use of a lifting device. Eye bolts are supplied by Girard Equipment to attach the PRV to a lifting device.

Disposal Requirements

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

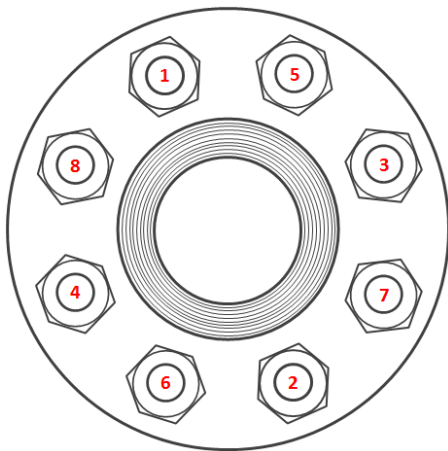
Installation Instructions

Note: To install eye bolts (GEI part # GX99170) for use with a lifting device, follow the following steps:

- 1) Unscrew GX99025 dust cover screws.
- 2) Replace with GX99170 eye bolts.



- 3) Lift PRV on top of tank car using lifting device.
- 4) Insert new, clean gasket.
- 5) Remove eyebolts and replace with dust cover.
- 6) Girard Equipment recommends using new, non-lubricated Stainless Steel studs and nuts to bolt device to tank car.



Torque Value: **125** Ft/Lbs. of torque +/- 10 Ft/Lbs.

Note: This is a guideline; customer needs to perform their own torque study.

Operation Instructions

No instructions are needed during operation.

Maintenance Instructions



WARNING: This device is under extreme high pressure that could cause serious injury or death. Do not attempt to disassemble this device unless you have been properly trained by a Girard Equipment representative. Tamper proof security fasteners have been installed to prevent disassembly by unauthorized personnel. Follow all installation, maintenance, and repair instructions to avoid injury.

Debris Screen Maintenance

Remove debris screen by unscrewing GX99055 button head socket cap screws. Use an air nozzle to remove dirt and/or debris at yearly intervals or as necessary.

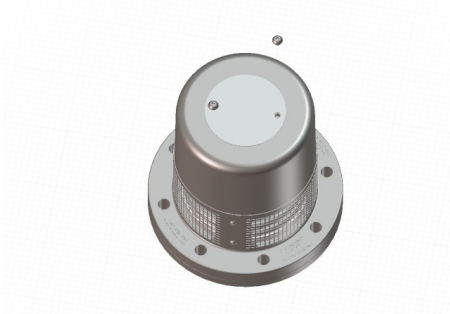
O-Ring Maintenance

All soft goods should be replaced at time of regular maintenance and requalification.

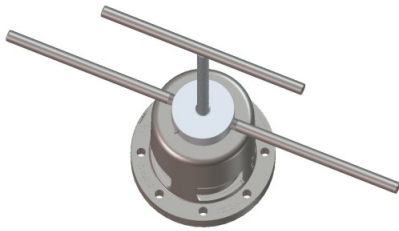
Or, if the valve fails an in service STD (Start to Discharge) pressure test.

To replace O-ring:

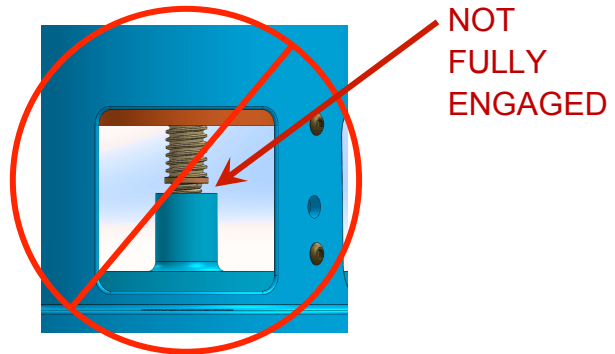
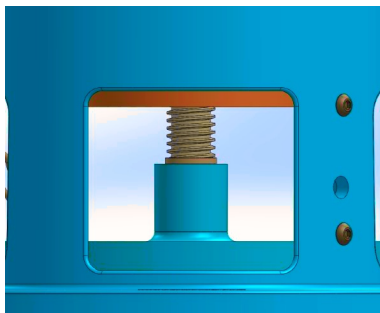
- 1) Remove GX99025 screws and GX99020 dust cover.



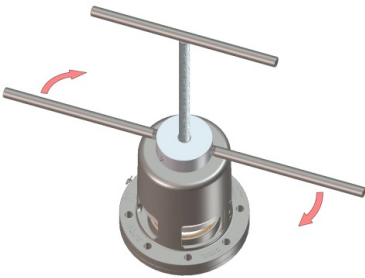
2) Insert GX99030 tool.



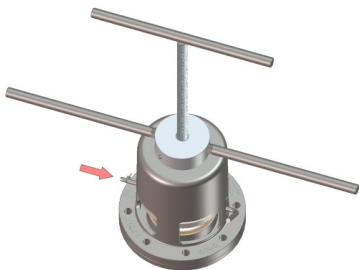
3) Ensure $\frac{3}{4}$ " male thread on tool is fully engaged into pallet.



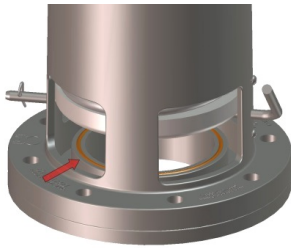
4) Turn bar clockwise to raise spring and pallet.



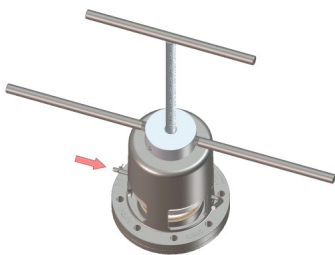
5) Insert safety bar.



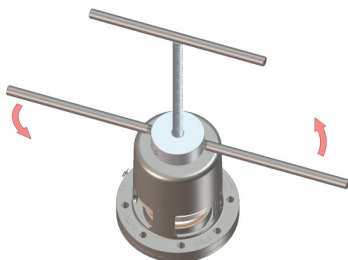
6) Remove and replace O-ring.



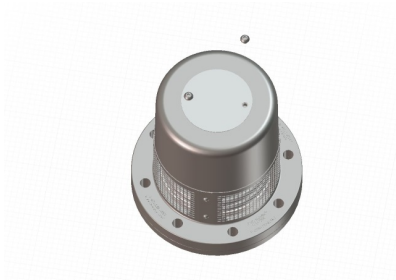
7) Remove safety bar.



8) Turn bar counter-clockwise to lower pallet.



9) Remove GX99030 tool. Replace GX99020 dust cover using GX99025 screws.



Test Instructions

1. Install valve on test bench using a suitable gasket.
2. Apply pressure to the valve until the STD (Start to Discharge) pressure is reached and the valve opens (this is just to cycle the valve once before actual testing begins). Reduce pressure.
3. Apply pressure to the valve until the STD pressure is reached and the valve opens. Adjust the valve as necessary to be within the tolerance specified in Table 2. Record the STD pressure.
4. Let pressure release from the valve until the gage shows that the pressure drop has stopped. This is the VTP (Vapor tight pressure) and must be in tolerance with Table 2 criteria. Record the VTP.
5. Repeat steps 2 and 3 two more times so that three sets of STD and VTP readings are recorded. However, if continued adjustment is necessary to be within the STD tolerance, begin again at step 2 until three sets of data are recorded without needing adjustment.

TABLE 2							
MODEL	NOMINAL STD (PSIG) a/	TOLERANCE (+/-) (PSIG)	MIN. STD (PSIG)	MAX. STD (PSIG)	MIN. VTP (PSIG)	GAGE RANGE (PSIG) b/	MAX. GAGE INCREMENT (PSIG) b/
GX11000 GX11005 GX11010	75	3	72	78	60	0-150	1

a) Valves should be set or reset to NOMINAL STD pressure

b) Digital or dial gages of greater range may be used if accuracy and sensitivity levels are equal to or better than required above.

Troubleshooting & Repair Guide

If device fails STD (Start to Discharge) Test:

1. Replace O-ring.
2. Clean ceiling of poppet with Scotch-Brite™ pad.

If device fails to reseal:

1. Clean ceiling of poppet with Scotch-Brite™ pad.

If device doesn't seal properly:

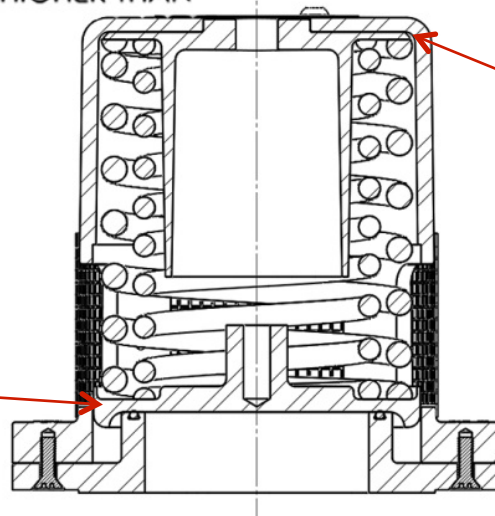
1. Install new gasket.

If STD pressure does not fall within range:

1. Spacer shims can be ordered and installed by authorized and qualified personnel only. Personnel must have received training by Girard Equipment, Inc. prior to ordering spacer shims or security screw removal tools.

1. ADD SHIM GX11150 IF STD PRESSURE IS LOWER THAN WHAT IS MARKED ON DATA

2. ADD SHIM GX11130 IF STD PRESSURE IS HIGHER THAN WHAT IS MARKED ON DATA



Replacement Parts

O-ring:	GX11421
Debris Screen:	GS99050
Screws for Debris Screen:	GX99055 (2 needed)
Dust Cover:	GX99020
Screws for Dust Cover:	GX99025 (2 needed)
Mounting Gasket:	GX99187

Accessories

Eye Bolt:	GX99170
Tool:	GX99030
Security Screws:	GX99060
5.5" RR Bolt Kit:	GX99210
<i>Includes:</i>	GX99190 – 5.5" RR 5/8-11 x 2-1/2 Fully Threaded Stud (8) GX99195 – 5.5" RR 5/8-11 Stainless Steel Hex Nut (8) GX99200 – 5.5" RR 5/8 Flat Washer (8)

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 5 years 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

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