SQUIBB TAYLOR INCORPORATED

MANUFACTURED BY FGI INTERNATIONAL

Instruction Manual for A1301 & 1310 Relief Valves

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KEEP THIS DOCUMENT WITH THE PRODUCT UNTIL IT REACHES THE END USER.

WARNING

A person should NEVER stand directly over or in front of, or look directly into a relief valve when the tank is pressurized. The relief valve could suddenly "pop" open blowing gas, dirt, and other debris into the person's face and eyes.

This equipment must be installed, operated, and maintained in accordance with federal, state and local codes and manufacturer's instructions. In addition, in most states the installation must also comply with ANSI K61.1 standards.

To insure long term safe operation, the manufacturer recommends that under normal service conditions this product should be inspected at least once every five (5) years and be repaired or replaced as required.

Only personnel trained in the proper procedures, codes, standards, and regulations should install and inspect this equipment. Failure to follow these instructions or to properly install and maintain this equipment could result in property damage and personal injury or death.

Introduction

SCOPE OF THIS MANUAL:

This manual covers instructions for the A1301 and A1310 series relief valves.

THINGS TO TELL THE CUSTOMER:

1. The purpose of a relief valve is to keep the tank from rupturing from excessive tank pressure by venting gas to the atmosphere until the tank pressure drops. Excessive tank pressure can be caused by the following:
   - Exposure to fire or radiant heat, including hot summer days
   - New or refilled tanks not fully purged of air
   - Tank colors (other than white) increase the heat absorption of the tank, thus raising the pressure in the tank
   - Overfilling the tank
2. Do not beat, pound, or hit the relief valve with hammers or other tools or attempt to force the valve closed as this will not stop gas discharge and could damage relief valve parts or rupture the tank.
3. Call your dealer if the relief valve discharges gas.

Specifications

CAUTION: If the valve is to be for service other than anhydrous ammonia or air, contact the factory to determine if the valve materials are suitable for the particular service.

Underwriters' Laboratories listed valves are required by most states, although some states require ASME capacity rated valves. Be sure the valve is rated and stamped to meet the requirements of the state where it will be used. The valve should also have sufficient capacity for the container size where it is used. Required relief valve capacity is a function of the container surface area.

The start-to-discharge pressure stamped on the valve must be correct for the design pressure of the container. Do not use a valve with a start-to-discharge pressure higher than the design pressure of the container.

When a valve has an outlet pipeaway stack (such as used in bulk storage applications), a restriction may result that reduces valve capacity below that stamped on the valve. In these cases, the total system capacity must be sufficient to meet the sizing requirements for the container being used.

Installation

Installed valves must have direct contact with the vapor space of the containers.

Install the valve so that flow is unobstructed. Each application will dictate whether discharge stacks or deflectors are required. Deflectors and adapters are separate devices mounted to the outlet of the valve to control discharge direction.

Coat the male threads of the valve with an Underwriters' Laboratories listed sealing compound. Do not allow excess compound to drip into the container or flow around the bottom edge of the pipe threads.

(OVER)

Installation (cont'd)

Pull the valve into the coupling hand tight, and then wrench tighten it for approximately two additional turns. Do not install the valve with such extreme torque that the coupling can cut threads into the valve. This could cause valve distortion and affect the internal working parts. Larger size valves may require an additional amount of torque to obtain a leak free connection.

Raincaps are required on all valves. The raincap should be kept in place; an out-of-place raincap indicates the valve may have opened to relieve overpressure. Most relief valves have a drain hole in the body which must remain open at all times.

New containers must be purged to remove air from the container. Failure to properly purge may result in excessive pressure and the possibility of "popping" the relief valve when the container is filled.

REFER TO FIGURE 1:

The relief valve is held closely by the spring force seating the rubber valve disc against the orifice.

When the tank pressure exceeds the spring force, the valve disc lifts off the orifice allowing gas to discharge through the valve to the air.

Gas discharge initially may be small producing only seepage and a light "hissing" sound. As pressure increases and gas volume discharge continues, a "popping" condition occurs with large volumes of gas discharge and a loud "hissing or roaring" sound.

When the tank pressure decreases enough, the spring force closes the valve disc back against the orifice stopping further discharge.

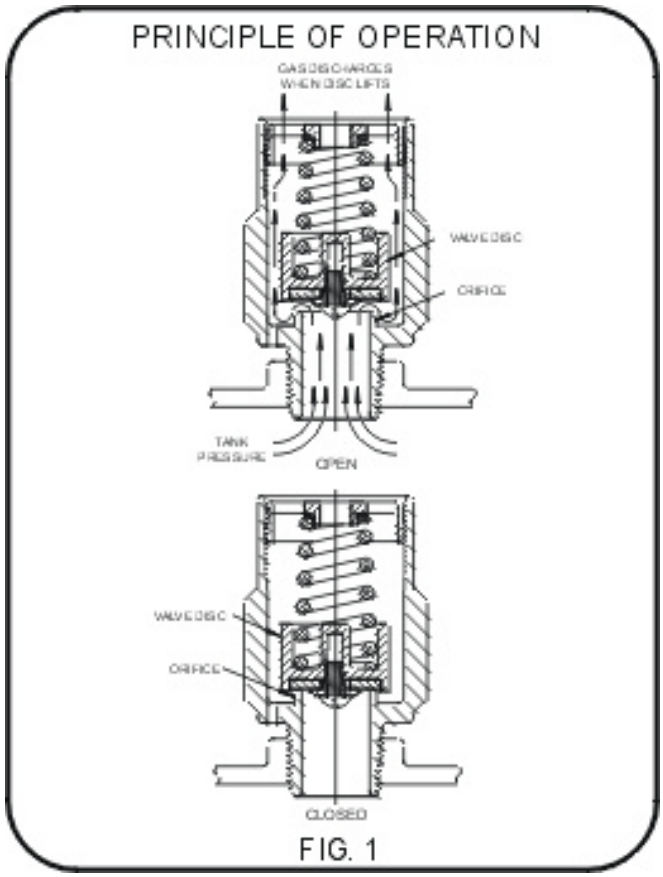

FIG. 1

Maintenance and Replacement

Safety relief valves are nonrepairable valves and cannot be adjusted in the field.

Any valve that has fully opened "popped" should be tested to see if it is within the allowable start-to-discharge pressure setting. If it is not within the correct range, it must be replaced. Relief valve start-to-discharge and reseat pressures may be lower if the valve has fully opened (popped).

Some relief valve installations require periodic testing or replacement, such as those required by ANSI K61.1 and / or any applicable local codes. It is recommended that all relief valves be regularly inspected for visible damage, dirt, corrosion, missing raincaps, paint inside outlet, tampering, etc. If any of the preceding is evident or questionable, the valve should be retested or replaced immediately.

The discharge side of the relief valve body must be kept free of dirt, water and other foreign matter which can damage the valve seat or "weld" some "wing style" poppets to the valve body. This can prevent the valve from opening. Replace valves when this occurs.

Relief valves are precisely set by the manufacturer for the correct start-to-discharge setting, and field repair should never be attempted. Since the disc in a relief valve is subject to normal deterioration, the manufacturer recommends that a relief valve not be used for longer than 5 years from date of manufacture. Earlier replacement may be required due to severe service conditions or code requirements.

Limited One-Year Warranty

Squibb-Taylor warrants the product identified herein to be free from defects in material and workmanship under normal use and service. If, within one year from the date the product is shipped from the factory, any unit fails to meet customer satisfaction, if will be replaced free of charge by Squibb-Taylor, FOB Dallas, Texas.

The owner's responsibility is for normal maintenance and any servicer's travel and labor charges.

This warranty applies only when the product is used for consumer use within the United States and Canada and is installed and used in accordance with all applicable national, state, and local codes, regulations, and laws.

This warranty shall not apply if the product has been subjected to unreasonable use, negligence, accident in transit, alteration, improper installation or misapplication.

Squibb-Taylor shall not be liable for any default or delay in performance under this warranty caused by any contingency beyond its control including without limitation war, government restrictions or restraint, strikes, fire, flood, or a shortage or reduced supply of raw material.

There are no express warranties other than set forth above. All implied warranties including the implied warranties of merchantability and fitness for a particular purpose are limited to the duration of the express warranties set forth above. Liability for consequential damages under this warranty is excluded to the extent exclusion is permitted by law.

This warning gives you certain rights and you may have other rights which vary from state to state.