SQUIBB TAYLOR

MANUFACTURED BY PARKER - PGI DIVISION

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Installation Manual Applying to Excess Flow Valves for NH_3 or LP-Gas Service

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

WARNING!

1. Contact with or inhalation of Liquid Anhydrous Ammonia (NH_3) or of LP Gas can cause SERIOUS INJURY OR DEATH.
2. Before installation or removal of any tank valve, the system must be purged of all product.
3. Personal Protective Equipment (PPE), safety gloves, goggles and clothing should be worn.
4. For proper handling and storage of NH_3, and Liquefied Petroleum Gas refer to ANSI Standard K61.1 and NFPA Pamphlet 58.
5. An abundant supply of fresh water should be available to provide immediate first aid treatment for exposure to NH3 and LP-Gas.
6. To prevent the accidental opening of any valve, never grasp or carry a valve by its Hand wheel or handle.
7. To ensure long term safe operation, the manufacturer recommends that under normal service conditions this product should be inspected at least once every year and be repaired or replaced as required.

User Safety Responsibility Statement for All Parker Products

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

· This document and other information from Parker-Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.

· The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.

To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

While this information is presented in good faith and believed to be accurate, Individuals using this literature must exercise their independent judgment in evaluating product selection and determining product appropriateness for their particular purpose, system requirements and certifications. The manufacturer reserves the right to change product designs and specifications without notice.

Tools Required

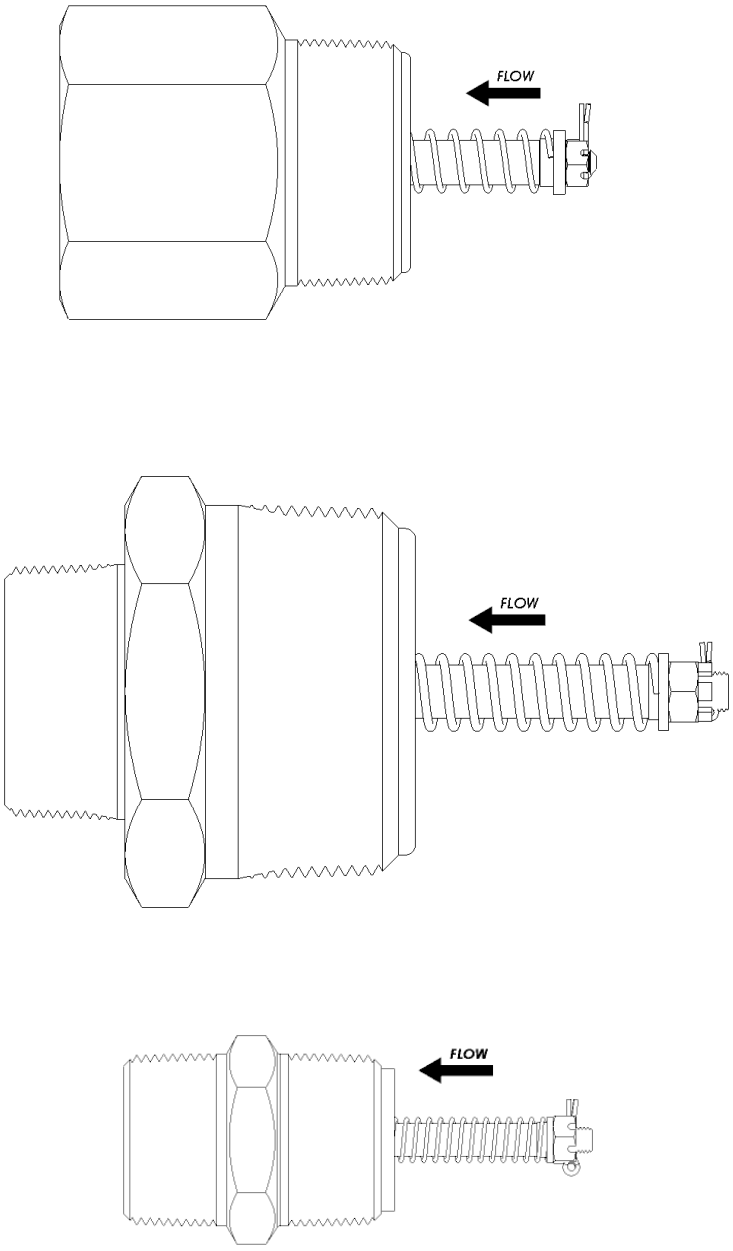
Safety Equipment (i.e. gloves, goggles, and clothing), 12" Adjustable Wrench, 7/16" Open End Wrench, and 12" Pipe Wrench.

1. The excess flow valve's closing flow rating must be less than the capacity of the NH_3 system in which the valve is being used. Allowance must be made for valves, fittings, hose, etc., in determining the capacity of the system. If branches or restrictions with a smaller capacity than the total system are incorporated, additional excess flow valves must be installed at these points.
2. Manually operate the excess flow valve's poppet before installation to assure parts were not damaged in shipment or blocked with dirt or foreign debris.
3. Use pipe dope on the male threads of the valve or the pipeline. Make sure flow is in the direction of the arrow stamped on the body, see illustration. Large size valves may require an extra length of pipe on the wrench handle to provide increased installation torque.
4. The excess Flow Valve should be checked periodically for corrosion and free operation of the excess flow mechanism. This must be done by physically inspecting the valve. Make sure system is empty of product before removing. Once per year the excess Flow Valve should be tested as described below at normal and minimum operating temperatures.
5. After an excess Flow Valve closes, leakage through the equalizing hole will continue to allow a small discharge of liquid product. The appearance that the valve may not have closed properly is due to the fact that NH_3 liquid expands approximately 800 times, and propane liquid expands approximately 300 times as it flashes to a vapor in the atmosphere. A cloud of vapor will be seen even though the valve has closed properly. For this reason the operator must be familiar with the location of all shutoff valves in the system. An Excess Flow Valve is not intended to shut off bubble tight when closed, but only to reduce the flow of vapor to a manageable amount until the appropriate shutoff valve can be safely closed.

A restriction upstream or downstream of an excess flow valve that does not allow a flow equal to the valve flow rating will not allow the valve to actuate regardless of a break downstream of the valve.

Testing the Excess Flow Valve

1. Install a ball valve and vent line at each logical piping or hose failure point and do the following at each point.
   NOTE: The valve line & vent line must be larger than the upstream piping so as to not cause a restriction and the vent line must be the secured and positioned for safety of the test.
   NOTE: The test MUST be conducted at the lowest system pressure. Remember that temperature greatly affects system pressure.
2. Open all upstream valves first and then *quickly* fully open the test ball valve.
3. The excess Flow Valve should shut immediately.
4. **If it does not close, a smaller excess flow rated device must be installed.**



FIGERE 1: EXCESS FLOW VALVES

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