

SUPERPRESSURE

LIQUID SERVICE RELIEF VALVE

44-19523 (500-7500 p.s.i)

44-19526 (1,000-15000 p.s.i)

44-19529 (5,000-45,000 p.s.i)

Instruction #807A

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DESCRIPTION

- A. The Relief Valve is an adjustable-type relief valve designed for installation in systems containing liquids under high pressures.

NOTE

These relief valves have a Tungsten Carbide valve stem and a 17-4PH Stainless Steel seat and while serviceable with most liquids it should not be used in systems containing liquids corrosive to Tungsten Carbide or 17-4PH

- B. The same type of valve is manufactured with three ranges of working pressures available: 500-7,500 p.s.i. (Cat. No. 44-19523); 1,000-15,000 p.s.i. (Cat. No. 44-19526); and 5,000-45,000 p.s.i. (Cat. No. 44-19529).
- C. All valve models have a 1/2-14 NPT exhaust port for connecting a relief pipe or tube to provide for the release of pressure.
- D. Physical measurements: Overall length - 15-1/2 in. Outside diameter - 3-1/4 in. Weight - (net) 15 lbs.

INSTALLATION

CAUTION

The valve is a free-exhaust type and should not be used as a back-pressure control or similar device.

- A. If the valve is pre-set at the factory to a specified pressure (specified when the valve was ordered), the pressure will be indicated on a tag attached to the valve when shipped. Care must be used when first placing the valve into service to allow pressure to build gradually and to observe the valve action.

If the valve is operated at other than room temperature a slight correction may be necessary to obtain the correct release pressure.

NOTE

Examine the valve carefully before installation to insure that no grease or dirt particles are present that would enter the valve and cause clogging, damage, or improper valve seating.

- B. The standard connection for fitting to 9/16 OD tubing is supplied with the valve. Adapters for 1/4 in. and 3/8 in. connections are also available from Newport Scientific, Inc.
- C. Two 7/16-20 holes are located in the valve body on the opposite side from the relief port to facilitate mounting the valve.
- D. Install a pipe or tubing on the 1/2 in. connection to safely direct the exhaust pressures away.

NOTE

IMPORTANT – THIS VALVE IS NOT RECOMMENDED FOR GAS SERVICE

VALVE ADJUSTMENT

If further adjustment on the relief valve is desired, proceed with the following steps:

- A. Install the valve in some system where a method of measuring pressure applied to the valve is available.
- B. Unscrew cap .
- C. Tighten or loosen adjusting nut to increase or decrease pressure on the spring. With the adjusting nut end of the

valve considered as the "top", turn the nut counterclockwise to decrease the valve releasing pressure or clockwise to increase the releasing pressure.

- D. There is no set relationship between the number of turns of the adjusting nut and variation of the amount of pressure required to "blow off" (or release) the valve; therefore, it is important to have a known pressure applied and the valve adjusted in gradual steps until the desired releasing pressure is reached.

MAINTENANCE

It is recommended that only the following maintenance be performed by the valve user. For any further required maintenance it is suggested that Newport Scientific, Inc. be contacted for instructions.

- A. Inspect the valve regularly for general cleanliness and tighten connections.
- B. To replace the valve seat, gasket, or disc, proceed as follows:
- (1) Remove the valve from all connections and place in a vise.
 - (2) Remove nut and release pressure on spring by unscrewing (counter clockwise) plug and remove nut.
 - (3) Carefully unscrew the connector.
 - (4) Remove the valve seat, gasket, or disc as required for replacing. Inspect those parts not replaced for signs of dirt, wear, or corrosion.
 - (5) Be careful not to loosen the plunger or the steel ball when the above parts are removed.
 - (6) Replace spring and nuts, as described above.

SUMMARY:

The attached excerpt from our Valves and Tubing Brochure provides a brief overview as well as an outline of the Relief Valve for your reference.