

INSTALLATION INSTRUCTIONS

EMERGENCY SAFETY SHUT-OFF VALVES MODEL #'S 521/522/521DP/522DP

WARNING: DO NOT USE OR TEST WITH WATER

Universal's products should be utilized in accordance with applicable federal and local laws and regulations. Product choice should be based on physical specifications and restrictions in concordance with the surroundings and materials to be handled.

UNIVERSAL PROVIDES NO GUARANTEE OF APPLICABILITY FOR A PARTICULAR UTILIZATION.

PURPOSE:

The Universal Safety Valve Series 521 and 522 is intended for installation at the inlet (bottom) of remote control dispensing devices, which dispense gasoline or other flammable liquids at commercial fueling facilities. This safety valve incorporates a single lever trip arm, with fusible element, and a shear section. These three features are designed to shut-off (close) the valve in case of fire or severe impact.

MAINTENANCE:

Proper operation is dependent upon correct installation and regular maintenance.

This safety valve application requires that the valve is inactive until the event of an emergency. The periodic manual operation of the valve (at least once a year) will ensure that the valve works properly. Against line pressure, trip the lever and check that no product flow is present. If the valve is working properly, reset.

HOW THE 521 AND 522 SERIES SAFETY VALVES WORK - OPERATION AND FEATURES:

When properly installed and in it's "active" position, the 521 & 522 series safety valve is ready to react to impact or fire hazard.

- Fire – the fusible link will melt and the valve will close and stop product flow
- Impact – the shear section will brake and fusible link will disconnect from the pin, thus closing the valve and stopping product flow

The Universal 521&522 series safety valve mechanism is contained in the lower housing. This allows replacement of the shear section without fear of product flow if the submerged pump is accidentally turned on.

The double poppet version contains an additional poppet in the top section, which allows both the lower and upper sections to seal when the shear section breaks.

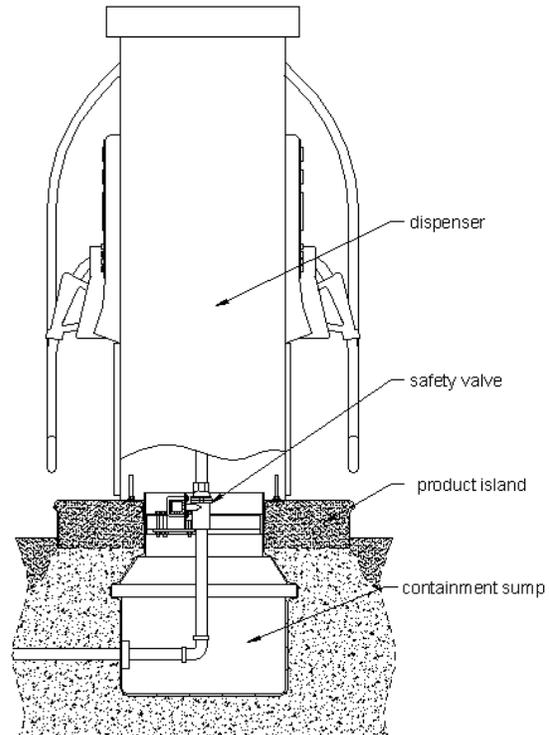
Only the 522 series has 2" external male threads on the inlet. This allows easy connection to the secondary containment piping.

IMPORTANT NOTE: If an adjacent vapor return line remains intact when the dispenser is knocked loose, the safety valve may not shear. According to NFPA 30A... it is recommended that either Universal's Model #518 Vapor Emergency Shut-off Valve or a flexible connector is installed for safety.

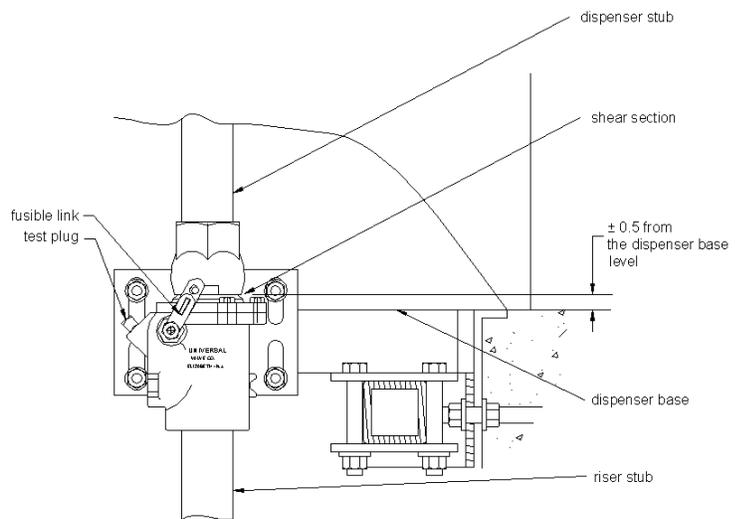
INSTALLATION DIAGRAMS:

The safety valve must be rigidly secured to ensure breakage at the shear groove, in the event of severe impact. Failure to provide a rigid mounting may result in a failure of the valve to

close or break. This could cause breakage of the valve and/or pipe in other than designed areas, resulting in continued product flow and a hazardous condition. The safety valve can be secured using Model 521KR "Sure-Shear" U-Clamp Anchor or other suitable means. It is essential that the valve have ample clearance to permit clear and unimpeded action of the fusible link. If this lever is stopped due to striking some interference, the valve cannot close in the event of emergency. This will result in a hazardous condition.



The shear section of the safety valve must be at the same level or no more than 1/2" above or below top of the dispenser base.



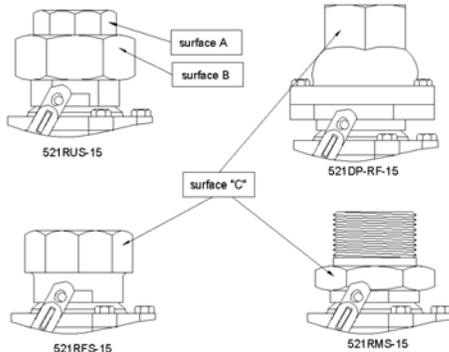
MODEL 521RUS-15 UNION TYPE:

Place wrenches on union nut and tail stock-surfaces "A" and "B" shown in the diagram. Hold wrench on "A" surface and tighten nut "B" only!

MODEL 521RFS-15, 521RMS-15, 521DP-RF-15:

Place wrench on surface "C" and hold steady. Then tighten the dispenser stub.

NOTE: Wrenching is positioned in the same place/location



on all models.

INSTALLATION:

- Make sure that product riser stub has adequate clearance to permit installation of safety valve
- Coat threaded end of riser stub with a non-hardening gasoline resistant pipe compound
- Screw valve tightly onto riser stub by placing one end of the wrench on the riser stub and a second wrench on the safety valve

CAUTION: Never attempt to tighten safety valve on riser stub by wrenching above the shear section. The shear section will break if wrenching is done above the shear section.

HOW TO OPEN THE SAFETY VALVE MANUALLY:

To open the valve, rotate the fusible link in a clockwise direction and engage the fusible link on the pin of the upper assembly.

HOW TO SHUT OFF THE SAFETY VALVE MANUALLY:

Slightly rotate the fusible link arm in a clockwise direction while pulling the arm away from the body. Then allow arm to rotate in a counterclockwise direction until the poppet is seated.

PRESSURE TESTING OF THE PRODUCT PIPING SYSTEM:

Testing of the product piping lines must be separate and isolated from testing of the tank. The testing recommendations are available from the tank manufacturers and/or NFPA 30.

PRODUCT SPECIFICATIONS:

- Valve closing mechanism placed in the body instead in the shear section. Thus the shear section may be changed without disturbing other dispenser operations.

- Choose from three replacement tops for single poppet series
- Choose from two replacement tops for double poppet series
- UL and ULC listed
- Line test port provided
- Raised bosses for anchoring
- Can be reset against the pressure in the system

MATERIALS:

Body & Adaptor –zinc plated steel
Shaft & Spring - stainless steel

TO TEST THE PRODUCT LINE:

- Disconnect electric to submerged pump – in the breaker panel
- Turn down set screw in submerged pump head (see manufacturer's recommendations)
- Close safety shut-off valve
- Remove 3/8" pipe test plug and attach line test equipment
- Follow PEI RP 100, page 17

HOW TO REPLACE SHEAR SECTION:

1. Disconnect electric to submerged pump-in breaker panel.
2. Remove pipe or union nut from top of the valve (the valve body does not have to be removed).
3. Lean back dispenser
- 4a. For Single Poppet –remove three hex head bolts and lift damaged top off the valve body
- 4b. For Double Poppet – remove three hex heads from uppermost section. Remove three hex head bolts holding shear section to the lower body. Remove shear section by sliding out sideways out the valve (some maneuvering may be necessary to disengage shear section).
5. Install new seal ring and new top.
6. Resecure dispenser.

It is necessary to retest the product line after fire or impact to assure that pipe fittings are not leaking. After fire or severe impact, the valve body should be thoroughly examined and tested, prior being returned to service.

PRODUCT DESCRIPTION:

Model	Description
521DP-RF-15	Female Double-Poppet Safety Valve
521DP-RM-15	Male Double-Poppet Safety Valve
521DP-RF-15-C	Female Double-Poppet Replacement Top
521DP-RM-15-B	Male Double-Poppet Replacement Top
521DP-SS-15	Double-Poppet Shear Section
521KR-8012	8"-12" U-Clamp Anchor
521KR-1216	12"-16" U-Clamp Anchor
521RFS-15	Female Safety Valve
521RMS-15	Male Safety Valve
521RUS-15	Union Safety Valve
521RF-15-C	Female Replacement Top
521RM-15-B	Male Replacement Top
521RU-15-23	Union Replacement Top w/2/3 Union
522DP-RF-15	Female Double-Poppet Safety Valve w/ external threads
522DP-RM-15	Male Double-Poppet Safety Valve w/ external threads
522RFS-15	Female Safety Valve w/ external threads
522RMS-15	Male Safety Valve w/ external threads
522RUS-15	Union Safety Valve w/ external threads

Proven Performance



UNIVERSAL VALVE CO., INC.

478 Schiller Street • Elizabeth, New Jersey 07206
(800) 223-0741 • (908) 351-0606 • Fax: (908) 351-0369
e-mail: sales@universalvalve.com
visit us at: www.universalvalve.com

