

9095S AST Overfill Prevention Valve

Installation & Maintenance Instructions

Tank Mounted Fill Applications

The 9095S AST Overfill Prevention Valve is installed at the fill port of a storage tank. Used in a pressurized tight fill application, the valve terminates flow of product when the liquid level reaches a pre-set warning level (90-95% full). The valve is installed on a standard 2" NPT male connection. The valve can be used in conjunction with Morrison AST Spill Containers for added spill protection. When installed to manufacturer's requirements, the Morrison Fig. 9095S Overfill Prevention Valve can eliminate hazardous liquid spills.



Failure to follow any or all of the warnings and instructions in this document could result in a hazardous liquid spill, which could result in property damage, environmental contamination, fire, explosion, serious injury or death.

Installation



Warnings

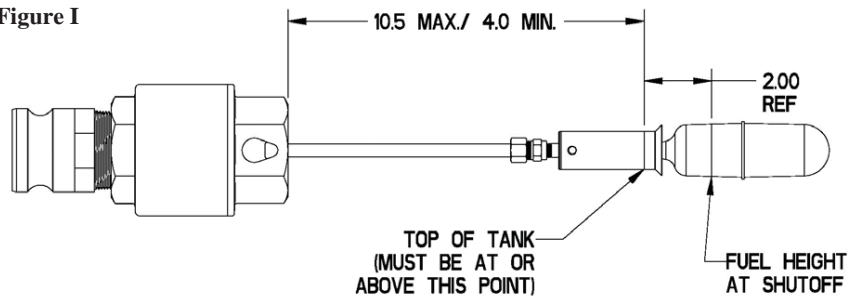
- **Fire Hazard** – Death or serious injury could result from spilled liquids.
- Any modification to this valve other than stated in these installation instructions will void the product warranty.
- This device is intended to be used as a secondary shutoff and should not be the only system in place to prevent a tank from overfilling. It is the sole responsibility of the operator to continuously prevent any spillage regardless of the situation or status of the valve.
- The valve must be used with clean product. Contamination from products such as used oil may cause the valve to function improperly. Line strainers or filters should be used on the fill piping or delivery vehicle to insure clean product.
- Product does not work with drop tube. Fuels requiring the use of a drop tube should not be used with this product.
- Minimum requirements for valve operation: 5 GPM inlet flow and 5 PSI inlet pressure.
- Maximum allowable viscosity is 150 centistokes.
- A tight fill is required for the valve to operate. Do not substitute any other fill adaptors for the special adaptor supplied.
- All by-pass and/or limit valves of the delivery system must be functional and properly set prior to filling.
- Install in accordance with all applicable local, state, and federal laws.
- For your safety, it is important to follow local, state, federal and/or OSHA rules that apply to working inside, above, or around the storage tank and piping area. Use all personal protective equipment required for working in the specific environment.
- Tanks could be under pressure. Vapors could be expelled from tank vents, piping, valves or fittings while performing installation. Vapors could catch fire or cause an explosion. **Avoid** sparks, open flame, or hot tools when working on valves.

Steps

Important: Valve does not work with drop tube. Fuels requiring the use of a drop tube should not be used with this valve.

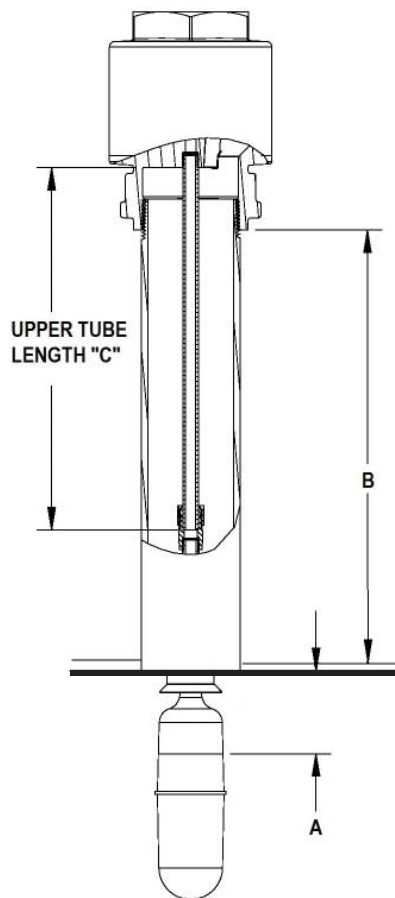
1. Remove the valve from box and remove all packaging material. Check the valve for any shipping damage. Do NOT use valve if any damage is found. Remove the tight-fill adaptor and nipple from the top of the valve (if applicable). Check for freedom of plunger movement by turning the unit upside-down, and looking through the body opening at the plunger. The plunger should slide freely to contact the seal surface of the body and drop back down into the dashpot when turned back to the upright position. Hold the valve upright and move the float up and down to insure there are no binding parts.

Figure I



2. Determine the desired **Tank Shutoff Height (A)** (See Fig. I).
3. Determine **Riser Pipe Height (B)** (See Fig. I).
4. Use the formula below to determine **Upper Tube Length (C)** (See Fig. II) required to adapt the unit to your application.

Figure II



Formula

$$\text{Upper Tube Length (C)} = \frac{\text{Tank Shutoff Height (A)}}{\text{Riser Pipe Height (B)}} + \text{Riser Pipe Height (B)} - 4'' = \boxed{}$$

*If **Upper Tube Length (C)** is less than 2" you will need to install an additional nipple on the riser. The total height of the nipple and riser length (B) will then be used to calculate the upper tube length.

Example 1:

You are installing this overfill protection valve on a fuel storage tank and you determine your **Riser Pipe Height (B)** to be 7" and want a **Tank Shutoff Height (A)** of 3". According to the above formula, a **Upper Tube Length (C)** of 6" is required.

Example 2:

A **Tank Shutoff Height (A)** of 3" is desired and the **Riser Pipe Height (B)** is 2". From the above equation, the **Upper Tube Length (C)** is 1". Since this is less than the 2" requirement, a 4" nipple is added to the riser resulting in a total **Riser Pipe Height (B)** of 6". The **Upper Tube Length (C)** is then recalculated to be 5".

5. Cut upper tube to length calculated above (C). Remove any burrs from end of tube.
6. Attach float assembly to upper tube and tighten compression fitting. Make sure that the float assembly is securely attached. *Use care with float assembly during installation.*
7. Apply a non-hardening gasoline resistant sealant sparingly to all threads.

Caution: Excessive use of thread sealant may cause valve to function improperly. Install valve in the storage tank.

Important: Install the included warning tag where it will be visible to the operator filling the tank through this valve.

Filling Procedure

1. Make sure the fill nozzle/hose is equipped with the appropriate coupler to form a secure connection with the tight fill adaptor.
2. Attach the nozzle/hose to the tight fill adaptor making sure the connection is secure.
3. Switch on the pumping system.
4. Open the fill nozzle and begin product transfer.
5. Continually monitor the liquid level measurement device during the fill.
6. Watch for a slight movement of the fill hose or listen for pump bypass activation which indicates overflow shut-off.

Overflow Disconnect Procedure

1. Once shut-off has occurred, close the fill nozzle immediately.
2. Turn off the pumping system.
3. Slowly release one (1) arm of the quick coupler. This will allow product between the nozzle and the valve to drain. Wait a minimum of (1) minute for product to drain.
4. Completely uncouple and remove the nozzle after the pressure in the line has decreased and the product has drained below the connection point.



Failure to follow any or all of the warnings and instructions in this document could result in a hazardous liquid spill, which could result in property damage, environmental contamination, fire, explosion, serious injury or death.

Maintenance

This valve should be maintained per local codes or API Recommended Practice 2350.



Warnings

- **Fire Hazard** – Death or serious injury could result from spilled liquids.
- You must be trained to maintain this valve. **Stop** now if you have not been trained.
- For your safety, it is important to follow local, state, federal and/or OSHA rules that apply to working inside, above, or around the storage tank and piping area. Use all personal protective equipment required for working in the specific environment.
- Tanks could be under pressure. Vapors could be expelled from tank vents, piping, valves or fittings while performing maintenance. Vapors could catch fire or cause an explosion. **Avoid** sparks, open flame, or hot tools when working on valves.

Steps

1. Carefully remove valve from the tank.
2. Inspect the float and float tube for any damage and make sure the float can move up and down freely. If the tube or the float has been damaged, or the float cannot move up and down freely, the valve must be sent back to the factory for evaluation.
3. Look down into the top of the valve to inspect for any debris or foreign objects that may have entered the valve. If you can see any debris or foreign objects, the valve must be returned to the factory for evaluation.
4. While holding the valve body in one hand and the valve float in the other hand, turn the valve upside down and right side up, listening for a clunking/clicking sound. The presence of this sound indicates that the valve plunger is moving up and down freely. If this clunking/click sound is not present, it may indicate that the plunger is stuck and the valve must be returned to the factory for evaluation.
5. Inspect the valve **warning tag** located near the tank fill and offloading area. If the tag is damaged or difficult to read, contact Morrison Bros. Co. at (800) 553-4840 for a free replacement tag.



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