

9095SS Overfill Prevention Valve

Installation & Maintenance Instructions

The 9095SS AST Overfill Prevention Valve is installed at the fill port of a top loading above ground storage tank. Used in a tight fill application, the valve restricts flow of product to 2.5 gallons per minute (@max pressure) when the liquid level reaches a pre-set warning level (90-95% full). The valve is installed through a 2" threaded opening. When installed to the manufacturer's requirements, the Morrison Fig. 9095SS Overfill Prevention Valve can eliminate product loss.



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 should not be the only means in place to prevent a tank from overfilling. It is the sole responsibility of the operator to continuously monitor operations to prevent any spillage regardless of the situation or status of the valve.
- The valve must be used with clean product. Contamination suspended in the liquid may cause the valve to function improperly. Line strainers or filters should be used in 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 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.
- 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.
- Fill points should be labeled to identify product being transferred according to all applicable codes.

Steps

Install in accordance to all applicable local, state, and federal laws. Valve must be installed in the tank while still having access to the test mechanism, if a spill container is required it will need to go above the top of the valve removing the tight-fill connector from the valve and placing it in the spill container.

1. Remove the valve from box and remove all packaging material. Check the valve for any shipping damage. Remove the tight-fill adapter from the overfill valve. Check for freedom of plunger movement (hold the float in place) by turning 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. With the valve upright move the float first and then the test mechanism through their full range to make sure no parts are binding.
2. Determine the required Tank Shutoff Height (A) **Warning: If using Diesel Exhaust Fluid, Value "A" must be 2.75" minimum.** (See Fig. I).

3. Determine the Shutoff Point of the Float (B) use the following formula:

$$\text{Shutoff Point (B)} = ((\text{Relative Density}-1) \times -5) + 2.6''$$

This is measured from the bottom of the float and should be marked when the correct value is known.

4. Determine the required Riser Pipe Height (C) (See Fig. I).

5. Use the formula below to determine the Upper Tube Length (D) (See Fig. III) required to adapt the unit to your application.

Formula

$$\text{Upper Tube Length (D)} = \text{A}'' \text{ Shutoff Height} + \text{B}'' \text{ Shutoff Point} + \text{C}'' \text{ Riser Pipe Height} - 8.6''$$

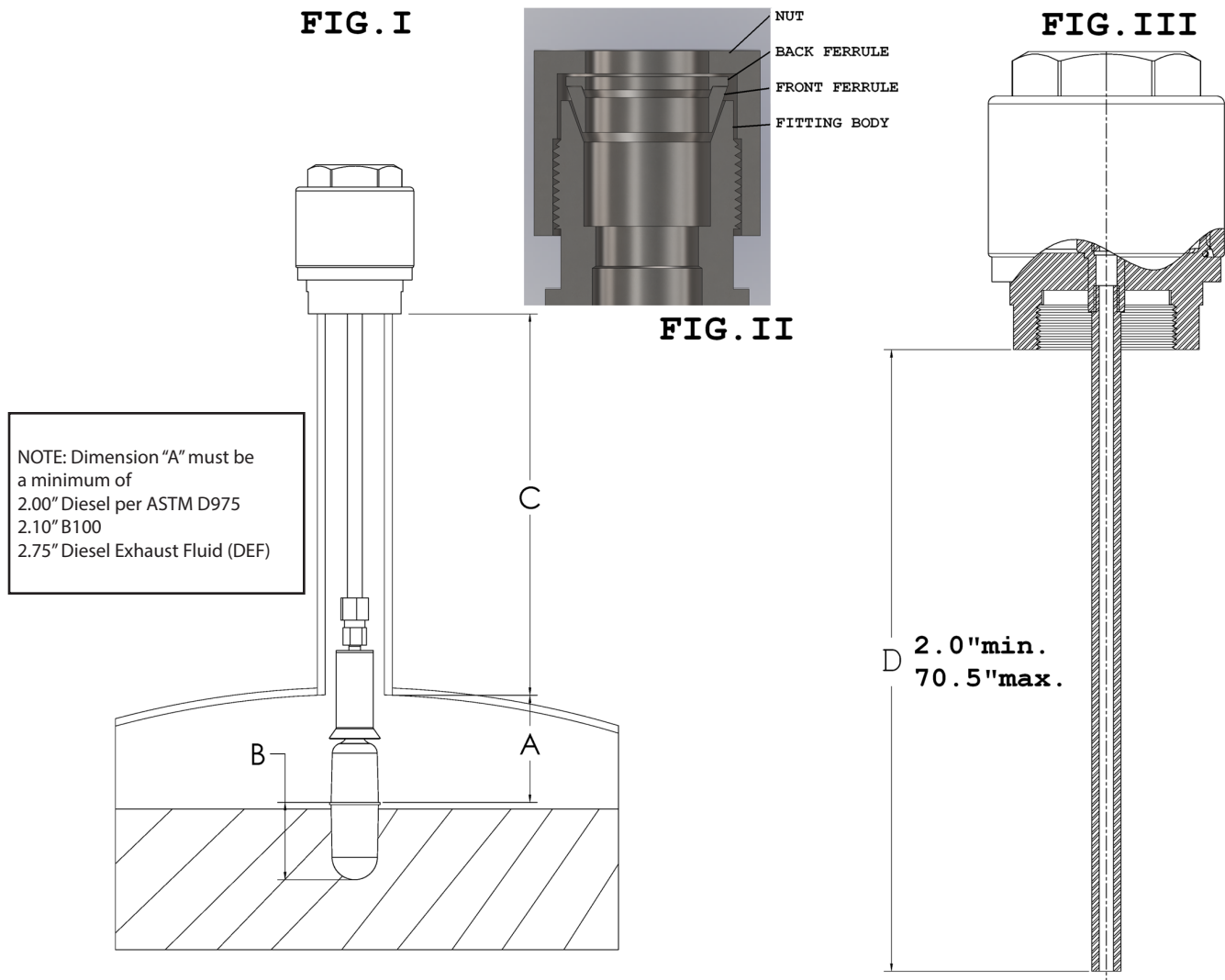
*If Upper Tube Length (D) is less than 2'' you will need to install an additional nipple on the riser. The total height of the nipple and riser length (C) will then be used to calculate the upper tube length.

Example 1:

You are installing this overfill protection valve on a fuel storage tank and you determine you want a Tank Shutoff Height (A) of 3'', the Shutoff Point (B) is calculated to be 3.6'', and Riser Pipe Height (C) to be 7''. According to the above formula, a Upper Tube Length (D) of 5'' is required.

Example 2:

You are installing this overfill protection valve on a fuel storage tank and you determine you want a Tank Shutoff Height (A) of 2'', the Shutoff Point (B) is calculated to be 2.6'', and Riser Pipe Height (C) to be 5''. From the above equation, the Upper Tube Length (D) 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 (C) of 9''. The Upper Tube Length (D) is then recalculated to be 5''.



6. The upper tube can now be cut to length. If the unit is shipped with the tube separate the tube will need to be attached using the supplied thread sealant. Warning: Excessive use of thread sealant may cause valve to function improperly.
7. Place the Float assembly's tube fitting over the tube (Important: Do not unthread this fitting as it comes completely assembled.) and tighten ¼ turn past finger tight.
8. Install valve into tank using non-hardening gasoline resistant sealant on riser pipe threads.
9. 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 is equipped with the appropriate coupler to form a secure connection with the tight fill adaptor.
2. Attach the nozzle 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. Continuously monitor tank filling process.
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 arm of the quick coupler. This will allow product between nozzle and 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.



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Maintenance

This valve should be maintained according to all applicable codes.



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 vents.
above, or around the storage tank and piping area. Use all personal protective equipment required for working in the specific environment.
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1. 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 float 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 of 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 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 valve 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 point. 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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