

922 Combination Vent/Overfill Alarm

Installation & Maintenance Instructions

The 922 is a fully mechanical, high intensity audible alarm for new and existing aboveground storage tanks. The pressure poppet setting is 6 oz./in² or 8 oz./in² with a vacuum relief setting of 1 oz./in². The unit can be set at 90% fill height by adjusting the cable length to the float device. The adjustment tool is provided. The unit attaches to a 2" or 3" N.P.T. pipe mounted on the tank.



Failure to follow any or all of the warnings or instructions in this document could result in a hazardous product 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.
- Install only on shop fabricated atmospheric tanks built and tested in accordance to industry standards such as UL142, NFPA 30 & 30A, and API 650.
- Install in accordance with all applicable local, state, and federal laws.
- 922 Combination Vent/Overfill Alarm **must** be properly sized and selected for each specific tank application.
- 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 vents.

Steps

1. Verify contents of box. You should have received: installation instructions; vent/alarm unit; float with cable and wrench; warning tag; cable tie. Inspect unit for shipping damage. Do not use if damage is found.
2. Check vent openings for foreign matter such as packaging material. Remove any that is found.
3. Make sure all emergency vents, fill connections, tank openings, and piping connections are airtight. The 922 alarm (whistle) may not operate without an airtight system.
4. See Diagram 1 to determine length of cable needed (C).

Record the following measurements:

(A)= Distance from bottom of tank to bottom of the alarm vent.

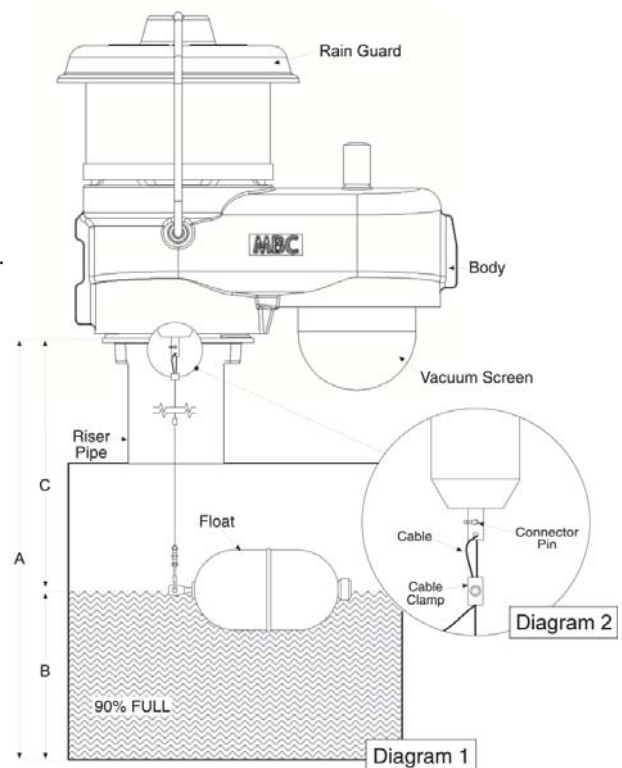
(B)= Distance from bottom of tank to 90% full level.

- Check local codes for proper riser pipe length/height requirements.
 - Caution: Riser pipe and bung opening must be free of burrs. Sharp edges may damage cable.
5. Calculate the length of cable needed (C) by subtracting (B) from (A).

$$(A) \text{_____} - (B) \text{_____} = (C) \text{_____}$$

6. Loosen cable clamp on free end of cable and then slide free end through the hole in the small pin in bottom of vent/alarm unit and back through cable clamp. See Diagram 2.

7. Adjust cable to proper length (C) as determined in steps #4 and #5 above. The total distance (C) should be



measured from the eyelet hole in the float to the bottom of the vent/alarm unit.

8. Tighten the cable clamp securely once the cable is the correct length. **CAUTION:** Failure to tighten the clamp securely could result in the float and cable falling into the tank and the overflow alarm not working.

9. Trim the excess cable no less than one foot from the cable clamp. This will provide extra cable if future adjustment is necessary. The extra cable may hang down in the tank. This will not affect the operation of the unit.

10. Slide the float unit down through the riser pipe.

11. Secure the vent/alarm unit to the riser pipe. (Note: When attaching the alarm unit to the riser pipe, a non-hardening, fuel resistant thread sealant should be applied to the riser pipe threads.)

12. The unit may be hand tightened onto the riser pipe. A wrench is not necessary. If a 2" riser pipe is used the double tapped bushing will need to be wrench tightened onto the riser pipe.



This is a combination pressure vacuum vent and overflow alarm. Proper alarm function will only occur if system is airtight, installed correctly and maintained regularly. All emergency vents, fill connections, tank openings, and piping connections must be airtight. Emergency vent should be set at least 2 oz./in² higher than the combination vent/overflow alarm.

Note: Minimum recommended fill rate for this vent/alarm to function properly is 20 GPM. If all emergency vents, fill connections, tank openings and piping connections are airtight, the alarm feature will register 106 Db. (6 oz) and 110 Db. (8 oz) when measured at a distance of 1 ft. with a fill rate of 90 GPM.

Important: Install the included warning tag where it will be visible to the operator filling or unloading the tank that is fitted with this vent/alarm.



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Maintenance

Monthly inspection, and immediate inspection during freezing conditions, by someone familiar with the proper operation of the storage tank vents, is required to insure venting devices are functioning properly before filling or unloading a tank.



WARNINGS

- **Fire Hazard** – Death or serious injury could result from spilled liquids.
- Clogged or restricted vents could cause damage to tanks and piping releasing liquids which could catch fire.
- Dust, debris, freezing rain, freezing condensation or other contaminants could clog or restrict the vents.
- In freezing conditions, inspect the vents immediately before filling or unloading a tank.
- Follow your employer's instructions for making sure vents are not clogged or restricted.
- You must be trained to inspect the vents. **Stop** now if you have not been trained.
- Do **not** fill or unload from a tank unless you are certain that the tank vents will operate correctly.
- 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.

Steps

1. Carefully remove vent/alarm from the riser pipe.
2. To insure that the vacuum poppet is moving freely, turn unit upside down and right side up and listen for poppet movement. Clean or replace vacuum screen if necessary.
3. Push upward on the ball seat making sure cover (pressure poppet) moves freely. Pressure poppet must be able

to move freely for vent to operate correctly. Clean or replace rain guard screen if necessary.

4. Inspect the ball seat and ball attached to float, making sure the ball freely moves. Ball must be able to move freely for alarm to work correctly.

5. Inspect the vent **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.

During maintenance procedure inspect all vent components and surfaces for damage, corrosion or excessive wear. If any is found, replace the vent.



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