

1. IMPORTANT INFORMATION

- 1.1. Proper installation of each tank is essential:
 - To ensure the safety of all the individuals involved in the installation.
 - To prevent tank damage and/or failure, which could lead to product loss and environmental contamination.
 - To validate the tank warranty.
- 1.2. In addition to these instructions, the installation must comply with NFPA (30, 30A, and 31), and all applicable Federal, State, Local or Provincial, construction, safety and environmental codes and regulations.
- 1.3. Any variances or deviations which are in direct conflict with these published installation instructions must be approved in writing prior to the installation by Containment Solutions.
- 1.4. The presence of any Containment Solutions representative at the job site does not relieve the installer of responsibility to follow these instructions.

2. TANK SITE

- 2.1. The foundation for the tank must be designed to support the total tank weight plus 100% of the weight of the maximum amount of product the tank will be storing. The foundation may be comprised of concrete, asphalt, gravel or other stable material and must include provisions in its design to prevent tank movement. The foundation design must also include provisions for draining surface water away from the tank to minimize corrosion.
- 2.2. This tank must be installed in accordance with all applicable federal, state and local environmental regulations and safety codes.
- 2.3. Tank must be grounded per local codes.
- 2.4. Tanks located in areas subject to flooding must be protected against flotation.
- 2.5. The tank shall be protected and secured from vandalism. The tank shall also be protected from accidental damage, such as from vehicular impacts, in accordance with all applicable codes.

3. TANK HANDLING

- 3.1. Equipment for handling the tank shall be of adequate size to lift and set the tank. For some tank sizes, a fork-lift may be used for tank movement. Do not drop or drag the tank.
- 3.2. Tanks shall be carefully handled to prevent damage to the tank coating. The use of nylon straps is preferred to prevent damage to the tank coating. When using cables or chains, they shall be padded, and of adequate length and size.
- 3.3. It is the responsibility of the owner or owner's representative to touch-up and repair any damage to the coating that occurs during transportation, tank installation or piping installation.
- 3.4. The inner tank must be empty before the tank is moved.

4. TESTING

- 4.1. The following air pressure testing is required and shall be performed at installation.
- 4.2. Install test piping and temporarily plug, cap or seal off remaining tank openings to hold pressure. If tank is equipped with standard emergency vents, remove emergency vents and cap openings to hold tank pressure as required.
- 4.3. The air pressure used for this test must not exceed 3 psig (21 kpa). Use a gauge with a 0 to 15 psig dial span. Set pressure relief valve in test air supply line at 3 psig.
- 4.4. Do not leave pressurized tank unattended.

- 4.5. Do not stand in front of tank heads or fittings when pressurizing tank. Hold test for one (1) hour.
- 4.6. The inner tank shall be pressurized to a maximum 3 psig air pressure.
 - 4.6.1. While maintaining this air pressure, the outer tank shall be tested to a maximum 3 psig in the interstitial space. Pressurize the interstice with air from the primary tank to avoid over pressurization of the interstice.
 - 4.6.2. NOTE: The inner tank will drop in pressure when the interstitial space is pressurized, but should hold steady at the lower pressure. If test pressure drops below 3 psig, close off the air supply to the annular space. Then reconnect the air supply line to the primary tank and increase the pressure to 3 psig maximum. Then continue testing the annular space per these instructions.
 - 4.6.3. All visible seams and welds are to be covered with a leak testing solution or equivalent material for the detection of leaks. Hold test pressure in interstitial space for 1 hour minimum. A steady drop in gauge pressure, or a stream of bubbles, indicates there may be a leak in the interstitial space.
 - 4.6.4. If any leaks are detected, notify the tank manufacturer. If no leaks are found, testing of the tank is complete.

⚠ WARNING

To avoid damage to the tank, do not apply air pressure to the interstitial space between the walls of a double wall tank without pressure in the primary tank. Never apply air pressure to the interstitial space that is higher than the air pressure in the primary tank

- 4.7. With tank depressurized, remove test piping, temporary plugs, caps and seals.
- 4.8. Reinstall emergency relief vents, etc. An emergency vent is required on both the primary tank and the interstice.

⚠ WARNING

Remove temporary manway cover short bolts and reassemble manway cover with proper size and type of long bolt with a minimum unthreaded length of 2", so that when the cover is fully raised, there is a 1½" minimum space between manway cover and frame. Failure to properly assemble cover of a long bolt manway used for emergency venting may make vent inoperable, causing tank failure by over-pressurization.

- 4.9. Installation of pumps, dispensers and electrical wiring shall follow the applicable requirements of codes and zoning ordinances.

5. TANKS

- 5.1. Install all permanent piping and fittings using suitable thread sealant material.
- 5.2. All unused tank openings must be properly sealed using threaded pipe plugs, flanges or caps using suitable thread sealant material.
- 5.3. Do not weld on the tank, modify, or penetrate the tank structure in any way without express written permission from Containment Solutions.

6. LABELING

- 6.1. Tanks shall be labeled in accordance with all applicable codes.

7. TANK ACCESSORIES

- 7.1. All tank accessories shall be installed as required per local codes. Anti-siphon devices, overfill shut-off and alarms, vents, gauges, emergency vents, etc. are common requirements for tanks storing motor fuels for the purpose of being dispensed into motor vehicles.
- 7.2. Manual liquid level gauges may require adjustment before initial start-up and before each refueling of the tank.
- 7.3. Adjustment of liquid level gauge:
 - 7.3.1. Visually inspect the moving parts of the gauge through tank top to ensure free full movement. If operation is obstructed, than gauge removal is needed.
 - 7.3.2. Remove gauge from fitting, realign the swing arm and reinstall in fitting in the correct direction allowing for proper operation of the gauge.

8. FACTORY INSTALLED EQUIPMENT AND ACCESSORIES

- 8.1. Factory installed equipment and accessories are susceptible to loosening during transit due to vibration. This could result in minor leaks at threaded connections.
- 8.2. At time of site installation and start-up, the installer or end user will be responsible for a visual inspection and repair of loose or leaking connections.
- 8.3. NOTE: Do not attempt to re-tighten all fittings before a fluid start-up test. Breaking the seal of the sealant during tightening could result in leaks.
- 8.4. To repair a loose or leaking threaded connection, disassemble the connection, clean threads and reinstall fittings using proper pipe sealant.

9. MAINTENANCE

- 9.1. Aboveground tanks require basic maintenance during the service life. The tank vessel is subject to accidental damage, vandalism, and atmospheric degradation of the coating.
- 9.2. Failure to adhere to and provide proof of proper maintenance may void your warranty.
- 9.3. The monitoring port on the secondary containment should be checked monthly for accumulation of liquid. If liquid is detected, test for the presence of hydrocarbons. Refer to the STI Standard SP001, "Standard for the Inspection of Aboveground Storage Tanks" for requirements concerning tank inspections. This SP001 Standard details requirements for inspections based on the tank installation and age. A tank must undergo the appropriate inspection prior to relocation.
- 9.4. The primary tank shall be inspected monthly for the presence of water at the lowest possible points inside the primary tank. Remove any water found. Water and sediment in fuel can cause plugging of filters. Also, bacterial growth, originating from the fuel can cause corrosion of tanks and lines. For procedures on how to check for the presence of water and removal of water, refer to API Recommended Practice 1621 and API Standard 2610.

- 9.5. The tank operator should perform periodic visual inspections to identify areas of damage to the vessel or the coating itself. Such damage should be repaired.
- 9.6. Periodic repainting of the surface will be required. The frequency of this maintenance procedure will be based upon the environmental factors in the geographic area where the tank is located. The operator is responsible for the selection of the paint, surface preparation and coating application. Local codes may require that the tank be relabeled.
- 9.7. Proper site preparation is vital to ensure proper draining of surface water (see paragraph 1.0 Tank Site). Over time, settlement may occur which alters the effectiveness of the initial surface water drainage provisions. Visual inspection of the vessel and surrounding foundation should identify any change in the drainage pattern. Should stagnant surface water be discovered against the surface of the vessel, the tank operator should consult the installation contractor.

10. ADDITIONAL REQUIREMENTS:

- 10.1. The Authority Having Jurisdiction shall be contacted prior to installing this tank.
- 10.2. This tank must be installed in accordance with NFPA 30, NFPA 30A, Uniform Fire Code or International Fire Code.
- 10.3. This tank shall be investigated to determine acceptability for use after fire exposure damage, other physical damage, or misuse.
- 10.4. Flame arresters shall be installed in the normal vent lines when required by the Authority Having Jurisdiction.
- 10.5. The product stored within the tank is compatible with steel and meets ASTM standards. Any fluid which does not meet ASTM standards must be compatible with steel and approved for storage in writing by CSI. Storing any fluid in the tank which is either not compatible with steel or not approved for storage by CSI will void the tank warranty.
- 10.6. Tank Installation Checklist must be completed and signed by the installing contractor. The completed checklist and copies of any written authorizations for variations and/or deviations received from CSI, should be retained by the tank owner and provided later to CSI to validate any future warranty claim.





TANK INSTALLATION CHECKLIST

For Hoover Vault™ Tanks and FuelMaster® Systems

The completed checklist and copies of any written authorizations for variations and/or deviations received from CSI, should be retained by the tank owner and provided later to CSI to validate any future warranty claim.

Site Owner _____ Date of Installation _____

UL# on Tank _____ Nominal Tank Capacity _____

Site Address _____
Street City State Zip

Installing Contractor _____
Company Street City State Zip

General Site Procedures	Initial On Lines Below	
	Completed	N/A
1. If applicable, minor repairs have been completed to the exterior surface of the tank.....	_____	_____
2. Proper grounding has been completed.....	_____	_____
3. Tank is properly anchored.....	_____	_____
4. Proper signs / labels have been applied to the exterior of the tank.....	_____	_____
5. Spill containment is present and operational.....	_____	_____
6. Verification of air test prior to filling is documented.....	_____	_____
7. Foundation pad is properly sloped to prevent water accumulation.....	_____	_____
8. Secondary containment is free of any liquids.....	_____	_____
9. Product to be stored in this tank is _____ (must be a compatible fluid).	_____	_____
10. The audible fill alarm is functioning at 90%.....	_____	_____
11. The overfill protection device is stopping flow at 95%.....	_____	_____
12. Fill connection is liquid tight and lockable.....	_____	_____
13. Check valve is present when using a remote fill.....	_____	_____
14. Pump is securely attached to the mounting bracket.....	_____	_____
15. Pump is wired properly per current NEC standards.....	_____	_____
16. Pump is properly calibrated.....	_____	_____
17. Vent piping is installed in accordance with NFPA codes.....	_____	_____
18. Venting device is suitable for product stored.....	_____	_____
19. Emergency vents are operating properly.....	_____	_____
20. Mechanical gauge is properly calibrated.....	_____	_____
21. Audible and visual leak indicators are properly working.....	_____	_____
22. I understand routine maintenance is required as stated in installation instructions.....	_____	_____

My signature below confirms that this tank was installed in accordance with CSI installation instructions, that the product stored is compatible with the tank, either expressly listed within the warranty or written approval from CSI verifying compatibility, that I have read and agree to the terms of the Limited Warranty and I recognize that this tank requires routine maintenance following API Recommended Practices and that failure to adhere to and provide proof of proper maintenance may void the tank warranty.

Owner Representative (Print Name) _____ Date _____

Contractor Representative (Print Name) _____ Date _____

Owner Representative (Signature) _____ Date _____

Contractor Representative (Signature) _____ Date _____