

NEW YORK CITY GASOLINE & DIESEL MOTOR FUEL TANK

SUPPLEMENTAL INSTRUCTIONS

1. INTRODUCTION

- 1.1. The purpose of this manual is to provide specific, detailed supplemental instruction regarding the installation of special Fiberglass Double-Wall Underground Storage Tanks (including compartment tanks) for New York City.
- 1.2. This manual must be used in conjunction with the most recent edition of Fiber Glass Systems™ Tank Installation Instructions (Pub. No. INST 1300)
- 1.3. This procedure applies to new tanks only. It is the responsibility of the owner, installer and operator to understand and follow all installation requirements.

1.4. Safety

- 1.4.1. These instructions should not be interpreted in any way to put one's health at risk, or to harm property and/or the environment.
- 1.4.2. Keep this manual available at the installation site and refer to safety procedures as needed.
- 1.4.3. The following definitions will serve as a guide when reading this manual:

⚠ WARNING

Indicates a potentially hazardous situation, which if not avoided could result in death or serious injury.

⚠ CAUTION

Indicates a potentially hazardous situation, which if not avoided may result in minor or moderate injury.

NOTICE

Indicates a potentially hazardous situation, which if not avoided may result in property damage.

1.5. Important Information

⚠ WARNING

Do not enter tank or tank sumps unless following OSHA guidelines for confined space entry. Failure to follow OSHA guidelines could result in death or serious injury.



ASPHYXIATION



FIRE



EXPLOSION

- 1.5.1. Follow all instructions in INST 1300 as well as the additional NYC instructions in this document.
- 1.5.2. Fiberglass tanks must be installed according to these instructions and NFPA 30 and 31.
- 1.5.3. Any variances to the published Installation Instructions must be approved by Fiber Glass Systems in writing prior to the installation.
- 1.5.4. Local codes may apply. Please consult them.

- 1.5.5. The presence of a company representative at the jobsite does not relieve the contractor of responsibility to follow the published installation instructions.
- 1.5.6. Special NYC Fire Department Requirements
 - 1.5.6.1. The Fire Department shall witness the pouring of the concrete slab.
 - 1.5.6.2. The Fire Department shall witness a 5 psig (3 psig for 12' diameter tanks) air soap test on the inner and outer tanks.
 - 1.5.6.3. With approved backfill material in place to the top of the tank, the Fire Department shall witness a hydrostatic test on the inner tank and an air test on the outer tank. The inner tank will be hydrostatically tested at the test pressure required by the Authority Having Jurisdiction (generally 15 psi). The outer tank of all size tanks will be air tested at 5 psi for 60 minutes with inner tank and all compartments at 5 psi.
 - 1.5.6.4. The Fire Department shall inspect placement of the backfill material and shall witness the pouring of the top slab and make final inspection for permits.

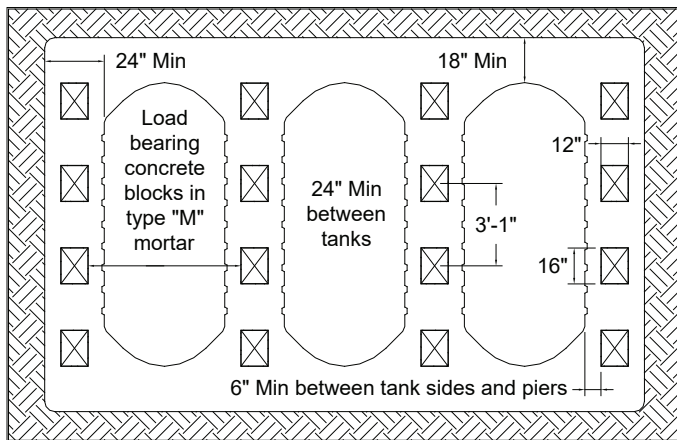
1.6. Tank Limited Warranty Activation

- 1.6.1. These instructions must be followed.
- 1.6.2. Installing contractor must be trained in accordance with the contractor training course in effect at the time of the installation.
- 1.6.3. The Tank Installation Checklist must be fully completed and signed by the tank owner's representative and the installing contractor at the time of installation.
- 1.6.4. The tank installation checklist, these instructions, and any correspondence related to the tank installation must be retained by the installing contractor and tank owner. The checklist will be required and must be provided for any warranty claim to be considered.
- 1.6.5. The limited warranty in effect at the time of tank delivery will apply and is available online.
- 1.6.6. The limited warranty only applies to a tank installed according to these instructions.
- 1.6.7. The limited warranty identifies the products and the tank is designed to store. Temperature of stored products must not exceed limit specified in the applicable limited warranty
- 1.6.8. Failure to comply with requirements for stored products and product temperature will void the limited warranty and may cause tank damage or failure.
- 1.6.9. It is the responsibility of the owner and operator to follow all operating guidelines and all limitations in the tank limited warranty.

2. HOLE SIZE

- 2.1. The following minimum clearances should be used with concrete piers (see Figure 2.1).
- 2.2. The hole must be large enough to allow a 6" minimum clearance on each side of the tank and the concrete block piers.
- 2.3. This 6" minimum clearance must be maintained for the entire tank length. Otherwise, tank damage and potential loss of product may occur.
- 2.4. The minimum spacing between tanks is 24".

Figure 2.1



- 2.5. The minimum clearance between the tank sides and the tank ends and the banks of the excavation walls is 18" (24" for 12ft tanks) with 24" preferred.
- 2.6. For additional installation information see "Hole Size" section in the current version of Pub. No.1300.

3. TANK TESTING

- 3.1. Follow all of the tank testing instructions in the most recent edition of Fiber Glass Systems™ Tank Installation Instructions (Pub. No. INST 1300)

4. ADDITIONAL NYC TANK TESTING

- 4.1. Primary Tank Hydrostatic Test
- 4.2. For tanks (including compartment tanks) with Dry Annular Space or with Annular Space Brine-Filled.
- 4.3. Backfill must be placed to the tank top.

⚠ WARNING

There is great danger of personal injury from flying objects if the tank explodes or loose piping connectors fail during the hydrostatic test of the inner tank. It is the Tester's responsibility to ensure that adequate safety precautions are taken to protect people and property during the hydrostatic test.

- 4.4. For compartment tanks, manifold all compartments together at the tank top.
 - 4.4.1. **Note: The term "primary tank" means all compartments manifolded together with any test pressures, then applied to all compartments simultaneously.**
- 4.5. Be sure manway bolts are torqued to 50 ft. lbs. using a torque wrench and follow ASTM specification for Structural Joints Using A325 or A490 Bolts.
- 4.6. Fill the primary tank, including all compartments, with water, being sure to vent tank and each compartment while filling.
- 4.7. Isolate the primary tank, including all compartments, from the annular space by disconnecting the air test fixture (if present) from the inner tank.
- 4.8. Install a pressure gauge to monitor the primary tank pressure. The water pressure gauges used for the hydrostatic test should have one pound gradations and have full scale reading of not less than 50 psig.

- 4.9. Vent the annular space for tanks with dry or brinefilled annular space. As the pressure is increased on the primary tank, the pressure on the annular space will increase, if the annular space is not vented.
- 4.10. Pipe the tanks in accordance with local codes and hydrostatically test the primary tank at the proper test pressure and duration based on tank nominal capacity.
- 4.11. Use a gate valve and pressure gauge to control the hydrostatic pressure at test pressure on the primary tank.
- 4.12. Use a pressure relief valve set at test pressure + 1/2 psig.
- 4.13. For safety reasons, run the pressure hose and gauge remote from the tank, and monitor pressure remote from tank.
- 4.14. Add the test pressure required by the Authority Having Jurisdiction on top of the water with all compartments manifolded together and hold for 60 minutes. Do not exceed the maximum pressure indicated on the label on the tank. This will generally be 15 psi but may be higher for some jurisdictions.

- 4.14.1. **Note: When measuring remote, there will be a short time lag before the pressure reading on the gauge will reflect the actual pressure on the tank.**

- 4.15. After the proper time duration, release the hydrostatic pressure in the primary tank and all compartment tanks.

4.16. Tank Annular Space Test

- 4.16.1. Pressure test the annular space by one of the following methods:
 - With the primary tank and all compartments full of water, add 5 psi pressure on top of the water with all compartments manifolded together. While holding pressure on all compartments, add 5 psi of air pressure to the annular space and hold for 60 minutes. Then vent the tank and all compartments then remove the water from the tank and all compartments.
 - Vent the primary tank and all compartments then remove the water from the tank and all compartments. With the tank and all compartments empty, add 5 psi pressure to the tank with all compartments manifolded together. While holding pressure on all compartments, add 5 psi of air pressure to the annular space and hold for 60 minutes.

5. SPECIAL TRIPLE WALL INSTRUCTIONS

- 5.1. Follow all of the tank testing instructions in the most recent edition of Fiber Glass Systems Tank Installation Instructions (Pub. No. INST 1300) as well as the tank testing instructions in supplemental INS1304 Triple Wall Testing.
- 5.2. Follow the included NYC Tank Testing in section 4, sections 4.1 through 4.15.
- 5.3. A triple wall tank will have two annular spaces and each space will require separate testing. Follow the section 4.16 instructions to test each annular space.