



Department of Environmental Protection

2600 Blair Stone Road ♦ Tallahassee, Florida 32399-2400

DEP Form: 62-761.900(9)

Form Title: Storage Tank Equipment

Registration Form

Effective Date: July 2019

Incorporated in Rule 62-761.850, F.A.C.

Storage Tank System Equipment Registration Form

Fill out completely

General Information

Company Name: Nationwide Tanks, Inc. Contact Name: Taylor Carroll
Company Address: 1313 W Hwy 76 City, State: Marion, SC Zip: 29571
E-mail: tayor.carroll@nationwidetanks.com Contact Number: 803-440-7051
Product Name: Underground Water Storage Tanks & UL1316 Fiberglass Fuel Tanks
Model Number(s): FTFNTD08, FTFNTD10, FTWNS08, FTWNS10, Product Type: FRP Underground Storage Tanks
Rule(s) citation that registration is being requested within Chapter 62-761 (UST), and/or 62-762 (AST), _____

F.A.C.: Write a brief description of equipment registration request including product limitations:

Nationwide tanks manufacturers double walled UL 1316 fuel tanks for all new generation fuels, diesel and DEF. We only manufacture 8' and 10' diameter up to 40,000 gallons. We offer multiple compartments, dry and wet interstitial options.

Information Checklist (Choose Yes, No, or N/A - Not Applicable):

	Yes	No	N/A
1. Third-party Certification by a Nationally Recognized Testing Laboratory? (Required)	☒	☐	☐
2. Documentation of third-party evaluation that the equipment meets DEP Rules?	☒	☐	☐
3. Documents included about the qualifications of the Nationally Recognized Testing Laboratory?	☒	☐	☐
4. Technical information and drawings included?	☒	☐	☐
5. Installation instructions included?	☒	☐	☐
6. Annual Operability Testing Requirements (Rules 62-761.500, 62-762.501, & 62-762.502 F.A.C.)?	☒	☐	☐
7. Integrity Testing Requirements (Rules 62-761.700, 62-762.701, & 62-762.702, F.A.C.)?	☒	☐	☐
8. Compatible with fuel blends containing >10% ethanol or >20% biodiesel?	☒	☐	☐
9. Has the product been approved or registered in other countries or states? (If so provide list)	☒	☐	☐
10. Any requirements for company-certified installers or trainers?	☒	☐	☐
11. Was this product(s) previously approved or registered by the Department? If yes, EQ- _____	☐	☒	☐
12. Any changes or modifications to the equipment since the last submittal to DEP?	☐	☒	☐

Document Information: Provide supporting documents indicated as "Yes" above including this form via email to Tanknotify@floridadep.gov, or documents can be sent to FDEP, Division of Waste Management, 2600 Blair Stone Road, MS 4560, Tallahassee, FL 32399.

Write a brief description of equipment installation and performance in the U.S.:

Nationwide Tanks have been certified by UL 1316 to manufacture underground double walled fuel tanks. They have been successfully installed in Texas and Oklahoma per our installation instructions.

Equipment Registration Certification:

To the best of my knowledge and belief, all information submitted on this form is true, accurate and complete.

Taylor Carroll Digitally signed by Taylor Carroll
Date: 2022.03.07 11:50:11 -05'00'

Printed Name and Title

Signature (right click to sign)

Date

For Department Use Only:

Date Application Received: 3/7/2027 Application complete: Yes: ☒ No: ☐

EQ- 975 Date of complete or incomplete letter sent: 3/9/2027 Date Equipment Requires Renewal: 3/9/2027

Storage tank system equipment requires renewal every 5 years in accordance with subsection 62-761.850(2), F.A.C.

NOTICE OF COMPLETION
AND
AUTHORIZATION TO APPLY THE UL MARK



2021-09-17

MR. David Pain
South Star Technology Limited
Naxxar Road
Office M/2, 15, Level 2, Corporate Suites
Birkirkara, 9048, MT

Your Reference: Email Pain September 2, 2021 12:07 AM
Our Reference: File MH65295, Volume 1 Order: 13993683
Project: 4790103788
Project Scope: 4790103788 - Transfer of the UL file MH64545 (Nationwide Tanks, Inc) to file
MH65295 (South Star Technology Limited)

Dear Mr. David Pain:

UL has completed the investigation under the above project and confirmed compliance of your product(s) with UL requirements. We appreciate that you have a choice of certification providers and thank you for choosing UL.

This letter temporarily supplements the UL Follow-Up Services Procedure and serves as authorization to apply the UL Mark at the factory location(s) identified on the Authorization Page of UL File MH65295, Volume 1. You are required to send a copy of this letter to all manufacturing locations authorized under UL File MH65295, Volume 1.

The Follow-Up Services Procedure covering your product(s) will typically be provided by UL within 10 business days. Any information and documentation provided to you involving the UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Products that bear the UL Mark must be identical to those submitted to UL for evaluation and certification and must comply with the Follow-Up Services Procedure covering your product(s). Additional requirements related to the responsibilities of the Applicant and Manufacturer can be found under **Additional Resources** at <https://www.ul.com/fus>.

A UL certification is a valuable marketing tool meaning your product or company has successfully met stringent requirements. We encourage you to use your UL Mark and certification in your marketing activities. You can find information on how to accurately promote your UL certification at <https://www.ul.com/marketing>.

If you have any questions, please contact me or any of our customer service representatives. And, congratulations again on your achievement!

Sincerely,

Radoslava Andabak
Project Handler II
UL International Germany GMBH
Radoslava.Andabak@ul.com

Bruce A. Mahrenholz
Director, Conformity Assessment Programs (CPO)
UL LLC
Bruce.A.Mahrenholz@ul.com

NOTICE OF COMPLETION
AND
AUTHORIZATION TO APPLY THE UL MARK



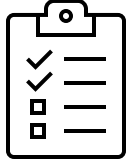
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Tank Installation Training Guide

Version 2.0 – 02.10.2022

Pub No- 3002





Tank Installation Checklist

- ✓ The installation checklist is found in the back of this manual or found on the NTI website.
- ✓ The checklist must be completed by the installing contractor and given to the tank owner.
- ✓ The tank limited warranty requires this document be retained by the owner to validate any future claim.

Pre- Installation Considerations

- Read, understand, and follow all instructions in the installation manual.
- Review and prepare to complete the tank installation checklist.
- Contact local authorities and review building codes, underground utilities, and any mandated testing requirements.



A large yellow cylindrical tank is being unloaded from a truck. The tank is positioned horizontally on the truck bed, supported by wooden dunnage. Several yellow lifting straps are visible, each with the text "DC CARGO MALL" printed on it. The tank has a blue circular logo on its left end. In the background, a gas station and some construction equipment are visible under a clear blue sky.

Tank Unloading

Tank Arrival

First:

- ✓ Carefully unload all accessories to prevent damage.
- ✓ All tanks must be mechanically unloaded.

For temporary job site storage.

- Use provided shipping pads or approved tank backfill.
- Place tanks on smooth ground and chock with sandbags.
- Tie down tank in anticipation of high winds.
- Protect collars from freezing conditions.

Lift Configuration

- When tanks arrive at the job site, they must always be mechanically unloaded.
- For 10' diameter tanks - There are different lift lug orientations for unloading from the truck or lifting into the excavation.
- Identify the tank lift lug orientation and use the appropriate method to lift the tank.

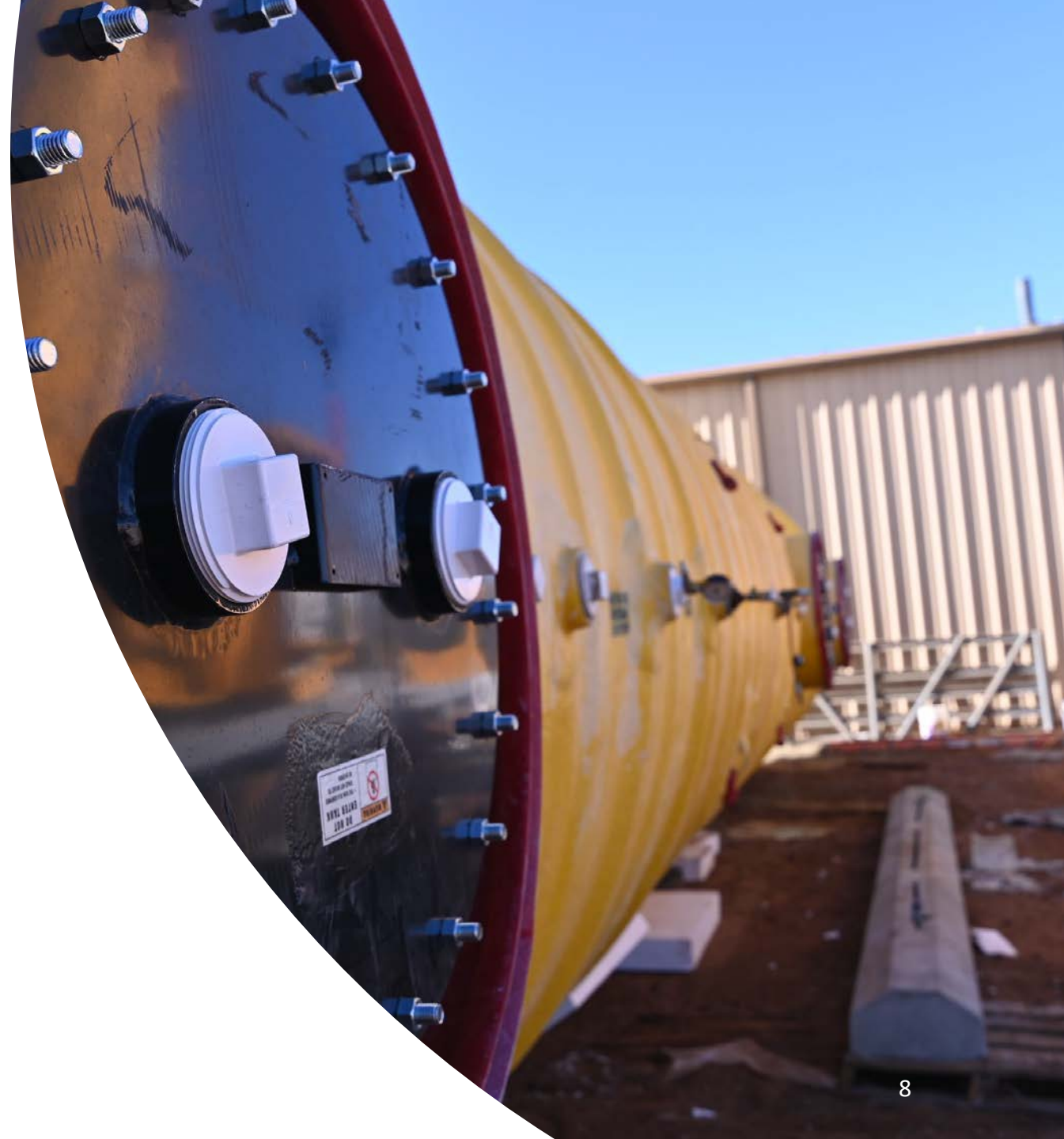


A close-up photograph of a pressure testing setup on a yellow-painted metal tank. A black hose is connected to a black valve assembly. Below the valve is a circular pressure gauge with a white face and black markings, showing a reading of approximately 20 PSI. The background is a blurred view of the yellow tank surface.

Tank Testing Procedure

Preparing For Testing

- Replace all fitting plugs with plugs suitable for the product to be stored.
- Clean factory pipe dope from all plugs and fittings.
- Apply pipe dope suitable for the product being stored.
- Re-install and tighten all fitting plugs.
- Assemble the required number of “Tank Test Manifolds” Reference Figure 5, one per compartment.
- Use contractor fabricated “Tank Test Manifold(s)”.
- Gauges must have a maximum full-scale reading of 15 [psig] with 1/2 [psig] or smaller increments.
- Pressure-relief device must be sized and set to prevent the tank from being pressurized in excess of the maximum allowed test pressure of:
 - ✓ 5 [psig] for double-wall tanks, interstice only.
 - ✓ 1 [psig] for single-wall tanks, main compartment.



Shipped Under Vacuum

1. The Vacuum date precedes the tank installation *by 7-days*; and
2. The factory supplied tank gauge reads a minimum of 10" vacuum.

*A tank shipped under vacuum can be immediately installed without additional testing if both of the following conditions are met:



Testing Single Walled Tank(s)

- Comply with Requirements Set in Section 4.0 of IM.
- Connect “Tank Test Manifold” to a tank threaded coupling.
- Connect the pressure source to the “Tank Test Manifold”.
- Pressurize tank to 1 [psig].
- Close the air supply valve (see Figure 5).
- Remove air supply.
- Monitor the pressure reading for 30 minutes for any loss in pressure from the initial reading.
- While under pressure, cover tank outer surface, including fittings and manways, with soap solution and inspect for leakage.
- After completing air test, vent/release pressure.

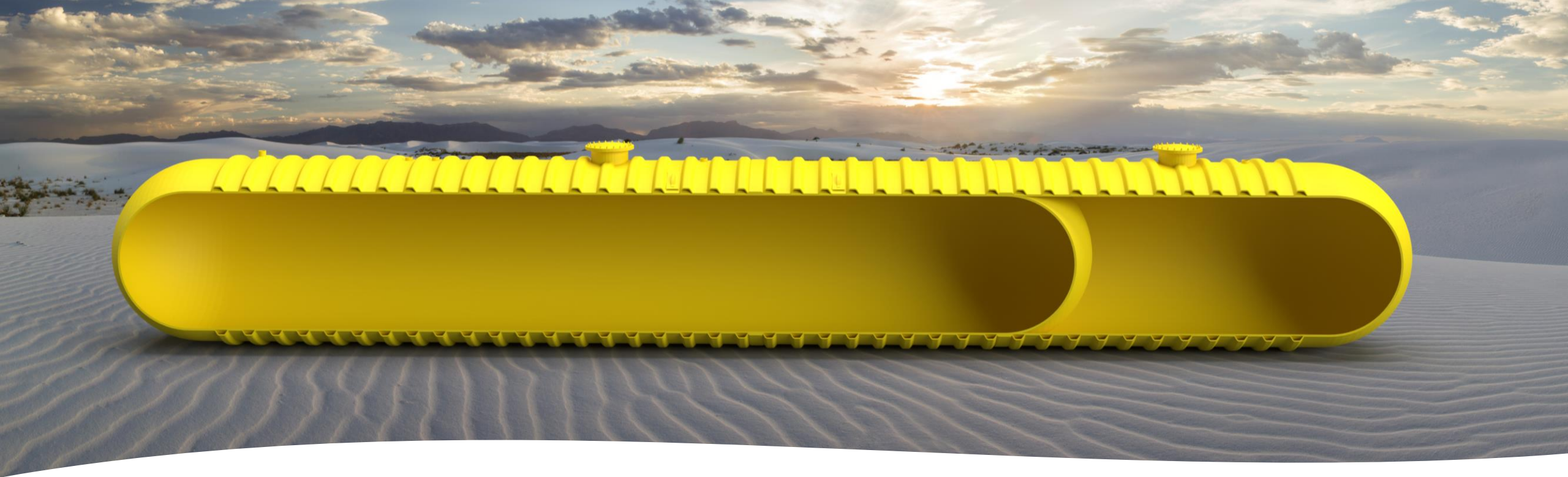


Testing Double Walled Tank(s)

Remove the manufacturer's supplied "Annular Space Gauge and Valve" and do all of the following:

- Release Vacuum Pressure; Install contractor fabricated interstice test manifold; refer to section 4.3.
- Slowly pressurize the annular space to 5 [psig].
- Soap and visually inspect tank exterior; and monitor the pressure reading for 60 minutes for any loss in pressure from the initial reading.
- While under pressure, cover the Tank outer surface, including fittings and manways, with soap solution and inspect for leakage.
- After completing the air test, vent/release pressure.





Multi- Compartment Tank(s) Testing

Each individual compartment, delineated by a common bulkhead, have a dedicated annular probe rib and annular space. There is no shared communication, probe rib, etc. between each adjacent compartment.

- Each compartment shall be treated as an individual tank and inspected independently.
- Repeat Section 4.4 for all compartments until complete tank has passed the acceptance criteria.

Post Installation Water Test

Each individual compartment, delineated by a common bulkhead, have a dedicated annular probe rib and annular space. There is no shared communication, probe rib, etc. between each adjacent compartment.

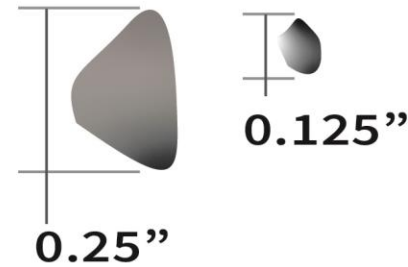
- Each compartment shall be treated as an individual tank and inspected independently.
- Repeat Section 4.4 for all compartments until complete tank has passed the acceptance criteria.

A photograph of a large-scale excavation project. The scene shows a deep, narrow trench with steep, reddish-brown soil walls. A person in dark clothing stands in the center of the trench, providing a sense of scale. To the right, a long red ladder leans against the wall. The ground is covered in a layer of grey gravel or crushed stone. The lighting is dramatic, with strong shadows cast across the trench floor.

Tank Excavation & Clearance

Backfill Requirements

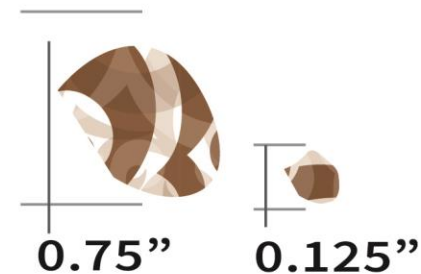
- Always use approved pea gravel or crushed stone.
- Require sieve analysis from your backfill supplier.
- Do not use sand or native soil.
- Alternative materials must be approved in writing by NT Technical Support prior to installation.



Crushed Stone



No More Than 5% Passing #8 Sieve

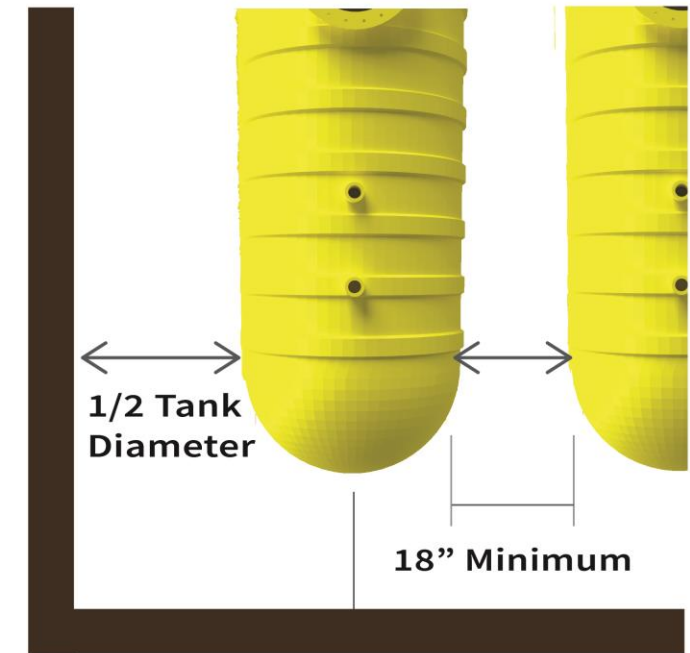
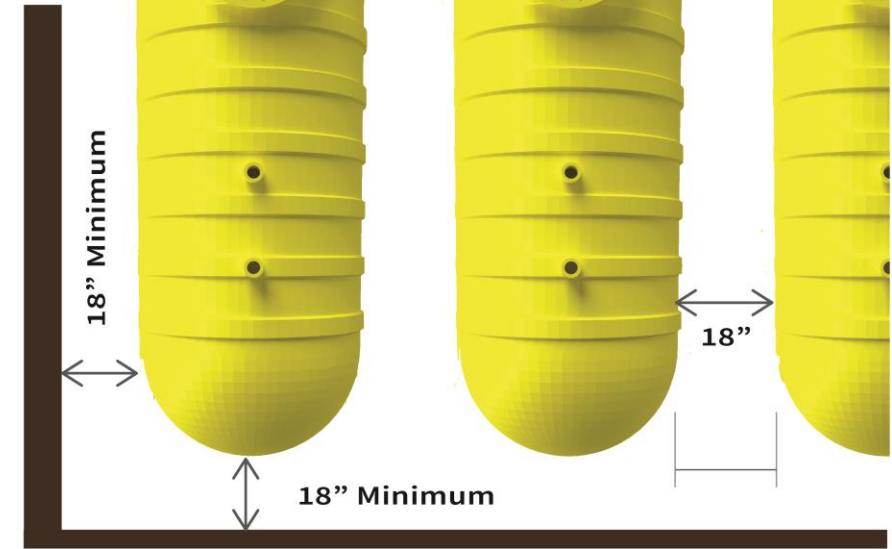


Pea-Gravel



Tank Location & Spacing

- It is recommended that the tank owner seeks the advice of a local foundation professional engineer to determine the proper location of a tank excavation near any existing buildings or structures.
- Unstable soil conditions require that the tank(s) be spaced a minimum of $\frac{1}{2}$ of the tank diameter between the excavation wall and the tank sides and endcaps.
- Stable soil conditions require spacing of 18" between the excavation wall and the tank sides and endcaps.
- If two tanks are installed in the same hole, allow for 18" spacing between tanks. If deadmen are used, space the tanks twice the width of the deadmen.



Unstable Excavation Examples

- Any soil that is naturally unstable
- Bog
- Peat Muck
- Quicksand
- Flowing Water
- Landfill
- Swamp
- Soft or highly Expansive Clay
- Underground Stream



Geotextile Fabric

To preserve the integrity of backfill material, it is recommended to utilize geotextile fabric when installing tanks. This is a particularly important step for:

- Areas with a high-water table or fluctuating ground water conditions.
- Areas with unstable native.
- Soil with less than 250 [lbs/ft²] cohesion or ultimate bearing capacity of less than 500 [lbs/ft²]. When the split backfill method is being used, a layer of geotextile fabric must be installed between the primary and secondary backfill.





Burial Depth & Cover

Appendix A (Anchor Charts)

Reference Appendix A (Anchor Charts) to verify the minimum depths for the following three common methods of anchoring tanks:

- Deadmen Anchors
- Concrete Anchor Pad
- Overburden
(No mechanical Anchoring)



Tank Anchor Hardware

NOTICE – METAL HARDWARE SHOULD NEVER BE IN DIRECT CONTACT WITH ANY PORTION OF THE TANK. TANK DAMAGE MAY OCCUR.

- Use only correct length anchor straps provided by NTI. Anchor points must be aligned with anchor ribs on the tank +/- 1".
- Do not use straps between ribs.

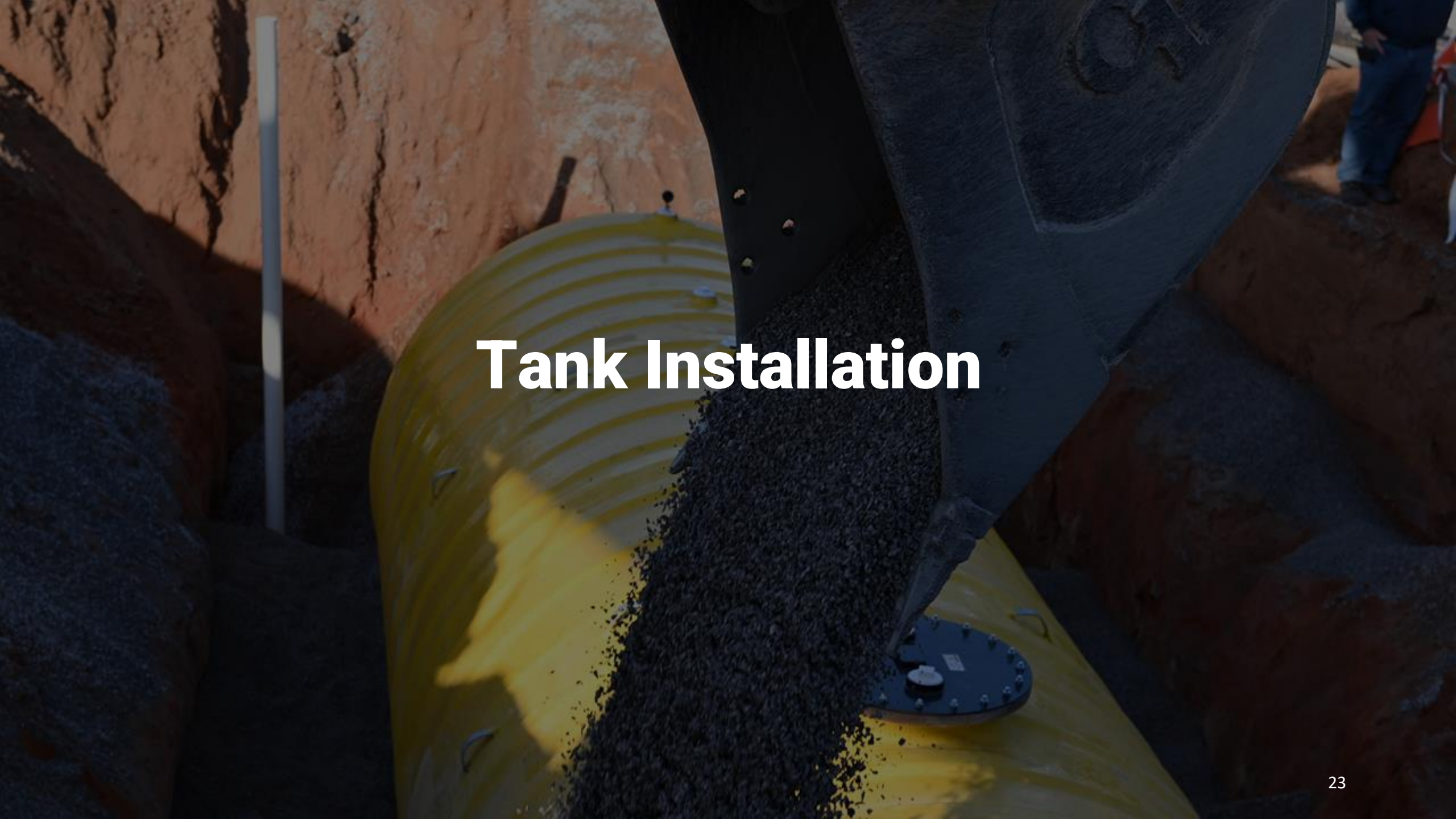


- ✓ For deadmen anchors, position each anchor on the inside edge of the tank shadow.
- ✓ For bottom anchor pad, position the anchor points 9" from tank shadow,

Ballasting

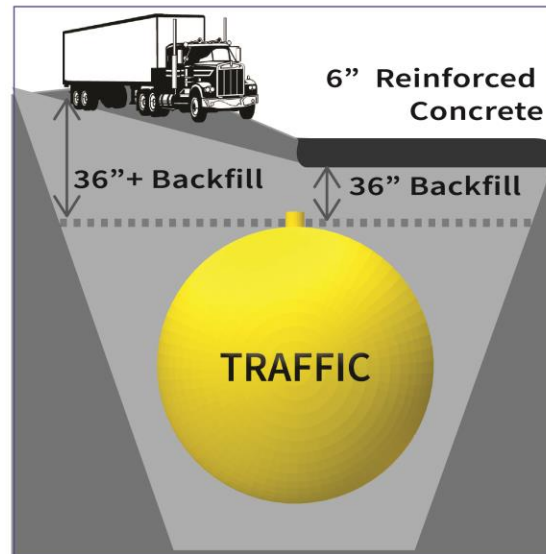
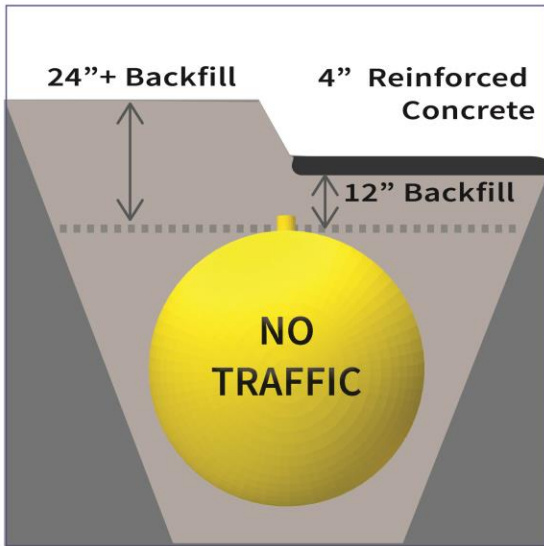
Each individual compartment, delineated by a common bulkhead, have a dedicated annular probe rib and annular space. There is no shared communication, probe rib, etc. between each adjacent compartment.

- Each compartment shall be treated as an individual tank and inspected independently.
- Repeat Section 4.4 for all compartments until complete tank has passed the acceptance criteria.



Tank Installation

Traffic vs No Traffic Burial

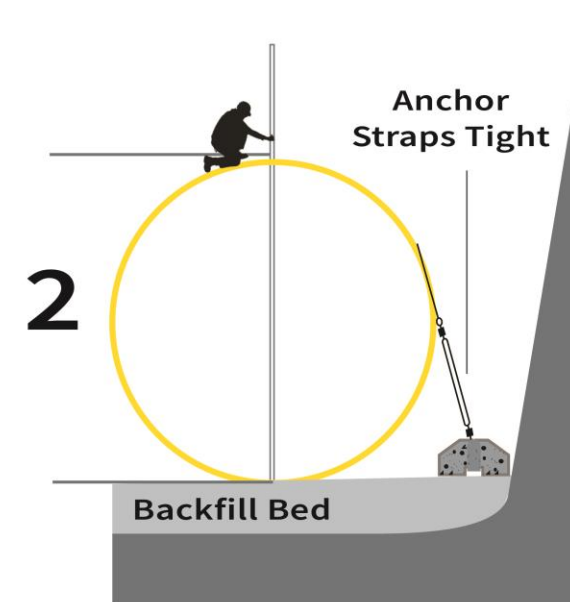
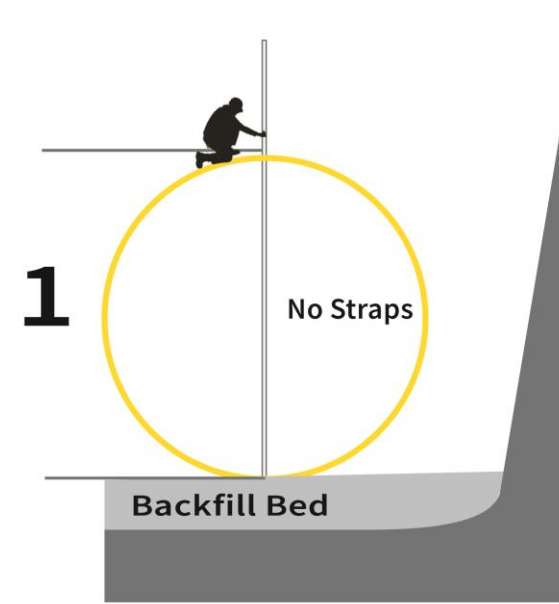


Tank Vertical Diameter Measurements Pt1

Over-Deflection of the tank may result in damage to the tank. Vertical diameter measurements are taken to determine the tank's deflection. The maximum tolerances are as follows:

- 8' tank – 1.25"
- 10' tank – 1.5"

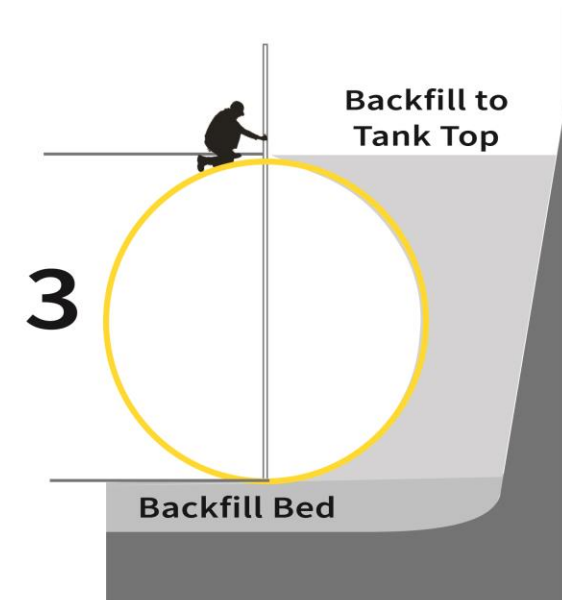
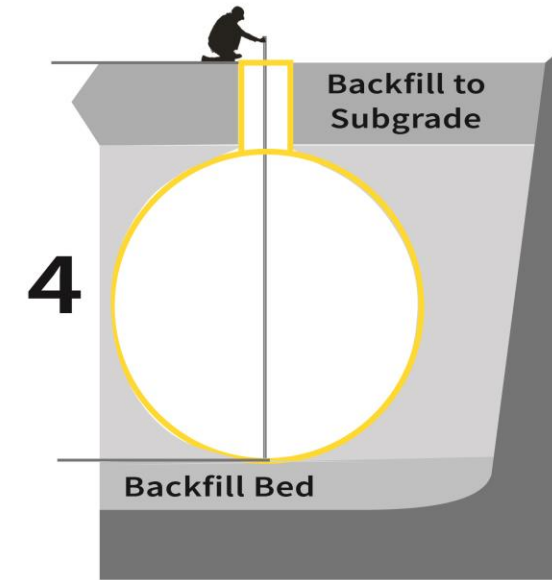
If at any point the deflection measurements exceed the tolerance, this indicates an improper installation. Stop the installation, and contact Nationwide Technical Support when taking corrective action is needed.



Tank Vertical Diameter Measurements Pt2

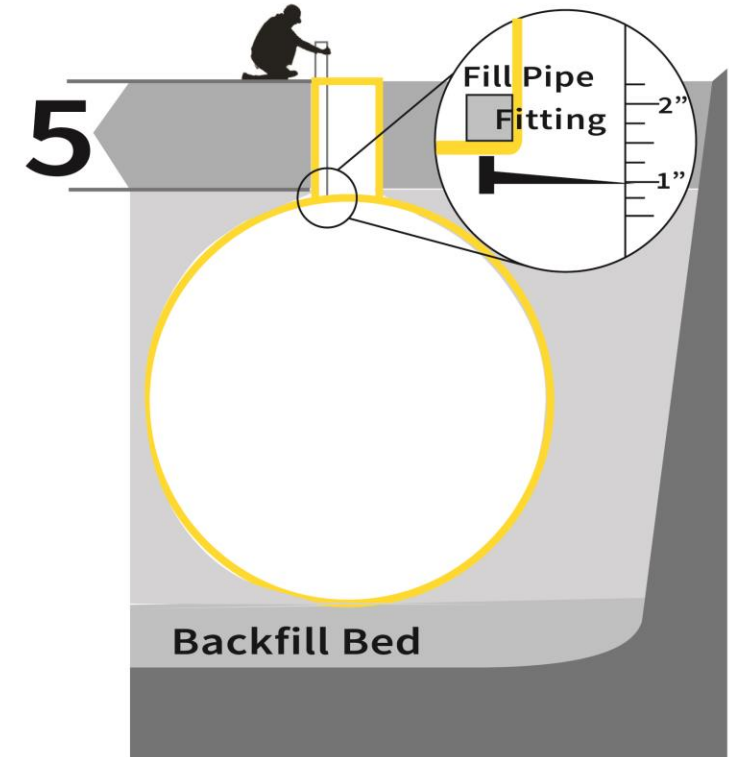
Vertical diameter measurements must be taken and recorded on the Tank Installation Checklist after each of the following steps:

- Take diameter measurement at the centermost location of the tank or compartment.
- First Vertical Diameter Measurement – Placement of tank on backfill bed.
- Second Vertical Diameter Measurement – Anchoring completed (if applicable).
- Third Vertical Diameter Measurement – Backfill to tank top.
- Fourth and Fifth Vertical Diameter Measurements – Backfill to subgrade, before the concrete pad.
- Vertical diameter measurements must be recorded for each tank compartment.



Tank Vertical Diameter Measurements Pt3

- The inner diameter deflection is calculated using the “Fourth Vertical Diameter Measurement” and “Fifth Vertical Diameter Measurement”. Refer to Figure.
- This measurement is taken by driving a nail into the 1” point at a right angle to the gauge stick.
- Lower the gauge stick down the fill pipe far enough to extend below the bottom of the fitting.
- Lift the gauge stick until the nail catches on the lip of the fitting.
- Read the measurement at the top of the fill pipe.
- Subtract 1” to allow for the point where the nail is in the gauge stick.



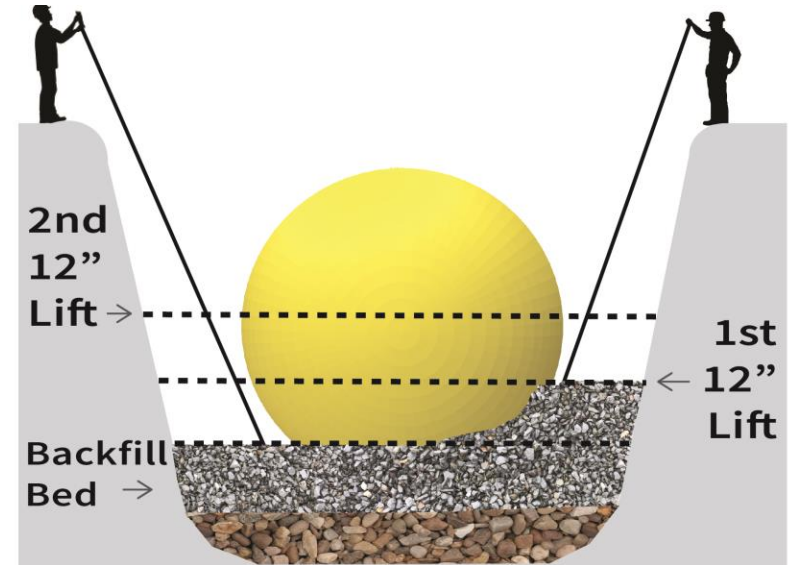
Dry Hole Installation

- Place tank in the excavation with lifting cables attached to lifting lugs provided on the tank. Maintain control of the tank with guide ropes.
- Set tank directly on backfill bed and take the First Vertical Diameter Measurement and record on the Tank Installation Checklist, see **Figure 14**.
- If mechanical anchoring is used, after anchoring is completed, take the Second Vertical Diameter Measurement, see **Figure 14**.
- If this measurement is not equal tolerances listed in 7.2, loosen the anchor straps and re-measure.



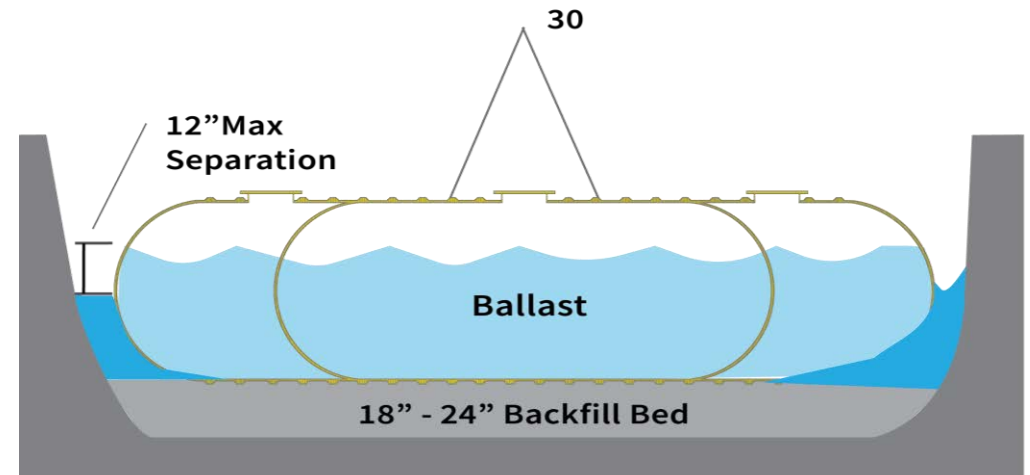
Dry Hole Installation Pt2

- Place the first 12" of approved backfill evenly around the tank. Push the backfill in place by using a non-metal tamping rod that is long enough to reach beneath the tank bottom.
- Work the backfill under the entire length of the tank, dome ends, and ribs eliminating all voids so that the tank is fully supported. Take care to not strike the tank with the probe or tank damage may occur.
- Repeat this process with a second lift of 12" backfill.
- After the second lift of backfill has been worked under the tank, between the 5 – 7 O'clock position, backfill can be brought to top with no additional handwork.



Wet Hole Installation

- Follow all steps in the Dry Hole Installation section while taking caution to keep the water level in the excavation at the lowest level possible by using submersible pumps. Ballast the tank if ground water cannot be lowered.
- Ballast level inside the tank and in all compartments should be equal and not more than 12" above the ground water level outside the tank, see Figure 13.





Additional Information

Internal & External Piping

Internal piping must terminate at least 4" from the Tank bottom to allow for Tank deflection. External piping must be isolated from the concrete pad.

Venting Tanks

Tanks are designed to operate at atmospheric pressure, except for use with a vapor recovery system. The venting system must be designed so that pressure or vacuum at the Tank top will not exceed 1 psig. during normal operation, filling, and emptying.

Installing Containment Sumps, Collars & Risers

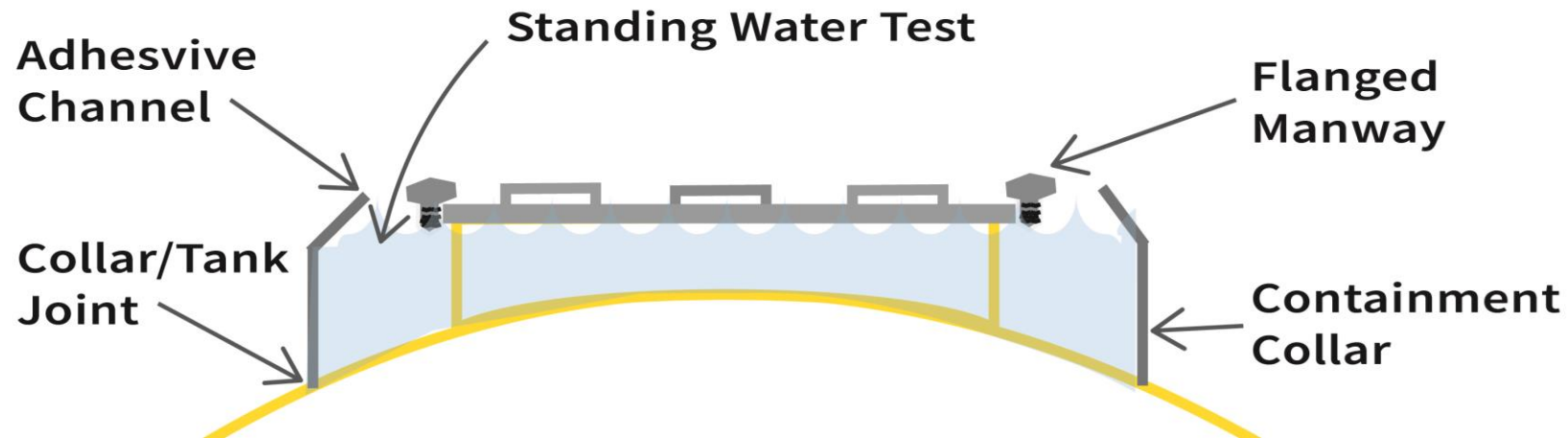
NTI offers sump kits in a variety of models and sizes that are designed for field installation. Instructions for the various models can be found in supplemental materials.

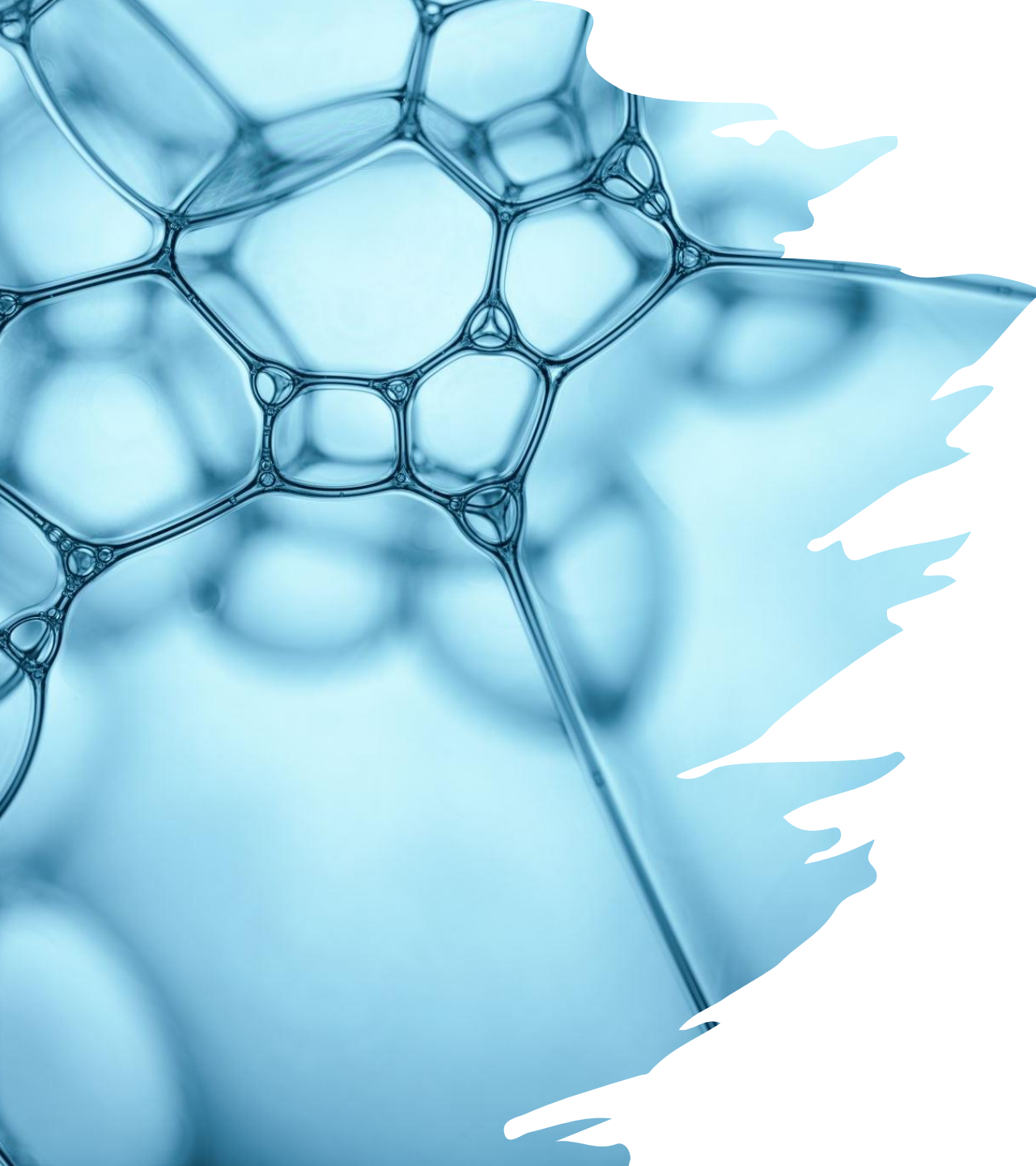


Collar Test Instructions

Before sump assembly, the containment collars must be leak tested.

- ✓ Place and secure measuring stick with 1/16" (0.0626") increments in the sump to measure any changes in the liquid level.
- ✓ Fill collar with water to the highest point and wait 20 minutes.
- ✓ Record the liquid level.
- ✓ Wait a minimum of one hour.
- ✓ Re-measure the liquid level. A liquid change of more than 1/8" (0.125") indicates a possible leak.
- ✓ Visually inspect the collar connection to the Tank wall and adhesive channel joint for leaks.
- ✓ Test liquids must be disposed of properly.





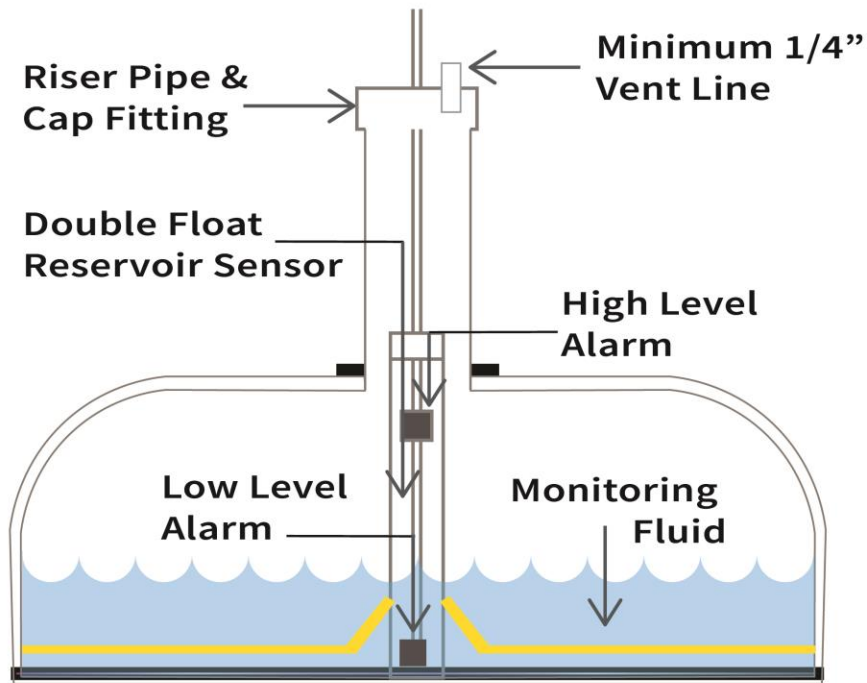
Interstitial Space Monitoring

MONITORING TANKS WITH A DRY INTERSTITIAL

Always consult with the monitoring equipment manufacturer regarding proper sensor installation, servicing and use instructions. Consult with all applicable governmental authorities regarding required inspections and other sensor-related requirements.

- ✓ The maximum vacuum for continuous monitoring is -1 psig. Utilize an approved vacuum monitoring system with a vacuum make-up pump.
- ✓ The maximum pressure for continuous monitoring is +1 psig. Utilize an approved pressure monitoring system with a pressure make-up pump. Ensure the system is designed to prevent pressure from exceeding +1 psig or Tank damage may occur.

Interstitial Space Monitoring Pt. 2



HYDROSTATIC MONITORING

Tanks with hydrostatic monitoring systems normally arrive with monitoring fluid installed in the annular space and some fluid in the reservoir.

- ✓ After installation, the fluid level in the reservoir must be filled to the proper level.
- ✓ Additional monitoring fluid is supplied with the Tank for this purpose.
- ✓ Vent the annular space with a minimum 1/4" hole at the riser top.
- ✓ When installing a double float sensor, the bottom of the sensor must be in contact with the Tank top.
- ✓ If a Tank has a reservoir installed, and arrives without monitoring fluid pre-installed, the annular space can be filled with monitoring fluid after the Tank has been placed in the excavation and backfilled to the Tank top.





UNDERGROUND STORAGE TANK

Tank Inspection, Handling, Installation and Operation Guidelines

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1.0 INTRODUCTION

Before beginning the tank installation process, this Underground Storage Tank Installation + Handling Manual ("Installation Manual"), and supplemental materials, must be reviewed. It is the responsibility of the installing contractor, owner, and operator to understand and follow all requirements herein. Proper inspection, installation, handling and operation, in compliance with all provisions of this Installation Manual is required under the Nationwide Tanks, Inc. ("NTI") Underground Fuel Storage Tank Limited Warranty ("Limited Warranty") and to assure long-term performance.

This Installation Manual provides the minimum requirements for the installation of an NTI fiberglass underground storage tank ("Tank"). The owner's engineer may exceed these minimum requirements if desired and will be responsible for the final design. Standard industry practices applicable to tank installations and operations must be followed during installation.

In addition, all work involving Tanks must comply with all applicable federal, state and local laws, codes, rules, regulations, and standards of appropriate governing agencies and authorities, including without limitation:

- National Fire Protection Association standards (for example, NFPA 30, 30A and 31)
 - Industry standard practices (for example, PEI RP100, API RP1615)
 - EPA reference materials (for example, "Doing It Right"); and
 - OSHA and all applicable federal, state, and local construction, safety, and environmental regulations.
- ▼ For more information, contact the appropriate governmental storage-tank authorities such as building or fire departments, and environmental agencies.
- ▼ Any variances from the installation instructions in this Installation Manual must be approved in writing by NTI prior to the Tank installation.

The presence of an NTI representative does not relieve the installing contractor of sole responsibility to follow instructions and complete a proper installation.

1.1 BEFORE YOU BEGIN

- ✓ Read, understand, and follow all instructions in this Installation Manual and all applicable law, codes, rules and regulations.
- ✓ Review and prepare to complete the Tank Installation Checklist.
- ✓ Contact local authorities and review applicable building codes, underground utilities, and any mandated testing and inspection requirements.
- ✓ Contact NTI for any installation questions, alternate installation methods, or information regarding the addition of fittings, manways, or Tank repair.

A federal law (the Solid Waste Disposal Act, as amended), requires owners of certain underground storage tanks to notify implementing agencies of the existence of their tanks. Notifications must be made within 30 days of bringing the tank into use. Consult EPA's regulation at 40 CFR 280.22 to determine if you are affected by this law.

1.2 SAFETY

Keep this Installation Manual available at the installation site as a reference to safety procedures as needed. The following safety definitions apply in this Installation Manual:

- ▲ **WARNING** INDICATES AS POTENTIALLY HAZARDOUS SITUATION, WHICH, IF NOT AVOIDED, COULD RESULT IN PROPERTY DAMAGE, SERIOUS INJURY OR DEATH.

- **NOTICE** INDICATES INFORMATION CONSIDERED IMPORTANT BUT NOT HAZARD RELATED. FAILURE TO HEED THIS NOTICE COULD RESULT IN PROPERTY DAMAGE..

1.3 LIMITED WARRANTY

Failure to adhere to these instructions in this Installation Manual and to comply with all applicable laws, codes, rules and regulations will void the Limited Warranty and could result in property damage, serious injury, death or Tank failure.

- ✓ It is the responsibility of the owner and operator to follow all operating guidelines set forth in this Installation Manual.
- ✓ The Tank owner is responsible for retaining the Limited Warranty and Installation Manual. Current NTI documentation is available online at www.nationwidetanks.com.
- ✓ The Tank Installation Checklist must be used for all Tanks during the installation process. Relevant information for each Tank must be recorded, signed, and retained by both the installing contractor and owner.
- ✓ The completed and signed Tank Installation Checklist must be provided to process any Limited Warranty claims, in addition to any correspondence regarding variances from the Installation Manual and records kept in connection with the Tank, including without limitation Tank and/or sensor inspection and maintenance records.



Figure 1: Tank Installation Overview

2.0 TANK HANDLING AND STORAGE

2.1 AVOIDING TANK DAMAGE

It is the responsibility of the installing contractor to properly rig, unload and secure the Tank. Move Tanks using a minimum of four lifting lugs provided with the Tank oriented in the upright position such that Tank is lifted vertically. Ensure the lifting load is evenly distributed. Use spreader bars and equal length slings as required. Do not use guide lugs for lifting.

- ✓ Never roll, drag, or drop the Tank.
- ✓ Do not allow Tank to swing or rotate during unloading.
- ✓ Do not wrap a chain or cable around the Tank at any time.
- ✓ Do not allow metal hardware to contact the Tank.
- ✓ Use appropriate guide ropes to guide the Tank as needed.

- ▲ **WARNING – NEVER RELEASE STRAPS SECURING THE TANK TO THE TRUCK UNTIL PROPER LIFTING EQUIPMENT IS SECURED TO THE TANK’S LIFTING LUGS AND ALL PERSONNEL ARE IN A SAFE LOCATION. FAILURE TO DO SO CAN RESULT IN PROPERTY DAMAGE, SERIOUS INJURY, OR DEATH.**
- ▲ **WARNING – ALWAYS SECURE THE TANK PROPERLY BEFORE MOVING, ROTATING OR LIFTING. FAILURE TO DO SO CAN RESULT IN PROPERTY DAMAGE, SERIOUS INJURY, OR DEATH.**

2.2 PROPER UNLOADING, LIFTING & GUIDING TANKS

Prior to unloading, installing, or relocating the Tank, NTI requires the Tank owner and/or owner’s agent to perform all of the following:

- ✓ Inspect the outside of the Tank surface to ensure the Tank was not damaged during handling or delivery. Visible damage, such as cracks or extensive scrapes must be reported;
- ✓ Sign all shipping papers and note any damage observed. Any visual damage observed must be noted in these papers and signed;
- ✓ Ensure all Tank lifting equipment is rated to handle the load; and
- ✓ Ensure the area selected to set the Tank is leveled, solid, and cleared of any large rocks and debris.

Ensure all items, including tools, are removed from the trailer bed to prevent any damage to the Tank prior to unloading the Tank.
Choose suitable lifting slings for the Tank being installed. The angle of the lifting sling should never exceed 30° degrees from vertical.

- ▲ **WARNING - ALWAYS SECURE THE TANK BEFORE MOVING, ROTATING OR LIFTING IT. THIS IS COMMONLY DONE BY CONNECTING A CRANE OR BACKHOE TO THE LIFTING LUGS. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN PROPERTY DAMAGE, SERIOUS INJURY OR DEATH.**

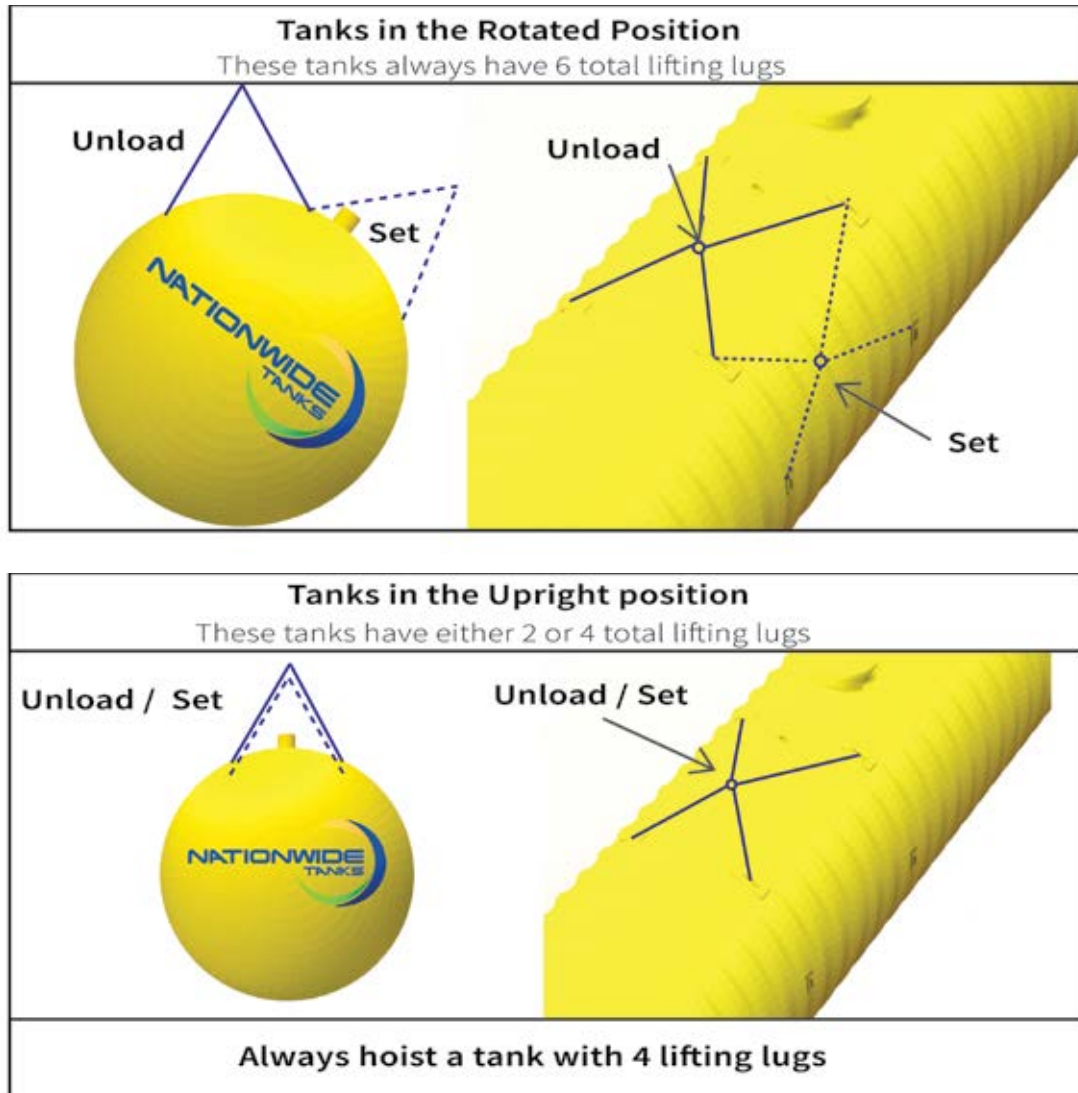


Figure 2: Vertical Hoist Lifting Sling

- **NOTICE – TANKS MUST BE UNLOADED UNDER THE DIRECTION OF A QUALIFIED RIGGER.**
- ▲ **ALWAYS ENSURE LIFTING EQUIPMENT IS RATED TO HANDLE THE LOAD.**

2.3 LIFTING TANK SUMPS, RISERS & DEADMEN

Always visually inspect the sump and all components for shipping damage.

- ✓ Do not roll, drop, or bounce.
- ✓ Set all components on a smooth surface.
- ✓ Secure sump from high winds if necessary.
- ✓ Use only anchor points when lifting and positioning NTI Deadmen.

DEADMEN ANCHORS [18" X 8" PROFILES]	
Lengths [ft]	Weight [lb]
14	1,686
18	2,100
22	2,500

TABLE 1: DEADMEN SIZES AND WEIGHTS

2.4 TANK STORAGE

When temporarily storing the Tank above the ground, locate a smooth, solid, level area to temporarily set the Tank. Clear the area of all protruding rocks, hard objects, trash, and debris. Chock the Tank as required.

Take care to ensure no water enters the Tank collar(s). It could freeze and result in damage to the Tank and/or collar. Cover collars or rotate Tank to prevent water accumulation.

3.0 PLANNING FOR INSTALLATION

3.1 BED AND BACKFILL

The use of approved backfill material is critical to long-term Tank performance. Keep backfill dry and free of ice in freezing conditions. Tanks are to be installed using select rounded stones or crushed stones as primary backfill. Reference Figure 3.

Tanks must be installed using approved backfill.

The supplier of backfill material must provide written certification that the material conforms to ASTM C-33, ASTM D-448, AASHTO M-43, in addition to a sieve analysis. Owner/Installing Contractor must retain certification and analysis with the Tank installation checklist.

Materials not allowed for backfilling include:

- ✓ Sand or Sandstone
- ✓ Crushed Concrete
- ✓ Limestone
- ✓ Seashells

Tanks must be backfilled to grade or subgrade with approved pea gravel or crushed stone. As an alternative, a split backfill method may be used, refer to Section 3.2.

Primary Backfill:

- ✓ Use coarse aggregate (rounded stones or crushed stones) as primary backfill material.
- ✓ Primary backfill material should be a mix of well-graded stones, generally conforming to the 6, 67, 7 and 8 sizes of ASTM's C33.
- ✓ No more than 5% of this material can be small enough to pass through the #8 sieve.



Figure 3: Crushed Stone (Top) & Pea Gravel (Bottom)

- **NOTICE: USING OTHER THAN SPECIFIED BACKFILL MATERIAL COULD CAUSE TANK FAILURE OR COULD RESULT IN DAMAGE TO THE TANK AND/OR SURROUNDING PROPERTY.**

3.2 SPLIT BACKFILL

Tanks must be installed using primary backfill vertically up to at least 75% of the Tank diameter and secondary backfill above the primary backfill, Reference Figure 4 for backfill split details. The use of geotextile is required in-between the primary and secondary backfill material, refer to Figure 4 and Section 5.5.

Secondary Backfill:

- ✓ Secondary backfill must be compact to achieve a minimum of 85% standard proctor density.
- ✓ 100% of secondary backfill material must pass through a 1-inch [25-cm] sieve.
- ✓ Secondary material must be installed in 12-inch [30-cm] to 24-inch [61-cm] lifts compatible with the compaction equipment used.
- ✓ Requirements of the piping, surface slab or roadway used may determine specifications for secondary backfill material and compaction above the filter-fabric layer.
- ✓ Always refer to applicable codes or standards for base course and sub-base course material and compaction requirements.

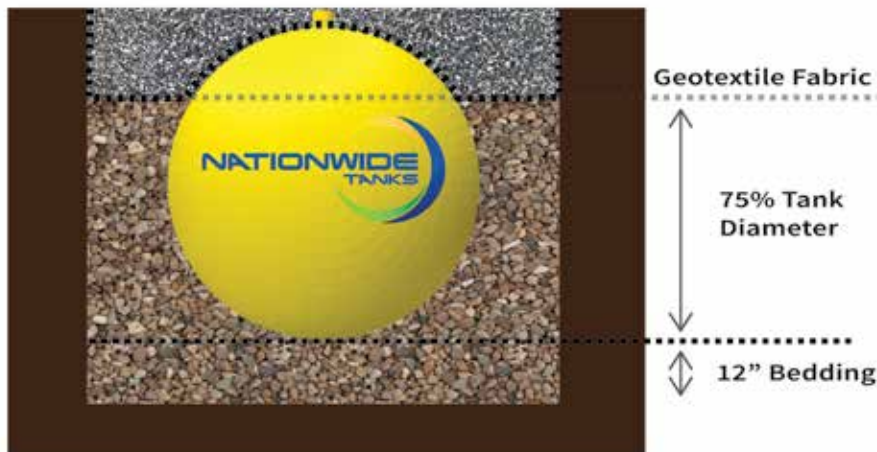


Figure 4: Split Backfill + Geotextile Fabric

4.0 PRE-INSTALLATION INSPECTION

4.1 VISUAL AIR/SOAP TEST

- Single-Wall Tanks air/soap tests must be performed at job site prior to installation to verify the absence of damage
- Some non-petroleum Tanks are not field air-testable and require a post-installation water test. Refer to section 4.8 Post Installation Water Test

▲ **WARNING – DO NOT PRESSURE TANKS OVER 5PSIG (35KPA). TANK OR OTHER PROPERTY DAMAGE, SERIOUS INJURY OR DEATH CAN RESULT.**

4.2 PREPARING FOR TESTING

- ✓ Replace all fitting plugs with plugs suitable for the product to be stored.
- ✓ Clean factory pipe dope from all plugs and fittings.
- ✓ Apply pipe dope suitable for the product being stored.
- ✓ Re-install and tighten all fitting plugs.
- ✓ Assemble the required number of "Tank Test Manifolds" Reference Figure 5, one per compartment
- ✓ Use contractor fabricated "Tank test Manifold(s)"
 - ✓ Gauges must have a maximum full-scale reading of 15 [psig] with 1/2 [psig] or smaller increments
 - ✓ Pressure-relief device must be sized and set to prevent the Tank from being pressurized in excess of the maximum allowed test pressure of:
 - ✓ 5 [psig] for double-wall Tanks, interstice only
 - ✓ 1 [psig] for single-wall Tanks, main compartment

4.3 TANK TEST MANIFOLDS EXAMPLE

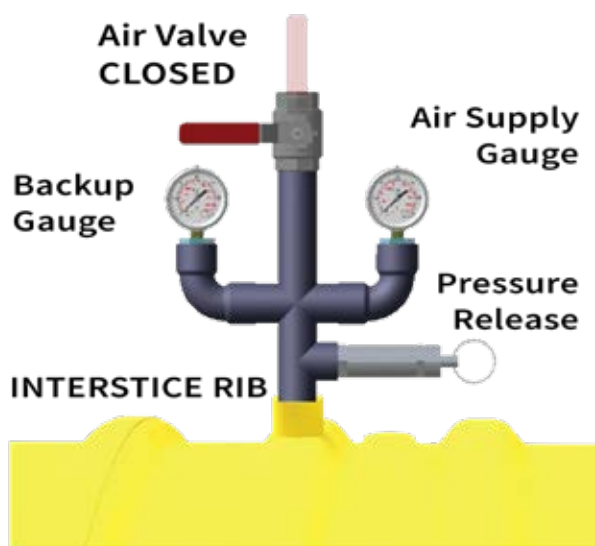


Figure 5: Contractor Fabricated Interstice Test Manifold

4.4 TESTING SINGLE WALL TANK(S)

- ▼ Comply with Requirements Set in Section 4.0
- ▼ Connect "Tank Test Manifold" to a Tank threaded coupling
- ▼ Connect the pressure source to the "Tank Test Manifold"
- ▼ Pressurize Tank to 1 [psig]
- ▼ Close the air supply valve (see Figure 5)
- ▼ Remove air supply
- ▼ Monitor the pressure reading for 30 minutes for any loss in pressure from the initial reading
- ▼ While under pressure, cover Tank outer surface, including fittings and manways, with soap solution and inspect for leakage
- ▼ After completing the air test, vent/release pressure

4.5 TESTING DOUBLE WALL TANK(S) SHIPPED UNDER VACUUM

For all double wall Tanks, there is no need to apply pressure to the main compartment. The full Tank can be properly inspected through the annular space.

- ✓ NTI Double wall dry annular space Tanks ship from the factory with the annular space under vacuum. The vacuum serves to confirm the integrity of the primary and secondary walls prior to and during shipment and during handling and offloading. This option may expedite Tank installation by minimizing testing procedures.
- ✓ Vacuum monitored Tanks must be under minimum vacuum for at-least 7-days. If this requirement is not met, a soap and water air pressure leak test is required. The date the vacuum was applied to the Tank is located on or near the vacuum gauge.
- ✓ Upon arrival of Tank vacuum reading and date must be recorded on the inspection checklist when the Tank arrives or is off-loaded.
 - o A Tank shipped under vacuum can be immediately installed without additional testing if both of the following conditions are met:

- The vacuum date precedes the Tank installation by at least 7-days; and
- The vacuum gauge reads a minimum of 10 inHg or -5 [psig]
- ✓ For Tanks not meeting the requirements above, with any dry annular space configurations, remove the manufacturer's supplied "Annular Space Gauge and Valve" and do all of the following:
 - o Release Vacuum Pressure;
 - o Install contractor fabricated interstice test manifold; refer to Section 4.3;
 - o Slowly pressurize the annular space to 5 [psig];
 - o Soap and visually inspect tank exterior; and
 - o Monitor the pressure reading for 60 minutes for any loss in pressure from the initial reading.
 - o While under pressure, cover the Tank outer surface, including fittings and manways, with soap solution and inspect for leakage.
 - o After completing the air test, vent/release pressure.

- **NOTICE – INTERSTICE WILL PRESSURIZE QUICKLY BUT IS NOT HAZARD RELATED; HOWEVER, FAILURE TO SLOWLY BLEED IN PRESSURE AND MONITOR WILL RESULT IN TANK DAMAGE.**
- ▲ **WARNING – DO NOT STAND ON OR NEAR ENDCAPS, MANWAYS, OR TANK FITTINGS WHILE PRESSURIZING TANKS. DO NOT LIFT OR HOIST TANKS UNDER PRESSURE. FAILURE TO HEED THIS WARNING CAN RESULT IN PROPERTY DAMAGE, SERIOUS INJURY OR DEATH.**
- ▲ **WARNING – DO NOT CONDUCT PRE-INSTALLATION TESTING WHILE THE TANK IS ON A TRAILER. FAILURE TO HEED THIS WARNING COULD RESULT IN PROPERTY DAMAGE, SERIOUS INJURY OR DEATH.**

- ✓ Prepare Soap and Solution
 - o For Warm Weather:
 - Five gallons of water
 - Eight ounces of dish washing detergent.
 - o For Cold Weather:
 - Four gallons of water
 - Eight ounces of dish washing detergent.
 - One gallon of windshield washer solution
- ✓ Backfill to the top of the Tank
 - o Inspect vacuum gauge and verify the annular still reads a minimum of 10 inHg or -5 [psig]
 - o In the unlikely event the annular space lost vacuum integrity during installation, discontinue the final installation steps and immediately call NTI.
- ✓ Release vacuum on the annular space and remove the gauge and piping components.
- ✓ If the vacuum level is ever less than 10 inHg (-5 psig), immediately call NTI .

4.6 MULTI-COMPARTMENT TANK(S) WITH COMMON DOME

Each individual compartment, delineated by a common bulkhead, has a dedicated annular probe rib and annular space. There is no shared communication, probe rib, etc. between each adjacent compartment

- ✓ Each compartment must be treated as an individual tank and inspected independently per Section 4.5
- ✓ Repeat the steps in Section 4.0, for the appropriate Tank type and for all compartments until the complete Tank has passed all of the acceptance criteria.

4.7 PERFORMING VISUAL CHECK ON A TANK WITH A WET INTERSTITIAL SPACE

- ▲ **WARNING - NEVER PRESSURIZE A WET INTERSTITIAL SPACE. FAILURE TO HEED THIS WARNING COULD RESULT IN PROPERTY DAMAGE, SERIOUS INJURY OR DEATH.**

Visually check both the interior and exterior of the Tank for monitoring fluid. The monitoring fluid is dyed to distinguish between moisture and brine fluid.

- ✓ Visually check the interior of the Tank.
- ✓ Inspect each compartment for multicompartment Tank.
- ✓ Visually check the exterior of the Tank.
- ✓ Check the exterior of each compartment of a multicompartment Tank, including the Tank bottom.
- ✓ If monitoring fluid is found, wipe the Tank dry and verify that the monitoring fluid does not reappear.

4.8 POST INSTALLATION WATER TEST

● **NOTE: THESE INSTRUCTIONS ARE FOR TANKS THAT CANNOT BE AIR TESTED.**

- ✓ Tanks may only be water tested if the backfill is at the Tank top, refer to Figure 15 (Left) in Section 7.
- ✓ Verify the Tank penetrations are exposed and temporarily remove backfill if required.
- ✓ Plug, cap and seal all fittings except for the manway and access collar.
- ✓ Completely fill the Tank with water.
- ✓ Continue filling the Tank until the access collar has a minimum of 3" of water.
- ✓ Wait at least 30 minutes and if the water level has not dropped more than $\frac{1}{4}$ ", the Tank is considered acceptable and leak free.
- ✓ If the Tank level drops more than $\frac{1}{4}$ ", ensure that the inlet and outlet pipe caps, plugs and collars are not leaking, then refill and retest.
- ✓ After the Tank is proven to be watertight, remove the water in the Tank to acceptable levels.

5.0 EXCAVATION & TANK CLEARANCE

5.1 TANK SPACING GENERAL

Always provide sufficient clearance to allow the deadmen to be set outside of the shadow of the tank.

The following are minimum spacings and must be increased as needed to accommodate deadmen or anchor slabs. Always provide sufficient clearance to allow the deadmen to be set outside of the Tank "shadow." Reference Figure 6.



Figure 6: Tank Shadow v. Deadmen Placement

5.2 EXCAVATION & TANK CLEARANCE

NTI recommends that the Tank owner seeks the advice of a local foundation professional engineer to determine the proper location of a tank excavation near any existing buildings or structures.

- ✓ Unstable soil conditions require that the Tank(s) be spaced a minimum of $\frac{1}{2}$ of the Tank diameter between the excavation wall and the Tank sides and endcaps.
- ✓ Stable soil conditions require spacing of 18" between the excavation wall and the Tank sides and endcaps.
- ✓ If two Tanks are installed in the same hole, allow for 24" spacing between Tanks. If deadmen are used, space the Tanks twice the width of the deadmen.

The location of a Tank can be affected by the location of nearby structures. When selecting a Tank site, care must be taken to avoid undermining the foundations of new or existing buildings or structures.

- ✓ Ensure that downward forces from loads carried by the foundations and supports of nearby structures (constructed before or after tank installation) are not transmitted to the tanks.

Ensure that the Tank is not located within the load distribution of any adjacent slabs or foundations using 45° as the angle of the projected loads. The Tank must not fall within the "shadow" of the 45-degree angle drawn downward from the corner(s) of the footing or foundation that is closest to the Tank. Reference Figure 7.

- ▲ **WARNING – FOLLOW ALL OSHA REGULATIONS WHEN ENTERING THE TANK EXCAVATION. COLLAPSE OF EXCAVATION WALLS CAN LEAD TO PROPERTY DAMAGE, SERIOUS INJURY OR DEATH.**
- **NOTICE – IMPROPER PLACEMENT OF THE EXCAVATION MAY RESULT IN PROPERTY DAMAGE AND/OR DAMAGE TO THE TANK.**

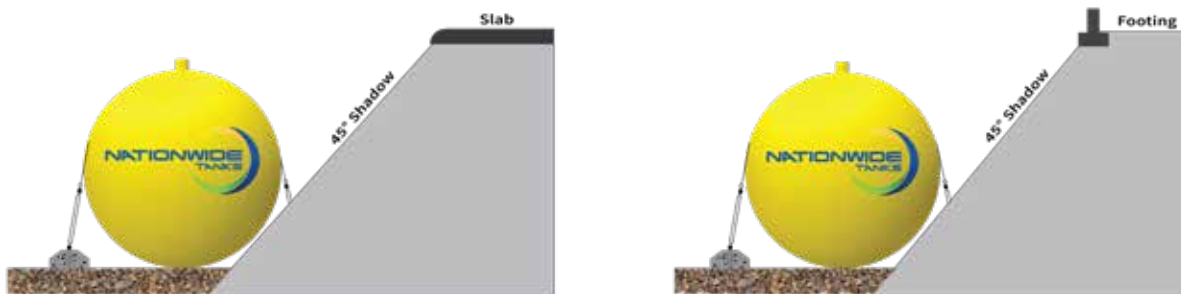


Figure 7: Tank Location - Nearby Structure

5.3 STABLE EXCAVATIONS

When your excavation is stable, and soil is native/undisturbed; utilize the minimum spacing between the sidewall or endcap of the Tank and the side of the excavation must be 18 inches.

5.3.1 INSTALLING TWO OR MORE TANKS - SAME LOCATION

- ✓ Space between Tanks placed end to end must follow the minimum spacing value of 18 inches.

- ✓ Tank measurements must include Tank sidewalls from the outside diameter of the Tank ribs.
- ✓ Allow for at least 18 inches between the Tanks.

5.3.2 INSTALLING TWO OR MORE TANKS WITH DEADMAN - SAME LOCATION

- ✓ Space between Tanks must be equal to or greater than two times the width of the deadman or deadmen required between the Tanks. Reference Figure 8.
- ✓ Spacing between Tanks placed end to end must follow the minimum spacing value of 18 inches.

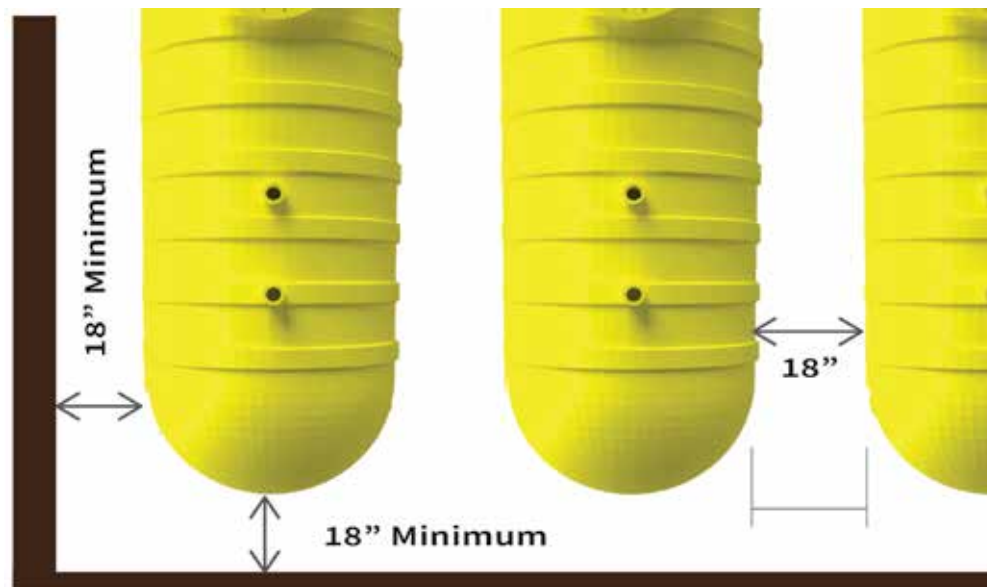


Figure 8: Installation of Two or More Tanks

5.4 UNSTABLE EXCAVATIONS

NTI recommends that the Tank owner consult a professional engineer if the undisturbed soil is soft or inherently unstable. A professional engineer can provide additional recommendations, including when a reinforced pad is needed under the Tank.

- ✓ When a pad is used, the pad should extend to the excavation walls.
 - ✓ Unstable excavations require geotextile fabric. Reference Section 5.5.
 - ✓ It is recommended that the Tank owner seek the advice of a local foundation professional engineer if unstable soil conditions are present. Stabilizing materials may be required as a foundation over the backfill bedding.
- **NOTICE – IN CERTAIN EXCAVATIONS WITH UNSTABLE SOIL THE EXCAVATION MAY BE CLASSIFIED AS STABLE IF PROPER SHORING IS PERMANENTLY IN PLACE. THE TANK OWNER SHOULD HAVE A QUALIFIED ENGINEER CERTIFY THAT THE EXCAVATION WOULD REMAIN STABLE FOR THE EXPECTED LIFE OF THE TANK.**

5.4.1 TANK EXCAVATION

Tank excavation requires a minimum space equal to half the diameter of the Tank between the excavation wall and both the side and the endcap of the Tank to enhance lateral resistance (Reference Figure 9), and one of the following criteria must be met:

- ✓ Soil must be cohesive soil - less than 750 lbs./sq. ft. [35.9 kPa] as calculated from an unconfined compression test;

OR

- ✓ Soil has an ultimate bearing capacity of less than 3,500 lbs./sq. ft. [167.6 kPa].

Unstable Excavation Examples:

- ✓ Any soil is naturally unstable
- ✓ Bog
- ✓ Peat
- ✓ Muck
- ✓ Quicksand
- ✓ Flowing Water
- ✓ Landfill
- ✓ Swamp
- ✓ Soft or highly Expansive Clay
- ✓ Underground Stream

- ▼ Spacing between each adjacent tank will have a minimum value of 18", refer to Figure 9.

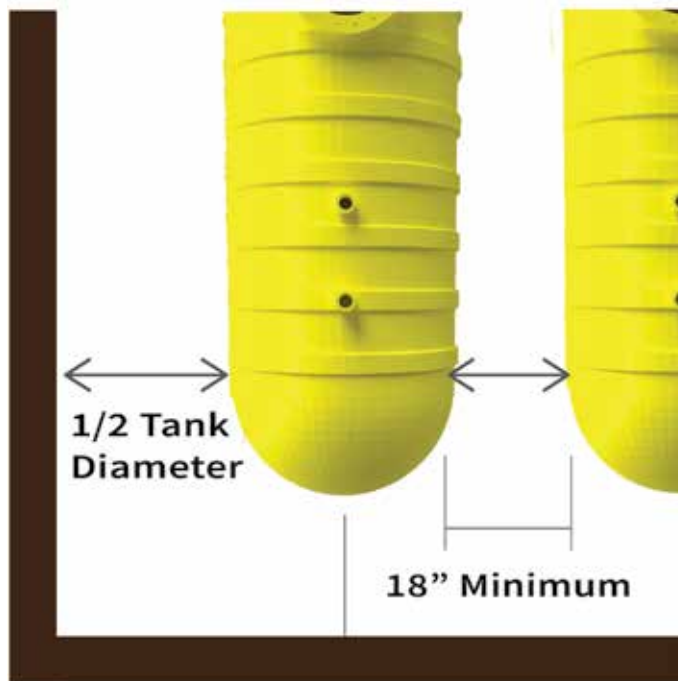


Figure 9: Unstable Soil Excavation

5.5 GEOTEXTILE FABRIC

To preserve the integrity of backfill material, NTI recommends utilizing geotextile fabric when installing tanks. This is a particularly

important step for:

- ▼ Areas with a high-water table or fluctuating ground water conditions
- ▼ Areas with unstable native soil (soft or highly expansive clay, silt, quicksand, peat, landfill, or underground stream present)
- ▼ Soil with less than 250 [lbs/ft²] cohesion or ultimate bearing capacity of less than 500 [lbs/ft²]

When the split backfill, method is being used, a layer of geotextile fabric must be installed between the primary and secondary backfill.

Non-degradable geotextile fabric, either woven or non- woven may be used as defined below:

- ✓ Minimum grab tensile strength of 120lbs (ASTM D-4632)
- ✓ Minimum flow rate of 18 gallons/min/ft² (ASTM D-4491)
- ✓ Minimum permittivity of .28 sec-1 (ASTM D-4491)
- ✓ Maximum apparent opening size of .3mm #50 US sieve (ASTM D-4751)

Geotextile fabric seams must overlap a minimum of 12" and must overlap onto the tank and excavation surface a minimum of 12". Place the backfill on top of the fabric to hold it in place.

6.0 BURIAL DEPTH & COVER

6.1 BURIAL DEPTH & COVER

If you are in the process of installing a Tank and need to consider a deeper burial than the one given for the Tank that was ordered, contact NTI to discuss available options.

Reference Table 2 to determine minimum depths and type of cover requirements. The maximum burial depth for standard Tanks is 7' from the Tank top to grade. Tanks can be designed for a deeper burial depth.

- ✓ Contact an NTI representative to discuss available options. Local codes may have more stringent depth and type of cover requirements. Always check with your local government agency to verify applicable requirements. Government agencies may require additional depths of cover for extra operational safety.
- ✓ If a traffic or surface pad is used, it must extend 12" beyond the Tank in all directions.
- ✓ Tanks with no traffic load must have a minimum of 24" backfill cover, or 12" backfill plus 4" Reinforced Concrete.
- ✓ Tanks with HS20 traffic loads (32,000 lbs./axle) must have a minimum of 36" backfill cover, or 18" backfill plus 6" Reinforced Concrete, Reference Figure 10.

Inadequate depth and/or type of cover will void the Limited Warranty.

It is the responsibility of the Tank owner, in consultation with engineering professionals, to ensure the concrete traffic pad, reinforcement and thickness, including without limitation the depth and type of cover, has been properly designed to meet applicable laws, codes, rules and regulations, along with the specifications herein.

Depth and Type of Cover Minimum Requirements for Fuel Tanks	
NON-TRAFFIC OPTIONS	TRAFFIC OPTIONS
24" backfill	36" backfill
12" backfill + 4" reinforced concrete	18" backfill + 6" reinforced concrete
12" backfill + 6" asphalt	18" backfill + 8" asphalt

TABLE 2: MINIMUM DEPTH AND TYPE OF COVER REQUIREMENTS

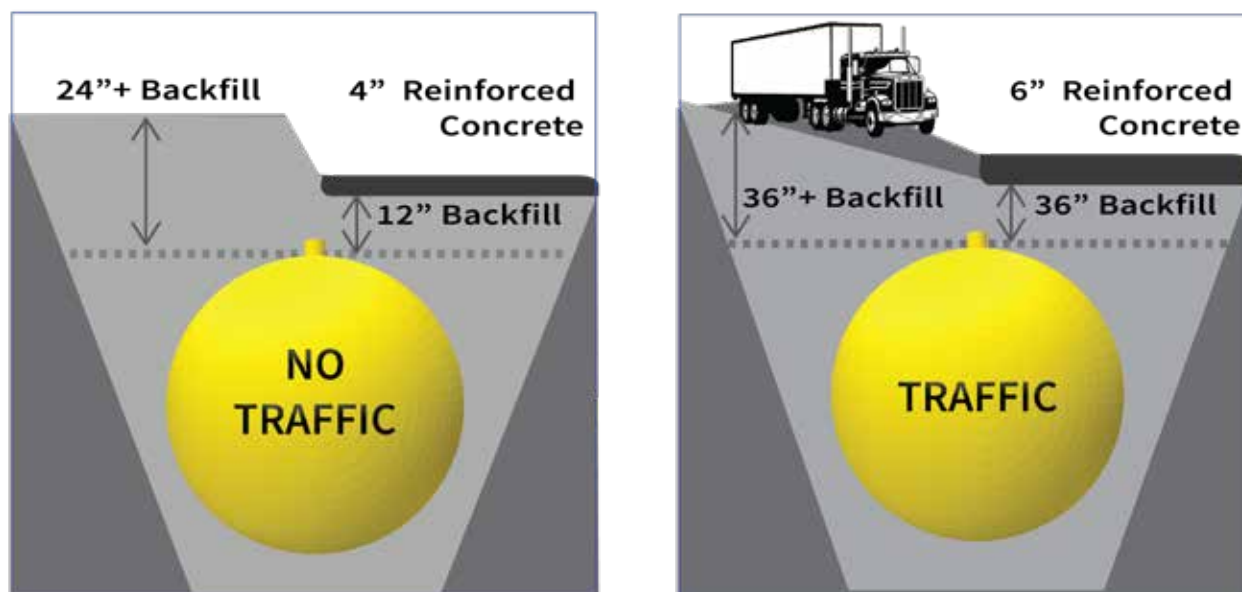


Figure 10: Minimum Burial Depth/Type of Cover Non-Traffic (Left) Traffic Rated (Right)

6.2 GENERAL REQUIREMENTS

- **NOTICE – THE INSTALLATION SITE SHOULD BE EVALUATED FOR BUOYANT CONDITIONS, INCLUDING BUT NOT LIMITED TO FLOODING, WATER TABLES AND TRAPPED WATER. FAILURE TO PROVIDE ENOUGH OVERBURDEN AND/OR ANCHORING CAN RESULT IN PROPERTY DAMAGE AND TANK FAILURE.**
- ▼ Reference Appendix A Anchor Chart to verify the minimum burial depths for the following three common methods of anchoring Tanks:
 - ✓ Deadmen Anchors
 - ✓ Concrete Anchor Pad
 - ✓ Overburden (no mechanical anchoring)

NTI offers an engineered mechanical anchoring system designed for each Tank size. The system includes deadmen anchors, straps, and hardware. It is the Tank owner's or representative's responsibility to determine the appropriate anchoring method to be used.





- ▼ Appropriate anchoring can be achieved with a combination of burial depth, straps, turnbuckles, deadmen anchors and anchor pads. Reference Appendix A for mechanical anchoring methods.

● **NOTICE – METAL HARDWARE SHOULD NEVER BE IN DIRECT CONTACT WITH ANY PORTION OF THE TANK. TANK DAMAGE MAY OCCUR.**

- ✓ Use only correct length anchor straps provided by NTI. Anchor points must be aligned with the designed anchor ribs within a 1" tolerance. Do not use straps between ribs.
- ✓ For deadmen anchors, position each anchor on the inside edge of the Tank shadow.
- ✓ For a bottom anchor pad, position the anchor points 9" from the Tank shadow.
- ✓ All anchor straps must be uniformly tightened down with turnbuckles or come-a-longs. Ensure straps do not cause Tank deflection.

6.3 ANCHOR POINT LOADS

- ✓ The Tank strap and all hardware should be designed for a minimum working load of 7,500 lbs.
- ✓ The installing contractor is responsible for providing hardware and anchor points of sufficient size and strength.
- ✓ For detailed/specific information regarding hardware and usage, it is recommended you consult the hardware manufacturer or supplier.
- ✓ The installing contractor is ultimately responsible for providing hardware and anchor points that are of sufficient strength and size.

6.4 CONCRETE ANCHOR PAD

To counteract buoyancy, the anchor pad for stable excavations must be a minimum of 8" thick with #6 rebar on 12" centers each way, constructed per current ACI code.

- ▼ The anchor pad must extend a minimum of 18" beyond the Tank shadow for stable excavations. The pad must be at least the same length of the Tank. For unstable excavations, consult with a soil's consultant for proper design specifications. It is mandatory that the anchor pad extend out to the excavation walls in unstable conditions.

Embedded anchor points should be designed for the working load of 7,500 lbf for both 8' and 10' diameter Tanks. When embedding anchor points at the time the pad is fabricated, the following design will meet the minimum required anchor points, refer to Table 3.

Tank Diameter	Minimum Rebar Loop Size	Rebar* Span
8 [ft]	#8	10.5"
10 [ft]	#8	13.5"
* Note: Wider or narrower span will reduce the strength of the anchor points below the required value.		

TABLE 3: MINIMUM REQUIRED ANCHOR POINTS

6.5 BALLASTING

- ▼ A Tank is not adequately protected against flotation until the Tank is fully backfilled and the top slab is in place.
- ✓ Use caution to ensure the Tank does not completely fill during ballasting. Keep the Tank vented to prevent any pressurization of

- the tank when filling.
- ✓ Ensure the ballast will not contaminate the product being stored or clean the tank before product is added to the Tank. This is especially important for diesel exhaust fluid (DEF) Tanks.
- ✓ Dry Hole – Add ballast only after backfilling is placed at least 75% of the way up the Tank.
- ✓ Only under wet-hole conditions should the ballast be added before the backfill is 75% of the way up the Tank. For wet-hole conditions refer to Section 7.4.

7.0 TANK INSTALLATION

▲ **WARNING – DO NOT ENTER THE TANK EXCAVATION UNLESS ALL OSHA REGULATIONS ARE FOLLOWED. COLLAPSING EXCAVATION WALLS CAN CAUSE PROPERTY DAMAGE, SERIOUS INJURY OR DEATH.**

7.1 BEFORE YOU BEGIN/GENERAL

Review all instructions to ensure compliance with all procedures, including without limitation the following:

- ✓ Bed and Backfill
- ✓ Pre-installation testing
- ✓ Excavation size & burial depth
- ✓ Anchoring

7.2 TANK VERTICAL DIAMETER MEASUREMENTS

Over-Deflection of the Tank may result in damage to the Tank.

Vertical diameter measurements are taken to determine the Tank's deflection. The maximum tolerances are as follows:

- ✓ 8' Tank – 1.25"
- ✓ 10' Tank – 1.5"

If at any point the deflection measurements exceed the tolerance, this indicates an improper installation. Stop the installation, and contact NTI Technical Support for corrective action.

Vertical diameter measurements must be taken and recorded on the Tank Installation Checklist after each of the following steps:

- ✓ First Vertical Diameter Measurement – Placement of Tank on backfill bed.
- ✓ Second Vertical Diameter Measurement – Anchoring completed (if applicable).
- ✓ Third Vertical Diameter Measurement – Backfill to Tank top.
- ✓ Fourth and Fifth Vertical Diameter Measurements – Backfill to subgrade, before the concrete pad.
- ✓ Take diameter measurement at the centermost location of the Tank.
- ✓ Vertical diameter measurements must be recorded for each Tank compartment.

Use a non-metallic gauge stick to take all measurements from the bottom of the tank to the bottom of the fitting that is closest to the center of the Tank or compartment.

- ✓ Place the backfill material evenly on opposite sides of the Tank so that the Tank does not shift.
- ✓ If secondary backfill material is to be used on the perimeter of the installation, it must be placed and compacted at the same time as the primary backfill material
- ✓ During the backfilling process, it is good practice to continue to check Tank deflection.

● **NOTICE – DO NOT BALLAST THE TANK UNTIL THE BACKFILL IS AT LEAST 75% UP THE TANK OR EVEN WITH THE TANK TOP. TANK DAMAGE CAN OCCUR.**

7.3 DRY HOLE INSTALLATION

Reference back to the Geotextile Fabric guide in Section 5.5 to determine if geotextile fabric is required or recommended for the installation.

- ✓ Place the Tank in the excavation with lifting cables attached to the lifting lugs provided on the tank. Maintain control of the Tank with guide ropes.
- ✓ Set the Tank directly on the backfill bed and take the First Vertical Diameter Measurement and record on the Tank Installation Checklist, see Figure 13.
- ✓ If mechanical anchoring is used, after anchoring is completed, take the Second Vertical Diameter Measurement, see Figure 13.
- ✓ If this measurement is greater than the tolerances listed in 7.2, loosen the anchor straps and re-measure.

Place the first 12" of approved backfill evenly around the Tank. Push the backfill in place by using a non-metal tamping rod that is long enough to reach beneath the Tank bottom. Work the backfill under the entire length of the Tank, dome ends, and ribs eliminating all voids so that the Tank is fully supported, refer to Figure 11. Take care to not strike the Tank with the probe or Tank damage may occur.

- ✓ Repeat this process with a second lift of 12" backfill.
- ✓ After the second lift of backfill has been worked under the tank, between the 5 – 7 O'clock position, backfill can be brought to the Tank top with no additional handwork

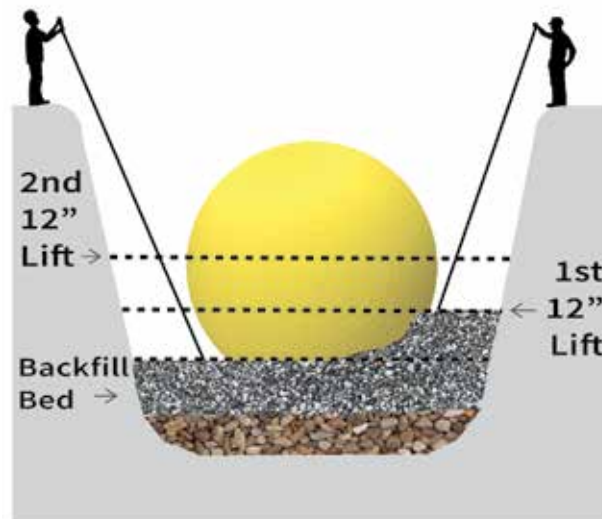


Figure 11: Probing Backfill Under the Tank

7.4 WET HOLE INSTALLATION

Follow all steps in the Dry Hole Installation section while taking caution to keep the water level in the excavation at the lowest level possible by using submersible pumps. Ballast the Tank if ground water cannot be lowered.

- ✓ The ballast level inside the Tank and in all compartments must be equal and not more than 12" above the ground water level outside of the Tank, see Figure 12.

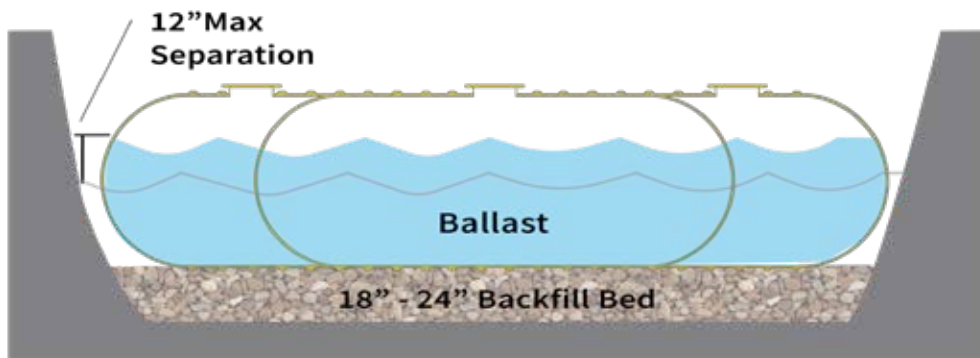


Figure 12: Ballast v. Ground Water Level

7.5 BACKFILL TO SUBGRADE

After the Tank has been placed in the excavation and all testing, backfilling, venting, and piping has been completed, add the remaining backfill to subgrade.

Once the Tank has been backfilled to subgrade, but before placement of the surface pad, take the Fourth Vertical Diameter Measurement and record on the Tank Installation Checklist, refer to Figure 14.

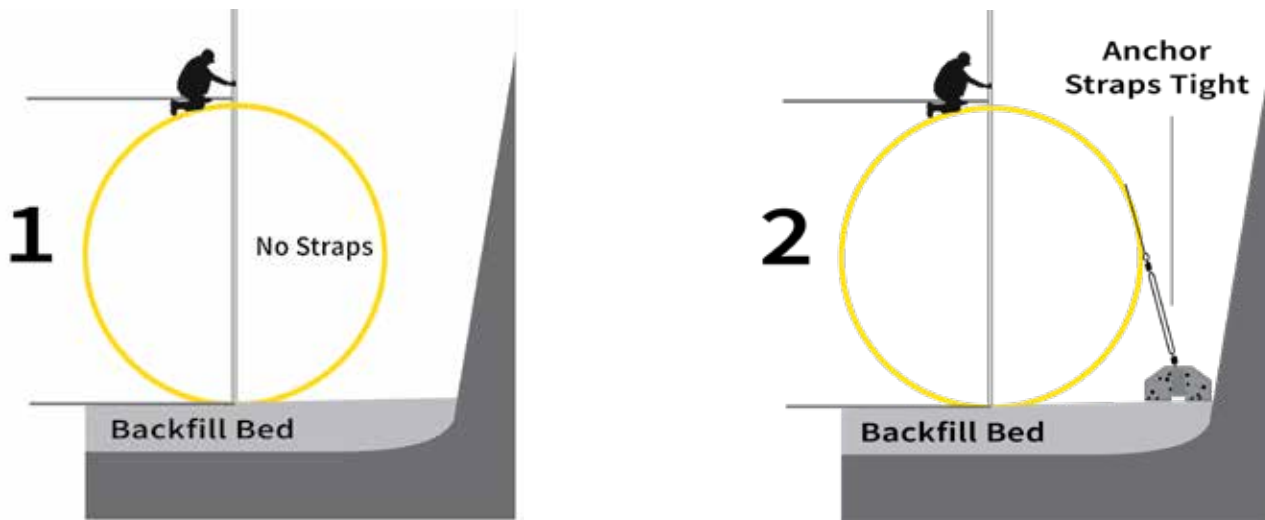


Figure 13: Tank First Measurement (Left) Second Measurement (Right)

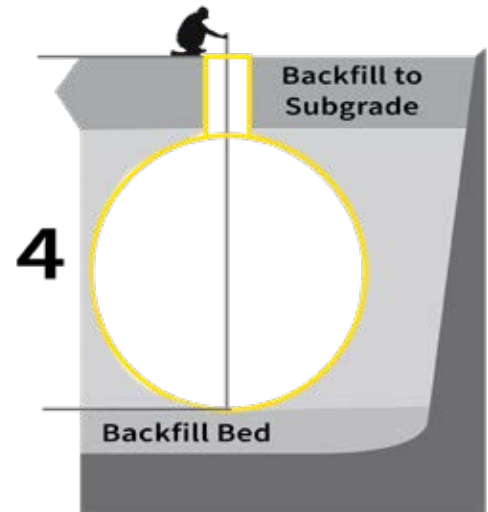
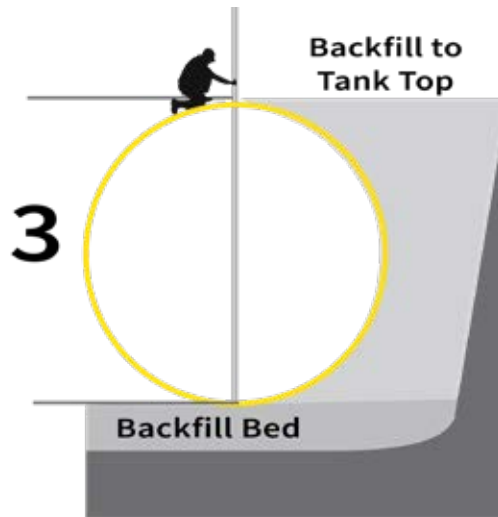


Figure 14: Third (Left) and Forth (Right) Vertical Diameter Measurements

- ✓ The inner diameter deflection is calculated using the “Fourth Vertical Diameter Measurement” and “Fifth Vertical Diameter Measurement” Refer to Figure 15.
- ✓ This measurement is taken by:
 - Driving a nail into the 1” point at a right angle to the gauge stick.
 - Lower the gauge stick down the fill pipe far enough to extend below the bottom of the fitting.
 - Lift the gauge stick until the nail catches on the lip of the fitting.
 - Read the measurement at the top of the fill pipe.
 - Subtract 1” to allow for the point where the nail is in the gauge stick.
 - After recording the final measurement, complete the Vertical Diameter Measurement of the Tank Installation Checklist. Verify that the deflection tolerances have not been exceeded.
- ✓ If the final deflection measurement exceeds the values in Section 7.2 you should stop the installation, prior to pouring the concrete pad, and immediately contact NTI Technical Support for directions.

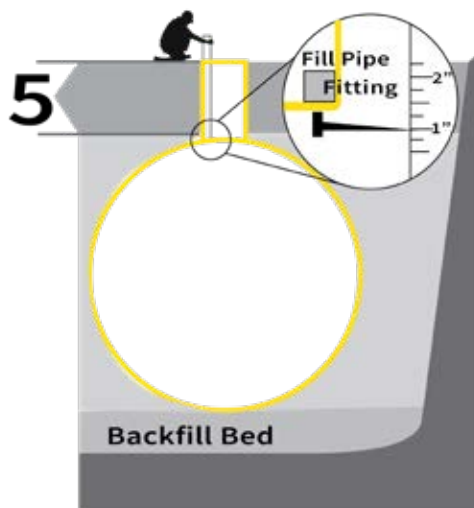


Figure 15: Fifth Vertical Diameter Measurement

8.0 ADDING TANKS AT EXISTING LOCATIONS

Additional tanks can be installed at existing locations. The provisions of this Installation Manual shall apply equally to any such additional Tanks.

8.1 PREFERRED METHOD

Following the procedures outlined in Section 6 of this Installation Manual, install a new Tank in a separate hole at least 36" from the original excavation.

- ✓ Maintain at least 36" at grade of native/undisturbed soil between the existing and new excavation.

8.2 ALTERNATE METHOD FOR DRY HOLE EXCAVATIONS ONLY

In a dry hole excavation, the existing excavation can be enlarged to add additional Tanks.

- ✓ Lower the ballast in existing Tanks to less than 25% capacity.
- ✓ Remove the surface slab.
- ✓ Enlarge the excavation for the new Tanks while leaving as much backfill as possible around the existing tanks.
- ✓ If necessary, install shoring to ensure the existing Tanks do not move and sufficient backfill remains in place.
- ✓ Following the procedures outlined in Section 6 of this Installation Manual, install the new Tanks in the excavation.
- ✓ Follow and complete the Tank Installation Checklist for all new and existing Tanks.

8.3 INTERNAL & EXTERNAL PIPING

- **NOTICE – ALL PIPING USED IN TANK INSTALLATION MUST CONFORM TO ALL APPLICABLE CODES AND STANDARDS.**
- **NOTICE – ALL METAL FITTINGS AND COMPONENTS MUST BE COATED TO PROTECT AGAINST CORROSION.**
- ▼ Internal piping must terminate at least 4" from the Tank bottom to allow for Tank deflection.
- ▼ External piping must be isolated from the concrete pad.
- ▲ **WARNING – ISOLATE THE TANK FROM ALL PIPING WHILE THE EXTERNAL PIPING IS BEING PRESSURE TESTED. EXTERNAL PIPING TEST PRESSURES CAN CAUSE TANK FAILURE AND MAY RESULT IN PROPERTY DAMAGE, SERIOUS INJURY OR DEATH.**
- **NOTICE – ALL CONNECTIONS TO THE TANK MUST BE FLEXIBLE TO ACCOMMODATE MOVEMENT AND PIPING MISALIGNMENT WITH THE TANK. FAILURE TO FOLLOW THIS INSTRUCTION COULD RESULT IN DAMAGE TO THE TANK OR OTHER PROPERTY.**

8.4 VENTING TANKS

Tanks are designed to operate at atmospheric pressure, except for use with a vapor recovery system.

The venting system must be designed so that pressure or vacuum at the Tank top will not exceed 1 psig. during normal operation, filling, and emptying.

- ▲ **WARNING – ALL TANKS AND COMPARTMENTS MUST ALWAYS BE ADEQUATELY VENTED, INCLUDING DURING FILLING AND EMPTYING OF THE TANK, EXCEPT AS DEFINED DURING PRE-INSTALLATION TESTING. FAILURE TO DO SO CAN CAUSE TANK FAILURE, PROPERTY DAMAGE, SERIOUS INJURY OR DEATH.**

8.5 INSTALLING CONTAINMENT SUMPS, COLLARS & RISERS

NTI offers sump kits in a variety of models and sizes that are designed for field installation. Instructions for the various models can be found in supplemental materials.

- ✓ Before beginning installation, consult all applicable laws, codes, rules and regulations to ensure proper monitoring compliance.
- ✓ Conduct a visual inspection of all sump components to ensure no items were damaged during shipping.
- ✓ Check to make sure the sump is the correct length for the intended burial depth.
- ✓ Install the containment sump according to the supplemental instructions.
- ✓ Once the containment sump is installed, backfill to the top and around the outside edge of the containment sump system. Make sure there is no backfill on top of the containment sump.
- ✓ Install a concrete form or barrier to allow a minimum 3" clearance between any load-bearing item and the top of the containment sump.
- ✓ Set a street box that will allow enough clearance around the containment sump opening for proper operation and removal of the watertight cover.
- ✓ Continue with backfill to subgrade.
- ✓ Maintain good drainage of water away from the access opening of the containment sump top when installing the surface pad.

8.6 COLLAR TEST INSTRUCTIONS

- ✓ Before sump assembly, the containment collars must be leak tested.
- ✓ Place and secure measuring stick with 1/16" (0.0626") increments in the sump to measure any changes in the liquid level.
- ✓ Fill collar with water to the highest point and wait 20 minutes..
- ✓ Record the liquid level.
- ✓ Wait a minimum of one hour.
- ✓ Re-measure the liquid level. A liquid change of more than 1/8" (0.125") indicates a possible leak.
- ✓ Visually inspect the collar connection to the Tank wall and adhesive channel joint for leaks.
- ✓ Test liquids must be disposed of properly.

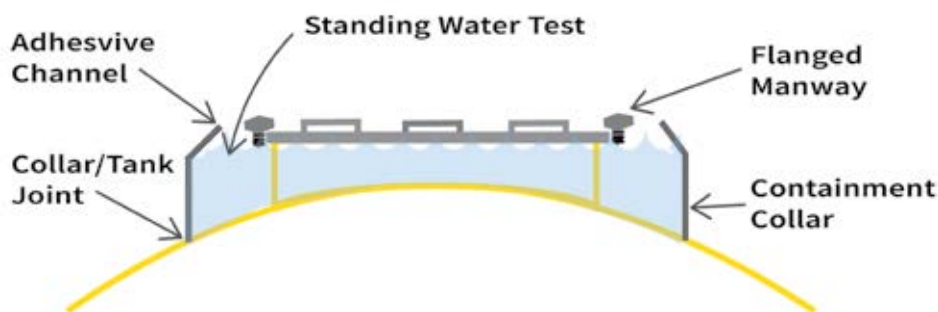


Figure 16: Collar Test Overview

9.0 INTERSTITIAL MONITORING

NTI Tanks are supplied with a minimum of one monitoring access fitting that provides access to the interstitial space.

9.1 MONITORING TANKS WITH A DRY INTERSTITIAL

Always consult with the monitoring equipment manufacturer regarding proper sensor installation, servicing and use instructions. Consult with all applicable governmental authorities regarding required inspections and other sensor-related requirements.

- ✓ When electronic monitoring sensors are used, the Tank may be sloped at the time of installation.
- ✓ If the Tank is sloped, place the Tank so that the lowest elevation is at the monitoring end.

- **NOTICE – CALIBRATION CHARTS ARE DESIGNED FOR LEVEL TANK INSTALLATION. TANKS INSTALLED WITH A SLOPE WILL AFFECT THE CALIBRATION CHART ACCURACY.**

NTI provides a pull cable with its Tanks that are designed to operate with a dry interstitial. Use the pull cable to position the electronic monitoring sensor at the Tank bottom. Monitor the condition of the cable and replace the cable if required.

For ease of installation, the sensor can be inserted in the Tank cavity before installing the monitoring riser pipe to grade. Dry-monitored Tanks do not require the interstitial space to be vented.

- ▼ The maximum vacuum for continuous monitoring is -1 psig. Utilize an approved vacuum monitoring system with a vacuum make-up pump.
- ▼ The maximum pressure for continuous monitoring is +1 psig. Utilize an approved pressure monitoring system with a pressure make-up pump. Ensure the system is designed to prevent pressure from exceeding +1 psig or Tank damage may occur.

9.2 HYDROSTATIC MONITORING

Tanks with hydrostatic monitoring systems normally arrive with monitoring fluid installed in the annular space and some fluid in the reservoir.

- ✓ After installation, the fluid level in the reservoir must be filled to the proper level.
- ✓ Additional monitoring fluid is supplied with the Tank for this purpose.
- ✓ Vent the annular space with a minimum ¼" hole at the riser top.
- ✓ When installing a double float sensor, the bottom of the sensor must be in contact with the Tank top, refer to Figure 17.
- ✓ If a Tank has a reservoir installed, and arrives without monitoring fluid pre-installed, the annular space can be filled with monitoring fluid after the Tank has been placed in the excavation and backfilled to the Tank top.
 - o Provisions must be made to access the reservoir for brine filling and the removal of air from the annular space at each end of the Tank.
 - o Contact NTI Technical Support for instructions.

9.3 SETTING LEVEL OF BRINE FLUID

After the top slab has been placed, check the level of monitoring fluid in the reservoir and set the monitoring fluid to the proper level.

After the Tank is installed, the level of monitoring fluid may fluctuate due to the following:

- ✓ Product level
- ✓ Groundwater fluctuation
- ✓ Tank filling and emptying
- ✓ Product and temperature variation

Check the level of the monitoring fluid in the reservoir and set the monitoring fluid to the proper level.

- ▲ **NOTICE – FAILURE TO SET THE MONITORING FLUID LEVEL PROPERLY COULD LEAD TO FALSE ALARMS.**

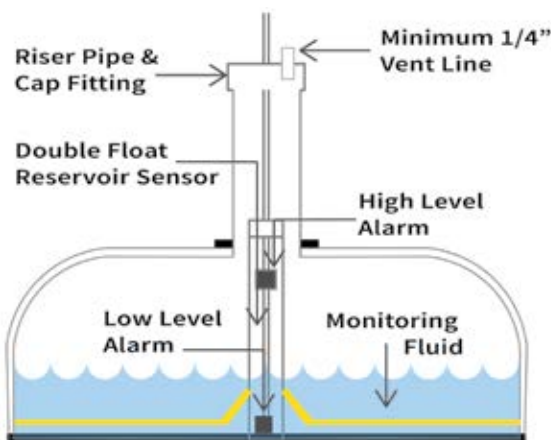


Figure 17: Wet Interstice - Liquid Level System

- ✓ Ensure that the monitoring fluid (brine) within the reservoir chamber is set per Table 4. Insert a tape measure, with water paste applied on the end, into the reservoir to determine the brine level. Add or remove brine as indicated by Table 4. During this step, note the length of the riser pipe.

Tank Diameter & Capacity	Reservoir Fluid Level Measurement		
	Tank is Empty	Tank is Half Full	Tank is Full
8' & (6M and less)	4¼"	4¾"	5¼"
8' & (Greater than 6M)	4¼"	5"	6"
10' & (12M and less)	4½"	5¼"	6"
10' & (13M - 20M)	5¼"	6½"	8"
10' & (21M - 35M)	3¾"	6½"	9½"
10' & (36M - 40M)	4"	5¾"	7½"

TABLE 4: MONITORING FLUID CALIBRATION

- ▼ Before placing the sensor in the reservoir, use the measurement of the riser pipe, plus 2 feet to place a mark on the sensor cable. Place the cable through the compression fitting in the riser cap. Tighten the compression fitting on the cable at the mark. This is designed to prevent the sensor cable from being dropped into the reservoir by accident.
- ▼ Connect an Ohm meter to the sensor wires before installation and manually move the floats to set off the high- and low-level alarms.
- ▼ Attach the sensor connector wire to the alarm panel wire in an acceptable electrical junction box (not supplied by NTI).
- ▼ Once the wiring connections have been completed, but before lowering the sensor into the reservoir, place the sensor in a bucket containing water and push the test buttons at the alarm panel to determine that the system is working properly.
- ▼ Lower the sensor into the riser pipe until it rests on the Tank top.
- ▼ Place the riser cap onto the riser pipe and thread down firmly so that the cap fits tightly into place.
- ▼ Pull any excessive connector cable through the cable clamp so that the sensor rests on the Tank top. Tighten the cable clamp so that the connector wire does not slip through.
- ▼ Check the alarm panel to determine if the status lights are working correctly.

- **NOTE: THIS SYSTEM SHOULD NOT BE USED WHEN THE WATER TABLE IS EXPECTED TO RISE OVER THE TOP OF THE RISER CAP. THE CAP IS NOT WATERTIGHT. IF CASUAL WATER ENTERS THE TOP VENT HOLE OF THE CONTROLLER CAP, IT MAY BE NECESSARY TO RUN A SEPARATE VENT LINE TUBE TO THE CAP VENT NIPPLE TO PREVENT THE BRINE LEVEL FROM INCREASING. THE ANNULAR SPACE OF THE TANK MUST ALWAYS REMAIN VENTED TO THE ATMOSPHERE.**

10.0 OPERATING GUIDELINES

10.1 GENERAL

Always retain a copy of this Installation Manual and operating guidelines, and keep them accessible to be referenced readily, along with any other supplemental NTI instructions and documentation.

Follow all applicable federal, state and local laws, codes, rules, regulations and safety precautions regarding underground storage tanks and their associated systems.

Reference NTI Appendices for supplemental documentation, Tank brochures and NTI manufactured accessory instructions. Contact NTI or visit our website for additional copies of documentation.

- ▼ Consult the Limited Warranty for additional conditions and limitations. The tank owner should retain a copy of the Limited Warranty with this Installation Manual and operating guidelines, along with all other supplemental NTI instructions and documentation. Storing products other than those identified in the manufacturer's limited warranty will void the tank manufacturer's obligations under the limited warranty.
- ▼ Storing fluids in the Tank other than those identified as Approved Fluids in the Limited Warranty will void the Limited Warranty
- ▼ The temperature of the stored fluids must not exceed the temperatures specified therefore in the Limited Warranty.
- ▼ Traffic loads, if any, must not exceed those acceptable based on the depth and type of cover used.
- ▼ Gaskets used in Tank installation must be compatible with the fluids stored in the Tank and must be within the operational temperature limitations specified in the Limited Warranty for the contained fluid.
- ▼ Do not allow the accumulation of water or moisture inside the containment sumps as it can freeze and cause damage to the Tank and surrounding appurtenances.

10.2 CONFINED SPACE ENTRY

All tanks, sumps, manways extensions and access risers are considered a confined space.

Proper permitting, industry standards and all applicable federal, state and local laws, codes, rules and regulations must be followed before entering a confined space. Manways and access risers are for use only by qualified personnel with proper training and safety equipment.

- ✓ Do not attempt to repair or modify your Tank as this will void the Limited warranty.
- ✓ If tank entry is required for repair, modification or inspection, you must first contact NTI at 830-387-4027 for instructions.

- ▲ **WARNING – DO NOT ENTER THE TANK UNLESS FOLLOWING OSHA GUIDELINES FOR CONFINED SPACE ENTRY. FAILURE TO DO SO CAN RESULT IN PROPERTY DAMAGE, SERIOUS INJURY OR DEATH.**

10.3 FILLING TANKS

All fluid deliveries must be gravity fed into the Tank unless positive shut-off equipment is installed on the lines and on the truck.

For Tanks with inlet and outlet piping that will result in pressure at the Tank top, the pressure should be limited to 1 psig.

For Tanks with vapor recovery systems, the pressure or vacuum must not exceed 1 psig.

- ✓ The Tank's venting system must be adequately sized and unobstructed to ensure that atmospheric pressure is always maintained, including during Tank filling, and emptying.
- ✓ Regular inspection of the automatic shutoff device for proper operation is required.
- ✓ The drop tube/fill line must be properly grounded to prevent static discharge during filling.
- ✓ If flooding may occur, precautions must be taken to prevent the Tank from floating or causing equipment damage. Reference the EPA's "Underground Storage Tanks Flood Guide" and any other applicable laws, codes, rules and regulations regarding required precautions.

▲ **WARNING – TANKS ARE DESIGNED TO OPERATE AT ATMOSPHERIC PRESSURE. OVER-PRESSURIZING THE TANK OR PRESSURIZED FLUID DELIVERIES CAN RESULT IN TANK DAMAGE OR FAILURE, PROPERTY DAMAGE, SERIOUS INJURY OR DEATH.**

APPENDIX A. ANCHOR CHARTS

Tank Diameter & Nominal Capacity (Including all compartments)		Space Between Tanks	Number of Sumps or Risers (Backfill to Grade No Traffic / Backfill with 6" Concrete Traffic Pad)				
			0	1	2	3	4
8' Diameter Tanks	< 7,000 with 12"x12" deadmen	24"	36" / 32"	47" / 43"	53" / 48"	-	-
	< 7,000 with 8" anchor pad	24"	36" / 32"	47" / 43"	53" / 48"	-	-
	< 7,000 no mechanical anchoring	18"	58" / 55"	73" / 69"	82" / 78"	-	-
	7,000 - 12,000 with 12"x12" deadmen	24"	39" / 35"	45" / 41"	47" / 43"	65" / 60"	65" / 60"
	7,000 - 12,000 with 8" anchor pad	24"	38" / 35"	42" / 39"	42" / 39"	65" / 60"	65" / 60"
	7,000 - 12,000 no mechanical anchoring	18"	61" / 58"	72" / 68"	76" / 72"	84" / 81"	NA
	13,000 - 16,000 with 12"x12" deadmen	24"	41" / 38"	46" / 42"	47" / 43"	52" / 47"	68" / 61"
	13,000 - 16,000 with 8" anchor pad	24"	38" / 35"	42" / 39"	42" / 39"	52" / 47"	68" / 61"
	13,000 - 16,000 no mechanical anchoring	18"	62" / 59"	71" / 68"	73" / 70"	80" / 76"	84" / 81"
	17,000 - 20,000 with 12"x12" deadmen	24"	42" / 38"	46" / 42"	47" / 43"	50" / 42"	52" / 48"
	17,000 - 20,000 with 8" anchor pad	24"	34" / 31"	38" / 35"	41" / 37"	41" / 37"	41" / 37"
	17,000 - 20,000 no mechanical anchoring	18"	63" / 60"	70" / 66"	71" / 67"	76" / 72"	79" / 75"
10' Diameter Tanks	< 10,000 with 18"x8.75" deadmen	36"	44" / 39"	50" / 44"	57" / 51"	-	-
	< 10,000 with 8" anchor pad	24"	33" / 29"	39" / 35"	57" / 51"	-	-
	< 10,000 no mechanical anchoring	18"	78" / 75"	NA	NA	-	-
	10,000 - 18,000 with 18"x8.75" deadmen	36"	47" / 43"	53" / 49"	55" / 50"	76" / 70"	80" / 75"
	10,000 - 18,000 with 8" anchor pad	24"	47" / 43"	53" / 49"	55" / 50"	76" / 70"	80" / 75"
	10,000 - 18,000 no mechanical anchoring	18"	83" / 80"	NA	NA	NA	NA
	19,000 - 23,000 with 18"x8.75" deadmen	36"	44" / 40"	49" / 45"	51" / 47"	62" / 60"	72" / 67"
	19,000 - 23,000 with 8" anchor pad	24"	41" / 37"	51" / 47"	51" / 47"	62" / 60"	72" / 67"
	19,000 - 23,000 no mechanical anchoring	18"	84" / 81"	NA	NA	NA	NA
	24,000 - 35,000 with 18"x8.75" deadmen	36"	51" / 47"	57" / 53"	70" / 66"	70" / 66"	70" / 66"
	24,000 - 35,000 with 8" anchor pad	24"	51" / 47"	57" / 53"	69" / 65"	69" / 65"	69" / 65"
	24,000 - 35,000 no mechanical anchoring	18"	84" / 81"	NA	NA	NA	NA
	36,000 - 40,000 with 18"x8.75" deadmen	36"	49" / 46"	54" / 51"	59" / 55"	60" / 56"	60" / 56"
	36,000 - 40,000 with 8" anchor pad	24"	49" / 46"	54" / 51"	59" / 55"	62" / 58"	65" / 60"
	36,000 - 40,000 no mechanical anchoring	18"	84" / 81"	NA	NA	NA	NA

APPENDIX B. TANK CAPACITY, SIZE AND STRAP QUANTITY

8' Diameter Underground Fuel Tanks	Nominal Capacity [US Gallons]	Fluid Volume [US Gallons]	Tank Total Length [Feet]	Weight [Pounds Mass]	Number of Straps [Total Quantity]
	5,000 (min)	5,127	16'	3,405	2
	6,000	6,155	19'	3,902	2
	7,000	7,183	22'	4,399	2
	8,000	8,135	24'	4,730	2
	9,000	9,163	27'	5,227	2
	10,000	10,191	30'	5,723	2
	11,000	11,143	32'	6,054	4
	12,000	12,171	35'	6,551	4
	13,000	13,199	38'	7,048	4
	14,000	14,151	40'	7,379	4
	15,000	15,179	43'	7,876	4

10' Diameter Underground Fuel Tanks	Nominal Capacity [US Gallons]	Fluid Volume [US Gallons]	Tank Total Length [Feet]	Weight [Pounds Mass]	Number of Straps [Total Quantity]
	10,000 (min)	10,177	20'	4,886	2
	11,000	11,077	21'	5,092	2
	12,000	12,152	23'	5,505	2
	13,000	13,127	25'	5,918	4
	14,000	14,190	27'	6,331	4
	15,000	15,190	28'	6,537	4
	16,000	16,153	30'	6,950	4
	20,000	20,245	37'	8,395	6
	21,000	21,065	38'	8,601	6
	22,000	22,240	40'	9,014	6
	23,000	23,115	42'	9,427	6
	24,000	24,190	44'	9,840	6
	28,000	28,115	50'	11,078	8
	29,000	22,290	52'	11,491	8
	30,000	30,265	54'	11,904	8
	33,000	33,203	59'	12,936	8
	34,000	34,178	61'	13,349	8
	35,000	35,166	62'	13,555	8
	36,000	36,241	64'	13,968	8
	41,000	41,041	72'	15,619	8
	42,000	42,216	74'	16,032	10
	43,000	43,191	76'	16,445	10
	44,000	44,166	78'	16,858	10
	45,000	45,153	79'	17,064	10
	46,000	46,328	81'	17,477	10
	50,000	50,141	88'	18,922	10

TANK INSTALLATION CHECKLIST

TO INSTALLING CONTRACTOR: Deliver the Installation Manual with the completed and signed Tank Installation Checklist to the Tank owner after tank installation. Retain a copy for your records.

TO OWNER: Retain the Limited Warranty, Installation Manual and completed and fully-executed Tank Installation Checklist. A completed and fully-executed copy of this Tank Installation Checklist will be required and must be provided to NTI when making a claim under the Limited Warranty.

Owner Name: _____

Installation Date: _____

Installation Address: _____

Installing Contractor: _____

TANK INFORMATION	Tank #1	Tank #2	Tank #3	Tank #4
Tank Type - Single-Wall (SW), Double-Wall (DW)				
Tank Usage (Fuel, Water & Wastewater)				
Nominal Tank Diameter (Feet)				
Nominal Tank Capacity (Gallons)				
Interstitial Monitoring (hydro, dry, vacuum, pressure, N/A)				
UL Label # (if applicable)				

SITE INFORMATION	Tank #1	Tank #2	Tank #3	Tank #4
Primary backfill meets requirements - yes/no				
Secondary backfill will be used - yes/				
Secondary backfill meets requirements - yes/no/N/A				
Geotextile filter fabric will be used - yes/no				
Excavation - shored/not shored				
H20 or HS20 traffic loads apply - yes/no				
Hole condition - dry or wet				
Anchoring system will be used - yes/no				
Type of anchoring system - deadmen/anchor slab/N/A				

PRE-INSTALLATION INSPECTION & TESTING	Tank #1	Tank #2	Tank #3	Tank #4
Shipping damage - yes/no				
Loss of vacuum - yes/no				
Record Vacuum Level				
Requirements met for double-wall Tanks shipped under interstitial vacuum - yes/no				
Record Vacuum Date				
Monitoring fluid visible on Tank interior - yes/no				
Monitoring fluid visible on Tank exterior - yes/no				
Record monitoring fluid level in reservoir if applicable				
Tank passed pressure/soap test if applicable - yes/no				

INSTALLING TANKS	Tank #1	Tank #2	Tank #3	Tank #4
Record Tank diameter measurement #1 (pre-installation)				
Record final backfill bedding depth under Tank (inches)				
Record final Tank spacing between Tanks (inches)				
Record final Tank spacing from endcap to excavation walls (inches)				
Record Tank diameter measurement #2 (after straps are installed)				
Subtract diameter measurement #2 from #1 and record				
Deflection measurement meets tolerance requirements - yes/no				
Voids under Tank between ribs and under domes filled with backfill and tamped - yes/no				
Backfill placement and compaction meet requirements - yes/no				
Flexible piping connections meet requirements - yes/no				
Fittings and other metal components are coated for corrosion protection - yes/no				
Record diameter measurement #3 (after backfilling to tank top is complete)				
Subtract diameter measurement #3 from #1 and record				
Deflection measurement meets tolerance requirements - yes/no				
Tank was ballasted prior to bringing backfill to Tank top - yes/no				

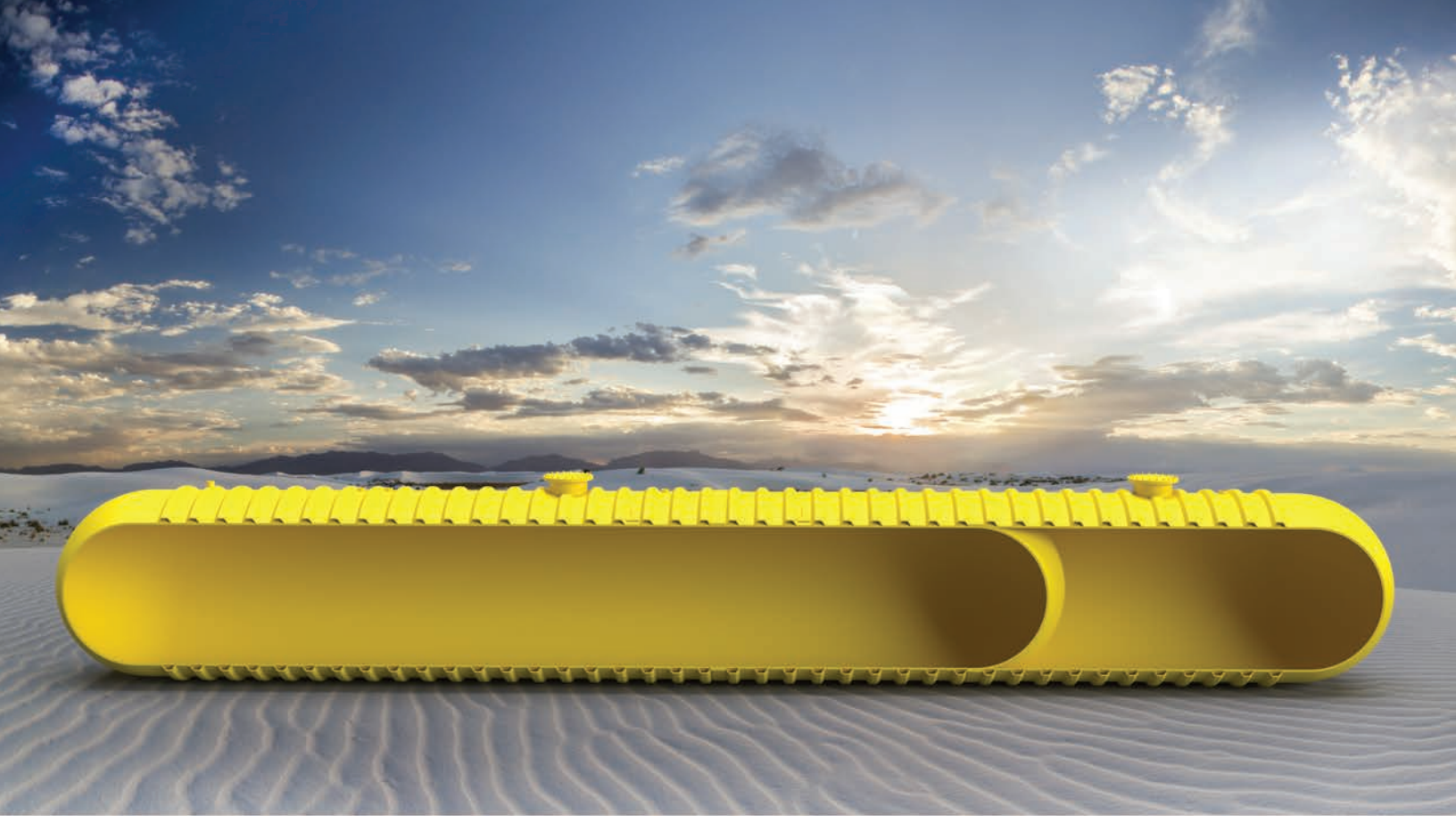
Complete below section after bringing backfill to the Tank top

Hydrostatic testing was completed - yes/no/N/A				
Containment sump testing was completed - yes/no/N/A				
Record final depth of backfill over Tank (inches)				
Record Tank diameter measurement #4 (after backfilling is brought to subgrade)				
Subtract diameter measurement #4 from #1 and record				
Final deflection measurement meets tolerance requirements - yes/no				
Type of surface pad used				
Thickness of surface pad used				
Record monitoring fluid level when backfilling and surface pad installation are complete				

Site Sketch	Additional Notes
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UL 1316 UNDERGROUND FUEL, DIESEL + DEF TANKS

Our Fiberglass Fuel Tanks

Nationwide's fiberglass fuel tanks are the most corrosion resistant tanks in the market today, meeting the most stringent requirements of the UL 1316 Third Edition. This provides our customers confidence for longstanding hassle-free service. Our corrosion resistant fiberglass tanks are compatible with all ethanol blended fuels, biodiesel and ultra-low sulfur diesel fuels. Fiberglass inherently provides corrosion resistance from external forces as well, as they are not vulnerable to corrosion. While cathodic protection and coatings are used to stem the corrosion issues of steel tanks, these add cost and are not a complete solution, still leaving steel tanks susceptible to corrosion. Our superior structural design and innovative resin technology give our customers confidence that they are choosing the best petroleum tank available on the market today.

Compartment tanks offer multiple benefits to the retailer. The double walled tank is divided by a double walled bulkhead to create multiple compartments. The ability to store multiple fuel blends in one tank lowers the excavation, permitting, inspection and shipping costs. This enables the retailer to offer multiple fuel selections where site restrictions may have prevented doing multiple single compartment tanks in the past, and adds flexibility to meet customers' changing demands. As multiple compartment petroleum tanks grow in popularity, the environmental and cost saving advantages of Nationwide Tanks' independently monitored compartments offer the versatility to only have one compartment down if any issues arise while the tank is in service. This also ensures the ability to pinpoint issues quickly while limiting downtime and lost revenue.

Standard Features

- UL 1316 (Third Edition) listing with most stringent resin requirements
- Compatible with all ethanol blended fuels, biodiesel and ULSD
- Advanced design using 100% corrosion resistant resin and glass (no fillers)
- Engineered structural layers using advanced helical technology
- Resin-rich smooth liner for maximum corrosion resistance
- Double-wall design around the full circumference of the tank
- Single, double or triple compartment models
- Dry & hydrostatic monitoring options
- Independent monitoring of multiple compartments
- 8' & 10' diameters
- Capacities up to 40,000 gallons
- Competitive lead times
- Exceptional customer service
- 30 year limited warranty



8' DIAMETER UNDERGROUND FUEL TANKS

Nominal Capacity [US Gallons]	Water Volume [US Gallons]	Dome to Dome Length [Feet]	Weight [Pounds Mass]	Number of Straps [Total Quantity]
5,000 (min)	5,127	16'	3,405	2
6,000	6,155	19'	3,902	2
8,000	8,135	24'	4,730	2
10,000	10,191	30'	5,723	2
12,000	12,171	35'	6,551	4
15,000	15,179	43'	7,876	4
18,000	18,135	49'	8,869	6
20,000	20,115	54'	9,697	6

10' DIAMETER UNDERGROUND FUEL TANKS

10,000 (min)	10,177	20'	4,886	2
12,000	12,152	23'	5,505	2
15,000	15,190	28'	6,537	4
18,000	18,128	33'	7,569	4
20,000	20,245	37'	8,395	6
25,000	25,178	45'	10,046	6
28,000	28,115	50'	11,078	8
30,000	30,265	54'	11,904	8
35,000	35,166	62'	13,555	8
40,000	40,253	71'	15,413	8



Company History

With over 20 years of experience in the fiberglass industry, our parent company began manufacturing fiberglass tanks in 2009. Our mission has always been to produce the highest quality fiberglass tanks on the market while following the latest and most stringent manufacturing standards. We continue that commitment to quality. Currently, we are the only manufacturer of underground fiberglass fuel tanks in the U.S. in compliance with the Third Edition of UL 1316. In addition, no other fiberglass tank company provides UL 2447-approved sumps which are built to a higher standard. In 2021, to meet our continued growth and introduction to the C-Store Industry, we acquired our newest manufacturing plant in Marion, SC and rebranded to Nationwide Tanks. Our vision is to provide the best products and services centered around the needs of the underground fuel and water market. Being the best means providing an outstanding engineered design, comprehensive quality control program, exceptional customer service, and delivering our products on schedule.



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LIMITED WARRANTY UNDERGROUND FUEL STORAGE TANKS

Nationwide Tanks, Inc. ("NTI") provides this standard limited warranty (the "**Limited Warranty**") to the original retail purchaser ("**Owner**") of its underground fuel storage tank (the "**Tank**") and/or Tank components, parts or accessories manufactured by NTI, if any ("**NTI Components**"), on the following terms:

1. **LIMITED WARRANTIES.** Each of the following is subject to the exclusions and conditions set forth in this Limited Warranty.

- (a) **External Corrosion Limited Warranty.** NTI warrants that the Tank will not fail due to natural external corrosion for a period of thirty (30) years from the date the Tank is originally delivered to Owner (the "Tank Delivery Date").
- (b) **Internal Corrosion Limited Warranty.** NTI warrants that the Tank will not fail due to internal corrosion for a period of thirty (30) years from the Tank Delivery Date.
- (c) **Structural Failure Limited Warranty.** NTI warrants that the Tank will not fail due to structural failure (defined as spontaneous breaking or collapse caused by material defects in manufacturing materials or workmanship) for a period of thirty (30) years from the Tank Delivery Date.
- (d) **NTI Components Limited Warranty.** NTI warrants NTI Components against material defects in manufacturing materials and workmanship for a period of one (1) year from the date of original delivery by NTI.

2. **EXCLUSIONS.** The limited warranties in Section 1 above shall not apply in connection with any of the following:

- (a) failure to complete any of the Required Owner Actions listed in Section 3(b) herein in the timeframe listed therein;
- (b) use of the Tank to store anything other than the following listed in ANSI/CAN/UL/ULC 1316:2018 at the specified temperatures (the "**Approved Fluids**") and any damages, failures or alterations caused or contributed to by such use:
 - i. gasoline, jet fuels, aviation fuels, motor oils, kerosene or diesel motor fuel, at ambient temperatures;
 - ii. gasoline and ethanol or methanol motor fuels with blend of up to 100% ethanol or 100% methanol (per ASTM fuel standards), at ambient temperatures;
 - iii. biodiesel fuel blends up to 100% biodiesel (B100 per ASTM fuel standards), at ambient temperatures;
 - iv. oxygenated motor fuels with up to 20%, by volume, of methyl tertiary butyl ether (MTBE), ethyl tertiary butyl ether (ETBE), di-isopropyl ether (DIPE), tertiary butyl alcohol (TBA), tertiary amyl methyl ether (TAME) or tertiary amyl ethyl ether (TAEE), at ambient temperatures; or
 - v. diesel fuel oils for oil burning equipment, at temperatures not to exceed 150°F or 65°C;
- (c) any products, components, parts or accessories not manufactured by NTI, including without limitation Third-Party Products (as defined in Section 3(f) and any consumable parts such as gaskets and O-rings;
- (d) removal of the Tank or any accessories from the original installation site and reinstallation at a new location without prior NTI inspection of such removal and reinstallation and NTI recertification of the Tank and accessories, or any failure to take steps reasonably requested by NTI in connection with the same;
- (e) normal wear and tear, abuse (whether chemical, accidental or deliberate), abnormal or unlawful use, neglect or alteration; and/or
- (f) damages, failures or alterations caused or contributed to by any of the following:
 - i. loading, unloading, storage, installation, operation, repair or maintenance in a location outside of the United States or in a manner not strictly in accordance with all applicable laws, codes, rules and regulations and all NTI instructions (including without limitation the Installation Manual (as defined in Section 3(a)), guidelines (including without limitation operating guidelines) and specifications provided or made available to Owner;
 - ii. failure in whole or in part of any Third-Party Products (specifically including without limitation alarms and sensors) for any reason, including without limitation lack of servicing, maintenance or inspection;
 - iii. loads or use in excess of that supported pursuant to the applicable American Association of State Highway Transportation Officials (AASHTO) traffic load rating standard (as amended, supplemented or replaced from time to time) specified in the Installation Manual given the depth of burial and type of cover used (for the avoidance of doubt and without limiting the foregoing, Tanks are manufactured for AASHTO HS20 traffic loads and support such loads and use so long as the burial depth and cover requirements for such traffic specified in the Installation Manual are strictly followed; if they are not, such loads or use would void this Limited Warranty (e.g., traffic over a Tank installed with burial depth and cover specified in the Installation Manual for non-traffic or AASHTO Airport Rated traffic over a Tank installed with burial depth and cover requirements specified in the Installation Manual for HS20 traffic);
 - iv. war, terrorism or acts of God or hazards of nature, including without limitation earthquake, ground movement, storm, high wind, fire or flood;
 - v. excessive hydrostatic pressure, inadequate site drainage, ground water, underground springs or underground obstructions;
 - vi. operation in excess of the Tank or NTI Component's rated capacity or contrary to its recommended use;
 - vii. misuse, servicing or lack thereof, or maintenance or lack thereof of the Tank, any NTI Component or any Third-Party Product; or
 - viii. loading, transporting, unloading, installation, repairs, alterations, modifications or any other work undertaken by Owner or a third party.

3. **OTHER CONDITIONS.** The following shall apply in connection with the Limited Warranty:

- (a) **Installing Contractor: Installation.** IT IS THE SOLE RESPONSIBILITY OF OWNER TO CONFIRM THE STANDING OF THE TANK INSTALLER (THE "**INSTALLING CONTRACTOR**") AND TO TAKE ALL STEPS NECESSARY TO VERIFY THAT THE INSTALLING CONTRACTOR IS QUALIFIED, LICENSED AND INSURED AND IN COMPLIANCE WITH ALL APPLICABLE FEDERAL AND STATE REQUIREMENTS. INSTALLING CONTRACTORS, INCLUDING THOSE THAT ARE NTI DEALERS, ARE INDEPENDENTLY OWNED AND OPERATED THIRD-PARTY BUSINESSES AND ARE NOT OWNERS OR AGENTS (IN FACT OR LAW) OF NTI. NEITHER NTI NOR ITS AFFILIATES SHALL BE RESPONSIBLE OR LIABLE FOR ANY ACTS OR OMISSIONS OF INSTALLING CONTRACTORS, INCLUDING THOSE THAT ARE NTI DEALERS, OR ANY DAMAGES RESULTING FROM THOSE ACTS OR OMISSIONS. Owner should conduct, or cause Owner's authorized representative to conduct, independent due diligence sufficient to confirm that the Installing Contractor is reputable and experienced, including without limitation by contacting the applicable state agency in the state where the Tank will be installed for guidance in this regard and to determine applicable licensing, certification and other requirements. In addition, Owner shall take, or cause Owner's authorized representative to take, the following actions in connection with installation of the Tank (the "**Installation Actions**"):
 - i. provide the Installing Contractor with a copy of the then-current NTI tank installation and handling manual (the "**Installation Manual**") and the then-current NTI tank installation checklist form included therein (the "**Installation Checklist**");
 - ii. ensure the Tank is installed in strict accordance with the Installation Manual and the Installation Checklist, as well as all applicable federal, state and local laws, codes, rules and regulations and all industry standards and trade practices;
 - iii. ensure the Installation Checklist is properly completed and executed by the Installing Contractor and Owner or Owner's legally authorized representative; and
 - iv. retain a copy of the properly completed and fully executed Installation Checklist and any correspondence regarding variances from the Installation Manual to provide in connection with any claim under this Limited Warranty.
- (b) **Required Owner Actions in Limited Warranty Claim.** To be eligible for Limited Warranty services, each of the following actions must be or have been (as indicated below) completed by Owner (collectively, the "**Required Owner Actions**"). Owner must:
 - i. have provided, or caused another to provide, NTI with the following information at or prior to the Tank Delivery Date: (x) Owner's full name and (y) the address of the original Tank installation site;
 - ii. have taken, or caused Owner's authorized representative to take, the Installation Actions;
 - iii. provide NTI with a copy of the properly completed and fully executed Installation Checklist, along with a copy of any correspondence regarding variances from the Installation Manual, at the time any Limited Warranty claim is made;
 - iv. have paid the Purchase Price (as defined in Section 3(e)) in full;
 - v. notify NTI in writing within the sooner of: (x) seven (7) days of becoming aware of a potential Limited Warranty claim; (y) 48 hours of an alarm or sensor being triggered for an outer wall leak that is confirmed to not be a false alarm; or (z) in the case of a release Owner is required to report to local authorities, 24 hours from the time Owner is required to report the same; and
 - vi. provide NTI and/or its designated affiliates, agents and/or subcontractors, as directed by NTI, with a reasonable opportunity to inspect the Tank, the installation and use thereof, and all records kept in connection therewith, including without limitation Tank and sensor inspection and maintenance records, and ensure that neither the Tank nor any surrounding backfill or factory-installed appurtenances are removed prior to such inspection.



Notices and information required by the foregoing must be mailed and emailed to the following: Nationwide Tanks Warranty Department, 1313 Hwy 76 West, Marion, South Carolina 29571 and warranty@nationwidetanks.com.

(c) **Damages Limitation.** NTI SHALL HAVE NO LIABILITY FOR INSTALLATION, REINSTALLATION OR REMOVAL COSTS, ENVIRONMENTAL CONTAMINATION, FIRES, EXPLOSIONS, LOSS OF TIME OR USE, INCONVENIENCE, DAMAGE TO PROPERTY, OR ANY OTHER INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR PUNITIVE DAMAGES OF ANY KIND ALLEGEDLY ARISING FROM ANY DEFECT OR BREACH OF WARRANTY, OR IN CONNECTION WITH ANY REPLACEMENT OR REPAIR HEREUNDER, WHETHER ANY SUCH CLAIM OR DAMAGES BE BASED UPON WARRANTY, CONTRACT, NEGLIGENCE, STRICT LIABILITY, TORT OR OTHERWISE. IN NO EVENT SHALL NTI'S TOTAL LIABILITY HEREUNDER EXCEED THE ORIGINAL PURCHASE PRICE (AS DEFINED BELOW) PAID TO NTI FOR THE COVERED PRODUCT (AS DEFINED BELOW). IT IS EXPRESSLY AGREED THAT THIS LIMITED WARRANTY DOES NOT FAUL OF ITS ESSENTIAL PURPOSE.

(d) **Disclaimers.** OTHER THAN THE EXPRESS LIMITED WARRANTY HEREIN, WHICH MAY NOT BE ALTERED IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF NTI, NEITHER NTI NOR ANY OF ITS AFFILIATES MAKES ANY WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, WITH RESPECT TO THE TANK, NTI COMPONENTS, OR ANY RELATED SERVICE, ADVICE OR CONSULTATION. IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, PERFORMANCE, NON-INFRINGEMENT AND TITLE, ARE HEREBY EXPRESSLY DISCLAIMED BY NTI AND ITS AFFILIATES AND WAIVED TO THE FULLEST EXTENT ALLOWED BY LAW. SOME JURISDICTIONS MAY NOT ALLOW LIMITATIONS ON IMPLIED WARRANTIES, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. THE TANK, ANY NTI COMPONENT(S) AND ANY RELATED SERVICE, ADVICE, OR CONSULTATION IS PROVIDED "AS IS," WITH ALL FAULTS AND WITHOUT WARRANTY OF ANY KIND OTHER THAN THIS EXPRESS LIMITED WARRANTY, AND ANY WARRANTIES IN CONNECTION THEREWITH IMPLIED BY ANY COURSE OF DEALING OR USAGE ARE EXPRESSLY EXCLUDED. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE.

(e) **Remedies.** IF THE LIMITED WARRANTY IS APPLICABLE, NTI SHALL, AT ITS OPTION AND IN ITS SOLE DISCRETION, EITHER: (I) REPAIR THE DEFECTIVE TANK SHELL OR NTI COMPONENT (THE "COVERED PRODUCT"); (II) REFUND THE ORIGINAL PURCHASE PRICE (AS DEFINED BELOW) OR A PORTION THEREOF; OR (III) DELIVER A REPLACEMENT COVERED PRODUCT TO THE POINT OF ORIGINAL DELIVERY. ANY REPAIR OR REPLACEMENT SHALL ONLY BE WARRANTED UNTIL THE CONCLUSION OF THE ORIGINAL WARRANTY TERM. ANY REPLACEMENT TANK PROVIDED BY NTI WILL BE EITHER NEW OR RECERTIFIED AND ANY RECERTIFIED TANK WILL BE TESTED TO ENSURE IT IS FUNCTIONALLY EQUIVALENT TO A NEW TANK. IN NO EVENT SHALL THE LIABILITY OF NTI AND ITS AFFILIATES UNDER THE LIMITED WARRANTY EXCEED THE PURCHASE PRICE PAID TO NTI FOR THE COVERED PRODUCT. FOR THE AVOIDANCE OF DOUBT, THE "PURCHASE PRICE" PAID TO NTI MEANS EITHER (I) THE WHOLESALE PRICE PAID BY THE APPLICABLE NTI DEALER TO NTI FOR THE COVERED PRODUCT IF OWNER PURCHASED THE PRODUCT FROM A DEALER OR (II) THE RETAIL PRICE PAID BY OWNER TO NTI FOR THE COVERED PRODUCT IF OWNER PURCHASED THE PRODUCT DIRECTLY FROM NTI, WITH THE PURCHASE PRICE IN EACH CASE BEING ONLY THAT AMOUNT PAID FOR THE COVERED PRODUCT ITSELF AND NO OTHER RELATED PRODUCTS, COSTS, EQUIPMENT OR OTHER WORK OR ASSOCIATED PROJECT COSTS. THE REMEDIES SET FORTH ABOVE CONSTITUTE OWNER'S SOLE AND EXCLUSIVE REMEDIES, AND THE SOLE OBLIGATION AND LIABILITY OF NTI AND ITS AFFILIATES, FOR ANY BREACH OF THE LIMITED WARRANTY.

(f) **Third-Party Products.** NTI manufactures only the Tank shell and any NTI Components. All other accessories, consumable parts, components, goods and materials associated with the Tank are manufactured by third parties ("Third Party Products"). Neither NTI nor its affiliates shall have any warranty or other obligation with respect to Third Party Products, and the warranty (if any) of the respective third-party manufacturer(s) will instead apply. Owner agrees to be bound by the terms, covenants and conditions of the respective third-party manufacturers' warranties and to look solely to such manufacturers in the event of a breach of any such warranties. Owner agrees that the disclaimers in Section 3(d) above shall apply equally to any goods or materials manufactured by third parties.

(g) **Applicable Law: Jurisdiction and Venue.** Any and all disputes, claims and/or suits arising from or relating to this Limited Warranty and/or a Covered Product shall be governed by the laws of the State of South Carolina, without regard to conflicts of law principles. Owner and NTI irrevocably agree to submit to the exclusive jurisdiction of the state or federal courts located in Marion, Marion County, South Carolina, or, to the extent NTI's principal office is at any time relocated outside Marion, South Carolina, then in the city and county in which NTI's principal office is then located, for the resolution of any disputes, claims and/or suits arising from or relating to this Limited Warranty and/or a Covered Product.

(h) **Arbitration: Waiver of Class Actions and Jury Trial.** Except to the extent expressly prohibited by applicable law, and subject to the provisions of this Section and Section 3(g) herein, any and all claims and disputes arising out of or in connection with this Limited Warranty or a Covered Product shall be submitted to and settled by binding arbitration under the authority of the Federal Arbitration Act. In the event a court determines that this limitation on joinder or class action certification of claims is unenforceable, then this entire commitment to arbitrate will become null and void and the parties must submit all claims to the jurisdiction of the courts. The arbitration shall take place in Marion, Marion County, South Carolina or, if NTI has relocated its principal office from Marion, Marion County, South Carolina, then in the city where NTI's principal office is located at the time of the dispute. The arbitrator must follow the law and may not disregard the express terms of this Limited Warranty. Notwithstanding the foregoing, the arbitration requirements of this Section shall not apply to any action for declaratory or equitable relief, including without limitation injunctive relief, brought at any time, including without limitation prior to or during the pendency of any arbitration proceedings initiated hereunder. WHERE PERMITTED BY APPLICABLE LAW, OWNER AND NTI AGREE THAT EACH MAY BRING CLAIMS AGAINST THE OTHER (AND/OR THE OTHER'S AFFILIATES) ONLY IN THEIR INDIVIDUAL CAPACITY AND NOT IN A PRIVATE ATTORNEY GENERAL CAPACITY OR AS A PLAINTIFF OR CLASS MEMBER IN ANY PURPORTED CLASS OR REPRESENTATIVE ACTION, AND NEITHER WILL SEEK TO COORDINATE OR CONSOLIDATE ANY CLAIMS HEREUNDER WITH ANY OTHER PROCEEDING. Unless both Owner and NTI agree in writing, no arbitrator or judge may consolidate more than one person's claims or otherwise preside over any form of a representative or class proceeding. Subject to the foregoing arbitration requirements, and without limiting or waiving the same, EACH OF OWNER AND NTI ACKNOWLEDGES AND AGREES THAT SUCH PARTY HAS HAD AN OPPORTUNITY TO CONSULT WITH LEGAL COUNSEL AND THAT SUCH PARTY KNOWINGLY AND VOLUNTARILY WAIVES ANY RIGHT TO A TRIAL BY JURY OF ANY DISPUTE PERTAINING TO OR RELATING IN ANY WAY TO THE SUBJECT MATTER HEREOF, THE PROVISIONS OF ANY FEDERAL, PROVINCIAL, STATE OR LOCAL LAW, REGULATION OR ORDINANCE THAT CAN BE WAIVED BY CONTRACT NOTWITHSTANDING. SOME STATES DO NOT PERMIT THE WAIVER OF A JURY TRIAL, SO THIS PROVISION MAY NOT APPLY TO OWNER.

(i) **Sole Agreement: Severability.** This Limited Warranty is accepted by Owner with the understanding that it is the sole warranty offered by NTI and/or its affiliates applicable to the Tank and any NTI Components and supersedes any prior understandings, agreements or representations, whether written or oral, by or among NTI and/or its affiliates and Owner regarding the Limited Warranty. If any provision of this Limited Warranty is held by a court of competent jurisdiction to be void or unenforceable, in whole or in part, such provision shall be deemed severable and will not affect or impair the legal validity of any other provision hereof.

10.2021



**THIS AGREEMENT IS SUBJECT TO ARBITRATION PURSUANT TO EITHER THE SOUTH CAROLINA
UNIFORM ARBITRATION ACT OR THE FEDERAL ARBITRATION ACT, AS APPLICABLE**

**LIMITED WARRANTY,
DISCLAIMER OF IMPLIED WARRANTIES AND LIMITATION OF DAMAGES
UNDERGROUND WATER STORAGE TANKS**

Nationwide Tanks, Inc. ("NTI") provides this standard limited warranty (the "**Limited Warranty**") to the original retail purchaser ("**Owner**") of its underground water storage tank (the "**Tank**") and/or Tank components, parts or accessories manufactured by NTI, if any ("**NTI Components**"), on the following terms:

1. **LIMITED WARRANTIES.** Each of the following is subject to the exclusions and conditions set forth in this Limited Warranty.
 - (a) **External Corrosion Limited Warranty.** NTI warrants that the Tank will not fail due to natural external corrosion for a period of one (1) year from the date the Tank is originally delivered to Owner (the "**Tank Delivery Date**").
 - (b) **Internal Corrosion Limited Warranty.** NTI warrants that the Tank will not fail due to internal corrosion for a period of one (1) year from the Tank Delivery Date.
 - (c) **Structural Failure Limited Warranty.** NTI warrants that the Tank will not fail due to structural failure (defined as spontaneous breaking or collapse caused by material defects in manufacturing materials or workmanship) for a period of one (1) year from the Tank Delivery Date.
 - (d) **NTI Components Limited Warranty.** NTI warrants NTI Components against material defects in manufacturing materials and workmanship for a period of one (1) year from the date of original delivery by NTI.
2. **EXCLUSIONS.** The limited warranties in Section 1 above shall not apply in connection with any of the following:
 - (a) failure to complete any of the Required Owner Actions listed in Section 3(b) herein in the timeframe listed therein;
 - (b) use of a non-potable water Tank to store anything other than non-potable water at temperatures not to exceed 150° F and any damages, failures or alterations caused or contributed to by such use;
 - (c) use of a potable water Tank to store anything other than potable water at ambient temperatures and any damages, failures or alterations caused or contributed to by such use;
 - (d) a Tank for which NTI has not been paid in full or on which the serial number or identification marked on the Tank has been removed, defaced or altered;
 - (e) any products, components, parts or accessories not manufactured by NTI, including without limitation Third-Party Products (as defined in Section 3(f) and any consumable parts such as gaskets and O-rings;
 - (f) removal of the Tank or any accessories from the original installation site and reinstallation at a new location without prior NTI inspection of such removal and reinstallation and NTI recertification of the Tank and accessories, or any failure to take steps reasonably requested by NTI in connection with the same;
 - (g) normal wear and tear, abuse (whether chemical, accidental or deliberate), abnormal or unlawful use, neglect or alteration;
 - (h) water tightness of the riser and/or pipe connections; and/or
 - (i) damages, failures or alterations caused or contributed to by any of the following:
 - i. loading, unloading, storage, installation, operation, repair or maintenance in a location outside of the United States or in a manner not strictly in accordance with all applicable laws, codes, rules and regulations and all NTI instructions (including without limitation the Installation Manual (as defined in Section 3(a)), guidelines (including without limitation operating guidelines) and specifications provided or made available to Owner;
 - ii. failure in whole or in part of any Third-Party Products (specifically including without limitation alarms and sensors) for any reason, including without limitation lack of servicing, maintenance or inspection;
 - iii. loads or use in excess of that supported pursuant to the applicable American Association of State Highway Transportation Officials (AASHTO) traffic load rating standard (as amended, supplemented or replaced from time to time) specified in the Installation Manual given the depth of burial and type of cover used (for the avoidance of doubt and without limiting the foregoing, Tanks are manufactured for AASHTO HS20 traffic loads and support such loads and use *so long as* the burial depth and cover requirements for such traffic specified in the Installation Manual are strictly followed; if they are not, such loads or use would void this Limited Warranty (e.g., traffic over a Tank installed with burial depth and cover specified in

the Installation Manual for *non*-traffic or AASHTO Airport Rated traffic over a Tank installed with burial depth and cover requirements specified in the Installation Manual for HS20 traffic);

- iv. war, terrorism or acts of God or hazards of nature, including without limitation earthquake, ground movement, storm, high wind, fire or flood;
- v. excessive hydrostatic pressure, inadequate site drainage, ground water, underground springs or underground obstructions;
- vi. use of the Tank to store water containing chemicals;
- vii. the overflow capacity of the Tank being less than the inflow, causing excessive hydraulic pressure;
- viii. operation in excess of the Tank or NTI Component's rated capacity or contrary to its recommended use;
- ix. placement of the Tank on unsound base or base that erodes and/or is not maintained;
- x. misuse, servicing or lack thereof, or maintenance or lack thereof of the Tank, any NTI Component or any Third-Party Product; or
- xi. loading, transporting, unloading, installation, repairs, alterations, modifications or any other work undertaken by Owner or a third party.

3. OTHER CONDITIONS. The following shall apply in connection with the Limited Warranty:

(a) **Installing Contractor; Installation.** IT IS THE SOLE RESPONSIBILITY OF OWNER TO CONFIRM THE STANDING OF THE TANK INSTALLER (THE "INSTALLING CONTRACTOR") AND TO TAKE ALL STEPS NECESSARY TO VERIFY THAT THE INSTALLING CONTRACTOR IS QUALIFIED, LICENSED AND INSURED AND IN COMPLIANCE WITH ALL APPLICABLE FEDERAL AND STATE REQUIREMENTS. INSTALLING CONTRACTORS, INCLUDING THOSE THAT ARE NTI DISTRIBUTORS, ARE INDEPENDENTLY OWNED AND OPERATED THIRD-PARTY BUSINESSES AND ARE NOT OWNERS OR AGENTS (IN FACT OR LAW) OF NTI. NEITHER NTI NOR ITS AFFILIATES SHALL BE RESPONSIBLE OR LIABLE FOR ANY ACTS OR OMISSIONS OF INSTALLING CONTRACTORS, INCLUDING THOSE THAT ARE NTI DISTRIBUTORS, OR ANY DAMAGES RESULTING FROM THOSE ACTS OR OMISSIONS. Owner should conduct, or cause Owner's authorized representative to conduct, independent due diligence sufficient to confirm that the Installing Contractor is reputable and experienced, including without limitation by contacting the applicable state agency in the state where the Tank will be installed for guidance in this regard and to determine applicable licensing, certification and other requirements. In addition, Owner shall take, or cause Owner's authorized representative to take, the following actions in connection with installation of the Tank (the "Installation Actions"):

- i. provide the Installing Contractor with a copy of the then-current NTI tank installation and handling manual (the "Installation Manual") and the then-current NTI tank installation checklist form included therein (the "Installation Checklist");
- ii. ensure the Tank is installed in strict accordance with the Installation Manual and the Installation Checklist, as well as all applicable federal, state and local laws, codes, rules and regulations and all industry standards and trade practices;
- iii. ensure the Installation Checklist is properly completed and executed by the Installing Contractor and Owner or Owner's legally authorized representative; and
- iv. retain a copy of the properly completed and fully executed Installation Checklist and any correspondence regarding variances from the Installation Manual to provide in connection with any claim under this Limited Warranty.

(b) **Required Owner Actions in Limited Warranty Claim.** To be eligible for Limited Warranty services, each of the following actions must be or have been (as indicated below) completed by Owner (collectively, the "Required Owner Actions"). Owner must:

- i. for potable water Tanks, have provided, or caused another to provide, NTI with written notice of the Tank's intended use prior to its manufacture;
- ii. have provided, or caused another to provide, NTI with the following information in writing at or prior to the Tank Delivery Date: (x) Owner's full name and (y) the address of the original Tank installation site;
- iii. have taken, or caused Owner's authorized representative to take, the Installation Actions;
- iv. provide NTI with a copy of the properly completed and fully executed Installation Checklist, along with a copy of any correspondence regarding variances from the Installation Manual, at the time any Limited Warranty claim is made;
- v. have paid the Purchase Price (as defined in Section 3(e)) in full;
- vi. notify NTI in writing within seven (7) days of becoming aware of a potential Limited Warranty claim; and
- vii. provide NTI and/or its designated affiliates, agents and/or subcontractors, as directed by NTI, with a reasonable opportunity to inspect the Tank, the installation and use thereof, and all records kept in connection therewith, including without limitation Tank and sensor inspection and maintenance records, and ensure that neither the Tank nor any surrounding backfill or factory-installed appurtenances are removed prior to such inspection.

Notices and information required by the foregoing must be mailed and emailed to the following: Nationwide Tanks Warranty Department, 1313 Hwy 76 West, Marion, South Carolina 29571 and warranty@nationwidetanks.com.

(c) **Damages Limitation.** NTI SHALL HAVE NO LIABILITY FOR INSTALLATION, REINSTALLATION OR REMOVAL COSTS, ENVIRONMENTAL CONTAMINATION, AMELIORATION OR REHABILITATION, FIRES, EXPLOSIONS, LOSS OF TIME OR USE, INCONVENIENCE, INTERRUPTION OF BUSINESS, DOWNTIME, TRANSPORTATION COSTS, DAMAGE TO PROPERTY OR LOST REVENUES, PROFITS, BUSINESS OPPORTUNITIES, PRODUCTION TIME OR SIMILAR LOSS OR EXPENSE INCURRED BY OWNER OR ANY THIRD PARTY, OR ANY OTHER INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL, EXEMPLARY OR PUNITIVE DAMAGES OF ANY KIND, WHETHER OR NOT NTI HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE AND EVEN THOUGH CAUSED IN WHOLE OR IN PART BY THE NEGLIGENCE (WHETHER SOLE, JOINT OR CONCURRENT), GROSS NEGLIGENCE, STRICT LIABILITY OR OTHER LEGAL FAULT OF NTI, ALLEGEDLY ARISING FROM ANY DEFECT OR BREACH OF WARRANTY, OR IN CONNECTION WITH ANY REPLACEMENT OR REPAIR HEREUNDER, WHETHER ANY SUCH CLAIM OR DAMAGES BE BASED UPON WARRANTY, CONTRACT, NEGLIGENCE, STRICT LIABILITY, TORT OR OTHERWISE. IN NO EVENT SHALL NTI'S TOTAL LIABILITY HEREUNDER EXCEED THE ORIGINAL PURCHASE PRICE (AS DEFINED BELOW) PAID TO NTI FOR THE COVERED PRODUCT (AS DEFINED BELOW). IT IS EXPRESSLY AGREED THAT THIS LIMITED WARRANTY DOES NOT FAIL OF ITS ESSENTIAL PURPOSE.

(d) **Disclaimers.** *OTHER THAN THE EXPRESS LIMITED WARRANTY HEREIN, WHICH MAY NOT BE ALTERED IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF NTI, NEITHER NTI NOR ANY OF ITS AFFILIATES MAKES ANY WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, WITH RESPECT TO THE TANK, NTI COMPONENTS, OR ANY RELATED SERVICE, ADVICE OR CONSULTATION. IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, PERFORMANCE, NON-INFRINGEMENT AND TITLE, ARE HEREBY EXPRESSLY DISCLAIMED BY NTI AND ITS AFFILIATES AND WAIVED TO THE FULLEST EXTENT ALLOWED BY LAW. THE TANK, ANY NTI COMPONENT(S) AND ANY RELATED SERVICE, ADVICE, OR CONSULTATION IS PROVIDED "AS IS," WITH ALL FAULTS AND WITHOUT WARRANTY OF ANY KIND OTHER THAN THIS EXPRESS LIMITED WARRANTY, AND ANY WARRANTIES IN CONNECTION THEREWITH IMPLIED BY ANY COURSE OF DEALING OR USAGE ARE EXPRESSLY EXCLUDED.*

(e) **Exclusive Remedies.** IF THE LIMITED WARRANTY IS APPLICABLE, NTI SHALL, AT ITS OPTION AND IN ITS SOLE DISCRETION, EITHER: (I) REPAIR THE DEFECTIVE TANK SHELL OR NTI COMPONENT (THE "COVERED PRODUCT"); (II) REFUND THE ORIGINAL PURCHASE PRICE (AS DEFINED BELOW) OR A PORTION THEREOF; OR (III) DELIVER A REPLACEMENT COVERED PRODUCT TO THE POINT OF ORIGINAL DELIVERY. ANY REPAIR OR REPLACEMENT SHALL ONLY BE WARRANTED UNTIL THE CONCLUSION OF THE ORIGINAL WARRANTY TERM. ANY REPLACEMENT TANK PROVIDED BY NTI WILL BE EITHER NEW OR RECERTIFIED AND ANY RECERTIFIED TANK WILL BE TESTED TO ENSURE IT IS FUNCTIONALLY EQUIVALENT TO A NEW TANK. IN NO EVENT SHALL THE LIABILITY OF NTI AND ITS AFFILIATES UNDER THE LIMITED WARRANTY EXCEED THE PURCHASE PRICE PAID TO NTI FOR THE COVERED PRODUCT. FOR THE AVOIDANCE OF DOUBT, THE "PURCHASE PRICE" PAID TO NTI MEANS EITHER (I) THE WHOLESALE PRICE PAID BY THE APPLICABLE NTI DISTRIBUTOR TO NTI FOR THE COVERED PRODUCT IF OWNER PURCHASED THE PRODUCT FROM A DISTRIBUTOR OR (II) THE RETAIL PRICE PAID BY OWNER TO NTI FOR THE COVERED PRODUCT IF OWNER PURCHASED THE PRODUCT DIRECTLY FROM NTI, WITH THE PURCHASE PRICE IN EACH CASE BEING ONLY THAT AMOUNT PAID FOR THE COVERED PRODUCT ITSELF AND NO OTHER RELATED PRODUCTS, COSTS, EQUIPMENT OR OTHER WORK OR ASSOCIATED PROJECT COSTS. THE REMEDIES SET FORTH ABOVE CONSTITUTE OWNER'S SOLE AND EXCLUSIVE REMEDIES, AND THE SOLE OBLIGATION AND LIABILITY OF NTI, FOR ANY BREACH OF THE LIMITED WARRANTY OR FOR BREACH OF ANY OTHER COVENANT, "DUTY" OR OBLIGATION ON THE PART OF NTI.

(f) **Third-Party Products.** NTI manufactures only the Tank shell and any NTI Components. All other accessories, consumable parts, components, goods and materials associated with the Tank are manufactured by third parties ("Third Party Products"). Neither NTI nor its affiliates shall have any warranty or other obligation with respect to Third Party Products, and the warranty (if any) of the respective third-party manufacturer(s) will instead apply. Owner agrees to be bound by the terms, covenants and conditions of the respective third-party manufacturers' warranties and to look solely to such manufacturers in the event of a breach of any such warranties. Owner agrees that the disclaimers in Section 3(d) above shall apply equally to any goods or materials manufactured by third parties.

(g) **Governing Law; Jurisdiction and Venue.** Any and all disputes, claims, liabilities, proceedings and/or causes of action (whether in contract or tort, or granted by statute) that may be based upon, arise out of or relate to this Limited Warranty, the Tank, any NTI Components and/or the rights and obligations of NTI and Owner in connection with the foregoing ("Claims"), shall be

governed by and construed in accordance with the laws of the State of South Carolina, without regard to conflicts of law principles and the arbitration provision in this Limited Warranty shall be governed by the Federal Arbitration Act. Subject to (and without limiting or waiving) the provisions of Section 3(h) below, Owner and NTI irrevocably agree to submit to the exclusive jurisdiction of the state or federal courts located in Marion, Marion County, South Carolina, or, to the extent NTI's principal place of business is at any time relocated outside Marion, South Carolina, then in the city and county in which NTI's principal place of business is located at the time the action is initiated, for the resolution of any such Claims.

(h) **Arbitration; Waiver of Class Actions and Jury Trial.** Except to the extent expressly prohibited by provisions of applicable law that cannot be waived by contract and that are necessarily applicable notwithstanding a contractual choice of other law, and subject to the provisions of this Section and Section 3(g) herein, any and all Claims shall be submitted to binding arbitration under the authority of the Federal Arbitration Act or the South Carolina Uniform Arbitration Act, as applicable, and shall be determined by arbitration administered by the American Arbitration Association pursuant to its then-current commercial arbitration rules and procedures. The arbitration shall take place in Marion, Marion County, South Carolina or, if NTI has relocated its principal place of business from Marion, Marion County, South Carolina, then in the city where NTI's principal place of business is located at the time the action is initiated. The arbitrator must follow the law and may not disregard the express terms of this Limited Warranty, including without limitation the choice of law in Section 3(g). Notwithstanding the foregoing, the arbitration requirements of this Section shall not apply to any action for declaratory or equitable relief, including without limitation injunctive relief, brought at any time, including without limitation prior to or during the pendency of any arbitration proceedings initiated hereunder. OWNER AND NTI AGREE THAT EACH MAY BRING CLAIMS AGAINST THE OTHER ONLY IN THEIR INDIVIDUAL CAPACITY AND NOT IN A PRIVATE ATTORNEY GENERAL CAPACITY OR AS A PLAINTIFF OR CLASS MEMBER IN ANY PURPORTED CLASS OR REPRESENTATIVE ACTION, AND NEITHER WILL SEEK TO COORDINATE OR CONSOLIDATE ANY CLAIMS HEREUNDER WITH ANY OTHER PROCEEDING. Unless both Owner and NTI agree in writing, no arbitrator or judge may consolidate more than one person's claims or otherwise preside over any form of a representative or class proceeding. In the event a court determines that this limitation on joinder or class action certification of claims is unenforceable, then this entire commitment to arbitrate will become null and void and the parties must submit all claims to the jurisdiction of the courts. Subject to the foregoing arbitration requirements, and without limiting or waiving the same, EACH OF OWNER AND NTI ACKNOWLEDGES AND AGREES THAT SUCH PARTY HAS HAD AN OPPORTUNITY TO CONSULT WITH COMPETENT LEGAL COUNSEL AND THAT SUCH PARTY KNOWINGLY AND VOLUNTARILY WAIVES ANY RIGHT TO A TRIAL BY JURY OF ANY DISPUTE PERTAINING TO OR RELATING IN ANY WAY TO THE SUBJECT MATTER HEREOF, THE PROVISIONS OF ANY FEDERAL, PROVINCIAL, STATE OR LOCAL LAW, REGULATION OR ORDINANCE THAT CAN BE WAIVED BY CONTRACT NOTWITHSTANDING.

(i) **Sole Recourse.** This Limited Warranty is accepted by Owner with the understanding and agreement that: (i) this Limited Warranty may only be enforced against, and any Claims may only be brought against, NTI and not against any direct or indirect parent or subsidiary of NTI or any past, present or future equity owner, director, officer, manager, employee, incorporator, affiliate, agent, attorney or representative of, or any financial advisor or lender to, NTI or any of the foregoing ("**Released Persons**"); (ii) no Released Person shall have any liability on any basis (whether in contract or tort, at law or in equity, granted by statute or otherwise) for any Claims; (iii) Owner will in no event threaten or assert any Claim against any of the Released Persons, whether granted by statute or based on theories of equity, agency, control, instrumentality, alter ego, domination, sham, single business enterprise, piercing the veil, unfairness, undercapitalization or otherwise and, to the maximum extent permitted by the governing law specified in Section 3(g), Owner hereby waives and releases all such Claims against such Released Persons that may otherwise be available at law or in equity to avoid or disregard the entity form of NTI or otherwise impose liability of NTI on any Released Person; and (iv) Owner shall indemnify NTI and each of the Released Persons from all claims, losses, injuries, damages, fees, costs, expenses, complaints and liabilities incurred or required as a result of a breach by Owner of any of the provisions of this Section.

(j) **Sole Warranty; Severability and Reformation.** This Limited Warranty is accepted by Owner with the further understanding and agreement that it is the sole warranty offered by NTI applicable to the Tank and any NTI Components and supersedes any prior understandings, agreements or representations, whether written or oral, by or among NTI, its affiliates and/or representatives and Owner regarding the Limited Warranty. If (but only to the extent that) any provision of this Limited Warranty is declared or found to be illegal, unenforceable or void (in whole or in part) under provisions of applicable law that cannot be waived by contract and that are necessarily applicable notwithstanding a contractual choice of other law, Owner and NTI agree that: (i) such provision may be deemed severable and the remainder of this Limited Warranty not affected by such provision shall be enforced to the fullest extent permitted by law; (ii) it is their specific intent and request that the adjudicative body called upon to interpret or enforce the Limited Warranty modify such provision to the minimum extent necessary so as to render it legal and enforceable while preserving the intent thereof; and (iii) if such amendment is not possible, another provision that is legal and enforceable and achieves the same objectives shall be substituted therefor.