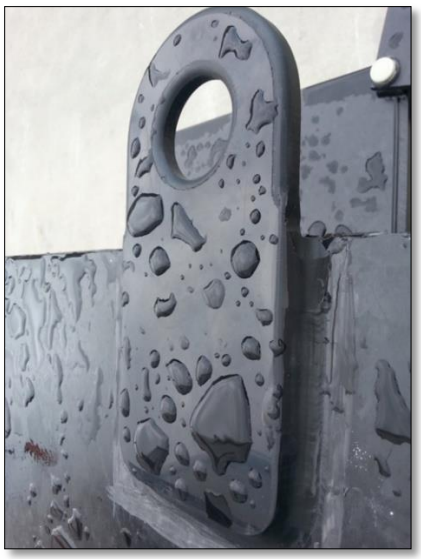
UNLOADING & HANDLING GUIDE

This is important information on the handling of your tank that can affect your warranty.



HANDLING OF TANKS DURING UNLOADING AND INSTALLATION.

Read all information pertaining to your tank(s) and method(s) of loading and setting.

Upon delivery be sure to inspect tank(s) for any visible shipping damage. If any is found, report the damage to Houston PolyTank and mark the bill of lading. If you have any questions about proper handling of the tank, be sure to consult Houston PolyTank.

WARNING:

Tank must be set on concrete or a solid support surface designed for total load weight. Setting area must be flat and clean of any debris. DO NOT drop a tank off of a truck onto the ground, doing so will immediately void warranty. Failure to properly handle, install and set on proper foundation constitutes a misuse of the tank and will void warranty.

(IMPORTANT) Applicable for ANY Method of Unloading and Moving

Lifting lugs and lifting holes are only to be used on already vertical tanks, for repositioning. All lifting lugs must be used for straight vertical lift.

Always avoid loading, unloading, or moving tanks in high winds.

Support and brace tanks lying on sides to prevent rolling and possible damage to fittings, people, or other property.

Tanks delivered horizontally must only be taken off with the strap/choke or the double strap/choke methods provided in this guideline. Other methods done instead give the tank a possibility of rotating and damaging fittings and rolling off of the trailer.

Make sure that any surfaces that tank is being set on is clean and free of debris.

More in “Notes” section.

Applicable When Using Slings/Straps

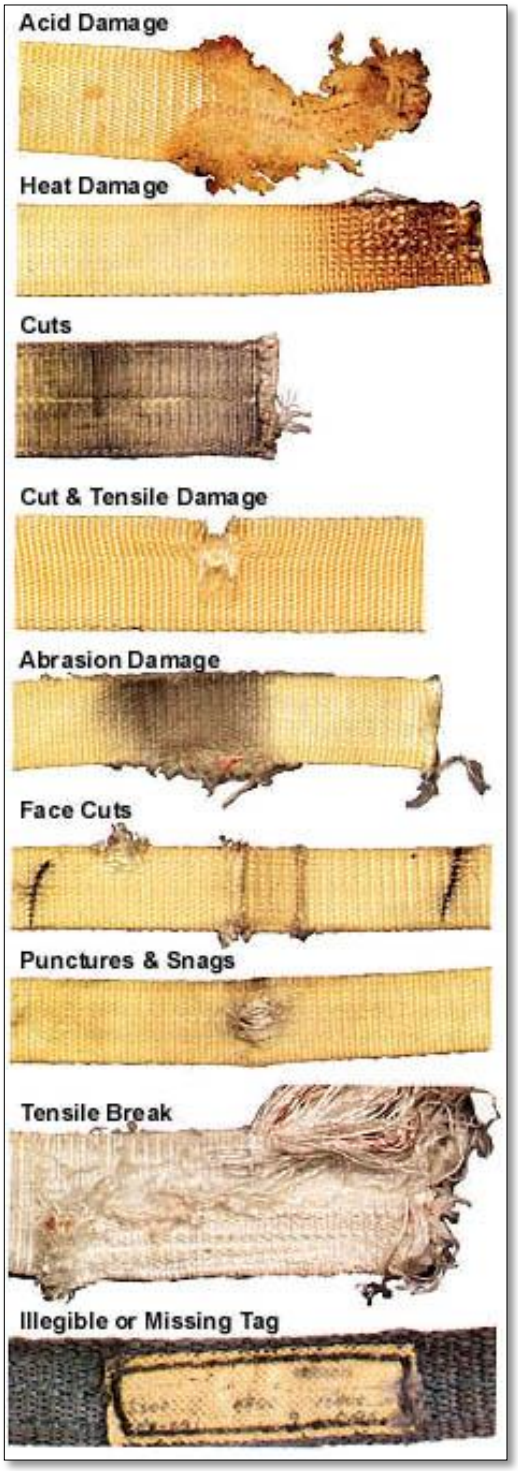
Clevis needs to be 3’-6’ above tank. The sling length will need to be approximately the tank circumference + the height of the tank.

The sling rating must exceed the weight of the tank.

Always check slings for damage. Any damages could cause weaknesses in the strap causing it to tear well under its weight rating, thus damaged slings should never be used.

When lifting using slings/straps be sure the slings/straps are clear from fittings. Make sure not to have any fittings that will be pushed up from the sling/strap.

Right: These are extreme examples of damages to check for signs which constitute decommission of a sling. Look for subtle hints of like damages and decommission sling before they get to this state.



Tank Unloading

Lifting lugs welded to tank shell (upright delivery only):

Use crane or other suitable lifting device. Attach clevis or lifting straps to all provided lifting lugs to distribute the tank weight evenly and unload tank to ground.

Strap / Choke method:

Be sure to use only approved lifting straps for this method of unloading (no chains or wire rope). Wrap strap around tank 2/3’s up the tank from the bottom. Attach strap to lifting device or crane. Slowly and carefully lift tank, strap will tighten and set itself around tank. Unload to the ground and block tank to prevent from rolling, or stand tank upright into vertical position. If tank is delivered laying on its side, when tightening the choke strap around the shell, rotate the strap as needed around the tank to ensure that the choke and crane hook are both horizontally centered above the tank to prevent the tank from rotating on the truck and the possibility of breaking fittings, etc.

SETTING TANK INTO LOCATION

Lifting lugs welded to shell for straight vertical pick:

Use crane or other suitable lifting device. Attach clevis or lifting straps to all lifting lugs. Attach securing anchors as needed or required. Be sure to check applicable building codes.

Strap / Choke method:

Be sure to use only approved lifting straps for this method of unloading (no chains or wire rope). Wrap strap around tank 2/3's up the tank from the bottom. Attach strap to lifting device or crane. Slowly and carefully lift tank, strap will tighten and set itself around tank. Tank is pulled upwards, towards the side the strap is attached to the lifting device, pulling it to one side at an angle. When the tank you are attempting to lift gets to a steep enough angle, it will swing slightly towards the side of the strap connection. Tank can be set up vertically into place, swing rule applies in opposite. Attach securing anchors as needed or required. Be sure to check applicable building codes.

Reminder: Concrete surface MUST be free of debris and stones.

Double Strap / Choke for vertical pick up:

Be sure to use only approved lifting straps for this method of unloading (no chains or wire rope). Both straps should be wrapped around 2/3's up the tank from the bottom, pulling from opposing sides. Slowly and carefully lift tank, straps will tighten and set around the tank. After the tank is upright, vertically reposition the tank with the straps in their current position. Attach securing anchors as needed or required. Be sure to check applicable building codes.

Above: Standing the tank vertically.
They are using a third strap near the bottom
to help pick up the tank vertically before raising the tank.

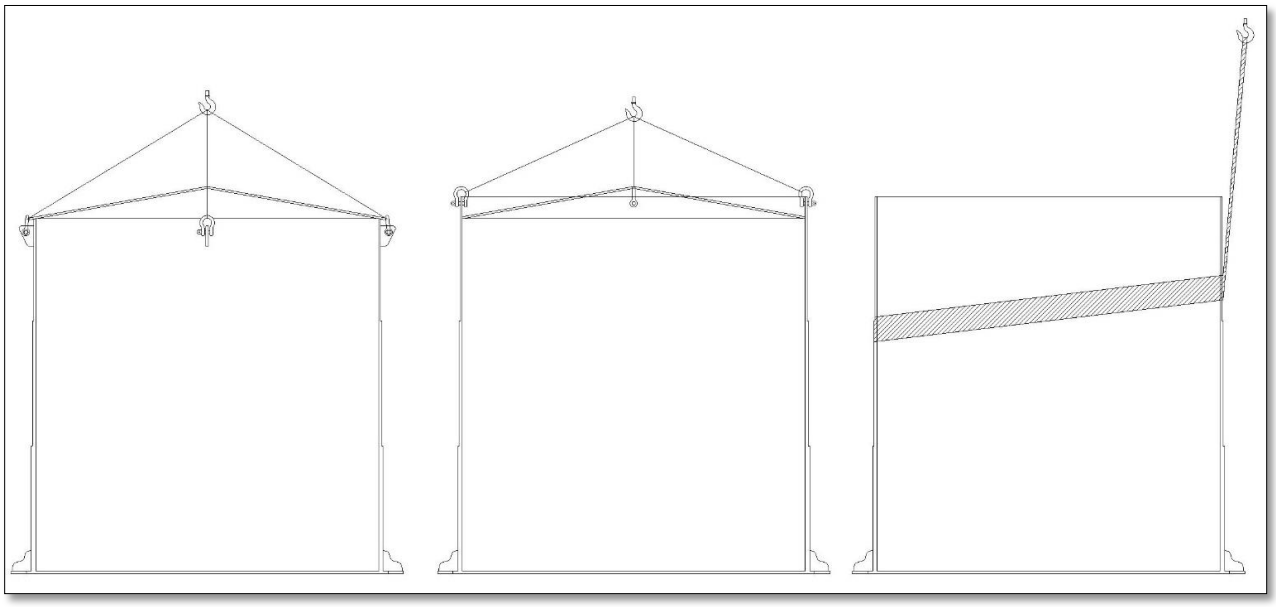
Right: Vertical repositioning.

VERTICAL REPOSITIONING ONLY WITH RECESSED LIFTING HOLES

On most of our recessed lid tanks, we provide holes for lifting at the top of the recess. These are to be used for vertical repositioning only. All lifting holes provided must be used as to keep tank level. When using the holes, use a rounded edge clevis or a foam protected clevis for protection from cutting into the plastic.

For Small Tanks:

Small tanks can be handled by a handling cart or a forklift. Forklift must have protected or rounded extensions to prevent sharp forks from damaging the tank. If there are any doubts whether a tank is too large or unstable for your handling cart or forklift, treat the tank as a large tank and use another method provided by this guideline. Whichever method chosen must have adequate support for the tank as it is being moved.



Lifting Lugs Recessed Lifting Holes Choke Strap

IMPORTANT NOTES APPLICABLE TO ALL TANKS

The impact strength of some thermoplastics can be compromised at especially low temperatures. Care should be taken with advice from the manufacturer during handling, transportation and installation when temperatures fall below 0°C.

Tanks must be installed on a continuous horizontal, smooth, flat surface such as a load-bearing concrete pad. The site should be inspected before installation to identify any defects or debris. Corrective action should be taken, if necessary, to clear the site before the unit is set.

The tank must be put on a stable base. Unstable materials such as sand or bitumen should not be used as a bedding layer between the tank base and the flat surface, as the loss of the layer will cause uneven stresses in the tank base. This may lead to mechanical failure or induce chemical deterioration in the tank base.

The tank should only be lifted using any lugs or other attachments designed for this purpose and in accordance with the Unloading & Handling Guide. Fittings and connections attached to the tanks should not be used. If a direct lift is to be made on the body of the tanks then, wire ropes or chains must not be used. A fiber strap (minimum width 75 mm) must be used for lifting. The tank should be carefully handled at all times to prevent impact damage.

Where temporary storage is required, store on a flat surface, clear of any debris, protected from the risk of impact, and in its correct orientation. The unit should be anchored to prevent any movement, e.g. due to wind. Consult the tank manufacturer for advice regarding suitable supports to avoid damaging the tank. It may be possible to use water to anchor a tank to prevent movement during storage but the water must be removed prior to lifting. It may also be necessary to ensure the inside of the tank is dried before the intended contents are introduced.

Tanks installed near roadways or other areas of vehicle movement should be provided with suitable impact barriers.

Anchor bolts for tie-downs should NOT be torqued. Only hand tighten anchor bolts on tie-down.

Installed tanks should be anchored using attachments designed for this purpose and included in the original tank design calculations. The attachments may need to be designed to prevent an empty tank from floating in the secondary containment where this is a possibility.

A pre-commissioning examination will prove useful in helping with scheduled inspections.