Spectrum Oil Storage System

Operating Manual

61263 - 03/11

Introduction

Trico Spectrum Oil Storage Systems are an innovated solution to resolving bulk oil storage issues for constricted space requirements, they allow expansion off of the base units while eliminating contamination issues. Storage systems come in four basic tank configurations depending on your bulk requirements. All systems come standard with 1-1/2” Polyurethane lines and Polyethylene shutoff valve. Dispensing valves are standard self closing bronze with quick coupling adapters for tank filling. A single drip tray is provided to contain spillage from valve assemblies while dispensing. The motor and pump combination draw less than 14.5 amps allowing the system to be placed on a 15 amp circuit. The bronze gear pump is positive displacement and self priming. Optional spill containment is available that exceeds the requirements set by EPA standards.

Fluid Capacity per Tank	65 Gallons
Sight Gauge	Brass / Stainless
Pump Head	Bronze Gear
Breather Manifold Assembly	100 cu in
Motor	1-1/2 HP TEFC
Amp Draw @ Max Load	14.5 A
Voltage	110 / 220 V
Containment Capacity per Spill Container	>110%
Tank Lines	1-1/2” Polyurethane
Tank Shut Off Valves	Polyethylene
Valve Assembly	Self Closing 1” Bronze

Important Safeguards

1. ***Read Instructions***
   All safety and operating instructions should be read before using the Spectrum Oil Storage System.

2. ***Retain Instructions***
   Safety and operating instructions should be retained for future reference.

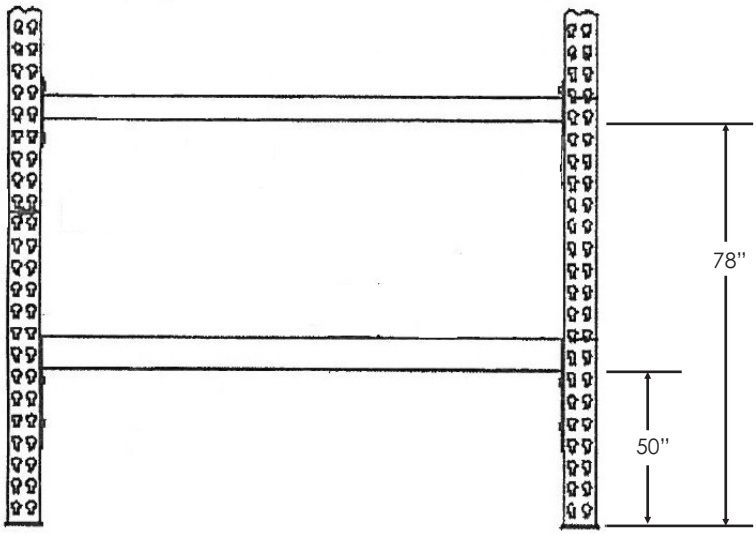
3. ***Heed Warnings***
   All warnings on the product and in the operating manual should be adhered to.

4. ***Follow Instructions***
   All operating instructions should be followed.

Warning: Do not store products with a flashpoint below 150°F or a product with a pH below 3. Storing unapproved products can result in serious bodily injury or death and will void any product warranty

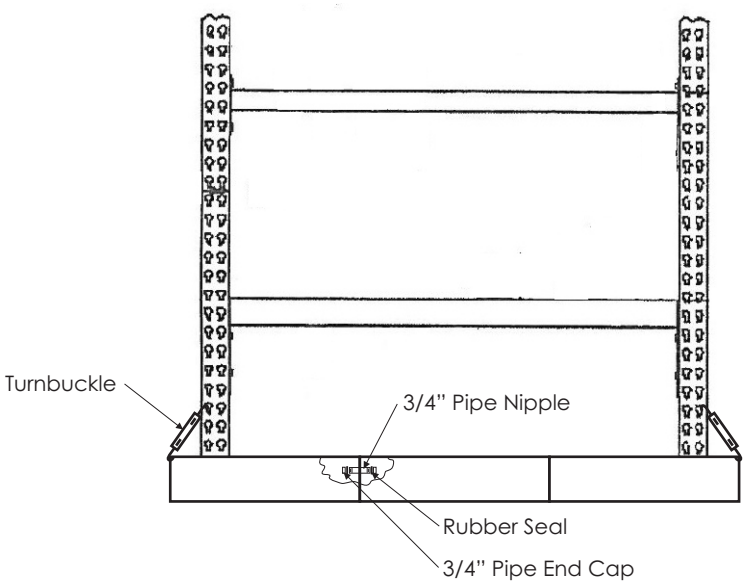
Rack Assembly

1. Determine the location of the Tank system and measure the length, width and height to ensure that the system is not obstructed. The minimum distance the tanks must remain from a wall surface is 12”.
2. Remove all components and hardware from boxes and lay them out for easy identification and inventory. Assembly of the system will take two people.
3. Gather the frame sides and crossbeam members form the shipping pallet and stand one of the ends upright. Measure approximately 50” from the ground and find the nearest keyhole slot. Measure and mark the other frame side in the same locations for the front and back crossbeam.
4. Insert one of the crossbeams with channel facing up into the key hole slot on the side frame and place the other end into the keyhole slot on the other frame.
5. Crossbeams are equipped with safety locks that snap into place locking the cross beam onto the side frame. Ensure that the safety locks are fully engaged. A small rubber or plastic mallet may be needed to properly engage the crossbeams.
6. Measure 78” from the ground and find the next set of keyhole slots for the second crossbeam location.
7. Insert the second set of cross beams with the channel facing up into the keyholes and lock tabs into place (this may take a small plastic mallet to knock into place).



♦ Containment Pan Assembly - Optional Item

1. Lay containment pans together so that the sides are next to each other in the location that the tank system will be placed. Once the pans are together they are difficult to move around by hand.
2. Containment pans are held together by ¾" close pipe nipples, flange seals and nuts. Place the ¾" close pipe nipple through the holes located on the side of the pan.
3. For pipe fitting joining pans together, place a rubber washer on each side of the pipe nipple that is through the hole in the pan sidewall.
4. Thread a nut on each side and tighten down.
5. Do the same step for each middle hole.
6. For side hole on the outside of the pan use the pipe cap on one side of the pipe nipple and a nut on the other.
7. Place the provided metal brackets evenly spaced on the sides of the pan and bolt them to the floor. This will help secure the unit.
8. Place the tank racking into the containment pan.
9. Attach the turnbuckles to each leg and through the holes provided on the containment pan.
10. Tighten the turnbuckle to give more rigidity to the framing.
11. Place the small grates into the containment pan on the outside of the racking and place the wider grates on the inside of the racking.



Liquid Level Gauge Assembly

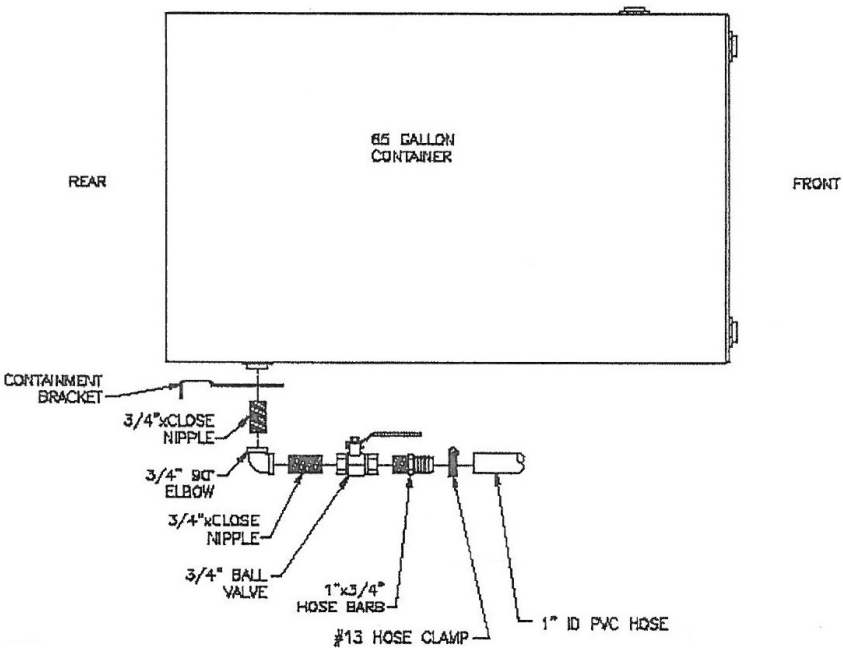
Trico Liquid Level Gauges are designed to give proper indication of fluid level within Trico's Spectrum Oil Storage Systems. Proper installation of this product will ensure long lasting life and proper sealing. Gauges come standard with a brass sight guard to prevent accidental breakage of the sight glass. Sight glasses are made of Borosilicate (Pyrex™) that prevents damage due to heat and cold.

1. Remove Liquid Level Gauge from shipping container, inventory items and inspect for damage.
2. Apply thread sealant to the 3/4” NPT male JCI adapter and thread it into the bottom hole on the front face of the tank and tighten down.
3. Find the 3/4” NPT hex bushing and apply thread sealant to the male threads and thread it into the top hole on the front face of the tank.
4. Next apply thread sealant o the 3/8” NPT end of the 1/4” tube adapter and thread it into the hex bushing placed into the top front hole of the tank.
5. Cut a piece of 1/4” polyethylene tubing to about 1.5” in length, a longer length is better and the tubing can be trimmed if needed after installation.
6. Place the liquid level gauge assembly so that the JCI male end connects with the female end located at the bottom front hole on the tank.
7. Align the gauge so that it is in the vertical position and tighten the JCI nut.
8. Place the 1/4” tube into the connectors of the tube fittings at the top of the level gauge by pushing in and then pulling out to lock the tube in place. If the tubing is too long it can be removed by pushing the adapter inward holding the connector tab in place and pulling out. Trim the tube and place the tube adapter back into the 1/4” tube.
9. Repeat steps to install all liquid level gauges onto tanks.

Caution: All liquid level gauges come preassembled and sealed at the factory. Do not loosen end caps; doing so could damage seals causing leakage.

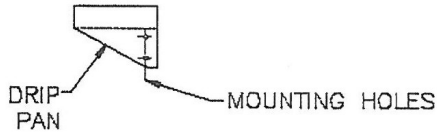
Tank Assembly

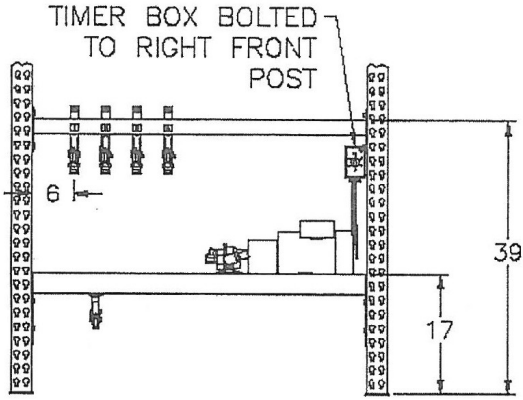
1. Thread the ball valve assemblies together with thread sealer using the 1-1/2” polyethylene fittings. The order is close nipple, 90 elbow, close nipple, ball valve, 1-1/2 hose barb(see drawing).
2. Assemble the ball valve assembly into the large hole on the bottom of the tank by placing the tank clip through the assembly and threading the assembly to the tank. The tank containment brackets will keep the tank from sliding off of the crossbeam when placed onto the rack.
3. A ¾” elbow and barb fitting is then threaded onto the top hole for the breather hose assembly.
4. Once fittings are placed onto the tanks lift each tank onto the racking starting with the first row. Make sure the tank containment brackets are placed over the crossbeams.

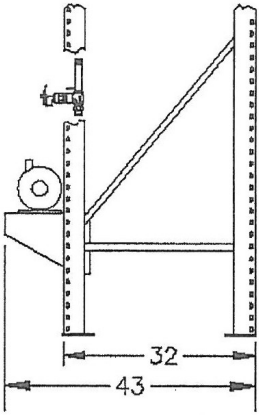


Drip Pan Assembly

1. Mark the location of the drip pan so the top of the drip pan is 17” off of the ground (see drawing).
2. Assemble the drip pan drain assembly by threading together with a 90 degree elbow a 3/4” pipe nipple and the drain faucet.
3. Thread the faucet assembly into the drain hole location on the bottom of the drip pan.
4. Use the hardware provided to mount to drip pan to its location.
5. Using the hardware provided mount the pump and motor assembly to the far right side of the drip pan, utilizing the rubber mounts.
6. Place the small grates into the drip pan.

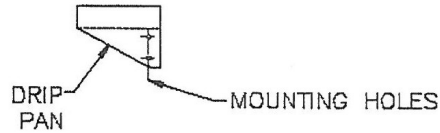


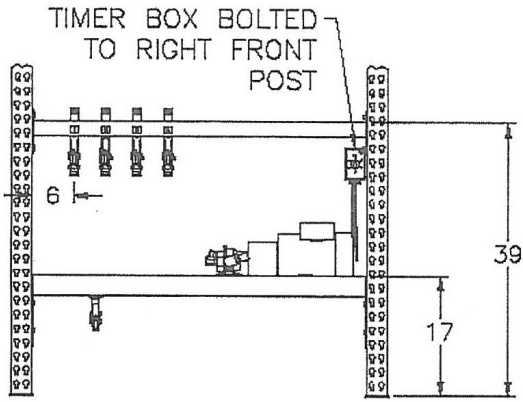


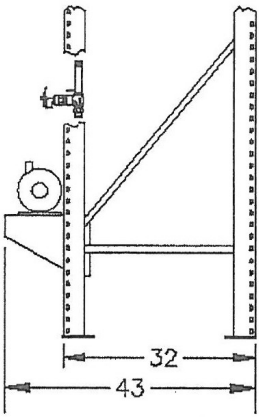


Tank Valve Assembly

1. Measure the location of the tank valve crossbeam at a height of 39” from the ground (see drawing).
2. Mount the tank valve crossbeam into location using the available hardware placing the channel inward.
3. Place the tank valve assemblies onto the crossbeam by rotating the locking lug horizontal and inserting the valve assembly into the crossbeam.
4. Position the first set of valve assemblies to the further left and rotate the locking lug to the vertical position.
5. Keeping the locking lug in the vertical position tighten the bolt at the back of the locking lug unit tight.
6. Repeat steps for the rest of the valve assemblies.
7. Thread the 90 degree elbow to the top of each valve and seal with thread sealant.
8. Thread a hose barb into the 90 degree elbow on the valve assembly and seal with thread sealant.

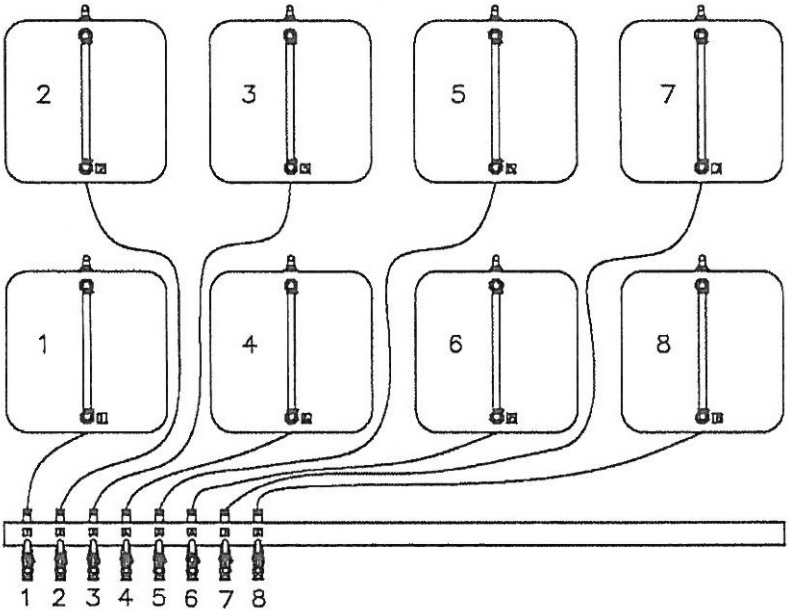




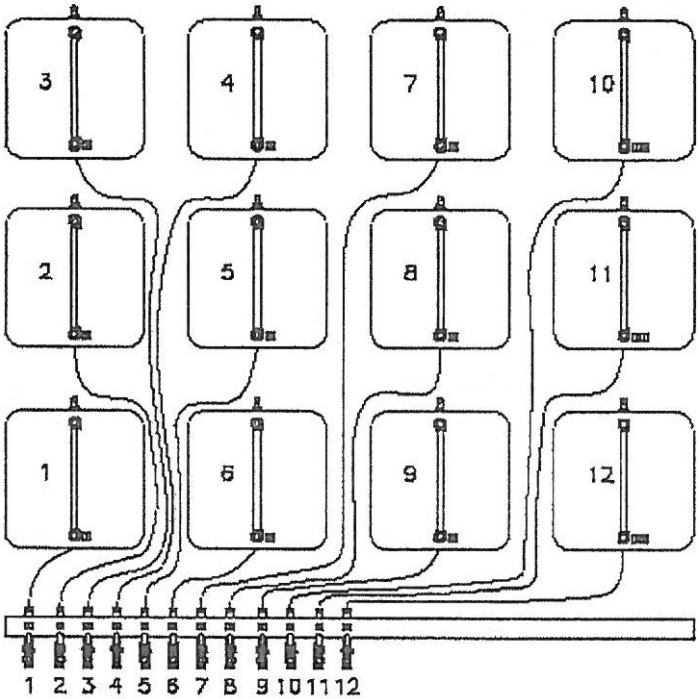


Hose Assembly

1. Cut lengths of hose that is long enough to go from each tank barb to each valve according to the tank layout (see drawings).
2. Push each hose onto the appropriate connection and secure with a hose clamp.
3. Repeat steps for each tank. Note the location of the tank with each valve.



⧫ Hose Assembly - cont.



Breather Manifold Assembly

1. Desiccant breather mounting brackets are placed at the top location of the second tank crossbeam and slide into the keyhole slots just like the crossbeams.
2. On either the top or bottom the desiccant breather is threaded onto the support.
3. A hose barb is then thread onto the opposite side.
4. There is one common breather for each row of tanks.
5. Cut lengths of the 3/4” hose to fit in between the top fittings. There should be an elbow and a barb at the very end of each tank row and T barb fittings on all other tanks.
6. Connect a length of hose from the last T-barb fitting to the barb fitting on the breather manifold.
7. Repeat the steps for the second row of tanks.