

TRANSTANK OPERATIONS AND MAINTENANCE MANUAL

**STANDARD
CONTAINERISED TANKS**

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1. OVERVIEW

This manual contains a general overview of Transtank products and equipment. Customised tanks are not covered in this manual.

All written and visual data contained in this document reflects the latest product information available at the time of publication.

Transtank Pty Ltd reserves the right to make changes at any time without notice.

1.1 INTRODUCTION

Congratulations on purchasing Australia's most up to date and versatile fuel storage system. In order to obtain the most from your purchase please read this manual thoroughly before installing or using your Transtank equipment.

Transtank is an Australian owned manufacturer and marketer of portable, self contained, hydrocarbons storage and dispensing equipment.

In general, the Transtank unit is designed around ISO dimensional requirements for shipping containers. Portability is the key design feature of Transtank unit and it can be easily and economically transported by rail, road or sea.

The design of the Transtank unit includes 'self bunding' and the tank can be situated onsite, within nominated separation distances, without the need for an external bund to be constructed. This feature also allows a Transtank unit to be readily relocated if required, without the need to construct any additional bunding.

For the most up to date information regarding Transtank equipment and products please refer to our web site *www.transtank.com*.

1.2 STANDARDS

Transtank equipment is designed to meet the following standards. These standards should continue to be used in the ongoing operation, maintenance and any changes or additions:

UL142 / ULCS601

STEEL ABOVEGROUND TANKS FOR FLAMMABLE AND COMBUSTIBLE LIQUIDS

UL142 / ULC142 ULCS601 (Canadian approval) covers the design and testing requirements for above ground tanks for the storage of flammable and combustible liquids. Nominated Transtank equipment has been designed and independently tested / verified by Underwriters Laboratories to comply with this standard.

It should be noted that the testing process is a continual ongoing requirement to retain approval to this standard.

AS1692 - 2006

STEEL TANKS FOR FLAMMABLE AND COMBUSTIBLE LIQUIDS

AS1692 - 2006 covers the design requirements for tanks used for the storage of flammable and combustible liquids. Transtank equipment is designed to meet or exceed these requirements.

AS1940 - 2004

THE STORAGE AND HANDLING OF FLAMMABLE AND COMBUSTIBLE LIQUIDS

AS1940 - 2004 is the Australian standard covering the design, operation and maintenance of flammable and combustible liquid storages. Where applicable Transtank equipment is designed tanks to comply with equipment ise designed to meet the requirements of AS1940 – 2004. It is the customers responsibility to ensure the tank is installed to this standard, if correctly installed.

An up-to-date copy of AS1940 - 2004 should be kept on-site at all times and referred to regularly in addition to any recommendations in this manual.

OTHER

Transtank equipment also complies to the following:

SANS10131 – 2004 South African standard

CSC approval for shipping of certain tanks.

Several other Australian Standards are referenced in AS1940 - 2004.

A summary of related Australian standards is listed below:

AS1020 The control of undesirable static electricity

AS1692 - 2006 Tanks for flammable and combustible liquids

AS1851 Maintenance of fire protection equipment

AS2865 Safe working in a confined space.

AS2683 Hoses and hose assemblies for petroleum products

AS3000 SAA Wiring Rules

Australian Standards are available from Standards Australia www.saiglobal.com.

1.3 REGULATIONS

Some State and Local Governments may have their own regulations governing the storage of flammable and combustible liquids, as well as environmental protection regulations.

Some states require a licence or registration to store and / or sell fuel. Please check with your state and local authority.

In some states the Environmental Protection Authority may require licensing and / or approval of bulk fuel or lubricants storages, and may require the installation of water run off

protection devices. Please check with your individual state EPA office for specific requirements.

Please check all State and Local Government regulations in the area before installation as these may take precedence over AS1940.

2. GENERAL INFORMATION

A Transtank unit is a double walled, self-bunded construction so do not require a separate spill containment bund. Where appropriate the tanks are CSC approved for shipping containers for ease of transport and handling. Portability is the key design feature of a Transtank unit.

Generally, the main features are :

Transtank equipment is designed and certified in compliance with UL142 / ULCS601 Steel Above Ground Tanks for Flammable and Combustible Liquids where appropriate.

Tanks are designed in accordance with AS 1692 for Flammable and Combustible Liquids and AS 1940 The Storage and Handling of Flammable and Combustible Liquids.

The tanks are made up of an internal fuel storage tank (rectangular design), this internal tank is surrounded by an external tank (or skin) providing the “self bunded” functionality of the design.

The tanks are designed to be used only in outdoor applications.

Venting both primary and interstitial is in accordance with requirements of UL142 / ULSC601 and AS 1940.

The tank fill point is compliant with AS1940.

A spill box is provided for overflow at the fill point.

An overflow protection valve is installed in the fill pipe of the tank to comply with AS1940 and is also fitted with an audible high level alarm.

Two dipsticks are provided with each tank, one for dipping the main (product) compartment, the other is provided to monitor the interstitial space between the inner and outer wall for leakage.

The outlet connection on the tanks are provided with internal anti-syphon protection.

A permanent ladder and platform are provided for ease of inspection and access, and complies to AS1657.

Pressure vacuum vents can be fitted to prevent the entry of dust and contaminants. This will also limit loss of vapor from the tank.

3. INSTALLATION

3.1 SITE PREPARATION

The relevant site area and plant shall be prepared and comply with AS1940 in a way that reduces the potential for fire, explosion, or exposure of persons to a hazardous substance.

Precautionary measures shall include the following, as appropriate:

- a) Identification of both the equipment to be worked on and other affected equipment.
- b) Depressurisation and disconnection of such equipment.
- c) Isolation and locking-off of the equipment from other equipment.
- d) Purging of the equipment.
- e) Where the work to be carried out may impact upon hazardous substances, the removal of those substances from the immediate vicinity is required.
- f) Sealing-off of sewers.
- g) Provision of appropriate fire-protection equipment.
- h) Testing of the work environment for flammable or hazardous vapours and oxygen content.

Transtank also recommends you carry out a risk assessment as part of the precautionary measures.

3.2 TANK FOUNDATION

Transtank equipment is designed to be placed on a hard level surface such as a concrete slab, earth hardstand or concrete footings; no bunding required under normal conditions.

The site must have adequate bearing capacity for the weight of the tanks and associated equipment.

If your surface isn't hard and level and concreting isn't an option we suggest using a Transtank skid in conjunction with your Transtank unit. Also take into consideration the likelihood of floods and other naturally occurring events.

The following drawings are available on request for surface preparation:

TT-SD00-19002 : Concrete strip footings located at either end of a Transtank unit

TT-SD00-19003 : Single Concrete foundation beneath a Transtank unit

TT-SD00-19004 : Earth Hardstand to support a Transtank unit

3.3 LIFTING AND UNLOADING

Tanks are supplied with crane lifting lugs located at the top of the unit, plus shipping container twist-lock points. Either of the above can be used for unloading or moving the tanks.

Important Notes:

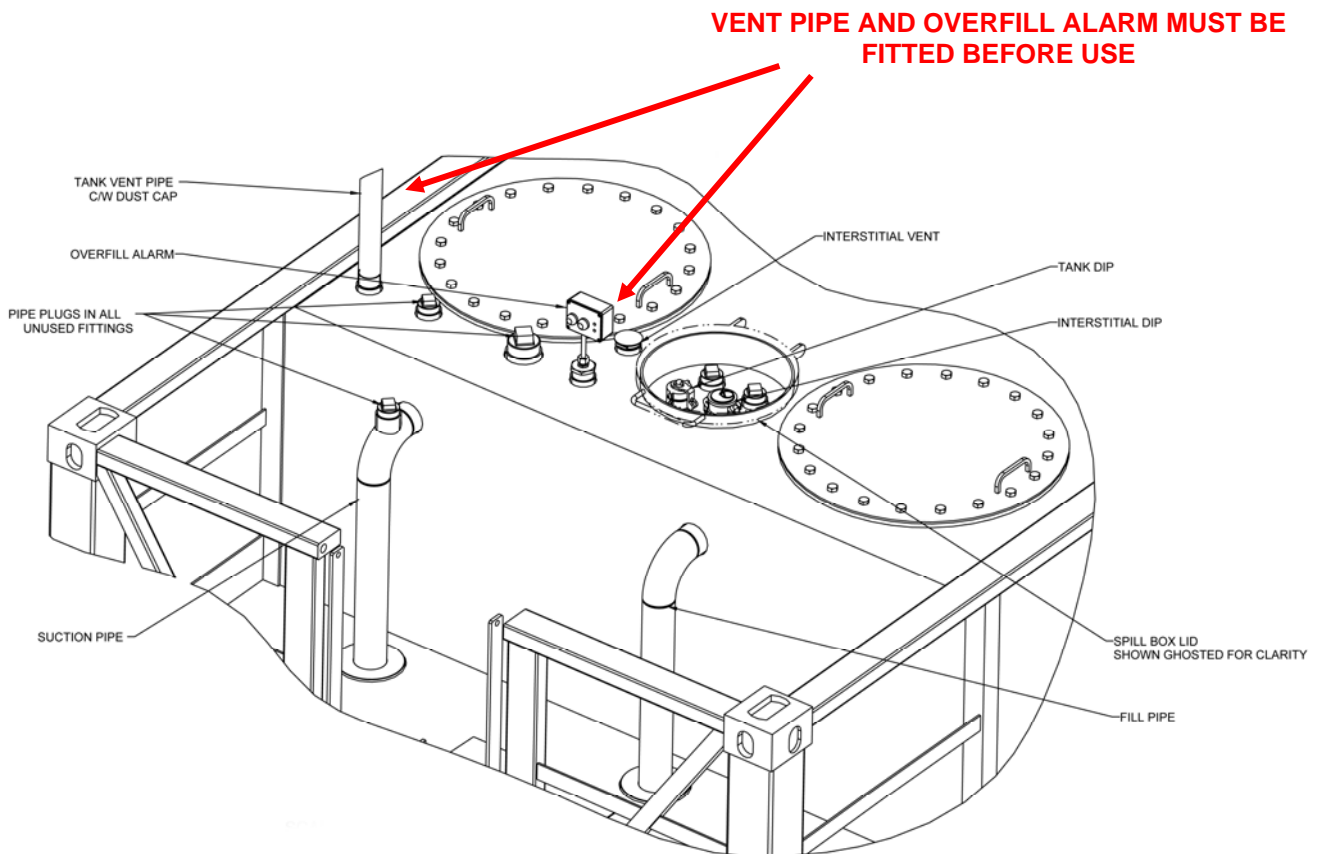
- The tank lifting attachments are only designed to be used when the tank is EMPTY.
- Only competent persons with suitable lifting equipment should be used to carry out any tank unloading or lifting.
- Care must be taken with pumping equipment and accessories when unloading

3.4 UNPACKING

Although Transtank equipment is designed for ease of installation, a number of components are packaged for transport and must be unpacked and **installed prior to use**.

These include:

- Overfill Warning Alarm
- Vent Pipe and Dust Cap



This diagram is a guide only and layout may vary between Transtank units due to product improvement.

VENT PIPE

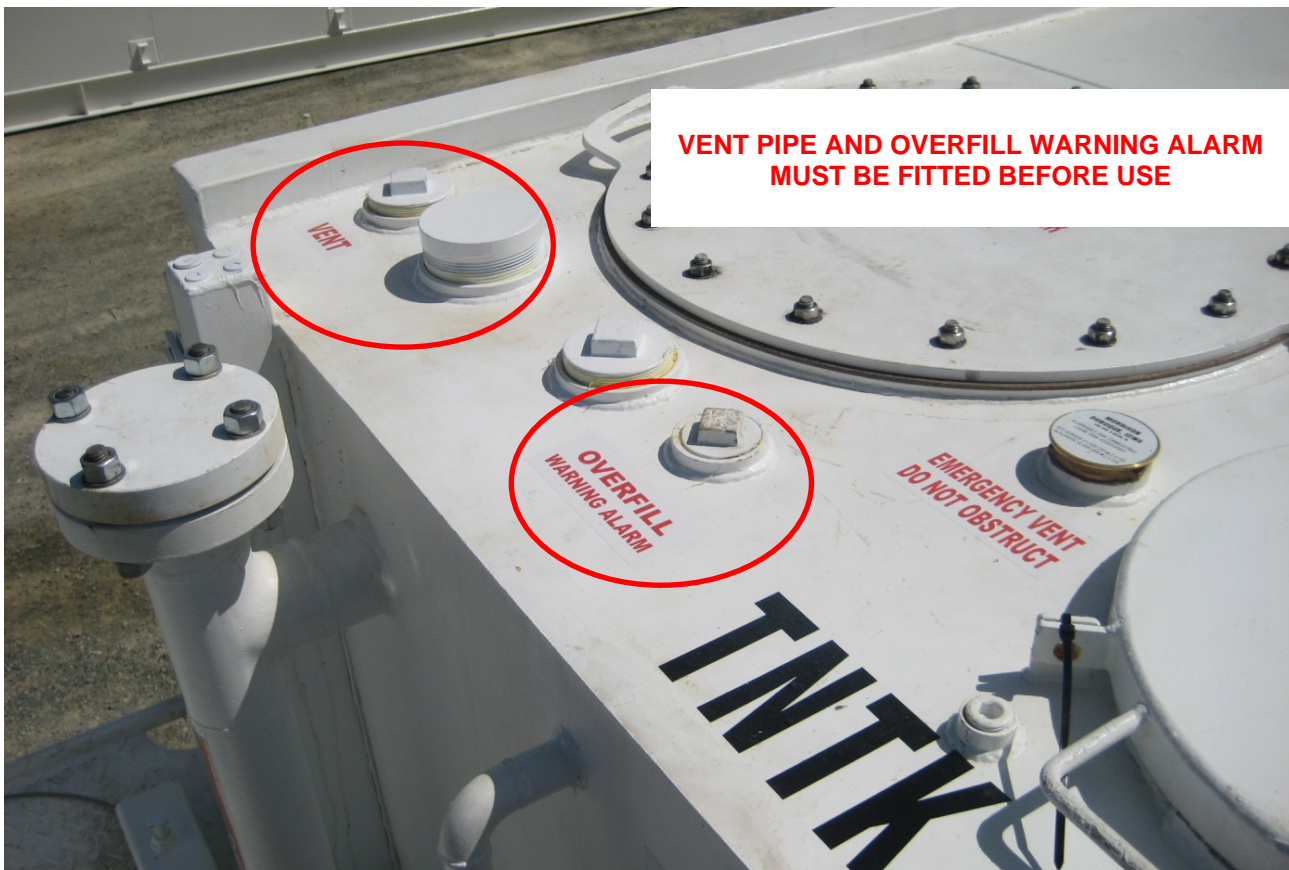
The Vent Pipe should be screwed into the 50nb BSP female housing located on the top of the tank, marked VENT. Thread tape or other suitable thread sealant should be used when mounting the air vent to the tank unit.

The vent pipe is generally packed in white PVC tubing and secured to the pump bay where fitted.

OVERFILL WARNING ALARM

The Overfill Warning Alarm should be screwed into the 50nb BSP female housing located on the top of the tank, marked OVERFILL WARNING ALARM. Thread tape or other suitable thread sealant should be used when mounting the Overfill Warning Alarm to the tank unit.

3.5



3.5 ELECTRICAL (POWER REQUIRED)

The Transtank unit should be connected to the site electrical system (where appropriate) by a suitably qualified electrician using only adequately rating components to individual State requirements and in accordance with AS3000 and AS1940.

The Transtank unit should be earthed to ground as detailed in AS3000, AS1020 and lightning protection for flammable tanks as detailed in AS1768.

If the product receipt or loadout is planned to occur at night, a suitable lighting system should be installed.



A view of the Pump Bay showing Electrical Input

3.6 PROTECTION

The installed tank must be protected from vehicular collision by adequate barriers or bollards where appropriate.

4. GENERAL TANK DETAILS

A Transtank unit typically comes with the following fittings:

At the end of the tank:

- Tank Inlet / Fill Connection
- Tank Outlet Connection

On top of the tank:

- Normal / Free Vent
- Emergency Vent
- Dip Fitting with Dip Stick (for product)
- Dip Fitting with Dip Stick (for interstitial space; leak detection)
- Overfill Warning Alarm
- Combined Low Drain and Water Drain
- Top Access Manhole (Confined Space Entry)

Inside the tank:

- Overfill Protection Valve (float actuated)
- Anti-syphon Valve

LEFT SIDE**RIGHT SIDE**

The front view of a Transtank unit with Pump Bay fitted



4.1 TANK INLET OR FILL

The standard Transtank unit fill fitting is a 3" (80nb) male camlock fitting located at the front of the tank, on the right hand side. (Note that some tanks may be configured differently to suit customer requirements).

Some Transtank units are set up with a tanker unloading pump, whereas others utilise the delivery truck's pump. In either case, the tank inlet pipework should include a check (one-way) valve to prevent any backflow on completion of delivery.

An anti-syphon hole is also provided in the internal fill pipe to prevent product siphoning out of the tank fill point.

All Transtank units also include an internal overfill protection "float valve" on the tank inlet line which will shut off flow into the tank in the event that the tank level increases to more than 90% - 97% (depending on safefill settings which may vary between Transtank units) of the tank's capacity.

4.2 TANK OUTLET

The tank outlet is a 3" (80nb) ANSI 150 flanged fitting located at the front of the tank, on the left hand side. (Note that some tanks may be configured differently to suit customer requirements).

All Transtank units include an anti-syphon valve (or valves) fitted internally on the tank outlet line, to prevent the contents of the tank from syphoning out should there be a leak or break in the outlet pipework or equipment. The valve relies on outlet pump suction to open it.

Note: The anti-syphon valve is designed to protect against accidental syphoning of product in the event of a downstream equipment failure. It should not be used as the only or primary method of preventing product release from the tank. It should be used in conjunction with other manual or automated valves.

Various pumping arrangements are available depending on customer requirements.

The tank suction pipe is positioned to draw product from close to the bottom of the tank, but are designed to leave a quantity of "unpumpable" product in the tank to prevent small

amounts of sediment/water from being discharged from the normal outlet. Thus, when no further product can be pumped out of the tank, some product will still remain.

4.3 DIPSTICKS

A dipstick is located beneath the cap at the top front of the tank. This dipstick is graduated for the nominal capacity of the tank and shows the maximum safe fill level. The maximum safe fill level should never be exceeded.

Note: Dipsticks give a good indication of tank contents but are normally supplied as a “standard” dipstick for a particular tank size. ie: They are NOT specifically calibrated to each individual tank, and minor variances may occur as a result of tank manufacturing tolerances.

A second dip fitting fitted with a non graduated alloy dip stick is provided for checking product in the interstitial space.



Top view of Transtank showing Dip Sticks

Dipping Procedure:

- Open the dip cap from the upwind side and raise the dipstick to a height where the product level can be seen
- Note the approximate level of the product
- Wipe down the dipstick with an absorbent rag
- Return the dipstick to the tank, lowering it rapidly to a point 50-100mm from the bottom and then slowly until the stick gently touches the bottom of the tank
- Pause with the stick in contact with the bottom of the tank and raise it quickly to where the liquid level can be read
- Record the reading
- Repeat the above twice more, to obtain 3 readings
- Take the average of the three readings as the dip for the tank
- Return the dipstick to the tank
- Refit or close the dip cap

4.4 WATER DRAIN

Water contamination increases static electricity generation and promotes biological growth which can be difficult and expensive to remove as well as causing contamination and filter blockages.

Water in fuel or lubricants is also undesirable because of the damage it can cause to engines and fuel systems. Water can be received with product delivery, can occur through leaking or incorrectly fitted tank-top fittings and occurs naturally as the result of condensation in tanks during cooler nights.

It is important that water is regularly removed from your Transtank unit.

Transtank units are constructed with a purpose built water catchment sump located at the front of the tank. The floor of the tank is sloped towards the front of the unit, creating a low point at the front of the tank to collect water.

Fuel and lubricants are lighter than water and will therefore sit on top of any water in the tank.

CHECKING FOR WATER

Checks for water should be made weekly and should be checked via the dip stick (during a normal dipping procedure).

To do so:

- Remove the dipstick and apply a small amount of water finding paste onto the bottom front face of the dipstick. Smear the paste evenly over the lower 100-150mm of the dipstick
- Insert the dipstick ensuring it touches the bottom of the tank, then remove it and check to see if the paste has changed colour from green to vivid purple (This indicates the presence of water in the bottom of the tank)
- If more than 10mm of the paste has changed colour, perform a water drain on the tank to remove the water

REMOVAL OF WATER

Water can be removed from tanks via the dip fitting (or through the top water drain fitting installed on some tanks).

Water removal from tanks requires the use of Personal Protective Equipment similar to bulk product handling, i.e. safety footwear, eye protection and PVC gloves.

- Use a metal drain bucket, with earthing lead and clamp attached.
- Remove cap from the water drain point.
- Insert manual (non powered) “Thief Pump” and attach drain bucket earthing lead to the pump.
- Place bucket under the pump outlet and operate pump. Continue pumping until no water is found.
- Record the fact that the tanks have been inspected and drained, and record the quantity drained.
- Dispose of drained product into site approved oil waste disposal system.

WARNING: DRAININGS CAN CAUSE DAMAGE TO THE ENVIRONMENT. DO NOT POUR DOWN DRAIN AND DISPOSE OF IN ACCORDANCE WITH LOCAL REGULATIONS!

4.5 MONITORING OF INTERSTITIAL SPACE

Transtank units have an interstitial space between the inner and outer tank wall. The interstitial space is the ‘gap’ between the Transtank primary and secondary containment ‘skins’ and is the units inherent protection against leaks from the inner tank.

Should the contents of the primary containment leak into the secondary containment space, the Transtank unit will no longer be considered a self bunded tank, and rectification will be required to restore the integrity of the tank.

The interstitial state is monitored by using a dipstick to check for any sign of product. If product it is detected, it is likely than a leak has occurred in the internal tank and should be investigated immediately. Contact Transtank for further information on 1300 789 535.

To prevent over-pressurisation of the interstitial space in a fire or from other causes, a relief valve is provided. It is important that the relief valve never be disabled or removed.

4.6 ELECTRONIC OVERFILL PROTECTION (OVERFILL WARNING ALARM)

In addition to a mechanical overfill protection device, all Transtank units include an electronic overfill alarm system which will sound an alarm if the tank is filled past the set safefill level.

WARNING: THE ALARM DOES NOT SHUT OFF PRODUCT DELIVERY; IT PROMPTS THAT OPERATOR ACTION NEEDS TO BE TAKEN TO SHUT OFF PRODUCT DELIVERY TO PREVENT OVERFILLING.

The standard “Scamp” unit is powered by an internal battery. The unit should be tested monthly and the battery should be changed every 12 months.



4.7 MECHANICAL OVERFILL PROTECTION

All Transtank units include an internal overfill protection “float valve” on the tank inlet line which will shut off flow into the tank in the event that the tank level increases to more than 90% of the tank’s ultimate capacity.

Should any problems be encountered with the overfill valve, contact Transtank.

Note: The overfill valve is designed to prevent over-filling during product delivery but does not shut off 100%. It should never be relied upon to prevent overfilling in a continuous feed situation.



Inside of a Transtank unit showing Overfill Protection Valve

4.8 TANK INTERNAL FITTINGS

NOTE: While the tanks are fitted with a top manhole and access panels, the inside of the tank is considered a **CONFINED SPACE**. Under no circumstances should any person enter the tank without appropriate permits, isolations and training.

WARNING: REMOVING THE MANWAY COVER WITHOUT APPROPRIATE PERMITS AND TRAINING WILL VOID YOUR WARRANTY!

4.9 ANTI-SYPHON VALVE

All Transtank units include an anti-syphon valve (or valves) fitted internally on the tank outlet line, to prevent the contents of the tank from syphoning out should there be a leak or break in the outlet pipework or equipment. The valve relies on outlet pump suction to open it.

Note: The anti-syphon valve is designed to protect against accidental syphoning of product in the event of a downstream equipment failure. It should not be used as the only or primary method of preventing product release from the tank. It should be used in conjunction with other manual or automated valves.



Inside view of a Transtank showing Anti-syphon Valve

5. PIPEWORK AND EQUIPMENT

5.1 PRODUCT PIPEWORK

Product pipework is generally of welded and flanged steel construction plus some screwed pipework. Pipeline protective coatings and contents markers need to be checked periodically.

5.2 THERMAL RELIEF SYSTEMS

Petroleum products expand at a greater rate than steel and when subjected to rises in temperature. Where a section of line is “locked in” with a valve at each end and the temperature rises, the product expands and the pressure in the line increases rapidly.

Thermal relief systems are installed to relieve any pressure rise in “locked in” sections of pipework. Without a relief system installed around at least one of the valves closing off the line, the high pressures generated can cause the failure of flange gaskets, seals, fittings, etc. Consequently, it is important not to allow sections of pipeline to become “locked in” between valves during tank farm operations.

A thermal relief system consists of a bypass loop of pipework around an isolating or non-return valve in the main line. The bypass loop is fitted with one or more isolating valves and a pressure relief valve. The isolating valves in the loop should always be open, unless there is a product leak in the relief valve, when they may be closed and the main line valve around which the loop is fitted must be cracked open. Never close the bypass isolating valves and the main line valves in such a way that there is no relief for thermal expansion of the product.

6. PUMPING EQUIPMENT AND FUEL MANAGEMENT SYSTEMS

Transtank units are supplied with pumping equipment and fuel management systems where requested.

Any supplier provided documentation or manuals will be included with your Transtank unit.

Please read these thoroughly before operating any pumping equipment or fuel management systems.

7. SAFETY

At all times, safety must be considered an important factor in the installation, servicing and operation of the product. Skilled and technically qualified personnel should always be employed for such tasks.

WARNING: FOLLOW ALL WARNING DECALS AND SIGNS WHEN NEAR A TRANSTANK UNIT!

7.1 FUEL NOZZLES

Please do not lock or prop open fuel nozzles, this is both illegal and dangerous. The nozzle may dislodge and spill fuel onto the ground or your clothing. It can also cause petrol to overflow from your vehicle's tank.

7.2 FILLING PORTABLE CONTAINERS

Only approved containers can be filled (has Standard AS2906 label or mark) with petrol or other fuels. They must be metal or plastic containers and can be purchased from petrol stations.

Containers greater than 25 litres can build up a static charge and cause a fire or explosion. By law, filling of larger containers such as 205 litres (44 gallon) drums is illegal.

When filling containers they must be placed firmly on the ground, in the open air, not in the boot of a car or ute, as this can increase the risk of fire and explosion.

7.3 IGNITION SOURCES

Smoking - By law you and your passengers are required to extinguish your cigarette, cigar or pipe before entering a refuelling station.

Mobile phones - Mobile phones are potentially hazardous when used near a refuelling station. Dropping a mobile phone, or turning a mobile phone on or off may cause a spark, which can ignite petrol vapours. Using a mobile phone while refuelling can cause a lapse in concentration. This could result in over filling your petrol tank that may cause dangerous spills.

Static electricity - Static electricity is made by two different surfaces rubbing together and can ignite fuel vapours. This can be a problem if you get in and out of your vehicle repeatedly.

Caravans and food vans - By law you are required to extinguish all pilot lights in the ovens of mobile camper vans, caravans and food vans and gas refrigerators on entering a refuelling station. After refuelling, open up your vehicle to remove any remaining vapours.

Vehicle engines - By law your vehicle must be switched off and remain off when refuelling. Your lights must also be switched off.

Motorcycles - When filling your motorcycle neither you or your passenger are allowed to sit on or straddle the bike. Fuel spilt onto a hot exhaust engine or clothing could cause a static charge and potentially a fire, causing injury.

Jump starting vehicles - If a vehicle requires being jump started, it must be pushed away from the refuelling station. A spark could ignite fumes which could cause a fire.

7.4 FUEL HANDLING

Always take great care when handling fuel from pumps. Petrol can irritate your skin. Avoid inhaling fuel vapours whenever you can. Never let fuel come into contact with your eyes. If

you spill fuel on your clothes soak the area affected with water before cleaning it off to reduce the chance of creating a static electrical spark.

It's good practice to touch a metal part of your car with your hands before removing the petrol cap to discharge any electricity.

7.5 SAFETY AND CHILDREN

Due to the dangerous nature of the products, handle fuel, diesel and lubricants with care. For this reason young people are not permitted to dispense fuel. Only persons 16 years and older are permitted to fill vehicles. Children should not stand next to parents when they are filling the vehicle, if a splash back occurs this could cause an eye injury.

8. RECEIVING FUEL

Transtank units can be filled using an Unloading Pump (where fitted) or Truck Mounted Unloading Pump.

WARNING: PLEASE ENSURE ALL DELIVERIES ARE MADE BY AN APPROPRIATELY TRAINED DRIVER. NOT DOING SO, WILL VOID YOUR WARRANTY!

Normal traffic should be kept clear of the tanker whilst it is unloading, allowing the tanker to exit in a forward direction in an emergency without obstruction.

The Transtank units contents must be manually “dipped” to confirm there is adequate space for the tanker to safely discharge into the facilities. Each Transtank unit includes an electronic overfill warning alarm, which will go into alarm if the tank exceeds it’s maximum safe full level.

WARNING: THE ALARM DOES NOT SHUT OFF PRODUCT DELIVERY; IT PROMPTS THAT OPERATOR ACTION NEEDS TO BE TAKEN TO SHUT OFF PRODUCT DELIVERY TO PREVENT OVERFILLING.

8.1 FILLING PROCEDURE

While hoses are connected, the driver should not leave the vehicle unattended at any time.

The driver must remain in a position where he has full control over all hoses, valves and controls.

1. Park in such a position that product can be discharged without moving the vehicle. The engine should be stopped and the parking brake engaged.
2. Note the location of Emergency Stops and Fire Extinguishers.

3. Dip each of the planned receiving tank(s) to ensure there is sufficient space for the amount of product being delivered. If there are any concerns about delivery details, contact site supervisor before discharge begins.
4. Select the first receiving tank by opening the manual tank isolation valve at the selected tank. Close all other manual tank isolating valves at the other tanks.
5. Connect the bonding / earthing cable prior to any further activity.
6. Raise the locking bar over the vehicle tank outlet connections.
7. Connect the product discharge hose(s) to the correct vehicle outlet and the Transtank fill connection.
8. Open the vehicle internal valve. Open the tanker manifold valve and check the sight-glass to confirm that the product colour is correct.
9. Make sure there are no leaks from any connections.
10. Open the Transtank fill point isolation valve(s).
11. Start Pump, proceed to discharge. Change receiving tanks (one at a time) as required to match discharge plan or instructions.

TRANSTANK UNIT WITH UNLOADING PUMP ONLY

NOTE: To ensure the discharge pump is not left on inadvertently, a timer may be fitted which will only allow the pump to run for 30-40 minutes before stopping automatically. If the discharge pump stops before the discharge is complete, press the start button again to restart the pump.

The pump timer should be set to allow the pumps to run just slightly longer than is required in normal operations. If continual trip-out becomes a problem, the timer can be reset with-in the Transtank electrical sub-board (by a suitably qualified / authorised person).

12. When the discharge is complete, close the tanker manifold valves; drain the hoses into the facility; close the Transtank hose isolation valve(s) and stop the pump. Visually check that the vehicle compartments are empty.

13. Ensure both internal and external valves on the vehicle are closed.
14. Disconnect and stow product hose. Take care to avoid spillage.
15. Securely close all vehicle fill caps. Lower the locking bar over the vehicle tank outlet connections.
16. Disconnect bonding wire.
17. Complete paperwork for delivery.

FUEL SPILLS

1. If product is spilled, discharging activities and the operation of pumps and motors must cease immediately. Press pump and / or emergency stop. Warn all persons away from the area.
2. Close all valves. If less than 1 litre, hose the area down before continuing the discharge. If more than 1 litre, proceed as below.
3. Advise site / facility supervisor immediately.
4. Place the fire extinguishers within easy reach, in case of fire.
5. Guard against product flowing outside the discharge area and contain any product flow using a spill kit or any other means available (such as sand and earth).

6. If the spill has spread towards the switchboard area, turn off the main power supply and evacuate.
7. If a large amount of combustible product (eg. Diesel) has been spilt and no other hazard exists, the vehicle may be moved (if necessary) under its own power. Ensure there are no naked flames, smoking or hazardous activity (eg. welding) taking place in the vicinity. Take care not to spread the liquid even more.
8. Clean up spill. Do not proceed with delivery until all potential hazards have been controlled or removed.
9. Any contaminated clothing must be removed.

FIRE

1. Immediately stop the flow of product. Press 'Emergency Stop'.
2. Raise the alarm.
3. If possible, close all valves, and disconnect from customer's tank.
4. If safe to do so, attempt to extinguish the fire using portable fire extinguishers.
5. Remove any other vehicles to a safe distance, away from the hazardous area.
6. If the vehicle is on fire do not attempt to move it.
7. If the fire grows beyond control, evacuate any persons in the vicinity to a distance of at least 50 metres from the vehicle.

9. REFUELLING

9.1 GENERAL

The following requirements apply to the whole of the fuel facility:

- Only authorised people to use the facility
- No Smoking – No ignition sources
- No cutting, burning or welding
- Only one vehicle to be refuelled at a time (unless multiple bowsers installed)
- No vehicles to reverse

9.2 EMERGENCY STOP

An EMERGENCY STOP button is located adjacent to the refuelling facilities and will stop all product flow and isolate tanks in an emergency.

Once the emergency situation has been rectified, the emergency stop needs to be reset by pulling it back out.

9.3 LIGHT VEHICLE

To refuel at the light vehicle dispenser:

1. Stop engine, apply brakes
2. Note the location of the Emergency Stop and Fire Extinguishers
3. Lift nozzle and refuel vehicle (pump will start automatically)
4. When finished, hang up nozzle (pump will stop automatically)
5. Record the amount of fuel taken.

WARNING: FOR PROBLEMS OR FAULTS, CONTACT SITE SUPERVISOR.

9.4 HEAVY VEHICLE

NOTE: No heavy vehicle refuelling is to take place whilst a fuel delivery tanker is discharging fuel into the facility.

Heavy vehicle refuelling utilises dry break nozzle equipped refuelling hoses to permit heavy vehicles to be refuelled.

A mechanical meter is located at each discharge facility to record the amount of fuel dispensed.

NOTE: To ensure the heavy vehicle refuelling pump is not left on inadvertently, typically it includes a maximum run time timer and it will only run for ~ 15 minutes before stopping automatically. If it stops before refuelling is complete, press the pump start again to restart the pump.

The pump timer should be set to allow the pumps to run just slightly longer than is required in normal operations. If continual trip-out becomes a problem, the timer can be reset with-in the Transtank sub-board (by a suitably qualified/authorised person).

To stop fuel flow in an Emergency, hang up the hose or press the Emergency Stop Button.

1. Ensure engine is stopped and brakes applied
2. Select appropriate nozzle, open refuelling hose isolation valve
3. Reset Meter to zero
4. Connect Nozzle to Vehicle
5. Rotate Nozzle Lever to ON position
6. Press Pump Start, slowly open the hose isolation valve and refuelling will commence and the nozzle will shut off when the vehicle fuel tank is full
7. Press Pump Stop and close the hose isolation valve when refuelling is complete
8. Disconnect Hose, hang up Nozzle.
9. Record fuel received

10. MAINTENANCE AND TECHNICAL SUPPORT

10.1 PIPEWORK SYSTEMS INSPECTION & TESTING

Regular inspection and testing of pipework is required to ensure its integrity.

With the products being handled (diesel and lubricants), internal corrosion should be minimal. However, general external pipework inspections should be carried out monthly to inspect for leaks, particularly from joints, seals valves and fittings.

Periodic pressure testing of lines should not be necessary if regular external inspections are carried out.

Any underground sections of line need to be tested at least annually.

WARNING: FAILURE TO CARRY OUT REGULAR INSPECTIONS AND MAINTENANCE ON YOUR TRANSTANK UNIT WILL VOID YOUR WARRANTY!

10.2 INSPECTION SCHEDULE

| PART OF TANK | MINIMUM STANDARD TYPE OF INSPECTION | PURPOSE | MAXIMUM INTERVALS BETWEEN INSPECTIONS |
|--------------------------------------|---------------------------------------------------|------------------------------------------------------------------------------------------------|----------------------------------------------|
| Tank externals | Visual | To ensure no visual evidence of abnormal stress, leaking, or other malfunctions | Monthly |
| Tank shell and internals | Visual plus Non destructive testing as required * | To prove the integrity of the tank, | 10 Years |
| Tank supports | Physical | To ensure no visual evidence of abnormal corrosion or stresses | Yearly |
| Tank earthing | Physical | To ensure earthing bond | Six Monthly |
| Tank valves | Visual | To ensure that fittings are free of leaks and operating correctly. | Monthly |
| | Remove and full test | | 10 Years |
| Tank vents | Visual | To ensure that fittings are free of leaks or blockages and operating correctly. | Monthly |
| | Remove and full test | | 10 Years |
| Other fittings | Visual | To ensure that fittings are sound and operating normally | Quarterly |
| Foundations | Physical | To ensure foundation has not subsided and put tank at risk | Yearly |
| Walkways & Ladders | Visual | To ensure they are sound | Yearly |
| Welds, surface corrosion & paintwork | Visual | To ensure no visual evidence of abnormal stress, deterioration, leaking, or other malfunctions | Monthly |

* The frequency of testing may need to be varied according to the type of service, and non-destructive examination may be waived if visual inspection indicates that such testing is not necessary.

Notes: Visual inspection refers to a visual examination of the tank parts while physical inspection refers to visual inspection and appropriate tests to confirm the function and condition of the parts and identify any weakness, deterioration or faults.

10.3 TECHNICAL SUPPORT

TRANSTANK

PHONE: 1300 789 535

FUELGEAR

(PUMPS AND EQUIPMENT)

PHONE: 1300 789 414

AFTER HOURS: 0439 927 351

TRANSTANK ANNUAL INSPECTION CHECKLIST

| 1. TANK INFORMATION: | | | |
|----------------------|--|------------------|--|
| Site Name: | | Inspection Date: | |
| Location: | | Tank ID: | |
| Inspector Name: | | Signature: | |

| ITEM | STATUS | | | COMMENTS |
|---------------------------------------------------------------------------------|--------|----|-----|----------|
| | YES | NO | N/A | |
| Is the containment structure in satisfactory condition? | | | | |
| Drainage pipes / valves are fit for continued service? | | | | |
| Is there evidence of tank settlement or foundation washout? | | | | |
| Is there evidence of cracking or flaking in the concrete foundation? | | | | |
| Are tank supports and exterior in satisfactory condition? | | | | |
| Is water able to drain away from the tank? | | | | |
| Is tank earthing secure and in good condition? | | | | |
| Is there evidence of paint cracking, peeling or damage? | | | | |
| Is there evidence of distortion, buckling, denting or bulging? | | | | |
| Are flanged connection bolts tight and fully engaged with no wear or corrosion? | | | | |
| Is there excess water lying on the top of the tank? | | | | |
| Is there evidence of coating cracking, peeling or blistering on the top? | | | | |

| | | | | |
|-------------------------------------------------------------------------------------------------------|--|--|--|--|
| Are there any visual holes anywhere in the exterior of the tank? | | | | |
| Are vents free from obstructions? | | | | |
| Is the Emergency Vent operational? (lift as required) | | | | |
| Is the Overfill Warning Alarm operational? (change battery annually) | | | | |
| Is the mechanical overfill protection device functioning properly? (located inside tank) | | | | |
| Is the Emergency Stop functioning correctly? | | | | |
| Are there any noticeable leaks from the tank, pipework, fittings, hoses or pumps? | | | | |
| Is the electrical wiring for control boxes, pumps, lights, etc in good condition? | | | | |
| Is the site lighting functioning correctly? | | | | |
| Is all safety equipment and PPE including fire extinguishers present and functioning correctly? | | | | |
| Did you dip the interstitial for water? (drain if found) | | | | |
| Is there excess liquid in the pump bay bund? (pump out excess) | | | | |
| Are walkways and ladders in good condition and free from obstructions? | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |



A blue shaded cell means a non-conformance that requires action to resolve the problem.

11. LIMITATIONS OF THE MANUAL

This manual contains a general overview of the Transtank Containerised Tanks. These guidelines and recommendations may or may not be appropriate for every Purchaser / Rentee.

The Purchaser / Rentee is solely responsible for setting the policies and procedures needed to operate its business according to the laws, regulations, and customs of its legal jurisdiction.

The Purchaser / Rentee is also solely responsible for the effects of these business policies and procedures and the statements and actions of its employees while on the job.

Transtank reserves the right to change the contents of this manual without notification at any time.

**FOR UP-TO-DATE PRODUCT INFORMATION OR
ADDITIONAL INFORMATION VISIT
WWW.TRANSTANK.COM**