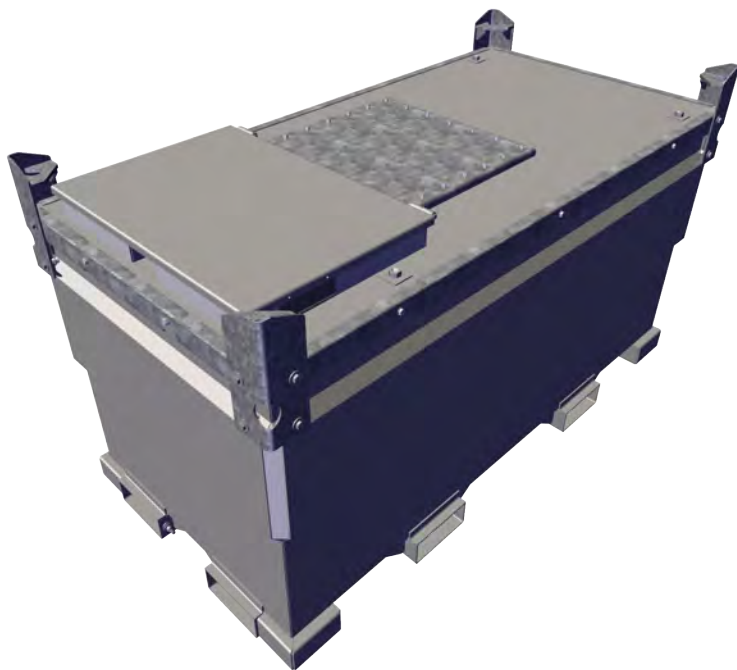


# TRANSCUBE GLOBAL

Product Manual



Aboveground tanks for flammable  
and combustible liquids

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**MODELS: 05TCG, 10TCG, 20TCG AND 30TCG**



# NUMBER ONE IN FUEL STORAGE

From a farm to a rock concert, our customers have one thing in common. They need a cost efficient, environmentally secure and safe source of fuel that's reliable and ready to go.

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# Introduction

**Thank you for choosing Western Global**



**IMPORTANT**



**Please read the contents of this manual before use.**

- Ensure all operators are fully conversant with the procedures for lifting, loading, positioning, filling, maintaining and use of the unit
- By understanding and following the information and procedures in this manual, your tank will give you many years of safe use
- Certain information in this manual is governed by law and is subject to change without prior notice. Great care has been taken to ensure that the information is correct at the time of publication.
- However, the owner's / user's sole responsibility is to ensure that they and the tank fully comply with all legal requirements. Western Global cannot and will not accept any liability for any inaccuracy or incorrectly stated legal requirements
- Western Global reserves the right to alter product specifications without prior notice or obligation

**Western Global Tanks are design approved under various Global /  
International / National / Regional standards of safety<sup>1</sup>**

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<sup>1</sup> Speak to your local / regional Western Global office for applicable standards.

# Description



## **UN IBC 31A/Y – (IBC) Intermediate Bulk Container**

The TCG range of UN IBC 31A/Y tanks has been designed to enable the safe storage and transportation of Class 3 Flammable & Combustible fluids.

- The TCG conforms to UN/ADR, CDG Regs (UK), US DOT, and Transport Canada which allows the transportation of the unit containing fuel by rail/highway/road. There is no need to drain/empty the tank before transporting
- Meets UL 142 and CAN/ULC-S601-14 standard of safety for storage of Class 3 flammable and combustible liquids
- The TCG can be used as an auxiliary fuel tank, feeding generators etc., and for refuelling other equipment via a dedicated fuel pump
- All pipework and pump systems are stored beneath a secure, lockable cabinet lid
- To aid both transporting and handling, the TCG is fitted with forklift pockets and crane sling lifting points
- Internal baffles ensure safe control of fuel movement when the unit is being lifted or transported
- Containment (Bund) has a capacity equal to 110% of the main tank's capacity
- The design enables maintenance of the containment area without speciality equipment
- The TCG has a comprehensive range of connection points to enable the attachment of various fittings and equipment
- The TCG can supply fuel to multiple feed lines

# Sign-off form

- The equipment provider should follow the general Safety Standards specified by the UN/DOT for the transport of Class 3 Packing Group II and Group III liquids.
- Anyone who will be using and/or maintaining the tank must read and clearly understand ALL Safety, Usage and Maintenance information in this manual
- Periodic reviews of SAFETY and OPERATION should be standard practice for all your equipment
- A sign-off sheet is provided for your records, showing all personnel working with the equipment

|                                                                                                                                |                    |                    |
|--------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|
| I have read and understand the information in the Operator’s Manual and have been instructed in the operation of the equipment |                    |                    |
| Date                                                                                                                           | Employee Signature | Employer Signature |
|                                                                                                                                |                    |                    |
|                                                                                                                                |                    |                    |
|                                                                                                                                |                    |                    |
|                                                                                                                                |                    |                    |
|                                                                                                                                |                    |                    |
|                                                                                                                                |                    |                    |
|                                                                                                                                |                    |                    |
|                                                                                                                                |                    |                    |
|                                                                                                                                |                    |                    |
|                                                                                                                                |                    |                    |
|                                                                                                                                |                    |                    |

# Identification marks

Each tank is supplied with 3 unique identification numbers.

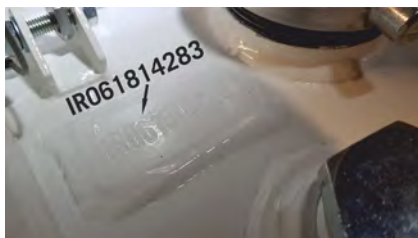
1. UN IBC Serial Number
2. Manufacturing Serial Number
3. UL/ULC Serial Number

|                     |  |
|---------------------|--|
| DATE OF MANUFACTURE |  |
| SERIAL NUMBER       |  |
| GROSS MASS          |  |
| TARE MASS           |  |
| CAPACITY @ 20°C     |  |

1, UN IBC Serial Number

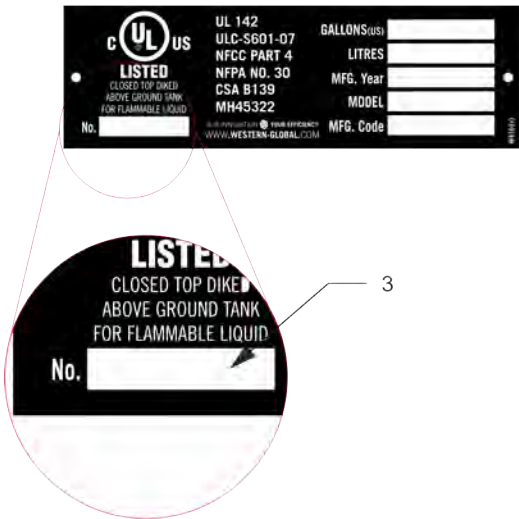
1

The UN IBC Plate is located on the external of the tank (front or Side near the cabinet area



2, Manufacturing Serial Number

The tank number is positioned in the cab area and will be permanently attached to the primary tank.



3, UL/ULC Serial Number

The UL Plate is located on the external of the tank (front or Side near the cabinet area

**Record your serial numbers here**

|                                 |  |
|---------------------------------|--|
| UN IBC Data-plate Serial Number |  |
| Manufacturing Serial Number     |  |
| UL/ULC Data plate Serial Number |  |
| Plant Number*                   |  |

\*Optional customer plant number

# Unit specification

## Capacities / Dimensions

| Model | Capacity |      |           |     |             |     |
|-------|----------|------|-----------|-----|-------------|-----|
|       | Litres   |      | US Gallon |     | Imp. Gallon |     |
|       | Nominal  | 95%  | Nominal   | 95% | Nominal     | 95% |
| 05TCG | 499      | 474  | 132       | 125 | 110         | 104 |
| 10TCG | 949      | 902  | 251       | 238 | 209         | 198 |
| 20TCG | 2091     | 1986 | 552       | 525 | 460         | 437 |
| 30TCG | 2980     | 2831 | 787       | 748 | 656         | 623 |

| Model | Weight |       |      |       |
|-------|--------|-------|------|-------|
|       | KG     |       | LBS  |       |
|       | TARE   | GROSS | TARE | GROSS |
| 05TCG | 415    | 889   | 915  | 1960  |
| 10TCG | 540    | 1442  | 1190 | 3179  |
| 20TCG | 823    | 2809  | 1814 | 6193  |
| 30TCG | 1100   | 3931  | 2425 | 8666  |

| Model | Dimension   |      |      |                 |    |    |
|-------|-------------|------|------|-----------------|----|----|
|       | Metric (mm) |      |      | Imperial (Inch) |    |    |
|       | L           | W    | H    | L               | W  | H  |
| 05TCG | 1150        | 1150 | 855  | 45              | 45 | 34 |
| 10TCG | 1155        | 1155 | 1324 | 45              | 45 | 52 |
| 20TCG | 2280        | 1150 | 1320 | 90              | 45 | 52 |
| 30TCG | 2288        | 1550 | 1323 | 90              | 61 | 52 |

## Current UN Reference number

**UN Certificate of Packaging reference number TCG(G)**

|       |                                     |
|-------|-------------------------------------|
| 05TCG | 31A/Y/** ***/B/844/160021/1726/1014 |
| 10TCG | 31A/Y/** ***/B/844/160019/3106/1726 |
| 20TCG | 31A/Y/** ***/B/844/160022/6000/3333 |
| 30TCG | 31A/Y/** ***/B/844/160020/8347/4710 |

\*\* \*\* = MM YY of manufacture.

## Legacy UN reference numbers

Legacy UN IBC Certificate of Packaging reference numbers for older North American tanks.

**IMPORTANT - FOR REFERENCE ONLY**

## Transport Canada - UN IBC Certificate of Packaging reference number

|       |                                            |
|-------|--------------------------------------------|
| 05TCG | 31A/Y/** ***/CAN / WEC 4-627 / 1661 / 923  |
| 10TCG | 31A/Y/** ***/CAN / WEC 4-627 / 2725 / 1514 |
| 20TCG | 31A/Y/** ***/CAN / WEC 4-627 / 5070 / 2817 |
| 30TCG | 31A/Y/** ***/CAN / WEC 4-627 / 7097 / 3943 |

\*\* \*\* = MM YY of manufacture

Legacy UN IBC Certificate of Packaging reference numbers for older European tanks.

**IMPORTANT - FOR REFERENCE ONLY**

## UN Certificate of Packaging reference number

|       |                                          |
|-------|------------------------------------------|
| 05TCG | 31A/Y/** ***/GB/WESTERN - 6176/2146/972  |
| 10TCG | 31A/Y/** ***/GB/WESTERN - 5250/2840/1578 |
| 20TCG | 31A/Y/** ***/GB/WESTERN - 5249/5866/3259 |
| 30TCG | 31A/Y/** ***/GB/WESTERN - 5248/8264/4591 |

\*\* \*\* = MM YY of manufacture

# Safety



**Before using this equipment and to avoid personal injury, carefully read and understand these instructions.**

## General

- If there is anything you do not understand, contact your supplier for advice
- The unit must be operated by authorised personnel only
- This unit must not be moved, filled, maintained, or operated by persons who are under the influence of alcohol or drugs, tired or unwell
- You **MUST** perform a risk assessment before using this equipment to ensure your safety and the safety of others
- Wear the correct Personal Protective Equipment for the task you are performing
- Do not wear loose jewellery or clothing that may get in the way or become trapped in the mechanism
- Inspect the unit before use, if there is any doubt about its condition, **DO NOT USE IT**
- Do not smoke – No naked flames near the tank
- Please follow all necessary Transportation of Dangerous Goods regulations and codes, National and Regional Fire Safety Codes, and other Installation Codes as applicable in your region/country of use.



No Smoking



No Open Flames



Authorised Access Only



Wear Safety Glasses



Wear Safety Helmet



Wear Ear Protection



Wear Safety Shoes



Wear Safety Gloves



Wear Coveralls

**NOTE: Please check with the local authority for any further site requirements or regional legislation. A full risk assessment may be required**

## Limitations of use

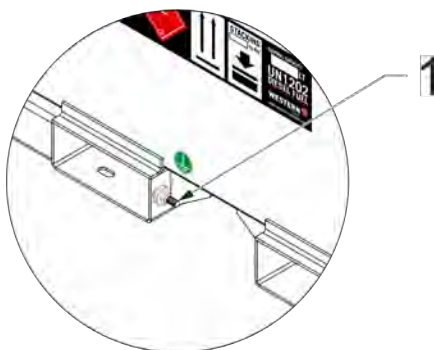
- The TCG is designed for the safe storage of CLASS 3, Packing Group II and Packing Group III Flammable & Combustible fluids, on-site or in transit as approved under UN TDG regulations
- Each unit should be filled up to a maximum of 95% of its stated Nominal capacity

## Safe practice

The storage, transportation and dispensing of Flammable & Combustible fluids are governed by law and the user/operator has sole responsibility to ensure that any such rules and regulations are abided by.

## Earthing point

- The unit is fitted with an earthing point. This can be found on the bottom frame of the unit
- Used to protect against static electricity build-up, this should be connected to a suitable earthing point, by a qualified electrician, when in use



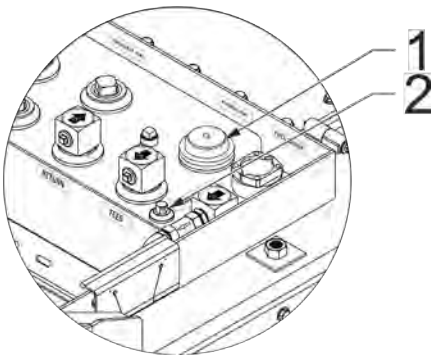
1. Earth point

## Venting

Each unit has 2 common vents installed in the Cab Area of the tank.

**IMPORTANT: Do not operate the unit if these vents are damaged or missing**

- 2" Pressure Vacuum Vent – Allows movement of air into the unit at low pressure during the pumping process and allows air out of the unit at a higher pressure to stop an overpressure of the internal tank
- ¼" Rollover Vent – Allows free flow air into and out of the tank at all times, this low-volume vent will fully close if the tank is accidentally inverted or turned on its side
- For static installation follow local regional, state, and national Fire Safety Codes and other governing Installation Codes for the Normal and Emergency Venting equipment and appurtenances.



1. 2" Pressure / Vacuum Vent
2. ¼" Roll Over Vent

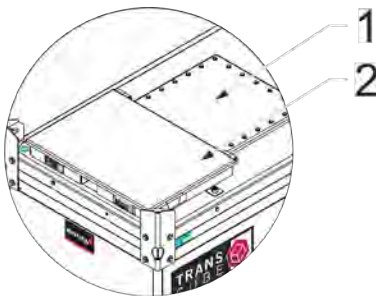
## Access and security



**SAFETY. Ingress to the inner tank must only be carried out by trained personnel after a full risk assessment has been carried out.**

### Access to the inner tank

For maintenance, inspection and cleaning, access can be made through the installed access lid on top of the tank.



1. Access Lid
2. Cabinet hatch

### Access to the Cab Area

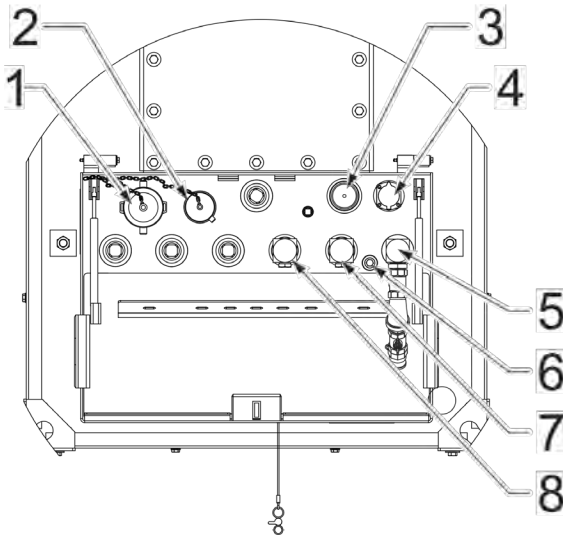
- The cabinet hatch is constructed of heavy-duty steel, care should be taken when opening or closing
- The cabinet hatch should be kept closed when the TCG is not being used, to protect the fittings and containment area from weather conditions.

### Security

- The TCG is fitted with a range of connections to enable the supply of Flammable & Combustible fluids. All the connections are housed behind the cabinet hatch, which can be locked using a suitable security padlock

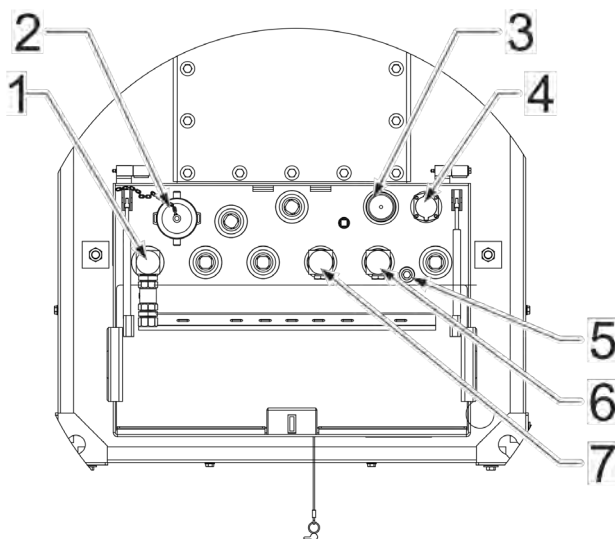
# Cabinet Overview

## Standard EU Unit



1. 3" NPTS Fill Point
2. 2" BSPP Fill Point
3. 2" NPT Pressure / Vacuum Vent
4. Fuel Gauge
5. 1" Pump Feed
6. ¼" NPT Roll-Over Vent
7. ½" NPT Feed
8. ½" NPT Return

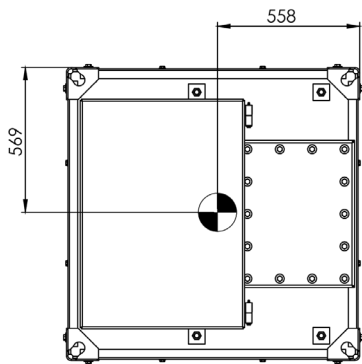
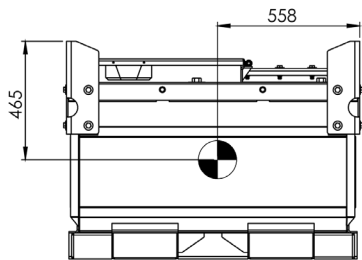
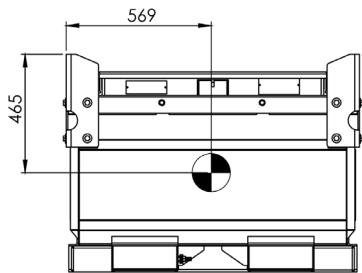
## Standard NA Unit



1. 1" Pump Feed
2. 3" NPTS Fill Point
3. 2" NPT Pressure / Vacuum vent
4. Fuel Gauge
5. ¼" NPT Roll-Over Vent
6. ½" NPT Feed
7. ½" NPT Return

# Centre of gravity

## 05TCG Centre of Gravity<sup>2</sup>

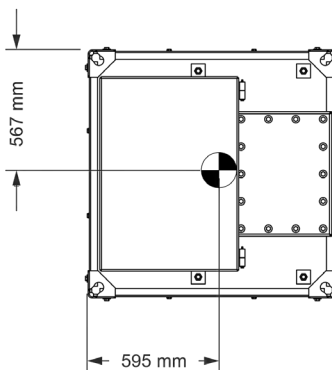
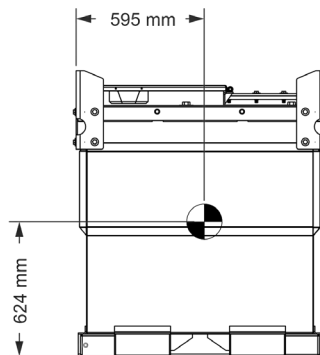
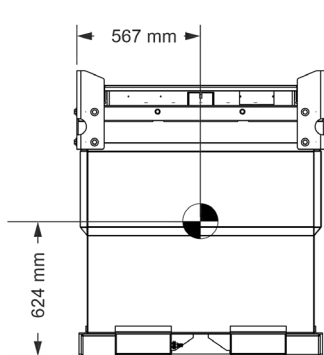


<sup>2</sup> Based on empty tank.

## 10TCG Centre of Gravity<sup>3</sup>



Centre Of Gravity

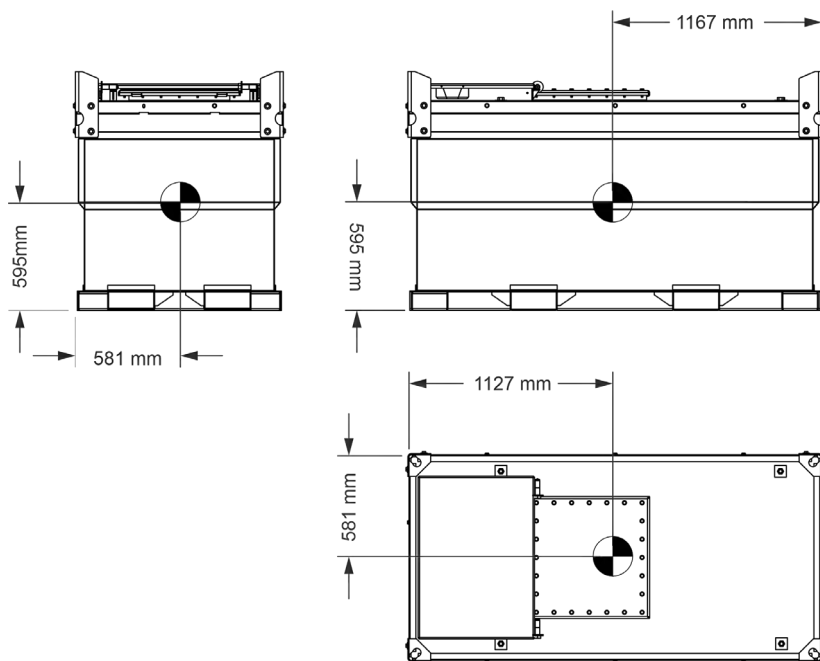


<sup>3</sup> Based on empty tank.

## 20TCG Centre of Gravity<sup>4</sup>



Centre Of Gravity

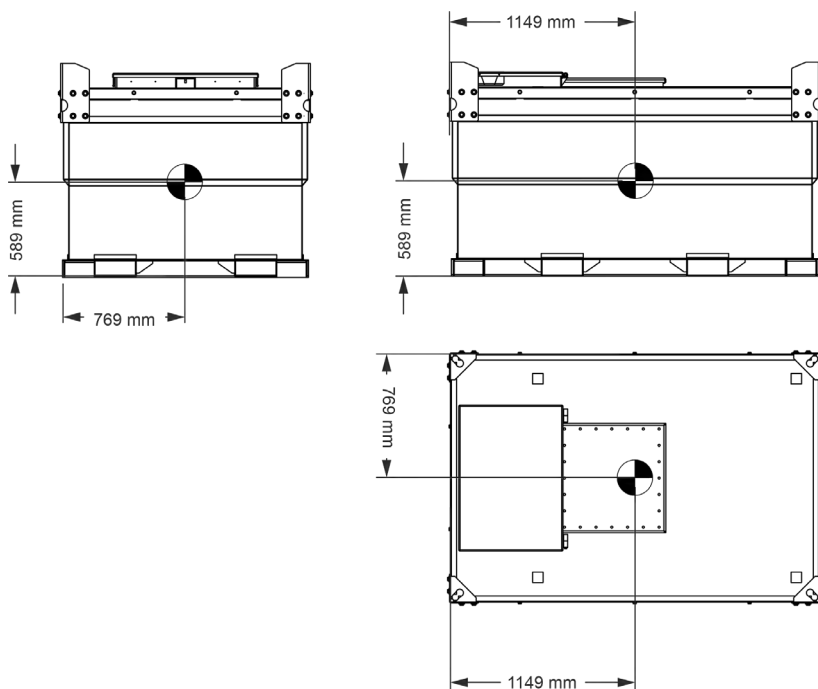


<sup>4</sup> Based on empty tank.

## 30TCG Centre of Gravity<sup>5</sup>



Centre Of Gravity



<sup>5</sup> Based on empty tank.

# Lifting & handling

**IMPORTANT: Always prepare a Lifting Plan/Risk Assessment.**

## By Forklift / Tele-handler

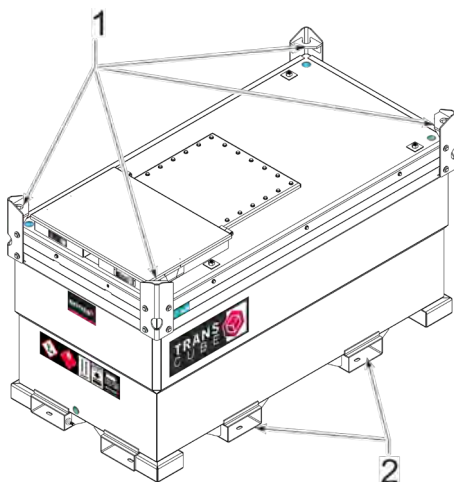
- Each TCG is fitted with forklift pockets which are designed to allow the TCG to be raised by a forklift/telehandler. The TCG can be lifted from all 4 sides. This must be considered in your risk assessment
- the total gross weight of the TCG mustn't be more than half (50%) of the forklift's maximum SWL. Ensure that the forklift's forks are set to the correct width for the TCG's fork pockets

## By Crane

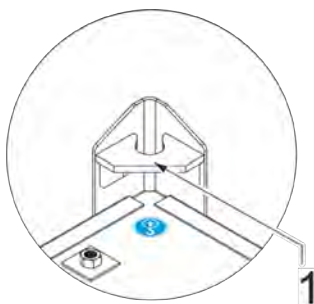
- Lifting of tanks should only be undertaken by a competently trained person
- You will require a lifting device (crane) and suitable four-leg chain slings fitted with hooks and safety catches
- Always check and obtain official confirmation from the chain sling supplier that it is both suitable in SWL and chain length
- With the chain slings correctly attached to the lifting equipment, attach each hook to the lifting points. Once attached, ensure the catches fitted to all hooks are closed
- Attach tag lines to the base of the unit to control rotation
- Lift the chains until taut and check that the hooks are correctly positioned with the catch closed and that the chains are not twisted. If a fault is found, lower the chain, and reattach it correctly
- Lift the unit until just off the ground and check that it is balanced and stable. Once you are satisfied that everything is correctly and safely set up, you can continue with the lift.

**The TCG must ONLY be lifted via the dedicated crane lifting points found in each corner. See Lifting Points**

- ALL lifting points must be used during a lift
- The lifting points MUST be inspected for condition and safe use
- DO NOT lift from the base, with polyester slings



1. Lifting Points
2. Fork Pockets



1. Lifting Point  
**LIFT HERE ONLY**

### **WARNING**

**Do not allow anyone under the raised load at any time or for any reason.**

- Use suitable tag lines to help control the movement of the unit and always keep constant communication with the crane operator
- Move slowly and smoothly to ensure full control of the unit's whereabouts
- Lower the unit to its required resting place using great care

## Positioning

Where the TCG is to be permanently positioned for use (long or short-term) certain aspects must be considered

- You should make sure that both supplying vehicle and receiving vehicle have safe and easy access to the TCG
- The position should be selected where the unit will be protected from accidental impact
- Consideration should be given to the location of overhead services such as telecommunications, power cables and overhanging obstructions. Be aware of the location of underground services, such as drains, and manhole covers
- You must also consider the ground surface and make sure it can support the weight of the TCG, its contents when full and any stored equipment such as pumps, without the risk of subsidence. It should be positioned on smooth and level ground with access available to the rear and sides
- Allow for access that may be required by the emergency services should it become necessary

## Filling

- **DO NOT FILL THE TANK WHEN DISPENSING IS IN OPERATION**
- Only fill the TCG to 95% of its nominal capacity
- Filling should only be performed by a suitably trained person and only following a full risk assessment
- The TCG must be positioned on a firm level surface, whether static, truck or trailer mounted
- Where truck or trailer mounted, ensure that the parking brake is set to ON and the wheels are chocked
- Before filling, ensure that you have a suitable spill containment kit and that you are wearing all required PPE
- Nozzle Fill - Unscrew and remove the 3" filler cap and place the filling nozzle in the 3" port.
- Hard Couple fill (EU Only) - Unscrew and remove the 2" filler cap and connect the 2" delivery hose. Remove the 3" cap to allow venting
- **Do not leave the nozzle unattended during the filling process**
- Observe the fuel level gauge for an indication of tank capacity, then once filled, replace all filler caps, and clean up any spills

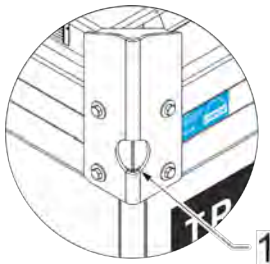
## Dispensing fuel

There are two options available for dispensing/supplying fuel. Either manually via a fuel pump and nozzle or by direct coupling to the equipment such as a generator.

- **By Fuel Pump** - For information about any pump system fitted to this TCG, please refer to the documents supplied with the pump.
- **Direct Coupling** - enables continuous fuel feed to equipment such as generators where fuel is required continuously.

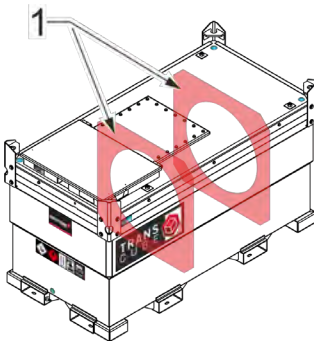
## Transporting

- **When transporting ALL ports, valves and vents must be closed**
- Ensure the pump is turned off
- Close and lock the access lid
- The TCG must be secured firmly to its means of transport
- Use tie-down points shown below



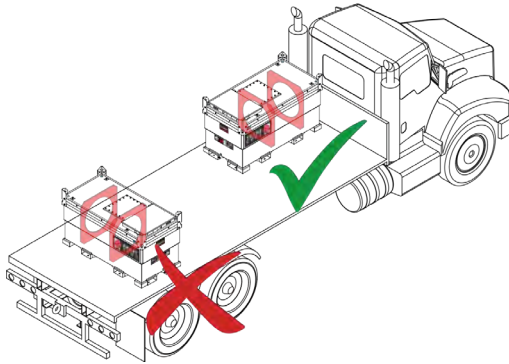
1. Tie Down Point

Each TCG incorporates baffle plates, which are situated in the inner tank. The baffle plates are designed to restrain and regulate the flow of fluid and remove the risk of damage to the tank during transport.



1. Baffles

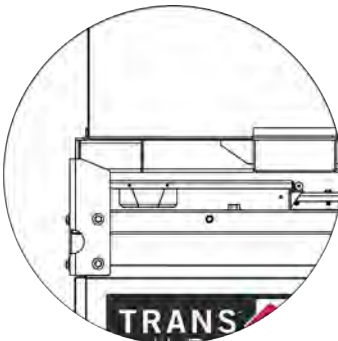
The baffle plates run the width of the unit and are only effective if the tank is loaded correctly onto the trailer, truck etc. NOTE: always load the tank as shown below with the cabinet running in the direction of travel.



**When transporting ALL ports, valves, vents, and openings must be closed**

## Stacking

- The TCG is designed with the structural strength to allow stacking 2 high when full and 3 high when empty.
- Always mate the corner brackets together to stabilise the stack.
- Use only a hoist or forklift with the required lift capacity to raise, lower or stack the tanks.



Stacking Arrangement

# Strapping charts

## 05TCG

| Depth<br>(mm) | Depth<br>(in) | Fuel Level<br>(Litre) | Fuel Level<br>(US Gallon) | Fuel Level<br>(Imp Gallon) |
|---------------|---------------|-----------------------|---------------------------|----------------------------|
| 571.5         | 22.5          | 499                   | 131.8                     | 109.8                      |
| <b>535</b>    | <b>21.1</b>   | <b>474</b>            | <b>125.2</b>              | <b>104.3</b>               |
| 500           | 19.7          | 430                   | 113.6                     | 94.6                       |
| 450           | 17.7          | 394                   | 104.1                     | 86.7                       |
| 400           | 15.7          | 357                   | 94.3                      | 78.5                       |
| 350           | 13.8          | 318                   | 84                        | 70                         |
| 300           | 11.8          | 278                   | 73.4                      | 61.2                       |
| 250           | 9.8           | 236                   | 62.3                      | 51.9                       |
| 200           | 7.9           | 192                   | 50.7                      | 42.2                       |
| 150           | 5.9           | 146                   | 38.6                      | 32.1                       |
| 100           | 3.9           | 99                    | 26.2                      | 21.8                       |
| 50            | 2             | 50                    | 13.2                      | 11                         |
| 0             | 0             | 0                     | 0                         | 0                          |

1. Highlighted on the strapping chart is the maximum safe fill level @ 95% of the nominal volume. DO NOT FILL ABOVE THIS LEVEL
2. The dip chart volume is taken from the lowest point in the tank.
3. When programming a level monitoring system, the difference in floor height at the port location (where the instrument is mounted) should be subtracted from the fill height for each volume increment line to equate to the corresponding fill height at the instrument location.

## 10TCG

| Depth<br>(mm) | Depth<br>(in) | Fuel Level<br>(Litre) | Fuel Level<br>(US Gallon) | Fuel Level<br>(Imp Gallon) |
|---------------|---------------|-----------------------|---------------------------|----------------------------|
| 1041          | 41            | 949                   | 250.7                     | 208.8                      |
| 1000          | 39.4          | 910                   | 240.4                     | 200.2                      |
| <b>970</b>    | <b>38.2</b>   | <b>902</b>            | <b>238.3</b>              | <b>198.4</b>               |
| 950           | 37.4          | 875                   | 231.2                     | 192.5                      |
| 900           | 35.4          | 840                   | 221.9                     | 184.8                      |
| 850           | 33.5          | 802                   | 211.9                     | 176.4                      |
| 800           | 31.5          | 764                   | 201.8                     | 168.1                      |
| 750           | 29.5          | 723                   | 191                       | 159                        |
| 700           | 27.6          | 682                   | 180.2                     | 150                        |
| 650           | 25.6          | 639                   | 168.8                     | 140.6                      |
| 600           | 23.6          | 594                   | 156.9                     | 130.7                      |
| 550           | 21.7          | 548                   | 144.8                     | 120.5                      |
| 500           | 19.7          | 500                   | 132.1                     | 110                        |
| 450           | 17.7          | 452                   | 119.4                     | 99.4                       |
| 400           | 15.7          | 402                   | 106.2                     | 88.4                       |
| 350           | 13.8          | 352                   | 93                        | 77.4                       |
| 300           | 11.8          | 301                   | 79.5                      | 66.2                       |
| 250           | 9.8           | 251                   | 66.3                      | 55.2                       |
| 200           | 7.9           | 201                   | 53.1                      | 44.2                       |
| 150           | 5.9           | 151                   | 39.9                      | 33.2                       |
| 100           | 3.9           | 100                   | 26.4                      | 22                         |
| 50            | 2             | 50                    | 13.2                      | 11                         |
| 0             | 0             | 0                     | 0                         | 0                          |

1. Highlighted on the strapping chart is the maximum safe fill level @ 95% of the nominal volume. DO NOT FILL ABOVE THIS LEVEL
2. The dip chart volume is taken from the lowest point in the tank.
3. When programming a level monitoring system, the difference in floor height at the port location (where the instrument is mounted) should be subtracted from the fill height for each volume increment line to equate to the corresponding fill height at the instrument location.

## 20TCG

| Depth<br>(mm) | Depth<br>(in) | Fuel Level<br>(Litre) | Fuel Level<br>(US Gallon) | Fuel Level<br>(Imp Gallon) |
|---------------|---------------|-----------------------|---------------------------|----------------------------|
| 1041          | 41            | 2091                  | 552.4                     | 460                        |
| 1000          | 39.4          | 2065                  | 545.5                     | 454.2                      |
| <b>982</b>    | <b>38.7</b>   | <b>1986</b>           | <b>524.6</b>              | <b>436.9</b>               |
| 950           | 37.4          | 1973                  | 521.2                     | 434                        |
| 900           | 35.4          | 1880                  | 496.6                     | 413.5                      |
| 850           | 33.5          | 1785                  | 471.5                     | 392.6                      |
| 800           | 31.5          | 1688                  | 445.9                     | 371.3                      |
| 750           | 29.5          | 1590                  | 420                       | 349.8                      |
| 700           | 27.6          | 1491                  | 393.9                     | 328                        |
| 650           | 25.6          | 1390                  | 367.2                     | 305.8                      |
| 600           | 23.6          | 1288                  | 340.3                     | 283.3                      |
| 550           | 21.7          | 1184                  | 312.8                     | 260.4                      |
| 500           | 19.7          | 1080                  | 285.3                     | 237.6                      |
| 450           | 17.7          | 972                   | 256.8                     | 213.8                      |
| 400           | 15.7          | 864                   | 228.2                     | 190.1                      |
| 350           | 13.8          | 756                   | 199.7                     | 166.3                      |
| 300           | 11.8          | 648                   | 171.2                     | 142.5                      |
| 250           | 9.8           | 540                   | 142.7                     | 118.8                      |
| 200           | 7.9           | 432                   | 114.1                     | 95                         |
| 150           | 5.9           | 324                   | 85.6                      | 71.3                       |
| 100           | 3.9           | 216                   | 57.1                      | 47.5                       |
| 50            | 2             | 108                   | 28.5                      | 23.8                       |
| 0             | 0             | 0                     | 0                         | 0                          |

1. Highlighted on the strapping chart is the maximum safe fill level @ 95% of the nominal volume. DO NOT FILL ABOVE THIS LEVEL
2. The dip chart volume is taken from the lowest point in the tank.
3. When programming a level monitoring system, the difference in floor height at the port location (where the instrument is mounted) should be subtracted from the fill height for each volume increment line to equate to the corresponding fill height at the instrument location.

## 30TCG

| Depth<br>(mm) | Depth<br>(in) | Fuel Level<br>(Litre) | Fuel Level<br>(US Gallon) | Fuel Level<br>(Imp Gallon) |
|---------------|---------------|-----------------------|---------------------------|----------------------------|
| 1050          | 41.3          | 2980                  | 787.2                     | 655.5                      |
| 1000          | 39.4          | 2857                  | 754.7                     | 628.5                      |
| <b>990</b>    | <b>39</b>     | <b>2831</b>           | <b>747.9</b>              | <b>622.7</b>               |
| 950           | 37.4          | 2730                  | 721.2                     | 600.5                      |
| 900           | 35.4          | 2600                  | 686.8                     | 571.9                      |
| 850           | 33.5          | 2469                  | 652.2                     | 543.1                      |
| 800           | 31.5          | 2335                  | 616.8                     | 513.6                      |
| 750           | 29.5          | 2200                  | 581.2                     | 483.9                      |
| 700           | 27.6          | 2062                  | 544.7                     | 453.6                      |
| 650           | 25.6          | 1923                  | 508                       | 423                        |
| 600           | 23.6          | 1781                  | 470.5                     | 391.8                      |
| 550           | 21.7          | 1637                  | 432.4                     | 360.1                      |
| 500           | 19.7          | 1490                  | 393.6                     | 327.8                      |
| 450           | 17.7          | 1341                  | 354.3                     | 295                        |
| 400           | 15.7          | 1192                  | 314.9                     | 262.2                      |
| 350           | 13.8          | 1043                  | 275.5                     | 229.4                      |
| 300           | 11.8          | 894                   | 236.2                     | 196.7                      |
| 250           | 9.8           | 745                   | 196.8                     | 163.9                      |
| 200           | 7.9           | 596                   | 157.4                     | 131.1                      |
| 150           | 5.9           | 447                   | 118.1                     | 98.3                       |
| 100           | 3.9           | 298                   | 78.7                      | 65.6                       |
| 50            | 2             | 149                   | 39.4                      | 32.8                       |
| 0             | 0             | 0                     | 0                         | 0                          |

1. Highlighted on the strapping chart is the maximum safe fill level @ 95% of the nominal volume. DO NOT FILL ABOVE THIS LEVEL
2. The dip chart volume is taken from the lowest point in the tank.
3. When programming a level monitoring system, the difference in floor height at the port location (where the instrument is mounted) should be subtracted from the fill height for each volume increment line to equate to the corresponding fill height at the instrument location.

# Maintenance and service schedule

| V = Visual inspection P = Physical Check L = Lubricate R = Replace |       |        |         |           |        |       |                                                                                                   |
|--------------------------------------------------------------------|-------|--------|---------|-----------|--------|-------|---------------------------------------------------------------------------------------------------|
| Item                                                               | Daily | Weekly | Monthly | 6 monthly | Yearly | Other | Reference / Comments                                                                              |
| General                                                            |       |        |         |           |        |       |                                                                                                   |
| Housekeeping                                                       |       | V      |         | P         |        |       | Check site and tank. Remove debris etc.                                                           |
| Firefighting media<br>(If fitted)                                  |       | V      |         | P         |        |       | V = Check in place and unused<br>P = Test pressure and function                                   |
| Doors                                                              |       |        | V       |           | L      |       | V = Visual inspection<br>L = Greases hinges                                                       |
| Signage                                                            |       |        | V/R     |           |        |       | Check damage and wear                                                                             |
| Tank                                                               |       |        |         |           |        |       |                                                                                                   |
| Ball valves                                                        |       | P      |         |           |        |       | P = Check operation                                                                               |
| Vents, fittings, and pipelines                                     |       | V      |         | P         |        |       | V = Visual checks for leaks and damage<br>P = physical check, bolt tightness, paint deterioration |
| Interstitial space<br>(Containment)                                |       | P      |         |           |        |       | Check for water or product                                                                        |
| Tank earthing                                                      |       |        |         | V         | P      |       | V = Visual check OK<br>P = Test continuity                                                        |
| Level gauges                                                       |       | V      |         |           | P      |       | V = Visual checks for leaks and damage<br>P = Remove and check operation                          |

# Statutory inspection and maintenance

To retain the UN IBC approval<sup>6</sup>, it is required that the owner of the TCG carries out regular inspections and ensures that a record of each inspection is kept. Where fault is found, the unit **MUST** be removed from service until the fault is rectified and the unit is retested successfully.

### Every 2 ½ years

- External inspection
- Function of all service equipment
- Leak test.

### Every 5 years

- Internal inspection
- External inspection
- Function of all service equipment
- Leak test.

**NOTE: The 2 ½ and 5-year Inspection must be carried out by a competent person**

### Record Keeping

A report of each inspection and test shall be kept by the owner of the IBC at least until the next inspection or test. The report shall include the results of the inspection and test and shall identify the party performing the inspection and test.

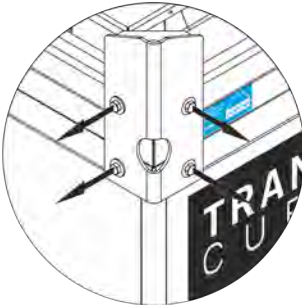
|               |               |              |                     |                 |           |
|---------------|---------------|--------------|---------------------|-----------------|-----------|
| Owner         |               |              | Date of manufacture |                 |           |
| Model         |               |              |                     |                 |           |
| Serial Number |               |              | Plant Number        |                 |           |
| Capacity      |               |              |                     |                 |           |
| Date          | 2.5 or 5 Year | Pass or fail | Comments            | Inspectors Name | Signature |
|               |               |              |                     |                 |           |
|               |               |              |                     |                 |           |

<sup>6</sup> For the United States - Periodic Testing is to be carried out by DOT certified person or approved facility under 49CFR  
For Canada – Transport Canada approved and Registered testing facility with valid certification under CAN/CGSB43.146-2022.

## Inner tank removal

For periodic inspection, you may be required to remove the inner tank from the containment. Follow local Health and Safety rules when carrying out this operation.

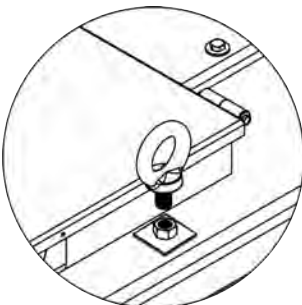
**IMPORTANT - Ensure the tank is empty before lifting.**



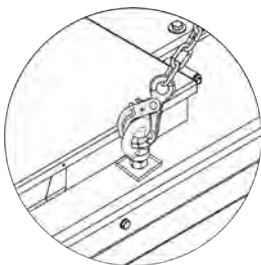
1. Remove all 4 corner brackets. Store brackets, nuts, and bolts safely



2. Remove 2 x side and 2 x end rails. Store rails, nuts, and bolts safely



3. Insert 4 x M22 lifting eyes in each corner of the inner tank

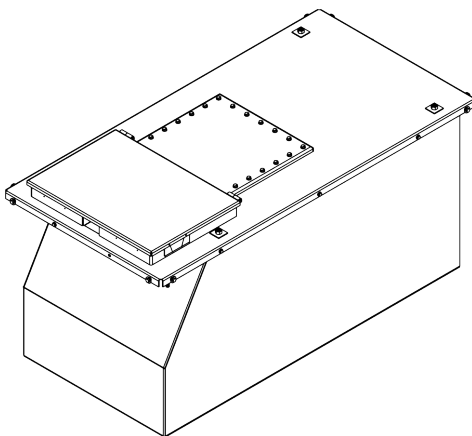


4. Using a 4-leg lifting chain attached to each corner carefully remove the inner tank

To re-install the inner tank into the containment, follow steps 1 – 4 in reverse. Always ensure the bolts are torqued.



Typical Lifting Eye M22



The inner tank was removed from the containment

# Torque settings

## Nuts and Bolts

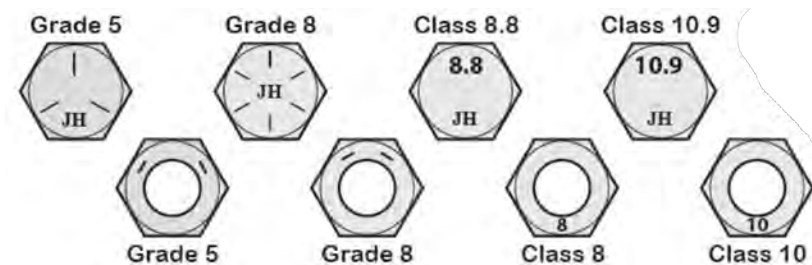
If the tank is required to be dismantled and re-assembled the tank nuts and bolts used are required to be torqued, torque settings are shown in the table below.

### Metric Torque Specifications

| Size | Typical Maximum Tightening Torque <b>Nm</b> <i>(lb-ft)</i> |                  |
|------|------------------------------------------------------------|------------------|
|      | Property Class                                             |                  |
|      | Grade 8.8                                                  | Grade 10.9       |
| M8   | <b>30</b> (21)                                             | <b>40</b> (30)   |
| M10  | <b>55</b> (42)                                             | <b>75</b> (60)   |
| M12  | <b>100</b> (74)                                            | <b>135</b> (106) |

Torque figures indicated above are valid for lightly oiled threads. Therefore, do not grease or oil bolts or cap screws unless otherwise specified.

Torque values for bolts and cap screws are identified by their head markings (property class).



# Environmental responsibility

Correct and considerate management of Flammable & Combustible fluids, their storage and transfer are the responsibility of everyone who operates or maintains this equipment. All necessary precautions should be made to prevent spills and subsequent pollution of the environment.

Have in place a clear action plan to deal with the accidental spill, no matter how small or large. Ensure that you have a Flammable & Combustible fluids spill containment kit available and that you understand its correct use.

## Spills

Should a spill occur when emptying the containment, or when filling or transferring fuel, clear the spill as quickly as possible using absorbent material. Ideally, you should use a dedicated spill kit which will contain all the necessary items to retain and remove such a spill.

- DO NOT hose the area down or use any detergents
- DO NOT allow the fuel to enter drains or watercourses
- Spills must be reported to your Local Authority
- All material used to retain and remove a spill should be bagged and collected by a registered carrier

## Containment

The TCG containment area safeguards against any spill exiting the unit and polluting the immediate area. The containment is designed to retain up to 110% of the unit's primary tank maximum storage capability.

- Check regularly for liquid in the containment
- Remove any water
- Take immediate remedial action if product or water is found

### **WARNING**

Waste may only be collected by a registered carrier.

## Disposal

When maintaining, servicing, or disposing of the TCG or consumable components, do not dispose of contaminated parts within general refuse.

Refer to local authority regulations for their correct disposal.

## Troubleshooting

The Transcube is a simple and reliable system.

Below we have listed common problems, causes and solutions that you may encounter.

If a problem is difficult to solve, even after having read through this troubleshooting section, please call your local Western Global distributor or dealer.

Before you call, please have the tank Identification Marks ready (Serial and Tank numbers)

| PROBLEM               | CAUSE                                | SOLUTION                                                                                                       |
|-----------------------|--------------------------------------|----------------------------------------------------------------------------------------------------------------|
| The pump will not run | No Power                             | Connect power wires to the correct power source                                                                |
|                       | Pump Off                             | Turn pump on                                                                                                   |
| Fuel in containment   | Loose-fitting                        | Tighten fitting                                                                                                |
|                       | Leaking Coupler                      | Replace coupler                                                                                                |
|                       | Overfilling                          | Watch the fuel gauge when filling.<br>Do not fill past 95% of the nominal capacity                             |
| Water in containment  | The lid was left open to the weather | Keep lid closed<br>Immediately remove water from the containment and dispose of per local environmental codes. |

## WARRANTY

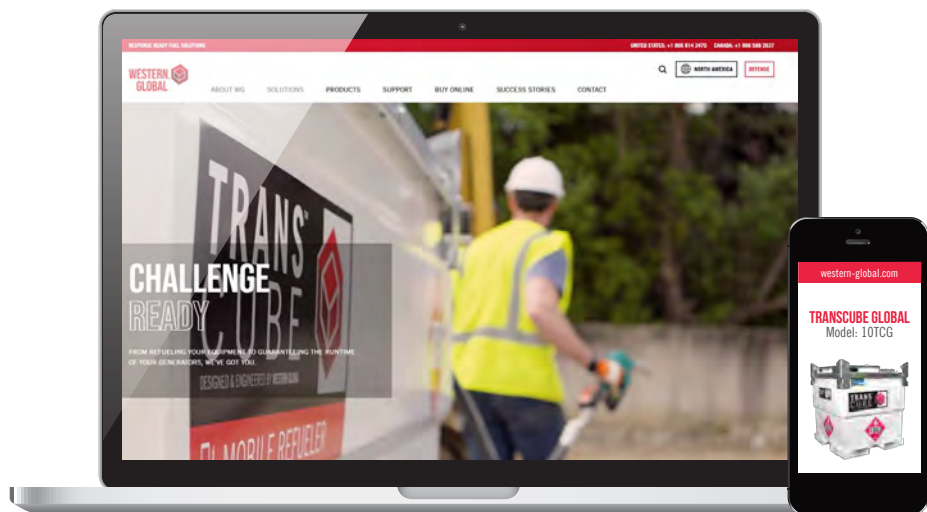
The Company undertakes to replace or repair, free of charge, any defect which the Company considers to be due to faulty workmanship or material within 36 months (or otherwise stated) of the sale date, except for:

- Defects arising from neglect, misuse, or unauthorised modifications.
- Damage caused by abuse, misuse, dropping or other similar damage caused by or because of a failure to follow transportation, storage, loading or operation instructions.
- Alterations, additions, or repairs carried out by persons other than the manufacturer or their recognised distributors.
- Transportation or shipment costs to and from the manufacturer or their recognised agents, for repair or assessment against a warranty claim, on any product or component.
- Materials and/or labour costs to renew, repair or replace components due to normal wear and tear.
- Faults arising from the use of non-standard or additional parts, or any consequential damage or wear caused by the fitting or use of such parts.

### IMPORTANT

Warranty may, at the sole discretion of the manufacturer, be voided if the scheduled service/inspections are not carried out in accordance with the logbook. The manufacturer and/or their recognised agents, directors, employees, or insurers will not be held liable for consequential or other damages, losses, or expenses in connection with, or because of, or due to the inability to use the product for any purpose.

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## **UK OFFICE:**

Western House, Broad Lane  
Yate, Bristol BS37 7LD

## **UK CONTACT**

**T:** +44 1454 227 277  
**E:** [info.uk@western-global.com](mailto:info.uk@western-global.com)  
[Western-global.com](http://Western-global.com)

---

## **USA - DETROIT OFFICE:**

1707 Northwood Drive  
Troy, MI 48084

## **USA - CHARLOTTE OFFICE:**

10233 Rodney Street  
Pineville, NC 28134

## **USA - SACRAMENTO OFFICE:**

8600 23RD Ave. Suite A  
Sacramento, CA 95826

## **CANADA OFFICE:**

101-251 Saulteaux Crescent  
Winnipeg, MB R3J 3C7

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## **USA CONTACT**

**T:** +1 866 814 2470  
**E:** [info.us@western-global.com](mailto:info.us@western-global.com)  
[Western-global.com](http://Western-global.com)

## **CANADA CONTACT**

**T:** +1 866 588 2637  
**E:** [info.ca@western-global.com](mailto:info.ca@western-global.com)  
[Western-global.com](http://Western-global.com)

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