

# Water Trucks

## Factory-Fitted Water Trucks



“HELPING TO DEVELOP AND PROTECT THE LAND”

# Contents

Safety	4
General Safety Instructions	5
General Information	6
Specifications	6
Description	7
Machine Limitations	9
Driving Stability	9
Operating Instructions	10
Before first use	10
In-cab Control Panel Functions	11
Pump Operation – Hydraulic System	12
Petrol or Diesel Pump Unit Control Panel	13
Pump Operation – Diesel Engine Option	14
Pump Operation – Petrol Engine Option	15
Filling the Tank	15
Dust Suppression Operation	18
Water Dousing Operation	21
Work Lights	23
Risk Assessment	24
Maintenance	25
Periodic Checks	25
Maintenance	25
Trouble Shooting	26
Warranty	27-28

## Disclaimer

All information, illustrations, and specifications contained in this manual are based on the latest product information available at the time of this publication's printing. TransTank International (TTi) reserves the right to alter and substitute specifications and methods at any time, in line with our commitment to continuous improvement.

No patent liability is assumed with respect to the use of information contained within this manual. While every precaution has been taken in the preparation of this manual, TTi assumes no responsibility for errors or omissions.

**Thank you for purchasing a TTi Water Truck Dust Suppression Unit (Water Truck), which will provide many years of reliable service when operated and maintained in accordance with this manual. This Water Truck Handbook is applicable to both the Storm™ & Cascade™ dust suppression systems.**

TTi manufacture a range of Water Truck units, with 8,000, 12,000, 13,000 or 15,000 litre tanks options, supplied with a hydraulic pump. Petrol or diesel pump options are available. This manual describes the operation, driving stability and maintenance procedures applicable to all units, noting additional requirements to options where necessary.

All TTi Water Truck tanks are rotationally moulded from quality polyethylene, purpose designed and manufactured to high standards. The Water Truck system is a truck-mounted tank water dispensing system designed to suppress dust on unmade roads, construction sites, etc.

The TTi Water Truck hydraulic pump is driven via the power take-off (PTO) of the vehicle. A hydraulic reservoir is mounted on the front of the Water Truck's frame. Optionally available is a petrol or diesel powered pump where a PTO is not fitted to the vehicle.

The Water Truck unit is supplied complete, tested and ready to mount to your vehicle – TTi can install it at our Sunshine North (Victoria) facility or deliver it as a unit for you to mount. TTi recommends that only water be used in the Water Truck unit. TTi warrants that the Water Truck has been designed and built for its intended purpose as a dust suppression system dispensing water.

The owner is responsible to ensure that the equipment is operated in accordance with this manual, with Australian WorkSafe requirements, applicable road rules and local council regulations. TTi is not liable for any loss, injury or death resulting from the failure to observe all safe working regulations as required by law.

Included with your Water Truck unit is the following documents:

1. Operator's Handbook (this manual, which includes the Warranty Registration Card)
2. Integral hydraulic, Honda Petrol or Yanmar Diesel engine pump manufacturer's handbook (whichever option selected)
3. Tank Quality Check Form. This is your verification that the unit has been quality checked, and verifies the serial number affixed to the unit.
4. Pre-Dispatch, Electrical and Operational Test checklists.

## Safety

This manual is intended for use by personnel experienced in the use of this and similar equipment. Read and understand this manual before attempting to operate or perform routine maintenance on this equipment. Your safety is of prime priority.



A **WARNING** highlights an essential operating or maintenance procedure, practice, condition or statement, which, if not strictly observed, could result in injury or death of personnel, or long-term health hazards.



A **CAUTION** highlights an essential operating or maintenance procedure, practice, condition or statement, which, if not observed, could result in damage or destruction of equipment.



A **NOTE** highlights or clarifies an essential systems description, operating or maintenance procedure, condition or statement.

## General Safety Instructions

1. This unit is designed and manufactured solely for the purpose of carrying and pumping water for dust suppression. Under no circumstances should it be used for any other purpose. It must never be used for transporting fuel or chemicals.
2. Only authorised and trained personnel are to operate this equipment. Operators must have read and fully understood this manual before operating the Water Truck unit.
3. Do not operate this equipment while under the influence of alcohol or any drugs that could impair your capabilities in any way.
4. Personal Protection Equipment (PPE) must be worn when refuelling the or operating the pump on the Water Truck unit. Exposure to excessive noise over an extended period can cause impairment or loss of hearing.
5. Avoid diesel or unleaded petrol contact with skin and eyes, and avoid breathing vapours or mists. Refer to the relevant Safety Data Sheet (SDS).
6. Any spillage of fuel while refilling the pump engine's tank should be immediately cleaned up and the materials used in the clean-up disposed of safely and in accordance with relevant regulations applying to the safe use, storage and disposal of fuel.
7. Ensure the capacity of the vehicle is suitable for the loaded mass of the Water Truck. Refer to the vehicle's operator manual for safe working loads, correct secure points and relevant safety instructions. Do not exceed the carrying and braking capacity as specified by the vehicle manufacturer.
8. The unit must be securely restrained when being transported on a vehicle. Ensure all bolts and fasteners are tightened and secure before operation.
9. Be aware of the height of the unit when mounted on a vehicle. Keep clear of overhead obstructions, such as bridges, low hanging tree limbs and power lines.
10. The Water Truck must never be left unattended while being filled with water.
11. Do not operate the pump when there is no water in the tank.
12. Do not use the Water Truck in ambient temperatures exceeding 40 degrees Celsius.
13. Do not disconnect any hoses, nozzles or filters while the equipment is operating. Disconnecting any components while under pressure may result in uncontrolled fluid discharge which may be hazardous.
14. Care should be taken at all times, particularly when operating on rough or steep terrain. Drivers should be aware of fluid surge affecting the centre of gravity.
15. The Water Truck has safety labels affixed to various locations on the unit. These labels should be kept clean and legible, and replaced if damaged.
16. Any unauthorised modifications to this equipment may affect its function and create a serious safety risk. Any unauthorised modifications will void any warranty on the unit.

## General Information

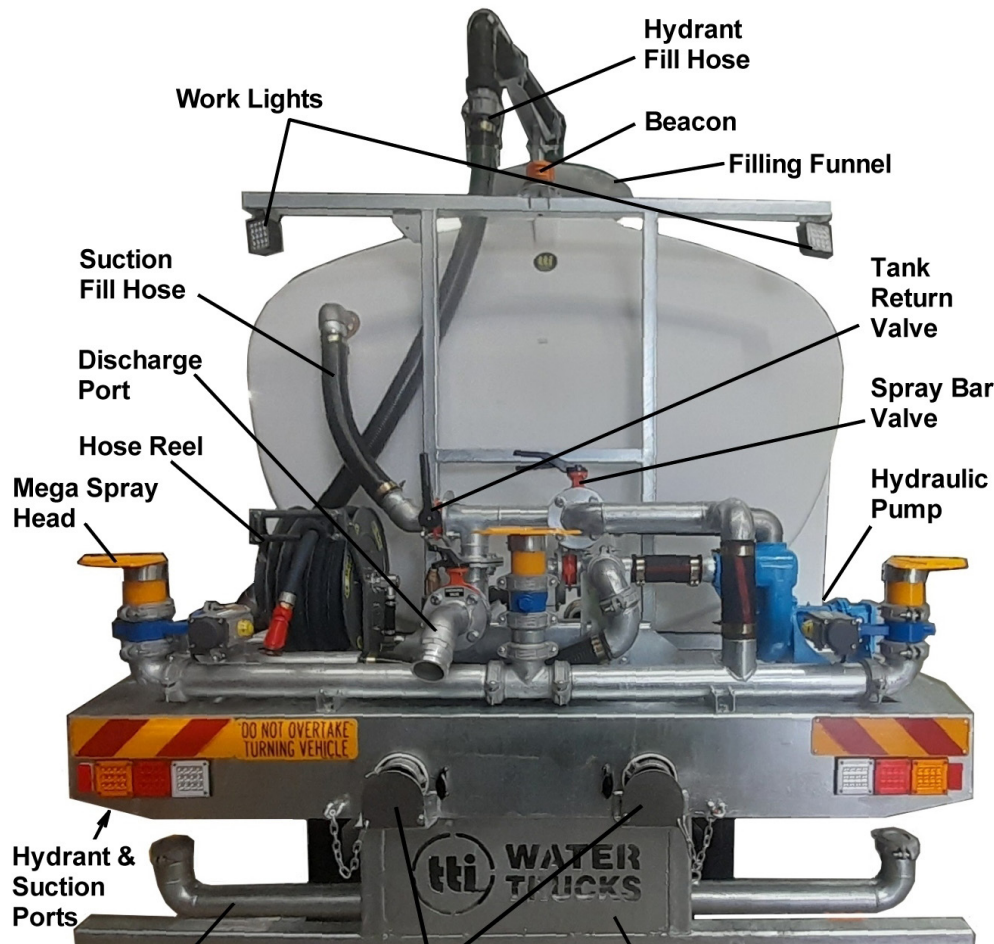
### Specifications

Tank	UV resistant polyethylene tank complete with LiquidLocker™™ Baffle system
Standard Equipment	LiquidLocker™™ Baffle Safety System
	T-REX hydraulic pump
	20m 1" multipurpose spring rewind hose reel
	Rotating beacon
	Pressure regulator
	6m bottom fill kit
	Sight level tube x 2
	In-cab control panel
	Open mesh funnel for stand pipe use
	3" solenoid operated Dribble bar
	1.5" and 3" solenoid operated Mega spray heads on rear spray bar
Options	Mid-mount batter spray bar
	Water cannon
	Front mounted spray heads
	Honda Petrol or Yanmar Diesel engine pump



## Description

The TTI Water Truck Dust Suppression Unit is designed to carry and distribute water using a self-contained pump and various water dispensing systems. The Water Truck has the following features, refer to Figure 1.



**Figure 1 – Component Identification**

### In-cab Control Panel

An in-cab control panel is mounted adjacent to the driver's seat, enabling full control of the Water Truck's functions. The rear high-mounted amber flashing beacons are also operated from this panel.

### Pressure Regulator

A pressure regulator is fitted to the pump discharge flange to control line pressure and prevent pump cavitation. The factory-set regulator feeds excess water back to the tank and is set to relieve at 50 – 60 psi.

### Rear Spray Bar

Fabricated from hot dip galvanised steel, the spray bar is mounted across the end of the frame and fed directly from the pump via a manually actuated control valve. Mounted at each end and centrally are the solenoid-operated Mega spray heads (if fitted). Where Mega spray heads are not fitted, a blanking cap is installed.

## **Dribble Bar**

A dribble bar is optionally fitted below the rear of the frame and has direct connections via a pneumatically actuated control valves from the pump outlet and the tank, enabling pressured spray or gravity feed water respectively. The dribble bar sprays water directly downwards via spray nozzles.

## **Front-mounted Spray Heads**

Optionally installed at the front of the vehicle is a fabricated hot dip galvanised steel spray bar fed directly from the pump. Mounted at each end are pneumatically operated solenoid control valves with spray heads.

## **Mid-mounted Batter Sprays**

Mid-mounted batter sprays are optionally fitted, controlled by pneumatically operated solenoid valves.

## **Water Cannon**

An optional water cannon can be fitted, to provide a directional, high-pressure water jet. The water cannon is controlled by a joystick with video screen, both of which are cab-mounted. The cannon has two modes – stream spray (SS) or fog (FOG).

## **Hose Reel**

A hose reel has 20 m of 1" hose fitted with an adjustable nozzle. The nozzle adjusts from closed through to jet and mist sprays, depending on requirement.

## **Ball Control Valves**

The Water Truck has several ball control valves, used to open or close water flow from the pump to the discharge points (spray bars, dribble bar, batter sprays, water cannon and hose reel). Ball control valves are also fitted on the suction line and the discharge side of the tank prior to entering the pump. Depending on ease of access to the valve, some are manually opened and closed, while others are pneumatically operated by a solenoid valve.

## **Solenoid Valves**

Pneumatically operated solenoid valves are fitted to each of the spray heads to enable individual control. The solenoid valves receive their air supply from the vehicle's air supply system. The solenoid valves are controlled via the Water Truck's in-cab control panel.

## **Pump**

The Water Truck is fitted with a hydraulically operated pump as standard. If the vehicle does not have a PTO to operate the pump, a diesel or petrol powered pump can be fitted as an option. The hydraulic pump incorporates TouchStream Technology to deliver a constant water flow, regardless of the vehicle's engine speed.

## **Work Lights**

Two LED work lights are mounted on the elevated frame above the rear of the Water Truck's tank. They are turned on at the switch located on the vehicle's dashboard, adjacent to the PTO switch. The work lights only operate when the vehicle's parking lights are on.



## **Frame**

The chassis frame of the Water Truck unit is an all steel, fully welded construction and hot dip galvanised for corrosion resistance. The frame has a rear drop-deck, housing the pump, spray bars and heads and associated control valves.

## **LiquidLocker™ Safety Baffle System**

The LiquidLocker™™ baffle system within the tank demonstrates measurable improvements in braking performance and dynamic stability and controllability. The system has been independently tested, with the report available upon request.

## **Tank**

All TTI tanks are constructed from UV resistant, virgin material polyethylene. Due to the rotational moulding process, there may be a small variance in the overall dimensions of the tank, therefore, calibration markings should be used as a guide only. Sight level tubes provide an accurate level indication of water within the tank – one tube is fitted to the rear of the tank, a second unit is near the front on the driver's side, which can be observed through the driver's external rear-view mirror.

## **Machine Limitations**

The Water Truck is subject to operating limitations. It is the operator's responsibility to ensure that this equipment is being operated safely and within these limitations.

## **Driving Stability**

The Water Truck unit is heavy when filled with water. To maintain stability while operating this unit:

- Ensure the truck tyres are inflated to their correct pressure at all times. Underinflated tyres can cause excessive lateral motion of the tyre, which may cause a rollover.
- Allow extra room for braking and turning when the tank is full.
- Ensure any side gradient (slope) is accounted for, especially when the Water Truck tank is full, as the unit will have a higher centre of gravity.

# Operating Instructions

## Before first use

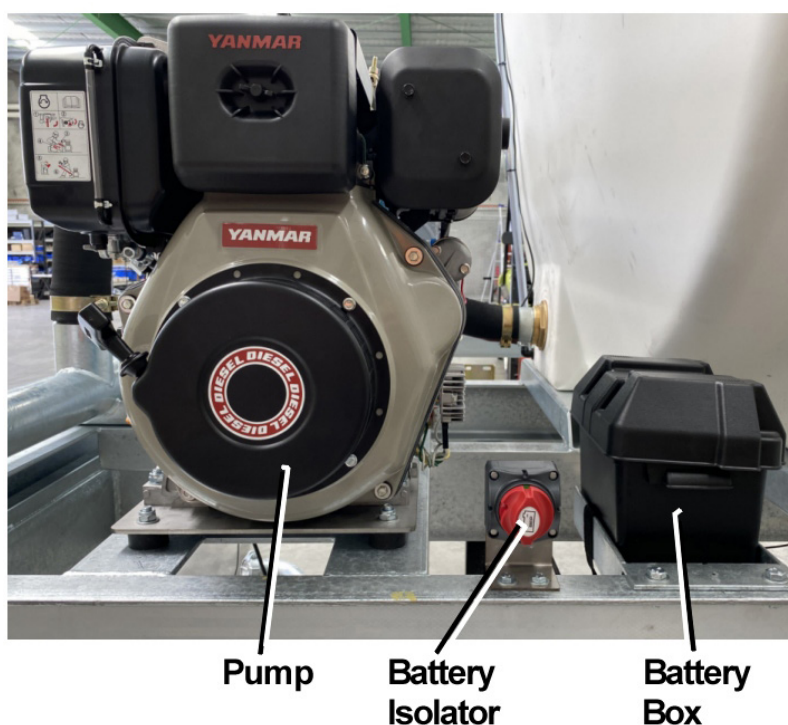
Your Water Truck Dust Suppression Unit is delivered fully assembled on the vehicle. Before use, it needs to be set up using the following instructions:

1. Complete the warranty registration online at [www.tti.com.au/warranty-registration](http://www.tti.com.au/warranty-registration), or use the Warranty Registration Card at the back of this handbook.
2. Store this handbook, along with the Tank Quality Check Form and pump units' manual in the provided pouch, in a safe and easily accessible place for future reference.



**WARNING! The operator must fully understand all aspects of this handbook. Do not operate the Water Truck if you are unfamiliar with its operation until you have read this handbook.**

3. Read and thoroughly understand this handbook, paying particular attention to all safety requirements, before using the Water Truck for the first time.
4. Check that all fittings, valves, hoses, electrical leads, pneumatic and hydraulic hoses are secure following transit, and are not damaged in any way.
5. Inspect the tank for any damage or abrasions.
6. Where a petrol or diesel pump option is fitted, ensure the 12 volt battery is fully charged and correctly connected to the pump unit's engine, refer to Figure 2. Refer to the supplied pump unit's manual and prepare the engine for use, such as filling its tank with fuel.



**Figure 2 – Optional Pump Engine and Battery (Diesel unit shown)**

## In-cab Control Panel Functions

The functions of the control panel must be fully understood before operating the Water Truck. The hydraulic pump unit's control panel differs from the control panel of the petrol or diesel driven pump, and is detailed in the next section.

### Hydraulic Pump Unit Control Panel

Figure 3 identifies all controls and indicators on the hydraulic pump unit's control panel, with their descriptions in the following table. Note that the figure and description includes all options as shown with an asterix (\*).

**Figure 3 – In-cab Control Panel – Hydraulic Pump Unit**



Water Control Knob	Rotary knob – increases or decreases water pressure by varying the hydraulic pump speed.
Switches	* FRONT SPRAY – LEFT – turns the left spray head ON or OFF
	* FRONT SPRAY – RIGHT – turns the right spray head ON or OFF
	* BATTER SPRAY – LEFT – turns the left spray head ON or OFF
	* BATTER SPRAY – RIGHT – turns the right spray head ON or OFF
	DRIBBLE – GRAVITY – turns the Dribble Bar ON or OFF for gravity feed
	DRIBBLE – PRESSURE – turns the Dribble Bar ON or OFF for pressure feed
	* WATER CANNON – turns the Water Cannon controller ON or OFF
	REAR SPRAY – LEFT – turns the left Mega spray head ON or OFF
	REAR SPRAY – CENTRE – turns the centre Mega spray head ON or OFF
	REAR SPRAY – RIGHT – turns the right Mega spray head ON or OFF

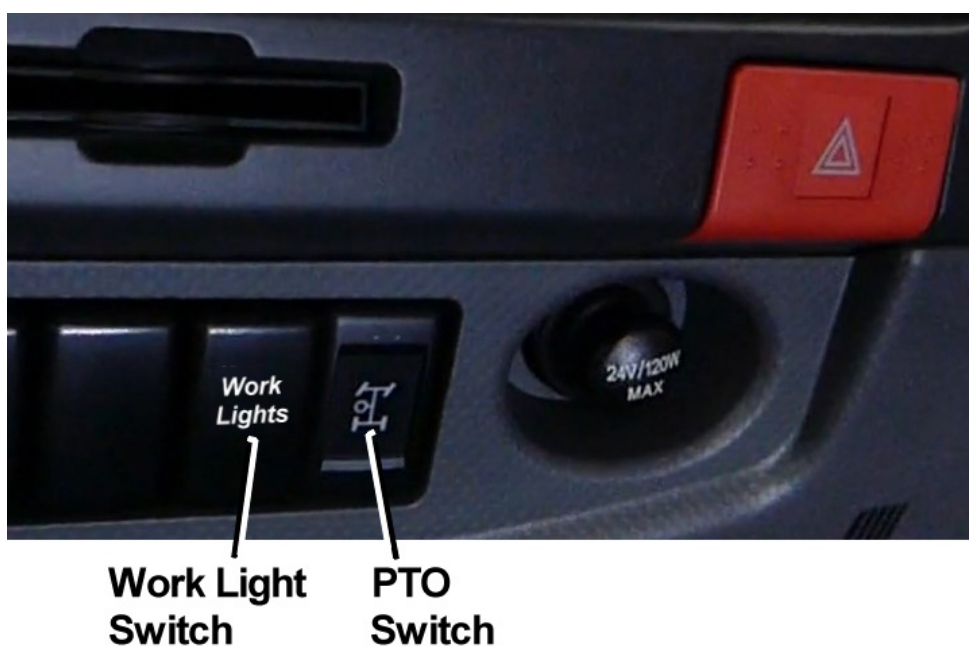
## Pump Operation – Hydraulic System

The Water Truck's hydraulically operated pump is started as follows, refer to Figure 3 and Figure 4:



**CAUTION!** Ensure the **WATER PUMP SPEED** knob is set to the **minimum position**

1. On the control panel, check that the water pump speed control knob is set to minimum position, i.e, fully anti-clockwise.
2. Check that all switches on the control panel are set to OFF.
3. Turn the beacon switch to ON.
4. With the vehicle's engine running, engage the PTO via the vehicle's dashboard-mounted switch. Check that the PTO indicator lamp on the vehicle's dashboard illuminates, indicating the PTO is now engaged.



**Figure 4 – In-cab PTO Switch**

5. Slowly turn the water pump speed control knob clockwise to engage the pump, which will be heard from the driver's cab. Adjust the speed to the required setting and select the desired water system, refer to Dust Suppression Operation. To use the Water Cannon, refer to the Water Cannon Operation section.

When the watering operation is complete, the pump is stopped as follows, refer to Figure 3:

1. Check that all switches have been set to OFF.
2. Slowly turn the water pump speed control knob anti-clockwise fully to disengage the pump. The pump will be heard to have stopped.
3. Disengage the PTO via the vehicle's controls. Check that the PTO indicator lamp on the vehicle's dashboard extinguishes, indicating the PTO is now disengaged.

## Petrol or Diesel Pump Unit Control Panel

Figure 5 identifies all controls and indicators on the optional petrol or diesel pump unit's control panel, with their descriptions in the following table. Note that the figure shows a control panel that doesn't include the optional batter or front spray heads.



**Figure 5 – In-cab Control Panel – Petrol/Diesel Pump Unit (typical)**

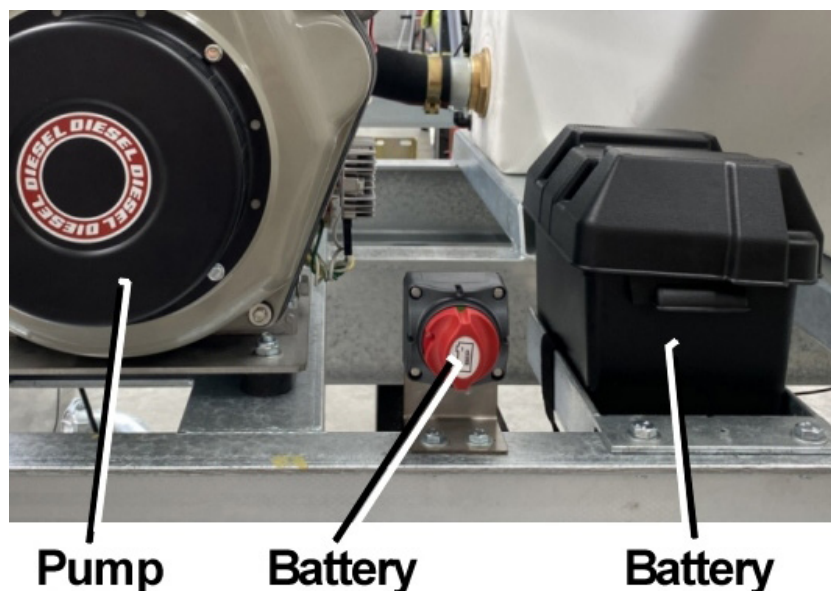
Switches	BEACON – turns the external flashing beacon light ON or OFF
	IGNITION – turns the engine power circuit ON or OFF
	START – starts the engine, returns to neutral position on release
	RPM – adjusts engine speed, returns to neutral position on release
	SPRAY VALVES – LEFT – turns the left Mega spray head ON or OFF
	SPRAY VALVES – CENTRE – turns the centre Mega spray head ON or OFF
	SPRAY VALVES – RIGHT – turns the right Mega spray head ON or OFF
	DRIBBLE – turns the Dribble Bar ON or OFF



## Pump Operation – Diesel Engine Option

The Water Truck's optional diesel pump engine is started as follows, refer to Figure 6:

1. Turn the fuel tap to ON.
2. Switch the battery isolator to ON. The switch is located adjacent to the battery box near the pump.



*Figure 6 – Engine Start-up (Typical for both Diesel and Petrol Engines)*



**CAUTION!** Ensure the engine's throttle is set to idle if the engine is cold. Do not adjust the throttle to maximum speed until the engine has warmed up.

3. At the in-cab control panel (refer to Figure 5), press the IGNITION switch to the ON position and press the RPM switch downwards multiple times to lower the engine speed to idle (low revs) for cold starting. If restarting a warm engine, the throttle can be left at normal engine operating speed.



**CAUTION!** To enable the driver to listen to the pump engine starting, ensure the driver's cab window is down and background noise such as a radio is turned down.

4. Press and hold the START switch for about 3 seconds. The engine should crank and start. Listening carefully, release the switch as soon as the engine starts. Once warmed up, lift the RPM switch multiple times to incrementally increase the engine speed to normal operating revs.
5. When the engine needs to be stopped, lift the IGNITION switch to the OFF position.

If the Water Truck is not going to be used within the next few hours, shut the system down as follows:

1. Switch the battery isolator to OFF.
2. Turn the fuel tap to OFF.



## Pump Operation – Petrol Engine Option

The Water Truck's optional petrol pump engine is started as follows, refer to Figure 6 (note that the diesel engine is shown, petrol engine arrangement is similar):

1. Turn the fuel tap to ON.
2. Switch the battery isolator to ON. The switch is located adjacent to the battery box near the pump.



**CAUTION! Ensure the engine's throttle is set to idle if the engine is cold. Do not adjust the throttle to maximum speed until the engine has warmed up.**

3. At the in-cab control panel (refer to Figure 5), press the IGNITION switch to the ON position and press the RPM switch downwards multiple times to lower the engine speed to idle (low revs) for cold starting. If restarting a warm engine, the throttle can be left at normal engine operating speed.



**CAUTION! To enable the driver to listen to the pump engine starting, ensure the driver's cab window is down and background noise such as a radio is turned down.**

4. Press and hold the START switch for about 3 seconds. The engine should crank and start. Listening carefully, release the switch as soon as the engine starts. Once warmed up, lift the RPM switch multiple times to incrementally increase the engine speed to normal operating revs.
5. When the engine needs to be stopped, lift the IGNITION switch to the OFF position.

If the Water Truck is not going to be used within the next few hours, shut the system down as follows:

1. Switch the battery isolator to OFF.
2. Turn the fuel tap to OFF.

## Filling the Tank

The Water Truck tank can be filled in any of the following three ways:

1. Hydrant filling method, drawing pressurised water directly from a hydrant via the filling hose.
2. Bottom filling method, using the pump to draw water from a dam or other source.
3. Standpipe filling method using a standpipe to fill directly into the top of the tank via the open mesh funnel.

## Hydrant Filling Operation

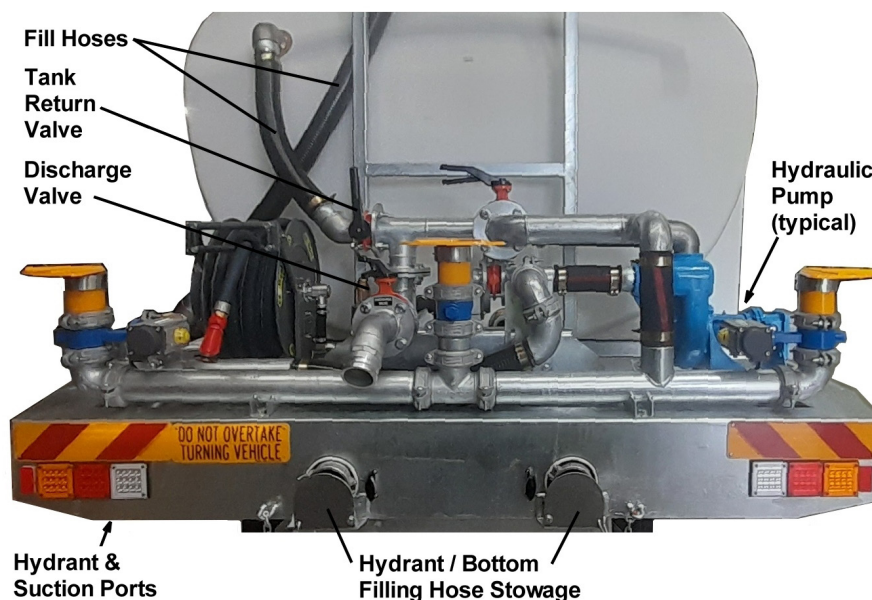
The Water Truck tank is filled from a hydrant as follows, referring to Figure 7:

1. A hydrant supply hose is located under the Water Truck's tank. Remove the securing plate, withdraw the hose and attach one end to the Water Truck's hydrant port under the rear of the vehicle (refer to Figure 8), the other end to the hydrant.
2. Open the supply hydrant's valve slowly; water will flow under pressure through the Water Truck's pipe system into the top of the tank.

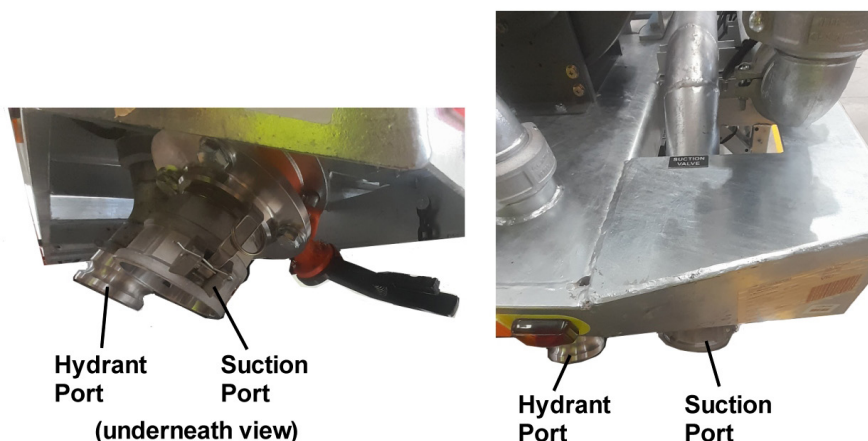


**CAUTION!** To prevent overflow, do not leave the filling operation unattended.

3. A sight level tube is fitted to the rear of the tank, providing a visual indicator of the level of water in the tank. When the tank is filled, close the supply hydrant's valve.
4. Disconnect the hydrant supply hose and stow it.



**Figure 7 – Filling Operations**



**Figure 8 – Hydrant and Suction Ports**

## Bottom Filling Operation

The tank is filled by drawing water using the Water Truck's pump as follows, refer to Figure 7:



**CAUTION! Ensure all ball valves have been correctly set prior to commencing the filling operation.**

1. A supply hose is located under the Water Truck's tank. Remove the securing plate, withdraw the hose and attach one end to the Water Truck's suction port (under the rear of the vehicle) with the camlock fittings.
2. Close the tank valve.
3. Place the filter end of the bottom fill hose into the water source. Ensure the filter is deep enough in the water to prevent it sucking air.
4. Open the suction valve.
5. Open the tank return valve.
6. Ensure the discharge valve is closed.
7. Referring to Start the Pump procedures (hydraulic, diesel or petrol engine), start the pump.
8. Ensure the pump is drawing water and discharging it into the Water Truck tank.



**CAUTION! To prevent overflow, do not leave the filling operation unattended.**

9. A sight level tube is fitted to the rear of the tank, providing a visual indicator of the level of water in the tank. When the tank is filled, stop the pump. Referring to Start the Pump procedures (hydraulic, diesel or petrol engine), start the pump.
10. Close the suction valve and disconnect the hose from the suction port.
11. Open the tank valve.
12. Clean and pack away the bottom fill hose.

## Standpipe Filling Operation

The Water Truck tank is filled by gravity from an overhead standpipe as follows, referring to Figure 7:

1. Position the Water Truck unit's top-mounted open mesh funnel under the standpipe.
2. Open the standpipe's valve and allow water to flow into the tank.



**CAUTION! To prevent overflow, do not leave the filling operation unattended.**

3. A sight level tube is fitted to the rear of the tank, providing a visual indicator of the level of water in the tank. When the tank is filled, close the standpipe's valve.

## Dust Suppression Operation

### Rear Spray Bar Operation

The rear spray bar is mounted across the end of the frame and fed directly from the pump via a pneumatically actuated control valve. Mounted at each end and centrally are the solenoid-operated Mega spray heads. The spray bar is operated as follows, refer to Figure 9:

1. Referring to Start the Pump procedures (hydraulic, diesel or petrol engine), start the pump and adjust the speed. Until the Mega spray head(s) are open, the factory set pressure regulator will divert the pumped water back into the tank.
2. From the control unit (refer to In-cab Control Panel Functions), select one, two or all three (if fitted) Mega spray heads switches. The pneumatically operated solenoid valve for each spray head will open, allowing the water to be sprayed. If not moving, commence driving along the required road or pathway.
3. At completion of the operation, shut down the spray bar operation in the reverse order to starting.



**Figure 9 – Rear Spray Bar and Dribble Bar**

### **Dribble Bar Operation (if fitted)**

A dribble bar is suspended across the end of the frame and fed water either directly:

- from the pump via a pneumatically operated solenoid valve, or
- gravity feed via a pneumatically operated solenoid valve.

Mounted along the length of the pressured dribble bar are down-jet nozzles. The dribble bar is operated under pressure as follows, refer to Figure 9:

1. Referring to Start the Pump procedures (hydraulic, diesel or petrol engine), start the pump and adjust the speed. Until the dribble bar solenoid valve is opened, the factory set pressure regulator will divert the pumped water back into the tank.
2. From the control unit (refer to In-cab Control Panel Functions), select the dribble bar pressure switch. The pneumatically operated solenoid valve will open, allowing the water to be sprayed out of the dribble bar. If not moving, commence driving along the required road or pathway.
3. At completion of the operation, shut down the dribble bar operation in the reverse order to starting.

The gravity fed dribble bar is operated as follows, refer to Figure 9:

1. From the control unit (refer to In-cab Control Panel Functions), select the dribble bar gravity switch. The pneumatically operated solenoid valve will open, allowing the water to discharge via gravity from the dribble bar. If not moving, commence driving along the required road or pathway.
2. At completion of the operation, shut down the dribble bar operation in the reverse order to starting.

### **Mid-mounted Batter Spray Bar (if fitted)**

The optional mid-mounted spray heads are located at either side of the vehicle near the front of the tank. They are fed directly from the pump via a pneumatically actuated control valve. The spray heads are operated as follows, refer to Figure 10:

1. Referring to Start the Pump procedures (hydraulic, diesel or petrol engine), start the pump and adjust the speed. Until the spray head(s) are open, the factory set pressure regulator will divert the pumped water back into the tank.
2. From the control unit (refer to In-cab Control Panel Functions), select one or both spray heads switches and turn ON. The pneumatically operated solenoid valve for each spray head will open, allowing the water to be sprayed. If not moving, commence driving along the required road or pathway.
3. At completion of the operation, shut down the spray head operation in the reverse order to starting.



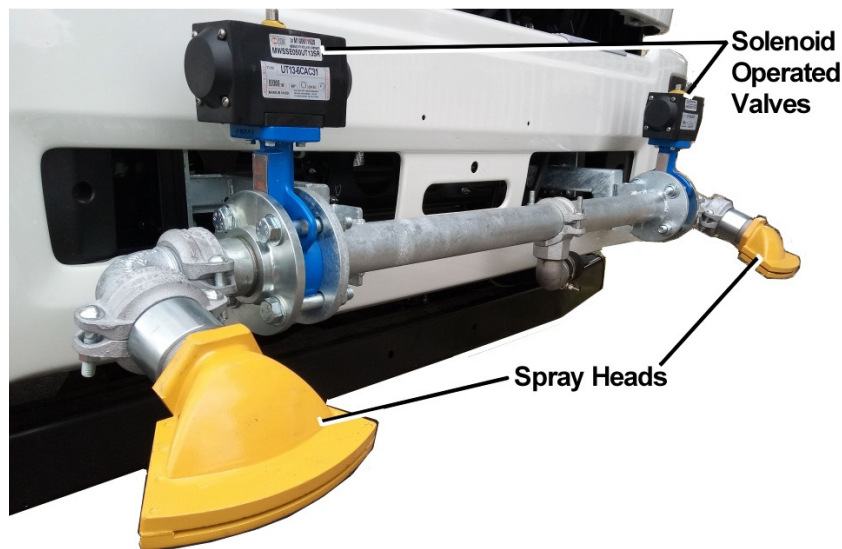


**Figure 10 – Batter Spray Bar and Heads (Typical, unit shown off vehicle)**

### Front-mounted Spray Heads (if fitted)

The optional front-mounted spray heads are located at the front corners of the vehicle and fed directly from the pump via a pneumatically actuated control valve. The spray heads are operated as follows, refer to Figure 11:

4. Referring to Start the Pump procedures (hydraulic, diesel or petrol engine), start the pump and adjust the speed. Until the spray head(s) are open, the factory set pressure regulator will divert the pumped water back into the tank.
5. From the control unit (refer to In-cab Control Panel Functions), select one or both spray heads switches and turn ON. The pneumatically operated solenoid valve for each spray head will open, allowing the water to be sprayed. If not moving, commence driving along the required road or pathway.
6. At completion of the operation, shut down the spray head operation in the reverse order to starting.



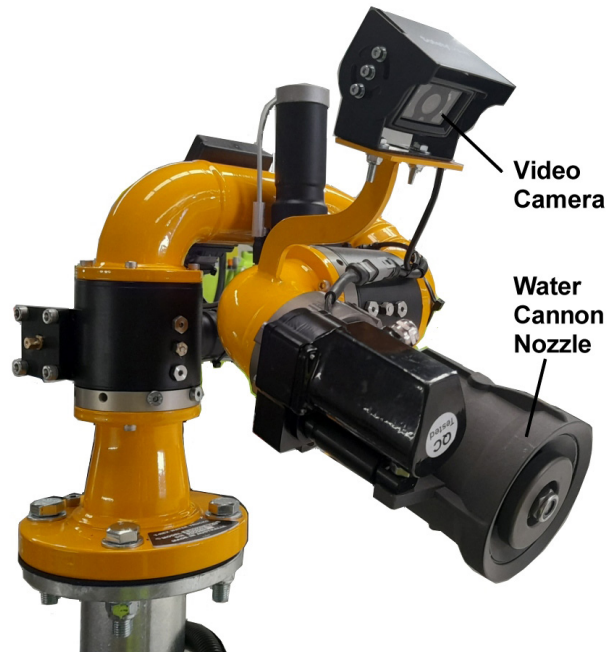
**Figure 11 – Front-mounted Spray Heads (Typical)**



## Water Dousing Operation

### Water Cannon Operation

The optional water cannon is fitted with a video camera (see Figure 12) which transmits to a display screen in the vehicle's cab.



**Figure 12 – Water Cannon**

The cannon is operated by a cab-mounted joystick controller, see Figure 13. The cannon is operated as follows:



**Figure 13 – Water Cannon Joystick Controller**

1. Referring to Start the Pump procedures (hydraulic, diesel or petrol engine), start the pump and adjust the speed. Until the water cannon is started, the factory set pressure regulator will divert the pumped water back into the tank.
2. At the control panel (refer to In-cab Control Panel Functions), turn the WATER CANNON switch to ON. This will then activate the joystick controller. The lamp on the joystick controller's base will illuminate RED, ready for operation.
3. Grasp the joystick and move it in the required direction, observing the direction of the cannon on the adjacent video display screen.



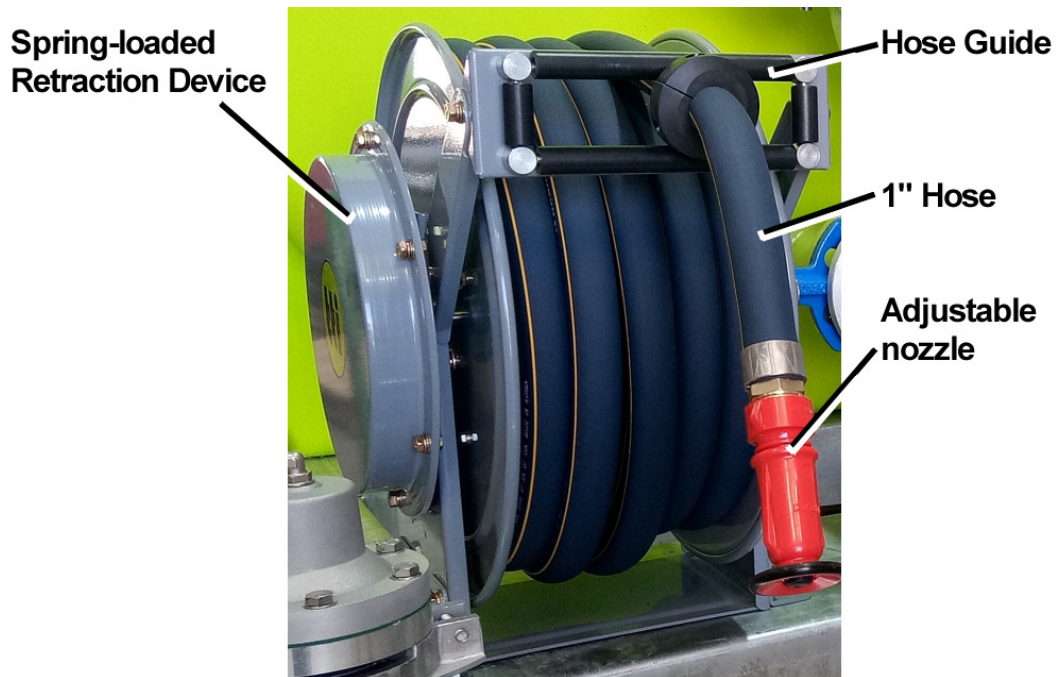
**NOTE! The joystick controller has two top-mounted water valve mode switches. These can be either held ON to start and released to turn OFF; or pressed ON and pressed OFF to stop.**

4. When correctly aimed, press (or hold) either one of the two water valve mode switches (SS (stream spray) or FOG mode) on the top of the joystick. The lamp on the controller will illuminate GREEN.
5. Using the joystick, aim the jet of water in the required direction.
6. When the task is finished, press (or release) the top-mounted switch to stop the water flow.
7. At the control panel, turn the WATER CANNON switch to OFF. The lamp on the joystick controller's base will go off.
8. Shut down the pump.

### Hose Reel Operation

The hose reel has 20 m of 1" hose fitted with an adjustable nozzle, which can be used for activities such as tree watering, firefighting or washdown purposes. The nozzle adjusts from closed through to jet and mist sprays, depending on requirements. The hose reel is operated as follows, refer to Figure 14:

1. Open the manually operated ball valve for the hose reel.
2. Referring to Start the Pump procedures (hydraulic, diesel or petrol engine), start the pump and adjust the engine speed. Until the hose nozzle is opened, the factory set pressure regulator will divert the pumped water back into the tank.
3. Pull the hose nozzle to feed the hose out of the reel. At the required length, it will retract slightly and lock into place.
4. Twist the nozzle to the desired spray pattern and direct the spray as required. Pressure can be reduced by adjusting the pump's speed from the in-cab control panel.
5. At completion of the operation, shut down the hose operation in the reverse order to starting.
6. Open the nozzle to release residual pressure, then close it again.
7. Retract the hose by tugging it, then allow the spring-loaded action to wind the hose back on to the reel.



*Figure 14 – Hose Reel (typical)*

## Work Lights

Two high-mounted LED work lights are located on the frame above the rear of the Water Truck's tank.



**NOTE!** The Water Truck's work lights only operate when the vehicle's parking lights are switched on.

To illuminate the work area, turn the dashboard-mounted switch to ON, refer to Figure 15.



**Work Light  
Switch**

*Figure 15 – Work Lights Switch (typical)*

## Risk Assessment

Task	Hazard	Risk	Control Measure/Mitigation
Partially fill the tank with water, start the motor & test the spray unit	Manual handling; slips, trips or falls; petrol; fumes; fingers jammed	Medium	Concentrate on task; follow safe manual handling techniques: <ul style="list-style-type: none"> <li>• Don't lift on your own if &gt; 20kg, bend knees &amp; keep back straight; Keep fingers clear;</li> <li>• Keep unit at least 8m away from overhead powerlines;</li> <li>• Fire extinguisher nearby;</li> <li>• Follow warning stickers on tanks; Wear PPE for petrol &amp; diesel fumes-mask &amp; gloves.</li> </ul>
Check weather conditions	Manual handling; slips, trips or falls	Low	<ul style="list-style-type: none"> <li>• Follow safe manual handling techniques: don't lift on your own if &gt;20kg, bend knees &amp; keep back straight.</li> </ul>
Use spray or fire fighter units.	As above; loss of load; heat & cold; noise; exceed load limit of vehicle; hose entanglement; exhaust fumes; terrain & slopes; run over by unit	High	<ul style="list-style-type: none"> <li>• As above</li> <li>• Wear clothes to suit heat &amp; cold;</li> <li>• Wear hearing protection if noise &gt;85 dBA;</li> <li>• Follow the manufacturer's safe operation instruction for the vehicle and the spray unit</li> <li>• Don't overload - water weighs 1kg for every 1 litre</li> <li>• Secure load to vehicle;</li> <li>• Keep hose tidy;</li> <li>• Put unit brakes on.</li> </ul>
Clean up, maintenance & storage	As above	Low	<ul style="list-style-type: none"> <li>• As above;</li> <li>• Continue to wear PPE for clean up;</li> <li>• Store unit in a dry, well ventilated area.</li> </ul>

## Maintenance

Your Water Truck Dust Suppression Unit requires minimal maintenance but regular cleaning and checks will ensure safe and reliable service over its lifetime. Periodic checks and inspections will identify any potential issues, enabling timely rectification and minimising downtime.

### Periodic Checks

The following checks and cleaning operations should be undertaken on a regular basis (at least annually). The frequency of these activities will depend on the nature of the operating environment and the operational hours of the Water Truck unit.

1. Clean the unit and inspect it for any signs of damage or wear. Replace any safety labels if they are damaged or illegible.
2. Check all fittings are firmly secured, tighten if necessary.
3. Unwind the hose from the reel fully to check that hose is in good order. Pressurise the line and check operation of spray nozzle. Rewind the hose onto the reel, ensuring it retracts all the way.
4. For the hydraulically operated pump, check the level of the hydraulic fluid, top up at the reservoir if required.
5. If fitted with the optional diesel or petrol engine driven pump, check the engine's oil level weekly. Top up if required.
6. Check for any signs of fuel, oil or hydraulic fluid leaks. If detected, investigate and rectify.
7. Check the condition of the optional diesel or petrol pump engine's 12 volt battery, replace it or charge it as necessary.
8. If the Water Truck is to be stored for an extended period, ensure the tank and all pipelines are empty and are not pressurised. Store the unit in a clean, dry and well-ventilated area.

### Maintenance

The Water Truck has been designed and built for minimal maintenance requirements, however to ensure a long and reliable unit life, the following tasks must be undertaken on a periodic basis. The frequency of these activities will depend on the nature of the operating environment and the operational hours of the Water Truck.

1. For the hydraulically operated pump, referring to the supplied pump manual, drain and replace the hydraulic fluid in accordance with the manufacturer's recommendations.
2. If fitted with the optional diesel or petrol engine driven pump, referring to the supplied pump manual, drain and replace the engine oil in accordance with the manufacturer's recommendations.

## Trouble Shooting

If a fault develops with the Water Truck, the following trouble shooting table provides guidance to identify and rectify the problem.

Problem	Possible cause	Remedy
Hydraulic pump will not feel water	Water pump speed set too low	Increase water pump speed at control panel
Engine will not crank (optional petrol or diesel engine)	Dead battery	Check battery state-of-charge
	Melted Fusible Link	Replace fusible link
	Loose Connections	Clean and tighten connections
	Faulty Ignition Switch	Check switch operation, replace as needed
	Faulty magnetic, relay, neutral start or clutch switches	Check and replace as needed
	Mechanical problem in engine	Check Engine
Engine cranks too slowly to start	Problem in theft deterrent system	Check service manual for system tests
	Weak Battery	Check battery and charge as needed
	Loose or corroded connections	Clean and tighten connections
	Faulty starter motor	Test Starter
Starter keeps running	Mechanical problems with engine or starter	Check engine and starter, replace worn out parts
	Damaged pinion or ring gear	Check gears for wear or damage
	Faulty plunger in magnetic switch	Test starter pull-in and hold-in coils
	Faulty ignition switch or control circuit	Check switch and circuit components
Starter spins, but engine will not crank	Binding ignition key	Check key for damage
	Faulty over-running clutch	Check over-running clutch for proper operation
	Damaged or worn pinion gear or ring gear	Check gears for damage and wear; replace as needed
Starter does not engage/disengage properly	Faulty magnetic switch	Bench test starter
	Damaged or worn pinion gear or ring gear	Check gears for damage and wear; replace as needed



# Warranty

## Your rights under the law

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law.

You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

## About this document

This document sets out the terms of the defects warranty that we offer to retail purchasers of our goods, including components, parts, and accessories (referred to as "products" in this document). We offer this defects warranty in addition to the consumer guarantees referred to above. Nothing in this document excludes or reduces your rights under those consumer guarantees.

## What this warranty covers

This warranty covers defects in materials or workmanship (or both) which are found to be present in our products, other than the defects in the parts and components listed below.

## What this warranty does not cover

This warranty does not cover defects or damage caused by your negligence, your failure to follow instructions (including incorrect assembly or mounting by you), or the improper use, maintenance, or abuse of the products.

This warranty does not cover engines, gearboxes, pumps, or regulators. These come with separate warranties from their manufacturers. By offering this defects warranty, we do not assume any additional obligations or liability on behalf of those manufacturers beyond what we must do to comply with the consumer guarantees referred to above.

## How long this warranty lasts for

Except in the case of products used for rental purposes, the period of our defects warranty is as follows for our various products:

Tanks (non-diesel), excluding frames	25 Years
Steel frames	5 Years
Other TTI Manufactured Components	1 Year

This warranty lasts for one year from the date of your retail purchase of the products, unless it is used for rental purposes, in which case this warranty is limited to 90 days.

## What we will do if you make a claim under this warranty

If you make a claim under this warranty, we will consider it in good faith. If we agree that the products are covered by this warranty and are defective, we will either (at our option) repair or replace them without charge to you.

## **What you must do (and not do) to entitle you to a claim under this warranty**

You must be able to provide proof of purchase, either by providing details of your warranty registration or a purchase receipt.

You must not repair or modify (or allow the repair or modification of) the products without prior authorisation from us. Further, you must not use any non-genuine parts with the products. Doing any of these things will void this defects warranty.

## **How to make a claim under this warranty**

If you believe that you have a claim under this warranty, please contact your reseller, or contact us using the following details:

<b>Name:</b>	<b>Trans Tank International</b>
<b>Postal Address:</b>	<b>PO Box 137 Nathalia, VIC, 3683</b>
<b>Physical Address:</b>	<b>Murray Valley Highway, Nathalia, VIC, 3638</b>
<b>Phone:</b>	<b>1800 816 277</b>
<b>Email:</b>	<b>ProductSupport@tti.com.au</b>

You must make the defective products available for inspection by returning them to us, and (if requested to do so) by making them available for inspection by us on site beforehand. You must ensure that the products are made safe for transportation and inspection, including by cleaning them thoroughly to remove any chemical residues. All returned products must be accompanied by a completed Return Goods Note. Please contact us using the details displayed above for a copy of this document.

## **Who is responsible for expenses for claims made under this warranty**

You are responsible for any expenses associated with the warranty claim, including transportation, charges made for service calls, and clean-up time.









**TransTank<sup>®</sup>**  
INTERNATIONAL



SCAN HERE!

**1800 816 277**

**sales@tti.com.au**

PO Box 137, Nathalia, VIC, 3638

Murray Valley Hwy, Nathalia, VIC 3638

Proudly Built By:

---

---

Signature

Date

Quality Checked By:

---

---

Signature

Date

**www.tti.com.au**