

# PolymerPro™

## Polymer Application Trailer



“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	9
Before First Use	9
Pump Operation – Petrol Engine	10
Pump Operation – Diesel Engine Option	11
Filling the Tank	12
PolymerPro Operation	15
Cleaning Procedure	17
Risk Assessment	18
Maintenance	19
Periodic Checks	19
Maintenance Tasks	19
Maintenance Schedule	20
Trouble Shooting	23
Warranty	24-25

## 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 PolymerPro Heavy-Duty Trailer Unit (PolymerPro), which will provide many years of reliable service when operated and maintained in accordance with this manual.**

TTi manufacture a range of PolymerPro units, from 800 through to 3,000 litre tanks, supplied with petrol or diesel pump options. This manual describes the operation, driving stability and maintenance procedures applicable to this unit, noting additional requirements to options where necessary.

All TTi PolymerPro tanks are rotationally moulded from quality polyethylene, purpose designed and manufactured to high standards. The PolymerPro is a trailer-mounted tank polymer dispensing system designed for soil stabilisation and erosion control activities.

The PolymerPro unit is supplied complete, tested and ready to go. TTi warrants that the PolymerPro has been designed and built for its intended purpose for dispensing polymer, for soil stabilisation and erosion control.

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 PolymerPro unit is the following documents:

1. Operator's Handbook (this manual, which includes the Warranty Registration Card)
2. Integral Honda Petrol or Yanmar Diesel engine and 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.

## 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 polymer for erosion control and soil stabilisation duties. 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 Storm 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 PolymerPro. 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. Disconnect the battery, if fitted, before conducting any electrical maintenance work.
8. Ensure the capacity of the vehicle is suitable for the loaded mass of the PolymerPro. Refer to the vehicle's operator manual for safe working loads and relevant safety instructions. Do not exceed the carrying and braking capacity as specified by the vehicle manufacturer.
9. Ensure the tow vehicle is equipped with a 7-pin plug, with the AUX pin wired for 12-volt power. This pin connects to the brake safety unit.
10. The PolymerPro must never be left unattended while being filled with polymer or water.
11. Do not operate the pump when there is no polymer or water in the tank.
12. Do not disconnect any hoses, nozzles or filters while the equipment is operating. Disconnecting any components while under pressure may result in uncontrolled polymer discharge which may be hazardous.
13. At completion of the operation, switch the pump off and relieve any residual pressure by squeezing the spray gun trigger.
14. At completion of the operation, decontaminate the PolymerPro tank and hose lines. Drain any residue chemicals and store in a sealed container. Dispose of any unwanted chemicals and tank rinse residue in accordance with current environmental and workplace health and safety regulations.
15. 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.
16. The PolymerPro has safety labels affixed to various locations on the unit. These labels should be kept clean and legible, and replaced if damaged.
17. 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

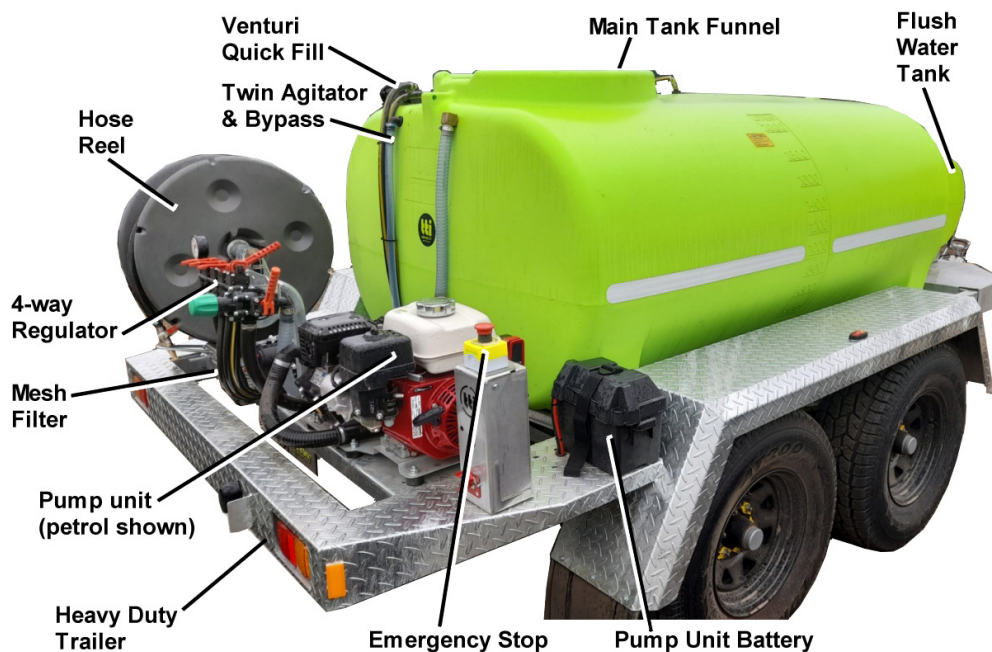
### Specifications

Tank	UV resistant polyethylene tank (from 800 through to 3,000 litre capacity), fully drainable
	100 litre flush water tank plumbed to main tank
Trailer	Fully welded and galvanised heavy duty steel frame, dual axle with 15" Sunraysia wheels with 6-stud pattern
	Electric brakes with break-away system (On-Road/Registrable)
	Rocker-Roller suspension
	ROVER Vehicle Type Approval – Certified & Compliant
Standard Equipment	Honda GX200 petrol engine and 75L/min Bertolini pump
	36m 19mm hose reel with adjustable nozzle
	4-way pressure regulator
	Twin Agitator System and pump bypass for thorough agitation of polymer and pump protection
	Open funnel for easy filling, with removeable mesh filter basket
	Venturi quick fill system, comprising suction hose, floating filter and venturi hydro injector
Options	Yanmar diesel engine upgrade option
	Electric start on engines
	Level sight tube
	Emergency stop button and padlock battery isolation switch fitted
	4.5K ABE Fire Extinguisher



## Description

The TTi PolymerPro is designed to carry and distribute a polymer solution using a self-contained pump and a hose reel dispensing system. The PolymerPro has the following features, refer to Figure 1. The SuperTrail has the following features, refer to Figure 1.



**Figure 1 – Component Identification Pump**

### 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.

In front of the main tank, a 100 litre flush water tank is mounted. The flush water tank is connected to the pressure regulator, to enable drawing water from this tank to flush the main tank and hose. A handwashing tap is also fitted to the flush water tank.

### Tank Level Indicator

An optional level sight tube is fitted to the rear of the tank and provides an accurate level indication of the polymer solution within the tank.

### Pressure Regulator

A 4-way pressure regulator and gauge is fitted to the pump discharge flange to control line pressure and prevent pump cavitation. The factory-set regulator feeds excess solution back to the tank and is set to relieve at 50 – 60 psi. The regulator can be manually set to operate:

- The venturi fill system
- Twin tank agitator system
- Tank flush system
- Spray hose mounted on the reel.

## Hose Reel

Each PolymerPro is fitted with a 36m 19mm diameter fire hose mounted on a manually operated hose reel. The hose is fitted with an adjustable brass nozzle which locates in a securing bracket on the hose reel support when the hose is stowed. The nozzle adjusts from closed through to jet and mist sprays, depending on requirement.

## Pump

The PolymerPro is fitted with a polymer specification 75L/min Bertolini pump powered by a Honda GX200 petrol engine. The petrol engine is recoil (pull) start with an electric start upgrade option available. A Yanmar 4.8hp electric start diesel engine is available as an option. Both electric start engine options include a dedicated battery for starting.

## Batteries

With a self-contained electric brake system installed on the PolymerPro trailer, a dedicated 12-volt battery is mounted at the front of the tank, housed in a battery box.

With the optioned electric pump start upgrade, a separate, dedicated 12-volt battery is installed near the engine. Power to start the pump is always provided by this battery.

## Venturi Quick Fill Kit

Each PolymerPro is fitted with a side-mounted hose bracket, housing the 6m quick fill hose. The hose enables water to be drawn directly from an external source or sucking polymer from an intermediate bulk container (IBC) or drum to a maximum height of up to 2m below the top of the PolymerPro tank.

The hose is fitted with a filter at one end and a camlock coupling on the opposite end, for direct connection to the venturi injector, located at the top of the tank, adjacent to the fill lid funnel. A minimum of 30 litres of water is required in the PolymerPro tank in order to draw from the polymer or water supply.

## Twin Agitator System and Pump Bypass

With the pump running and the agitator handle on the 4-way regulator open, liquid is recirculated under pressure through the two agitator ports in the tank, thoroughly mixing the polymer.

When the pump is running and the spray gun is not used, the pump bypasses through the agitator system, providing protection for the pump.

## Trailer

The trailer frame is an all steel, fully welded construction and hot dip galvanised for corrosion resistance. The frame has additional welded gussets for added strength and filled-in chequer plate mudguards to protect the tank. The dual 50mm solid axles are fitted with 6-stud 15 inch Sunraysia wheels.

The trailer is braked (registerable), with a Credo self-contained electric brake system. The brake system has its own dedicated 12-volt battery located at the front of the trailer, and incorporates a break-away safety system, refer to Figure 2.

## Ball Control Valve

The PolymerPro has a ball control valve used to select either the main tank or the flush water tank.



## Machine Limitations

The PolymerPro unit is subject to operating limitations. It is the operators' responsibility to ensure that this equipment is being operated safely and within these limitations.

## Driving Stability

The PolymerPro unit is heavy when filled with polymer solution or water. To maintain stability while operating this unit:

- Ensure the trailer 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 PolymerPro tank is full, as the unit will have a higher centre of gravity.

## Operating Instructions

### Before First Use

Your PolymerPro Heavy-Duty Trailer Unit is delivered fully assembled. Before use, it needs to be set up using the following instructions:

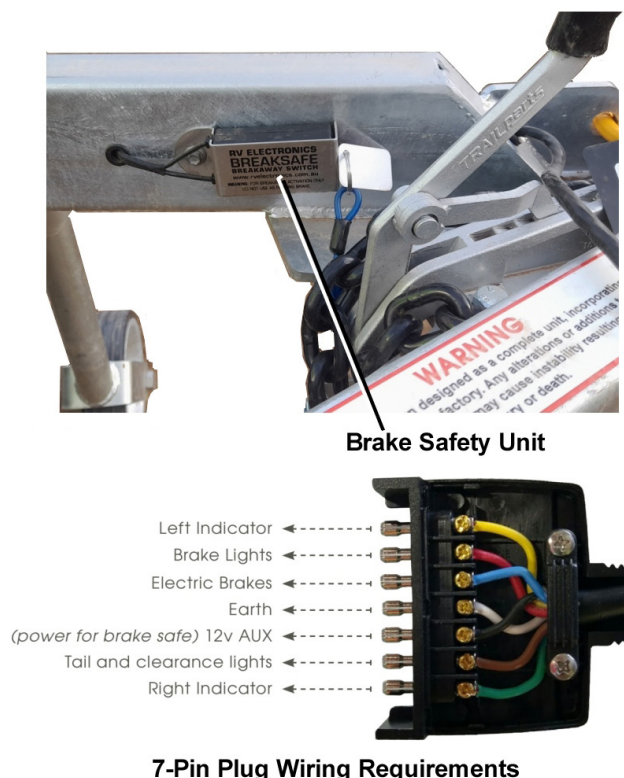
1. Complete the warranty registration online at [www.tti.com.au/warranty-registration](http://www.tti.com.au/warranty-registration), or use the Warranty Registration Card at the back of this handbook.
2. Store this handbook, along with the Tank Quality Check Form and pump unit's manual in the provided leather 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 PolymerPro 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 PolymerPro for the first time.
4. Check that all fittings, valves, hoses and electrical leads are secure following transit, and are not damaged in any way.
5. Inspect the tank for any damage or abrasions.
6. Connect the PolymerPro to the tow vehicle, ensuring the tow hitch engages correctly and locks in place. Connect the safety chains using rated D-shackles.
7. Connect the 7-pin trailer plug to the tow vehicle, ensuring it locks firmly. Ensure the AUX pin is supplied

with 12-volt power from the tow vehicle, as this is essential for the electric brake safety unit, refer to Figure 2. Check lights and indicators operate correctly.



**Figure 2 – Brake Safety Unit and 7-Pin Plug**



**CAUTION: The engine must be inspected and prepared in accordance with the manufacturer. Failure to fulfil this requirement may void the engine's warranty.**

8. Prepare the pump engine in accordance with the selected engine's manual supplied with your PolymerPro unit.
9. Where an electric start petrol option or diesel pump is fitted, ensure the 12-volt battery is fully charged and correctly connected to the pump unit's engine. The battery box is located adjacent to the pump unit, against the trailer's mudguard. Refer to the supplied pump unit's manual and prepare the engine for use, such as filling its tank with fuel.

## Pump Operation – Petrol Engine

The PolymerPro's petrol pump engine is started as follows, refer to Figure 3:total sprayer output,

1. Turn the fuel lever to ON.
2. If the engine is cold, turn the choke lever to ON.



**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. Set the throttle lever to idle for cold starting. If restarting a warm engine, the throttle can be left at normal engine operating speed.
4. For a manual start engine, turn the power switch to ON. Pull the recoil starter handle until the engine starts, then back off the choke lever to OFF.
  - For an optional electric start engine, insert the key and switch the engine to ON and START. When the engine starts, release the key, which will return to the ON position. Back off the choke lever to OFF.
5. Once the engine is warmed up, adjust the throttle to increase the engine speed to normal operating revs.
6. When the engine needs to be stopped, turn the power (manual start) or key switch (electric start) to the OFF position.

If the PolymerPro is not going to be used within the next few hours, shut the system down by turning the fuel tap to OFF.



**Figure 3 – Engine Start-up (Petrol Engine shown)**

## Pump Operation – Diesel Engine Option

The PolymerPro's optional diesel pump engine is started as follows, refer to Figure 3:

1. Turn the fuel tap to ON.



**CAUTION: Ensure the engine's throttle is set to the start position. Do not adjust the throttle to maximum speed until the engine has warmed up.**

2. Set the throttle lever to the START or RUN position (depending on model).

3. Insert the key and switch the engine to ON and START. When the engine starts, release the key, which will return to the ON position.
4. Once warmed up, adjust the engine speed to normal operating revs using the throttle lever.
5. When the engine needs to be stopped, turn the throttle lever back to the idle position.
6. Turn the key switch to the OFF position.

If the PolymerPro is not going to be used within the next few hours, shut the system down by turning the fuel tap to OFF.

## Filling the Tank

The PolymerPro tank is filled by gravity from an overhead standpipe as follows:



**CAUTION: The PolymerPro unit is designed for polymer and water use only. It must not be used for other chemicals or fuel.**

1. Standpipe filling method using a standpipe to fill directly into the top of the tank via the open mesh funnel.
2. Quick fill system, using the supplied suction hose, floating filter and venturi hydro injector. The venturi system works by using the pump to provide a small amount of water to create suction through the venturi hydro injector.

## Standpipe Filling Operation

The PolymerPro tank is filled by gravity from an overhead standpipe as follows:

1. Open the filling lid from the tank's top opening and lift out the filter basket (see Figure 4), if necessary.
2. Add the required quantity of polymer to the tank.
3. Replace the filter basket.
4. Position the PolymerPro unit's top-mounted fill point funnel under the standpipe.
5. Open the standpipe's valve and allow water to flow into the tank.



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

6. An optional sight level tube is fitted to the rear of the tank, providing a visual indicator of the level of water in the tank. If a sight level tube is not fitted, observe the water level directly in the tank. When the tank is filled, close the standpipe's valve.
7. Upon completion of filling, replace the tank's filling lid.

## Quick Fill Operation

The tank is filled by drawing polymer or water from a source using the PolymerPro's venturi hydro injector as follows, referring to Figure 4, Figure 5 and Figure 6:



**NOTE: The quick fill system requires some water in the tank to operate the venturi hydro injector.**

1. Ensure there is at least 30 litres of water already in the tank, as this is required to create the venturi effect.
2. Open the filler lid on the tank, to allow venting when the venturi hydro injector is operating. The filter basket does not need to be removed.
3. Position the PolymerPro unit close to the polymer or water supply, such that the liquid is less than 2m lower than the top of the PolymerPro's venturi hydro injector.
4. Open the camlock end of the 6m quick fill hose to disconnect it from its storage bracket.
5. Open the cap on the venturi hydro injector and fit the hose's camlock end.
6. Place the floating filter end of the hose into the polymer IBC, drum or water source. Ensure the filter is deep enough in the liquid to prevent it sucking air.
7. Referring to Pump Operation procedures (diesel or petrol engine), start the pump.
8. At the 4-way regulator, open the valve to the line connected to the venturi hydro injector. Water from the tank will start pumping to the injector, which will create the venturi effect to draw the liquid from the supply into the PolymerPro's tank.
9. Ensure the pump is drawing liquid and discharging it into the PolymerPro's tank.

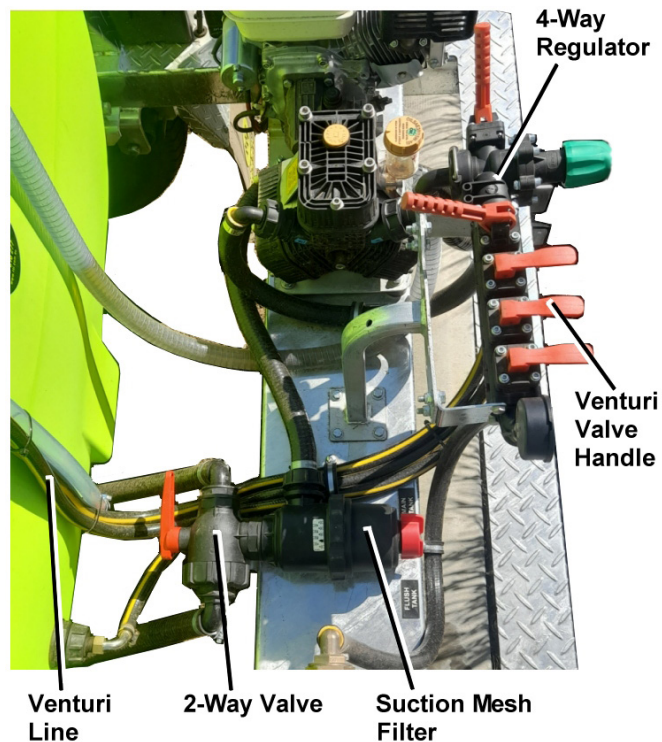


**CAUTION: To prevent overflow, do not leave the filling operation unattended.**

10. An optional sight level tube is fitted to the rear of the tank, providing a visual indicator of the level of water in the tank. If a sight level tube is not fitted, observe the liquid level directly in the tank. When the tank is filled, stop the pump.
11. Close the venturi valve on the 4-way regulator.
12. Disconnect the quick fill hose from the venturi hydro injector and reinstall the injector's cap.
13. Drain and clean the hose and return it to its bracket on the side of the trailer, locking the camlock end to its mount.

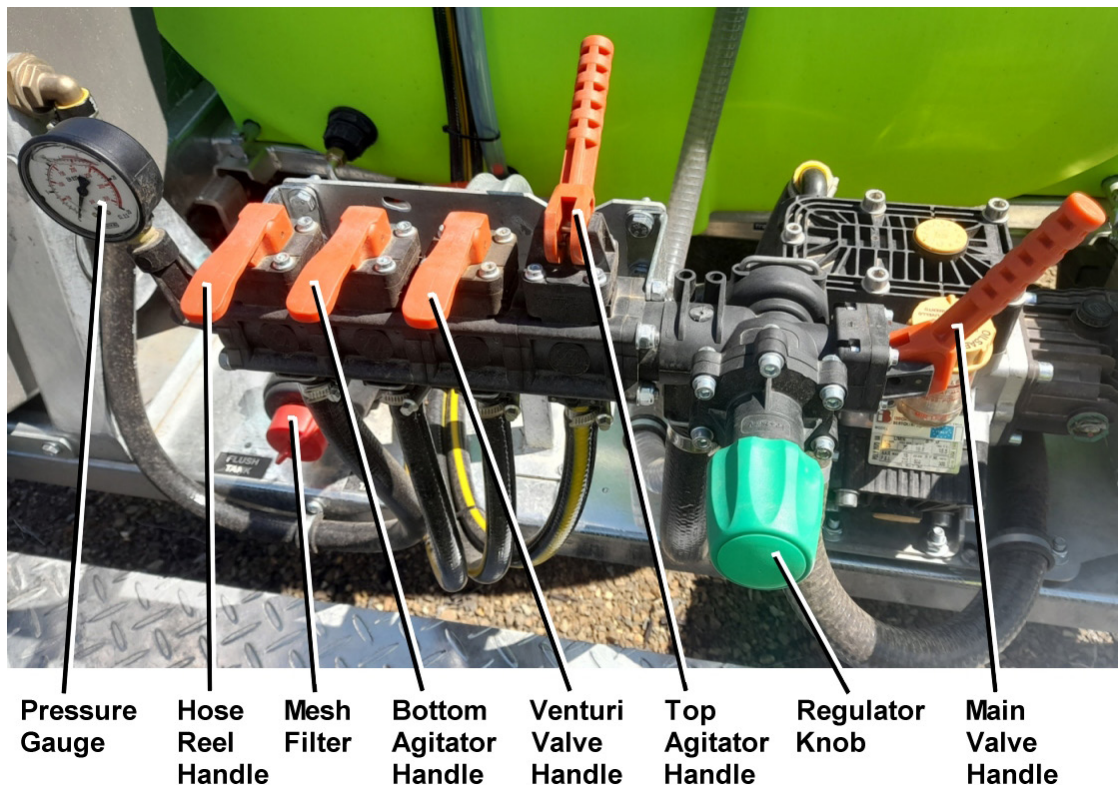


**Figure 4 – Tank Quick Fill Operation**



**Figure 5 – PolymerPro Operation – 1**





**Figure 6 – PolymerPro Operation – 2**

## PolymerPro Operation

### Initial Operation Set Up

The PolymerPro Heavy Duty Trailer Unit is operated as follows, refer to Figure 6:

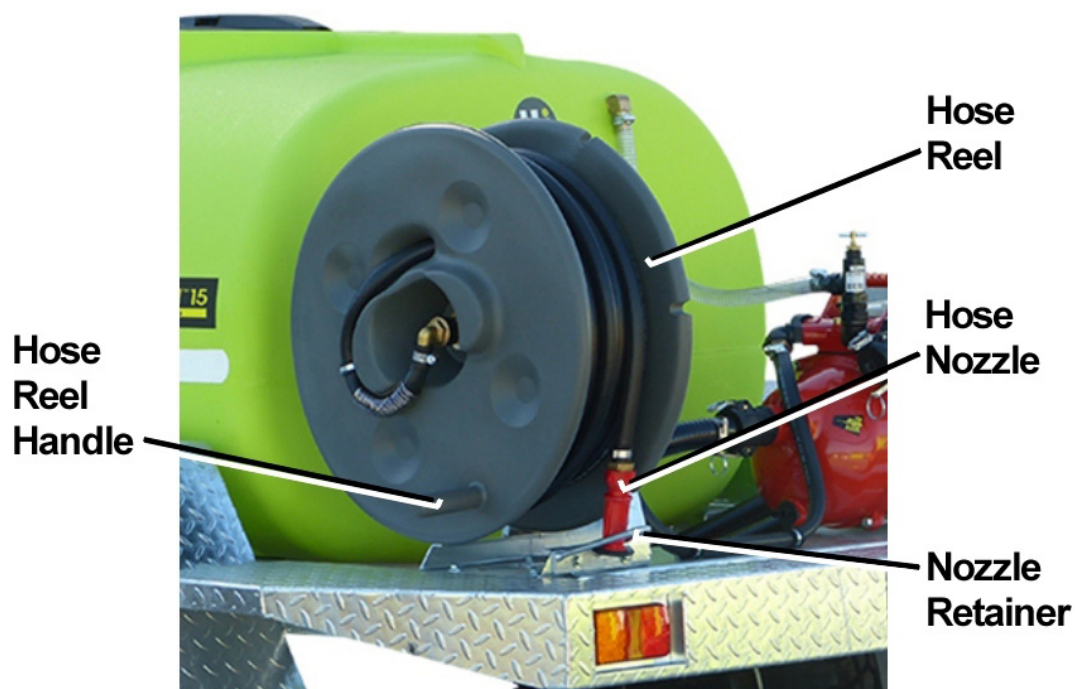
1. Connect the unit to the tow vehicle and check security of all connections (refer to Before First Use procedure above).
2. Fill the tank from an appropriate source, refer to the Filling the Tank procedure above.
3. Fill the flush water tank with clean water.
4. Switch the 2-way valve (see Figure 5) on the suction hose on the back of the suction mesh filter to MAIN TANK.
5. Start the pump (referring to the pump procedure above) and allow to warm up. The Main Valve Handle (bypass valve) must be set to divert the water back into the tank, otherwise the engine will not start.
6. At the 4-way regulator manifold, open the top and bottom agitator valves. This will allow the liquid to circulate through the system, thoroughly mixing the contents of the tank.

### Spray Hose Operation

With the PolymerPro unit operating as described above, the spray hose is used as follows, refer to Figure 7:

1. Unlock the hose reel and release the hose's nozzle from its retaining bracket. Pull out the length of hose required.

2. Adjust the pump engine's speed to achieve the optimum flow rate.
3. Open the hose's nozzle by rotating it to achieve the desired spray pattern.
4. Upon completion of the task, close the hose nozzle. The polymer liquid will bypass back into the tank.
5. Switch the 2-way valve on the back of the suction mesh filter from the MAIN TANK to FLUSH TANK.
6. Open the hose nozzle again. Clean water from the flush tank will now be drawn through the pump, regulator manifold and hose to flush the system.
7. Close the hose nozzle and shut the pump down, referring to the appropriate Pump Operation procedure above.
8. Open the hose nozzle to release pressure.
9. Rewind the hose onto the reel by manually winding the handle on the side of the reel. Close the nozzle and lock the nozzle back into its bracket.



**Figure 7 – Spray Hose Reel**

## Cleaning Procedure

The recommended cleaning procedure is as follows:



**WARNING: Ensure the cleaning area is in an open, well-ventilated space, and any flushing water is captured to prevent runoff into watercourses or into environmentally sensitive areas.**

1. After spraying operations are complete, park the PolymerPro on a slight upwards slope, so the rear of the trailer is downhill. This will assist with draining the tank.
2. Drain any residual polymer fluid by opening the suction mesh filter housing adjacent to the bottom of the tank, refer to Figure 6. Capture and dispose or store any fluid in accordance with environmental and work safety requirements.
3. If necessary, top up the 100L flush water tank.
4. Switch the 2-way valve on the back of the suction mesh filter from the MAIN TANK to FLUSH TANK.
5. Start the pump (referring to the pump procedure above) and set it to normal operating speed.
6. Open the hose valve handle on the 4-way regulator manifold, pull out the hose and open the spray nozzle.
7. Close the hose valve handle and open the bottom agitator valve handle. This will spray clean water into the bottom of the tank.
8. Close the bottom agitator valve handle and open the venturi valve handle, which will flush the venturi line back into the tank.
9. Close the venturi valve handle and open the top agitator valve handle. This will wash down the sides of the tank interior.
10. Close the top agitator valve handle and shut down the pump engine.
11. Switch the 2-way valve back from the FLUSH TANK to MAIN TANK.
12. To fully drain the PolymerPro tank, open the suction mesh filter and allow to drain out.
13. Once fully drained, close the mesh filter.

## 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; diesel; 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 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 unit to tow vehicle;</li> <li>• Keep hose tidy;</li> <li>• Put unit brakes on (if fitted).</li> </ul>
Clean up, maintenance & storage	As above	Low	<ul style="list-style-type: none"> <li>• As above;</li> <li>• Wear PPE for clean up;</li> <li>• Store unit in a dry, well ventilated area.</li> </ul>
Burn risk	Hot exhaust/muffler	Med	<ul style="list-style-type: none"> <li>• Do not reach over hot exhaust</li> <li>• Do not service engine while hot</li> <li>• Wear appropriate PPE</li> </ul>

## Maintenance

Your PolymerPro Heavy-Duty Trailer 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. The frequency of these activities will depend on the nature of the operating environment and the operational hours of the PolymerPro unit. Refer to the maintenance schedule tables below for details of maintenance intervals.

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 hoses, fasteners and 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 petrol or optional diesel engine driven pump, check the engine's oil level weekly. Top up as required.
5. Check for any signs of fuel or oil leaks. If detected, investigate and rectify immediately.
6. Check the condition of the optional diesel or petrol pump engine's 12 volt battery, replace it or charge it as necessary.
7. Check the condition of the electrical brake's 12 volt battery, replace it or charge it as necessary.
8. If the PolymerPro unit 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 Tasks

The PolymerPro 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.



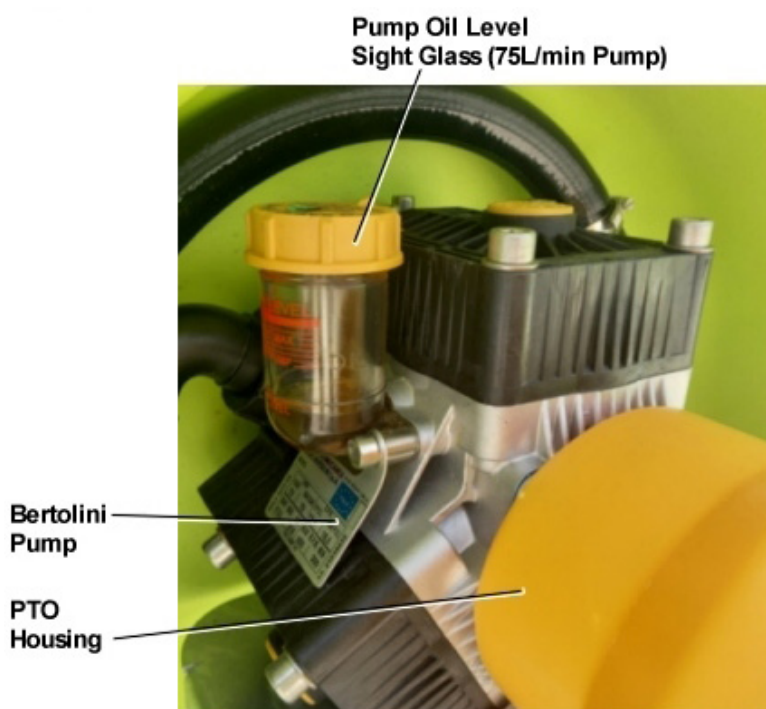
**CAUTION! In dusty, dirty or smoky environments, cleaning, inspection and servicing of the unit on a regular basis is essential. The cleaning, inspection and servicing must be undertaken more frequently in harsh conditions to avoid damage or destruction of equipment.**

The frequency of these activities will depend on the nature of the operating environment and the operational hours of the PolymerPro unit.

### Pump System

1. Refer to the supplied pump engine manual, drain and replace the engine oil in accordance with the manufacturer's recommendations.
2. Clean engine's air filter regularly, especially if working in a dusty environment.
3. At the rear of the pump, adjacent to the tank, unscrew the suction filter cover and remove the filter screen and gasket. Soak the filter screen in clean water, brushing carefully with a nozzle brush. When re-assembling, ensure the gasket is in position.

4. Refer to the pump manual (downloaded via link on supplied data sheet), drain and replace the pump oil in accordance with the manufacturer's recommendations (refer to Figure 8).
5. Replace the pump's check valves and diaphragms in accordance with the manufacturer's recommendations.



*Figure 8 – Bertolini Pump – Checking the Oil Level*

## Maintenance Schedule

The following tasks are to be conducted in accordance with each of the schedules. All scheduled tasks are to be undertaken concurrently. For example, at the three month maintenance interval, all tasks listed are to be undertaken, in addition to the daily, weekly and monthly tasks.



**NOTE! Maintenance is important. Keep a record of all maintenance tasks conducted on the PolymerPro unit.**

TTi recommends photocopying these schedules in order to keep a detailed log of all maintenance tasks. A copy of these schedules will be required to support any warranty claim.



## Daily Tasks

The following tasks are to be undertaken daily, or prior to each use, of the PolymerPro unit.

No.	Task	Notes
1	Inspect the PolymerPro for any signs of damage or wear	Clean, repair or replace
2	Check plug connections and test lights/indicators	Test function of lights and trailer brakes
3	Check fuel	Top up as required
4	Inspect engine's air filter and housing for dust	Clean, replace as necessary
5	Press button on brake safety unit (Figure 2) to test charge	Charge brake battery
6	Clean Suction Filter	Unscrew red suction filter and clean
7	Ensure freshwater tank is full	Use rinse tank to clean lines/ tank after every use

## Weekly Tasks

The following tasks are to be undertaken each week or 10 operating hours, whichever occurs first.

No.	Task	Date	Signed
1	All Daily tasks		
2	Remove and clean the engine's air filter		
3	Check engine oil level, top up as required		

## Monthly Tasks

The following tasks are to be undertaken each month or 20 operating hours, whichever occurs first.

No.	Task	Date	Signed
1	All Daily and Weekly tasks		
2	Check tyre pressures are 36psi (248kPa or 2.48 Bar)		
3	Visually inspect tyres for wear or damage		
4	Check wheel nut tension		
5	Visually inspect suspension components		
6	Check for damaged electrical brake cables		
7	Check hose and hose reel by unwinding fully		
8	* Change pump engine oil (and filter, if fitted) (first change, thereafter every six months or 100 operating hours)		

### Three Monthly Tasks

The following tasks are to be undertaken every three months or 50 operating hours, whichever occurs first.

No.	Task	Date	Signed
1	All Daily, Weekly and Monthly tasks		
2	* Re-tension axle U-bolts (first time, thereafter every six months or 100 operating hours)		
3	Inspect, clean and grease suspension lubrication points		
4	Inspect the air filter, replace if clogged or damaged		
5	Check all hoses, fasteners, nozzles and fittings		

### Six Monthly Tasks

The following tasks are to be undertaken every six months or 100 operating hours, whichever occurs first.

No.	Task	Date	Signed
1	All Daily, Weekly, Monthly and 3-Monthly tasks		
2	Change engine oil (and filter, if fitted)		
3	Inspect spark plug (petrol engine only)		
4	Check tension on axle U-bolts and suspension components		
5	Lubricate grease nipples on suspension shackles and trailer hitch		

### Twelve Monthly tasks

The following tasks are to be undertaken every twelve months or 200 operating hours, whichever occurs first.

No.	Task	Date	Signed
1	All Daily, Weekly, Monthly, 3-Monthly & 6-Monthly tasks		
2	Check the battery condition (if fitted)		
3	Replace the engine's air filter		
4	Drain and flush the fuel tank		
5	Replace the engine's fuel filter		
6	Replace the spark plug (petrol engine only)		
7	Inspect brake shoe/pad wear and adjustment (if fitted)		

### Two Yearly Tasks

The following tasks are to be undertaken every 24 months or 500 operating hours, whichever occurs first.

No.	Task	Date	Signed
1	All Daily, Weekly, Monthly, 3-Monthly, 6-Monthly and 12-Monthly tasks		
2	Disassembly, clean and repack wheel bearings		
3	Change brake fluid and bleed brakes (hydraulic braked version)		

## Troubleshooting

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

Problem	Possible Cause	Remedy
Pump will not feed water	Ball valve closed on outlet/s	Open ball valve/s
Engine will not crank (petrol or optional diesel engine)	Flat battery	Check battery state-of-charge
	Melted fusible link/circuit breaker	Replace fusible link/breaker
	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
	Problem in theft deterrent system	Check service manual for system tests
Engine cranks too slowly to start	Weak Battery	Check battery and charge as needed
	Loose or corroded connections	Clean and tighten connections
	Faulty starter motor	Test Starter
	Mechanical problems with engine or starter	Check engine and starter, replace worn out parts
Starter keeps running	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
	Binding ignition key	Check key for damage
Starter spins, but engine will not crank	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 spins, but engine will not crank	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 to view our PDF  
Handbook online

**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**