

SuperReel™ M-Series

Mechanical Driven Field Sprayer



“HELPING TO DEVELOP AND PROTECT THE LAND”

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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 SuperReel[™] 500L or 600L M-Series Field Sprayer (SuperReel M-Series sprayer), which will provide many years of reliable service when operated and maintained in accordance with this manual.

This TTi SuperReel M-Series sprayer unit has either a 500-litre or 600-litre tank and comes standard with a petrol operated pump and two power retracting SuperReel hose reels. With the included Next-Gen remote control system, the pump engine is started and stopped, and the hose reels are individually retracted.

This manual describes the operation, driving stability and maintenance procedures applicable to the SuperReel M-Series sprayer, noting additional requirements to options where necessary.

All TTi SuperReel M-Series sprayer tanks are rotationally moulded from quality polyethylene, purpose designed and manufactured to high standards. The SuperReel M-Series sprayer is a slip-on unit for the back of a utility or trailer and designed for herbicide or pesticide spraying.

The SuperReel M-Series sprayer is supplied complete, tested and ready to mount to your vehicle. TTi warrants that the SuperReel M-Series sprayer has been designed and built for its intended purpose as a pesticide/herbicide spray unit.

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 SuperReel M-Series sprayer are the following documents:

1. Operator's Handbook (this manual, which includes Warranty details)
2. Honda Petrol engine manufacturers' handbooks
3. Bertolini pump manufacturers' handbooks.

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 spraying herbicides and pesticides. Under no circumstances should it be used for any other purpose. It must never be used for transporting fuel.
2. Only authorised and trained personnel are to operate this equipment. Operators must have read and fully understood this manual before operating the SuperReel M-Series sprayer.
3. Do not operate the SuperReel M-Series sprayer anywhere near bystanders, livestock, watercourses or any non-targeted vegetation that may be in danger from spray drift contamination.
4. Wind direction and speed must be taken into account, as windy conditions may endanger the operator or damage to adjacent non-target vegetation. Avoid spraying on hot and sunny days or when wind speed exceeds 6.5km/h.
5. Do not operate this equipment while under the influence of alcohol or any drugs that could impair your capabilities in any way.
6. Personal Protection Equipment (PPE) must be worn when operating the petrol pump on the SuperReel M-Series sprayer. Exposure to excessive noise over an extended period can cause impairment or loss of hearing.
7. PPE appropriate to the chemicals being used must be worn at all times when operating the SuperReel M-Series sprayer. As a minimum, the PPE should include coveralls, gloves and boots. A face shield and PVC apron are recommended depending on the task. It is recommended that the following documents should be read and understood by the operator:
 - Australian Standard for Chemical protective clothing AS3765
 - Australian Standard for Respiratory protection devices AS1715
8. Ensure the capacity of the vehicle is suitable for the loaded mass of the SuperReel M-Series sprayer. Refer to the vehicle's operator manual for safe working loads, correct securing points and relevant safety instructions. Do not exceed the carrying and braking capacity as specified by the vehicle manufacturer. As a guide, one litre of water weights one kilogram (kg); chemicals are marginally heavier. Therefore, a 600 litre SuperReel M-Series sprayer full of water will weigh in excess of 940 kg. The Tare Weight (empty) is approximately 340 kg.
9. The unit must be securely restrained on the vehicle. Ensure all fasteners are tightened and secure before operation.
10. Care should be taken at all times, particularly when operating on rough or steep terrain. Drivers should be aware of fluid surge affecting the vehicle's centre of gravity.
11. The SuperReel M-Series sprayer must never be left unattended while being filled with fluids.
12. Do not operate the pump when there is no fluid in the tank.
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. Ensure any electrical connections are properly configured, to prevent damage such as shorting or reverse polarity.
15. At completion of the operation, switch the pump off and relieve any residual pressure by squeezing the spray gun trigger.
16. At completion of the operation, decontaminate the SuperReel M-Series sprayer 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.
17. The SuperReel M-Series sprayer has safety labels affixed to various locations on the unit. These labels should be kept clean and legible, and replaced if damaged.
18. 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, fully drainable 600 litres
Standard Equipment	Honda GX270 petrol engine with remote control electric start
	Bertolini pump 54 litres per minute, at 580 psi
	Fabricated galvanised steel frame with 4-way forklift pockets, with both pre-drilled bolt-on mounting points and tie-down points
	Pressure regulator with three valves, including a capped valve for kerbside or boom spraying kits (not supplied).
	Two remote control auto rewind SuperReels with 100 m of anti-kink nylon hose and Turbo spray guns (one hand-held remote control for each SuperReel hose reel, with one unit-mounted control box)
Options	Manual electronic pushbutton override for SuperReel retraction (if remote control is lost)
	SuperReel fitted with 150, 200 or 250 m of anti-kink nylon hose and Turbo spray gun
	Swivelling hose guide with safety over-run cut-off switch
	Engine oil drain hose for no-mess oil change
	Venturi Fill Kit (for connection to Drain/Suction Port)

Description

The TTI SuperReel M-Series sprayer is designed to carry and distribute herbicides, pesticides or water using a self-contained petrol driven pump, refer to Figure 1. The SuperReel M-Series sprayer is configured with twin engine-powered retraction SuperReel M-Series sprayers and fitted with a 600-litre tank. The unit is suitable for fitting to a conventional utility tray or trailer, in either a permanent bolted connection (with pre-drilled mounting points) or removeable tie-down configuration with integrated tie-down loops.



Figure 1 – SuperReel 600L M-Series Field Sprayer

The SuperReel M-Series sprayer has the following features, refer to Figure 2.

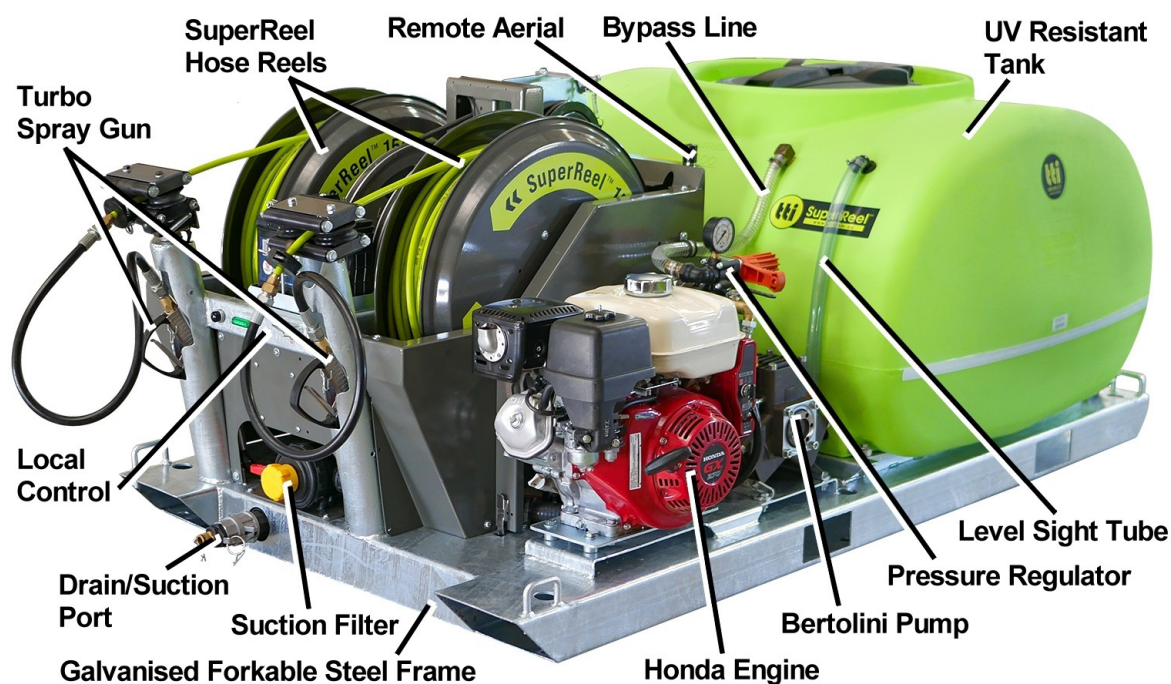


Figure 2 – Component Identification – SuperReel 600L M-Series Field Sprayer

Tank

All TTI tanks are constructed from UV resistant, virgin material polyethylene. The 600-litre tank is fully drainable and includes a level sight tube to provide an accurate level indication of fluid within the tank. The tank inlet is fitted with an internal basket strainer under the twist lock filling cap. The tank has an isolating valve to shut off flow between the tank and the pump.

SuperReel and Spray Gun

Each of the powered retracting SuperReel hose reels contains 100 m of anti-kink nylon hose connected to a trigger actuated Turbo spray gun with adjustable nozzle. The hose is pulled out manually from the SuperReel. Each hose is independently mechanically retracted using the integral Honda pump engine.

The spray gun nozzle adjusts from jet through to mist sprays by adjustment of the lever adjacent to the trigger. When the trigger is squeezed, the fluid is discharged; when the trigger is released, the fluid bypasses back into the tank.

The SuperReel M-Series sprayer unit is available with a 150 m, 200 m or 250 m hose options.

Honda Engine and Bertolini Pump

The SuperReel M-Series sprayer is fitted with a Honda GX270 electric start petrol engine connected by a horizontal drive chain to a Bertolini pump. The pump is rated at 54 litres per minute.

The pump's drive shaft extends into the centre of the twin hose reel unit, with an additional sprocket near the end. This second sprocket drives the vertically mounted secondary chain, with the upper sprocket shaft incorporating two pulleys (with integrated clutch) to drive the hose reel retraction via drive belts.

If a spray gun is not in operation when the pump is running, the fluid bypasses back into the tank via the hose operation lever at the pressure regulator.

Pressure Regulator

A pressure regulator and pressure gauge are fitted to the pump discharge flange to control line pressure and prevent pump cavitation. The regulator is adjustable and can be set to approximately 5 bar for spot spraying. A third capped valve is fitted to the regulator housing, available for additional equipment, for example, a kerbside spray head.

An optionally available solenoid operated valve can be fitted to the third valve position, which can be operated using the VALVE button on the remote controls. This valve can be used for additional equipment, such as a kerbside spray head or boom spray.

Hose Operation Lever

A manually operated lever is fitted adjacent to the pressure regulator and has two positions:

- BYPASS – directs the fluid back into the tank.
- ON – for operation of the hose reels.

The lever should always be set to the BYPASS position when starting the pump and switched to the ON position when ready to start spray operations.

Manually Operated Valves

Manually operated valves are fitted to the regulator to feed to each of the SuperReel hose reels. A third capped valve is fitted to the regulator housing, available for additional equipment, such as a kerbside spray head or boom spray.

A valve is located on the side of the hose reel frame to isolate the tank from the pump. A valve is fitted to 1¼" drain/suction port for easy draining of the system. The port includes a camlock fitting for connecting to a hose for connecting to a clean water supply to flush out the lines.

This port can be used to suction fill the tank from either a clean water supply or a pre-mixed chemical supply tank. A faster filling method is to connect to the clean water supply via an optional Venturi Fill Kit.

Suction Filter

Adjacent to the 1¼" drain/suction port a filter is installed on the suction line. The filter has a removeable filter element for easy cleaning.

Frame

The chassis frame of the SuperReel M-Series sprayer is an all steel, fully welded construction and hot dip galvanised for corrosion resistance. The frame incorporates 4-way forklift pockets for easy loading and unloading from the vehicle. Six pre-drilled bolt-on mounting points are provided for permanent mounting to a vehicle. Four tie-down points are provided to secure the SuperReel M-Series sprayer to a vehicle for temporary use.

The steel frame incorporates two secure lock-in spray gun holders. Between the holders is a local control panel for recovering the hoses if the remote controls are not available.

Machine Limitations

The SuperReel M-Series sprayer 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 SuperReel M-Series sprayer is heavy when filled with fluid. To maintain stability while operating this unit:

- Ensure the vehicle 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 SuperReel M-Series sprayer tank is full, as the vehicle may have a higher centre of gravity.

SuperReel Operating Instructions

Before first use

Your SuperReel M-Series sprayer is delivered fully assembled and ready to be fitted onto 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.
2. Store this handbook, along with engine and pump manuals, 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 SuperReel 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 SuperReel M-Series sprayer 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 that may have occurred during transit.



CAUTION: The unit must be securely mounted to the vehicle. Failure to do so may result in the unit moving or falling off the moving vehicle. Warranty is conditional on the unit being correctly mounted.

6. Position your SuperReel M-Series sprayer onto the vehicle and mount securely to the tray. If using tie-down straps, they must be rated to at least the total mass of the unit when filled with fluid. Alternatively, the integrated tank frame may be bolted to the vehicle. Refer to Figure 3 for details on mounting points.



CAUTION: Ensure any electrical connections are configured correctly to prevent shorting or reverse polarity. Warranty is conditional on the electrical systems being correctly connected.

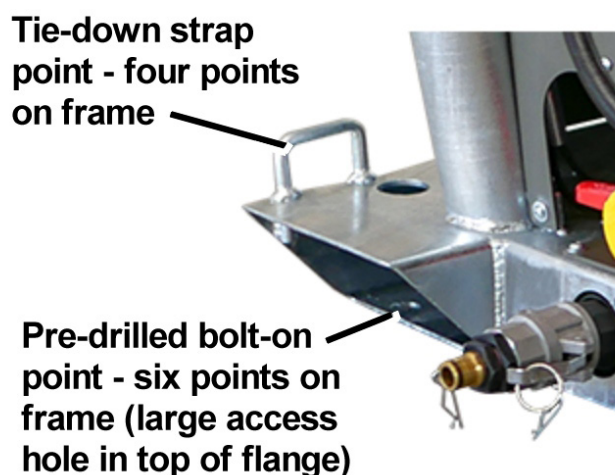


Figure 3 – SuperReel M-Series Sprayer Mounting Options

7. Refer to the supplied pump unit's manual and prepare the engine for use, such as filling its tank with fuel.

Filling the SuperReel M-Series Sprayer Tank



WARNING: Ensure the filling area is in an open, well ventilated space if filling with chemicals. Follow the instructions provided with the chemicals or the applicable Safety Data Sheet.

Mixing and filling the SuperReel M-Series sprayer should be undertaken at a carefully chosen site, away from any risk of spillages draining into water courses or into environmentally sensitive areas. Children and animals must always be kept away from mixing and filling operations.

The SuperReel M-Series sprayer tank can be filled in either of the following two ways:

1. Top filling via the large tank filler opening.
2. Suction filling using the pump to draw water from a clean water supply or chemical supply tank. An optional Venturi Fill Kit will enable filling the tank quicker.

Top Filling Operation

The unit's tank is filled as follows:

1. Open the tank filler by twisting and lifting the lid.
2. Withdraw the internal basket strainer and inspect it for any debris. Clean it if required and reinstall it into the top of the tank, refer to Figure 4.



Figure 4 – SuperReel M-Series sprayer Filler Lid and Basket Strainer

3. Follow the chemical manufacturer's instructions and safety precautions carefully, taking note of the order in which the products are added to the tank.
4. Measure the correct quantities of chemicals using clean measuring containers specifically for this purpose only, then add the chemicals to the tank.
5. Rinse out the measuring containers and any empty containers and pour all rinsing liquid into the SuperReel M-Series sprayer's tank.



CAUTION: Do not overfill the tank. This may result in chemical spillage.



CAUTION: The SuperReel M-Series sprayer must never be left unattended while being filled with fluid.

6. Top up the tank with water to the required level, ensuring it is not overfilled. A sight tube is located on the tank, providing a visual indication of the fluid level in the tank.



CAUTION: Ensure the tank isolating valve is fully open before starting the pump.

7. Thoroughly mix the contents by stirring with a suitable paddle or starting the pump with the hose operation lever set to the BYPASS position and the tank isolating valve open, refer to Operating Instructions.
8. Upon completion of filling the SuperReel M-Series sprayer tank, replace the filler cap and twist to tighten.
9. Wash off any spillage from outside the tank.
10. Close the chemical supply containers and store appropriately. Any empty containers must be thoroughly rinsed and set aside for collection and disposal in compliance with environmental and work safety requirements.

Suction Filling Operation

The unit's tank is filled as follows:



NOTE: The SuperReel M-Series sprayer tank can be filled with either water or chemicals using this method.

1. If adding the chemicals directly to the tank, follow steps 2 to 6. If adding the premixed chemicals from a supply tank, start at step 7.
2. Open the tank filler by twisting and lifting the cap.
3. Withdraw the internal basket strainer and inspect it for any debris. Clean it if required and reinstall it into the top of the tank.
4. Follow the chemical manufacturer's instructions and safety precautions carefully, taking note of the order in which the products are added to the tank.
5. Measure the correct quantities of chemicals using clean measuring containers specifically for this purpose only, then add the chemicals to the tank.
6. Rinse out the measuring containers and any empty containers and pour all rinsing liquid into the SuperReel M-Series sprayer's tank.



CAUTION: Do not overfill the tank. This may result in chemical spillage.



CAUTION: The SuperReel M-Series sprayer must never be left unattended while being filled with fluid.

7. Connect a hose (not supplied) to the 1¼" drain port camlock coupling (refer to Figure 5), with the other end connected to either a clean water supply, such as a tank, or a pre-mixed chemical tank.

Alternatively, an optional Venturi Fill Kit can be connected, making filling the tank faster.



CAUTION: Ensure the tank isolating valve is fully open before starting the pump.

8. Close the SuperReel M-Series sprayer's tank isolating valve, located on the side of the hose reel frame.
9. Close the two hose reel valves on the pressure regulator manifold.

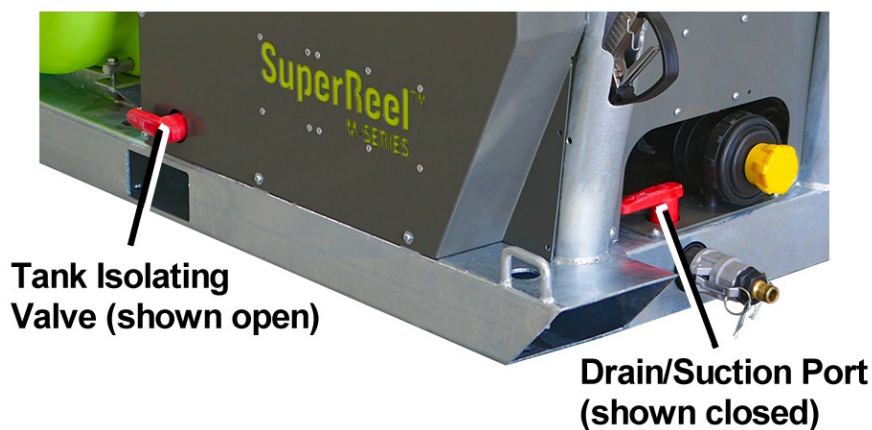


Figure 5 – SuperReel M-Series sprayer's Tank Isolating Valve and Drain/Suction Port



CAUTION: Ensure not to over-run the hose when pulling it out from the reel, as this may damage the hose or the fittings.

10. Open the clean water supply's valve, then open the drain/suction port valve.
11. Start the pump, refer to the Pump Operation procedure below. Water will be drawn through the pump and fed into the tank via the bypass line.
12. Top up the tank with water to the required level, ensuring it is not overfilled. A sight tube is located on the tank, providing a visual indication of the fluid level in the tank.

Operating Instructions

Normal Operation

The SuperReel M-Series sprayer is started and operated as follows:



WARNING: Suitable PPE must be worn by the operator when conducting hose spraying operations.



CAUTION: Do not spray in windy conditions, where spray drift contamination may occur.

1. Position the vehicle with the SuperReel M-Series sprayer at a suitable point of the operations area.
2. Confirm the tank contains the required chemical quantity by observing the fluid level at the level sight tube.



CAUTION: Ensure the pressure regulator is set to the minimum position.

3. At the rear of the SuperReel M-Series sprayer, switch the power toggle switch to ON, refer to Figure 6. The green lamp will light up, indicating the system is powered up. The remote controls will now be operational.

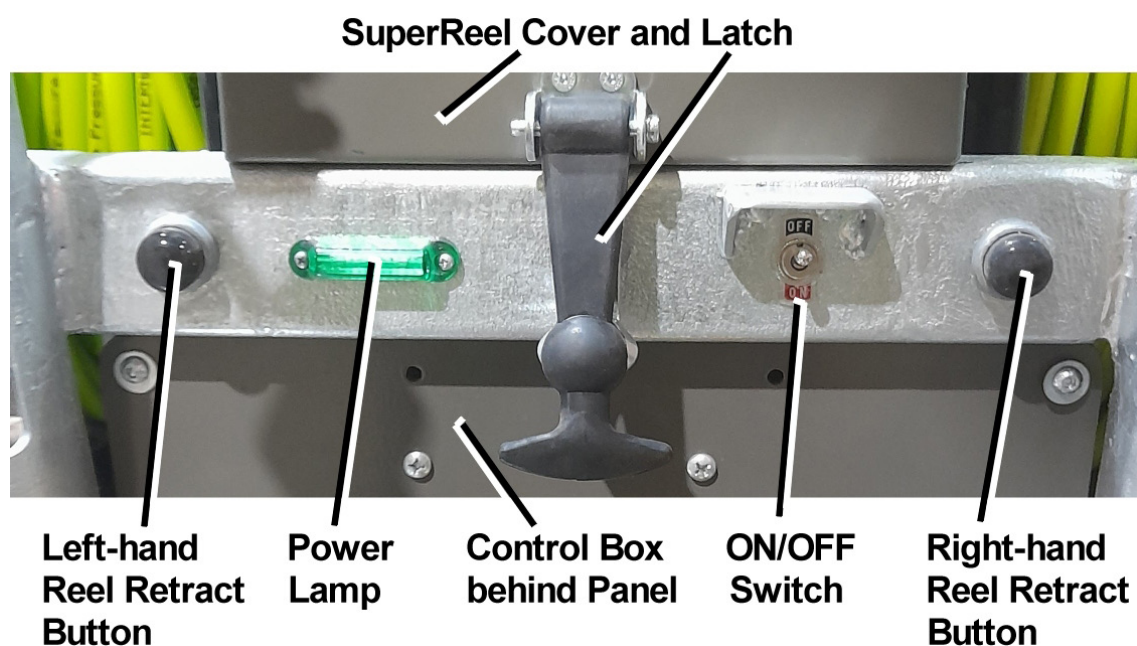


Figure 6 – Manual Control Panel

- At the pump, check that the pressure regulator is set to the minimum position by turning the adjustment knob anti-clockwise, refer to Figure 7.

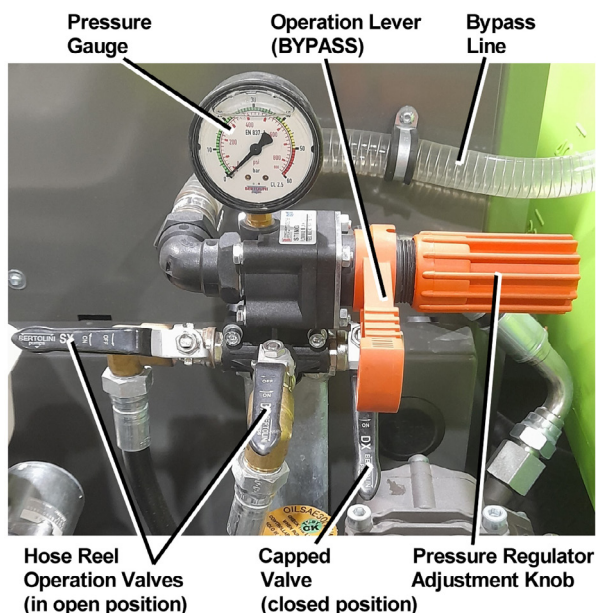


Figure 7 – Pressure Regulator

- Check that the hose operation lever is in the BYPASS position.
- Start the pump, refer to the Pump Operation procedure below. The fluid will now start circulating through the system and returning to the tank via the bypass circuit.
- With the pump running, turn the operating lever from BYPASS to the ON position.
- At the regulator manifold, open one of the hose valves, which will now pressurise that hose. If both reels are to be used, open the second hose valve.
- Turn the pressure regulator knob clockwise to the required pressure – approximately 5 bar for hose spraying operation is recommended, which can be fine-tuned as required.



CAUTION: Ensure not to over-run the hose when pulling it out from the reel, as this may damage the hose or the fittings.

- Pull the hose/s to unwind it from the SuperReel/s. The integrated clutch in the reel will release the hose as it is pulled out.
- Aim the hose's spray gun in the required direction and squeeze the trigger. Adjust the spray pattern by operating the lever on the spray gun handle, refer to Figure 8.
- Use a constant speed when spraying and release the trigger at the end of each swath or change of direction, to prevent overdosing. Work in parallel lines when spraying large areas, rather than swinging from side to side.
- At the end of the task, release the spray gun trigger – the fluid will automatically recirculate through the system and return to the tank via the bypass circuit until the pump is switched OFF. If both hoses are in operation, wait until the second operator has finished, then switch the pump OFF using either one of the remote controls.
- With the pump turned off, aim the spray gun/s in the required direction, squeeze the trigger to release the residual pressure in the hose, which will result in a small amount of fluid discharging.

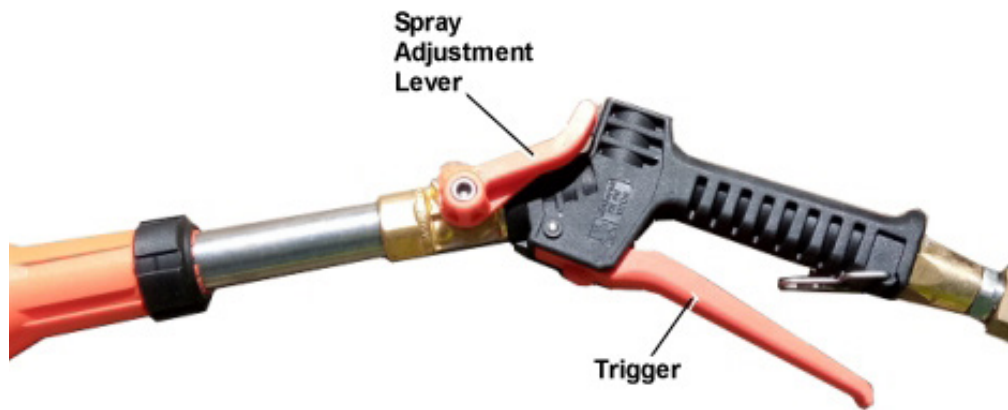


Figure 8 – Spray Gun (typical)

15. With the hose pressure released, the hose is ready to stow back onto the SuperReel. To retract the hose, apply a little tension to the hose, to ensure the hose does not flip off the spool upon starting.
16. Press the button on the remote controls supplied with the SuperReel M-Series sprayer to start retracting the hose onto the relevant reel, refer to Figure 9. While holding onto the spray gun, walk back towards the SuperReel M-Series sprayer, ensuring there is minimal slack in the hose while it retracts. The hose will wind on to the reel's spool, guided by the integrated roller hose guide.
17. Release the button when the hose is retracted, allowing enough slack in the hose to stow the spray gun in its holder beside the SuperReel. Optionally available is a swivelling roller hose guide that has a spring-loaded mount. If the end-of-hose retainer hits the hose guide block, it will slide against the spring and release a limit switch, which disengages the clutch on the belt driven hose reel.
18. At the regulator, turn the hose operation lever to the BYPASS position.
19. At the manual control panel, switch the power toggle switch to OFF. The lamp will go out.

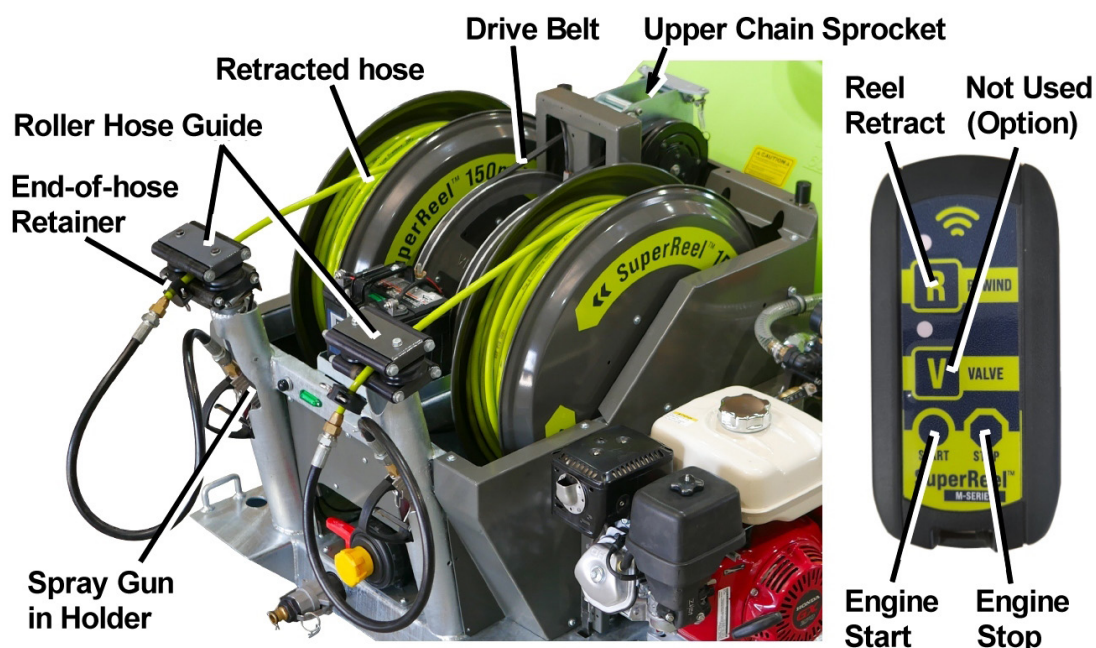


Figure 9 – SuperReel Hose Reels (central cover removed) and Remote Control

Hose Recovery

In the event a remote control is lost or faulty, the SuperReel's hose/s can be recovered using manual override controls, see Figure 10.

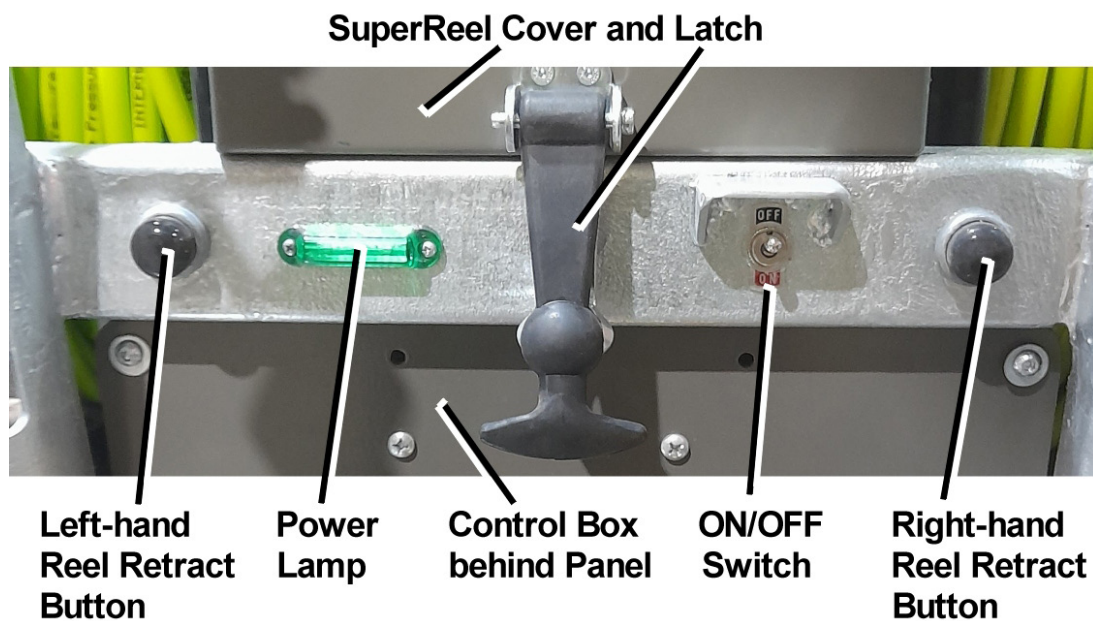


Figure 10 – Manual Control Panel



CAUTION: Ensure the hose does not get snagged around obstacles.

1. Walk back to the SuperReel M-Series sprayer, carrying the spray gun with you. Check that the hose does not get caught up around obstacles.
2. At the manual control panel, press and hold the relevant reel retract button. The hose will retract onto the hose reel.
3. When the hose reaches the fully retracted stage, be carefully to release the retract button to prevent damage to the hose or reel. Stow the spray gun into its holder.

Pump Operation

The SuperReel's petrol pump engine is started as follows, refer to Figure 11:

1. At the manual control panel, switch the power toggle switch to ON, refer to Figure 6. The green lamp will light up, indicating the system is powered up. The remote controls will now be operational.
2. Turn the fuel tap to ON.
3. Set the choke lever to the closed position.



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.

4. Check that the throttle is set to the idle position. If restarting a warm engine, the throttle can be left at normal engine operating speed.

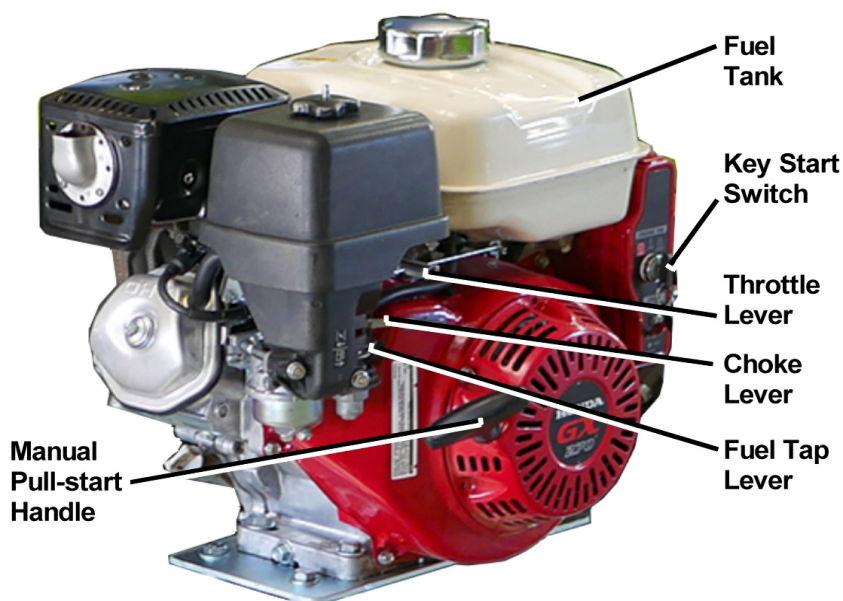


Figure 11 – Petrol Pump Details

5. Insert the ignition key into the ignition switch and turn clockwise to start the engine. The engine should crank and start. Release the key as soon as it starts.

Alternatively, press the START button on one of the remote controls. Release the button as soon as the engine starts.

6. Once the engine is warmed up, slowly increase the engine speed to a medium setting, which should result in the required performance while minimising the fuel consumption and excessive engine noise.
7. When the engine needs to be stopped, turn the ignition switch to the OFF position, or press the STOP button on a remote control.

If the SuperReel M-Series sprayer is not going to be used within the next few hours, shut the system down as follows:

1. Set the engine throttle lever to the idle position.
2. Turn the fuel tap to OFF.

Clean-up and Decontamination

After use, the SuperReel M-Series sprayer unit must be thoroughly decontaminated inside and outside – including the pump, hoses and spray guns – to avoid damage to crops from any harmful spray residues. Decontamination also prevents sprayer corrosion and abrasion.

Cleaning the SuperReel M-Series sprayer should be undertaken at a carefully chosen site, away from any risk of spillages draining into watercourses or into environmentally sensitive areas.

Short-term Clean-up Procedure

The recommended short-term clean-up procedure, for use when the SuperReel tank does not need to be emptied, is as follows:



WARNING: Suitable PPE must be worn by the operator when cleaning and decontaminating the SuperReel M-Series sprayer. Follow the instructions provided with the chemicals or the applicable Safety Data Sheet.



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, connect a hose (not supplied) to the 1¼" drain port camlock coupling (refer to Figure 12), with the other end connected to a clean water supply, such as a tank.



CAUTION: Make sure all valves are in their correct positions before starting the pump.

2. After spraying operations are complete, connect a hose (not supplied) to the 1¼" drain port camlock coupling (refer to Figure 12), with the other end connected to a clean water supply, such as a tank.

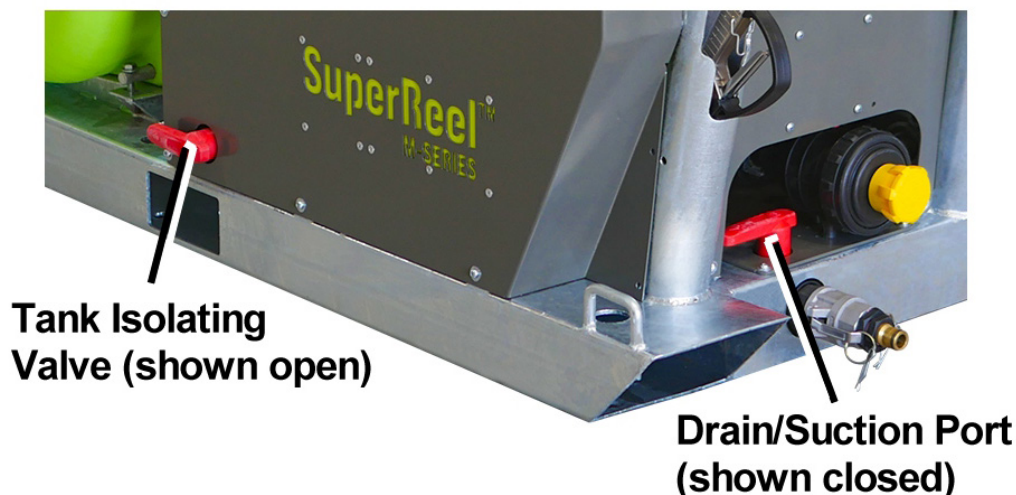


Figure 12 – SuperReel M-Series sprayer's Tank Isolating Valve and Drain/Suction Port

3. Open the clean water supply's valve, then open the drain/suction port valve.
4. Start the pump, refer to the Pump Operation procedure above. Water will be drawn through the pump.
5. On both spray guns, squeeze and hold the triggers, directing the nozzles to a safe discharge area or capture and dispose or store any fluid in accordance with environmental and work safety requirements.

Decontamination Procedure

The recommended decontamination procedure is as follows:



WARNING: Suitable PPE must be worn by the operator when cleaning and decontaminating the SuperReel M-Series sprayer. Follow the instructions provided with the chemicals or the applicable Safety Data Sheet.



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, drain any residual fluid via the drain/suction port beneath the hose reels. Capture and dispose or store any fluid in accordance with environmental and work safety requirements.
2. Once drained, rinse out the tank with several changes of water, plus a recommended cleaning fluid. Where it can be reached internally, use a brush to scrub the inside of the tank.
3. Operate the SuperReel M-Series sprayer with clean water, using the SuperReel hoses, to ensure no chemical residue remains.
4. 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.
5. Ensure that the tank's basket strainer is free from chemical residue or debris.

If the SuperReel M-Series sprayer is to be stored for an extended period, thoroughly clean and decontaminate the unit as described above. Ensure it is allowed to dry, the tank and all lines are empty and not pressurised, then store it in a well ventilated area.

Maintenance

Your SuperReel M-Series sprayer 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 SuperReel M-Series sprayer.

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 each hose from the reel fully to check that hose is in good order. Pressurise the line and check operation of the spray gun nozzle. Rewind the hose onto the reel, ensuring it retracts all the way.

4. Check the pump's engine oil level weekly. Top up if required.
5. Check for any signs of fuel or oil leaks around the engine. If detected, investigate and rectify.
6. Check the engine fuel line filter, clean or replace as necessary.
7. Clean the engine's air filter regularly, especially if working in a dusty environment.
8. Check drive chains tensioners for correct alignment and signs of wear. Clean and lubricate chains as necessary.
9. Check the hose reel drive belts for tension and signs of wear.
10. Check all electrical cables and fittings for any sign of damage.
11. If the SuperReel M-Series sprayer is to be stored for an extended period, thoroughly clean and decontaminate the unit as described above. Ensure it is allowed to dry, the tank and all lines are empty and not pressurised, then store it in a well ventilated area.

Maintenance Tasks

The following tasks must be undertaken on a periodic basis to ensure your SuperReel sprayer's ongoing reliability.



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 SuperReel M-Series sprayer unit but as a minimum, the following tasks should be undertaken annually.

Engine

1. Refer to the supplied Honda engine manual, drain and replace the engine oil in accordance with the manufacturer's recommendations.
 - a. If the optional engine oil drain hose is fitted (see Figure 13), raise the end of the hose above the engine before removing the plug. Carefully lower the drain hose, capturing the used oil into a suitable container. When drained, reinstall the drain hose plug, tightening firmly.
 - b. Where the optional oil drain hose is not fitted, remove the sump plug and capture the used oil in a suitable container. When drained, reinstall the sump plug, tightening firmly.
2. Dispose of the used oil in accordance with environmental requirements.
3. Fill the sump with the required quantity of oil, using the filler port by unscrewing and removing the dipstick

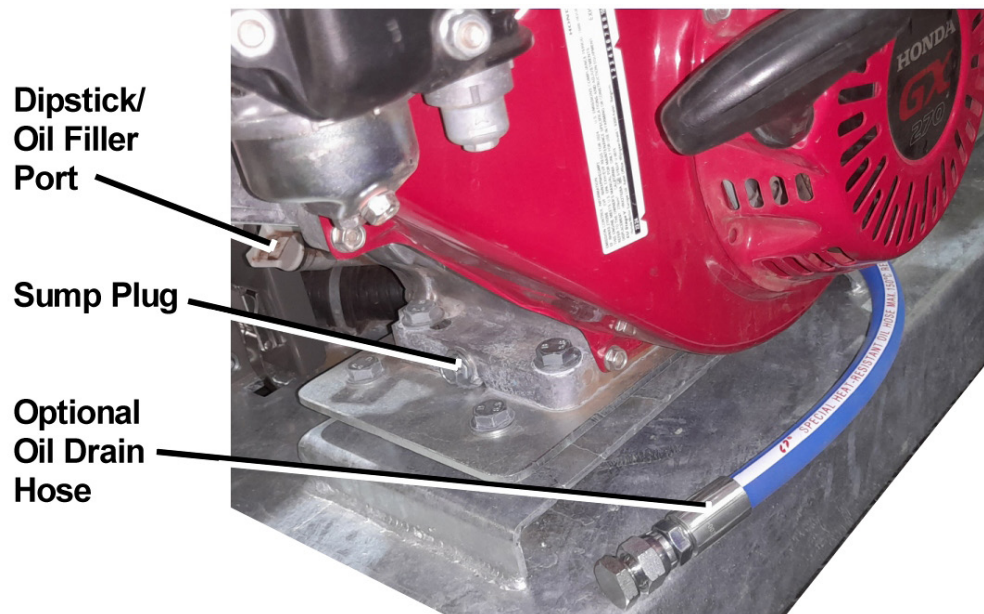


Figure 13 – Engine Oil Drain Options

4. Once the required quantity of oil has been poured in, insert and screw in the dipstick.
5. Allow ten minutes for the oil to settle, then unscrew and withdraw the dipstick to check the oil quantity is correct. Add more oil if necessary.
6. Clean engine's air filter regularly, especially if working in a dusty environment.

Pump System

1. Refer to the supplied pump manual, drain and replace the engine oil in accordance with the manufacturer's recommendations (refer to Figure 14).

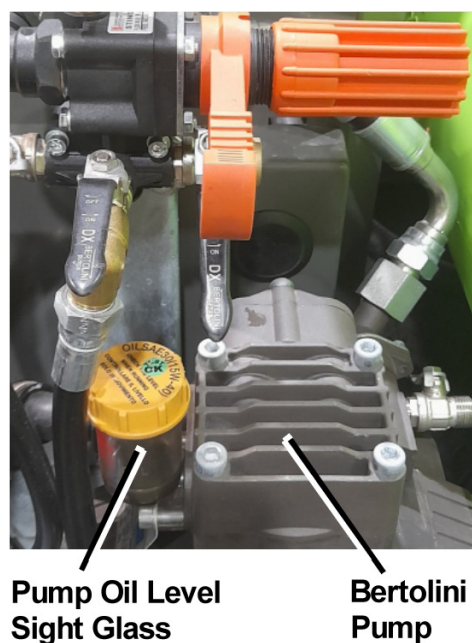


Figure 14 – Pump Oil Level Sight Glass

2. Unscrew the suction filter cover (refer to Figure 15) 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.

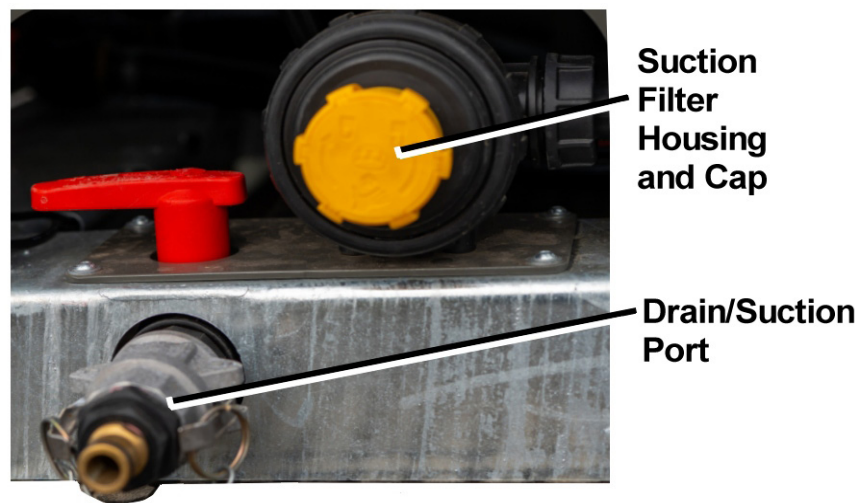


Figure 15 – Suction Filter

Drive Chains

Primary Chain

The primary drive chain is configured horizontally and is located behind a guard cover at the rear of the engine.

1. Release the guard cover's front and rear securing screws and carefully lift vertically, clear of the unit.
2. Visually inspect the drive chain for any wear or damage. If necessary, clean and apply suitable chain lubricant to the chain.
3. Inspect the sprockets at the engine and the pump for any wear or damage, replace as necessary.
4. Inspect the chain tension idler assembly for any damage or wear, replace as necessary.
5. Replace the guard cover, align and refit the securing screws.

Secondary Chain

The secondary drive chain is configured vertically and is located under the central cover, between the two SuperReel hose reels, refer to Figure 16

1. Release the rubber toggle catch on the front of the cover and tilt vertically. A gas-filled strut will assist in lifting the cover.
2. Visually inspect the drive chain for any wear or damage. If necessary, clean and apply suitable chain lubricant to the chain.
3. Inspect the upper and lower sprockets for any wear or damage, replace as necessary.
4. Inspect the chain tension idler assembly for any damage or wear, replace as necessary.
5. Carefully lower the central cover and refit the rubber toggle catch into its receptacle.

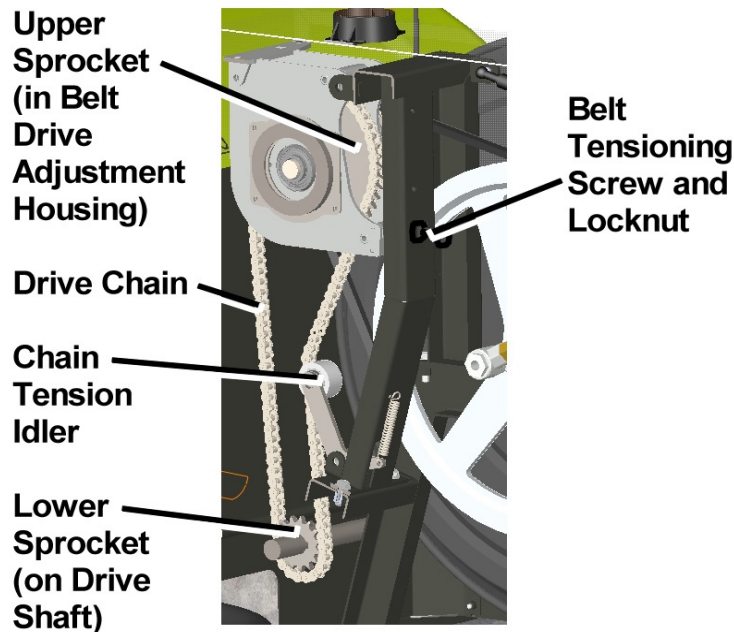


Figure 16 – Hose Reel Chain Drive and Belt Tensioning Screw

Chain Lubrication

1. At the rear of the primary drive chain's guard cover, remove the round rubber grommet in the maintenance hole.
2. Using a suitable chain lubricant, apply sparingly to the chain through the opening.
3. Refit the rubber grommet to the maintenance hole in the guard cover.

Hose Reel Drive Belt

Belt Tension Adjustment

Each of the SuperReel hose reels has a rubber drive belt to retract the hoses onto the reels. Belt tension is adjusted as follows, refer to Figure 16:

1. Release the rubber toggle catch on the front of the central cover and tilt vertically. A gas-filled strut assists in lifting the cover.
2. Check belt tension by pressing down between the large reel pulley and the small drive pulley. Deflection should be less than 10 mm.
3. If tension is required, back off the locknut on the tensioning adjustment screw.
4. With some clearance from the locknut on the screw, turn the adjustment screw inwards, apply tension to the drive belts' pivot housing. When sufficient tension is applied, retighten the locknut firmly to prevent the tensioning adjustment screw from moving.
5. Carefully lower the central cover and refit the rubber toggle catch into its receptacle.

Hose Release Tension Adjustment

The hose release tension is controlled by friction using a section of rubber belt, refer to Figure 17. The belt section is secured at the lower end by a bolt to the hose reel frame, passes around approximately one quarter of the double pulley, with the upper end secured by a spring mounted on an adjustable bracket. Pull out several metres of hose to check release tension. If necessary, use the following steps to adjust.

1. Release the rubber toggle catch on the front of the central cover and tilt vertically. A gas-filled strut assists in lifting the cover.
2. Using suitable spanners, tighten the upper spring bracket nut to increase tension on the pulley; or loosen the nut to decrease tension.
3. Check tension by pulling out several metres of hose, readjust as necessary.
4. Carefully lower the central cover and refit the rubber toggle catch into its receptacle.

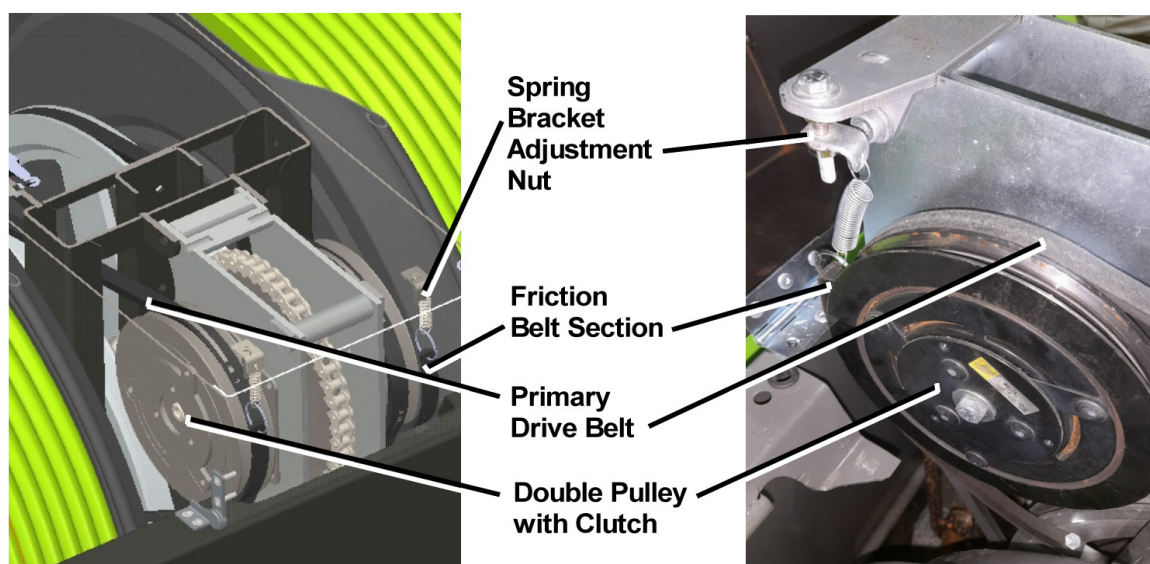


Figure 17 – Hose Reel Release Tension Arrangement

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.



CAUTION: Maintenance is important. Keep a record of all maintenance tasks conducted on the SuperReel M-Series sprayer 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 SuperReel M-Series sprayer.

#	Task	Notes
1	Inspect the SuperReel M-Series sprayer for any signs of damage or wear	Clean, repair or replace
2	Check Anderson plug connection	Test function
3	Check fuel	Top up as required
4	Inspect engine's air filter and housing for dust	Clean, replace as necessary

Weekly tasks

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

#	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		
4	Check the SuperReel drive belt tension, adjust as necessary		
5	Check the SuperReel hose release tension, adjust as necessary		

Monthly tasks

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

#	Task	Date	Signed
1	All Daily and Weekly tasks		
2	Check hose and hose reel by unwinding fully, replace replacing seals and nozzles as required		
3	Check securing system used to fastener unit to vehicle		
4	Check guards and roller hose guide rollers on SuperReels		
5	Check the SuperReel bearings for any noise or friction		
6	Check chain tensioner bearings for any noise or friction		
7	Check battery connections		
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.

#	Task	Date	Signed
1	All Daily, Weekly and Monthly tasks		
2	Inspect the air filter, replace if clogged or damaged		
3	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.

#	Task	Date	Signed
1	All Daily, Weekly, Monthly and 3-Monthly tasks		
2	Change engine oil (and filter, if fitted)		
3	Inspect spark plug		
4	Clean and lubricate primary drive and hose reel drive chains		

Twelve Monthly tasks

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

#	Task	Date	Signed
1	All Daily, Weekly, Monthly, 3-Monthly & 6-Monthly tasks		
2	Check the battery condition (diesel option only)		
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	Replace the remote control batteries annually		
8	Replace the drive belts annually		

Two-Yearly tasks

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

#	Task	Date	Signed
1	All Daily, Weekly, Monthly, 3-Monthly, 6-Monthly and 12-Monthly tasks		

SuperReel Remote Control Pairing

In the event that the remote control is lost or damaged, a replacement can be ordered by contacting TTI on 1800 816 277. The replacement unit will be configured for the SuperReel but the operator will need to pair the new remote control with the individual SuperReel hose reel. Each hose reel has a dedicated remote control. Pairing is the process to obtain a unique assignment between the remote control and the hose reel.

The pairing process can be undertaken on site as follows, refer to Figure 18:

1. Retract a few metres of hose from the SuperReel hose reel, to enable testing once the pairing process is completed.
2. Unscrew the outer screws on the panel below the manual control panel. Carefully withdraw the panel to access the control box.
3. At the manual control panel, switch the toggle switch to ON. This will provide 12V power to the control box. The POWER LED will flash GREEN.
4. Press and hold the PAIR button on the control box for two seconds and wait for the POWER LED to flash GREEN slowly.

5. On the remote control, press the R (rewind) and V (valve) buttons simultaneously five times. The two LEDs on the remote control will flash BLUE momentarily, and the POWER LED on the control box will light solid GREEN. This indicates successful pairing of the remote control to the control box.
6. Press and hold the R (rewind) to retract the hose back on to the reel. The RETRACT LED on the control box will flash GREEN. Release the R (rewind) button when the hose has fully retracted.
7. Refit the control box panel and reinsert the securing screws. Tighten the screws firmly.

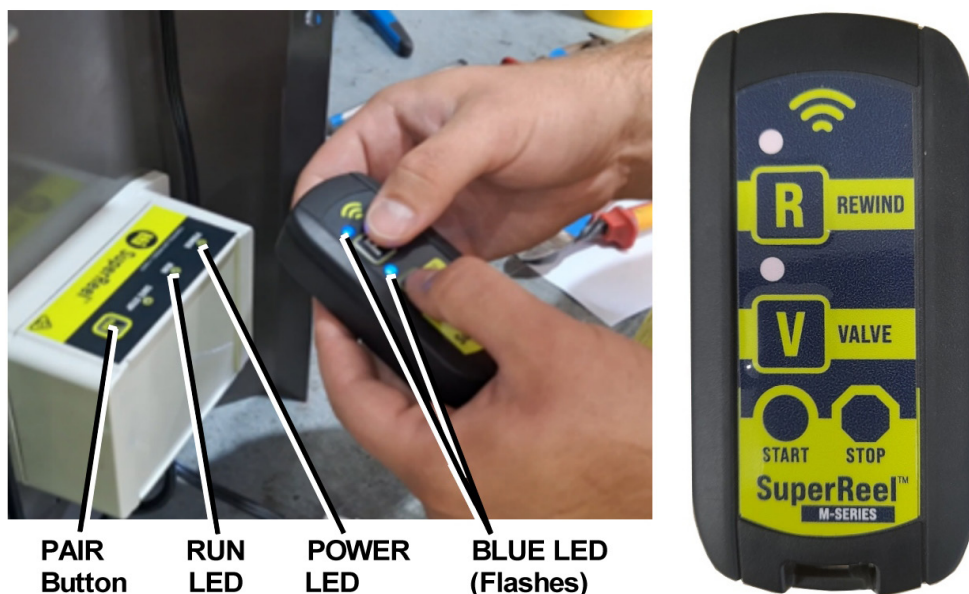


Figure 18 – SuperReel Remote Control Pairing

Trouble Shooting

If a fault develops with your SuperReel M-Series sprayer, the following trouble shooting tables provides guidance to identify and rectify the problem

SuperReel M-Series Sprayer Pump

Problem	Possible Cause	Remedy
Pump will not prime	Insufficient motor speed	Increase motor speed
	Air leak on suction line	Tighten or replace fittings
Pressure drops under load and pump is noisy	Insufficient motor speed to prevent clutch slippage	Increase motor speed
	Suction line restriction	Remove restriction
	Pump sucks air	Tighten or replace fittings
Pressure drops or fluctuates during operation	Residue on valves	Disassemble and clean valves, replace any broken valve springs as necessary
No pressure	Residue on valves	Disassemble and clean valves, replace any broken valve springs as necessary
	Broken regulator spring	Replace regulator spring

SuperReel Hose Reel

Problem	Possible Cause	Remedy
SuperReel does not wind	ON/OFF switch not turned on	Check switch
	ON/OFF switch faulty	Check/replace ON/OFF switch
	Fuse blown	Check/replace fuse
	Loose electrical connections	Check battery and connections
	Manual switch faulty	Check manual switch
	Loose/broken drive belt	Adjust or replace drive belt
	Loose/broken drive chain	Adjust or replace drive chain
	Seized bearings on reel shaft	Replace bearings
	Swivel roller hose guide slide cut-off switch activated	Push roller hose guide back into place
Remote does not operate at distance	Damaged aerial	Repair or replace aerial or lead
	Battery flat	Replace battery
Remote does not operate	Remote not paired with the receiver	Pairing required, refer to Pairing Instructions
	Battery flat	Battery replaced in remote
	Faulty transmitter/receiver	Return to TTI for repair or replacement
Hose does not pull off easily, or too easily	Hose release tension incorrect	Adjust friction belt tension.
Remote does not operate	Remote not paired with the receiver	Pairing required, refer to Pairing Instructions
	Battery flat	Battery replaced in remote
	Faulty transmitter/receiver	Return to TTI for repair or replacement

Risk Assessment

Task	Hazard	Risk	Control Measure/Mitigation
Check weather conditions	Manual handling; slips, trips or falls	Low	- Wear PPE as per chemical requirements SDS – coveralls, gloves, safety footwear, glasses & respirator •Follow safe manual handling techniques: don't lift on your own if >20kg, bend knees & keep back straight.
Mix chemicals (if applicable) and fill spray tank	As above, spray drift, chemical spillage, emission of vapours or flammability: weather, untrained visitors	Medium	- As above - User trained in relevant chemical mixing & administration course, e.g, Chem Cert; - Follow relevant Environmental Protection Authority requirements; - Fire extinguisher nearby; - Keep visitors away from job location unless wearing full PPE.
Check the Spray Unit and carry vehicle is safe before use, i.e. where applicable: - wheel nuts, tire pressure, bearings, tow hitch, etc. Use spray unit as per instructions in manual	As above; loss of load; heat & cold; noise; exceed load limit of vehicle; hose entanglement; exhaust fumes; terrain & slopes;	High	- As above - wear clothes to suit heat & cold; - Wear hearing protection if noise >85 dBa; - Follow the manufacturer 's safe operation instruction for the vehicle and the spray unit - Don't overload - water weighs 1kg for every 1 litre - Secure load to vehicle; - Keep hose tidy; - Put unit brakes on.
Clean up, maintenance & storage	As above	Low	- As above; - Continue to wear PPE for clean up; - Store unit in a dry, well ventilated area.

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 T Ti Manufactured Components	1 Year
Engine	3 Years
Pump	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:

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

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.



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SCAN HERE!

1800 816 277

sales@tti.com.au

PO Box 137, Nathalia, VIC, 3638

Murray Valley Hwy, Nathalia, VIC 3638

Proudly Built By:

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Date

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Date

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