



**TranTank<sup>®</sup>**  
INTERNATIONAL

Operator's Product HandBook

# Strike<sup>™</sup> & ReelStrike<sup>™</sup>

12v Sprayer with Reel



“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 ReelStrike & Strike Spot Sprayer unit, which will provide many years of reliable service when operated and maintained in accordance with this manual.**

TTi manufacture a range of ReelStrike & Strike units, either 200 or 400 litre tanks, supplied with a 12-volt electric pump and fitted with hose, hose reel and spray boom options. This manual describes the operation, driving stability and maintenance procedures applicable to all units, noting additional requirements to options where necessary.

All TTi ReelStrike & Strike tanks are rotationally moulded from quality polyethylene, purpose designed and manufactured to high standards. The ReelStrike & Strike is a Utility Terrain Vehicle (UTV) tub-mounted unit designed for everything from herbicide or pesticide spraying. The ReelStrike & Strike can also be mounted on the back of a utility or trailer.

The ReelStrike & Strike unit is supplied complete, tested and ready to mount to your vehicle. TTi warrants that the ReelStrike & Strike 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 ReelStrike & Strike unit is the following documents:

- Operator's Handbook (this manual, which includes the Warranty Registration Card)
- 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 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 ReelStrike & Strike unit.
3. Do not operate the ReelStrike & Strike unit 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. PPE appropriate to the chemicals being used must be worn at all times when operating the ReelStrike & Strike. 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
7. Ensure the capacity of the vehicle is suitable for the loaded mass of the ReelStrike & Strike. 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), therefore a full 200 litre ReelStrike & Strike unit will weigh in excess of 250kg.
8. The unit must be securely restrained on the vehicle. Ensure all fasteners are tightened and secure before operation.
9. 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.
10. The ReelStrike & Strike must never be left unattended while being filled with fluids.
11. Do not operate the pump when there is no fluid 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 fluid discharge which may be hazardous.
13. Ensure any electrical connections are properly configured, to prevent damage such as shorting or reverse polarity.
14. At completion of operation, switch the pump off and relieve any residual pressure by squeezing the spray gun trigger or opening an optionally fitted spray boom valve.
15. At completion of the operation, decontaminate the ReelStrike & Strike tank and spray 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.
16. The ReelStrike & Strike 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 complete – 200 or 400 litres mounted on galvanised steel forkable frame
Standard Equipment	Remco 12V electric pump – 8.3 litres/min 100psi, c/w 3.6m electrical lead with cigarette plug
	Pressure regulator
	6m hose with spray gun
	Pressure regulator
Options	Remco 12V electric pump – 11.4 litres/min 60psi
	Remco 12V electric pump – 15.1 litres/min 100psi
	Remco 12V electric pump – 19.1 litres/min 60psi
	30m hose on hose reel with spray gun
	BoomTech nozzle kit with tailgate bracket
	HitchIt attachment with boomless nozzle
	HitchIt attachment with 4m Versatile Spray Boom

### Description

The TTi ReelStrike & Strike Spot Sprayer unit is designed to carry and distribute herbicides or pesticides using a self-contained pump and various fluid dispensing systems, refer to Figure 1 for a typical example. The ReelStrike & Strike variants are configured in two different styles, both designed to fit into the trays of UTVs:

- 200 litre tank unit with:
  - 6m hose and spray gun (Strike) or
  - 30m hose on hose reel with spray gun (ReelStrike & Strike)
- 400 litre tank unit with:
  - 6m hose and spray gun (Strike) or
  - 30m hose on hose reel with spray gun (ReelStrike & Strike)

The Strike is fitted with a 6m hose while the ReelStrike has the hose reel and 30m of hose. Either configuration is suitable for fitting to a conventional utility tray or trailer.



**Figure 1 – ReelStrike & Strike Purpose-built UTV Spot Sprayer**

The Strike has the features shown in Figure 2, with the ReelStrike is shown in Figure 3.



**Figure 2 – Component Identification – 400 litre Strike unit**



**Figure 3 – Component Identification – 400 litre ReelStrike & Strike with hose reel**

### **Pump**

The ReelStrike & Strike is fitted as standard with an 8.3 L/min 100psi 12V Remco electric pump. Optionally available are larger capacity Remco electric pumps, with increased delivery from 11.4 L/min to 19 L/min.

If the spray gun or spray boom is not in operation when the pump is running, the fluid bypasses back into the tank.

### **BoomTech Nozzle Kit**

An optional BoomTech nozzle kit can be mounted to the vehicle or trailer with a tailgate bracket. The BoomTech has two volume adjustable nozzles, ideal for fence lines, orchard, blanket and end row spraying. The BoomTech nozzle kit requires a minimum pump capacity of 11.4 L/min, requiring the selection of one of the three larger pump options available for the ReelStrike & Strike units.

### **Boomless Nozzle Kit**

An optional brass boomless nozzle kit can be mounted to the optional HitchIt attachment, which fits any 50mm Hayman Reece tow hitch. The nozzle is available in four sizes and is ideal for blanket spraying, especially in rough country spraying and for locust control. By swapping nozzle plates, the nozzle can be used for either a 90 or 180-degree spray swath.

### **Versatile Spray Boom**

An optional 4m Versatile spray boom can be mounted to the vehicle or trailer with U-bolt clamps or using the optional HitchIt attachment. The 1.2m wide spray boom has three adjustable centre nozzles and two off-centre end jets to provide a range of spray volumes and patterns, which can achieve a 4m width swath.

The spray boom is operated by a manual valve to start up or stop spray operations. When the valve is closed, the fluid bypasses back into the tank.



### **6m Hose and Spray Gun**

For the Strike unit, a manually coiled 6m long 10mm diameter hose is connected to a trigger actuated PowerJet spray gun with adjustable brass nozzle. The nozzle adjusts from jet through to mist sprays by rotating the nozzle head. When the trigger is squeezed, the fluid is discharged; when the trigger is released, the fluid bypasses back into the tank. The spray gun is stowed by means of two storage clips located on the side of the tank.

### **30m Hose Reel and Spray Gun**

The ReelStrike has an manually operated hose reel containing 30m of 10mm diameter hose is connected to a trigger actuated PowerJet spray gun with adjustable brass nozzle. The hose is pulled out manually from the reel and retracted using the handle on the side. The spray gun is stowed by means of two storage clips located on the side of the tank.

The nozzle adjusts from jet through to mist sprays by rotating the nozzle head. When the trigger is squeezed, the fluid is discharged; when the trigger is released, the fluid bypasses back into the tank.

### **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 depending on the operation requirements – for boom spraying, the regulator is to be set to approximately 3 bar; with spot spraying via the hose reel the regulator is set to approximately 5 bar.

### **Suction Filter**

A filter is installed on the suction line adjacent to the pump. The filter has a removeable filter element for easy cleaning.

### **Manually Operated Valve**

A manually operated valve is fitted to the optional spray boom feed line. The valve switches from the hose feed to the spray boom feed.

### **Frame**

The chassis frame of the ReelStrike & Strike unit is an all steel, fully welded construction and hot dip galvanised for corrosion resistance. The ReelStrike & Strike unit has an additional upper structure to support the hose reel. The frames incorporate forklift pockets.

### **Tank**

All TTI tanks are constructed from UV resistant, virgin material polyethylene. The tank is fully drainable and has an internal basket strainer under the filling cap.

## Machine Limitations

The Strike and ReelStrike & Strike units are 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 ReelStrike & Strike unit 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 ReelStrike & Strike tank is full, as the vehicle may have a higher centre of gravity.

## Spray Boom Calibration

Accurate calibration is an essential element of any spraying function as it ensures that the chemical is applied at the rate specified on the product label. Application in excess of the recommended rate may be dangerous, can damage crops and is uneconomical.

Calibration must be carried out:

- When spraying for the first time with new spray equipment
- At the beginning of each season
- After changes of nozzle tips, spraying pressure or vehicle speed
- After every 100 hectares of spraying

PPE appropriate to the chemicals being used must be worn at all times when calibrating the ReelStrike & Strike. As a minimum, the PPE should include coveralls, gloves and boots. A face shield and PVC apron are recommended.

## Calibration Procedure

Check the label on the chemical container for the application rate and recommended spray nozzle type, refer to Figure 4, which shows the TeeJet AIXR nozzle application chart. To apply a specific rate of chemical to the target surface, work out the:

- total sprayer output,
- travel speed, and
- the swath width.

Using these parameters, the application rate is calculate as follows

## Measure Total sprayer output [L/min]

Set the pressure at the correct level for spraying determined by the type of nozzles. All nozzles used for spraying should be left on. For initial trials, set the pressure regulator at approximately 2 bar and adjust as needed.

- Fill the spray tank with clean water, refer to Filling the ReelStrike & Strike Tank procedure below. Run the sprayer at the correct pressure with all nozzles operating.
- Place a measuring jug under first nozzle for one minute, then measure how much water is in the jug.
- Repeat for all nozzles. Nozzle output should not vary by more than 10%. If it does, the nozzle could be worn or damaged and should be replaced.
- Add all the jug measurements to find the total sprayer output in litres per minute.

## Measure the travel speed [km/h]

The normal speed for spraying with small boom sprayers is 4–10 km/h. The slower the travel, the higher the application rate. Adjust travel speed to suit ground conditions.

- Measure how many seconds it takes to travel 100 metres with the sprayer attached and half full.
- Calculate your travel speed by inserting the time in seconds into the following formula: Travel speed (km/h) = distance travelled in metres (say 100m) x3.6 / Time taken (in seconds)

## Calculate spray application rate [L/Ha]

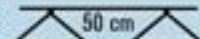









First, measure the swath width in metres. For general broadcast spraying, the swath width is equal to the number of nozzles multiplied by the nozzle spacing. For band spraying, the swath width is equal to the total of all the band widths. Calculate the application rate using the following formula:

$$\text{Application rate (L/ha)} = (600 \times \text{total sprayer output (L/min)}) / (\text{swath width (m)} \times \text{travel speed (km/h)})$$

Example: If total sprayer output is 5 L/min, speed is 8 km/h, and swath width is 4m, the application rate =  $(600 \times 5 = 62.5 \text{ L/ha}) / (4 \times 8)$

If the application rate is less than specified, increase the pressure and repeat calibration to achieve the correct rate. Once the required rate is achieved, note the following parameters for future reference when using this particular chemical:

- Nozzle Fitted
- Type (Drop Size)
- Application Rate
- Spray Pressure
- Forward Speed

Nozzle Icon	Pressure (bar)	DROP SIZE	LERAP RATINGS	CAPACITY ONE NOZZLE IN L/MIN	l/ha 								CAP PART NUMBER	
					5 km/h	6 km/h	7 km/h	8 km/h	10 km/h	12 km/h	16 km/h	18 km/h		20 km/h
	1.0	XC	—	0.34	81.6	68.0	58.3	51.0	40.8	34.0	25.5	22.7	20.4	11441A-CCLR
	2.0	C	—	0.48	115	96.0	82.3	72.0	57.6	48.0	36.0	32.0	28.8	
	3.0	C	—	0.59	142	118	101	88.5	70.8	58.0	44.3	39.3	35.4	
	4.0	M	—	0.68	163	136	117	102	81.6	68.0	51.0	45.3	40.8	
	5.0	M	—	0.76	182	152	130	114	91.2	76.0	57.0	50.7	45.6	
6.0	M	—	0.83	199	166	142	125	99.6	83.0	62.3	55.3	49.8		
	1.0	XC	—	0.46	110	92.0	78.9	68.0	55.2	46.0	34.5	30.7	27.6	
	2.0	VC	—	0.65	156	130	111	97.5	78.0	65.0	48.8	43.3	39.0	
	3.0	C	—	0.79	190	158	135	119	94.8	79.0	59.3	52.7	47.4	
	4.0	M	—	0.91	218	182	156	137	109	91.0	68.3	60.7	54.6	
	5.0	M	—	1.02	245	204	175	153	122	102	76.5	68.0	61.2	
6.0	M	—	1.12	269	224	192	168	134	112	84.0	74.7	67.2		
	1.0	XC	**	0.57	137	114	97.7	85.5	68.4	57.0	42.8	38.0	34.2	
	2.0	VC	**	0.81	194	162	139	122	97.2	81.0	60.8	54.0	48.6	
	3.0	VC	**	0.99	238	198	170	149	119	99.0	74.3	66.0	59.4	
	4.0	C	**	1.14	274	228	195	171	137	114	85.5	76.0	68.4	
	5.0	C	**	1.28	307	256	219	192	154	128	96.0	85.3	76.8	
6.0	M	—	1.40	336	280	240	210	168	140	105	93.3	84.0		
	1.0	XC	**	0.68	163	136	117	102	81.6	68.0	51.0	45.3	40.8	
	2.0	VC	**	0.96	230	192	165	144	115	96.0	72.0	64.0	57.6	
	3.0	VC	**	1.18	283	236	202	177	142	118	88.5	78.7	70.8	
	4.0	C	**	1.36	326	272	233	204	163	136	102	90.7	81.6	
	5.0	C	**	1.52	365	304	261	228	182	152	114	101	91.2	
6.0	M	—	1.67	401	334	286	251	200	167	125	111	100		
	1.0	UC	***	0.91	218	182	156	137	109	91.0	68.3	60.7	54.6	
	2.0	XC	**	1.29	310	258	221	194	155	129	96.8	86.0	77.4	
	3.0	VC	**	1.58	379	316	271	237	190	158	119	105	94.8	
	4.0	VC	**	1.82	437	364	312	273	218	182	137	121	109	
	5.0	C	**	2.04	490	408	350	306	245	204	153	136	122	
6.0	C	—	2.23	535	446	382	335	268	223	167	149	134		
	1.0	UC	***	1.14	274	228	195	171	137	114	85.5	76.0	68.4	
	2.0	XC	***	1.61	386	322	276	242	193	161	121	107	96.6	
	3.0	VC	**	1.97	473	394	338	296	236	197	148	131	118	
	4.0	VC	**	2.27	545	454	389	341	272	227	170	151	136	
	5.0	C	**	2.54	610	508	435	381	305	254	191	169	152	
6.0	C	—	2.79	670	558	478	419	335	279	209	186	167		
	1.0	UC	***	1.37	329	274	235	206	164	137	103	91.3	82.2	
	2.0	XC	***	1.94	466	388	333	291	233	194	146	129	116	
	3.0	VC	***	2.37	569	474	406	356	284	237	178	158	142	
	4.0	VC	**	2.74	658	548	470	411	329	274	206	183	164	
	5.0	C	**	3.06	734	612	525	459	367	306	230	204	184	
6.0	C	—	3.35	804	670	574	503	402	335	251	223	201		
	1.0	UC	—	1.82	437	364	312	273	218	182	137	121	109	
	2.0	XC	—	2.58	619	516	442	387	310	258	194	172	155	
	3.0	VC	—	3.16	758	632	542	474	379	316	237	211	190	
	4.0	VC	—	3.65	876	730	626	548	438	365	274	243	219	
	5.0	VC	—	4.08	979	816	699	612	490	408	306	272	245	
6.0	C	—	4.47	1073	894	766	671	536	447	335	298	268		
	1.0	UC	—	2.28	547	456	391	342	274	228	171	152	137	
	2.0	UC	—	3.23	775	646	554	485	388	323	242	215	194	
	3.0	XC	—	3.95	948	790	677	593	474	395	296	263	237	
	4.0	VC	—	4.56	1094	912	782	684	547	456	342	304	274	
	5.0	VC	—	5.10	1224	1020	874	765	612	510	383	340	306	
6.0	VC	—	5.59	1342	1118	958	839	671	559	419	373	335		

NOTE: Always double check your application rates. Tabulations are based on spraying water at 21°C.

### DROPLET SIZE CATEGORIES

 <b>XF</b> EXTREMELY FINE	 <b>VF</b> VERY FINE	 <b>F</b> FINE	 <b>M</b> MEDIUM	 <b>C</b> COARSE	 <b>VC</b> VERY COARSE	 <b>XC</b> EXTREMELY COARSE	 <b>UC</b> ULTRA COARSE
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Droplet size may vary with nozzle capacity, spray angle and spray pressure.

Figure 4 - AIXR Application Chart

# ReelStrike & Strike Operating Instructions

## Before first use

Your ReelStrike & Strike Spot Spray Unit is delivered fully assembled and ready to be fitted onto the vehicle. Before use, it needs to be set up using the following instructions:

- 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.
- Store this handbook, along with the Tank Quality Check Form and pump unit's manual 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 ReelStrike & Strike unit if you are unfamiliar with its operation until you have read this handbook.**

- Read and thoroughly understand this handbook, paying particular attention to all safety requirements, before using the ReelStrike & Strike for the first time.
- Check that all fittings, valves, hoses and electrical leads are secure following transit, and are not damaged in any way.
- Inspect the tank for any damage or abrasions that may occur during transit.



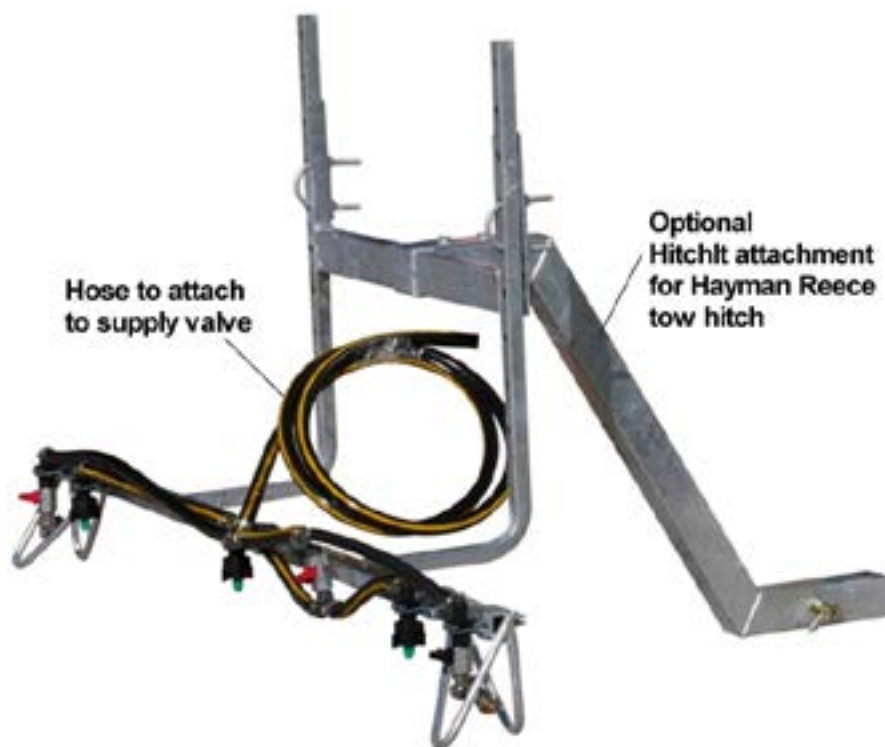
**CAUTION: The unit must be securely mounted to the vehicle. Failure to do so may result in the unit moving or falling off the moving vehicle. Warranty is conditional on the unit being correctly mounted.**

- Position your ReelStrike & Strike unit onto the vehicle and mount securely, either using tie-down straps to suitable points on the steel frame or other suitable devices, refer to Figure 2 and Figure 3. The tie-down straps 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.



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

- Install the supplied electrical cable and connect it to the vehicle's power supply (cigarette lighter socket) or battery (via alligator clips). The ON/OFF switch is cable mounted and easily accessible to the operator from the driver's seat.
- For the optional BoomTech nozzle kit, mount the bracket to the vehicle's tailgate and connect the hose to the manually operated valve near the tank.
- For the optional Boomless Nozzle kit, mount the optional HitchIt to the vehicle and securely install the nozzle kit to the top of the HitchIt.
- Where the optional Versatile Boom is ordered (refer to Figure 5), install it to the vehicle and connect the hose to the manually operated valve near the tank.
- It is recommended that at first use, the ReelStrike & Strike is filled with water for calibration purposes and for the operator to become familiar with the characteristics of the unit, refer to Calibration Procedure.



*Figure 5 – Versatile Boom Arrangement*

## Filling the ReelStrike & Strike 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 ReelStrike & Strike unit 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 ReelStrike & Strike unit's tank is filled as follows:



**CAUTION: If an optional boom or boomless spray nozzle kit is fitted, ensure the manually operated isolating valve is CLOSED.**

- Check that the optional boom kit isolating valve near the pump is CLOSED.
- Open the tank filler by twisting and lifting the cap.
- Withdraw the internal basket strainer and inspect it for any debris. Clean it if required and reinstall it into the top of the tank.
- Follow the chemical manufacturer's instructions and safety precautions carefully, taking note of the order in which the products are added to the tank.
- Measure the correct quantities of chemicals using clean measuring containers specifically for this purpose only, then add the chemicals to the tank.
- Rinse out the measuring containers and any empty containers and pour all rinsing liquid into the ReelStrike & Strike tank.



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



**CAUTION: The ReelStrike & Strike must never be left unattended while being filled with fluid.**

- Top up the tank with water to the required level, ensuring it is not overfilled.



**CAUTION: If an optional boom or boomless spray nozzle kit is fitted, ensure the manually operated isolating valve is CLOSED.**

- Thoroughly mix the contents by stirring with a suitable paddle or starting the pump to allow recirculation through the pump and back into the tank.
- Upon completion of filling the ReelStrike & Strike tank, replace the filler cap and twist to tighten.
- Wash off any spillage from outside the tank.

- 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.

## Operating Instructions

The ReelStrike & Strike is started and operated as follows:

- Confirm the tank contains the required chemical or water quantity.



**NOTE: Ensure the pressure regulator is set to the minimum position.**

- At the pump, check that the pressure regulator is set to the minimum position by turning the knob anti-clockwise, refer to Figure 6.



**Figure 6 – Pressure Regulator**

- If fitted with a spray boom option, check that the isolating valve adjacent to the tank is in the CLOSED position.
- For spraying operations, refer to:
  - Hose Spray Operation
  - Spray Boom Operation
  - BoomTech and Boomless Nozzle Spray Operation



## Hose Spray Operation

Set up and operation of the hose spray system is conducted as follows:



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



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

- Position the vehicle at a suitable point of the operations area.



**NOTE: If an optional boom or boomless spray nozzle kit is fitted, ensure the manually operated isolating valve is CLOSED.**

- If the ReelStrike & Strike unit is fitted with a spray boom option, ensure the isolating valve adjacent to the tank is in the CLOSED position.
- Check that the pressure regulator is set to its minimum setting. Start up the pump by turning the electric pump's cable-mounted switch to ON. The fluid will now be circulating through the system and returning to the tank via the bypass circuit.
- Set the pressure regulator to approximately 5 bar – this can be fine-tuned as require



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

- Uncoil the hose manually from the Strike unit, or pull the hose from the ReelStrike & Strike's hose reel to unwind it from the reel.
- Aim the hose's PowerJet spray gun in the required direction and squeeze the trigger. Adjust the spray pattern by rotating the brass nozzle tip.
- 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 and switch the pump OFF. The fluid will automatically recirculate through the system and return to the tank via the bypass circuit until the pump is switched OFF.
- With the pump now turned OFF, aim the spray gun in the required direction and squeeze the trigger. This will release the residual pressure in the hose, which will result in a small amount of fluid discharging.
- With the hose pressure released, the hose is ready to stow back on the ReelStrike & Strike. Refer to the following section applicable to the hose option supplied with your unit.

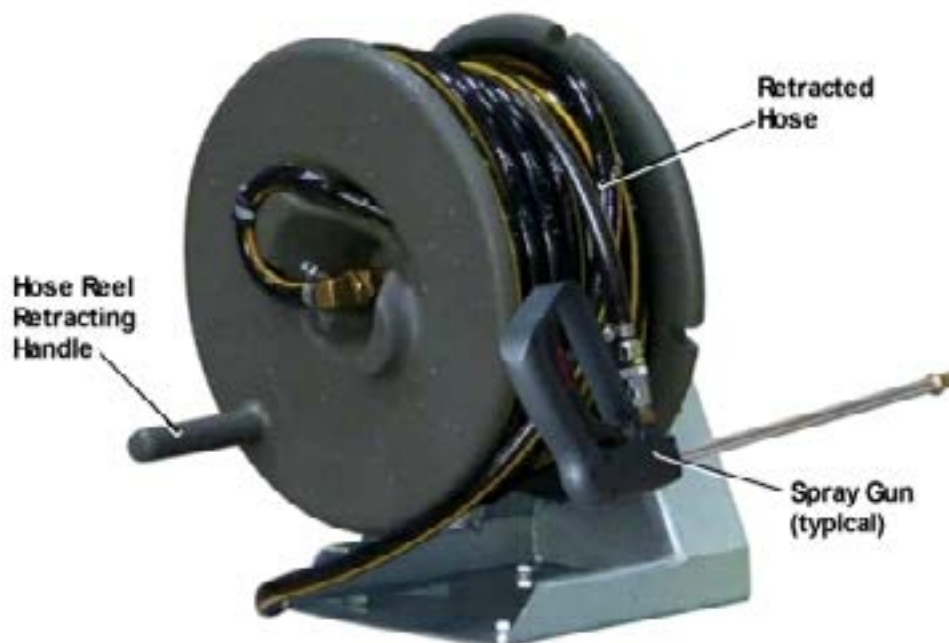
### **6m Hose**

The Strike unit is provided with a 6m hose and spray gun. To stow the hose, simply coil it loosely around the tank and clip the spray gun into its holder on the side of the tank.

### **3m Hose Reel**

The ReelStrike is provided with 30m of hose on a manually operated hose reel, refer to Figure 7. To retract the hose, turn the handle at the side of the hose reel to wind it onto the spool, guiding the hose as necessary to ensure even distribution across the width of the reel. Allow enough slack in the hose to stow the spray gun in its holder on the side of the tank.

The reel has a four-position locking device to prevent the hose unwinding during transit.



**Figure 7 – 30m Hose Reel**

## Spray Boom Operation



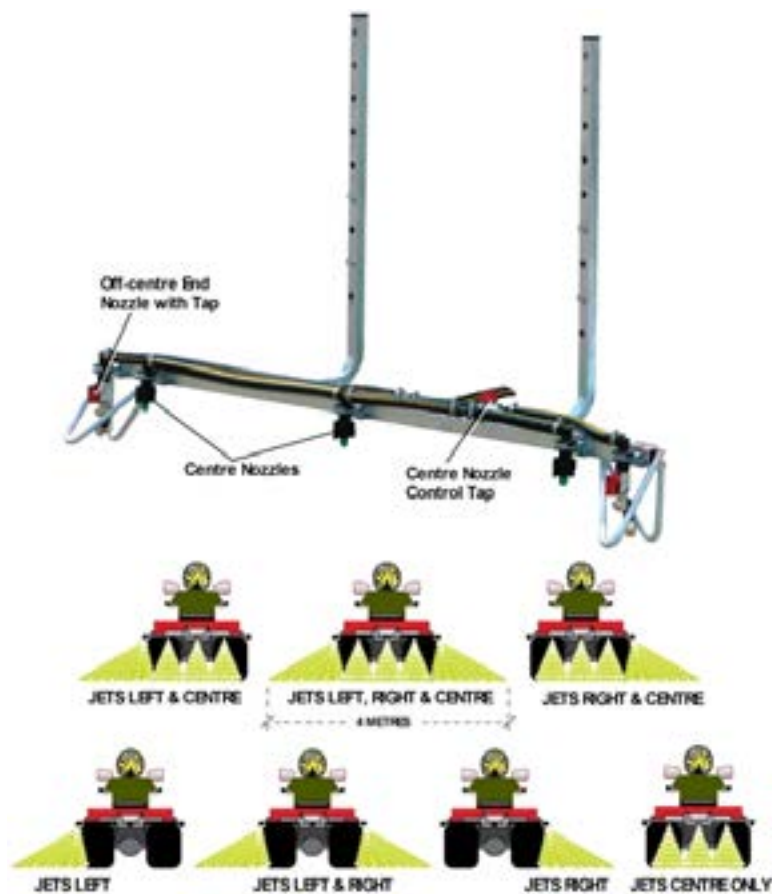
**WARNING:** Before commencing spraying, plan the work effectively to minimise potential contamination of adjacent areas.

Set up and operation of the Versatile Boom is conducted as follows:



**WARNING:** Do not spray in windy conditions, where spray drift contamination may occur. Spray drift can be reduced by lower nozzle height, lower pressures or by fitting larger nozzles.

- Set the required spray selection by opening or closing the individual control valves on the spray nozzle lines, refer to Figure 8.
- Position the vehicle at the starting point of the operations area.



**Figure 8 – Spray Boom Details**

- Turn the isolating valve (adjacent to the pump) on the boom spray line to the OPEN position.
- Set the pressure regulator to the correct setting as determined during calibration.
- With the vehicle's engine running and the operator in the driver's seat, start the pump by turning the electrical lead-mounted switch to ON. The fluid will now start to discharge from the boom spray nozzles.
- Commence driving the vehicle at the speed determined during calibration to achieve the required spray outcome.
- At the end of each swath or before turning around, switch the pump OFF. When commencing the next swath, turn the pump switch back to ON.

## BoomTech and Boomless Nozzle Spray Operation



**WARNING: Before commencing spraying, plan the work effectively to minimise potential contamination of adjacent areas.**

- The optionally fitted BoomTech nozzle kit and boomless nozzle spray kit are operated as follows:



**WARNING: Do not spray in windy conditions, where spray drift contamination may occur. Spray drift can be reduced by lower nozzle height, lower pressures or by fitting larger nozzles.**

- For the boomless nozzle kit, set the required spray pattern by swapping the nozzle plate for either the 90 degree or 180 degree swath. The BoomTech nozzle kit does not require any adjustment.
- Position the vehicle at the starting point of the operations area.
- Turn the isolating valve (adjacent to the pump) on the boom spray line to the OPEN position.
- Set the pressure regulator to the correct setting as determined during calibration.
- With the vehicle's engine running and the operator in the driver's seat, start the pump by turning the electrical lead-mounted switch to ON. The fluid will now start to discharge from the boom spray nozzles.
- Commence driving the vehicle at the speed determined during calibration to achieve the required spray outcome.
- At the end of each swath or before turning around, switch the pump OFF. When commencing the next swath, turn the pump switch back to ON.

## Clean-up and Decontamination

After use, the ReelStrike & Strike unit must be thoroughly decontaminated inside and outside – including the pump, hoses, boom and spray gun – to avoid damage to crops from any harmful pesticide spray residues. Decontamination also prevents sprayer corrosion and abrasion.

Cleaning the ReelStrike & Strike should be undertaken at a carefully chosen site, away from any risk of spillages draining into watercourses or into environmentally sensitive areas.

The recommended decontamination procedure is as follows:



**WARNING: Suitable PPE must be worn by the operator when cleaning and decontaminating the ReelStrike & Strike unit. 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.**

- After spraying operations are complete, drain any residual fluid via the bung located at the bottom of the tank. Capture and dispose or store any fluid in accordance with environmental and work safety requirements.
- 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.
- Operate the ReelStrike & Strike unit with clean water, using both the spray boom and hose (as applicable), to ensure no chemical residue remains.
- 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.
- Ensure that the tank's basket strainer is free from chemical residue or debris.
- Nozzles, nozzle filters, nozzle caps and gaskets should be cleaned by soaking in water, brushing with a nozzle brush and allowed to dry. Do not blow through the nozzles or use wire or pins to clear any blockages.
- Dispose of all rinsing water in compliance with environmental and work safety requirements.

If the ReelStrike & Strike unit 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 empty and not pressurised then store it in a well ventilated area.

## Maintenance

Your ReelStrike & Strike Spot Spray Unit requires minimal maintenance but regular cleaning and checks will ensure safe and reliable service over its lifetime. Periodic checks and inspections will identify any potential issues, enabling timely rectification and minimising downtime.

### Periodic Checks

The following checks and cleaning operations should be undertaken on a regular basis (at least annually). The frequency of these activities will depend on the nature of the operating environment and the operational hours of the Strike /ReelStrike & Strike unit. Refer to the maintenance schedule tables below for details of maintenance intervals.

- Clean the unit and inspect it for any signs of damage or wear. Replace any safety labels if they are damaged or illegible.
- Check all fittings are firmly secured, tighten if necessary.
- Unwind the hose fully to check that hose is in good order. Pressurise the line and check operation of spray gun nozzle. Rewind the hose loosely around the tank (Strike) or onto the hose reel (ReelStrike & Strike), ensuring it retracts all the way.
- Check all electrical cables and fittings for any sign of damage.
- If the ReelStrike & Strike 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 empty and not pressurised then store it in a well ventilated area.

### 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 task 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 ReelStrike & Strike unit.**

ATTi 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 ReelStrike & Strike unit.

#	Task	Notes
1	Inspect the ReelStrike & Strike unit for any signs of damage or wear	Clean, repair or replace
2	Check electrical plug connection	Test function of pump

### Weekly tasks

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

#	Task	Notes
1	All Daily tasks	Clean, repair or replace

### 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		

### 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	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		

### 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	Electric pump inspection and clean		

## 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 tasks		

## Maintenance Tasks

The following tasks must be undertaken on a periodic basis to ensure your ReelStrike & Strike's ongoing reliability. The frequency of these activities will depend on the nature of the operating environment and the operational hours of the ReelStrike & Strike but as a minimum, the following tasks should be undertaken annually.

### Electric Pump

- Check all fittings are firmly secured, tighten if necessary.
- Inspect electrical cables and connections, repair or replace as necessary.
- Unscrew the suction filter cover (refer to Figure 9) 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.

## Trouble Shooting

If a fault develops with your ReelStrike & Strike unit, the following trouble shooting tables provides guidance to identify and rectify the problem.

### Pump

Problem	Possible Cause	Remedy
Pump will not prime	Air leak on suction line	Tighten or replace fittings
Pressure drops or fluctuates during operation	Suction line restriction	Remove restriction
	Pump sucks air	Tighten or replace fittings
No pressure	Broken regulator spring	Replace regulator spring



## Risk Assessment

Task	Hazard	Risk	Control Measure/Mitigation
Check weather conditions	Manual handling; slips, trips or falls	Low	<ul style="list-style-type: none"> <li>Wear PPE as per chemical requirements SDS – coveralls, gloves, safety footwear, glasses &amp; respirator</li> <li>Follow safe manual handling techniques: don't lift on your own if &gt;20kg, bend knees &amp; keep back straight.</li> </ul>
Mix chemicals (if applicable) and fill spray tank	As above, spray drift, chemical spillage, emission of vapours or flammability; weather, untrained visitors	Medium	<p>As above;</p> <ul style="list-style-type: none"> <li>User trained in relevant chemical mixing &amp; administration course, e.g, Chem Cert;</li> <li>Follow relevant Environmental Protection Authority requirements;</li> <li>Fire extinguisher nearby;</li> <li>Keep visitors away from job location unless wearing full PPE.</li> </ul>
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	<p>As above;</p> <ul style="list-style-type: none"> <li>wear clothes to suit heat &amp; cold;</li> <li>Wear hearing protection if noise &gt;85 dBa;</li> <li>Follow the manufacturer's safe operation instruction for the vehicle and the spray unit</li> <li>Don't overload - water weighs 1kg for every 1 litre</li> <li>Secure load to vehicle;</li> <li>Keep hose tidy;</li> <li>Put unit brakes on.</li> </ul>
Clean up, maintenance & storage	As above	Low	<p>As above;</p> <p>Continue to wear PPE for clean up;</p> <p>Store unit in a dry, well ventilated area.</p>

# Warranty

## Warranty Policy

TTi will, at its option, repair or replace without charge any part covered by this warranty which is found to be defective in material and/or workmanship within one (1) year after date of sale to the original retail purchaser. If the product is used for rental purposes, this warranty is limited to ninety (90) days.

Upon request, the customer will make the defective part available for inspection and/or return the defective part to TTI, transportation charges prepaid. All parts and components are covered by this warranty except the following, which are warranted separately by their respective manufacturers:

- engines
- gearboxes
- pumps
- regulators.

TTi does not assume any warranty obligation, liability or modification for these items, which are covered exclusively by the stated warranty of the respective manufacturers.

## What this Warranty Does Not Cover?

### This warranty does not cover:

1. defects caused by depreciation or damage caused by incorrect mounting, normal wear, accidents, improper maintenance, improper use or abuse of the product, alterations or failure to follow the instructions and warnings provided.
2. Any charges for making service calls, clean up time and transport charges.
3. The use of non-genuine parts on equipment supplied by TTI. This will automatically negate any warranty.

## How to Obtain Service Under this Warranty?

Warranty service can be arranged by contacting your dealer, or by contacting TTI directly on 1800 816 277.

Proof of warranty registration and date of purchase may be required to verify warranty coverage. Any defective parts returned to TTI must be accompanied by a Return Goods Note. This form can be obtained by contacting Product Support on 1800 816 277 or emailing ProductSupport@tti.com.au.

## Warranty Limitations

Warranty limitations are as follows:

1. There is no other express warranty. Any warranty that may be implied from this purchase including merchantability and fitness for purpose is hereby limited to the duration of this warranty and to the extent permitted by law. Any and all implied warranties are excluded.
2. TTI will not be liable for any incidental, consequential or special damages and/or expenses in connection with the purchase or use of this equipment, to the extent permitted by law.
3. Only the warranty expressed in this limited warranty shall apply and no dealer, distributor or individual is authorised to amend, modify, or extend this warranty in any way. Accordingly, additional statements, whether oral or written, do not constitute warranties by TTI, and should not be relied upon.





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