



S-Dome+ 1524 & *S-Dome+* 3049

CDA option



Instruction manual

Publication No: 8M15A200 (Rev. 1)



EDITION NOTICE

Prepared and printed by or on behalf of:



This publication covers the following products:

Micron Weed Management equipment with incorporation of

S-Dome + 1524

S-Dome + 3049

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Micron Sprayers Ltd.

Bromyard Industrial Estate
Bromyard, Herefordshire
HR7 4HS - U.K.
T: +44 (0)1885 482397
enquiries@micron.co.uk
www.microngroup.com



Goizper S.Coop.

C/ Antigua, 4 - 20577 Antzuola
(Gipuzkoa) Spain
T: +34 943 786 000
micron@goizper.com
www.micronweedmanagement.com

Preface

This document has been produced to provide guidance for the installation and use of the Micron Weed Management (MWM) spray equipment and associated accessories.

Operators of the Micron Weed Management (MWM) system should read this document thoroughly and understand the correct use of this equipment and necessary safety precautions before attempting to install or operate the spray equipment or its associated accessories.

Readers should pay attention to the ***'Important Information'*** section of this document.

Please contact Goizper Group or their agents if you require any assistance.

Micron is a registered trademark of Goizper Group. All other trademarks used in this Document are the property of their respective owners.

While reading this document please be aware of the following conventions:

- Every care has been taken in the design of the equipments and the preparation of this document. However, Goizper Group cannot accept responsibility for errors or the consequences thereof.
- The operator must satisfy themselves that the equipment is suited to the intended use, is functioning correctly and its use complies with local regulations controlling the application of pesticides.
- All spray applications illustrated in this Document are provided for guidance only. When using pesticides operators should always refer to the product label and any local or national regulations for specific conditions of use.

Warranty

GOIZPER GROUP takes pride in producing a high quality, durable products and assumes the costs of corrective action by replacing the affected parts in case of material or manufacturing defects, provided they occur within the warranty period which must be counted from the date of sale. MWM machines comply with the regulations in force in the country of delivery. In case of doubt, please consult the seller. Please note that there are some countries in which specific warranty conditions apply. This warranty does not apply to defects resulting directly or indirectly from misuse, abuse, neglect, accident, repair or alteration, or lack of maintenance. Keep the purchase receipt as proof of purchase.

Cleaning, maintenance, and adjustment work are not covered by the warranty. All warranty work must be carried out by an authorised GOIZPER GROUP dealer.

IMPORTANT INFORMATION (PLEASE READ)

Truck unloading

When unloading the sprayer from the truck, please observe the manufacturer's or distributor's instructions. A crane, forklift or unloading dock is required for unloading. When unloading with a crane, make sure that the ropes or belts used are sufficiently strong.

Instruction to Operators

The equipment referred to in this document is designed for use by suitably qualified and experienced personnel. The operator **must** ensure that they are fully compliant with any national or local regulations governing the use of pesticides and application equipment before attempting to use the MWM spray equipment. If misused the MWM spray equipment has the potential to cause harm to personnel, property or the environment. Please read the information in this document thoroughly before installing and/or operating the equipment.

It is the operator's responsibility to ensure the safe use of the equipment and the safety of others during use of the equipment.

It is the operator's responsibility to minimise environmental impact from the use of the equipment.

It is the operator's responsibility to ensure that all warning labels on the equipment are legible. Any damaged labels must be replaced.

Working with this Document

This document has been written to provide the information to correctly install and use the equipment safely. Various symbols are used on the equipment and in this document to provide guidance to the operator; please take time to become familiar with these symbols.

PROHIBITIONS IN USE




Micron Weed Management (MWM) equipment is designed for use with agricultural spray products that are approved for use in the intended crop situation.

The use of non-approved products is strictly prohibited.

The equipment should **not be** used to spray the following materials:

- Any form of petrochemical fuel or volatile oils
- Strong acids
- Concentrate solvents

SYMBOLS USED ON THE EQUIPMENT AND IN THIS DOCUMENT

	Denotes a caution or warning – ‘things to be aware of’
	Denotes a mandatory prohibition – ‘things you must not do’.
	Denotes a mandatory instruction – ‘things you must do’.
Ignoring these warnings, prohibitions or instructions may result in injury to persons, damage to equipment or environmental contamination.	






















	Mandatory Prohibition		Caution or Warning		Mandatory Instruction
	Do not insert fingers or foreign objects		Warning – risk of electric shock		Refer to Instructions
	STOP - Do not proceed with this action		Caution – Surface may be hot		Eye protection – must be worn
	Keep Clear – Keep all persons clear of this area		Warning – risk of crushing of hands or fingers		Gloves – must be worn
	Warning – danger from leaking substances		Warning – risk of crushing of whole body or limbs from side		Protective Clothing – must be worn
	Warning – risk of danger from escaping high pressure fluid		Warning – risk of crushing of whole body or limbs from above		Wash hands – hands must be washed after handling
	Toxic – risk of contact with toxic substances		Harmful – substance is harmful		Danger to the environment – risk of contamination

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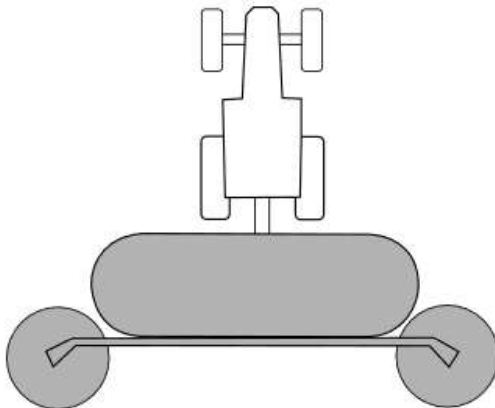
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1 INTRODUCTION

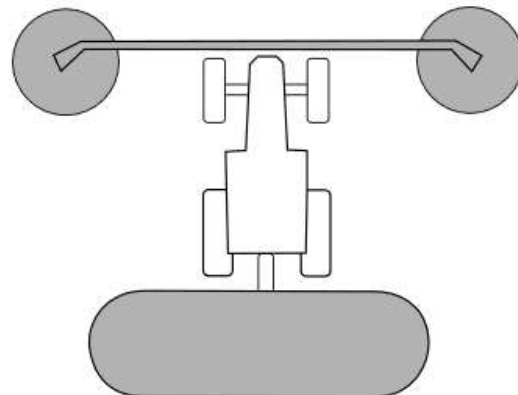
Micron Weed Management (MWM) S-Dome+ equipment is designed for the precision application of weed control products at low spray volumes and reduced risk of drift. The spray is normally shielded, and each spray head incorporates low volume rotary atomisers for CDA (Controlled Droplet Application). MWM equipment is designed primarily for the application of weed control products in bush and tree crops. The MWM equipment can also be used to apply selective and non-selective herbicides between crop rows at low volumes.

The central dome is mounted on the main structure and the side domes are mounted on a breakaway arm which allows the domes to rotate on a centre bearing and roll around tree or bush crops.

It is possible to mount the side domes at the rear (with the arms on the main structure) or at the front of the vehicle (using the H-frame or S-frame):

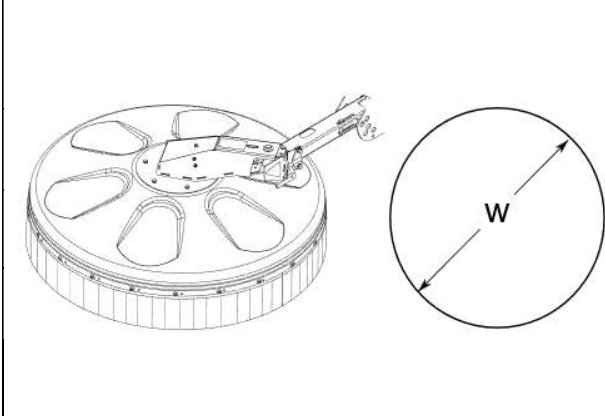


Side domes at the rear

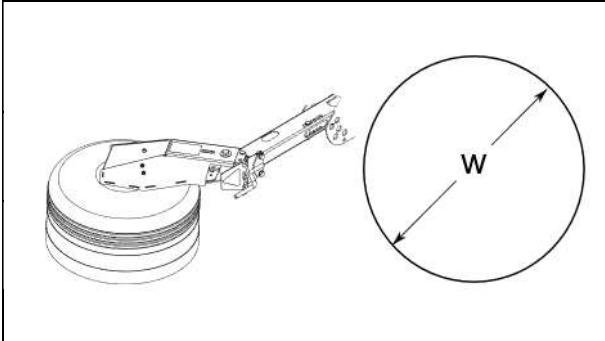


Side domes at the front

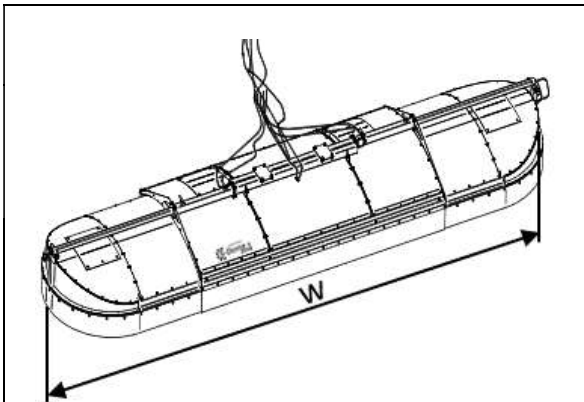
S-Dome product range (Side domes)

	Description	Spray width "W"
	S-Dome 400	0,4 m / 15,7"
	S-Dome 600	0,6 m / 23,6"
	S-Dome 900	0,9 m / 35,4"
	S-Dome 1200	1,2 m / 47,2"

S-Flex product range (Side domes)

	Description	Spray width "W"
	S-Flex 400	0,4 m / 15,7"
	S-Flex 600	0,6 m / 23,6"
	S-Flex 900	0,9 m / 35,4"

Product range S-Dome+ (Center dome)

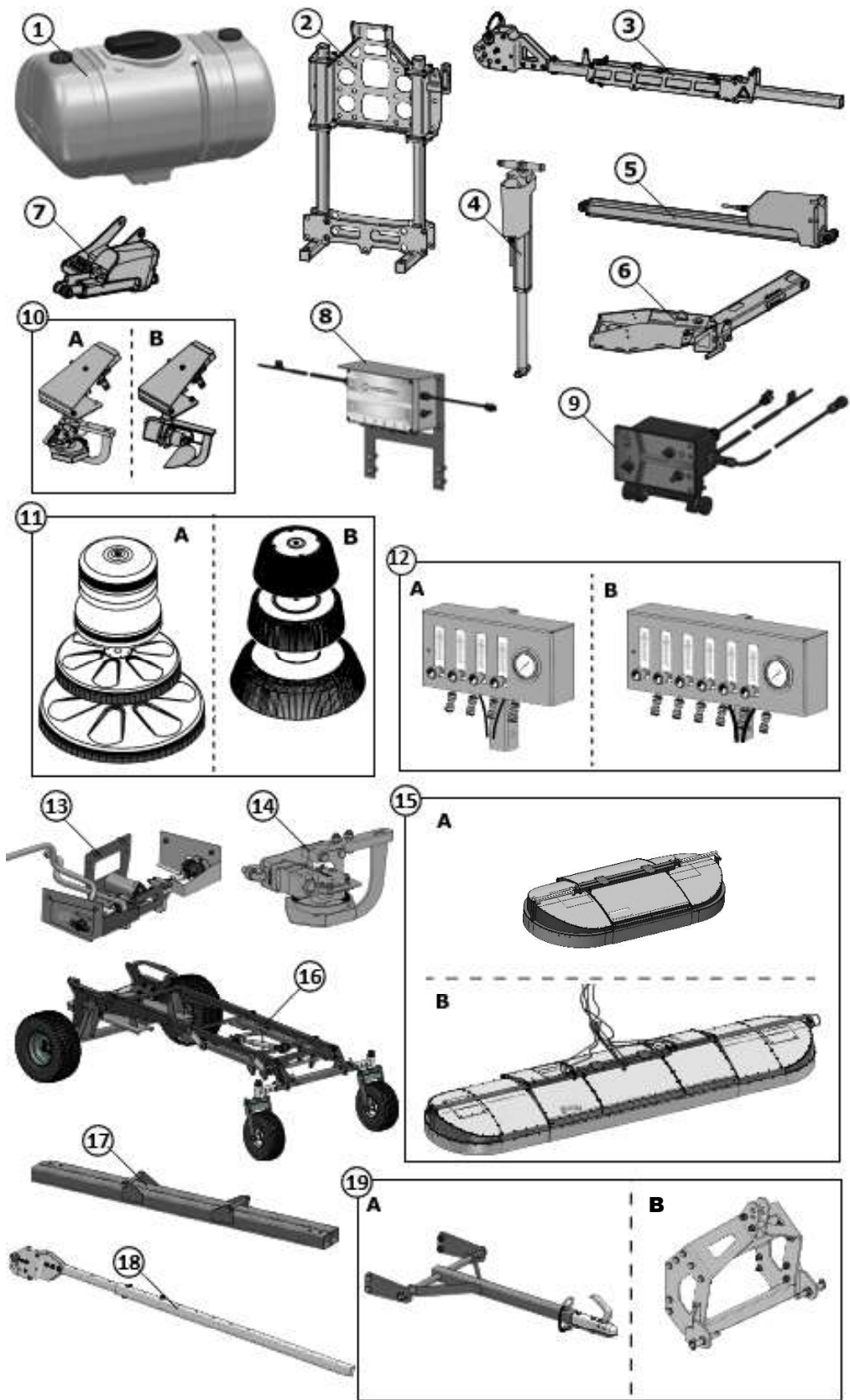
	Description	Spray width "W"
	S-Dome + 1524	Min: 1.5 m Max: 2.4 m
	S-Dome + 3049	Min: 3 m Max: 4.8 m

1.1 Technical specifications

Specification		
Model names:	S-Dome +	
Description:	A reduced drift sprayer with CDA (<i>Controlled Drop Application</i>) atomiser.	
Models:	S-Dome + 1524 S-Dome + 3049	
Manufacturer:	Goizper Group, Spain	
Year of manufacture:	Refer to serial number plate	
Finishing:	Grey metal and stainless-steel parts with yellow domes	
Weight		
S-Dome + 1524	480 kg	
S-Dome +3049	550 kg	
S-Dome 400	28 kg	
S-Dome 600	29,5 kg	
S-Dome 900	33,5 kg	
S-Dome 1200	36,5 kg	
S-Flex 400	28,5 kg	
S-Flex 600	31 kg	
S-Flex 900	32 kg	
S-Guard	29 kg	
Minimum working temperature:	+5 °C	
Working pressure:	0.1 - 1 bar (8 - 10 psi)	CDA Atomisers
Flow rate/atomiser range:	100 - 300 ml/min	CDA Atomisers
Max. operating speed:	10 kph (during spraying)	
Dome operating height:	25 - 50 mm (above ground level)	
Filter size ¹ :	Mesh 50 (blue - ISO19732)	
Optional accessories	Tank and pump equipment. Different mounting chassis	

¹ If the hydraulic system is NOT supplied by Goizper Group, then these MUST include an in-line filter of 50 mesh size (blue: ISO19732).






1.2 Components






Identification of components

ARTICLE		DESCRIPTION	INSTALLATION INSTRUCTION MANUAL NO.
1		300L tank	8M15T200
2		H-frame structure	8M13H200.1
3		H-frame arm	8M13H200.2
4		Vertical actuator kit	8M13H200.3
5		Horizontal actuator kit	8M13H200.4
6		Breakaway	8M13A200.1
7		Actuator kit	
8		Electronic kit	8M15E200
9		Remote control	8M13R200
10	A	Head kit 600	8M13D200
	B	Head kit 400	8M12D200
11	A	S-Dome shields (ø400, ø600, ø900, ø1200)	8M13D200 /
	B	S-Flex shields (ø400, ø600, ø900)	8M12D200
12	A	4 heads Flow control	8M15F200
	B	6 heads Flow control	
13		Pump system, SD+	8M15T203
14		Head kit set, SD+	8M15A201
15	A	Center Dome SD+ 1524	8M15D200
	B	Center Dome SD+ 3049	
16		Center Frame SD+	8M15A200
17		Arm support, SD+ 3049 /1524	8M15B202
18		SD+ arms 3049 / 1524	
19	A	Tow bar assembly, SD+	8M15B203
	B	Three-point bracket assembly, SD+	8M15B204

2 SECURITY

WARNINGS AND PROHIBITIONS	
	<p>Do not insert fingers or any foreign object into the equipment. This may cause a risk of harm and may damage the equipment.</p> <p>Do not dismantle or modify the equipment. This may cause a risk of harm and may damage the equipment.</p> <p>Do not operate the equipment if there are visible symptoms of a problem, such as leaking fluids, abnormal noise, or structural damage. Operating the equipment under such conditions may cause a risk of harm or may damage the equipment or the environment.</p>
	<p>Risk of crushing of the whole body or limbs.</p> <p>Risk of crushing of hands or fingers.</p> <p>Do not stand or position any limb or part of the body between the equipment and the vehicle to which it is mounted.</p> <p>Do not stand, sit, or lie beneath any part of the equipment unless the equipment is adequately supported on suitable floor standing supports.</p> <p>Do not stand, or allow others to stand, within the reach of extended or lowered parts of the equipment (swivel range).</p> <p>Do not stand, or allow others to stand, within the stroke area of the three-point linkage (tractor mounted equipment).</p>
	<p>Danger from leaking substances. Substances may be harmful and/or under high pressure.</p>
	<p>Risk of contact with toxic or hazardous substances.</p> <p>Always read and retain the instructions on chemical used in this equipment.</p> <p>Ensure that all instructions for the chemicals being used remain with the equipment until the equipment has been cleaned and is ready for storage or re-use. If practicable display the details of the chemicals, being used in the equipment, on the exterior of the equipment where they are easily visible.</p> <p>Do not drink fluids from any part of the equipment including the hand-wash and rinse tanks.</p> <p>Do not use water from the hand wash facility for washing the face or eyes.</p> <p>Do not eat, drink or smoke when operating the equipment.</p> <p>Do not dispose of toxic or hazardous chemicals or fluids into drains or water courses.</p> <p>After use remove and clean all protective clothing. Thoroughly wash hands and face.</p>
	<p>Some surfaces and hoses may become hot during operation. Take care when handling and to avoid contact with, or proximity to, flammable materials.</p>

	<p>Use Caution and reduce speed when manoeuvring a vehicle with mounted equipment.</p> <p>The equipment may reduce or obscure the operator's vision.</p> <p>The equipment may obscure the visibility to others of vehicle mounted warning marks, beacons and lights.</p> <p>The equipment may obscure vehicle mounted lighting. Ensure that vehicle lights are visible when in transit. Ensure the working area has sufficient light for safe operation.</p> <p>The additional weight of the equipment may affect the steering and stability of the vehicle.</p> <p>Use extreme caution when turning on sloping ground as the equipment may alter the vehicles balance and centre of gravity.</p> <p>Use extreme caution when turning as the equipment may alter the required turning circle of the vehicle.</p> <p>Use extreme caution when passing obstacles and through gaps as the equipment may alter the width of the vehicle.</p>
	<p>Ensure that the extremities of the equipment are always visible to the operator. Attach additional marking devices or visibility aids where required.</p> <p>Use additional person(s) to assist with manoeuvring where operator vision is obscured.</p> <p>During use of the equipment make regular assessment of weather condition, wind speed and direction adjust activity as appropriate.</p> <p>Leave the vehicle in a safe condition before leaving the operators position to examine or adjust the equipment.</p>
	<p>Run the equipment only on the indicated supply voltage. Use of incorrect supply voltage may cause a risk of fire or other harm and may damage the equipment.</p> <p>Ensure that all connection sockets are clean and free from contamination before and after use.</p> <p>When connecting or disconnecting cables and hoses to the equipment; always grasp the connector directly, do not hold by or pull on the cable or hose as this may cause damage.</p> <p>Ensure the electrical power supply is adequate for the equipment. An inadequate power supply may cause the equipment to malfunction or fail.</p> <p>Disconnect the unit from the power supply when not in use for an extended period.</p> <p>Always lift the equipment by the lifting or mounting points where provided.</p> <p>Always wear personal protective equipment when instructed to do so.</p> <p>Ensure the equipment is securely mounted on floor standing mounts before attempting any maintenance or repair operations.</p>

2.1 Mechanical and electrical hazards



The main mechanical hazards when using MWM spray equipment are risk of entrapment to fingers and limbs from moving parts. Warning signs are located at points of potential injury. As sprayers operate on a low voltage 12V system that does NOT present a significant risk from electrical shock.

2.2 User protection



Wear gloves



Wear face shield or eye protection



Wear protective clothing



Wash hands

Operators **MUST** always read the product label **BEFORE** using pesticides and follow advice regarding use of personal protective equipment (PPE). When handling concentrates operators should wear gloves, protective clothing, boots and eye protection or a face shield to protect eyes and skin. Some products may also require the use of a respirator mask.

2.3 Working with pesticides



Always read the product label and adhere to maximum dose rates and safety precautions.



Protect the environment by avoiding always run off into ditches or waterways.

2.4 Hand wash tank

The MWM 300L tank unit has an integrated 17 l hand washing tank. It should be filled with **clean water** only.

2.5 Drift reduction measures

The S-Dome+ units are fitted with shields (domes) low to the ground making them less susceptible to spray drift than unshielded spray nozzles.

Wind tunnel studies in the UK have indicated drift reductions more than 90% over conventional unshielded sprayers with the Micron Weed Management range and hence these are suitable as a Drift Reducing Technology (DRT)

Spray heads **must** always maintain close contact with the ground (25-50 mm above the ground). When operating on uneven or rough ground reduce speed to ensure the spray heads **do not** bounce.

The following measures may be used to further reduce any risk of spray drift:

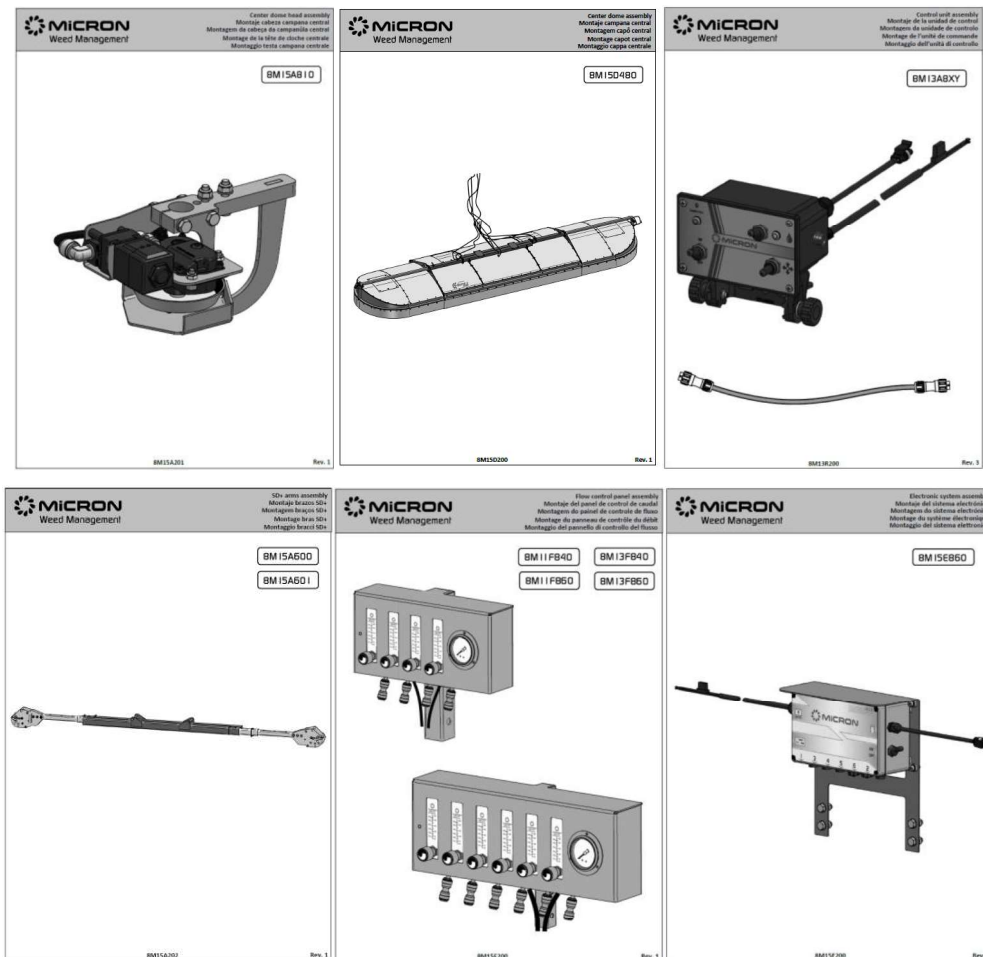
- Schedule treatment for the early morning or the evening hours (there is generally less wind).
- Keep the working height of the spray heads as low as possible. The risk of drifting increases as the distance between the shield and ground increases.
- Avoid operating at excessive speeds and flow rates.

3 INSTALLATION

The tank system should be regulated to an output pressure of approximately 0,5 bar (7,5 psi). The tank system **must** include an inline filter of 50 mesh size (blue – ISO19732). The CDA spinning disc atomisers are used with a flow gauge with adjustable trimmer for each atomiser to regulate flow according to vehicle speed, application volume and band width.

3.1 Initial assembly (S-Dome+)

Micron Weed Management equipment are supplied with a series of modules, each with individual installation instructions.



Examples of installation instructions for each module

3.2 CDA Atomisers

There are 3 versions of rotary atomisers, depending on the shield and size:

- 1- S-Flex and S-Dome 1200, 900, 600: bandwidth 0.6, 0.9 and 1.2 m (3000 rpm)
- 2- S-Flex and S-Dome 400: Sector atomiser, bandwidth 0.4 m (4000 rpm).
- 3- Center Dome (1524 and 3049): bandwidth 1.5-2.4m and 3-4.8m (3000rpm).

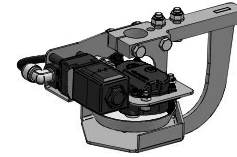


S-Flex/S-Dome

600/900/1200*



Sectoral atomiser



Center Dome

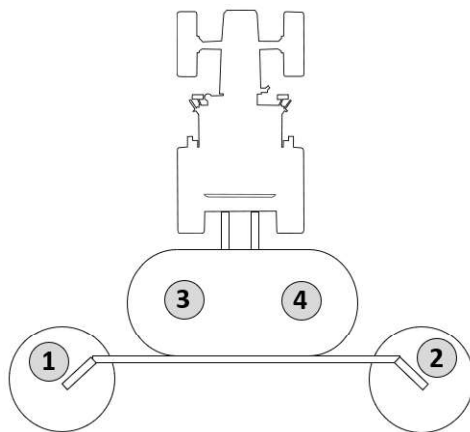


***PATENTED ROTARY ATOMISER**

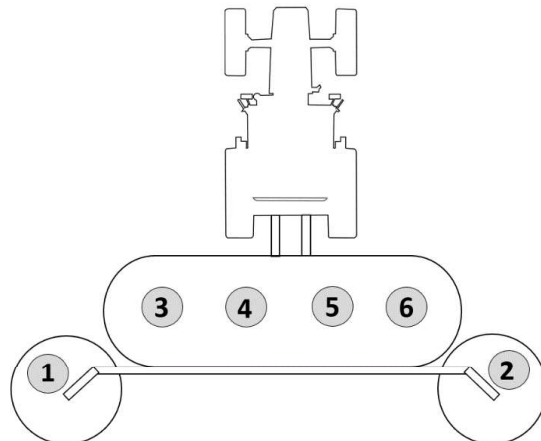
3.3 Mounting to a vehicle

The S-Dome + 1524 and S-Dome + 3049 units can be equipped with one or two side domes (S-Dome, S-Flex) and a center dome (1524 or 3049).

S-Dome + 1524



S-Dome +3049



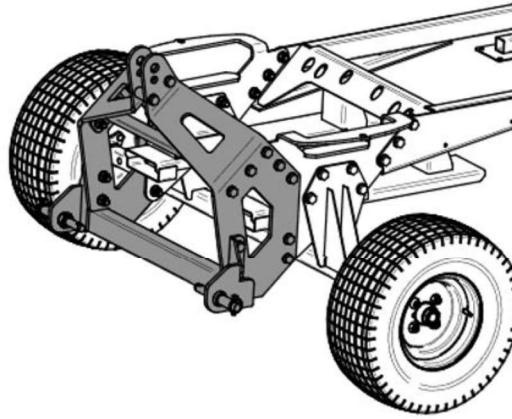
Ensure that there is sufficient space for the breakaway to be fully extended and that the user's access to the vehicle is not impaired. Check the weight limit the vehicle can support is not exceeded.

Some additional local fabrication may be necessary to fit some vehicles. For further advice on fitting the spray heads contact the Goizper distributor.

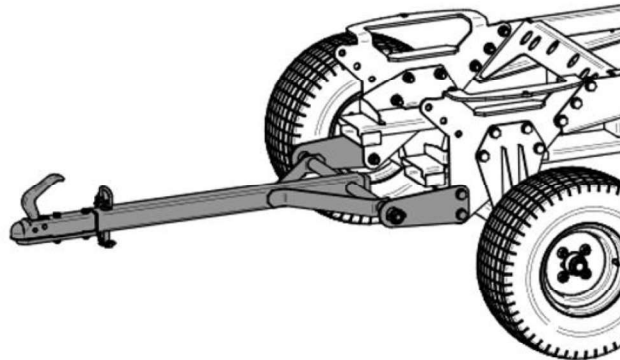
The spray shield should be between 25 mm and 50 mm from the ground when spraying.

Ensure that the breakaway can operate freely without touching the vehicle.

The mounting or coupling of the main structure (chassis) to the vehicle can be carried out by means of the three-point linkage or trailer coupling.













Three-point coupling








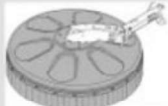



Trailer coupling

3.3.1 Assembly process

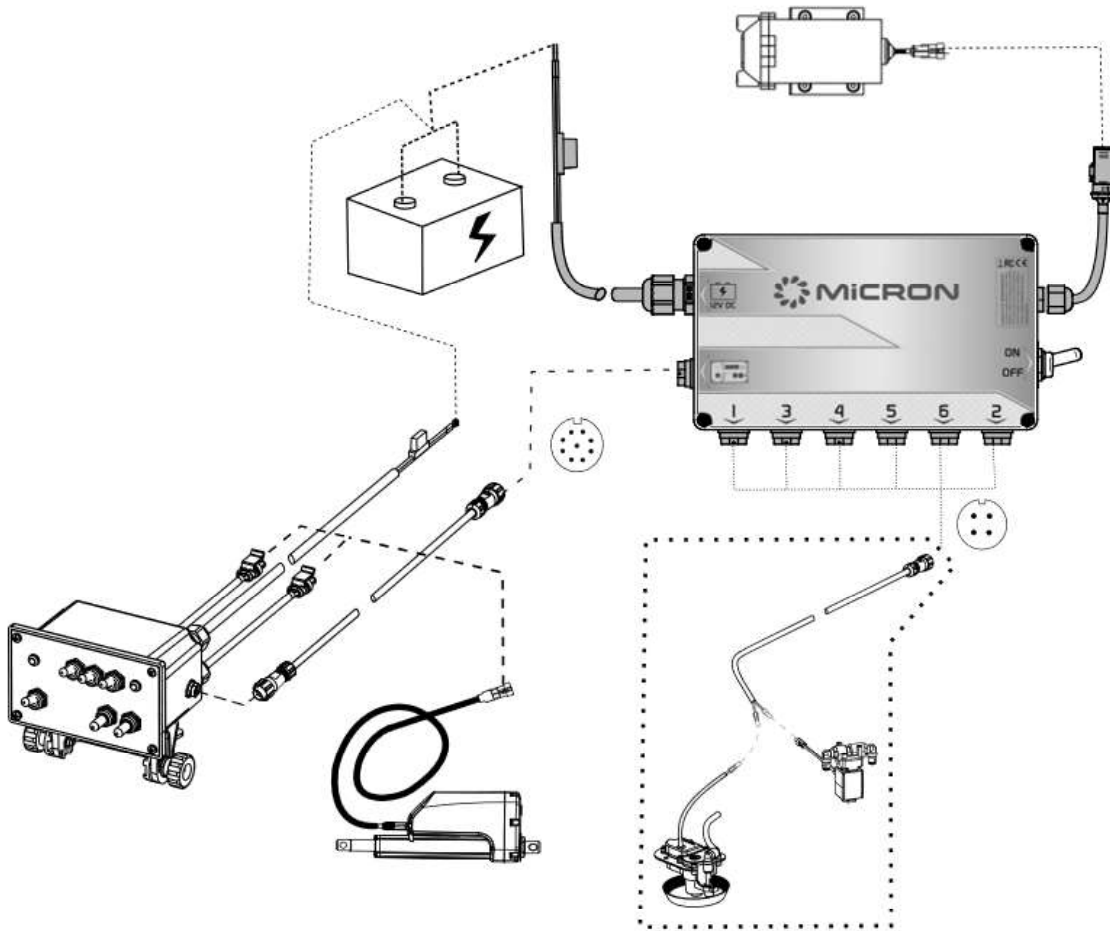
Follow the steps in the table below to assembly the machine/components you have bought. Instruction sheets can be found inside each kit in www.micronweedmanagement.com

1 STRUCTURE	2 CENTER DOME AND HEAD	3 ARM AND BREAKAWAY		4 PUMP SYSTEM
<p>Main structure</p> 	<p>Center Dome 1524</p>  <p>Center Dome Head</p> 	<p>Arm support 1524</p> 	<p>Arm 1524</p>  <p>Breakaway</p> 	<p>Pump system</p> 
	<p>Center Dome 3049</p> 	<p>Arm support 3049</p> 	<p>Arm 3049</p> 	

5 TANK	6 ELECTRONICS	7 COUPLING SYSTEM	8 HEAD KIT AND SHIELD	9 FLOW CONTROL PANEL	10 REMOTE CONTROL
<p>Tank</p> 	<p>Electronic assembly</p> 	<p>Three-point coupling</p> 	<p>S-Flex S-Dome Ø400</p> 	<p>4 Heads</p> 	<p>Remote control</p> 
		<p>Trailer coupling</p> 	<p>S-Flex S-Dome Ø600 Ø900 Ø1200</p> 	<p>6 Heads</p> 	

3.3.2 Electrical diagram

Depending on the number of heads and actuators supplied on your machine, you will find different numbers of connectors:



Electrical wiring connection diagram

3.4 Tank system

It is recommended to always use the Micron Weed Management tank systems. Refer to the instructions supplied with the tank system.

In case the equipment is working without MWM tank and pump system, the remote control may show an error in the pump GREEN LED (the light will be flashing). This is because the electronics is not controlling the MWM tank pump.

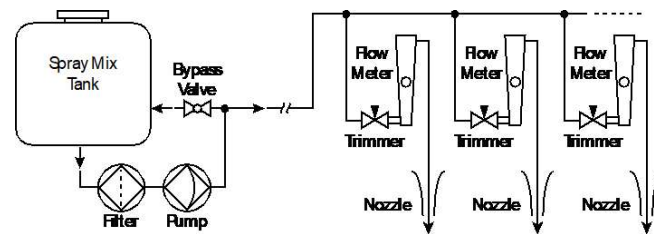


300 L tank

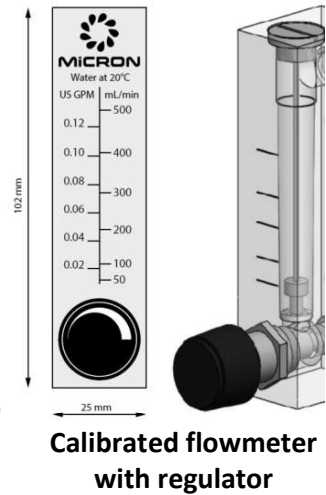
3.5 Information on flow control

Flow control for the rotary atomisers on the CDA units is achieved using a flowmeter with adjustable trimmer to regulate flow rate. The liquid flow lifts a ball on the gauge and indicates the flow on a graduated scale.

To the rear of each flowmeter is a 6 mm push fit fitting on the upper outlet to connect the feed hose to each individual atomiser – one flow gauge per CDA atomiser. There is also a 6mm push fit inlet at the base of each flowmeter connected via the manifold to the main inlet from the pump.

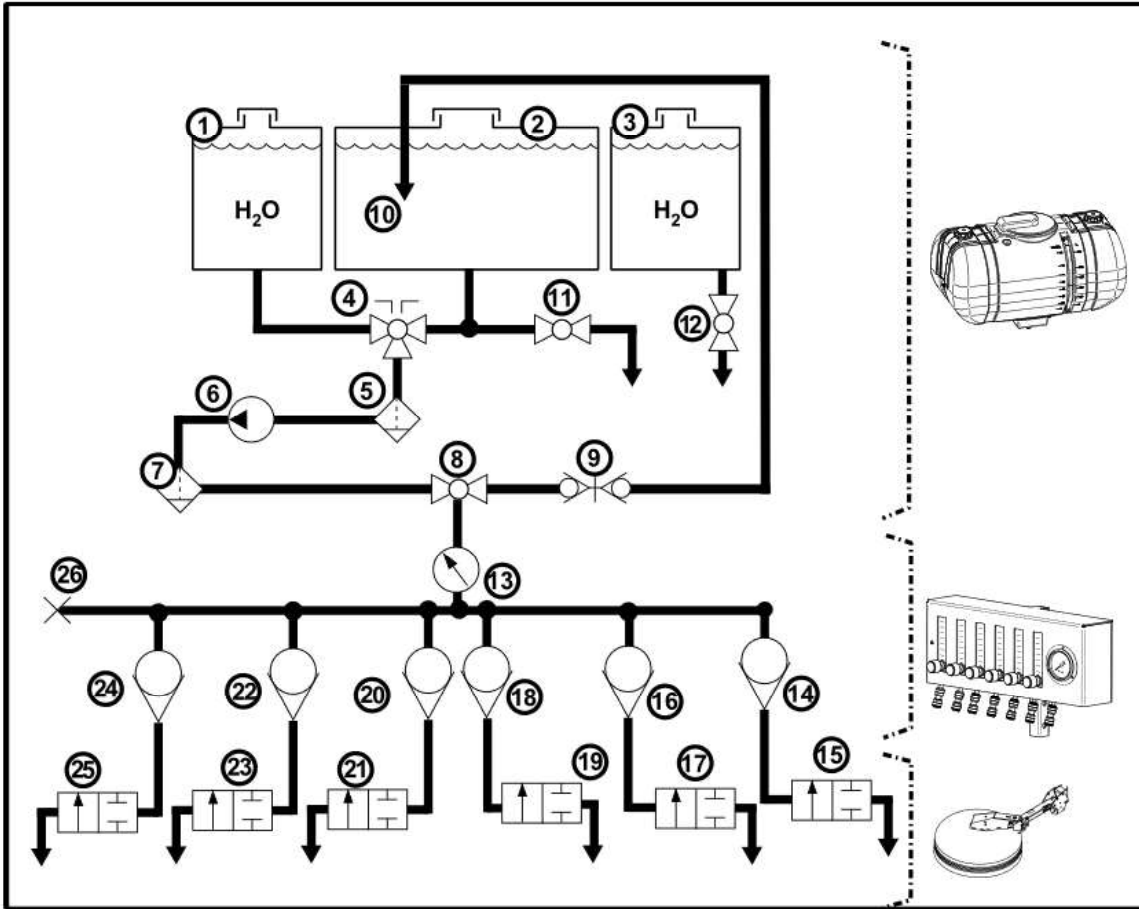


Typical hydraulic circuit layout



Mount the Flow Control in a convenient position visible to the operator.

3.5.1 Hydraulic diagram



Hydraulic diagram

1	Cleaning tank	10	Return flow	19	Solenoid valve 3
2	Main tank	11	Drain valve	20	Flowmeter 4
3	Hand-washing tank	12	Handwashing valve	21	Solenoid valve 4
4	Tank selector valve	13	Pressure gauge	22	Flowmeter 5
5	50 mesh filter	14	Flowmeter 1	23	Solenoid valve 5
6	Pump	15	Solenoid valve 1	24	Flowmeter 6
7	50 mesh filter	16	Flowmeter 2	25	Solenoid valve 6
8	Regulating valve	17	Solenoid valve 2	26	Plug
9	Quick connectors	18	Flowmeter 3		

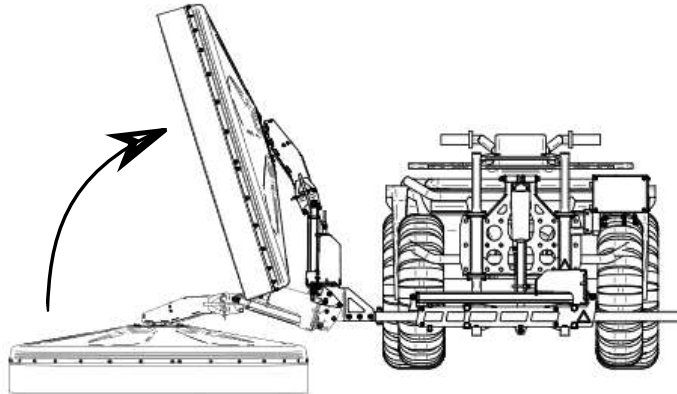
* The flow diagram corresponds to the system S-Dome+ 3049. The S-Dome+1524 system is the same, without elements 22,23,24 and 25.

3.6 Transport



When transporting the sprayer on public highways it is the responsibility of the operator to ensure the implement and tanking system can be safely moved and all road regulations complied with.

When transporting the sprayer, operators **must** lift all interception boom units to their highest position and lock them with the locking bolt unit. As for the center dome, its sides must be retracted.



You should also check that there are no obstacles in the user's field of vision. S-Dome+ equipment is transported depending on the type of coupling on the vehicle. In the case of the three-point linkage, the structure should be lifted and in the case of the trailer coupling, the bar must be extended to make it easier to move.

4 GETTING READY FOR SPRAYING

4.1 Pre-spray inspection

The user **must** ensure the tank system is in good condition before attempting any spraying operation. Operators must ensure they comply with any local or national regulations for the inspection of spraying equipment.

- Check for structural defects such as broken or cracked components.
- Check for leaking joints or hoses.
- Check for excessive wear in the three-point linkage pins and balls (where fitted).
- Check for loose bolts or fittings and tighten as appropriate.
- For hydraulically driven pump units. With the hydraulic hoses connected and the hydraulic system pressurised. Check the spraying pumps operate without excessive noise.

4.1.1 Leak test



Wear gloves



Wear a face shield or eye protection



Wear protective clothing



Wash hands

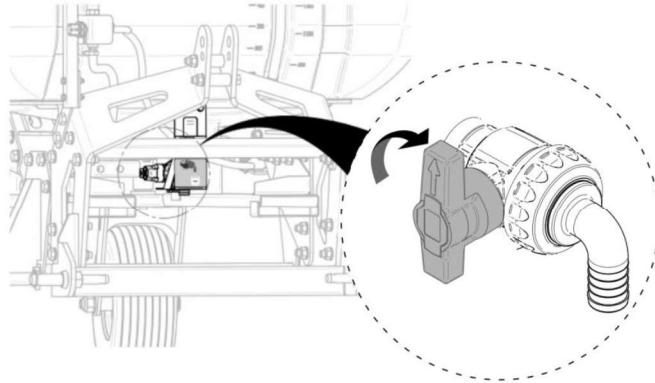
Perform all necessary tests and inspections **before** mixing pesticides. If using the equipment for the first time or after a period of storage, the system **must** be checked, with water only, to ensure it is operating correctly and there are no leaks. Work through the procedures listed in the following sections.

Pesticide should not be put into the spray mix tank until the system has been filled with water and the plumbing circuit checked for leaks. Perform all test procedures with clean water only.

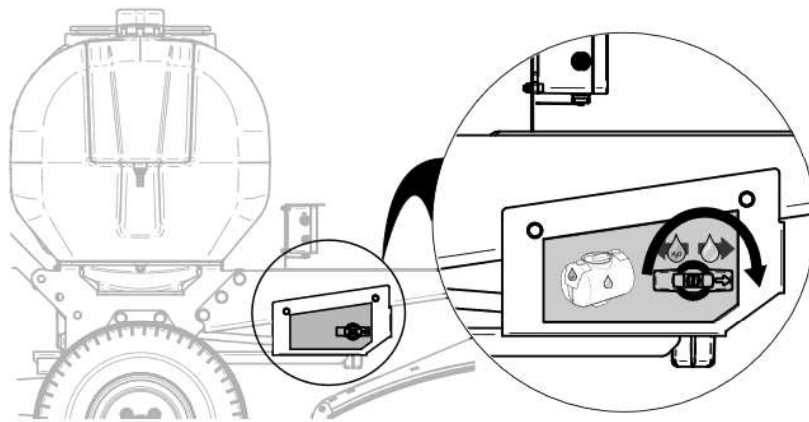
Follow the operating procedures. With a small quantity of water in the main tank, pressurise the system by running the pump with the outlet valve closed. When the system is pressurised visually check for leaking hoses or joints. Repair any defects immediately and retest the tank. When you are satisfied that the tank system is not leaking and is functioning correctly, open the outlet valve and test the spraying equipment. Refer to the spraying equipment instructions for further information regarding testing and setup.

Next procedure describes a proper set up and use of a Micron Weed Management equipment:

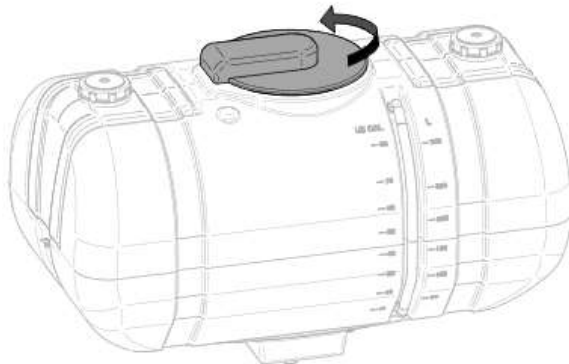
- 1- Check that the drain valve is closed.



- 2- Check that the selector valve is set to "product".



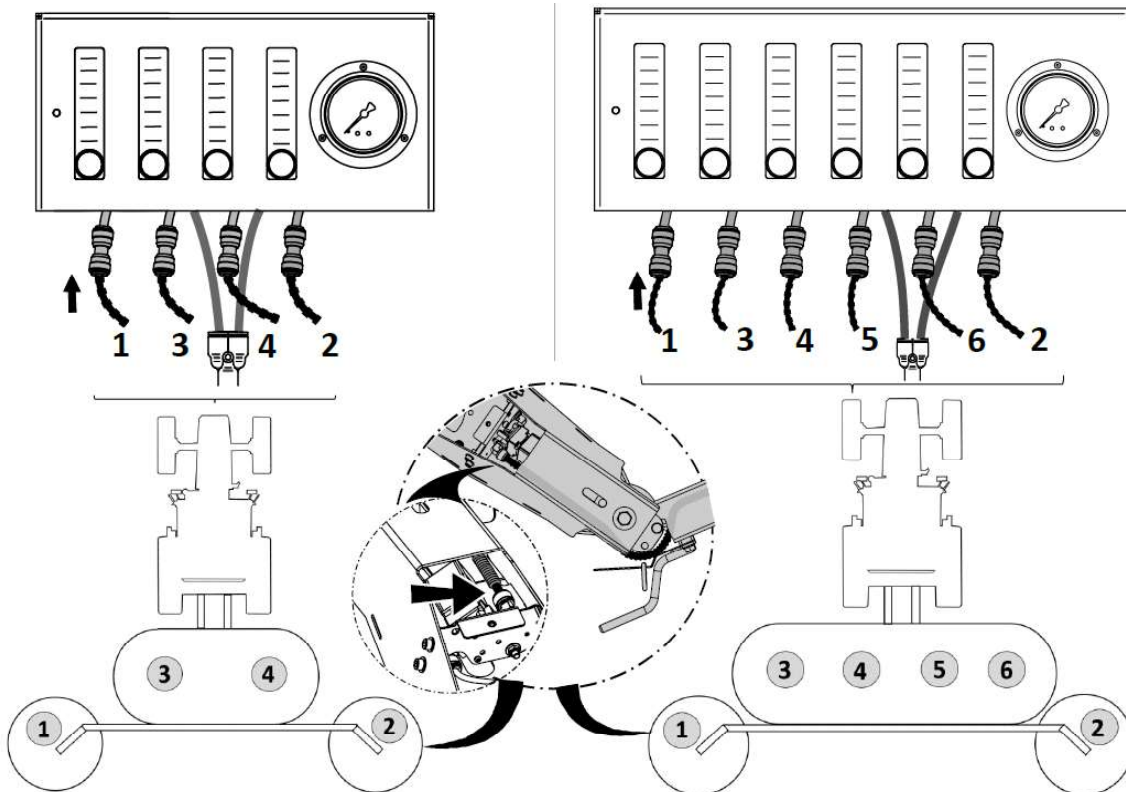
- 3- Open the filler cap.



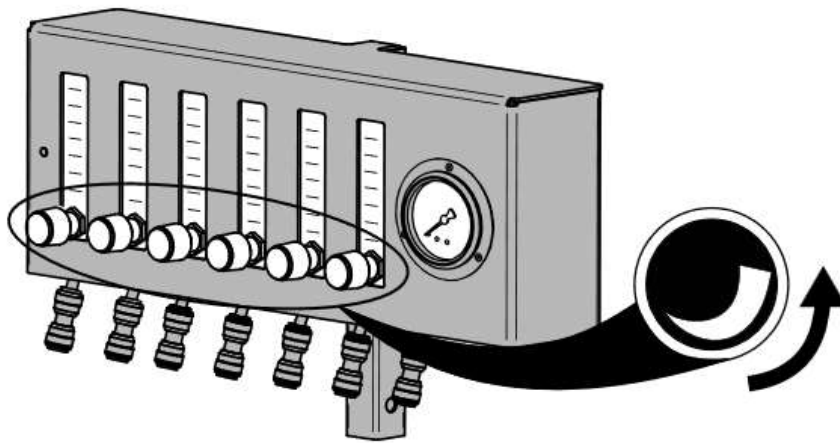
- 4- Visually inspect the filter. Remove and clean the filter if you notice any signs of clogging or contamination. Replace the filter if any damage is observed.



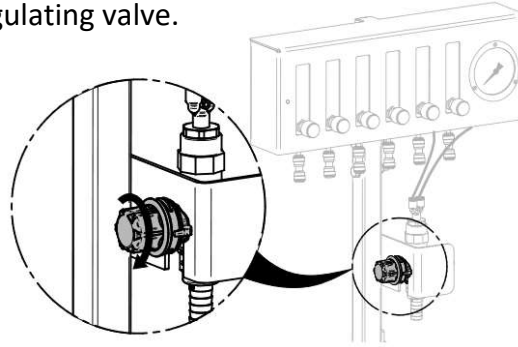
- 5- With the filter in place, add approximately 5 l (1.5 US gal) of clean water to the spray mix tank.
- 6- Close the filler cap and check that it is properly fitted.
- 7- Connect the spray equipment to the flow control panel. See the connection order we recommend in the picture below:



- 8- Open the flowmeters to maximum.



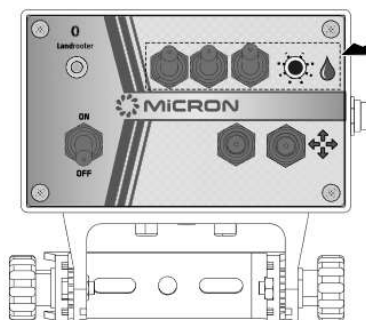
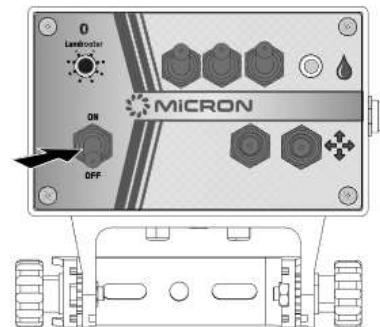
9- Close the regulating valve.



10- Turn on the main switch of the machine, located on the electronics (see picture on the left).

11- Start the pump (turn the main switch on the controller to ON) and check that the fluid flows through the system.

When this main switch is activated, the BLUE LED will flash. The GREEN LED will light up as many times as there are sprayer sections on the machine to ensure that all connections are correct.



12- Activate the spray switch on the controller. The green LED will light up.

13- Check the spray equipment for leaks and if it is working properly. Repair any defects immediately and repeat the procedure from point 10.

5 MIXING, FILLING AND CALIBRATION

5.1 Calculating Mixing Rates



Read the safety instruction at the beginning of this document before handling chemicals. Always carefully read and follow the handling instructions supplied by the chemical manufacturer.



Wear gloves



Wear face shield or eye protection



Wear protective clothing.



Hand wash

ALWAYS read the product label to identify the maximum quantity of product to be applied per hectare (e.g. 2 litres product per hectare).

Refer to your spraying equipment for instructions on setup and calibration.

The following calculation is provided as a guide to calculating spray mix rates and includes calculations for spraying in bands. The LANDROOTER™ WIZARD (section 5.3) has been developed to make these calculations.

$$\text{SPRAY MIX VOLUME (L)} = \frac{\text{Volume Rate } \left(\frac{\text{L}}{\text{ha}}\right) \times \text{Band Width (m)} \times \text{Field Area (ha)}}{\text{Row Width(m)}}$$

Volume Rate (L/ha): Total volume of spray mix to be applied on the treated area.

Band width (m): Width covered by the spray pattern, shield or combination of shields (in case of spraying the whole row, this will be the same value as the row width).

Field area (ha): Total area of the field.

Row width (m): Distance between tree or crop rows.

Example:

Volume rate 30 L/ha. Row width 6 m. The entire row width will be applied using an S-Dome+ 3049 with two 1200mm domes (6m total) on an area of 10 ha. The required volume rate will be:

Mix Volume (L)	=	Volume Rate (L/ha)	x	Band Width (m)	x	Field Area (ha)	x	Row Width (m)	=	300 L
		30		6		10		6		

5.2 Flow rate of spraying

CDA atomisers require very low flow rates, between 100 and 300 milliliters per minute for each atomiser. Refer to the spray equipment instructions for further information on setting flow rates.

The flow rate per atomiser/nozzle is calculated using the following formula:

FLOW RATE per atomiser / nozzle (L/min)

$$= \frac{\text{Band width (m)} \times \text{Vehicle speed} \left(\frac{\text{km}}{\text{s}} \right) \times \text{Application volume} \left(\frac{\text{L}}{\text{ha}} \right)}{600 \times \text{Number of atomisers}}$$

Note: For this formula the International System of Units (SI) must be used.

Example:

S-Dome+ 3049 (4 atomisers in the center dome) with two S-Dome 1200 heads on a tractor travelling at 5 km/h applying 30 l/ha spray rate, applying a total bandwidth of 6m (adjusting the center dome to 6-2.4=3.6m).

Calculate the required flow rate for each atomiser as follows:

CENTER DOME Flow rate (per atomiser)

4 atomisers

Band width=3,6m

Vehicle speed = 5 km/h

Application rate = 30 l/ha

$$3,6 \text{ m} \times 5 \text{ km/h} \times 30 \text{ L/ha} / (600 \times 4) = 0,225 \text{ L/min} = \mathbf{225 \text{ mL/min}}$$

SIDE DOME Flow rate

1 atomiser

Band width =1,2m

Vehicle speed = 5 km/h

Application rate = 30 l/ha

$$1,2 \text{ m} \times 5 \text{ km/h} \times 30 \text{ L/ha} / (600 \times 1) = 0,36 \text{ L/min} = \mathbf{300 \text{ mL/min}}$$

The LANDROOTER™ wizard can also be used to calculate the appropriate flow rate for each nozzle/atomiser.

5.3 LANDROOTER™ wizard

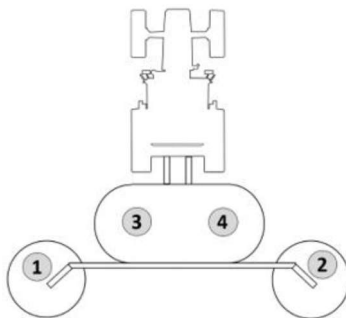
The main function of the herbicide mix LANDROOTER WIZARD is to facilitate calculations and optimize the amount of prepared mixture, so you do not have to waste product. It is also necessary to use it since it will give us information about the flow to use during the treatment. Click on the "herbicide mixture" icon and the wizard will open.



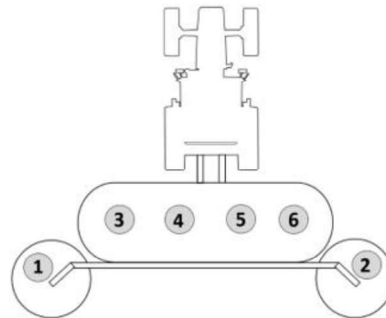
(Direct address: <https://my.landrooter.com/laboratory>)

In the calculations, in the case of the S-Dome+ unit, the side domes flow rate (flow rate of heads 1 and 2) and the center dome flow rate (flow rate of heads 3 and 4 in the case of S-Dome+1524 and of heads 3, 4, 5 and 6 in the case of S-Dome+3049) are obtained separately.

S-Dome+1524



S-Dome+3049



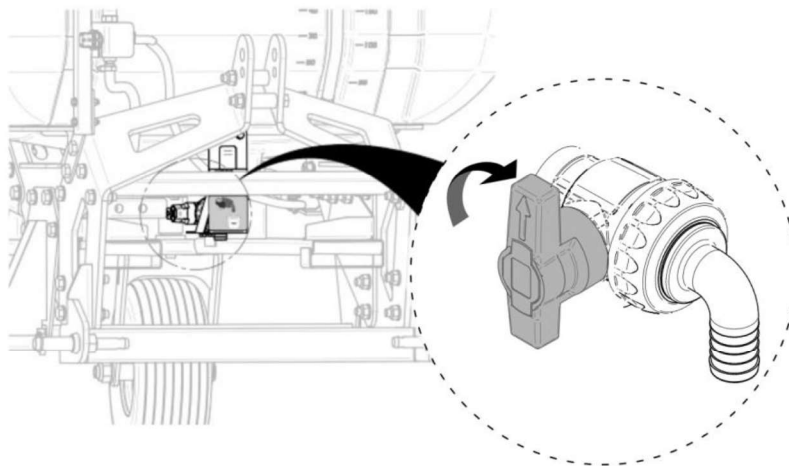
For more information, please refer to the LANDROOTER™ manual on the website.

5.4 Preparing the Spray Mix

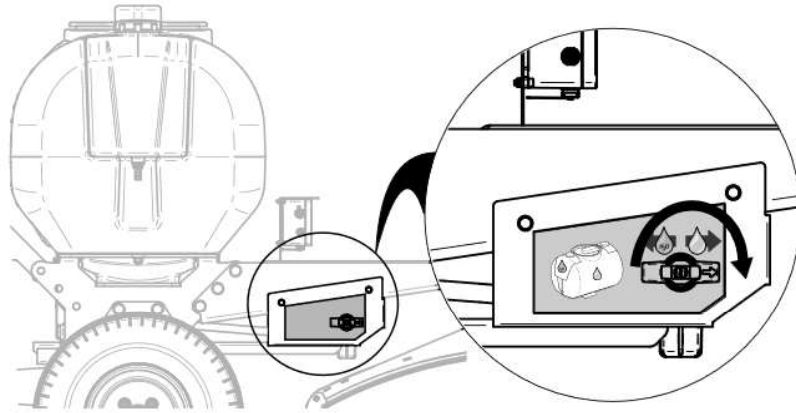
- 1- Only prepare sufficient spray mix for the required spray operation. Use LANDROOTER WIZARD (see section 5.3) as a help for calculating the needed spray mix.



- 2- Check the calibration and operating parameters against the instructions supplied with the spraying equipment.
- 3- Read the product label and abide by all safety requirements for PPE when mixing and filling..
- 4- Mix products in a secure area according to manufacturer's recommendations. Prevent any spillage or wash down from contaminating waterways or other areas.
- 5- Check for leaks before mixing products into the spray mix tank. See section 4.1
- 6- Check that the cleaning tank is filled exclusively with clean water before preparing the spray mixture.
- 7- Fill the main tank through the filler neck located at the top. The rinsing tank and the hand wash tank are filled with water independently through their own mouths.
- 8- Check that the drain valve located at the base of the main tank is closed.



9- Check that the selector valve is set to "product".



10- Unscrew the filler cap of the main tank.



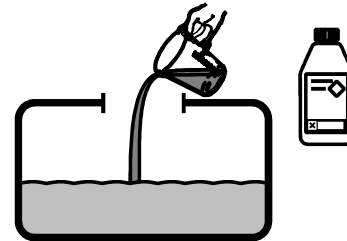
11- Visually inspect the filter. Remove and clean the filter if you notice any signs of clogging or contamination. Replace the filter if any damage is observed.



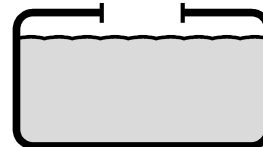
12- With the filter in place, add approximately 50 % of the required amount of clean water to the main tank.



13- Add the required quantity of chemical to the main tank.

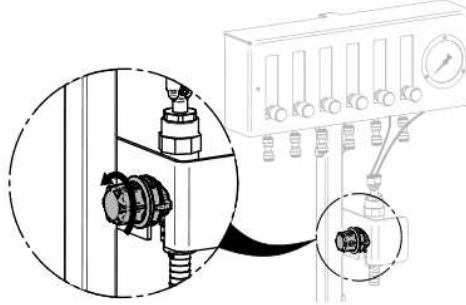


14- Add the rest of the required amount of clean water to the main tank.



15- Close the filler cap and check that it is properly fitted.

- 16- Open the regulating valve so that the entire pump flow returns to the tank and switch on the pump.



Liquid returning to the tank causes agitation of the mixture. The agitation will vary depending on the volume of liquid returning to the tank. Agitation is usually sufficient for all applications, including powders in solution.

5.5 Calibration

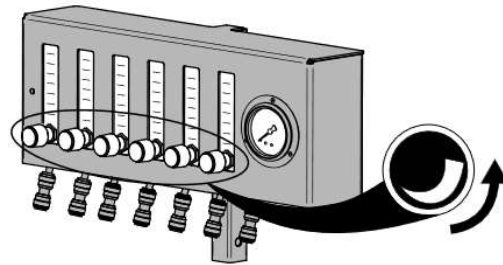


- 1- Turn on the main switch of the machine, located on the electronics (see picture on the left):

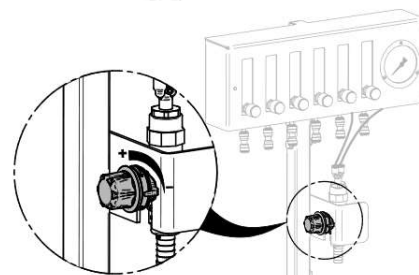
- 2- Start the pump and check that the fluid moves through the system.



- 3- Make sure that the flowmeters are fully open.



- 4- Adjust the regulating valve until the pressure gauge reads approx. 0.5 bar.



- 5- Adjust the flowmeters with the flow rate calculated in paragraphs 5.2 and 5.3.

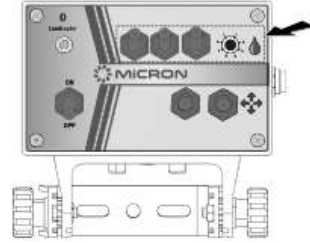
- 6- The MWM equipment is now ready for use.

5.5.1 Measuring the flow rate (CDA atomiser)

Once the equipment is inspected for any leaks the measuring of the flow rate must be done before starting spraying.

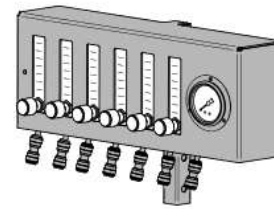
Follow the following steps:

- 1- With the equipment in running, activate the spray switch on the remote control.



- 2- Open the flowmeters to the maximum and adjust the pressure to 0,25 bar (3,63PSI) using the return to tank valve.

- 3- Adjust the flow control trimmers checking the flowmeter for each atomiser.

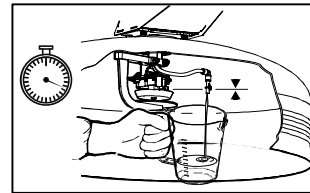


- 4- Measure the discharge from the nozzle over 1 minute, with the arm in horizontal position. Depending on the spray head model, the nozzle and its positioning will be different:

- Models 600, 900 and 1200 and center dome head:

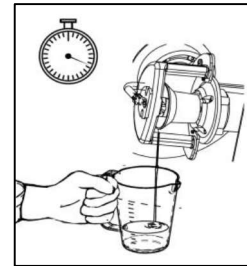
Simply remove the feed nozzle from the atomiser disc.

To access the heads of the center dome, the openings intended for this purpose must be opened.



- Models 400:

Remove the nozzle from the recirculating cup.



6 SPRAYING

6.1 Spraying process



Wear gloves



Wear face shield or eye protection



Wear protective clothing.



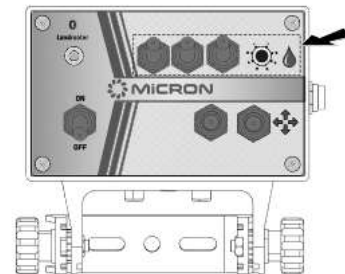
Hand wash

After "preparing for use" (section 4) and "mixing, filling and calibration" (section 5). Continue with the following steps:

- 1- Use the master switch located on the electronics to switch on the unit (see picture right). When the main switch is pressed, the BLUE LED on the controller will flash. The GREEN LED will light up as many times as there are atomisers in the machine, to make sure that all connections are correct.

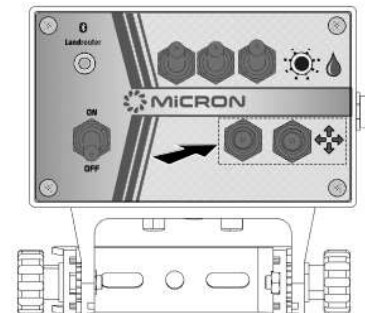


- 2- With the pump running, activate the spray switches to spray. The green LED light indicates that the unit is spraying. Switch off again to stop spraying.



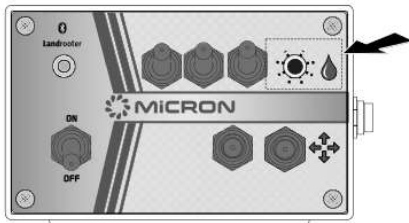
- 3- If the unit is equipped with actuators, use the actuator switches to adjust position of the domes.

Note: Be sure to turn off the spray switch before raising the side hood at an angle.

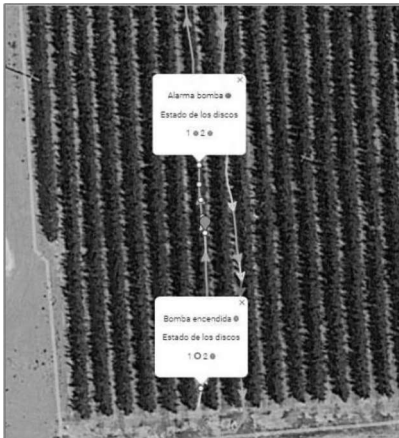


6.2 Alarm indicator for system malfunction

1- PUMP ALARM AND ATOMISER ALARM:



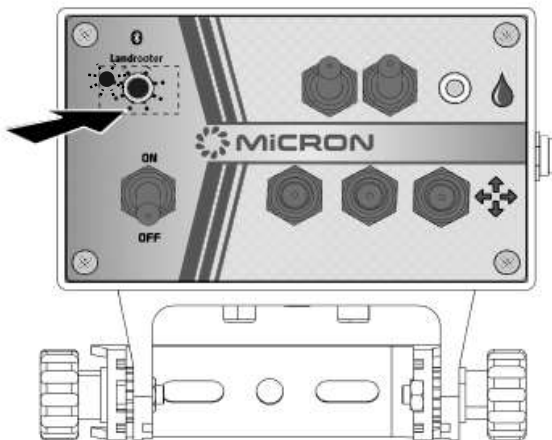
If the GREEN LED flashes, this may indicate a pump or spray motor fault. Or that another pump (different from the one supplied with the equipment) is being used.



The Landrooter App will show us on the cell phone the reason for the failure by means of a red landmark.

If this situation occurs, check to see if there is any blockage in the conduits/nozzles or that the atomizer disc is not blocked and that it rotates freely.

2- BLUETOOTH® INDICATOR :



With the tank's master switch on, the blue LED (Bluetooth®) will flash to indicate that it is in the pairing process.

This pairing is done automatically if you are within the field or less than 5 meters away.

If this led does not flash twice intermittently, then the sprayer is not paired with the mobile phone yet, so no information would be transferred.

If so, CHECK that the Bluetooth on the mobile phone is on, and you are inside the field.

* For more details, please check Landrooter manual on the website.

7 CLEANING



Wear gloves



Wear eye protection



Wear protective clothing.



Hand wash

When spray is complete rinse out the spray lines, pump and atomiser/nozzles with clean water and spray out any washings onto the treated area or a suitable non crop area. Do not exceed maximum dose rates.

Wash down any contaminated surfaces with clean water and detergent in a secure area or biobed where washings are retained and cannot enter waterways or drain into adjacent areas.

7.1 Disposal of Washings



Always dispose of chemicals and washings in accordance with the manufacturer's instructions.

Pesticides **must** always be handled and stored in accordance with the manufacturer's instructions and stored in their original containers.



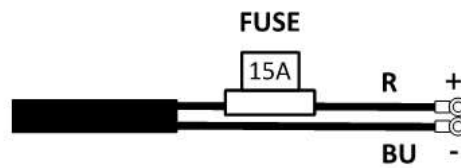
Avoid contamination of waterways or drainage ditches when disposing of washings and follow local regulations regarding the safe use and disposal of pesticides.

8 MAINTENANCE

Micron Weed Management (MWM) spraying equipment will require routine maintenance; the user should regularly inspect the equipment for damage or wear and replace any damaged or significantly worn items immediately. Any moving parts should be lubricated with a suitable good quality lubricant. Always flush through pump, hoses and atomisers/nozzles with clean water after spraying to avoid nozzle blockages.

8.1 Fuse Replacement

The standard power wire assembly has an inline fuse fitted to the positive (+) wire near to the positive (+) battery terminal.



- 1- Switch off all electrics including the vehicle engine.
- 2- Remove the cover of the fuse housing and replace the fuse.

8.2 Lubrication Table

Operators should ensure good lubrication of the moving parts of their equipment. The following table is provided as a guide.

Item	Lubricant	Interval
Threaded metal parts	Brush or Spray exposed threads with grease or oil.	Every month and before storage.
Threaded plastic parts	Light coating of silicone spray or petroleum jelly.	As required.

Lubrication

8.3 Service and inspection intervals

Item	Action	Frequency
Nozzle	Remove and Clean. Check flow rate.	Start of each season and during as required.
Atomiser disc or drum and recirculation cap	Remove and Clean.	Start of each season and during as required.
Atomiser Motor	Remove and clean contact. Ensure the motor is free from moisture before refitting.	As required should issues arise.
Flowmeter	Flush through with clean water.	After each use.
Spray lines and ancillary items	Check for leaks. Check for correct operation of valves and regulators.	Start of each season.
Filters	Check and clean all filters.	Start of each season and as required during.
Shield brushes	Check for excessive wear or damage.	Start of each season.
Mechanical defects	Inspect operation of mechanical components. Grease moving parts as required.	Start of each season.
Joints, pivot pins and bearings	Check for excessive wear and adequate lubrication.	Annually.
Greased joints and grease nipples	Pack with grease.	Annually.
Moving Parts	Check for free and smooth operation and adequate lubrication.	Annually.

Service and inspection

8.4 Storage of sprayers

1. Ensure the system is drained of all fluids including those in any rinse tank or hand-wash tank. Dispose of washings appropriately.
2. Where winter temperatures approach freezing it is necessary to add antifreeze into the main tank and circulate around pump and spray lines to prevent freezing of any water retained in the plumbing system. **Before using it again, drain anti-freeze from system. Rinse through with clean water before spraying.*
3. Store the equipment in a covered and well-ventilated area. Store away from direct sunlight.
4. Ensure brushes (if fitted) are suspended above ground to prevent damage during storage.

9 TROUBLESHOOTING

Problem	Possible Cause	Action
Breakaway arm stiff or does not move	Pivot seized.	Dismantle, clean and lubricate pivot.
Breakaway arm loose and does not return to stop	Return spring detached or broken.	Reattach or replace spring.
Dome/Shield does not rotate freely <i>*S-Guard model does not rotate</i>	Dome/shield bearing seized.	Replace bearing.

Mechanical faults

9.1 CDA

Problem	Possible Cause	Action
Pump and CDA atomiser not operating	<p>Inline switch is off.</p> <p>Blown fuse.</p> <p>Loose connection at battery or electronic box.</p> <p>Incorrect wiring at electronic box.</p>	<p>Switch on.</p> <p>Replace fuse.</p> <p>Check all connections; tighten as necessary.</p> <p>Check wiring and re-wire as necessary.</p>
Blows fuse with control unit switched off	Wiring on main lead or electronic box reversed.	Check wiring and re-wire as necessary.
Blows fuse when control unit is switched on	Short to earth.	Check all wiring for earth faults and repair.
CDA atomiser does not operate	<p>Obstruction in atomiser disc.</p> <p>Atomiser faulty.</p>	<p>Remove and clean atomiser disc.</p> <p>Replace atomiser unit</p>
Pump operates intermittently	Loose electrical connection.	Check all connections; tighten as necessary.
Pump will not operate	<p>Loose electrical connection.</p> <p>Faulty pump motor.</p>	<p>Check connections.</p> <p>Check or replace pump motor.</p>
Pump runs but no flow from outlet	<p>Tank empty.</p> <p>Blocked nozzle.</p> <p>Blocked filter.</p> <p>Blocked hose.</p> <p>Kinked hose.</p> <p>Float stuck in flow meter.</p> <p>Solenoid not opening.</p>	<p>Refill tank.</p> <p>Remove and clean.</p> <p>Check and clean.</p> <p>Clean all hoses.</p> <p>Straighten all hoses.</p> <p>Clean with water.</p> <p>Check wiring and operation</p>

10 SPRAYER DISPOSAL



Dispose of equipment in accordance with local regulations.

Clean to remove any chemical residues and dispose of accordingly.

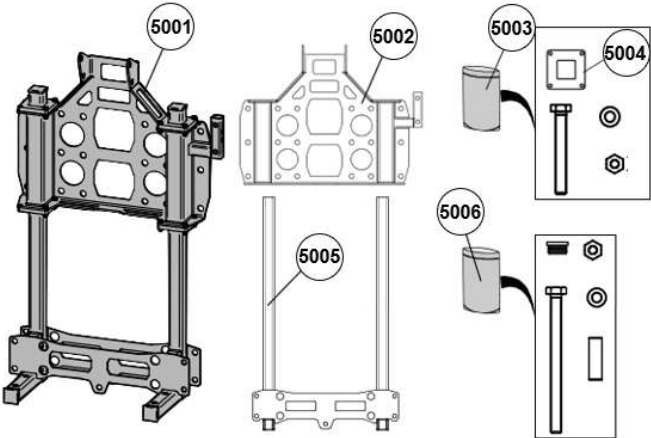


Avoid contamination of the environment with any sprayer washings.

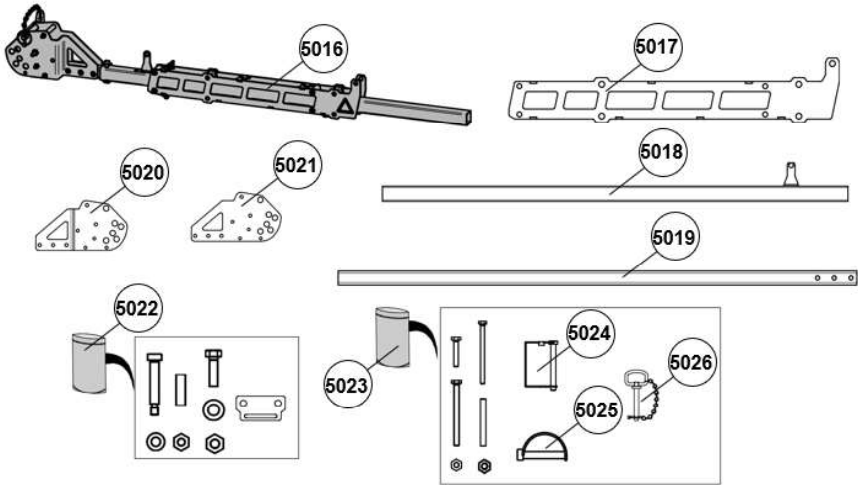
Dismantle equipment as far as practical and clean all parts.

Dispose of the component parts by material type in accordance with local waste disposal regulations.

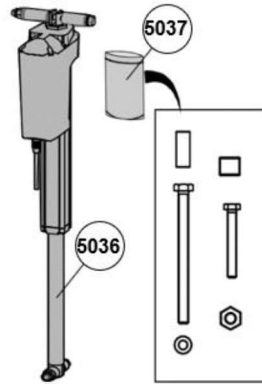
11 SPARE PARTS



NO.	REF.	DESCRIPTION
5001	8M13H800	H-frame support assembly
5002	8M13H500	H-frame, fixed support
5003	8M13H600	Fixed support, screw kit
5004	8M13H324	H-frame, fixed support vertical guide
5005	8M13H501	H-frame, moving support
5006	8M13H601	Moving support, screw kit



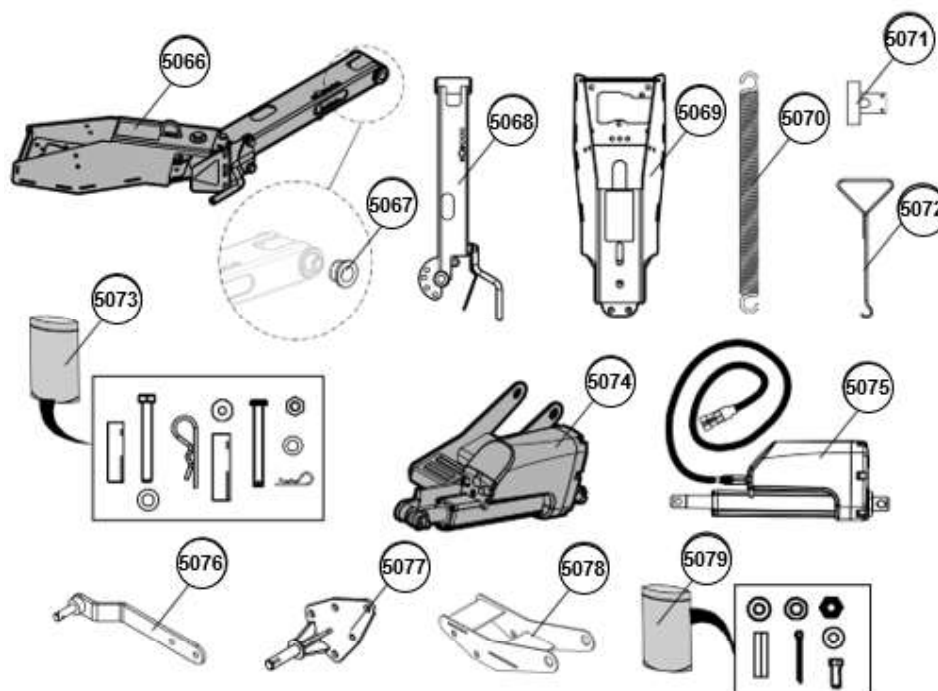
NO.	REF.	DESCRIPTION
5016	8M13H810	H-frame arm assembly
5017	8M13H510	H-frame, actuator arm support
5018	8M13H511	H-frame, actuator arm
5019	8M13H512	H-frame, manual arm
5020	8M13H514	H-frame, indexing plated, jogged
5021	8M13H513	H-frame, indexing plated, flat
5022	8M13H610	Actuator arm support, screw kit
5023	8M13H611	Actuator arm, screw kit
5024	8M13H517	Shaft locking pin
5025	8M13A331	Linch pin
5026	8M13A332	Hitch pin



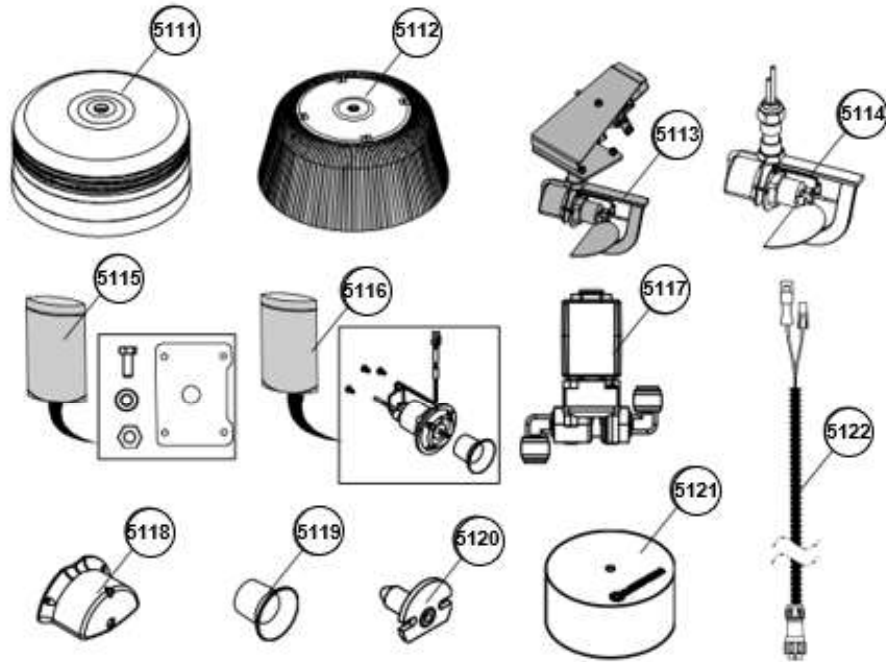
NO.	REF.	DESCRIPTION
5036	8M13H820	Vertical actuator kit
5037	8M13H620	Vertical actuator kit, screw kit



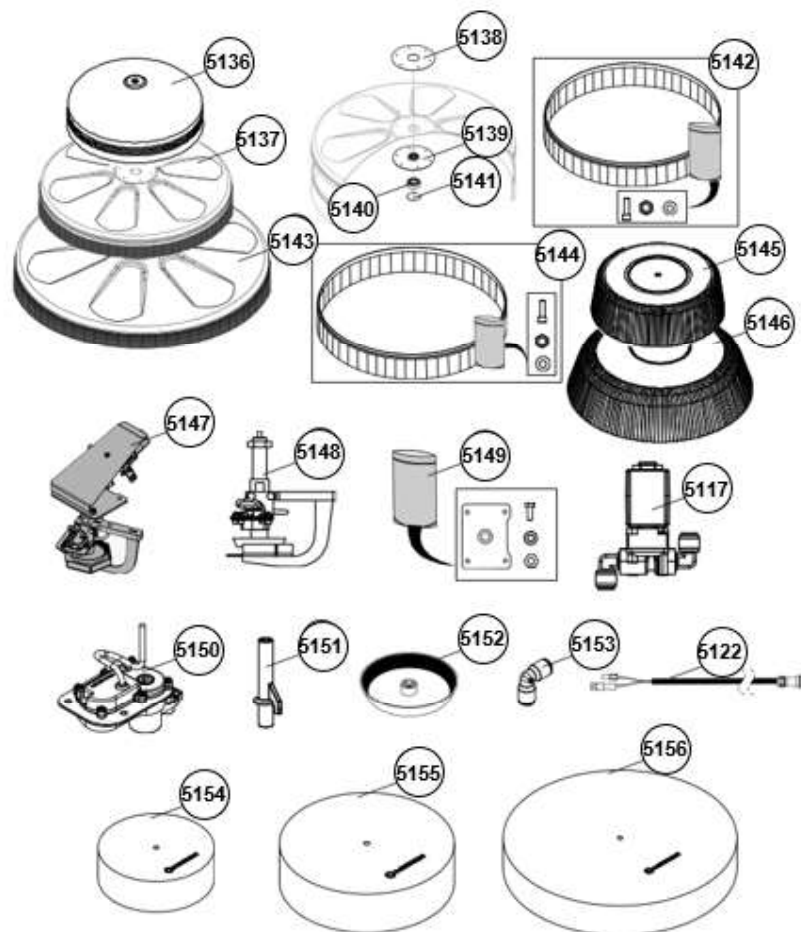
NO.	REF.	DESCRIPTION
5038	8M13H830	Horizontal actuator kit
5039	8M13H630	Horizontal actuator kit, screw kit



NO.	REF.	DESCRIPTION
5066	8M13A820	Breakaway kit
5067	8M13A320	Self autolubricating bush
5068	8M13A521	Suport arm, break away
5069	8M13A520	Pivot arm, break away
5070	8M13A323	Tension spring
5071	8M13A522	Bracket, spring puller
5072	8M13A526	Tool, spring puller
5073	8M13A608	Break away, screw kit
5074	8M13A640	Actuator kit
5075	8M13A333	Breakaway actuator
5076	8M13A544	Actuator link arm bracket
5077	8M13A547	Actuator rear bracket
5078	8M13A540	Bracket, lift, actuator, break away
5079	8M13A609	Screw kit, break away actuator

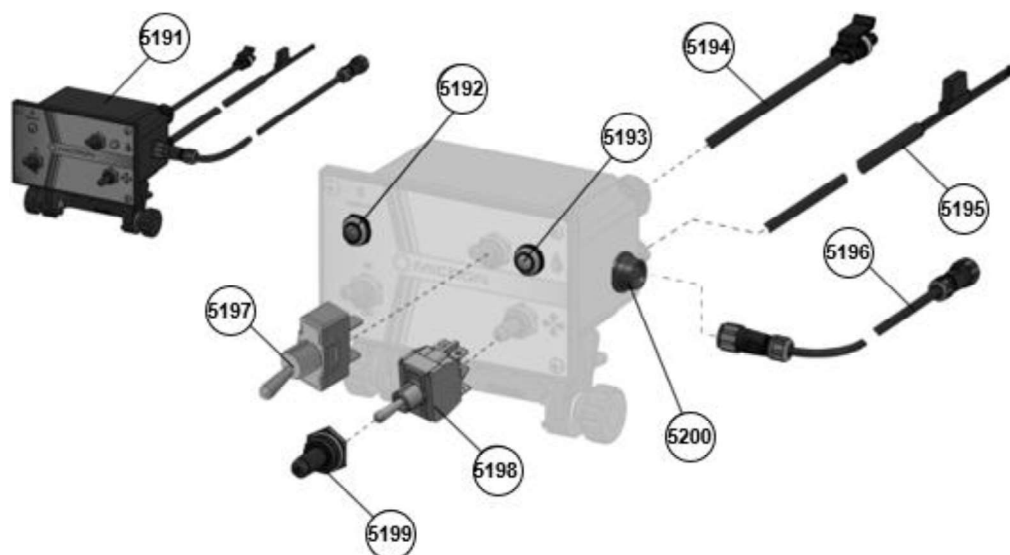


NO.	REF.	DESCRIPTION
5111	8M13D040	S-Dome 400 dome assembly
5112	8M12D040	S-Flex 400 dome assembly
5113	8M13A850	Head kit, CDA 400
5114	8M13A604	Head assembly, CDA 400
5115	8M13A616	Plate component kit, cda 400
5116	8M13A615	CDA 400 motor
5117	8M13A301	Solenoid valve
5118	8M13A334	Recirculating cap
5119	8M13A335	Drum atomizer
5120	8M13A336	Feed nozzle
5121	8M12D040800	Slip-on cover 400
5122	8M15E302	Cable EV/Disc SD+



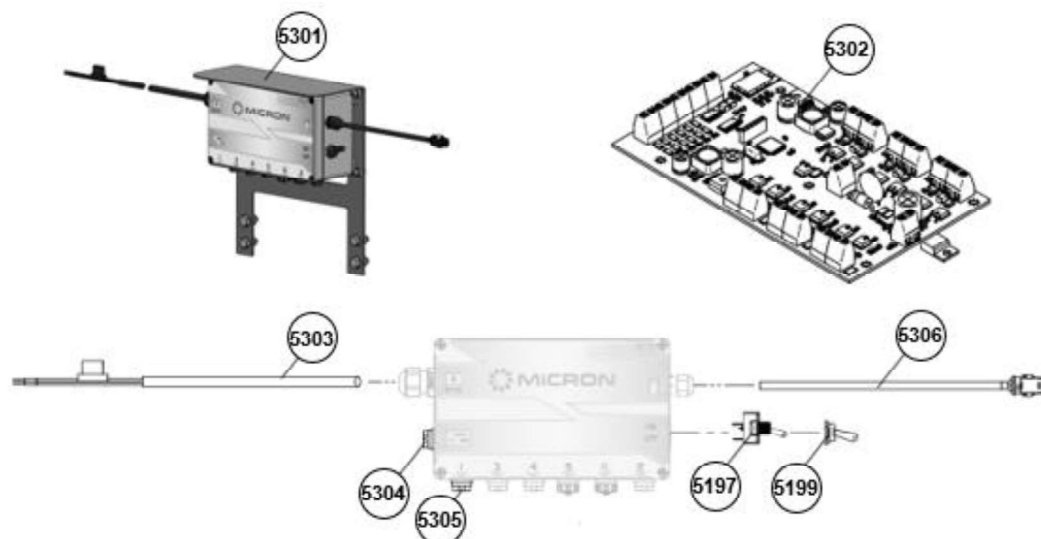
NO.	REF.	DESCRIPTION
5117	8M13A301	Electro valve
5122	8M15E302	Cable EV/Disc SD+
5136	8M13D060	S-Dome 600 dome assembly
5137	8M13D090	S-Dome 900 dome assembly
5138	8M13D120502	Dome top support plate
5139	8M13D120601	Plate with bearing
5140	24206304	Bearing
5141	21964502	Circlip
5142	8M13D811	S-Dome 900 brush kit
5143	8M13D120	S-Dome 1200 dome assembly
5144	8M13D812	S-Dome 1200 brush kit
5145	8M12D060	S-Flex 600 dome assembly
5146	8M12D090	S-Flex 900 dome assembly
5147	8M13A810	Head kit, CDA 600 and larger

5148	8M13A601	Assembly, motor and guard
5149	8M13A812	Threaded plate kit
5150	8M13A600	Motor assembly 3300 with protector
5151	83749303	Red nozzle
5152	83749601	CDA disc
5153	8M13A305	Elbow push-fit
5154	8M12D060800	Slip-on cover 600
5155	8M12D090800	Slip-on cover 900
5156	8M13D120800	Slip-on cover 1200



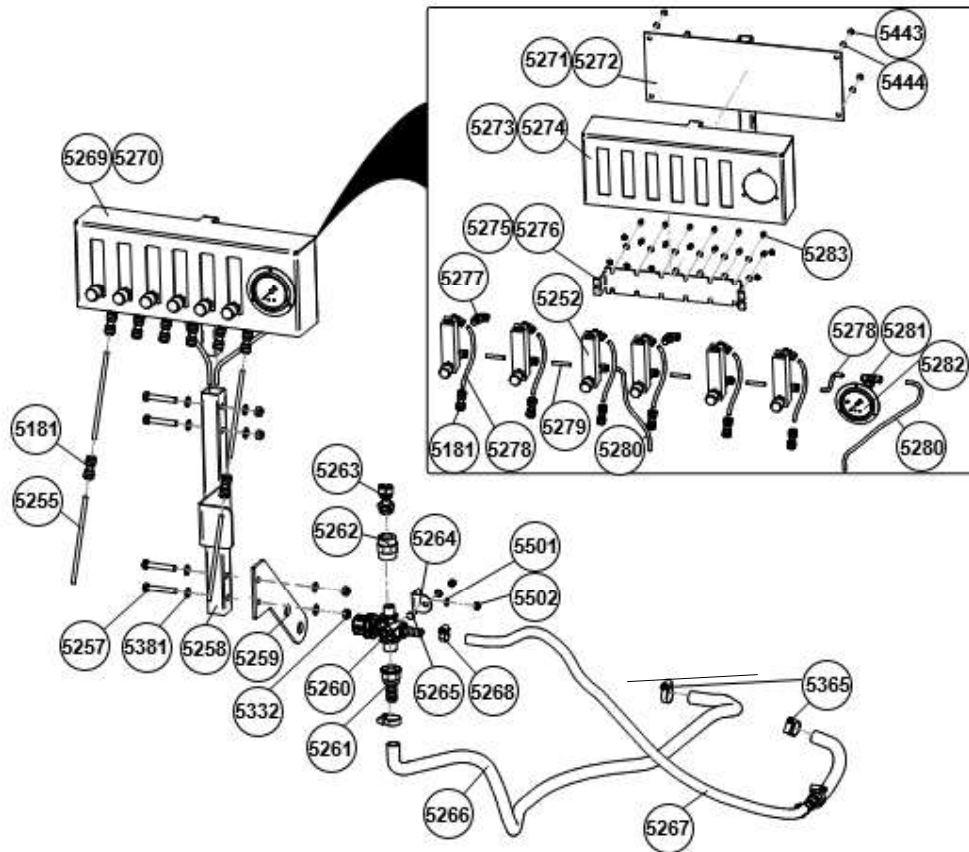
NO.	REF.	DESCRIPTION
5191	8M13R8XY	Remote control (X sprayer, Y actuators)
5192	8M13R307	Blue led
5193	8M13R308	Green led
5194	8M13R313	Actuator cable
5195	8M13R311	Battery cable

5196	8M13R326	Cable between remote control and box
5197	8M13R309	Switch spraying
5198	8M13R310	Switch actuator
5199	8M13R319	Switch cap
5200	8M13R324	Integrated remote control cable



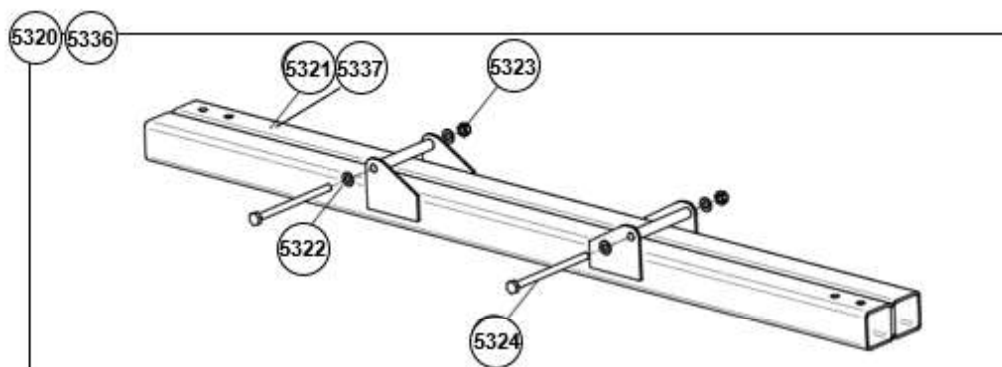
NO.	REF.	DESCRIPTION
5197	8M13R309	Switch spraying
5199	8M13R319	Switch cap
5301	8M15E860	Electronics 4-6 heads
5302	8M15E300	Electronic PCB 4-6 heads

5303	8M15E308	Cable battery box, SD+
5304	8M15E315	Cable box controller, SD+
5305	8M15E316	Cable box EV- disk, SD+
5306	8M15E310	Cable box pump, SD+

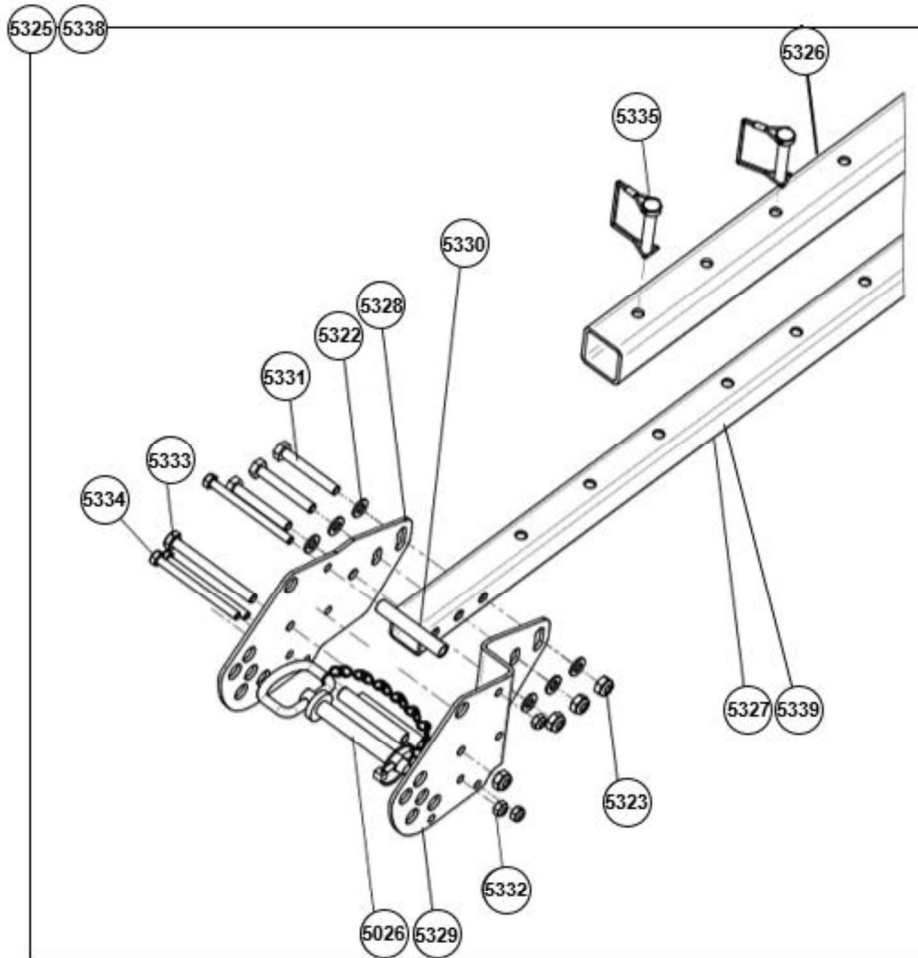


NO.	REF.	DESCRIPTION
5181	8M13F305	Straight push-in fitting 0606
5252	8M13F301	Flowmeter 500 ml/min (0.12 US GPM)
5255	8M13F602	Hose arm to flowmeter
5257	25423850	Bolt DIN933 M8x50 ZINC
5258	8M13F564	Flow control 4-6 support
5259	8M13F563	Flow control 4-6 clamping plate
5260	8M15T311	Pressure regulating valve 1/2 "M-1/2 "M
5261	8M15T320	Straight fitting G1/2" D15H
5262	8M13F360	Union 1/2" H-H
5263	8M13F361	Fitting 2 outlets D6 M1/2" M1/2".
5264	8M31T503	Regulator clamping plate
5265	25423616	Bolt DIN 933 M6 x 16 ZINC
5266	8M13F406	Tank-regulator hose (L=1250mm)
5267	8M13F603	Return hose subassembly 300L
5268	20124008	Clamp 8-16
5269	8M13F640	Control panel 4 heads 500ml
5270	8M13F660	Control panel 6 heads 500ml
5271	8M13F540	Back cover control panel 4 heads
5272	8M13F560	Back cover control panel 6 heads

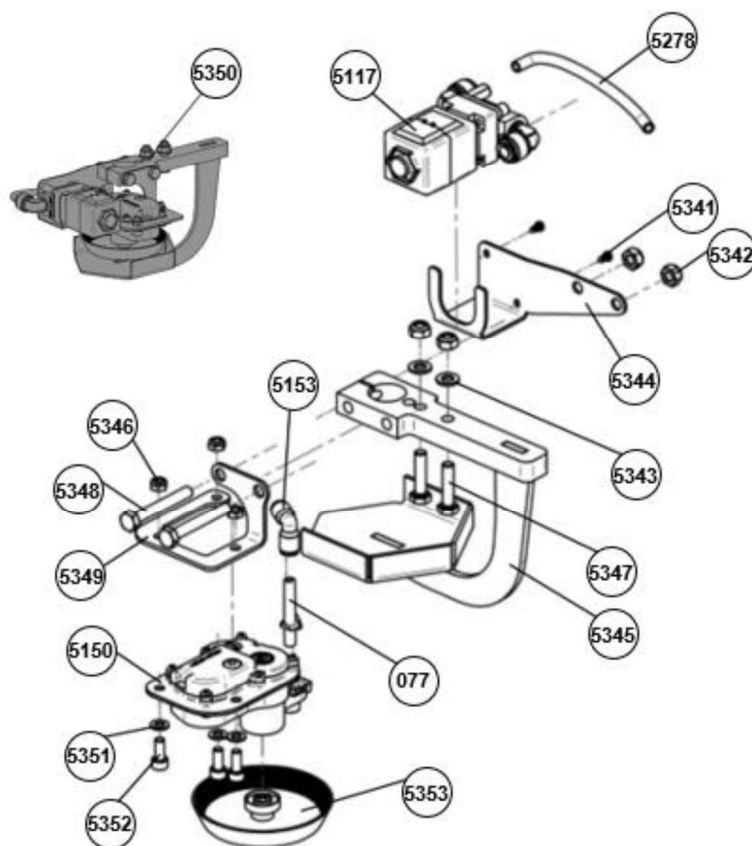
5273	8M13F541	4 head flowmeter panel
5274	8M13F561	6-head flowmeter panel
5275	8M13F542	Flowmeter clamp 4 heads
5276	8M13F562	Flowmeter clamp 6 heads
5277	8M13F362	Pushfit elbow fitting M3/8" D6
5278	8M13F401	Hose D6x170 BK
5279	8M13F403	Hose D6x35 BK
5280	8M13F405	Hose D6x240 BK
5281	8M13F303	Push-fit T-fitting female G 1/4
5282	8M13F310	Pressure gauge horz. 1/4" GAS 0/4BAR with front edge
5283	25523508	Bolt DIN912 M5x8 ZINC
5332	262230081	Self-locking nut DIN985, M8 (ZINC)
5365	20124022	Clamp S/F Ø 12-22 ZN
5381	21123008	Flat washer DIN125 M8 ZINC
5443	26223005	Nut DIN985 M-5 ZINC
5444	21123005	Flat washer DIN125 M-5 ZINC
5501	21123006	Flat washer M-6
5502	262230061	Self-locking nut DIN985 M6 ZINC



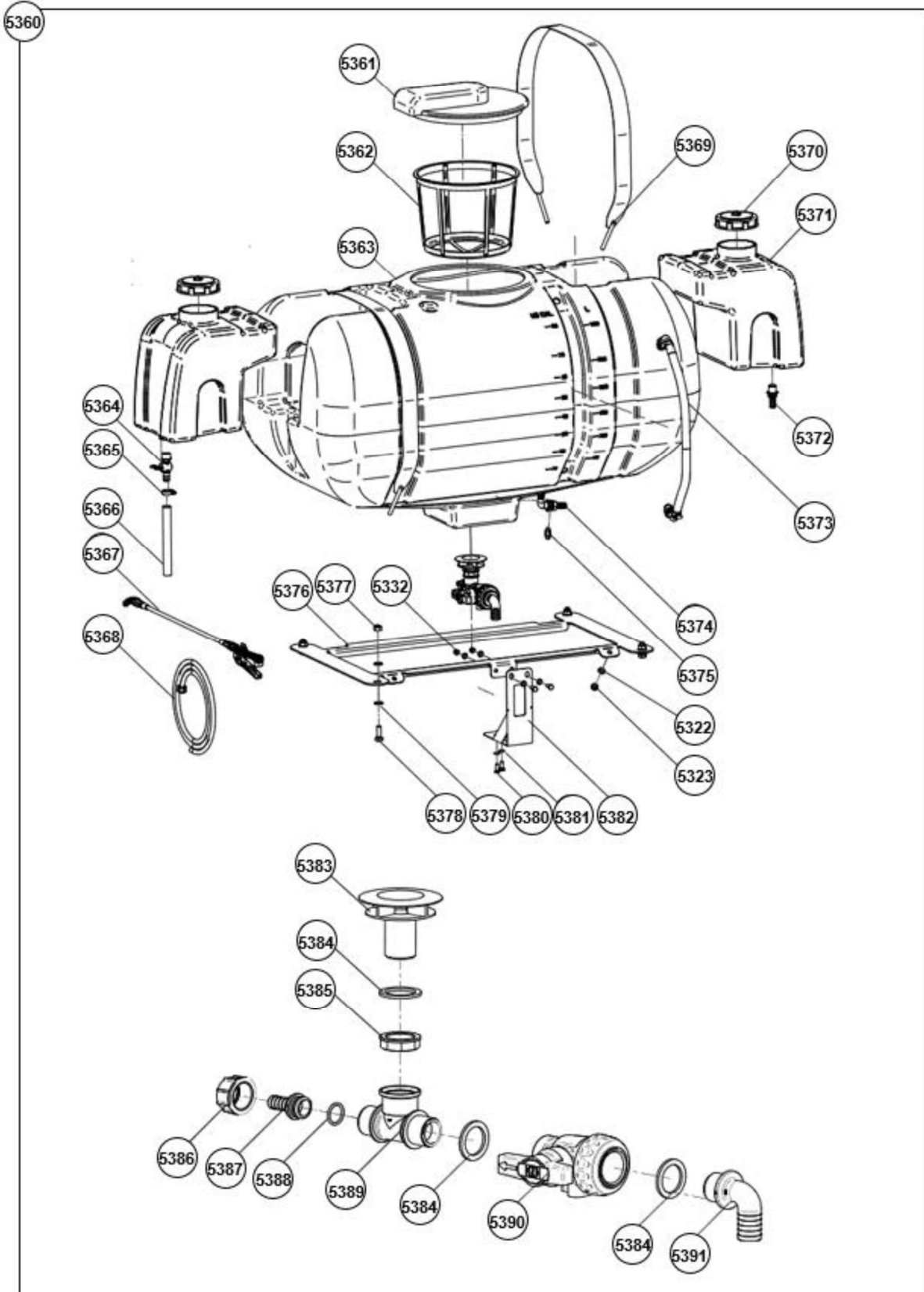
NO.	REF.	DESCRIPTION
5320	8M15A600	ARM SUPPORT SUBASSEMBLY, SD+ 3049
5321	8M15A531	DOUBLE EXTENSION ARM SUPPORT, SD+ 3049
5322	21123010	FLAT WASHER DIN125 M10 ZINC
5323	262230101	SELF LOCKING NUT DIN985, M10 ZINC
5324	25423160	BOLT DIN 931 M10x160 ZINC
5336	8M14A600	ARM SUPPORT SUBASSEMBLY, SD+ 1524
5337	8M14A500	ARM SUPPORT, SD+1524



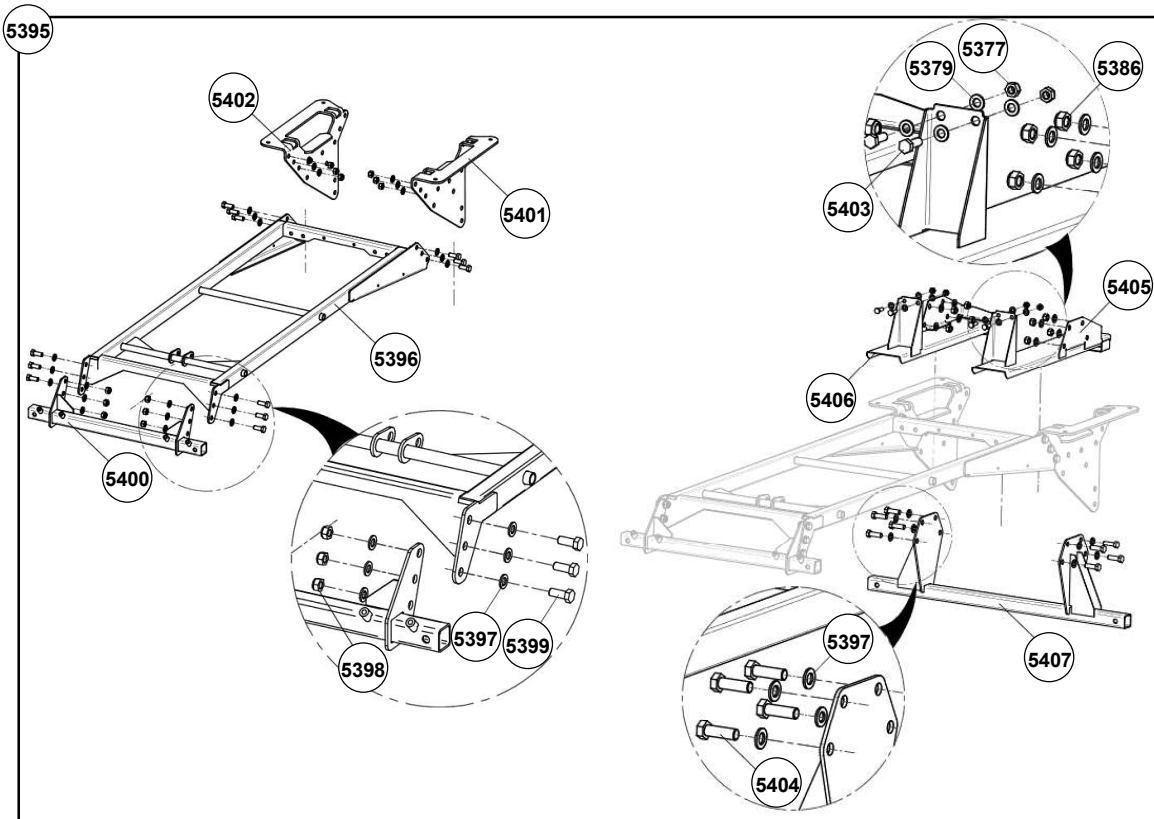
NO.	REF.	DESCRIPTION
5026	8M13A332	HITCH PIN DIA. 16 WITH PIN CENTRE AXLE
5322	21123010	FLAT WASHER DIN125 M10 ZINC
5323	262230101	SELF LOCKING NUT DIN985, M10 ZINC
5325	8M15A601	ARM SD+ 3049
5326	8M15A533	MIDDLE TUBE DOUBLE EXTENSION ARM, SD+ 3049
5327	8M15A532	INNER TUBE, DOUBLE EXTENSION ARM, SD+ 3049
5328	8M15A502	FLAT PLATE SD+ ARM
5329	8M15A503	BENT PLATE SD+ ARM
5330	8M13A537	SPACER TUBE 84 mm
5331	25423107	BOLT DIN931 M10X70 HEX ZINC
5332	262230081	SELF-LOCKING NUT DIN985, M8 (ZINC)
5333	2542310105	BOLT DIN931 M10x105 ZINC
5334	254238105	BOLT DIN931 M8x105 ZINC
5335	8M15A301	SAFETY PIN D11x54
5338	8M14A601	ARM SD+ 1524
5339	8M14A501	INNER SLIDING TUBE, SD+ ARM 1524



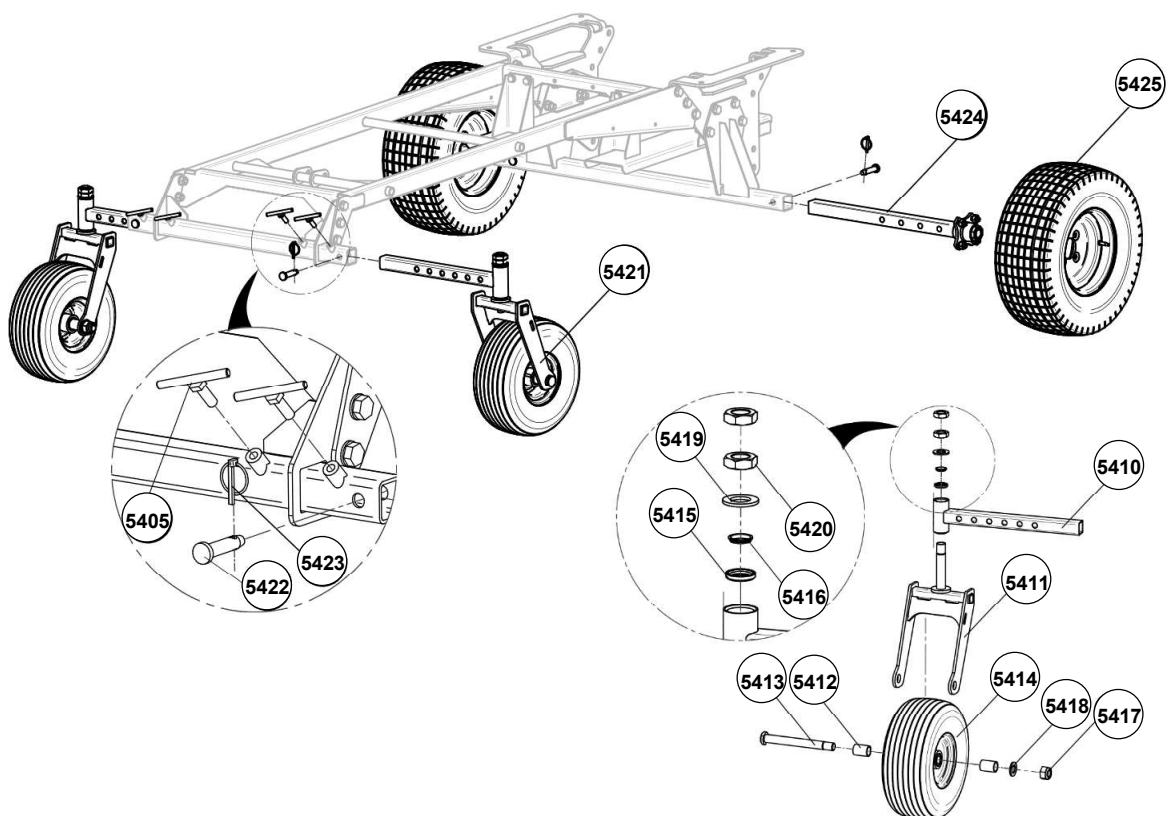
NO.	REF.	DESCRIPTION
077	83749303	RED NOZZLE
5117	8M13A301	SOLENOID VALVE WITH PUSHFIT AND CONNECTOR
5150	8M13A600	MOTOR ASSEMBLY 3000 WITH PROTECTOR
5153	8M13A305	PUSHFIT ELBOW 0606
5278	8M13F401	HOSE D6X170 BK
5341	25208395	SCREW DIN 7981 2,9X9,5 S/S
5342	262080061	SELF-LOCKING NUT DIN985, M6 S/S
5343	21108006	WASHER INOX.M-6
5344	8M15A506	EV SUPPORT, SD+
5345	8M13A500	DISC PROTECTOR BRACKET
5346	262080051	SELF-LOCKING NUT DIN985, M5 S/S
5347	25408625	BOLT DIN 933 M6X25 S/S
5348	25408645	BOLT DIN 931 M6 x 45 S/S
5349	8M13A501	MOTOR SUPPORT
5350	8M15A810	HEAD KIT SET, SD+
5351	21108005	FLAT WASHER DIN125 M5 INOX. SHAPE B
5352	25508512	BOLT DIN912 M5x12 INOX
5353	83749301	ULV DISC



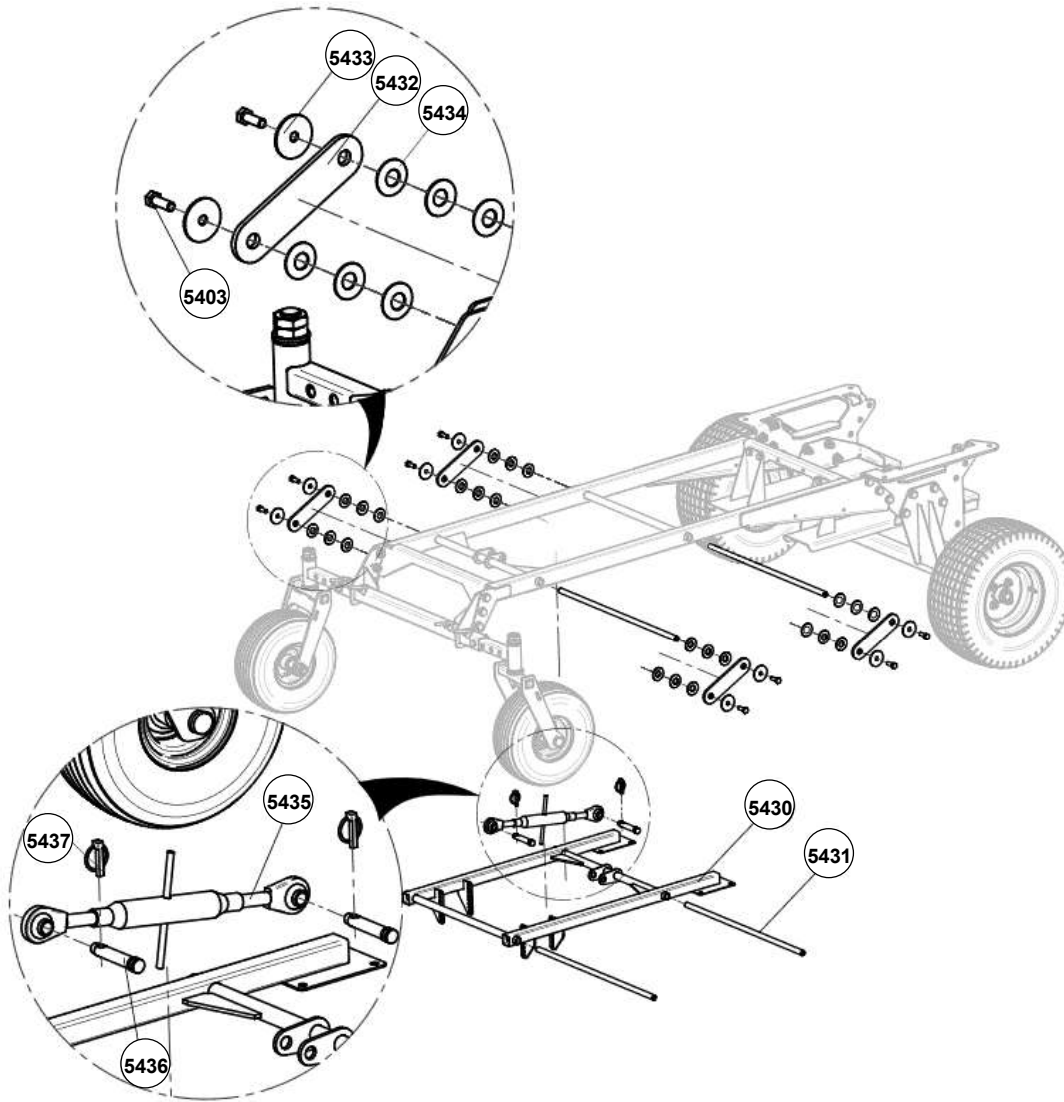
NO.	REF.	DESCRIPTION			
			5374	8M15T301	CURVED RETURN FITTING
5322	21123010	FLAT WASHER DIN125 M10 ZINC	5375	8M15T309	FLAT GASKET 1/2"- D21X33 E2,5 EPDM
5323	262230101	SELF-LOCKING NUT DIN985, M10 ZINC	5376	8M15T506	300L TANK BASE PLATE SD+
5332	262230081	SELF-LOCKING NUT DIN985, M8 (ZINC)	5377	262230121	SELF-LOCKING NUT DIN985, M12 ZINC
5360	8M15T801	300L TANK SET	5378	254231235	BOLT DIN 931 M12X35
5361	8M15T307	HINGED LID	5379	21123012	FLAT WASHER DIN125 M12 ZINC
5362	8M15T306	TANK FILTER	5380	25423820	DIN933 M8x20 ZINC
5363	8M15T330	300L TANK	5381	21123008	FLAT WASHER DIN125 M8 ZINC
5364	8M15T310	WASHBASIN TAP	5382	8M15T504	DRAIN VALVE CLAMPING PLATE
5365	20124022	CLAMP S/F Ø 12-22 ZN	5383	8M15T302	ANTI-WHIRLPOOL G1"
5366	8M15T401	HAND CLEANING HOSE	5384	8M15T303	FLAT GASKET 1" EPDM
5367	84941823	EVOLUTION LANCE	5385	8M15T304	PLASTIC NUT G1"
5368	8M15T603	CLEANING HOSE WITH PUSHFIT	5386	8M15T318	PLASTIC NUT G1" FOR STRAIGHT FITTING
5369	8M15T507	300L TANK FIXING STRAP	5387	8M15T317	STRAIGHT FITTING D15 FOR NUT G1"
5370	8M15T328	D122 THREADED CAP WITH BREATHER	5388	8M15T316	O-RING 1" EPDM
5371	8M15T331	AUXILIARY TANK 17L	5389	8M15T315	T FITTING G1 M-H-M
5372	8M15T308	MALE STRAIGHT FITTING D15-G1/2	5390	8M15T323	2 WAY VALVE G1"
5373	8M15T305	TANK LEVEL	5391	8M15T324	ELBOW FITTING G1" M



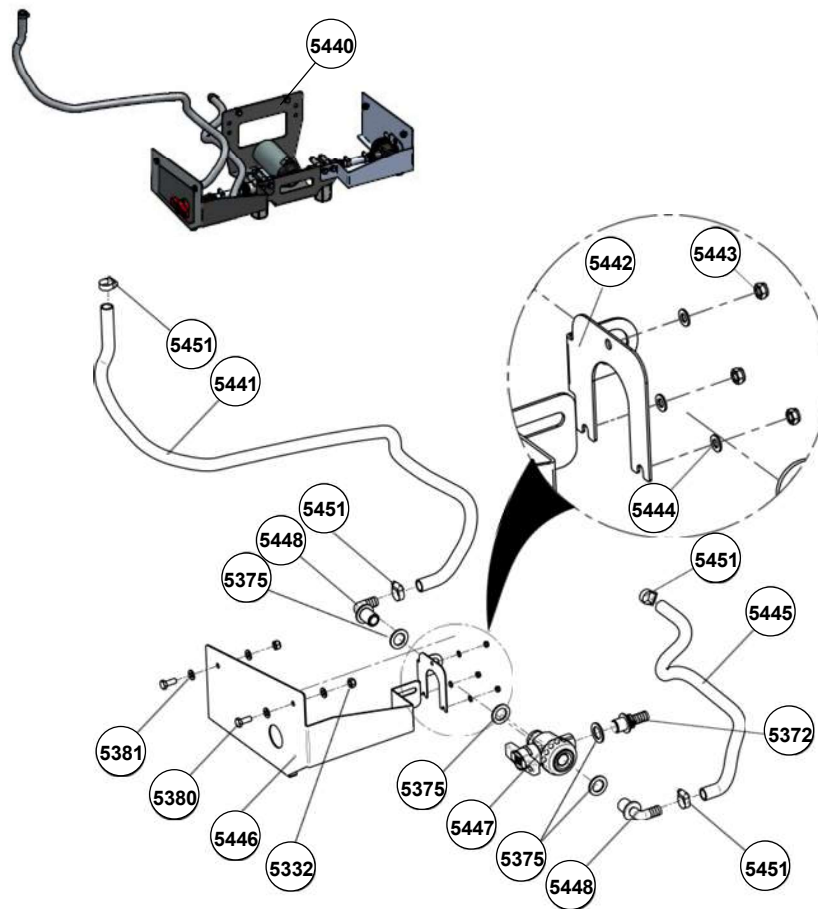
NO.	REF.	DESCRIPTION
5377	262230121	SELF-LOCKING NUT DIN985, M12 ZINC
5379	21123012	FLAT WASHER DIN125 M12 ZINC
5395	8M15B800	CENTRAL STRUCTURE ASSEMBLY, SD+
5396	8M15B508	MAIN CHASSIS, SD+
5397	21123016	FLAT WASHER DIN125 M-16 ZINC FORM A
5398	262230161	SELF LOCKING NUT DIN985, M16 ZINC
5399	25423164	BOLT DIN933 M16X40 HEX ZINC
5400	8M15B532	REAR WHEEL PIVOTING TIE ROD
5401	8M15T510	300L TANK MOUNTING PLATE TO CHASSIS, SD+, LEFT
5402	8M15T511	300L TANK MOUNTING PLATE TO CHASSIS, SD+, RIGHT
5403	25423123	BOLT DIN933 M12X35 HEX ZINC
5404	25423165	BOLT DIN933 M16x50 HEX ZINC
5405	8M15B524	FORKLIFT FORK, RIGHT
5406	8M15B523	FORKLIFT FORK, LEFT
5407	8M15B516	FRONT WHEEL AXLE BAR



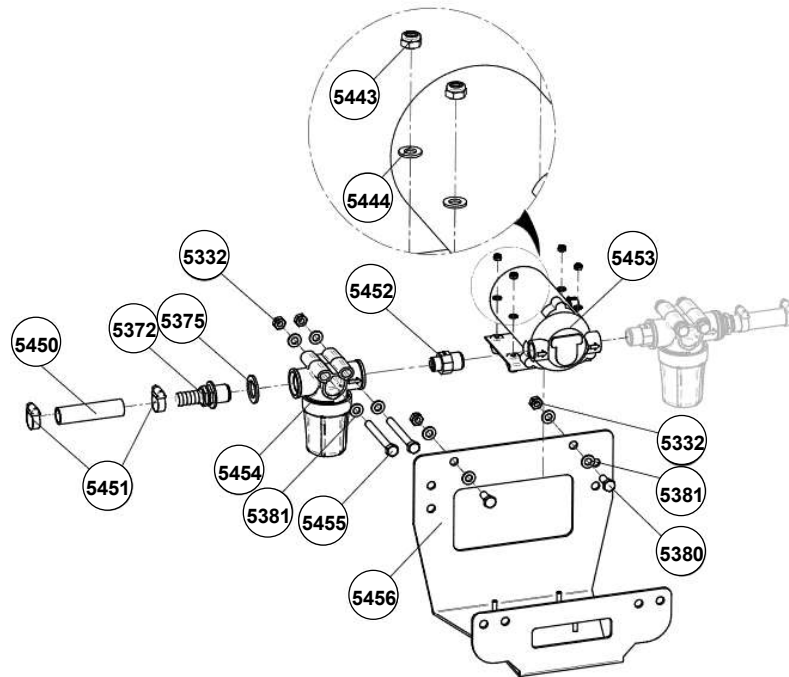
NO.	REF.	DESCRIPTION
5055	8M13A531	CLAMPING M12 TEE SCREW
5410	8M15B500	PIVOTING REAR WHEEL ARM
5411	8M15B501	PIVOTING REAR WHEEL FORK
5412	8M15B502	SPACER 33,4 X 3,38 X 47
5413	8M15B504	REAR WHEEL PIVOT AXLE, D25X200, M24
5414	8M15B303	WHEEL SET 15-600-6PR W/BEARING *25
5415	8M15B304	STEERING BEARING, ANGULAR CONTACT, 30.15 X 41 X 6.5 X 45° X 45°
5416	8M15B305	1 1/8" COMPRESSION RING
5417	262230241	SELF-LOCKING NUT DIN985, M24 ZINC
5418	21123024	FLAT WASHER DIN125 M-24 ZINC FORM A
5419	21123027	FLAT WASHER M-27 ZINC
5420	26223027	NUT DIN 936B, M27 X 2 ZINC
5421	8M15B610	SD+ PIVOTING WHEEL SET
5422	8M15B506	THIRD POINT BOLT CAT.0
5423	8M15B507	LINCH-PIN 6 X 44,5
5424	8M15B517	SEMI-AXLE 4X98 S/F40-30 P.575
5425	8M15B621	WHEEL 20,5 x 8 x 10 ATQ. SEAT 10PR



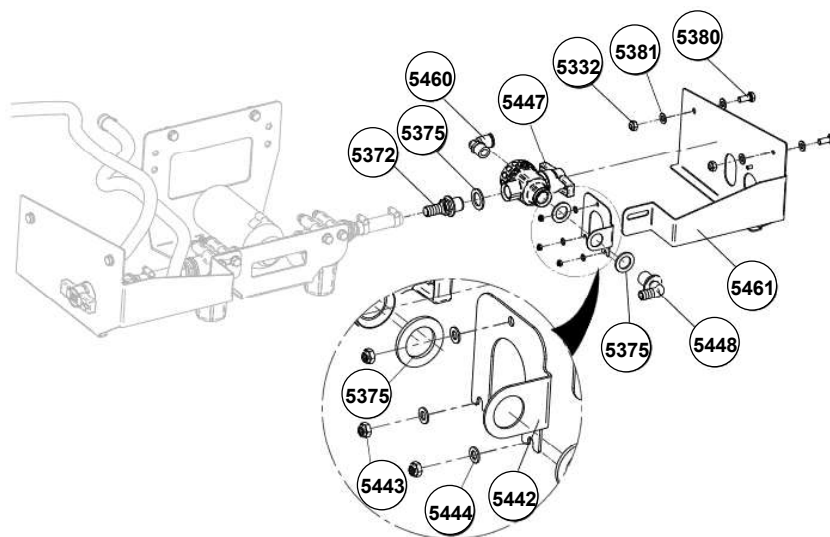
NO.	REF.	DESCRIPTION
5403	25423123	BOLT DIN933 M12X35 ZINC
5430	8M15B509	CENTER DOME SUPPORT, SD+
5431	8M15B510	HEIGHT ADJUSTMENT BAR
5432	8M15B511	PLATE FOR AXLE CONNECTION HEIGHT ADJUSTMENT
5433	8M15B512	DISC WASHER
5434	21364522	BELLEVILLE WASHER DIN2093 50X22, 4X2
5435	8M15B513	THIRD POINT CAT.1/1 410-595
5436	8M15B514	THIRD POINT BOLT CAT.1
5437	8M15B515	LINCH PIN 11X44,5



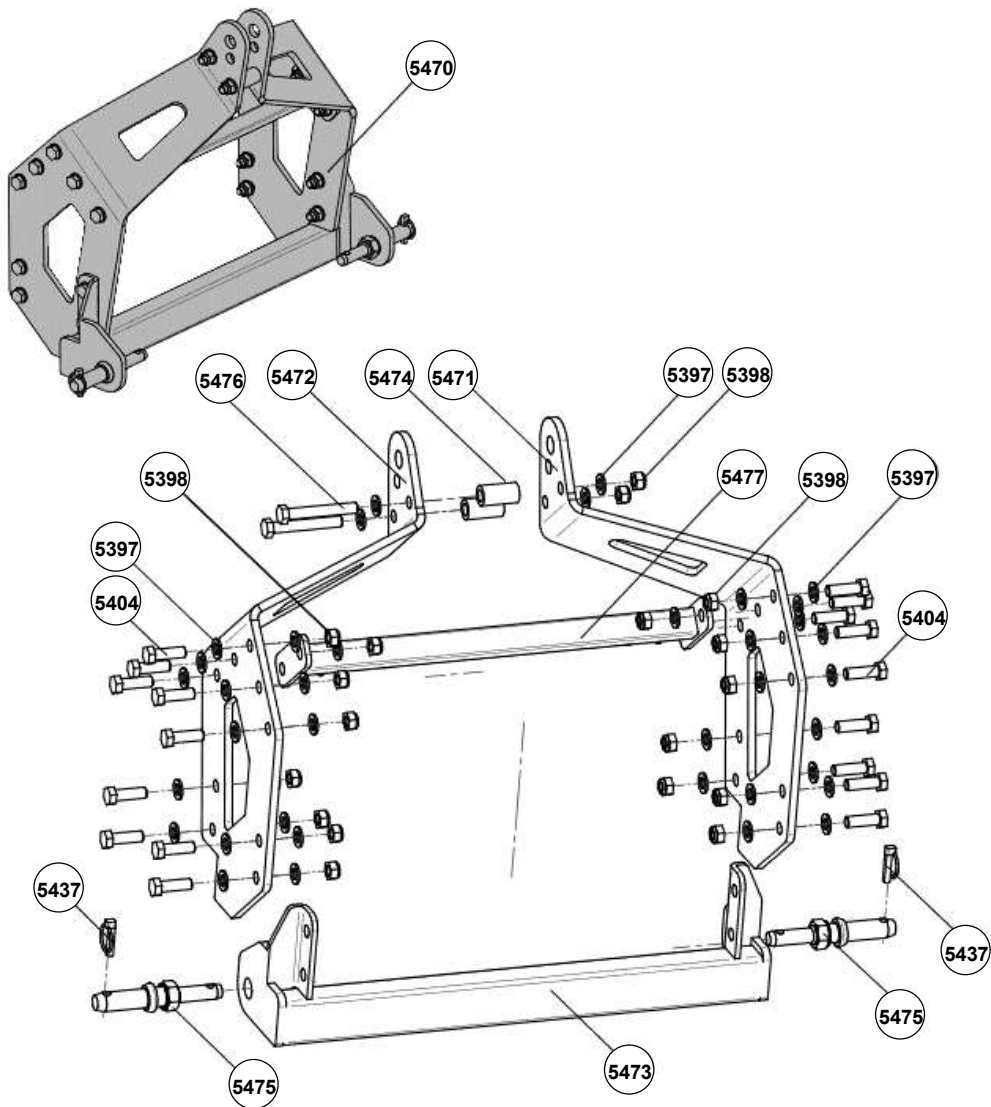
NO.	REF.	DESCRIPTION
5332	262230081	SELF-LOCKING NUT DIN985, M8 (ZINC)
5372	8M15T308	MALE STRAIGHT FITTING D15-G1/2
5375	8M15T309	FLAT GASKET 1/2"- D21X33 E2,5 EPDM
5380	25423820	BOLT DIN933 M8x20 ZINC
5381	21123008	FLAT WASHER DIN125 M8 ZINC
5440	8M15T602	PUMP SYSTEM, SD+
5441	8M15T403	HOSE 3-WAY CLEANING TANK
5442	8M15T503	3-WAY CLAMPING PLATE
5443	26223005	NUT DIN 985 M-5 ZINC
5444	21123005	FLAT WASHER DIN 125 M-5 ZINC
5445	8M15T402	HOSE 3-WAY HERBICIDE TANK
5446	8M15F501	3-WAY PLATE SD+, LEFT
5447	8M15T314	3 WAY VALVE 1/2
5448	8M15T319	ELBOW FITTING G1/2" D15 G1/2 "M



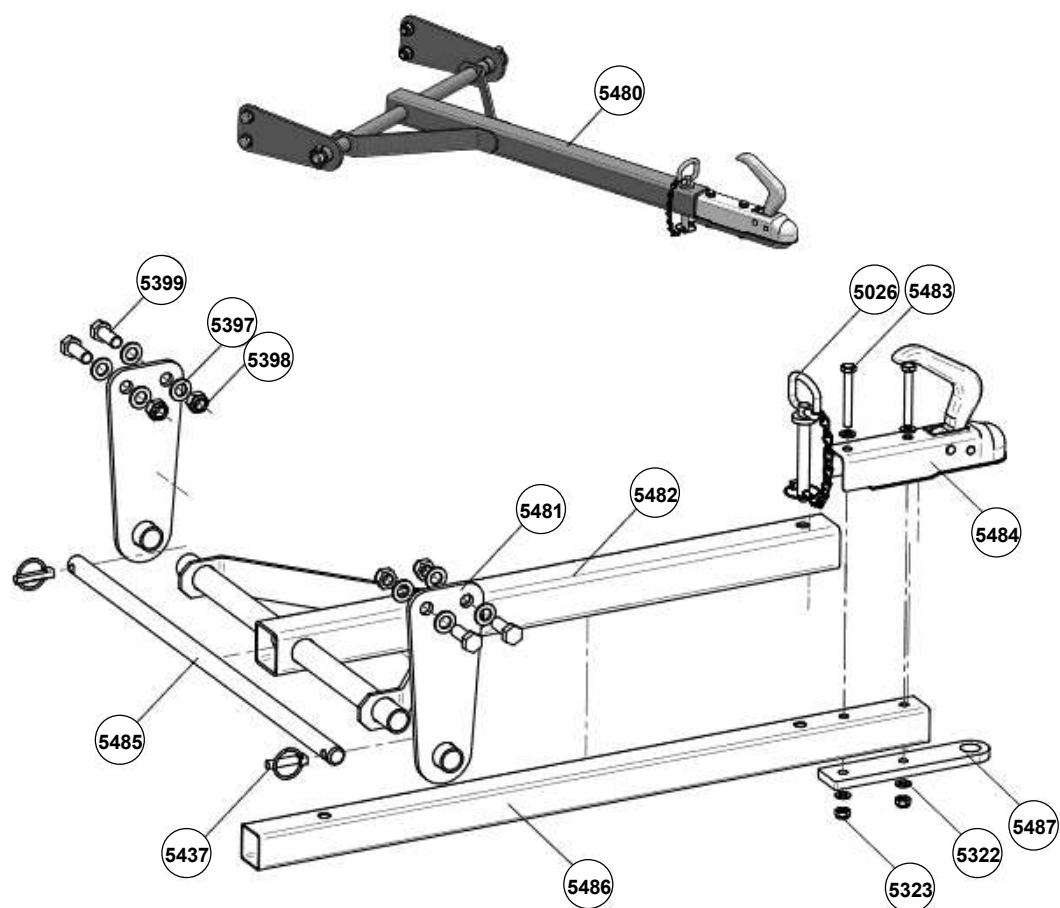
NO.	REF.	DESCRIPTION
5332	262230081	SELF-LOCKING NUT DIN985, M8 (ZINC)
5372	8M15T308	MALE STRAIGHT FITTING D15-G1/2
5375	8M15T309	FLAT GASKET 1/2"- D21X33 E2,5 EPDM
5380	25423820	BOLT DIN933 M8x20 ZINC
5381	21123008	FLAT WASHER DIN125 M8 ZINC
5443	26223005	NUT DIN 985 M-5 ZINC
5444	21123005	FLAT WASHER DIN 125 M-5 ZINC
5450	8M15T404	HOSE FILTER TO 3-WAY
5451	20124012	MIKALOR CLAMP 12-22
5452	8M15T327	UNION REDUCER M-M G3/8"-1/2"
5453	8M15T601	6.8LPM PUMP WITH CONNECTOR
5454	8M15T313	LINE FILTER H G1/2 50 MESH
5455	25423880	BOLT DIN931 M8X80 ZINC
5456	8M15F500	PUMP PLATE SD+



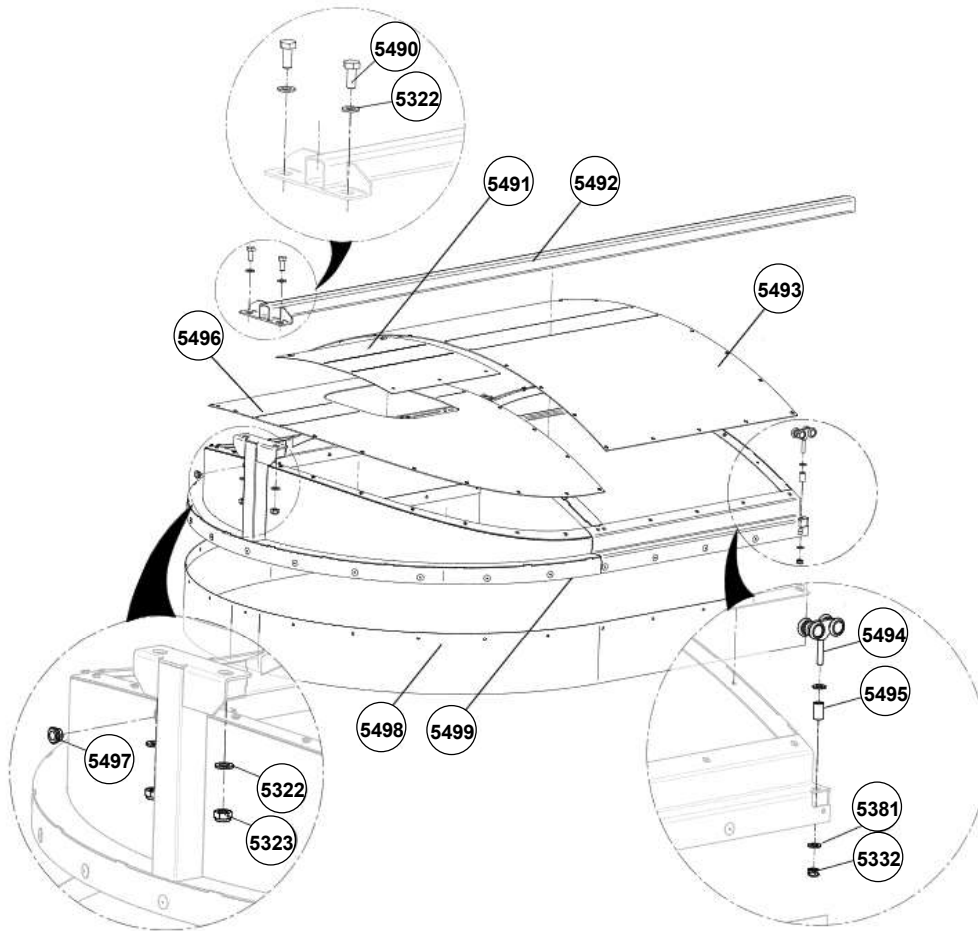
NO.	REF.	DESCRIPTION
5332	262230081	SELF-LOCKING NUT DIN985, M8 (ZINC)
5372	8M15T308	MALE STRAIGHT FITTING D15-G1/2
5375	8M15T309	FLAT GASKET 1/2"- D21X33 E2,5 EPDM
5380	25423820	BOLT DIN933 M8x20 ZINC
5381	21123008	FLAT WASHER DIN125 M8 ZINC
5442	8M15T503	3-WAY CLAMPING PLATE
5443	26223005	NUT DIN 985 M-5 ZINC
5444	21123005	FLAT WASHER DIN 125 M-5 ZINC
5447	8M15T314	3 WAY VALVE 1/2
5448	8M15T319	ELBOW FITTING G1/2" D15 G1/2 "M
5460	8M15T326	ELBOW FITTING D12 M1/2
5461	8M15F502	3-WAY PLATE SD+, RIGHT



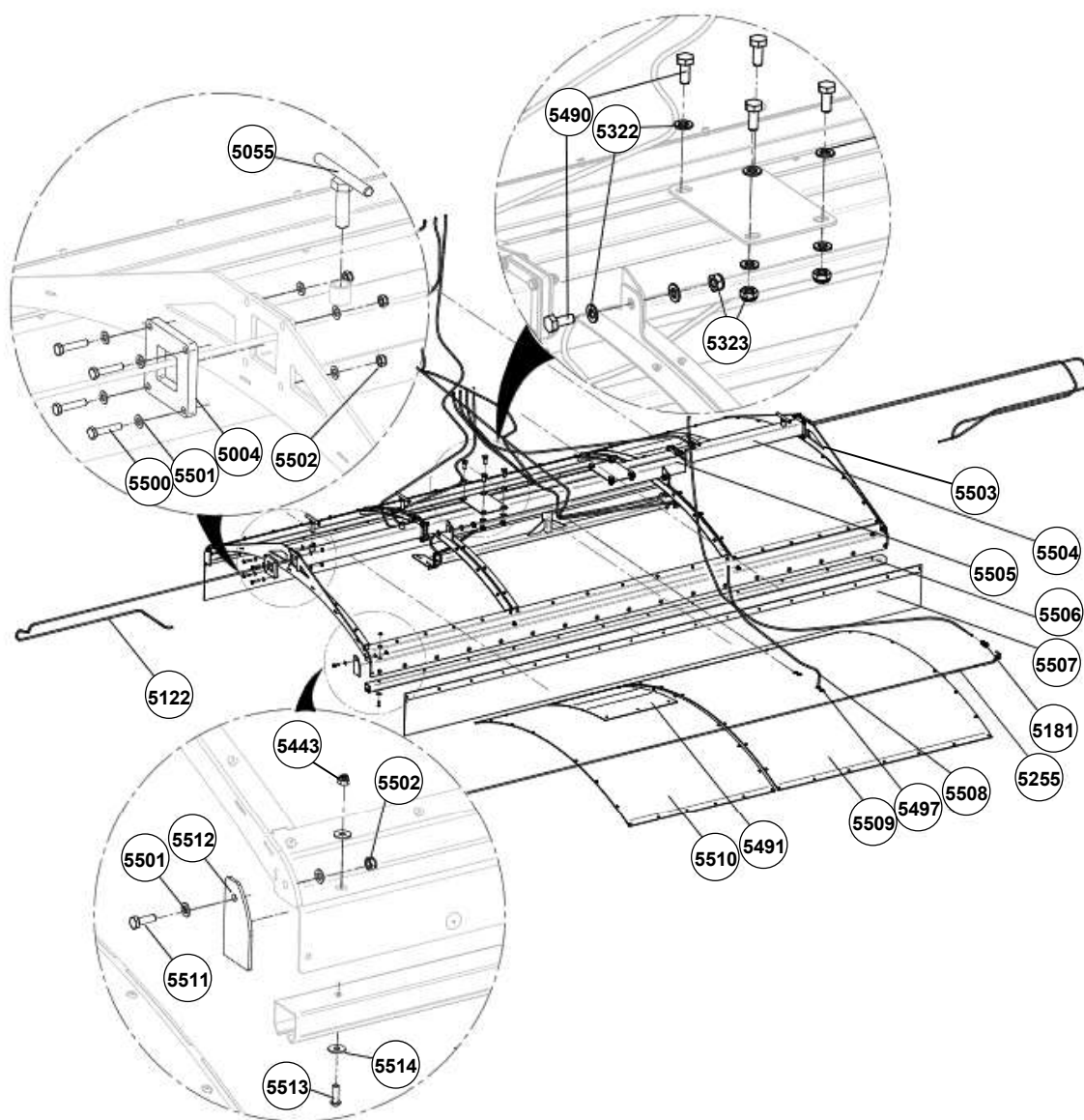
NO.	REF.	DESCRIPTION
5397	21123016	FLAT WASHER DIN125 M16 ZINC
5398	262230161	SELF-LOCKING NUT DIN985, M16 ZINC
5404	25423165	BOLT DIN933 M16x50 HEX ZINC
5437	8M15B515	LINCH PIN 11X44,5
5470	8M15B820	3-POINT LINKAGE ASSEMBLY, SD+
5471	8M15B526	3-POINT SUPPORT, LEFT
5472	8M15B527	3-POINT SUPPORT, RIGHT
5473	8M15B528	3-POINT BAR
5474	8M15B529	3-POINT SPACER
5475	8M15B530	DOUBLE PIN CAT.1/2
5476	25423161	BOLT DIN931 M16x110 ZINC
5477	8M15B534	3-POINT TIE ROD



NO.	REF.	DESCRIPTION
5026	8M13A332	HITCH PIN DIA. 16 WITH PIN CENTRE AXLE
5322	21123010	FLAT WASHER DIN125 M10 ZINC
5323	262230101	SELF-LOCKING NUT DIN985, M10 ZINC
5399	25423164	BOLT DIN933 M16X40 HEX ZINC
5397	21123016	FLAT WASHER DIN125 M16 ZINC FORM A
5398	262230161	SELF-LOCKING NUT DIN985, M16 ZINC
5437	8M15B515	LINCH PIN 11X44,5
5480	8M15B810	TOW BAR ASSEMBLY, SD+
5481	8M15B533	TOW BAR AXLE PLATE, SD+
5482	8M15B521	TOW BAR STRUCTURE, SD+
5483	25423108	BOLT DIN 931 M10X80 HEX ZINC
5484	8M15B522	BALL COUPLING HEAD 750KG
5485	8M15B519	TOW BAR, SD+
5486	8M15B531	BALL HITCH BAR
5487	8M15B520	TOW BAR PLATE SD+

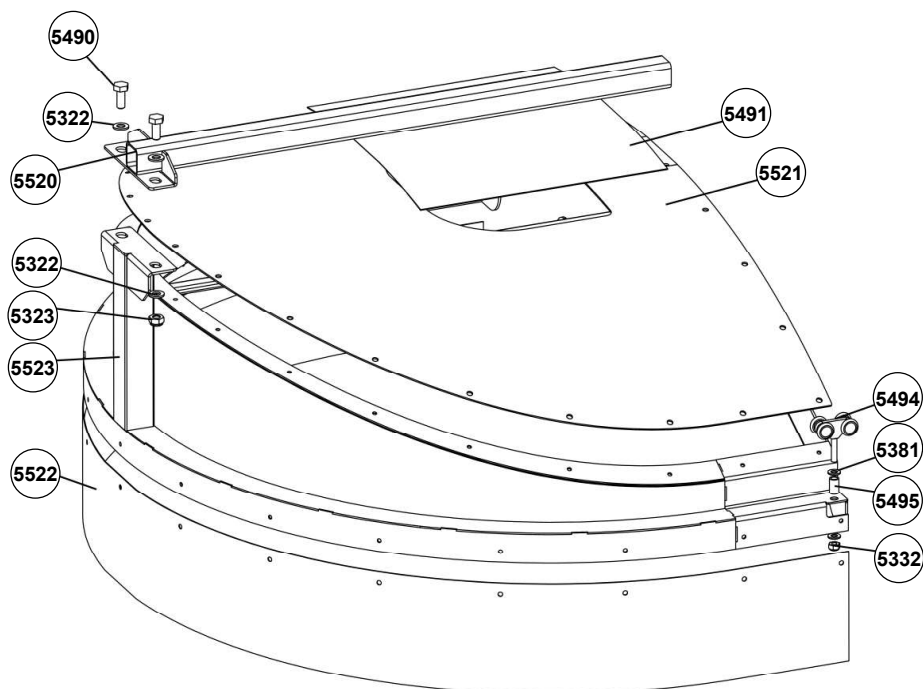


NO.	REF.	DESCRIPTION
5322	21123010	FLAT WASHER DIN125 M10 ZINC
5323	262230101	SELF-LOCKING NUT DIN985, M10 ZINC
5332	262230081	SELF-LOCKING NUT DIN985, M8 (ZINC)
5381	21123008	FLAT WASHER DIN125 M8 ZINC
5490	254231025	BOLT DIN 933 M10x25 ZINC
5491	8M15D480308	ACCESS COVER CF
5492	8M15D480505	EXTENSIBLE BAR CF 3049
5493	8M15D480306	CF SIDE PLASTIC SHEET
5494	8M15D480303	ROLLAPAR E60 DOUBLE U-30 NYLON (cod.459N)
5495	8M15D480300	ROLLAPAR SPACER 12x8,2x20mm
5496	8M15D480307	CF CURVED SIDE PLASTIC SHEET
5497	8M15D480301	CABLE GLAND Di=10mm
5498	8M15D480310	SIDE SKIRT CF 3049
5499	8M15D480501	SIDE STRUCTURE CF 3049

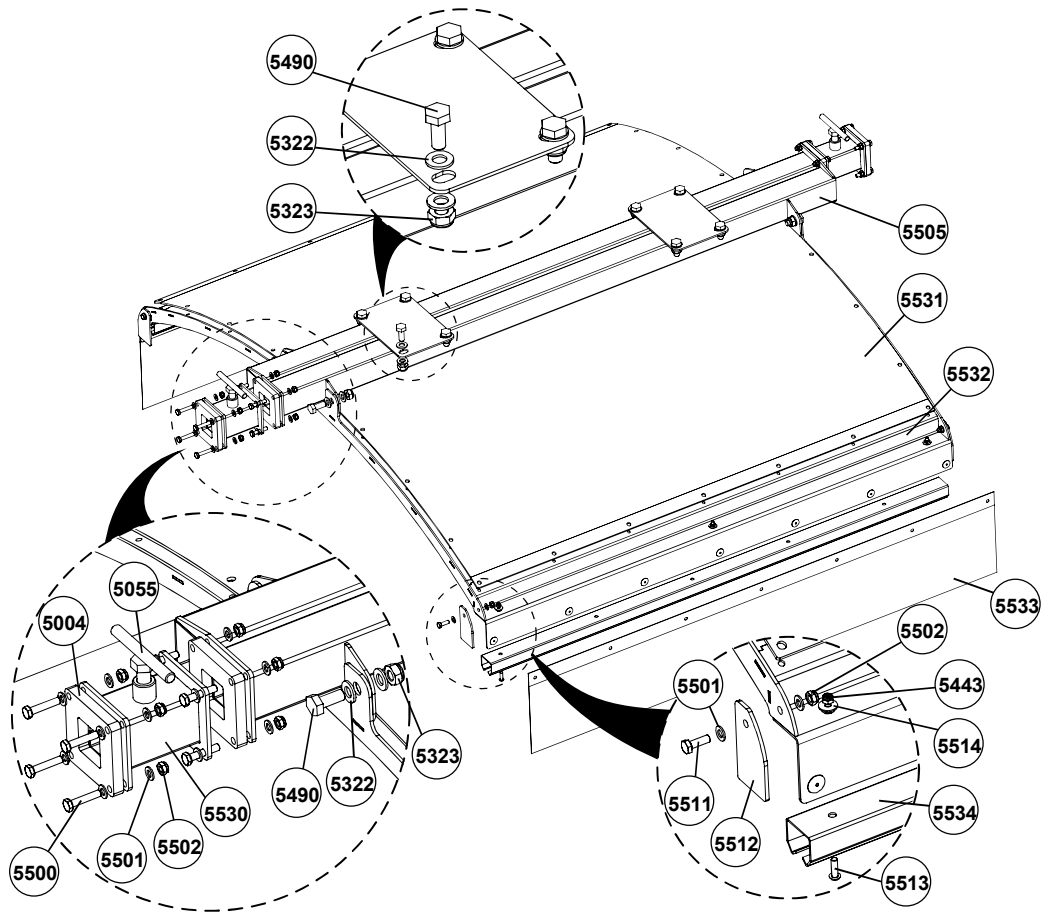


NO.	REF.	DESCRIPTION
5004	8M13H324	H-FRAME, FIXED SUPPORT VERTICAL GUIDE
5055	8M13A531	CLAMPING M12 TEE SCREW
5122	8M15E302	CABLE EV/DISCO SD+
5181	8M13F305	PUSH-FIT STRAIGHT O606
5255	8M13F602	FLOWMETER-ARM HOSE
5322	21123010	FLAT WASHER DIN125 M10 ZINC
5323	262230101	SELF-LOCKING NUT DIN985, M10 ZINC
5443	26223005	SELF LOCKING NUT DIN985 M5 ZINC
5490	254231025	BOLT DIN 933 M10x25 ZINC
5491	8M15D480308	ACCESS COVER CF
5497	8M15D480301	CABLE GLAND Di=10mm

5500	25423630	BOLT DIN931 M6x30 ZINC
5501	21123006	FLAT WASHER M-6
5502	262230061	SELF LOCKING NUT DIN985 M6 ZINC
5503	8M15D480500	CENTER FRAME CF 3049
5504	8M15D480503	CLAMPING PART TIP CF 3049
5505	8M15D480502	FASTENING PART CF 3049
5506	8M15D480400	RAIL PROFILE SD+ 3049
5507	8M15D480309	CENTER SKIRT CF 3049
5508	8M14E302	EV/DISCO SD+ CABLE (3,5m)
5509	8M15D480304	CF CENTRAL PLASTIC SHEET
5510	8M15D480305	CF CENTRAL PLASTIC SIDE SHEET
5511	25423618	BOLT DIN933 M6x18 ZINC
5512	8M15D480504	STOP PLATE CF
5513	25908516	BOLT DIN 7380 M5x16 INOX
5514	211080051	FLAT WASHER DIN 9021, M5 WIDE FLANGE S/S



NO.	REF.	DESCRIPTION
5322	21123010	FLAT WASHER DIN125 M10 ZINC
5323	262230101	SELF LOCKING NUT DIN985, M10 ZINC
5332	262230081	SELF-LOCKING NUT DIN985, M8 (ZINC)
5381	21123008	FLAT WASHER DIN125 M8 ZINC
5490	254231025	BOLT DIN 933 M10x25 ZINC
5491	8M15D480308	ACCESS COVER CF
5494	8M15D480303	ROLLAPAR E60 DOUBLE U-30 NYLON
5495	8M15D480300	ROLLAPAR SPACER 12x8,2x20mm
5497	8M15D480301	CABLE GLAND Di=10mm
5520	8M14D240505	EXTENSIBLE BAR CF 1524
5521	8M14D240300	SIDE SHEET CF1524
5522	8M14D240301	SIDE SKIRT CF 1524
5523	8M14D240501	SIDE FRAME CF 1524



NO.	REF.	DESCRIPTION
5004	8M13H324	H-FRAME, FIXED SUPPORT VERTICAL GUIDE
5055	8M13A531	CLAMPING M12 TEE SCREW
5122	8M15E302	EV/DISCO SD+ CABLE (7m)
5181	8M13F305	PUSH-FIT STRAIGHT 0606
5255	8M13F602	FLOWMETER-ARM HOSE
5322	21123010	FLAT WASHER DIN125 M10 ZINC
5323	262230101	SELF-LOCKING NUT DIN985, M10 ZINC
5443	26223005	SELF LOCKING NUT DIN985 M5 ZINC
5490	254231025	BOLT DIN 933 M10x25 ZINC
5500	25423630	BOLT DIN931 M6x30 ZINC
5501	21123006	FLAT WASHER M-6 BICHROME PLATED
5502	262230061	SELF LOCKING NUT DIN985 M6 ZINC
5505	8M15D480502	FASTENING PART CF
5508	8M14E302	EV/DISCO SD+ CABLE (3,5m)
5511	25423618	BOLT DIN933 M6x18 ZINC

5512	8M15D480504	STOP PLATE CF
5513	25908516	BOLT DIN 7380 M5x16 INOX
5514	211080051	FLAT WASHER DIN 9021, M5 WIDE FLANGE S/S
5530	8M14D240503	CLAMPING PART TIP CF 1524
5531	8M14D240302	CENTER PLASTIC SHEET CF1524
5532	8M14D240500	CENTER FRAME CF1524
5533	8M14D240309	CENTER SKIRT CF1524
5534	8M14D240400	RAIL PROFILE CF1524

Vehicle stability calculations

The user must take the necessary measures to determine the correct centre of gravity for the equipment configuration and the loads to be used. The following calculation is given for information purposes for installations mounted on agricultural tractors. For all other vehicle types, please refer to the vehicle manufacturer's instructions.

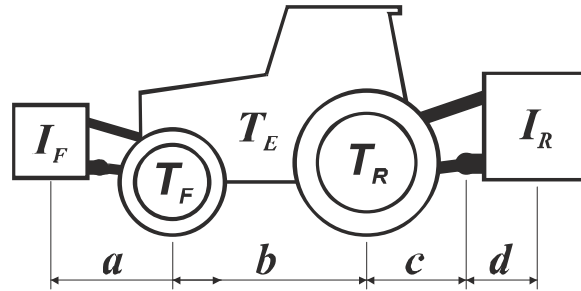


Figure 1 Stability of tractor-machine combinations

$$IF, \text{ min} = \frac{(I_R \times (c + d)) - (T_F \times b) + (0.2 \times T_E \times b)}{a + b}$$

T_E [kg] Mass of unladen tractor ¹

T_F [kg] Tractor front axle load unloaded ¹

T_R [kg] Tractor rear axle load, unladen ¹

I_R [kg] Combined mass of rear ballast and/or rear-mounted implement ²

I_F [kg] Combined mass of front ballast and/or front-mounted implement ²

a [m] Distance from the centre of gravity for the combination of front ballast and/or front mounted front implement to the centre of the front axle. ³

b [m] Tractor wheelbase ¹³

c [m] Distance from the centre of the rear axle to the centre of the lower joint balls ¹³

d [m] Distance from the centre of the lower hinge balls to the centre of gravity for rear ballast and/or rear-mounted implement combination ²³

¹ consult manufacturers' information

² see technical specifications section

³ should be measured

Conversion factors

1 yard	= 3 feet	= 0.91 metres
1 metre	= 39.37 inches	= 1.09 yards
1 statutory mile	= 0.87 nautical miles	= 1.61 kilometres
1 nautical mile	= 1.15 statute miles	= 1.85 kilometres
1 kilometre	= 0.62 statute miles	= 0.54 nautical miles
1 statutory mile	= 1760 yards	= 5280 feet
1 nautical mile	= 2027 yards	= 6081 feet
1 kilometre	= 1094 yards	= 3282 feet
1 metre/second	= 2237 miles per hour	= 196.9 ft/min
1 acre	= 43 560 sq. ft.	= 4840 square yards
1 acre	= 4047 square metres	= 0.40 hectares
1 hectare	= 107 600 sq. ft.	= 11 955 square yards
1 hectare	= 10 000 square metres	= 2.47 acres
1 square mile	= 640 acres	= 259 hectares
1 square kilometre	= 247 acres	= 100 hectares
1 US gallon	= 0.83 imperial gallons	= 3.78 litres
1 imperial gallon	= 1.20 US gallons	= 4.54 litres
1 litre	= 0.26 US gallon	= 0.22 imperial gallons
1 pint US	= 16 fluid ounces US	= 0.47 litres
1 imperial pint	= 20 imperial fluid ounces	= 0.57 litres
1 US gallon / acre	= 8 pints US / acre	= 9.45 litres / hectare
1 imperial gallon / acre	= 8 imperial pints / acre	= 11.35 litres / hectare 0.081 imperial gallon / acre
1 litre / hectare	= 0.11 US gallon / acre	= acre
1 pound	= 16 oz	= 0.45 kilograms
1 kilogram	= 2.20 pounds	= 35.3 oz
1 ounce	= 28.35 grams	
1 pound / square inch	= 0,068 atmospheres 14.70 pounds / square	= 0,067 bar
1 atmosphere	= inch 14.50 pounds / square	= 1.01 bar
1 bar	= inch	= 0.98 atmospheres
1 kilopascal	= 0,01 bar	= 0.145 lb / sq. in.

DECLARATION OF CONFORMITY

COMPANY: GOIZPER S.COOP.

ADDRESS: ANTIGUA 4, 20577 ANTZUOLA, GIPUZKOA (SPAIN)

CIF: F-20025441

STATES THAT THE FOLLOWING PRODUCT:

S-DOME +

BRAND: MICRON WEED MANAGEMENT

MODEL: S-DOME+1524, S-DOME+ 3049

It complies with the following directives and standards:

Directives:

- Machinery 2006/42/EC
- Machinery for pesticide application 2009/127/EC
- Sustainable use of pesticides 2009/128/EC
- Electromagnetic compatibility 2014/30/EU
- Radio equipment 2014/53/EU
- Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) 2017/2102/EC

Standards:

- Agricultural machinery UNE-EN ISO 4254:2013
- Environmental requirements for atomisers UNE-EN ISO 16119:2013

Antzuola, 22-10-2019

Oier Bartolomé

(Business Manager MWM)

The electronics include a **Bluetooth® module** for connection to mobile phones and sending machine data to the cloud.

Regulatory information FCC

Goizper S. Coop. does not authorise the user to make any changes or modifications to this device. Any change or modification may void the user's authorisation to use this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Safety from radio frequency exposure

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and the FCC Radio Frequency (RF) Exposure Statement. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

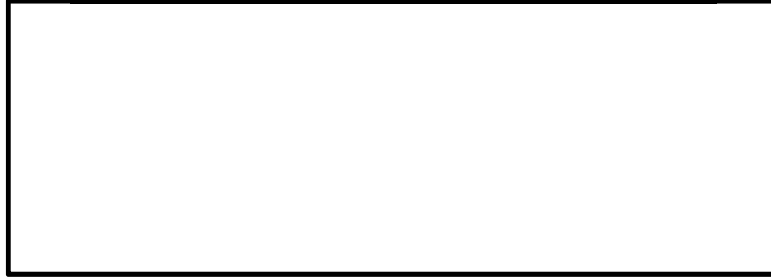
This device must be installed and used at a distance of more than 5 mm from the human body.

Class B device notice

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with these instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Ask the dealer or an experienced radio/TV technician for help.

DISTRIBUTED BY / DISTRIBUÉ PAR / DISTRIBUÉ PAR



Micron Sprayers Ltd.

Bromyard Industrial Estate

Bromyard, Herefordshire

HR7 4HS - U.K.

T: +44 (0)1885 482397

enquiries@micron.co.uk

www.microngroup.com



Goizper S.Coop.

C/ Antigua, 4 - 20577 Antzuola

(Gipuzkoa) Spain

T: +34 943 786 000

micron@goizper.com

www.micronweedmanagement.com

