



Sprayers • Spares • Treatments

Greenkeeper Sprayer

Handbook & Operating Instructions

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CONTENTS OF THE PACKING CASE

1 x Sprayer body complete
1 x Top handle
1 x Spray Boom Assembly Complete
2 x Swath marker wheel assemblies
1 x Bag containing:
(a) Handle nuts, bolts and washers
(b) 2 x cable ties for hose securing.
1 x Instruction Manual and Guarantee card

ASSEMBLY INSTRUCTIONS

The **GREENKEEPER sprayer** has been factory tested prior to packing and only requires the boom and handle assemblies to be fitted, using nuts, bolts and washers supplied in fixing bag.

Take the boom assembly complete and attach to the main frame using M6 nuts, bolts and washers from the fixing bag. When this has been completed take the black nylon wing nut and fit onto the boom inlet.

Take handle section and fit into place at the required height, using M6 x 40mm bolts, M6 wing nuts and washers from fixing bag. The tubes attached to the ball valve assembly on the handle should run along the inside of the handle. For tidiness, secure the tubes to the handle using the cable ties supplied.

TESTING

A trial run should be carried out on a dry concrete surface to check that the nozzles are in alignment. This should be carried out using clean water to ensure everything is in working order.

Half fill the container with cold water, turn the ON-OFF tap into the ON position and move off at a steady walking pace similar to mowing, to maintain an indicated pressure of around 1 bar on the gauge. This will prime the pump mechanism and water will spray from the nozzles, showing that all the air has been bled from the system.

If an airlock remains in the system, unscrew one of the three diaphragm check valve caps and push the machine until water flows through the system. Tighten the cap and the machine will start to spray. DO NOT over tighten diaphragm caps.

OPERATING INSTRUCTIONS

When filling the machine add sufficient liquid treatment to cover the area needing

treatment or a pro-rata amount for a smaller area. PAY CAREFUL ATTENTION to which colour nozzle is fitted at the time of spraying to avoid any over or under application of the treatment. Always follow the manufacturer's instructions relating to the specific area. In many instances dilution rates of treatments are not critical, but in some cases where a greater volume of water is needed, then two half strength applications are recommended, spraying where possible in a chequer board fashion in North to South and East to West directions.

SPRAY WIDTH AND COVERAGE

The **GREENKEEPER** sprayer has a spray width of 36 inches (914 mm) which is wider than the track of the machine. The overlap must be taken into consideration on the return swath. Swath marker wheels are included with the machine as standard.

They lightly scuff the grass at the outer limit of the spray path, allowing exact marking of the treated area. In common with all Walkover sprayers, the spray pattern tails off on the extreme edge of the treated swath which is compensated for when treating the return track by slightly overlapping spray paths.

The Greenkeeper is fitted with one set of nozzles: either-

(a) Blue AN DT 1.5,

One full tank covers 670 sq. metres (800 sq. yards)
equivalent to 370.4 litres/hectare (33 gallons/acre)
Or-

(b) Red AN DT 2.0

One full tank covers 500 sq. metres (600 sq. yards)
equivalent to 494 litres/hectare (44 gallons/acre)

The tank is marked to give approximate coverage for partial filling.

N.B The coverage areas for each nozzle may vary plus or minus 5% depending on the speed of operation and variations of the terrain.

ALWAYS KEEP ALL FOUR WHEELS ON THE GROUND WHEN SPRAYING.

NOZZLE ASSEMBLY

The diaphragm control valve unit is fitted with a quick fit nozzle cap. It is important to keep the nozzle outlet parallel to the ground. Necessary adjustments to the

nozzle alignment can be made using a pliers across the nozzle flats. If the nozzle drips or the spray pattern is distorted, this may be caused by a minute blockage in the diaphragm valve or nozzle filter. To remove the nozzle tip, rotate the cap a half turn anticlockwise, when viewing from the front. Always ensure the nozzle seal is in place on reassembling. Treat all components with care as they are precision made to give a long and accurate working life.

PUMP REMOVAL

Should the pump at any stage during the machine's working life cause trouble it can easily be removed and returned to Walkover Sprayers Ltd. for repair or replacement. Work on the inside of the pump can only be carried out by the manufacturer and No attempt should be made to dismantle this unit otherwise the guarantee becomes invalid. To remove the pump, tip the machine backwards onto the handle to allow easy access. Remove the circlip (spring clip) on the right of the pump which holds the axle and wheel assembly in position. This frees the axle from the pump. Remove the stainless steel elbow retaining spring clip and then each of the pipe elbows from the pump. These elbows are a push fit and are detached by pulling at a slight angle. Unscrew the retaining nuts thus allowing complete removal of the pump. To reassemble the unit, reverse the foregoing operation ensuring that the nuts are not over tightened.

CLEANING AND STORAGE

ALWAYS THOROUGHLY CLEAN THE SPRAYER AFTER USE.

Flush through the whole system with clean water using a generous amount of mild household detergent. **It is very important not to allow chemicals to dry out in the pump mechanism which could granulate, solidify and score the interior surfaces or sieze.** This could impair the performance of your machine. A drain tap is mounted in the bottom of the tank for easy drainage.

GREAT CARE SHOULD BE TAKEN TO THOROUGHLY CLEAN THE SPRAY BOOM ASSEMBLY OF ALL CHEMICAL MATERIALS.

The boom could hold chemical from the last usage and cause a problem next used. To clean the boom thoroughly remove the two end diaphragm caps and flush through with a garden hose.

When temperatures around freezing are likely to be experienced ensure that all the liquid has been drained from the machine by removing the hose from the pump. This elbow is a snap fit and pulls out quite easily at a slight angle. Rotate the drive wheel to empty the pump and pipe work and reconnect the pipe into the pump. A small amount of car anti-freeze introduced into the pipe and pump system will give excellent protection.

DO NOT empty chemicals in areas where contamination may occur.

FILTRATION

A basket filter is located under the filler cap and should remain in position at all times, except when removing for cleaning. An in-line bowl filter between the tank and pump gives further protection to the pump and nozzles. Periodically this should be cleaned by removing the bowl and washing the small stainless steel element inside. An isolating tap between the bowl filter and the tank allows removal of the bowl when the tank is loaded, thus no wastage of chemical can occur if a blockage needs clearing whilst the sprayer is in use. It is useful when cleaning the sprayer to remove the filter bowl and element and flush the tank through with clean water without pushing any sediment into the pipeline feeding the pump.

ALWAYS OPERATE THE GREENKEEPER MACHINE WITH FILTERS IN PLACE.

TYRE PRESSURES

The tyre pressure for all four wheels should be maintained at between 20 to 25 p.s.i.

DO NOT inflate over 25 p.s.i.

NEVER

1. Add concentrated active ingredients to an empty tank, this will result in pure product entering the delivery pump and pipe lines.
2. Leave the sprayer in winter storage with liquid in the tank or pipe work. Severe frost could distort the pump and burst the pipes.

ALWAYS

Ensure the container is half full of clean cold water at the outset of your spraying operation and the pump primed before adding concentrated chemical.

In the case of highly viscous concentrates and soluble powders, pre-dilute the product to be applied in a watering can or bucket

with sufficient water to ensure it is completely dissolved.
Half fill the tank with clean cold water. Add the required amount of product and top up to the 25 litre (5.5 gallon) level with water and replace the cap. Rock the unit backwards and forwards a few times to ensure satisfactory mixing and then commence spraying, maintaining a steady pace. If a smaller area is to be treated fill the tank to the appropriate level.

The **GREENKEEPER** sprayer stops spraying immediately it ceases to travel forward. To move the sprayer in a full condition (from one area to another) without spraying, turn the ON-OFF tap to the OFF position. In this position the liquid in the container is recycled through the pipe work system back into the tank.

PRECAUTIONS

The pump mechanism is set by the manufacturer. Any tampering with the pump setting may change the performance of your machine and will render your Guarantee void.

Some of the chemicals which can be applied by this machine onto grass areas and driveways require special precautions for use. Protective clothing including boots, gloves and masks may be necessary and therefore individual manufacturer's recommendations for the particular chemical MUST be closely adhered to.

Walkover Sprayers disclaim any responsibility for misuse of any proprietary brand of chemical applied by a machine of their manufacture. All reasonable care is taken to ensure correct dosage application of known chemical formulations but Walkover do not guarantee either their efficiency or accept any responsibility for damage resulting from user's mistakes in assessing dilution rates.

Experience has shown that combined mixes of chemicals, i.e. fungicides and weed killers, can sometimes interact, resulting in the formation of gelatinous substance which can crystallise if left in the machine after use. This solidifies within the pump and nozzles and can in extreme instances completely destroy the pump mechanism.

Many proprietary brands of garden and horticultural chemical are sold in the form of Soluble powder or Crystals.

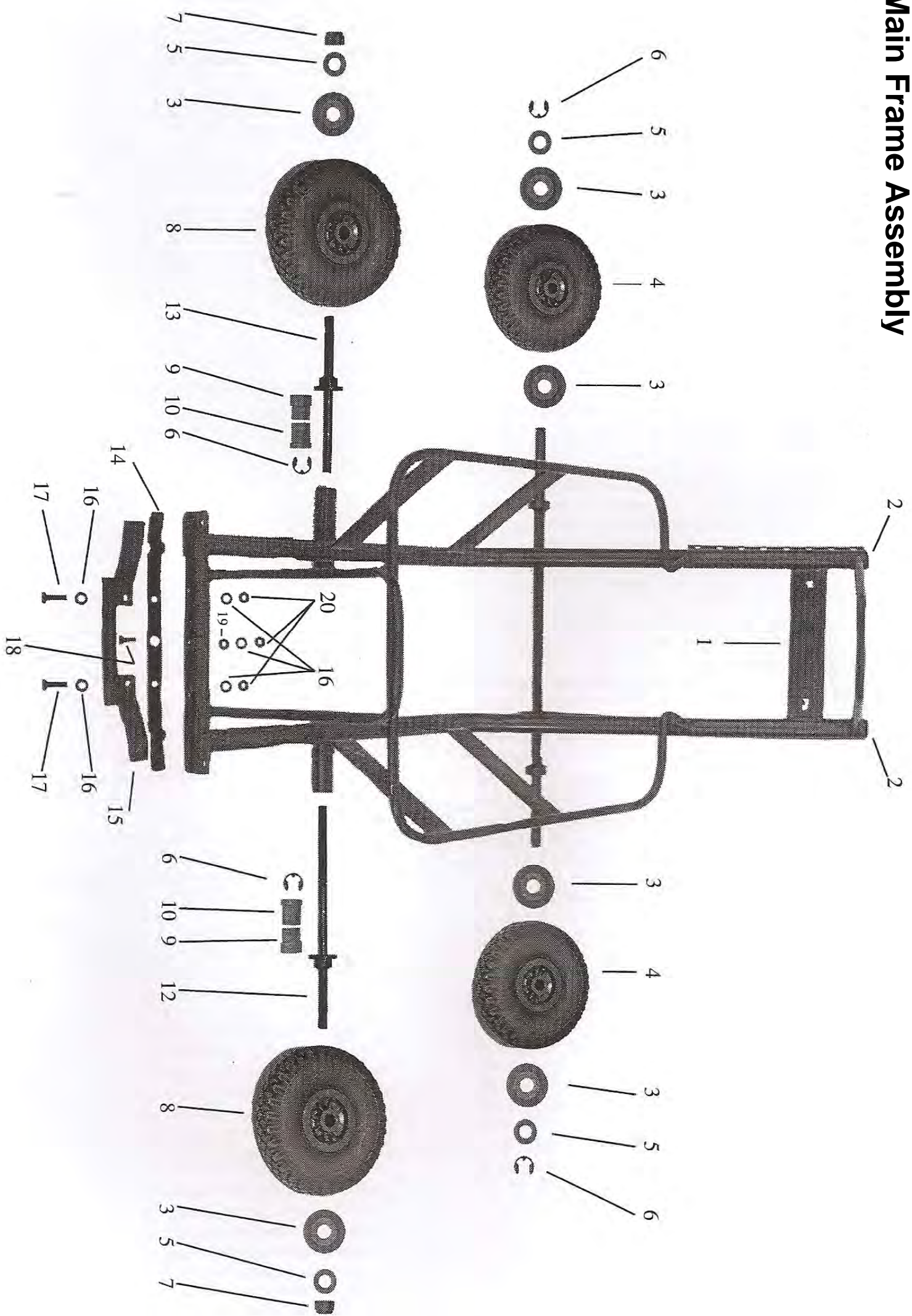
The **GREENKEEPER** sprayer will satisfactorily apply these chemicals always providing that the crystals or powder are pre-mixed before adding to the reservoir tank and assuming that the chemical in question is **entirely soluble**.

NEVER leave a soluble powder or a crystal solution, or even an organic product, to stand in the machine for any period of time as sediment may form in the system and the concentration being applied may be too strong and cause scorching. It may also find its way into the pump mechanism causing damage.

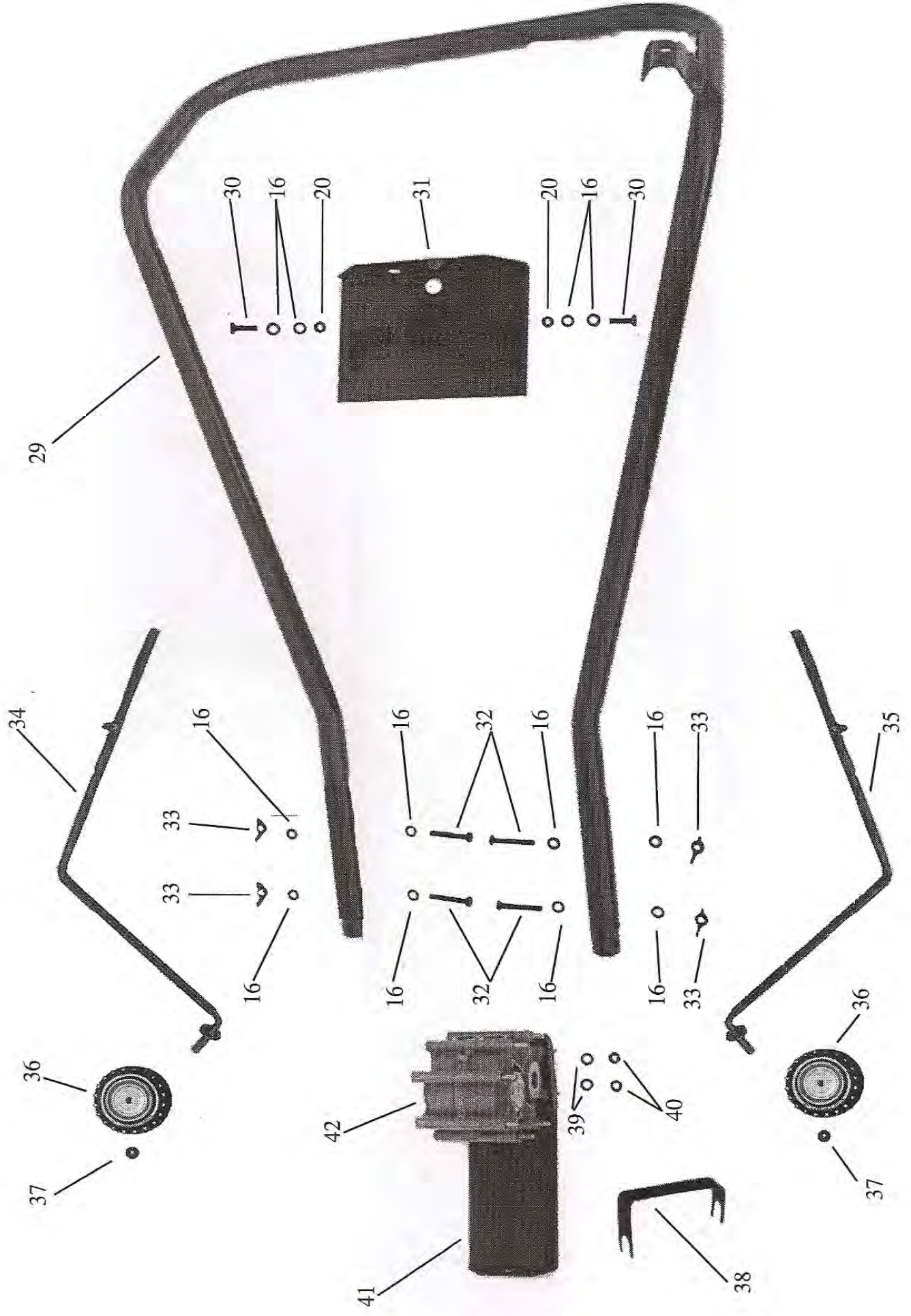
DO NOT mix proprietary brands of chemicals unless assured of their compatibility.

Please Note. Powder or crystalline treatments which require diluting & mixing (not liquid concentrates) such as sulphate of iron should be used with caution. Treatments that have not been thoroughly mixed or that have been allowed to settle can potentially damage your sprayer because such materials are abrasive. Please exercise care & vigilance

Main Frame Assembly

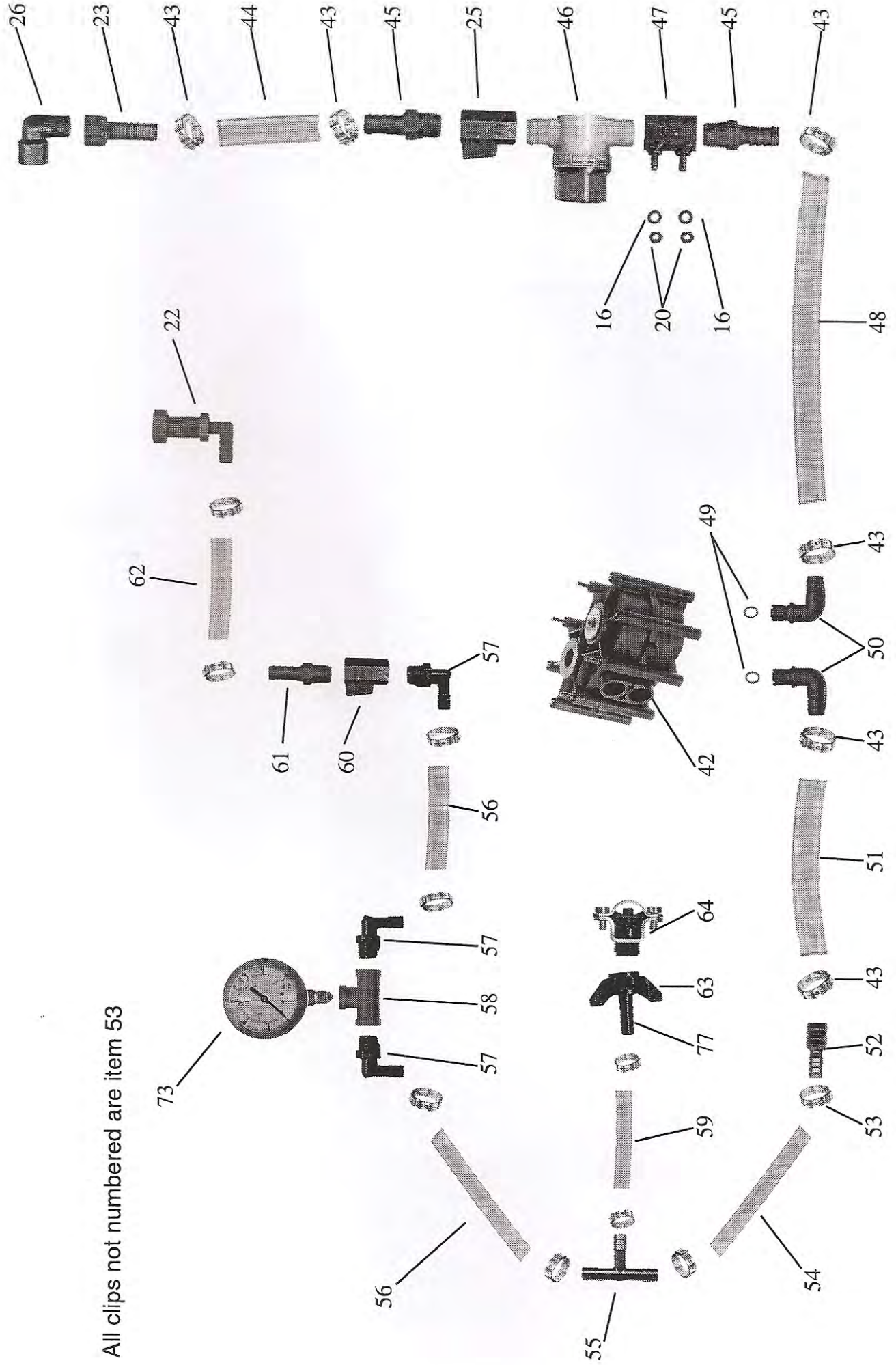


Handle and Swath Markers

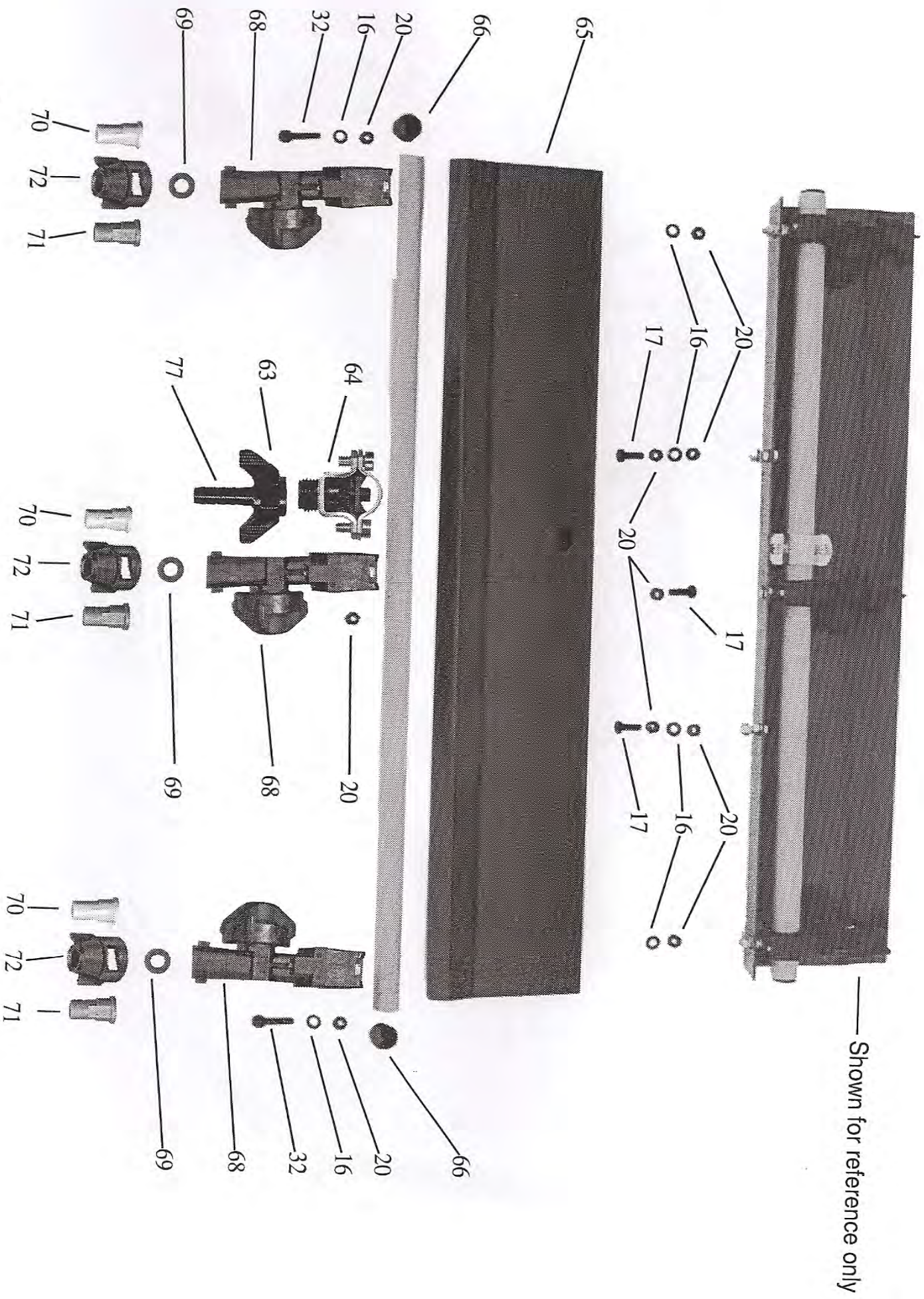


Pipe Work

All clips not numbered are item 53

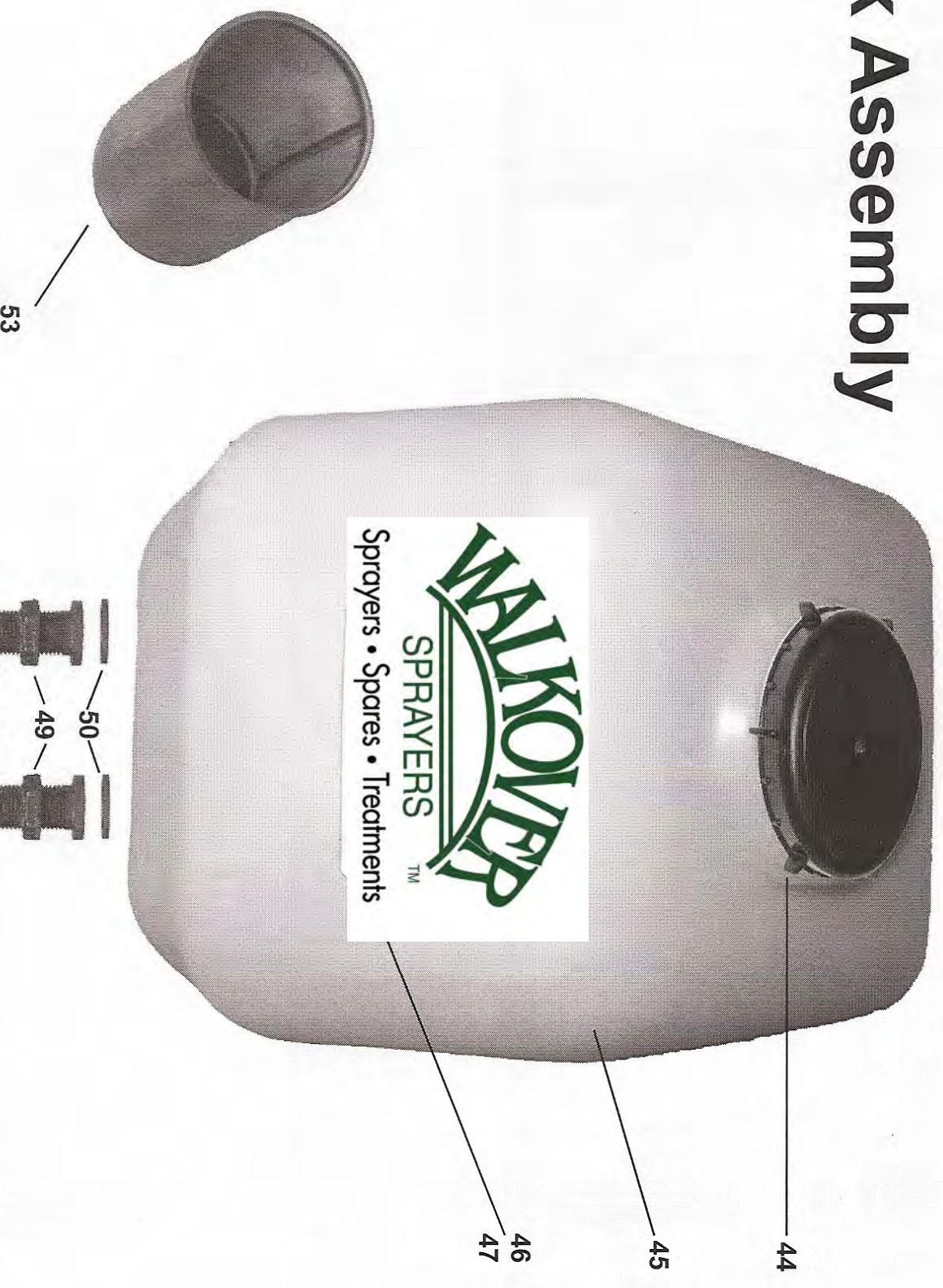


Boom Assembly



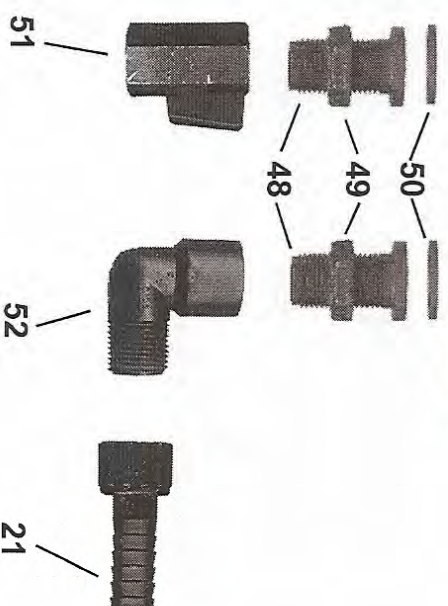
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Tank Assembly



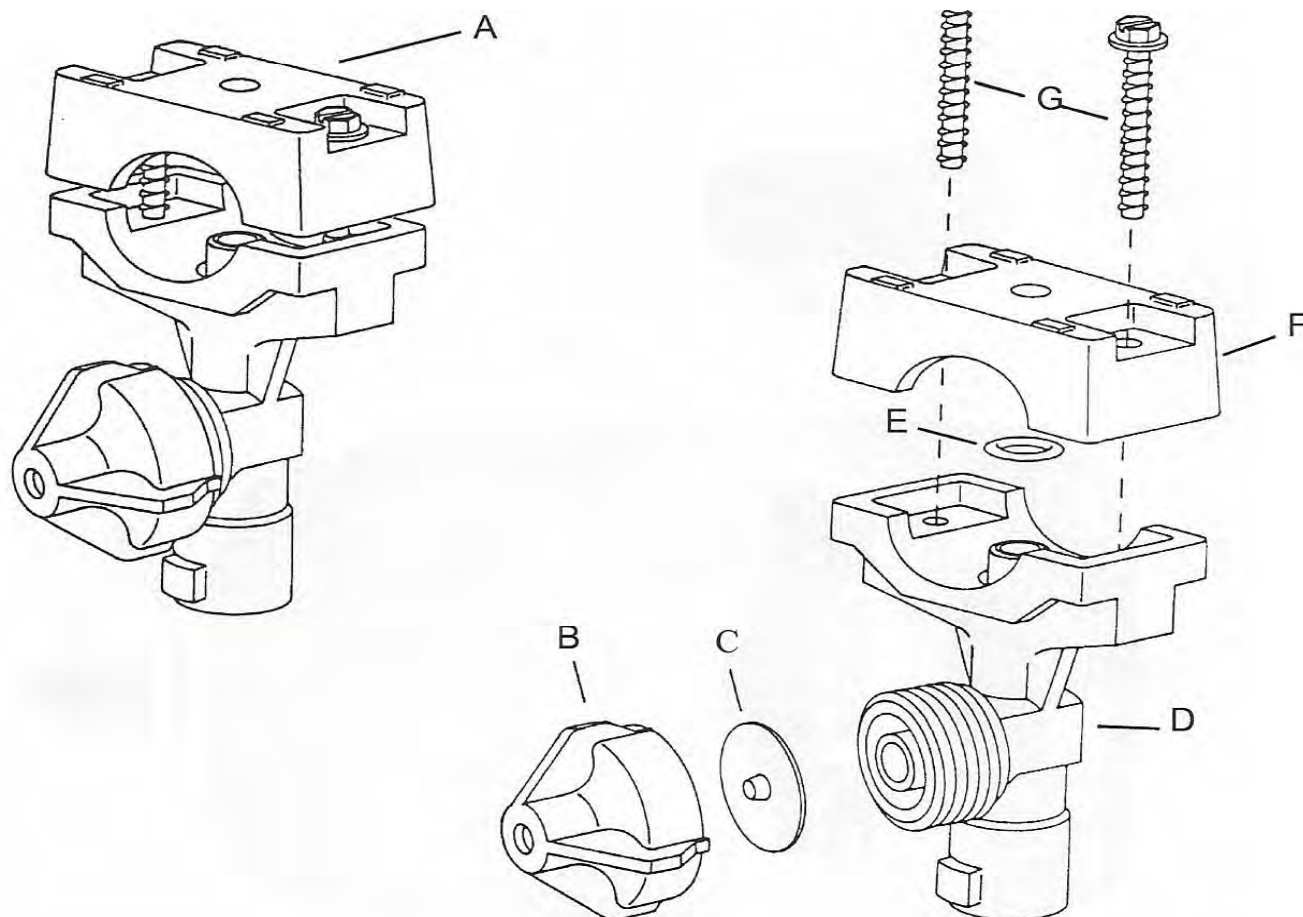
Complete Tank Assembly - Item 26
(includes items - 44,45,46,47,48,49,50,51,52,54)

Item 54 not shown - Content Label



Nozzle & Diaphragm Assembly

TYPICAL NOZZLE AND DIAPHRAGM ASSEMBLY



Nozzle & Diaphragm Assembly

Item	Part No.	Description	
A	W1566	Split Eyelet Connector DVC 1/2" Pipe	QJ17560-1/2"-NYB
B	W1596	Chemsaver End Cap Assembly	21950-10-NYB
C	W1597	Diaphragm EPDM Rubber	CP21953-EPR
D	W1602	Nylon Body	CP22403-NYB QJ17560-1/2"-NYB
E	W1601	'O' Ring BUNA-N	CP7717 2-110-UB
F	W1600	Upper Clamp Nylon	CP24276- NYB
G	W1621	Screw	Type 430, Stainless Steel

Greenkeeper Parts Reference List

Item Number	Quantity	Part Number	Description
1	1	W1141	Main Frame
2	2	W1172	End Plug ¾" (Frame)
3	6	W1149	Wheel Bearing
4	2	W1160	Wheel 10" Pneumatic
5	4	W1131	M12 Plain Washer
6	4	W1132	Circlip
7	2	W1171	M12 Nyloc Nut
8	2	W1115	Wheel 12" Pneumatic
9	2	W1151	Bush Nylon (Long Shoulder)
10	2	W1150	Bush Nylon (Short Shoulder)
11	1	W1642	Tank Cap
12	1	W1148	Drive Axle
13	1	W1147	Free Wheel Axle
14	1	W1312	Spring
15	1	W1313	Swath Marker Support Bracket
16	19	W1036	M6 Plain Washer
17	4	W1129	M6 x 16 Hex Head Set Screw
18	1	W1040	M6 x 16 Pozi Head Set Screw
19	1	W1341	M6 Half Nut
20	6	W1041	M6 Nut
21	1	W2017	Tank Assembly
22	1	W1276	Elbow & Nut 11/16" NPT x ⅜" Hose Tail
23	1	W1279	½" Cap & Liner
24	2	W1092	½" BSP Tank Connector (Machined)
25	2	W1162	½" BSP Ball Valve
26	1	W1247	½" BSP Street Elbow – Male & Female
27	1	W1156	Filter 5" Basket
28	1	W1177	Content Label – Not Shown
29	1	W1593	Handle
30	2	W1169	M6 x 10 Hex Head Set Screw
31	1	W1142	Pressure Gauge Plate
32	7	W1130	M6 x 35 Hex Head Set Screw
33	4	W1037	M6 Wing Nut
34	1	W1314	Swath Marker – Right Hand
35	1	W1315	Swath Marker – Left Hand
36	2	W1032	Wheel 4"
37	2	W1033	⅜" Spring Dome Nut
38	1	W1069	Outlet Securing Clip
39	2	W1068	M4 Spring Washer
40	2	W1043	M4 Nut
41	1	W1143	Pump Fixing Plate
42	1	W2056	Pump
43	6	W1055	Stainless Steel Stepless Clamp 24:1
44	1	W1641	Tank 25 Litre
45	2	W1409	½" BSP x ⅝" Hose Tail
46	1	W1158	Inline Strainer Assembly
47	1	W1157	Tap Socket Connector
48	1	W1376	⅝" x ⅛" x 10" Long Tube
49	2	W1004	'O' Ring for Elbow
50	2	W1005	Elbow
51	1	W1376	⅝" ID x ⅛" x 10 ½" Long Tube

52	1	W1165	5/8" to 3/8" Hose Mender
53	10	W1223	Stainless Steel Stepless Clamp 18.5
54	1	W1587	3/8" ID x 1/8" x 10" Long Tube
55	1	W1125	3/8" Equal Tee
56	2	W1586	3/8" x 1/8" x 36" Long Tube
57	3	W1166	1/4" BSP x 3/8" Hose Tail Elbow
58	1	W1577	1/4" BSP Equal Female Tee TT 1/4"
59	1	W1587	3/8" ID x 1/8" x 10" Long Tube (Tee to Boom)
60	1	W1127	1/4" BSP Ball Valve
61	1	W1121	1/4" BSP x 3/8" Hose Tail
62	1	W1585	3/8" ID x 1/8" x 40" Long Tube (Tap to Tank Elbow)
63	1	W1570	Wing Nut (use with W1571)
64	1	W1569	Inlet Connector for 1/2" Pipe
65	1	W1578	Nozzle Plate
66	1	W1572	End Plug 1/2" (Sprayboom)
67	1	W1583	Boom 1/2" ID x 26" Long Durapipe
68	3	W1566	Split Eyelet DCV for 1/2" Tube
69	3	W1568	Seal
70	3	W1584	1.5 TF VP Nozzle - Blue Plastic
71	3	W1574	2.0 TF VP Nozzle – Red Plastic
72	3	W1567	Bayonet Cap
73	1	W1159	Pressure Gauge
74	1	W1175	Mesh for Inline Strainer –Not Shown
75	4	W1347	Cable Tie – Not Shown
76	1	W1579	Decal
77	1	W1571	Hose Shank Connector (use with W1570)

Conversion Tables

To Convert	Multiply
Feet to metres	0.3048
Metres to feet	3.2808
Yards to metres	0.9144
Metres to yards	1.9361
Sq. metres to sq. feet	10.7638
Sq. Feet to Sq. Metres	0.092903
Sq. Yards to Sq. Metres	0.83612
Sq metres to sq. yards	1.19599
Acres to Hectares	0.40468
Hectares to Acres	2.47105
Gallons to Litres	4.545
Litres to gallons	0.22

1 sq foot	144 sq inches	0.0929 sq metres
1 sq yard	9 sq feet	0.8361 sq metres
1 Acre	4840 sq yards	4046.9 sq metres
1 Gallon	8 Pints	4.5461 Litres
American Liquids		
1 US Pint (16 fl. Oz)	0.8327 Imp. Pints	0.4732 litres
1 US Gallon	0.8327 Imp Gallons	3.7853 Litres

RECOMMENDED DILUTION/ APPLICATION RATES FOR WALKOVER SPRAYERS

Quantities of product to add to one full tank

Walkover	Sprayer	Anvil Type		AREA				VITAX	WALKOVER	WALKOVER	WALKOVER
Sprayer Model	Tank Size	Number of Nozzles	Nozzle Size	Area covered by 1 full tank (sq metres)	Area covered by 1 full tank (sq Yards)	Area covered by 1 full tank (sq Foot)	Area covered by 1 full tank (Acres)	Liquid Lawn Feed & Weed	MOSS TREATMENT & LAWN CONDITIONER	FINE TURF LAWN FERTILISER	AUTUMN FEED/ WINTER CONDITIONER
GARDENER	10 Litres	1	TF.VP. 2.0 or DT2.0 Red	125	150	1350	0.03	0.5 litre	2.5 litres	1 litre	1 litre
YARDMASTER	20 Litres	1	AN28-4.0 Brass	250	299	2691	0.06	1.0 litre	5.0 litres	1.8 litres	1.8 litres
TURFMASTER	25 Litres	2	TF.VP. 2.0 or DT2.0 Red	525	628	5650	0.13	2.1 litres	10.5 litres	3.7 litres	3.7 litres
		2	TF.VP. 3.0 or DT3.0 Grey	280	335	3010	0.07	1.1 litres	5.6 litres	2.0 litres	2.0 litres
GREENKEEPER	25 Litres	3	TK 1.5 Brass or DT1.5 Blue	668	799	7190	0.17	2.6 litres	13.4 litres	4.7 litres	4.7 litres
		3	TF.VP.2.0 or DT2.0 Red	500	598	5380	0.12	2.0 litres	10.0 litres	3.5 litres	3.5 litres
FIELDMASTER	110 Litres	4	TF.VP2.0 or DT2.0 Red	2350	2811	25301	0.6	9.0 litres	47.0 litres	16.5 litres	16.5 litres
		4	TF.VP 4.0 White	1848	2211	19727	0.5	7.3 litres	37.0 litres	13.0 litres	13.0 litres
RAMBLER	25 Litres	2	TF.VP2.0 or DT2.0 Red	836	1000	8999	0.21	3.3 litres	16.7 litres	5.9 litres	5.9 litres
		2	TF.VP3.0 or DT3.0 Grey	556	665	5985	0.14	2.2 litres	11.1 litres	3.9 litres	3.9 litres
Application	Aztec recommend that Moss Treatment is applied in two half strength applications, applied North-South; then East-West. Apply first half, then the second half 3 days later. Scarify the treated area 2 weeks after Moss Killer application has been completed							Use every 4-6 weeks April - September. Re-apply if weeds persist.	Apply where necessary - usually in Spring and Autumn	Use every 4-6 weeks between March and November	Apply evenly from September onwards. Re-apply for thorough conditioning

1. Nozzles failing to spray together.	<p>Check that the diaphragm control valve units are not over tightened. Slacken all control valve units and retighten finger tight, just stopping leaks when operating the machine.</p> <p>Diaphragm control valves should never be over tightened.</p>
2. Nozzles failing to spray	<p>Check your walking speed. You could be walking too slow to operate the unit.</p> <p>Taps in off position.</p> <p>Nozzle strainer or inline filter blocked.</p> <p><i>Air lock.</i> Unscrew one diaphragm control valve unit, push or pull the machine until liquid flows. Tighten diaphragm control valve as in 1 above. Do not over tighten.</p> <p><i>Blocked Nozzle.</i> Remove nozzle cap by turning the cap one half turn anti- clockwise. Clean nozzle or replace. Replace cap and try machine again.</p>
3. Blocked tubes or tank.	<p>Remove diaphragm control valves and nozzle caps. Disconnect a convenient tube joint. Using the water pressure from a garden hose, force blockage through the system, increasing the water pressure as necessary. Reassemble when blockage is clear.</p>
4. Drop in pressure	<p><i>Leak from pump</i> Remove the pump from the machine and return to dealer for repair.</p> <p><i>Worn pump.</i> If the pressure drops as your walking speed increases the pump is worn. Replace the pump.</p> <p><i>Leak in pipe work or pipe joints.</i> Replace pipe tube as necessary. Tighten or replace pipe clips as required.</p> <p><i>If pneumatic wheels fitted.</i> Check that the wheel is not spinning on the axle. Tighten the wheel nut as necessary.</p>

<p>5. Streaking- uneven spray pattern</p>	<p><i>Blocked or damage nozzle.</i> Remove as in 2 and clean or replace</p> <p><i>Material buildup on nozzle.</i> Clean nozzle cut out, with stiff card</p> <p><i>Nozzle incorrectly aligned.</i> Release nozzle cap by turning the cap one half turn anti-clockwise, realign nozzle and retighten the cap.</p> <p><i>Mixed nozzles.</i> You may have different nozzles fitted. Refit matching nozzles as required.</p>
<p><i>Machines fitted with a tap.</i></p> <p>6. Machine still sprays when the tap is turned off.</p>	<p>The return tube to the tank is blocked. Remove and flush with garden hose to clear blockage.</p> <p>If the unit is being towed, the towing speed is too fast.</p>

User Notes

GUARANTEE

Please return your completed Warranty Card immediately upon receipt of your **GREENKEEPER WALKOVER SPRAYER**.

This ensures that as a user you will automatically appear on our mailing list which is periodically used to advise **GREENKEEPER SPRAYER** owners of any new developments relating to the machine.

If there is any component, or components, manufactured by WALKOVER SPRAYERS LIMITED that are found to be defective within 12 months from the date of purchase WALKOVER undertake to replace the faulty component(s) free of charge.

The following are **NOT** covered under this guarantee:

- (1) A new sprayer which has been subject to operation in excess of recommended capacities, misuse, negligence or accident, or has been altered or modified in a manner not authorised By Walkover Sprayers Ltd.
- (2) TRANSPORTATION CHARGES – to and from an authorised dealer.

Walkover Sprayers Ltd. operate a policy of continual improvement and reserve the right to alter product specification without giving prior notice.

After each season, we recommend that you have your machine serviced by your dealer, preferably between October and January, to avoid delay at the start of the following season. Walkover may also be able to assist with your maintenance requirements, so please call & enquire.



Sprayers • Spares • Treatments

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