

CONTENTS

SECTION	PAGE
1.0 Specification	1
2.0 Introduction	2
3.0 Safety and environmental considerations	3
4.0 Instructions for use	5
5.0 Hydraulic system	7
6.0 In cab controller box	9
7.0 Turbofan spray heads.....	12
8.0 Calibration and adjustment.....	14
9.0 Turbospray parts list	17
10.0 Turbospray parts diagram	18
11.0 Turbospray parts list	19
12.0 Turbospray parts diagram	21
13.0 Turbospray general arrangement	24
14.0 Controller box circuit diagram	26
15.0 Turbospray spray circuit plumbing diagram.....	27

SPECIFICATION

Tank volume:	325 litres
Height:	2.3 m
Width:	1.1 m
Length:	1.5 m
Weight (dry):	290 kg
Pump:	Diaphragm type
Chemical output:	0.25 - 8 l/min/head
Hydraulic requirement:	10 l/min/head @ 95 bar
Spray width:	2.0 - 3.0 m (adjustable)
Spray height:	0.5 - 2.3 m (adjustable)
Airflow (at 0.4 m):	98 m ³ /min/head
Air velocity (at 0.4 m):	18 m/s

Issue 1 (03.05.01)

INTRODUCTION

This handbook should be considered an integral part of the machine, it should be kept safely so that it can be easily located when needed in the future.

Handbook composition

This handbook consists of several separate manuals to make reference to the different parts of the sprayer easier and to avoid repetitions. These are:

- a) Main sprayer manual
- b) Pump manual
- c) Controller box manual
- d) Turbofan spray head manual

Micron Sprayers reserves the right to change the handbook with out prior notice and the print runs may create slight differences.

Warning symbols

Warning symbols used on the machine and in this handbook are explained below:



Keep out of range of working machinery



Not drinking water



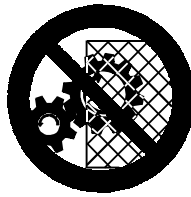
Do not remove safety devices



Read the instructions before use



No smoking



Do not clean or lubricate when running



Use a container for storage of residues

Protections for users:

Use gloves
Use protective clothing
Use a mask
Protect your hearing at all times.
Sound levels at or in excess of 94dB(A).



SAFETY AND ENVIRONMENTAL CONSIDERATIONS

Use

The TURBOSPRAY has been designed primarily for use in agriculture. Materials used in its construction will withstand standard products conventionally used for agricultural spraying. Other uses are not recommended and Micron Sprayers Limited will not be held liable for any damage caused by the use of aggressive, dense and/or viscous chemical products. The TURBOSPRAY is not designed to apply liquid fertilisers.

Prohibited usage:

The TURBOSPRAY **MUST NOT** be used to apply the following types of products:

- any kind of paint
- any kind of solvent or thinner
- any kind of fuel or lubricant
- diesel or any kind of gasoline
- any kind of inflammable liquid
- animal and human feeds
- liquids containing granules or large particles
- mixtures of non-compatible chemical products
- liquid or suspended fertilisers with insoluble granules
- liquids at temperatures higher than 40^o C
- any products that are not detailed in the specific use of the machine

Use of pesticides

Pesticides can be toxic to both the humans and the environment if not used correctly and should only be used by qualified operators who are in possession of a relevant spraying certificate and who have carefully read the label and followed any specific safety instructions.

Instructions for chemical use

In order to prevent and accidents and contamination:

- Handle products carefully wearing appropriate protective clothing, gloves, eye protection, respirator etc as detailed on the product label with you.
- In case of eye contact or swallowing consult a doctor remembering to take the chemical label.
- Wash carefully any clothes which come into contact with pure or dilute chemical product.
- Do not smoke, drink or eat during the preparation and the spraying of the product.
- When spraying, observe safety distances from inhabited areas, rivers, streets, sport-centres, parks.
- Wash the chemical product containers well, using proper equipment and rinsing repeatedly with clean water. Dispose of washing residues in accordance with local regulations.
- Collect washed containers and dispose of them properly. Do not leave empty pesticide containers in the environment and do not re-use them for any other purpose. It is advisable to make a hole in the bottom of containers when they are empty to prevent re-use.
- Carefully wash sprayers after and dispose of washing residues in accordance with local regulations.
- Keep chemical products in locked stores.



INSTRUCTIONS FOR USE

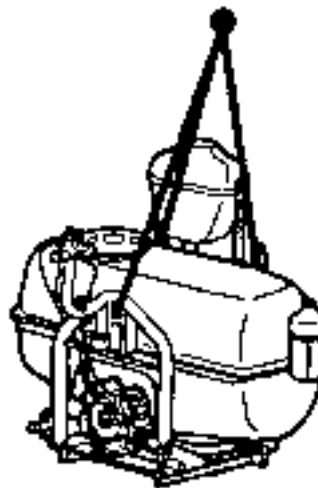
Machine transport and handling

The dry weight of the machine is 640 pounds. If it is necessary to lift the machine, use proper fabric slings and hoists or bridge crane with sufficient lifting capability.

Only lift or move the machine when the tank is empty. If there is liquid in the tank, the machine will be heavier and the liquid shifting could vary the centre of gravity causing uncontrolled movement. Apply the slings as shown.

Do not lift the machine with a fork lift truck unless it is secured on a pallet.

Do not stand under the machine when it is suspended in the air.



The TURBOSPRAY is designed to be mounted on the rear of a tractor. When it is not mounted to a tractor the support stand provided with the machine must be used.

Machine description

The complete TURBOSPRAY sprayer consists of an 85 gallon HDPE tank with auxiliary clean water washing tank, a robust steel frame, a diaphragm pump and in-cab electric controls. This is fitted with hydraulically driven TURBOFAN fan/atomiser spray heads.

Clean water tank

The TURBOSPRAY is equipped with an auxiliary tank containing clean water for tank washing which should always be filled with clean water. Do not drink water in this tank.

Preliminary Checks

When you first receive the TURBOSPRAY sprayer check that all parts are complete. If any parts are damaged or missing, refer to your supplier or to Micron Sprayers Limited.

Mounting on tractor

Before mounting on any tractor ensure that the tractor is suitable for this purpose. A suitable tractor should:

- a) Be capable of sustaining the weight of the sprayer when full and ready to work (1360 pounds). Failure to meet this specification is dangerous as it could lead to loss of sensitivity on the steering and subsequently overturn on sloping ground.
- b) Be equipped with a suitable PTO mechanism (13/8 ASAE DIN 9611/A at 550 RPM)
- c) Possess a suitable hydraulic system capable of delivering 2.5 gallons/min/head at

1400 P.S.I. (controlled by either single or double acting tractor control valve. NB Use of a single acting valve will require the addition of a dedicated return line NOT connected to the motor drain line.) with a unique return circuit for motor drain lines.

- d) Possess a three point linkage capable of bearing the weight of the sprayer when full

If in doubt as to the suitability of the tractor refer to the manufacturer.

Mounting on the tractor:

- a) Check the diameter of the lower link pins. If necessary, correctly orientate the double diameter pins
- b) Regulate correctly the length of the top link allowing the sprayer to be vertical in the working position.

Head mounting

The TURBOSPRAY is shipped with the TURBOFAN spray heads dismantled. It is important that these are mounted in the desired spraying position:

1. Position the two head mounting bars on the sprayer frame at a height suitable to your application ensuring that the securing bolts are tight. **NB Due to its weight the position of the head mounting bars should only be altered with the spray heads dismantled.**
2. Attach each individual spray head in turn to its carrying arm using the bolts provided.
3. Adjust the width of the carrying arms by slackening the nuts on the U-bolts and adjusting the width as appropriate. Final adjustment can be made in the field according to the row width of crop being treated.
4. Attach the three hydraulic pipes to the correct ports on the head motor as described below.
5. Connect the spray lines to each head and fit the appropriate orifice restrictor plate as necessary (see CALIBRATION).



HYDRAULIC SYSTEM

The Hydraulic Block has provision to enable the sprayer to be fitted to any currently available tractor hydraulic system, i.e. "Open Centre", "Closed Centre" or "Load Sensing".

Essential Features of Hydraulic System for TURBOSPRAY Sprayers

The hydraulic system of the tractor to be used must have sufficient hydraulic flow. The minimum flow requirement for each TURBOFAN head is 2.5 gallons/min, therefore, for example, for a four head machine the tractor must have a minimum flow rate of 10 gallons/min.

The tractor must be fitted with a supply line and a return line. These must be fitted between the "Bulkhead Plate" and the tractor auxiliary hydraulics, as shown on Page 24.

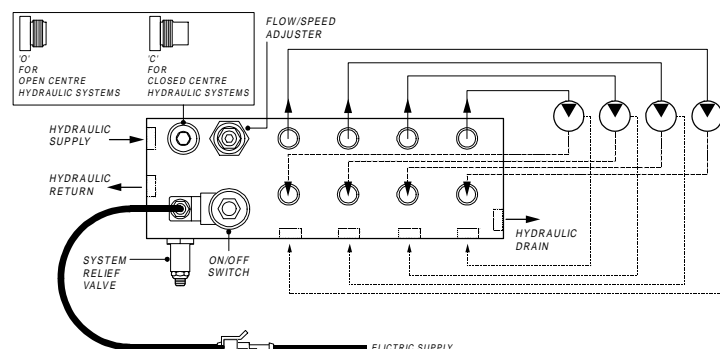
Drain lines are fitted to all hydraulic motors. A single line **MUST** be returned from the "Bulkhead Plate" (see Page 24) to the oil reservoir of the tractor in an unrestricted flow. The maximum back pressure allowed in this line **MUST NOT** exceed 22 PSI. Do not use quick release connectors in the hydraulic drain line pipe as each of these can easily cause 8 PSI back pressure. This back pressure must be avoided in order to protect the life of the hydraulic motor shaft seals.

Description of Hydraulic Block

The TURBOSPRAY sprayer is fitted with a "Hydraulic Block". This contains most of the components and fittings which make up the hydraulic system of the sprayer.

The "Hydraulic Block" and circuit (Micron Part No.6264) is shown below and on Page 24 with part numbers shown on Page 22. This block contains the following:

1. *Tractor Hydraulic System Selection Plug* - two alternative plugs are available :
 - a) The Short Plug (Micron Part No.6333) is supplied fitted as standard, and is used in conjunction with open centre tractor hydraulic systems, or:-
 - b) The Long Plug (Micron Part No.6334). This is used with closed centre and load sensing tractor hydraulic systems.
 - c) If the tractor system is of the "load sensing" type, then an extra "load sensing" hose must be fitted and relieved back to the tractor auxiliary hydraulics (see Page 24).
2. *On/Off Valve (12V operation)* - this controls the oil flow to the TURBOFAN spray heads. This is switched from the tractor cab using the "In-cab Controller" (see p.9).
3. *Relief Valve* - for the TURBOSPRAY sprayer hydraulic circuit. This is pre-set to 2500 PSI and should not be adjusted unless necessary.
4. *Speed Control Valve* - this valve is used to set the TURBOFAN speeds in the range 4000-5000 rpm. **NOTE: DO NOT** allow TURBOFAN speed to exceed 5000 rpm.



PTO Shaft

A PTO shaft is supplied with the TURBOSPRAY sprayer. This may need to be cut to length so as to be suitable for the tractor on which the sprayer is being mounted. This is important because of:

- Dangerous loads on the pump shaft if the PTO shaft is too long
- The danger of fracture if the shaft is too short.

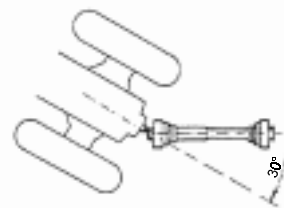
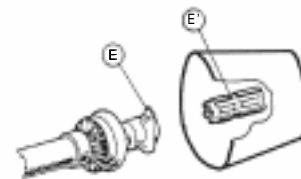
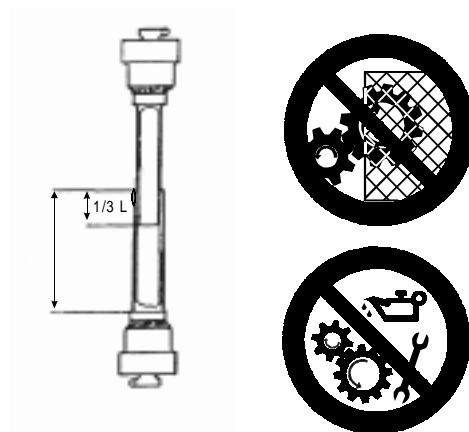
The minimal overlap of the two telescopic tubes must never be shorter than 1/3 of the tubes length.

The transmissible power of the PTO system must be at least equal to that which is necessary to power the sprayer pump (model BP 60 - see pump handbook).

When using the PTO drive:

- **DO NOT** activate the PTO shaft without the PTO tractor guard., PTO shaft guard and fixed guard on the pump shaft being in place
- Hook the proper locking chains to secure anchorages.
- Make sure that the push button or the E-ring nut are correctly inserted and fixed both on the pump side and on the tractor side as shown.
- **DO NOT** exceed 30° - 35° of inclination in any direction as shown.
- When the machine is not being used, grease the splines and the tubes periodically and keep the connection zones particularly clean.

Avoid contact of the end of the PTO with the ground when the machine is not being used. If necessary, hook the outside locking chain to a part of the machine frame.

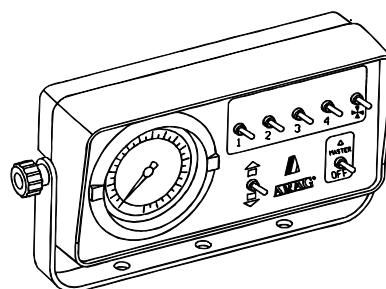


IN CAB CONTROLLER BOX

1. Fit the in-cab controller box to a suitable rigid mounting point within the tractor cab, in easy reach of the operator. The control box must be positioned in a visible position so that all danger zones are visible when operating the controls and controls are most rapidly accessible in the event of an emergency.
2. Connect the input cables to a suitable switched supply
3. Feed the wiring loom from the sprayer into the tractor cab and connect to the controller box. Take care to route the cable in such a fashion as to avoid trapping or interfering with tractor controls or operation.
4. Route the spray line pressure gauge pipe from the quick release coupling on the valve block to the rear of the controller box and connect.

A full instruction manual for the controller box is also supplied with the TURBOSPRAY sprayer. The functions of this controller have been adapted in order to accommodate the TURBOFAN heads fitted to the basic sprayer. The revised layout of the controller box is as given in Appendix A.

Switches 1-4 control the spray liquid flow to the 4 turbofan heads, with switch 5 controlling the hydraulic power to the heads.



Pump

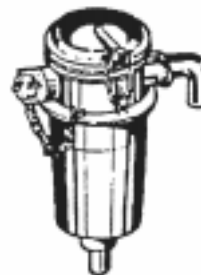
Full instructions for use and maintenance of the pump are found in the manufacturers manual. The model of pump fitted to the TURBOSPRAY is the BP 60.

The pump is designed to operate at PTO speeds 550 RPM. Speeds in excess of this should not be used. There is a safety valve on the pump which has been calibrated in order to avoid excess pressures. Do not alter this valve or obstruct the tubes connected to it.

Main spray filter

The sprayer is provided with an intake filter equipped with a 50 mesh filtering element.

Correct filter usage is a pre-requisite for successful spraying. Regularly check the filter element is clean and unblocked or when using particulate suspensions. This will need to be done more frequently if clean water is not used for spray mixing. When doing this, it is important to wear protective gloves.



The filter element cannot be cleaned while the pump is operating as the pressure generated by the pump will prevent removal of the cap.

Before removing the cap from the filter, make sure that the filter is isolated from its supply tubing by means of the 3 way valve.

After having washed the filter element, re-assemble the cap remembering to open the isolation valve after cleaning.

NB : Do not dispose of the washing residues into the environment.

Pressure Regulator

The pressure regulator controls all the main spray functions, and a good knowledge of its functioning makes work easier and more accurate.

The working pressure of the sprayer is determined by the pressure regulator and a pressure relief valve which protects the circuit from over-pressures during operation. In case of serious obstructions of the connection tubes (occurring very rarely) the relief valve will operate.

The TURBOSPRAY is fitted with an electrically controlled pressure regulator which is electrically activated from the tractor cab. The pressure relief valve is manually set.

OPERATION

Tank Filling

In order to protect people, animals and the environment agricultural sprayers should only be filled indirectly by open and free falling water, particularly when filling from the water mains. This is so as to avoid contamination of the water supply by reverse suction of the filling pipe back into the water source. The filling tube must not come into contact with the liquid inside the tank and it must discharge onto the upper edge of the filling opening through the filter located in opening.

The tank is equipped with graduations indicating the precise quantity of liquid inside the tank. This is designed to be read when the sprayer is on level ground.

Test with Clean Water

Before the first treatment it is recommended to carryout a test with clean water in order to check the correct operation of the sprayer and familiarise yourself with it.

Mixing

It is important that all necessary protective safety clothing is used for mixing and filling operations.

Good mixing and a good agitation before and during the spraying operation are very important for a correct distribution of agrochemicals onto the crop.

In order to achieve adequate mixing of products in the tank prior to spraying, with the pressure valve set to zero so that the pump bypass returns all product to the tank, run the pump at 500 rpm for 10-15 minutes to thoroughly agitate and mix the spray solution.

Sprayer Washing

After treatment wash all equipment thoroughly inside and out. Contaminated equipment can be very dangerous for people, especially for children.

Circuit-washer and tank-washer

The sprayer is equipped with a circuit washing tank which must be filled with clean water. This is used to rinse the intake circuit, delivery filter, pump, pressure regulator and heads. A special rotating nozzle located in the tank washes its inner surface. To operate the washing circuit:

1. Rotate the lever of the 3-way intake tap
2. Run the pump for a few minutes
3. Turn on the tap connected with the rotating nozzle and let it operate for about three minutes
4. Turn off the above tap and dispose of the the residual washing products on a field where no damage will be caused or in accordance with local regulations..

In order to clean most thoroughly (important when using a variety of types of product on different crops) add 5 pounds of soda to the washing liquid every 26 gallons washing water.

TURBOFAN SPRAY HEADS

Introduction

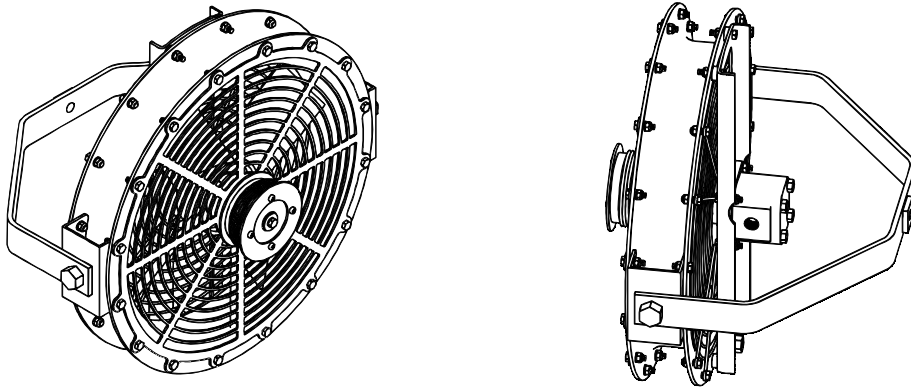
The TURBOFAN spray head has been developed from over 30 years experience in the design and use of rotary atomisers. Originally developed for agricultural aircraft, these atomisers are now used for aerial and ground applications in more than 75 countries. This unique background, combined with continuous research and development, has enabled Micron to produce a truly versatile and reliable spray head for almost every agricultural spraying requirement.

The TURBOFAN spray head uses a rotary atomiser, mounted in a protective cowl and driven by a compact hydraulic motor which breaks the spray liquid into precisely sized droplets. This unique approach ensures that all of the spray volume is concentrated into a narrow range of droplet sizes.

The atomiser also incorporates an axial fan which produces a turbulent, swirling airstream from the spray head. This carries spray to the target, disturbs foliage and ensures good penetration to give an even coverage in dense crops.

The Micron TURBOFAN spray head operates over a wide range of liquid flow rates, enabling the same unit to be used for ultra low, low and higher volume application. The atomiser is designed to handle all types of liquid formulations from specialised ULV products to high concentrations of emulsifiable concentrates and solids in suspension.

The TURBOSPRAY is supplied with four TURBOFAN spray heads fitted as standard. It is possible to add additional heads to the sprayer but this should only be done in accordance with the section on fitting additional Turbofan heads.



NB DUE TO THE NATURE OF ITS OPERATION, THE ATOMISER ASSEMBLY ON THE TURBOFAN SPRAY HEAD IS UNGUARDED. DUE TO THE POSSIBLE CUTTING AND ENTANGLEMENT HAZARDS THAT THIS POSES:

DO NOT WEAR LOOSE OR FLAPPING CLOTHING WHEN OPERATING THE SPRAYER.

DO NOT APPROACH WITHIN AT LEAST THREE FEET OF THE TURBOFAN SPRAY HEAD WHEN IT IS ROTATING.

Operating the TURBOFAN heads

Optimum results will only be obtained from the TURBOSPRAY if the TURBOFAN spray heads are correctly calibrated, operated and maintained. It is important that operators are completely familiar with their calibration and use. The following sections emphasise points of particular importance.

Daily inspection

All parts of the sprayer should be checked at least once a day. A complete check list for the spray heads is included in the Maintenance section of this Handbook. However, particular attention must be paid to the condition of the atomisers, chemical feed pipes and restrictors and all hydraulic hoses and fittings. All atomisers must run smoothly without vibration.

Calibration Procedure

Before use, the sprayer must be calibrated for application rate. Full details are given in CALIBRATION. It is important to note that the tables are based on performance with water and are intended only as a guide. Actual performance will vary according to the type and formulation of chemical being used. It is therefore vital that the calibration of the system is checked whenever a new chemical is used.

Position of spray heads

The proximity of the spray heads to the crop can be adjusted according to row width. The angle of the heads can be adjusted by loosening the locking nuts on the head mounting frames shown adjusting to the desired position and tightening to lock the new position.

When a sprayer is used for the first time the coverage of spray droplets on the foliage should be checked to ensure that the spray heads are correctly positioned. Each spray head must be positioned sufficiently far from the crop to allow the airflow from the fan to disperse the spray droplets over a wide band and to prevent local over-application of foliage close to the atomiser. However, the distance should not be so great that the airflow becomes dissipated or that the spray droplets could be prone to drift in a wind. In general, a distance of 20 inches to the outer face of the crop is preferred in vines.

Two alternative carrier arms are supplied for either narrow rows (carrier arm 'A' Micron part no. 6274) or wide rows (carrier arm 'B' Micron part no. 6275) (see Page 23).

The coverage can sometimes be assessed visually if the colour of the active material leaves a clearly defined droplet (as with some fungicides). However, it is preferable to place water sensitive papers in the foliage and to check the coverage by the droplet density on the papers. Alternatively, a fluorescent dye can be added to the spray mixture and the coverage assessed viewing the droplets with an ultra-violet lamp in the dark.

Sequence of Operation

The rotation of the fan / atomiser units on the spray heads and spray liquid flow to the spray heads is controlled by the in-cab spray controller as shown.

It is important that the fan/ atomiser units are rotating before the spray liquid flow is turned on and conversely that the chemical supply is shut off before the spray heads are stopped. This ensures that a stream of chemical does not run out of the atomisers and that the correct size of droplet is always produced. It is not normally necessary to stop the spray heads every time the chemical flow is turned off.

CALIBRATION AND ADJUSTMENT

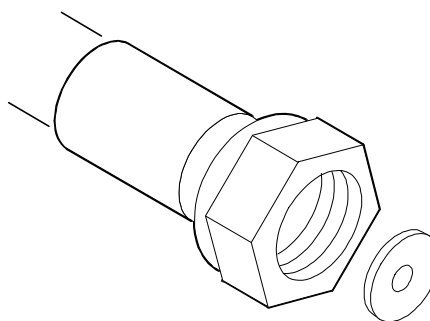
As with any sprayer, the TURBOSPRAY heads must be calibrated before use.

Application Rate

The output rate of chemical from the sprayer (flow rate) will be determined by the required application rate (in gallons/acre) and the area sprayed per minute (in acres/minute).

The flow of chemical from each spray head is controlled by an interchangeable fixed restrictor orifice in the feed to the atomiser and by the spray chemical pressure. Spray chemical pressure is controlled by the pressure regulator or by-pass valve in the feed from the chemical pump.

1. Using the table below select a combination of operating pressure and orifice restrictor plate which will give the required flow rate. These figures are based on measurements with water. Actual flow rates may differ according to the viscosity of the chemical being used.
2. Set the selected pressure on the pressure control valve.
3. To each head fit the correct orifice restrictor plate.



Approximate flow rates for fixed restrictor orifices

RESTRICTOR No.	FLOW RATE (GPM)		
Restrictor number	10 PSI	20 PSI	30 PSI
10	0.006	0.009	0.011
48	0.143	0.202	0.247
55	0.188	0.266	0.326
86	0.470	0.664	0.813

4. With the fan / atomiser units switched off the flow rate to one head should be measured as follows:
- a) Fill the tank with clean water
 - b) Start the chemical pump of the sprayer but do not run the hydraulic system.
 - c) Open the appropriate spray valve until all air is purged from the spray hose and spray head.
 - d) Place a suitable container under the spray head, open the spray valve and collect water dispensed over the period of one minute.
 - e) Use a measuring cylinder or calibrated container to measure the output and calculate the flow rate in gallons per minute per spray head.
 - f) The bank of flow indicators to individual heads (Micron part no. 6268, Page 21) should indicate similar flow levels for all heads. If the actual output is slightly too high or too low, it may be possible to adjust it by varying the spray chemical pressure individually on the valve bank..
 - g) If this adjustment is insufficient, the restrictor orifice for each spray head must be changed to a smaller size to reduce the flow or a larger size to increase the flow.

The flow must always be re-checked after making any adjustments to the restrictors or spray pressure.

Having established the flow rate with water verify and adjust as necessary using the tank mix.

NB The switch to operate the hydraulic circuit is located on the controller box adjacent to the valve switches controlling chemical flow. When calibrating take great care that the hydraulic circuit switch is not inadvertently activated when operators are in the vicinity of the spray heads.

AFTER USE

The entire sprayer must be emptied and flushed out with clean water or a suitable solvent after use. This eliminates the possibility of dried chemical residues blocking valves, restrictors or atomiser discs. This precaution is particularly important when using wettable powders as these will tend to sediment in the tank and pipe work, causing serious blockages when the sprayer is next used.

MAINTENANCE

The sprayer maintenance is important for safe operation of the unit. The sprayer component manuals should also be consulted

Programmed maintenance

It is recommended to follow a programmed maintenance schedule as detailed below:

Every 8 hours

1. Check for leaks on spray and hydraulic circuits
2. Check PTO guards
3. Check integrity of discs / gauzes and guards on the spray heads
4. Check tightness of atomiser mounting
5. Check hydraulic filter indicator
6. Check spray filters

Every 30 hours

1. All above
2. Check tightness of spray head adjusting bolts
3. Check hydraulic fluid level
4. Check pump mounting s and connections
5. Check oil level in pump and replenish if necessary
6. Check spray head bearings for signs of wear
7. Check correct rotational speed of atomiser (5000 RPM Max)

End of season

1. All above
2. Check pump function and repair as necessary

Warehousing and Eventual Transport

The TURBOSPRAY should be stored in places protected from humidity and frost. DO NOT operate the pump shaft if you suspect that there is ice inside the pump.

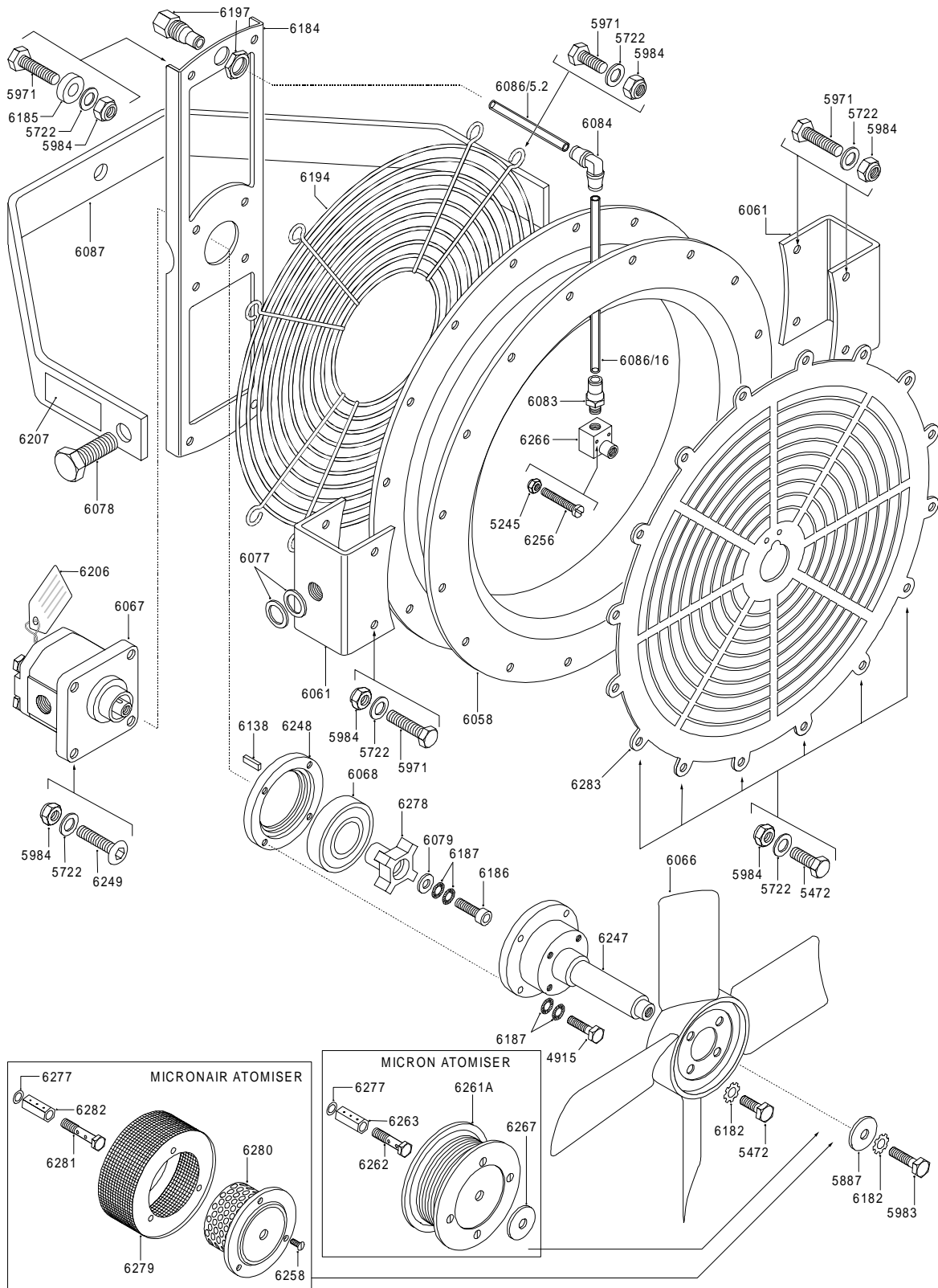
Dismantling of Turbofan Spray head

Should a TURBOFAN spray head require maintenance, it must be dismantled.

TURBOFAN (BASIC) PARTS LIST (TBF/200)

PART NO.	DESCRIPTION	QTY
4915	SCREW, M5 X 16, S/S	4
5245	NUT, M4 NYLOC	2
5472	SCREW, M6 X 16, SET, HEX, S/S	24
5722	WASHER, M6, FLAT, S/S	36
5887	WASHER, M6 X 25 OD, PLAIN, S/S	1
5971	SCREW, M6 X 25, SET, HEX, S/S	12
5983	SCREW, M6 X 20, SET, HEX, S/S	1
5984	NUT, M6, NYLOC, S/S	36
6058	FAN COWL	1
6061	SADDLE	2
6066	FAN, 4-BLADE	1
6067	MOTOR, HYDRAULIC, C/W KEY	1
6068	BEARING NO.6006LLUA/2A	1
6077	WASHER, M16, NORDLOCK (PAIR)	2
6078	SCREW, M16 X 40, SET, HEX, S/S	2
6079	WASHER, 5M X 15OD X 1.6, S/S	1
6083	CONNECTOR, 1/8" BSP X 8MM DIA	1
6084	CONNECTOR, ELBOW, 8MM X 8MM	1
6086	TUBE, 8MM X 6MM, NATURAL	0.0064
6086/16	TUBE, SEMI RIDGID, NYLON	1
6086	TUBE, 8MM X 6MM, NATURAL	0.0021
6086/5.2	TUBE, SEMI RIDGID, NYLON	1
6087	BRACKET, U	1
6138	KEY FOR HYDRAULIC MOTOR	1
6182	WASHER, M6, SHAKEPROOF	5
6184	CARRIER, MOTOR	1
6185	SPACER	4
6186	SCREW, M5 X 16, CAP HEAD, S/S	1
6187	WASHER, 5M NORDLOCK (PAIR)	5
6194	GUARD, REAR	1
6197	CONNECTOR, 1/4" BSP (F) X 8MM	1
6206	LABEL, DRAINLINE	1
6207	LABEL, ROTATION	2
6247	SHAFT, FAN/ATOMISER	1
6248	RING, LOCKING	1
6249	SCREW, M6 X 25, SOCKET	4
6256	SCREW, M4 X 25, PANHEAD	2
6266	DISTRIBUTOR BLOCK	1
6278	DRIVE CROSS	1
6283	FRONT PLATE (2 HOLE FEED)	1
MICRON ATOMISER PARTS (TBF/003)		
6261A	ATOMISER STACK ASSEMBLY	1
6277	WASHER, M8, FIBRE	1
6262	BOLT, BANJO (MICRON)	1
6263	FEED BODY (MICRON)	1
6267	SPACER (MICRON)	1
MICRONAIR ATOMISER PARTS (TBF/004)		
6277	SEAL, BONDED	1
6279	ATOMISER GAUZE	1
6280	ATOMISER HUB	1
6281	BOLT, BANJO	1
6282	FEED BODY	1
6258	SCREW, 8-32 UNC X 100 DEGREE	3

TURBOFAN PARTS DIAGRAM



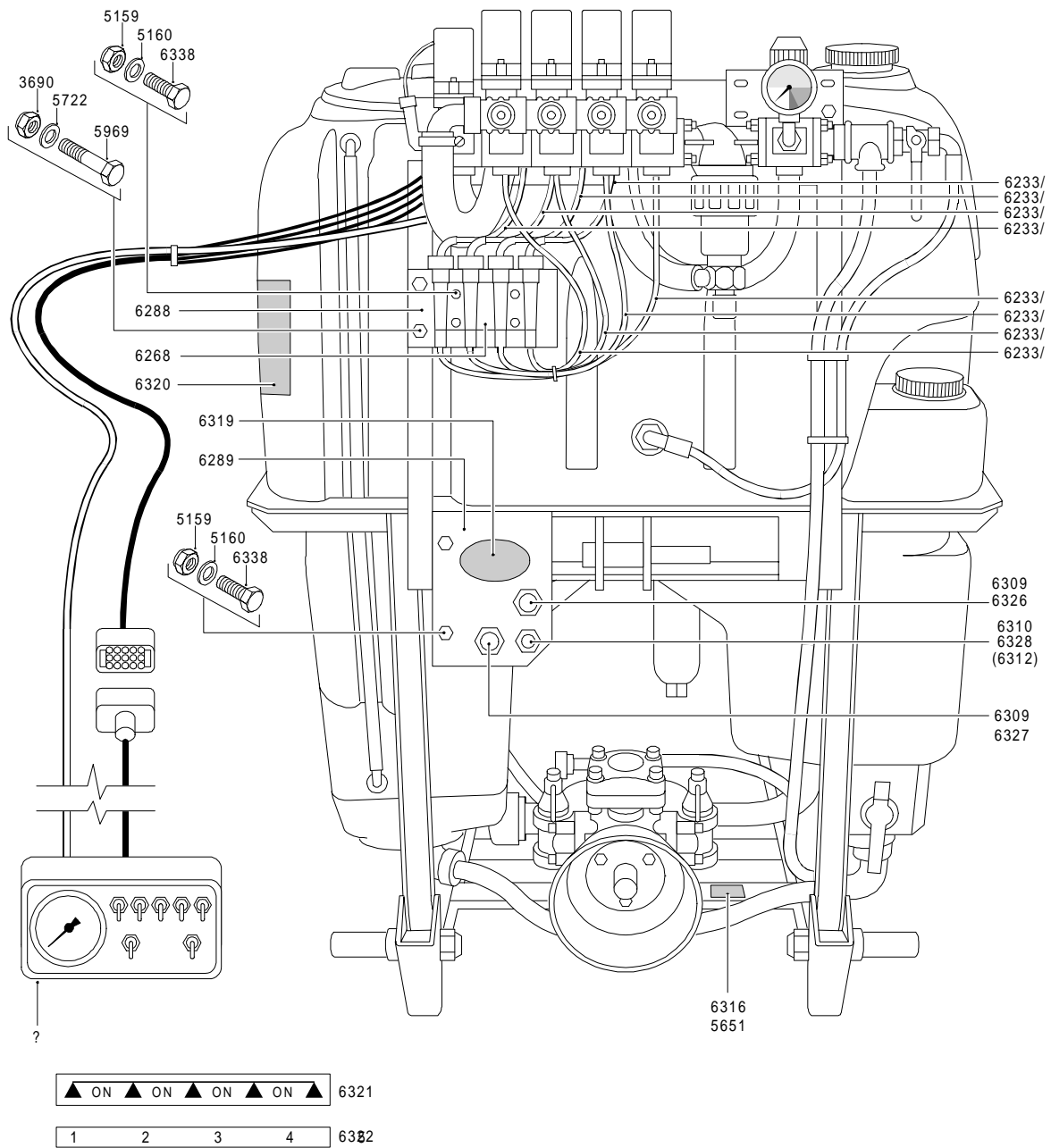
TURBOSPRAY PARTS LIST

PART NO.	DESCRIPTION	QTY
3690	NUT NYLOCK M6	4
4217	SETSCREW M8 X 20 S/S	3
5159	NUT NYLOCK M8	2
5160	WASHER PLAIN M8	2
5177	NUT NYLOCK M12	16
5651	POP RIVETS 1/8 X 3/8	2
5716	WASHER PLAIN M12	16
5722	WASHER PLAIN M6	4
5926	ADAMPTOR 3/4M - 1/2M	2
5961	ADAPTOR M/M 1/2 BSP	2
5969	BOLT M6 X 55 S/S	4
5973	WASHER PLAIN M10 S/S	9
5975	NUT NYLOCK M10 S/S	9
6023	ADAPTOR 1/4 BSP M - 1/2 BSP M HYD	4
6242	PLUG 1/2 BSP M. HYD	3
6264	VALVE BLOCK (COMPLETE)	1
6268	SPRAY MONITOR 4 WAY UNIT C/W SPARE BALLS	1
6270	SIDE MEMBER L.H. (AS DRAWN)	1
6271	SIDE MEMBER R.H. (OPP HEAD)	1
6272	TOP MEMBER	1
6273	REAR EXTENSION	2
6274	CARRIER ARM 'A'	4
6275	CARRIER ARM 'B'	4
6276	CLAMP BAR	8
6287	HYDRAULIC MOUNTING PLATE	1
6288	REDBALL MOUNTING PLATE	1
6289	FRONT PLATE	1
6290	FILTER MOUNTING BRACKET	1
6291	FILTER (COMPLETE)	1
6293	SETSCREW M10 X 30 PLATED STEEL	9
6294	BOLT M10 X 80 PLATED	1
6295	SETSCREW M12 X 35 STEEL PLATED	16
6296	SETSCREW M12 X 20	1
6298	SUPPORT STAND (PAIR)	1 SET
6299	EXHAUST CLAMP + NUTS	9
6300	WASHER SHAKEPROOF M12 S/S	1
6301	WASHER SHAKEPROOF S/S	6
6302	SEAL BONDED 3/4 BSP	2
6303	SEAL BONDED 1/2 BSP	4
6304	SEAL BONDED 3/8 BSP	20
6305	SEAL BONDED 1/4 BSP	10
6306	ADAPTOR 1/4 M/M HYD	4

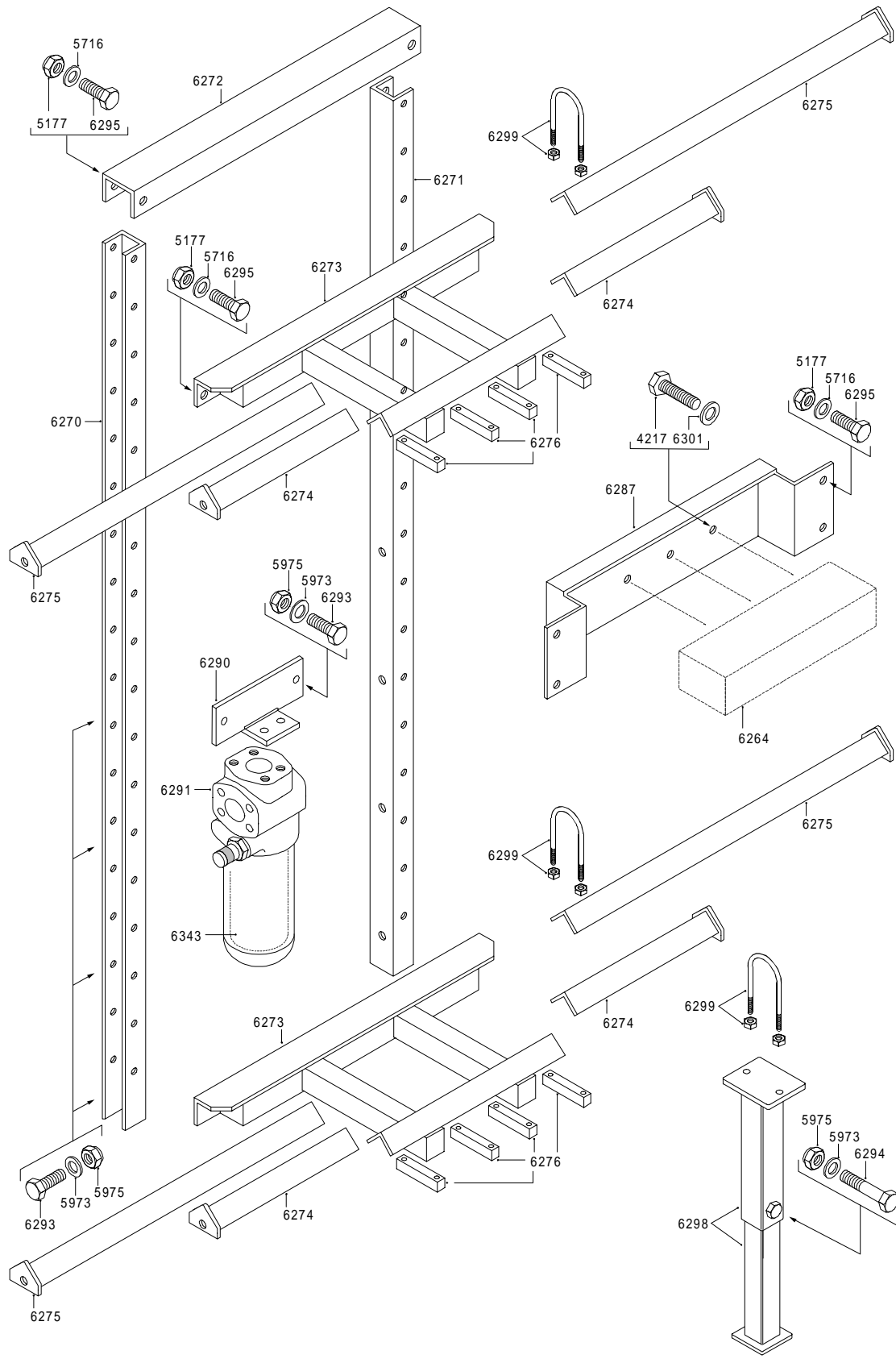
TURBOSPRAY PARTS LIST (CONTINUED)

PART NO.	DESCRIPTION	QTY
6307	ADAPTOR 3/8 M/M HYD	17
6309	BULKHEAD 1/2 M/M R.S. 497690 HYD	2
6310	BULKHEAD 3/8 M/M R.S. 497684 HYD	1
6311	PLUG 3/8 M HYD	12
6312	PLUG 3/8 F	1
6313	PLUG 1/4 M	6
6314	TEE 1/2 F/F/F/F HYD	1
6315	ADAPTOR 1/2 M / 1/4 F REDUCER HYD	1
6316	C.E. MARKING PLATE	1
6317	PLUG 1/2 F	2
6318	LABEL TURBOMIST OVAL (LARGE)	2
6319	LABEL TURBOMIST OVAL (SMALL)	2
6320	LABEL HAZARDS FRENCH/ENGLISH	1
6321	LABEL (EN MARCHE)	1
6322	LABEL (1 2 3 4 5 ETC.)	1
6324	HOSE 3/8 - 3/8 90 SW F / 3/8 STR F (HEADS)	8
6325	HOSE 1/4 - 1/4 F STR / 1/4 F STR (DRAINS)	4
6326	HOSE 1/2 - 1/2 SW 90 F / 1/2 F STR (FRONT TO FILTER)	1
6327	HOSE 1/2 - 1/2 SW 90 F / 1/2 SW 90 F (RET. BLOCK TO FRONT)	1
6328	HOSE 3/8 - 3/8 STR F / 3/8 SW 90 F (BLOCK DRAIN TO FRONT)	1
6329	HOSE 1/2 - 1/2 SW 90 F / 1/2 STR M (FILT/BLOCK)	1
6333	PLUG 3/8 CONE TYPE (AD-BP-2-C)	8
6338	M8 X 55 S/S BOLT	2
6341	SEAL BONDED 1/8 BSP	4
6233/	HOSE 3/8 BLACK X 600 LONG	4
6233/	HOSE 3/8 BLACK 3500 LONG	4
AJ6344	ORIFICE PLATE NO.98	4
AJ6379	LFM BODY 1/4 BSP BRASS	4
AJ6380	LF CAP BRASS	4
AJ6381	HOSE BARB 3/8 FLAT SEAT	4
LF2181	HOSE CLIP, ABBA 17	16
	CABLE 12V	
	WATERPROOF PLUG	1
	WATERPROOF SOCKET	1
	GROMMET	4
	PINS	2
	SOCKETS	2
	CABLE	
	DIODE	1

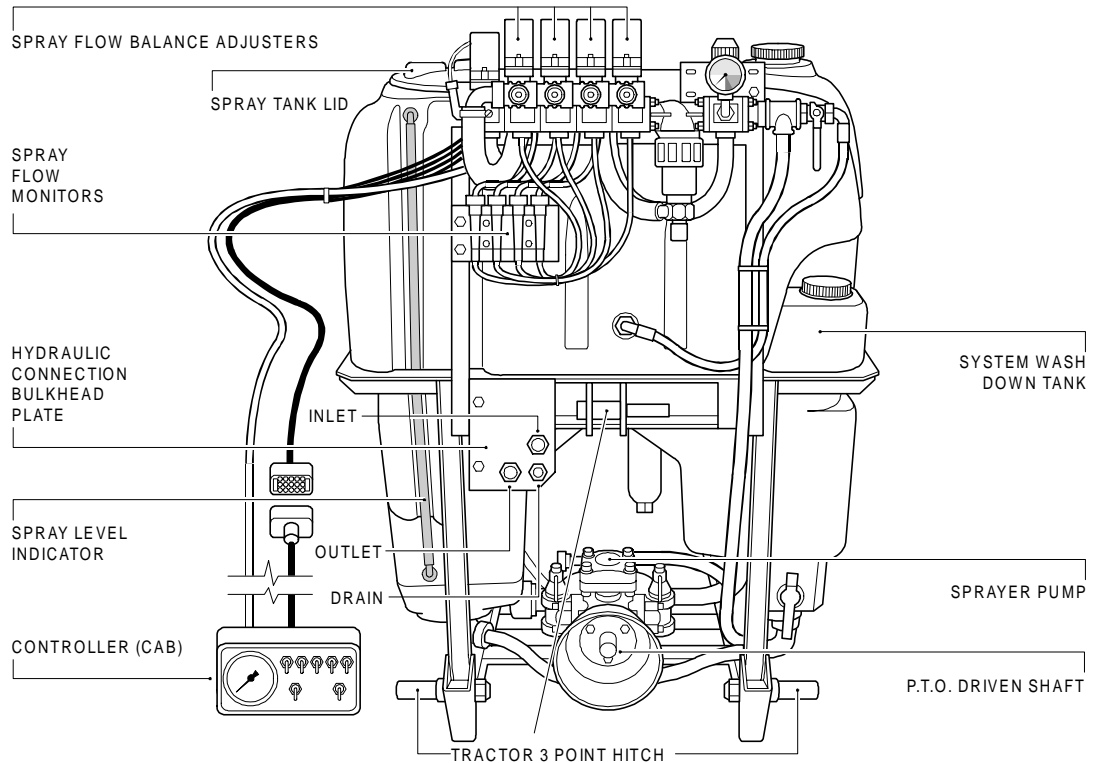
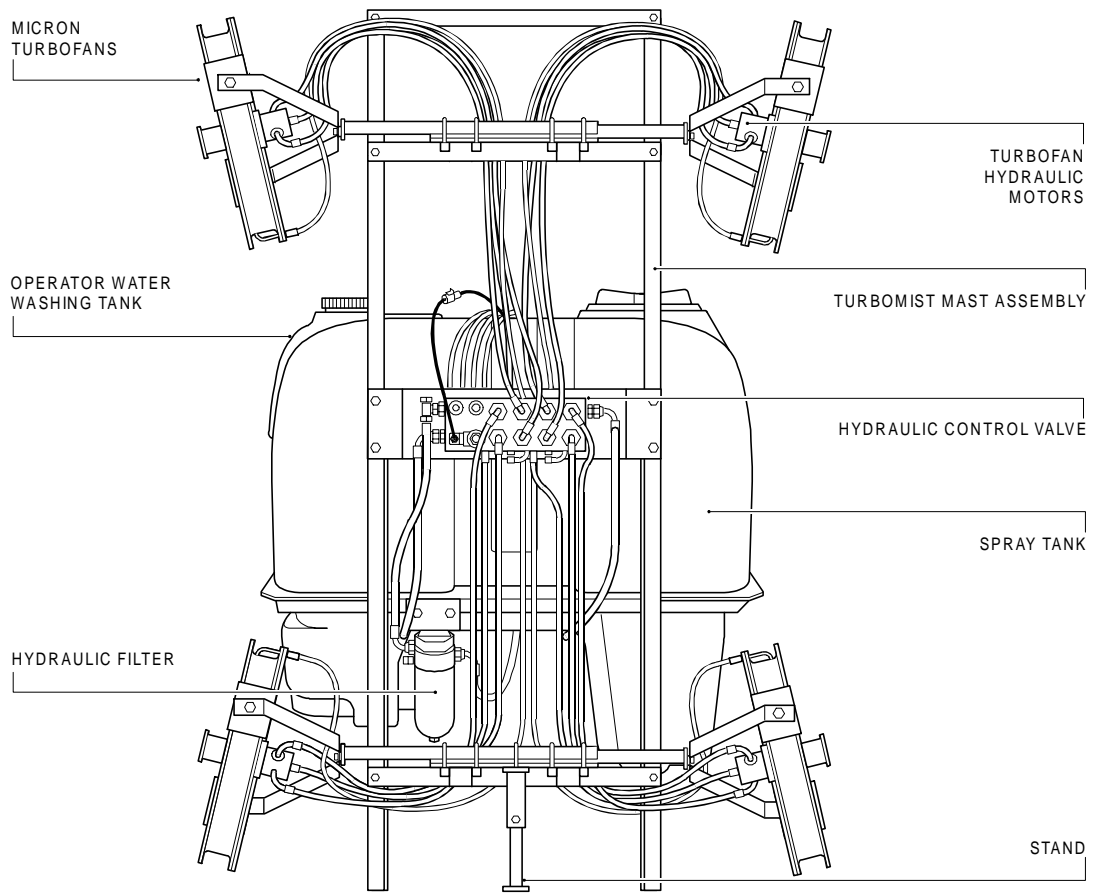
TURBOSPRAY PARTS DIAGRAM (1 OF 3)



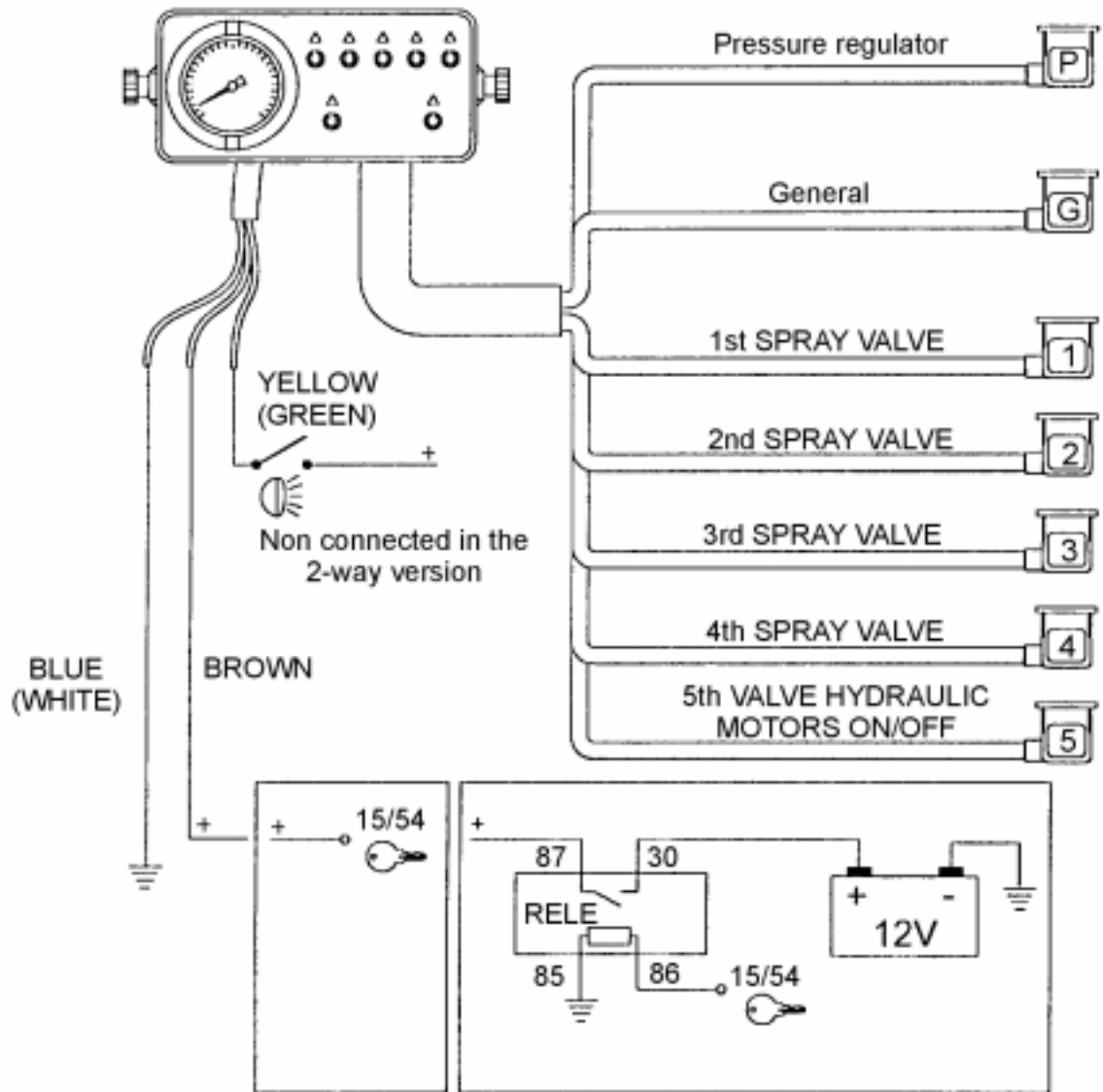
TURBOSPRAY PARTS DIAGRAM (3 OF 3)



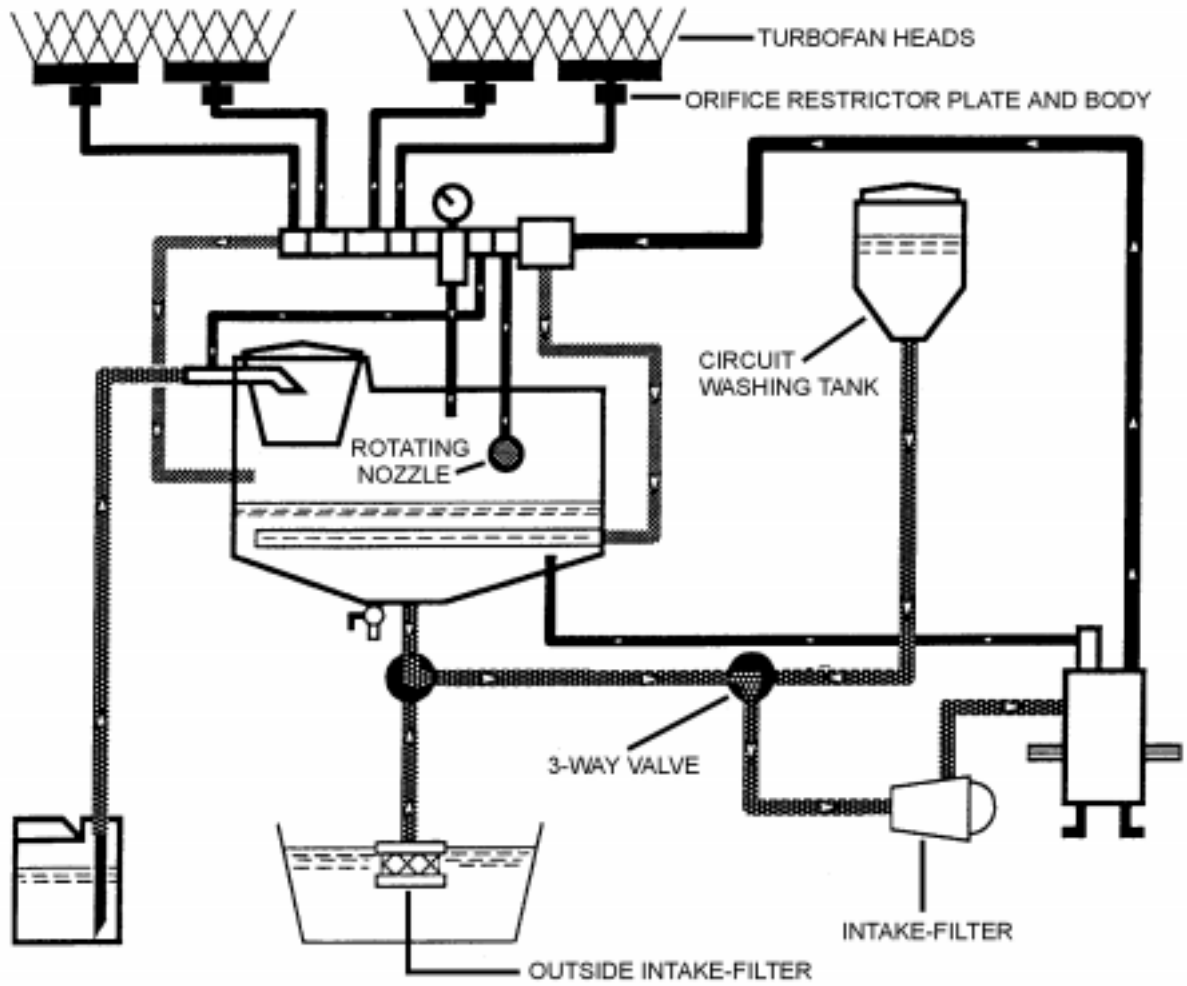
TURBOSPRAY GENERAL ARRANGEMENT (2 OF 2)



TURBOSPRAY CONTROL BOX DIAGRAM



TURBOSPRAY SPRAY CIRCUIT PLUMBING DIAGRAM



NOTES