



OWNER'S MANUAL FOR



ATV MOUNTED **C.D.A BOOM SPRAYERS**

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SAFETY PRECAUTIONS

ATV C.D.A. BOOMS

AN IMPORTANT MESSAGE FOR OWNERS & OPERATORS OF C-Dax ATTACHMENTS/ACCESSORIES

Be warned of the dangers of loading your ATV or other vehicle in excess of its carrying capacity. It is important to understand that any loads or attachments whether fastened to or placed on a vehicle or ATV will alter the stability or handling characteristics of that vehicle or ATV. Spray tanks or other equipment must be filled only to a level where the gross weight is within the load limit of the ATV or other vehicle.

Safety is a primary concern in the design, manufacture, sale, and use of spray tanks and other equipment. As manufacturers of spray tanks and other equipment we want to confirm to you, our customers, our concern for safety. We take this opportunity to remind you about the simple, basic and common sense rules of safety when using spray tanks and other equipment. Failure to follow these rules can result in severe injury or death to operators and bystanders.

It is essential that everyone involved in the assembly, operation, transport, maintenance and storage of this equipment be aware, concerned, prudent and properly trained in safety.

This also applies to equipment that is loaned or rented to someone who has not read the owner's manual and is not familiar with the operation of application equipment.

- NEVER EXCEED THE LOAD LIMIT CAPACITY OF THE ATV OR OTHER VEHICLE.
- ALL ATV AND TRAILED EQUIPMENT TYRES SHOULD BE INFLATED TO MANUFACTURERS RECOMMENDED OPERATING PRESSURES.
- PLEASE NOTE THAT FILLING THE SPRAY TANK OR OTHER EQUIPMENT COMPLETELY AND OR THE ATTACHMENT OF ADDITIONAL EQUIPMENT TO THE ATV MAY EXCEED THE ATV'S MAXIMUM LOAD CAPACITY, AND ADVERSELY AFFECT THE STABILITY OF THE ATV OR OTHER VEHICLE.
- CARGO SHOULD BE PROPERLY DISTRIBUTED AND SECURELY ATTACHED.
- REDUCE SPEED WHEN CARRYING CARGO OR PULLING A TRAILER OR TRAILED APPLICATION EQUIPMENT AND ALLOW GREATER DISTANCE FOR BRAKING.
- NEVER ALLOW ANYONE TO RIDE ON YOUR SPRAYER OR OTHER EQUIPMENT.
- ALWAYS FOLLOW THE INSTRUCTIONS IN THE OWNER'S VEHICLE MANUAL FOR CARRYING CARGO OR PULLING A TRAILER.
- PROPER MAINTENANCE IN LINE WITH MANUFACTURER'S RECOMMENDED MAINTENANCE PROCEDURES IS ESSENTIAL.
- BEFORE APPLYING CHEMICALS, READ THE LABEL OF THE CHEMICAL MANUFACTURER OR SUPPLIER FOR PERSONAL PROTECTIVE EQUIPMENT AND OPERATE AS RECOMMENDED.

THE SAFETY OF ALL CHEMICALS USED IN AGRICULTURE IS UNDER THE JURISDICTION OF A GOVERNMENT AGENCY, IE N.Z. MINISTRY FOR THE ENVIRONMENT; USA ENVIRONMENTAL PROTECTION AGENCY. FURTHER LOCAL GOVERNMENT OR STATE LAWS MAY APPLY.

Throughout this manual there are highlighted text boxes containing warnings, cautions and notes.

Warnings are mandatory instructions to prevent serious injury or permanent damage.

Cautions are advisory instructions to ensure reliable operation of the equipment.

Notes are for convenient operation.

WARNING

To reduce the chance of ATV instability, it is recommended that the ATV be stationary while spot spraying on a slope or hillside.

SAFETY PRECAUTIONS CONTINUED

- Before attempting to install or operate the equipment, read and understand the manual thoroughly. Failure to comply with this instruction constitutes improper use and will invalidate the warranty.
- Before using your pesticide, STOP, Read the label.
- Mixing pesticides is a most dangerous time as it involves handling the concentrated material. For toxic compounds, use protective clothing such as overalls, hat, gloves, boots and respirator.
- When using concentrated sprays, full protection is necessary.
- When using diluted sprays, wear a hat, long-sleeved cotton overalls, and boots. If you use pesticides regularly, it is a good idea to always wear a respirator to avoid cumulative effect.
- Other protection may be required. Check the label. It may have specific directions for the particular chemical.
- Protective clothing should be properly cared for. Rinse heavily contaminated clothes in the open before washing in the laundry.
- Wash and dry protective clothing every day, but keep them separate from other washing.
- Respirators need special care. Clean your respirator after spraying. Use soapy water then rinse and allow drying completely before storing in a clean plastic bag. Replace canisters in respirator after eight hours use.

C-Dax

ATV MOUNTED

C.D.A BOOM SPRAYERS

OWNER'S MANUAL
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WARRANTY

1 WARRANTY AND LIABILITY

Use of the equipment

- 1.1 You must satisfy yourself as to the suitability of the equipment for your intended use(s) of the equipment.

Your relationship with the retailer

- 1.2 Where you consider you have a warranty claim (or any other claim) in relation to the equipment, you must contact the retailer who sold you the equipment, not C-Dax directly. The retailer is responsible for liaising with C-Dax in respect of your claim.

Warranty

- 1.3 C-Dax warrants to the original purchaser that the equipment is sold free from defects in materials and workmanship for a period of 12 months from date of first retail sale (6 months from date of first retail sale if the equipment is sold in the U.K.) subject to the terms set out below.
- 1.4 C-Dax will at its option repair or replace the defective equipment (or part of the equipment) or notify the retailer of the equipment to refund the purchase price for such defective equipment to you in the event of a breach of this warranty, subject to the terms set out below.

Liability

- 1.5 Except for the warranty set out in clause 1.2 above, all warranties and representations (including those expressed or implied by law) in respect of the equipment or advice relating to the equipment provided to you by C-Dax are excluded to the extent permitted by law.
- 1.6 Notwithstanding anything else in this manual, C-Dax's maximum liability to you (in the event that such liability exists) in respect of any breach of warranty, any matter set out in this manual, or for defective equipment or advice relating to the equipment provided is limited at C-Dax's option to:
- (a) repairing or replacing the equipment (or part of the equipment); or
 - (b) notifying the retailer of the equipment to refund the price for the equipment paid by you.
- 1.7 Notwithstanding anything else in this manual, in no event will C-Dax be liable, whether in contract, tort (including negligence) or otherwise:
- (a) where you have altered or modified the equipment, misused or misapplied the equipment, or the equipment has been subjected to any unusual, excessive or non-recommended use, service or handling (including as set out in this manual);
 - (b) where the equipment is not transported, stored, handled or used in accordance with any directions given by C-Dax (or the retailer) to you (including as set out in this manual);
 - (c) where the equipment:
 - (i) has been subject to neglect, accident or hireage, or the damage arises from fair wear and tear, battery damage or chemical attack;
 - (ii) has been built to a customer's specifications; or
 - (iii) has been dismantled, repaired or serviced other than by an authorised service agent of C-Dax;
 - (d) for loss or damage caused by any factors beyond C-Dax's control; or

(e) for any loss of profit or revenue, or for any special, indirect, incidental or consequential damage, loss or injury of any kind suffered by you.

1.8 Where C-Dax elects to repair or replace the equipment it will use reasonable endeavours to do so as soon as practicable but will not be liable for any delay in doing so.

1.9 You agree that the transactions entered into between you and the retailer (and C-Dax) are for the purposes of trade and that, having regard to all relevant circumstances of the transactions, it is fair and reasonable that the provisions of the Consumer Guarantees Act 1993 (NZ) do not apply to those transactions to the fullest extent permitted by law.

INSTALLATION

ATV Mounting

NOTE

The QS upright bars can be adjusted in 50mm increments on the sprayer centre frame.

218/318

The 218/318 are general purpose C.D.A. booms for pastoral and other applications.

No QS Frame

Bolt the boom to an appropriate surface using the boom mounting holes.

With QS Frame

Install the QuickSmart™ frame as detailed in the QuickSmart™ mounting instructions.

With QSA Frame

Fit the QS upright bars to the centre frame of the sprayer using M10x30 bolts and nuts supplied. Fit with mounting lugs facing inwards. Fit the sprayer to the QuickSmart™ frame and unfold arms. To set:

- 218 atomisers at correct width spacings, fold arms around until they line up with centre frame.
- 318 arms diagonally fold out 180°, the centre probes fold down 90° and lock.

Set atomisers to required spraying height by fitting the QS mount bars on the high or low position, and/or adjusting the position of the mount bars on the centre frame of the sprayer.

Boom Height

The top of the atomiser's spinning disc should be 600mm above the target. If this is not achievable (for very tall targets such as Californian Thistle) mount the boom as high as possible.

WIRING

Place the switch box on the vehicle to suit the operator. Use the Velcro attached to the base of the switch box to secure it to the vehicle.

Connect the battery connections to the vehicle battery taking care to ensure that the red wire is connected to the positive battery terminal.

Connect the cables to the sprayer using the connectors provided. The connectors may be removed and the cables shortened if required, but care must be taken to ensure that the wires are reconnected correctly.

CAUTION

Failure to connect the wiring correctly will result in the atomisers spinning in reverse. This will adversely affect the operation of the sprayer. The atomiser has the correct direction of rotation labelled on the motor.

Unplug the sprayer pump connection and reconnect the pump to the appropriate cable (pump) from the control box.

The unused sprayer battery cable may be removed or left in place and stowed for reconnection when the sprayer is removed from the vehicle.

If the handlebar mounted switch is preferred to control the pump (ATV only), leave the appropriate cable (pump) from the sprayer control box unconnected.

PLUMBING

NOTE

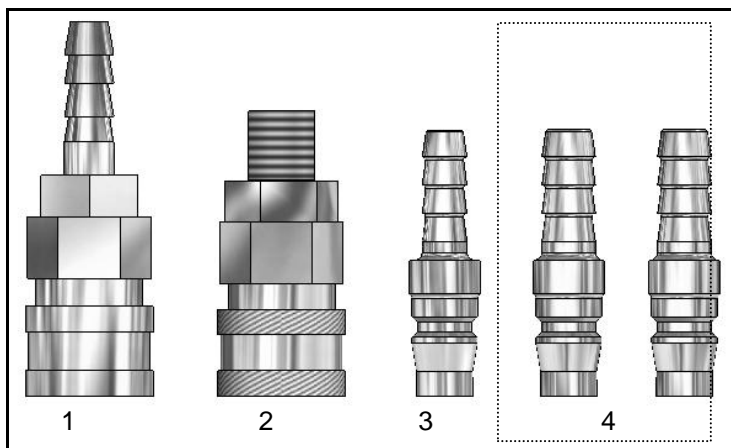
A combination of heating the end of each hose with hot water and applying Vaseline to the hose tail will make installation easier.

NOTE

Use the 'E' clamps on 8.5mm hose and the 'F' clamps on 10mm hose.

Delivery Hose

Each CDA Boom is supplied with a dry-break kit. Once installed, this kit allows quick and easy interchanging of spray equipment.

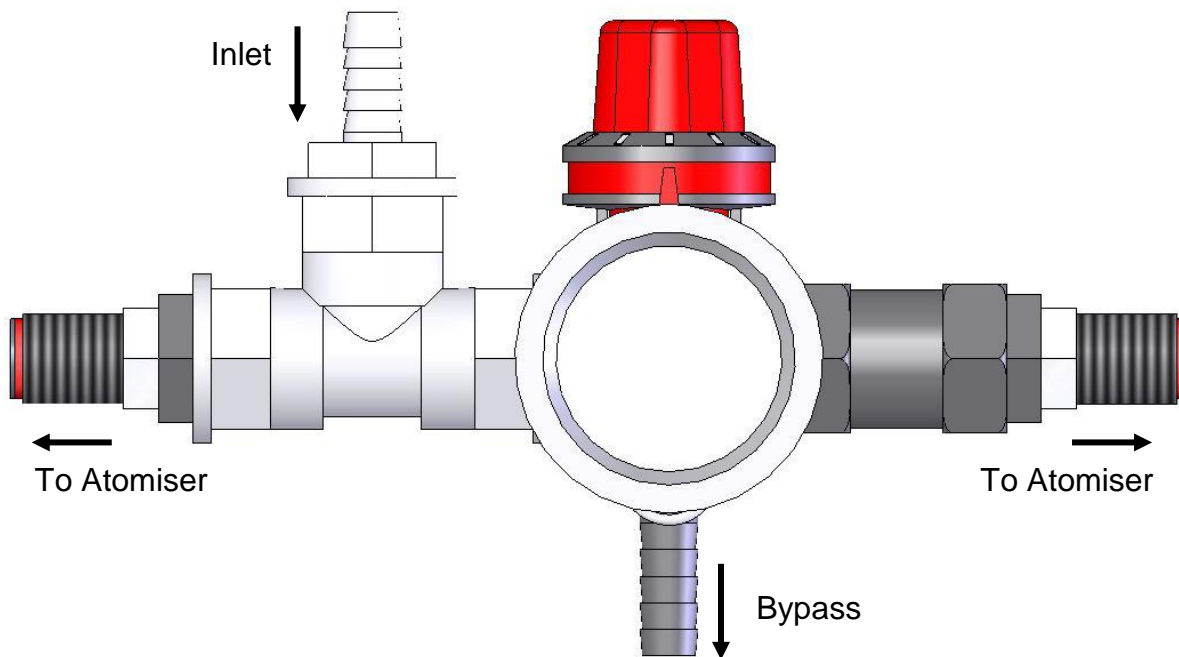


Dry-break kit

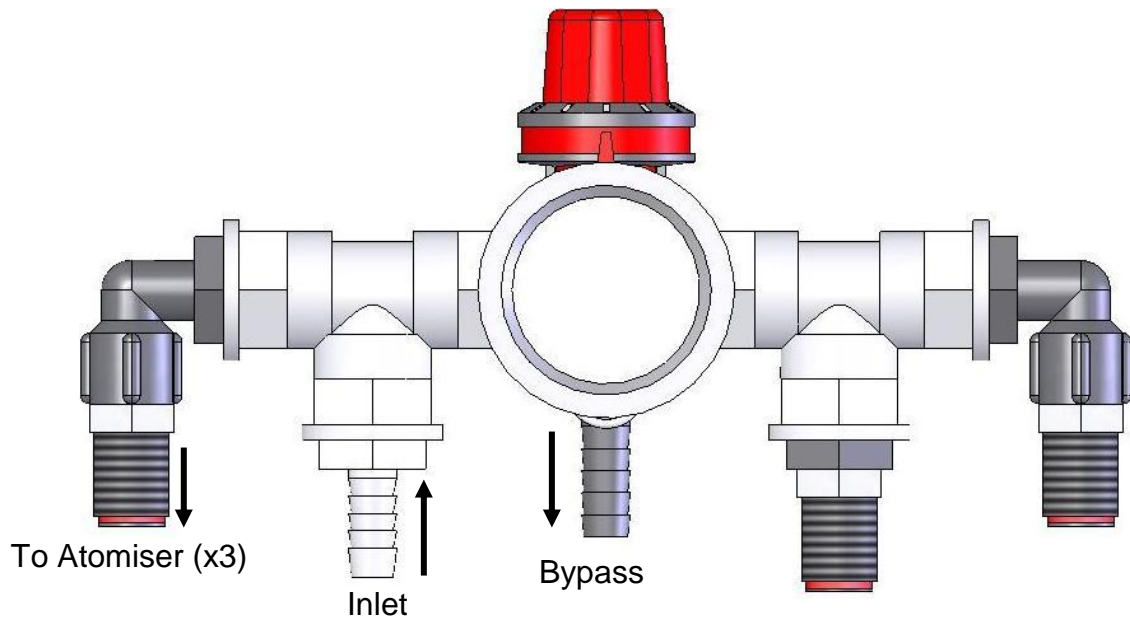
Using the parts found in the dry-break kit, install as follows:

1. Route the delivery hose from the pump to a convenient position near the CDA frame.
2. Cut this hose and install the quick release valve with the 8.5mm brass hose shank (1).
3. Cut a length of the supplied delivery hose to a length that connects the above brass fitting with the regulator assembly. Connect one end of this hose to the inlet hose tail on the regulator and the other to a quick release valve with a 10mm brass hose shank (4).

The following diagrams show the regulator hose setups.

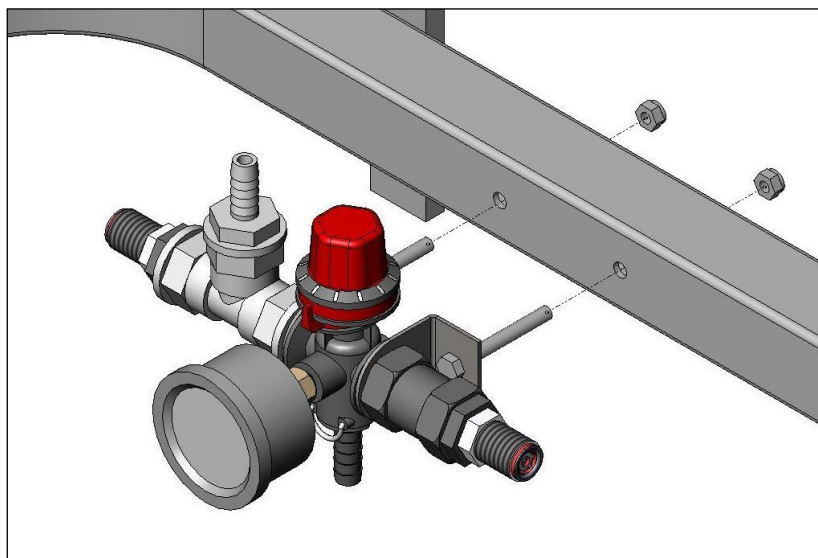


218 Regulator Assembly



318 Regulator Assembly

Place a check valve strainer and flow plate into each of the atomiser ports and connect all the hoses to the regulator. Fasten the regulator to the frame through the holes provided (see 218 regulator mounting below).



Return Hose

Cut a length of the supplied delivery hose to a length that connects the regulator assembly to the tanks bypass-inlet. This must be connected to deliver the excess flow from the regulator back to the tank.

Connect one end of the hose to the bypass hose tail on the regulator assembly and the other to a quick release valve with the 10mm brass hose shank (4). This connects to the 10mm quick coupler (2) that – if not already installed - will need to be installed on the tank. Placement of this bypass-inlet will depend on the tank in use.

Installing the Bypass-Inlet

CAUTION

Carefully screw the valve into the tank fitting applying a little liquid thread sealer to the thread

WARNING

To avoid damaging the tank, do not over tighten the fittings.

50 and 80 Litre Sprayrider Tanks

1. Locate the brass insert in the tank rear wall under the blue fresh water tank, and carefully drill out the plastic using an 11mm drill bit.
2. Screw the 10 mm brass quick-coupler (2) into the insert as shown below.
3. Route the 10 mm bypass hose connected to the throttling valve to this tank connection.



SR50/80

THE PROCESS OF SPRAYING

Conventional pressure nozzle spray booms waste between 60-70% of their output due to the broad spectrum of droplet sizes they produce. Typically 10-1000 microns in size. (1 micron = 1/1000th of a millimetre)

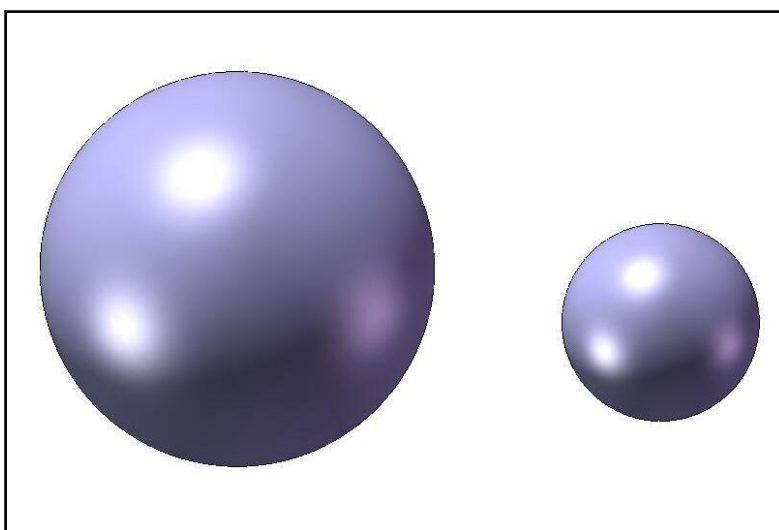
Potentially:

Small Droplets:	Droplets less than 70 microns drift In a moderate breeze 10-40 micron droplets will drift hundreds of metres.
Medium Droplets:	250 micron droplets move only 2-3 metres
Large Droplets:	Droplets greater than 350 microns run off

Optimum droplet size is said to be around 200-250 microns for herbicidal spraying.

NOTE

A 800 micron droplet contains 8 times the volume of a 400 micron droplet.
A 400 micron droplet contains 8 times the volume of a 200 micron droplet.



Droplet Size Comparison: 800 micron droplet (left) and 400 micron droplet (right)

THEORY OF OPERATION

Spray fluid is placed in the tank where it is drawn through a suction filter and pumped to a control valve. The excess flow from the valve is returned to the tank via the bypass hose. Fluid at a nominal pressure of 1.3 bar is metered to the atomisers via orifice plates, and line strainers.

At the atomiser, fluid is delivered into the spinning atomiser disc via two feed nozzles. From the base, centrifugal force propels the fluid up the fluted sides of the atomiser disc and the droplets of a controlled size form between the gaps of the teeth around the edge of the atomiser. Centrifugal force evenly distributes the droplets over a 360-degree diameter from the atomiser.

Droplet size is controlled by the constant speed of the spinning atomiser disc.

OPERATION

1. Place water in the spray tank.
2. Fold the boom arms out.
3. Turn on the pump, (switch labeled 'PUMP' on the switch box). Leave the atomisers switched off.
4. Ensure hoses and lines are free of kinks and blockages.
5. Allow time for the air to be expelled from the hoses and lines.
6. Water should flow evenly over the edge of the blue atomiser disc.
7. With the pump still on, set the pressure in the spray line to approximately 20psi (1.3 bar), by turning the bypass regulator stem on the control unit.
8. Turn on the atomiser discs (switch labelled "DISC" on the switch-box). Even-sized droplets will be formed by the atomisers, thus creating the spray.

SPRAYING

There are five easy steps to Controlled Droplet Application (C.D.A.) spraying:

1. Select droplet size
2. Calibrate the boom
3. Select travel speed
4. Add chemical
5. Spray

1. Select Droplet Size

Choice of Droplet

The atomiser(s) can produce two different sizes:

"MEDIUM" 150-180 micron (µm) diameter.

"LARGE" 250-300 micron (µm) diameter.

NOTE

One micron is one thousandth of a millimetre. 250 micron is one quarter of a millimetre, or approx "ten thou".

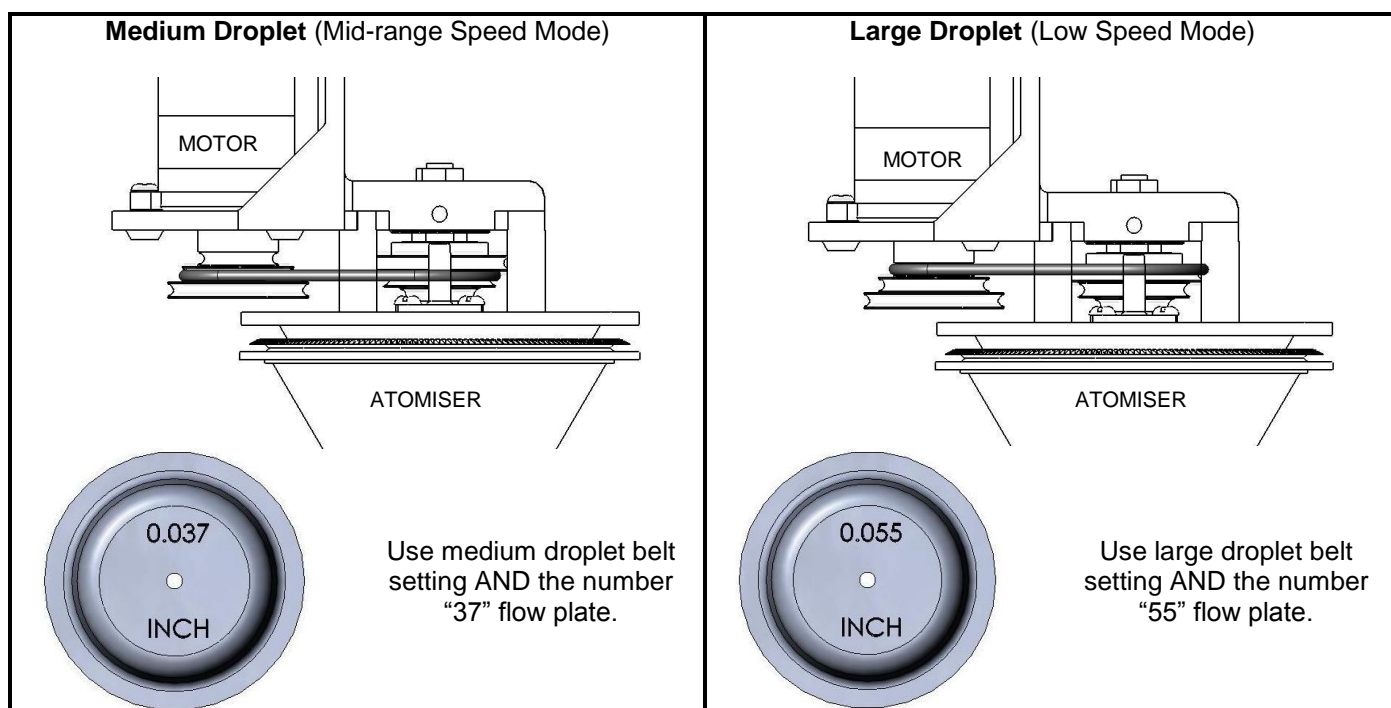
Droplet to Use

Use the MEDIUM droplet, except in the following circumstances:

	Chemical(s)	Environment	Physical
LARGE Droplet	<ol style="list-style-type: none"> 1. Soil applied chemical. Wettable powder. 2. High nitrogen content. 3. Liquid fertiliser. 4. Mixture or "Cocktail". 5. High application rate. 	<ol style="list-style-type: none"> 6. Dead calm. 7. Wind greater than 12 kph. 8. Dry soil. 9. Humidity lower than 50%. 10. Temperature higher than 18°C. 	<ol style="list-style-type: none"> 11. To reach weeds at base of maturing crop.

Changing droplet size:

Droplet size is determined by a) the belt setting on the atomiser and b) the flow plate used above each atomiser. The following table shows the settings used to create each droplet.



NOTE

Your boom is factory set for large droplets with #55 flow plates and low speed belt setup.

2. Calibrate The Boom

1. With the sprayer operating, catch the fluid in a large pail for one minute.
2. Using a measuring jar, measure the amount of fluid dispensed.
3. The flow must be **1.0 L/Min** for the large droplet and **500 ml/Min** for the medium droplet.
4. To adjust the flow rate, alter the pressure at the control valve
5. Flows from each atomiser should be within five percent of each other. If not, check for blockages, incorrect or damaged flow Plates, or poor pump performance.

3. Select Travel Speed

A **CONSTANT** vehicle speed **MUST** be maintained. The maximum recommended vehicle speed is 12 kph. Use 6 to 8 kph for rough conditions. Check your speedometer or tachometer with the tank half full of water.

- 6 kph = travelling 50 metres in 30 seconds
- 8 kph = travelling 50 metres in 22 seconds
- 10 kph = travelling 50 metres in 18 seconds
- 12 kph = travelling 50 metres in 15 seconds

4. Add Chemical to the Tank

The following tables show the litres or kilograms of chemical to put in your tank depending on your Droplet Size, Vehicle Speed and Chemical Rate per Hectare.

Use the table according to your tank size. For example, use the 50 litre table if you have a 50 litre tank. Determine your **CHEMICAL** Rate per Hectare by referring to the chemical container or information leaflet supplied with the chemical. (WARNING: Ignore recommended "Total Application Rates" or "Water Rates" as they often refer to spraying with pressure nozzles). If CDA spray rates are listed on the chemical label rates, apply these rates. Half fill the tank with **CLEAN** water, add the chemical then fill with **CLEAN** water.

NOTE

Ensure chemical is thoroughly mixed with water before spraying.

EXAMPLE: 50 litre tank, MEDIUM droplet, 3 litres of chemical per hectare, travel speed 12 kph. Therefore, 10.8 litres of chemical in the tank, the rest is CLEAN water.

Droplet Size	Chemical Rate per Hectare litres/ kg	Litres/kg of Chemical in Tank for vehicle speeds at 8, 10, 12 kph											
		50 litre Tank			80 litre Tank			100 litre Tank			200 litre Tank		
		8	10	12	8	10	12	8	10	12	8	10	12
Large Droplet	1	1.2	1.5	1.8	1.9	2.4	2.8	2.4	3.0	3.6	4.8	6.0	7.2
	2	2.4	3.0	3.6	3.9	4.8	5.8	4.9	6.0	7.2	9.8	12.0	14.4
	3	3.6	4.5	5.4	5.8	7.2	8.6	7.2	9.0	10.8	14.4	18.0	21.6
	4	4.8	6.0	7.2	7.7	9.6	11.5	9.6	12.0	14.4	19.2	24.0	28.8
Medium Droplet	1	2.4	3.0	3.6	3.9	4.8	5.8	4.9	6.0	7.2	9.6	12.0	14.4
	2	4.8	6.0	7.2	7.7	9.6	11.5	9.6	12.0	14.4	19.2	24.0	28.8
	3	7.2	9.0	10.8	11.5	14.4	17.3	14.4	18.0	21.6	28.8	36.0	43.2
	4	9.6	12.0	14.4	15.4	19.2	23.0	19.2	24.0	28.8	38.4	48.0	57.6

5. Spray

CDA Performance data

Spraying Solutions	Droplet Size	Boom Model	Application Rate (lit/ha at 8, 10 and 12 kph)	Range of Tank (hectares at km/hour)													
				50 litre Tank			80 litre Tank			100 litre Tank			Time to Empty Tank (minutes)				
				8	10	12	8	10	12	8	10	12	8	10	12	50	80
Foliar Fertilisers High 'N' Chemicals Systemic & Soil applications Herbicides & windy conditions	250-300 Micron #55(L) Flow Plate	118															
	218	42.0	33.0	27.0	1.2	1.5	1.85	1.9	2.4	3.0	2.4	3.0	3.7	50	80	100	
	318													25	40	50	
	418													17	26	33	
Contact & systemic herbicides, fungicides, & insecticides applied to foliage	150-200 Micron #37(M) Flow Plate	118															
	218	21.0	16.5	13.7	2.4	3.0	3.6	3.8	4.8	5.8	4.7	6.0	7.3	100	160	200	
	318													50	80	100	
	418													33	53	67	
														25	40	50	

CAUTION

Ensure that the ATV has sufficient power supply for running pump, boom, Foam Marker, etc. As a guide, amp ratings are:

Flojet 3501	6 amps
8002 SHURflo Pump	6 amps
Micromax Atomiser	3 amps (each)
Foam marker Compressor	6 amps

NOTE

An initial running-in period occurs before the motors reach full speed, which can take between 15mins to an hour. As long as the spray from the atomisers is consistent, the boom can be used.

APPLICATION FORMULA

Area Covered per Tank

The area cover per full tank (Ha) =
$$\frac{\text{Amount of Chemical in a Full Tank (L or Kg)}}{\text{Chemical Rate per Hectare (L or Kg)}}$$

Spray Volume

Spray Volume per Hectare (L/Ha) =
$$\frac{\text{Tank Volume (L)}}{\text{(Hectares Sprayed with a Full Tank)}}$$

Spray Volume

Time to Empty a Full Tank (Mins) =
$$\frac{\text{Tank Volume (L)}}{\text{(Total Volume/Min from the Atomisers)}}$$

- To spray an area LESS than that covered by a full tank:

- Chemical Per Tank (L or Kg) = (Chemical Rate per Hectare) x (Hectares to Spray)

- Total Spray Volume per Area (L/m²) =

$$\frac{\text{Volume of Tank (L) x Chemical for the Tank (L or Kg)}}{\text{Amount of Chemical for a Full Tank (L or Kg)}}$$

USING THE PREVIOUS EXAMPLE: 50 litre tank, MEDIUM droplet, 3 litres of chemical per hectare, travel speed (from page 15) 12KPH, and 10.8 litres of chemical in a full tank. Total area sprayed with a full tank is 3.6 hectares.

THEREFORE: If only 2 hectares are to be sprayed, 5.9 litres of chemical and 21.9 litres of clean water are required for a total spray solution volume of 27.8 litres.

NOTE

With ATV mounted 50, 80 and 100 litre tanks, only use powders that stay in suspension for more than the time taken to empty the tank.

CHEMICAL ADVICE

C-Dax Ltd or their agents cannot make recommendations or give advice as to the use of chemicals and cannot accept responsibility for any damage, injury or other consequence for disregarding this warning notice. Contact your chemical supplier for advice.

WARNING

Mixing chemicals is a most dangerous activity as it involves handling the concentrated material. For toxic compounds, use protective clothing such as overalls, hat, gloves, boots and respirator.

When using diluted sprays, wear at least a hat, long-sleeved cotton overalls, and boots. If you use pesticides regularly, it is a good idea to always wear a respirator to avoid accumulation of toxins in the body. Other protection may be required. Check the label for specific directions for the particular chemical.

Purchasers must ensure that operators of these machines are fully aware of the dangers of spraying chemicals.

MAINTENANCE

After Use

- At the end of spraying, flush the system three times with fresh water. Finish with a final rinse using C-Dax Neutralise rinsing solution.
- Remove the strainer basket under the lid of the sprayer, rinse and refit.
- Remove the nut at the outlet of the pressure controller, remove the strainers and flow plates, clean them and replace them ensuring that the nuts are finger tight.
- Clean the outside of the sprayer to remove any spray residue.
- Lubricate the spinner bearings by applying a few drops of SAE30 lubricating oil at the oil cap (if fitted, models without oil cap have sealed bearings).

Routinely

- Check that atomiser discs rotate freely.
- Clean or replace bearings as necessary.

Annually

- Check the condition of the drive belts between the atomisers and the atomiser motors. Replace any belts that have become slack and are slipping.
- Lubricate the break away joints with good quality grease.

CAUTION

**When washing, do not direct water onto the motor. Pump motors are not waterproof.
Hard washing of pump motors will result in damage.**

Filters

Your C.D.A. sprayer is fitted with three stage filtration consisting of a:

- a) Filter basket at the tank inlet,
- b) Suction filter between the tank and pump, and
- c) Check valve 'nozzle' filter next to the Flow Plates.

Check all filters after the first four hours of use, then at the end of each spraying session. You may need to do this more regularly depending on the water supply and chemicals used.

Flow Plates

Check for blockages or uneven wear by calibrating. Flow Plate wear is acceptable provided flow between atomiser heads varies by less than five percent.

Electrical

Check wiring and fuse holder to ensure good connections and no exposed wires. Repair any poor quality connections.

WARNING

Do not store sprayer with detergent or chemical solution in the system.

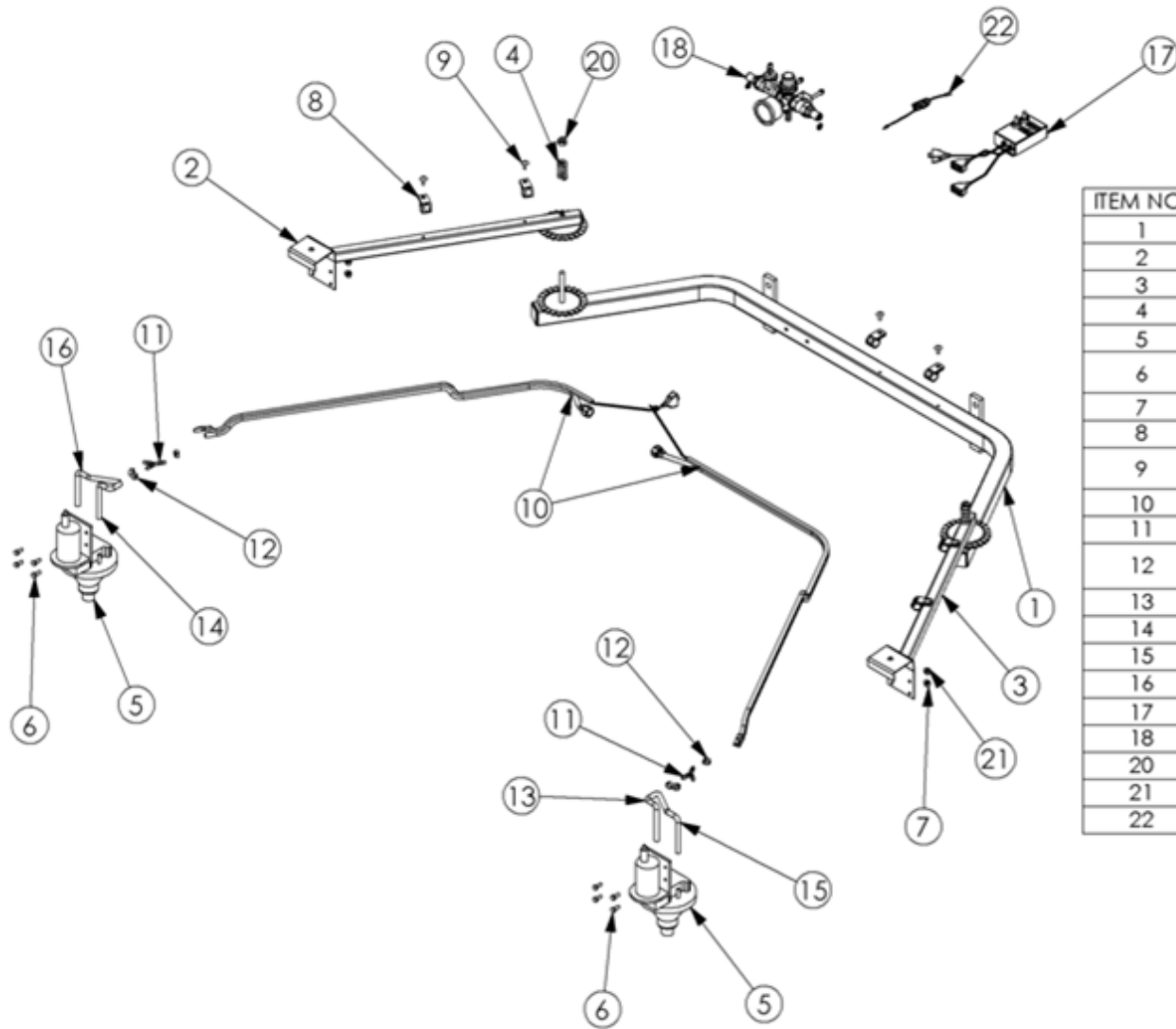
WARNING

Drain fluid from pump and system before storage if there is a risk of fluid freezing in lines.

TROUBLE SHOOTING

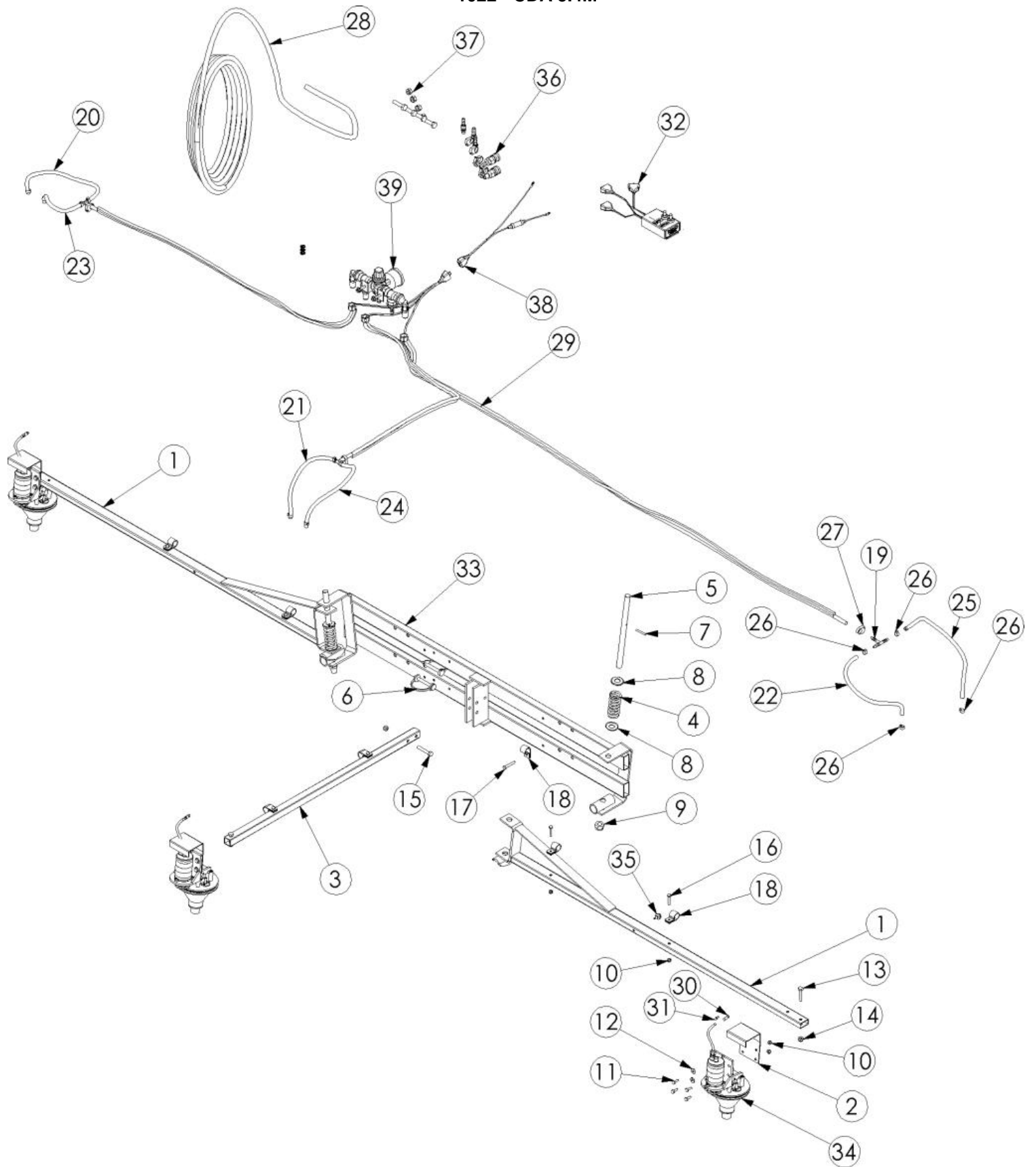
Switch turned on but pump & atomizers do not operate	1. Blown fuse	Check wiring and replace 15A fuse
	2. Connections incorrectly made	Make sure all electrical connections are correct and secure
	3. On/Off switch failed	Replace switch
Fluid flow from atomisers too low	1. Too much fluid being bypassed	Reduce bypass by adjusting throttling valve
	2. Blocked line	Check for debris, dirt and kinks in the hose.
Spray solution is foaming from atomiser	1. Air leak	Check for air leaks in all hose fittings
	2. Restricted flow	Ensure spray hose is free of kinks or restrictions
	3. Incorrect calibration	Recheck atomiser calibration and spray pressures
Atomisers slow revving	1. Insufficient voltage	Confirm battery can supply the current required. Check electrical connections.
	2. Problem with drive pulley	Check drive pulley to ensure its not slipping, loose or contacting the motor or frame
Atomisers pulsing during spraying	1. Lack of fluid	Check hose connections are tight
Pump fails to prime	1. Air Leak	Check for air leak in suction line.
	2. Blocked line	Check for debris, dirt and kinks in the hose
	3. Pump failed	Pump valves or diaphragm needs servicing
Pump head leaking	1. Loose pump-head bolts	Check and tighten if necessary
	2. Pump failed	Pump valves or diaphragm needs servicing
Low flow from atomizer but adequate pressure reading	1. Blocked line	Check for blockages in the inline filters and flow plates
	2. Pump failed	Pump requires servicing
Adequate flow <u>but</u> very high or low pressure reading	1. Regulator blocked	Ensure regulator valve is free from blockages and is plumbed correctly
	2. Pressure gauge faulty or inlet blocked	Check inlet for blockages and replace pressure gauge if necessary
Excessive pump noise or vibration	1. Pump failed	Pump requires servicing

**EXPLODED PARTS DIAGRAM
1021 – CDA 3.6M**



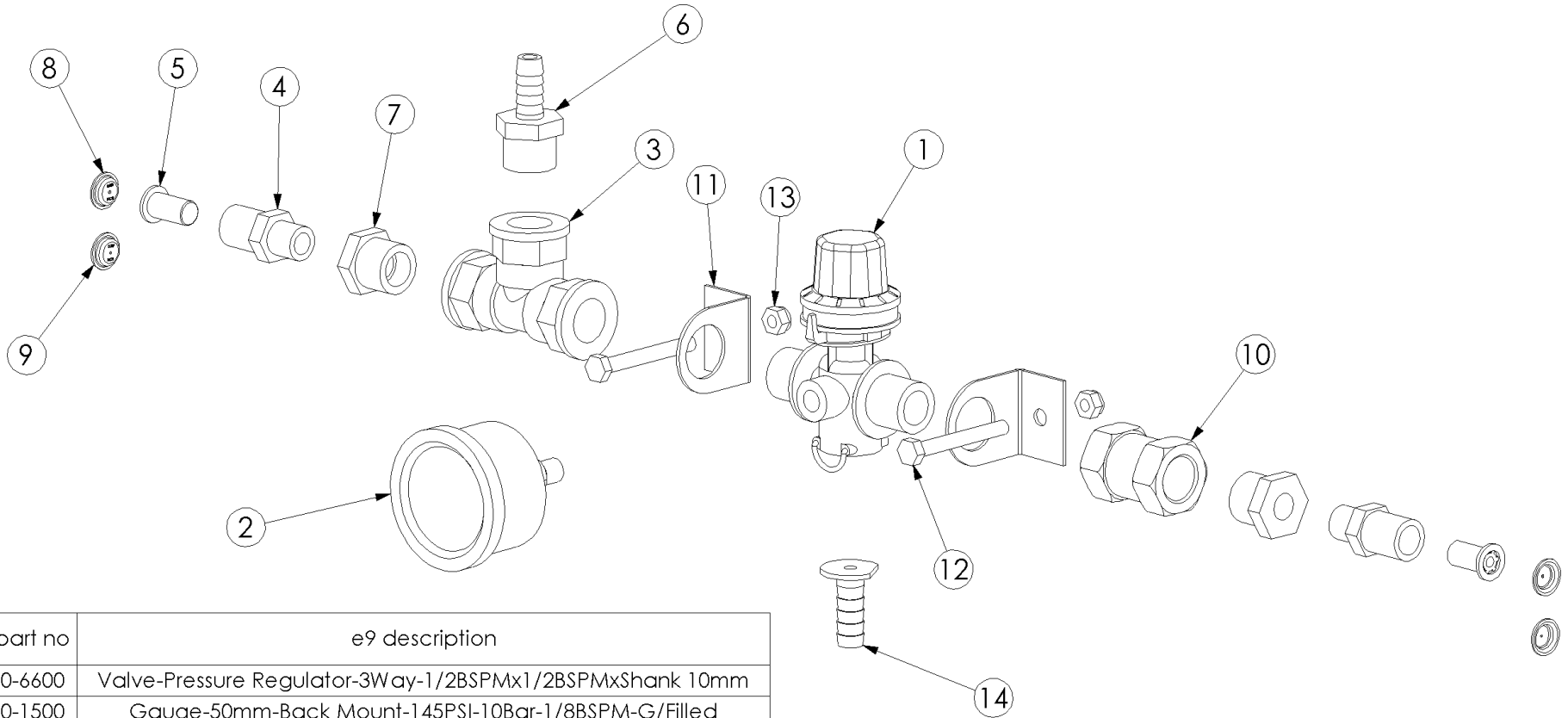
ITEM NO.	QTY.	e9 part no	e9 description
1	1	1900-1400	Centre-Boom-CDA-218-ZP
2	1	1072-1200	Arm-Boom-218-LH-ZP
3	1	1072-1201	Arm-Boom-218-RH-ZP
4	2	8250-1800	Spring-Compression-Crinkle Plate-ZP
5	2	1085-5100	Atomiser-Micron-CDA-MM84-Bare
6	8	3290-0616	Fastener-Set Screw-Hex-8.8 Grade-M6x16-ZP
7	8	3310-6006	Fastener-Washer-Flat-M6-ZP
8	6	2050-5600	Clip-P Type-Bracket-19mm-Steel ZPG
9	6	3240-0015	Fastener-Rivet-Blind-Truss Head-3/16x15mm-Aluminium
10	1	1500-3900	Cable-Electrical-Loom-CDA 218-Boom
11	2	6200-9130	Pipe-Fitting-Tee- 6 Shank x6-Plastic
12	6	2000-2013	Clamp-Hose-Oetiker-Single Ear Stepless-13.2<>15.7mm-S/S
13	1	4100-1006	Hose-Spray-Delivery-7 Bar-6mm ID-PVC
14	1	4100-1006	Hose-Spray-Delivery-7 Bar-6mm ID-PVC
15	1	4100-1006	Hose-Spray-Delivery-7 Bar-6mm ID-PVC
16	1	4100-1006	Hose-Spray-Delivery-7 Bar-6mm ID-PVC
17	1	1500-3100	Cable-Electrical-Loom-2 Switch Box-2.5M
18	1	8427-2100	Controller-Regulator-CU2 218G2
20	2	3170-0010	Fastener-Nut-Nyloc-M10-ZP
21	8	3170-0006	Fastener-Nut-Nyloc-M6-ZP
22	1	1500-3600	Cable-Electrical-Loom-Battery Feed-0.5M

EXPLODED PARTS DIAGRAM
1022 - CDA 5.4M



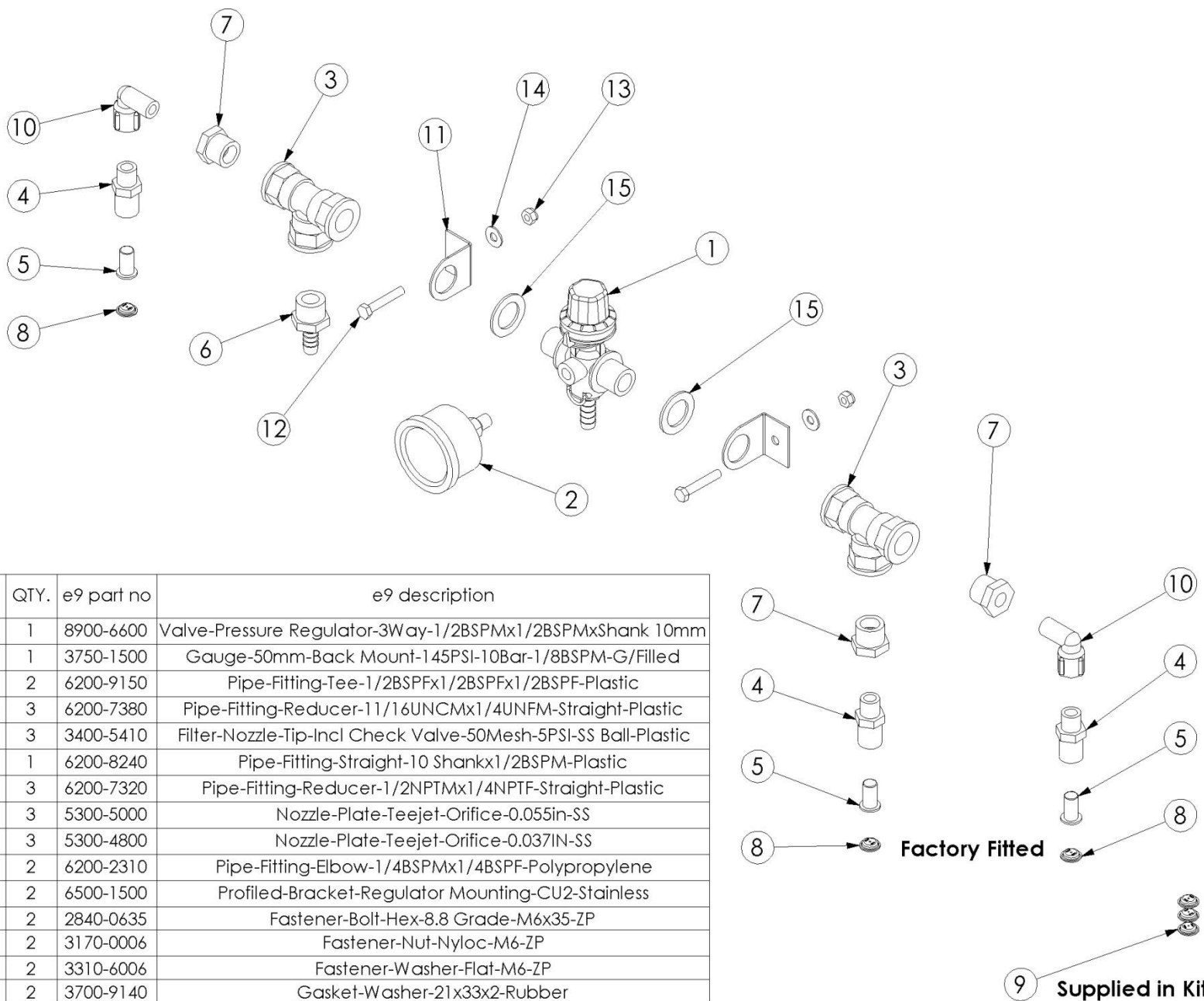
Item No.	QTY.	e9 part no	e9 description
1	2	1072-1700	Arm-Boom-ATV4-ZP
2	3	1300-5400	CDA MNT-318-G2-ZP
3	1	1072-1300	Arm-Boom-318 G2-Centre-ZP
4	2	8250-1710	Spring-Compression-Boom-SL-ZP
5	2	6100-4000	Pin-Hinge-16x280mm-i-Boom-ZP
6	2	6100-4860	PIN-LOCK-8x57mm-ZP
7	2	3205-0400	Fastener-Pin-Roll-3/16"x1 1/4"-Black Steel
8	4	3310-0016	Fastener-Washer-Cup-M16-Pressed-ZP
9	2	3170-0016	Fastener-Nut-Nyloc-M16-ZP
10	20	3170-0006	Fastener-Nut-Nyloc-M6-ZP
11	12	3290-0616	Fastener-Set Screw-Hex-8.8 Grade-M6x16-ZP
12	12	3310-6006	Fastener-Washer-Flat-M6-ZP
13	3	2840-0840	Fastener-Bolt-Hex-8.8 Grade-M8x40-ZP
14	4	3170-0008	Fastener-Nut-Nyloc-M8-ZP
15	1	3290-0850	Fastener-Set Screw-Hex-8.8 Grade-M8x50-ZP
16	4	3290-0630	Fastener-Set Screw-Hex-8.8 Grade-M6x30-ZP
17	3	3290-0640	Fastener-Set Screw-Hex-8.8 Grade-M6x40-ZP
18	7	2050-5600	Clip-P Type-Bracket-19mm-Steel ZPG
19	3	6200-9130	Pipe-Fitting-Tee-6 Shankx6 Shankx6 Shank-Plastic
20	1	4100-1006	Hose-Spray-Delivery-7 Bar-6mm ID-SUPER ULTRAFLEX-PVC
21	1	4100-1006	Hose-Spray-Delivery-7 Bar-6mm ID-SUPER ULTRAFLEX-PVC
22	1	4100-1006	Hose-Spray-Delivery-7 Bar-6mm ID-SUPER ULTRAFLEX-PVC
23	1	4100-1006	Hose-Spray-Delivery-7 Bar-6mm ID-SUPER ULTRAFLEX-PVC
24	1	4100-1006	Hose-Spray-Delivery-7 Bar-6mm ID-SUPER ULTRAFLEX-PVC
25	1	4100-1006	Hose-Spray-Delivery-7 Bar-6mm ID-SUPER ULTRAFLEX-PVC
26	12	2000-2013	Clamp-Hose-Oetiker-Single Ear Stepless-13.2<>15.7mm-S/S
27	3	2000-0010	Clamp-Hose-Herbi-C-Ratchet-10.2<>11.8mm-Black-Nylon
28	1	4100-0010	Hose-Spray-Delivery-40 Bar-10mm ID-Yellow
29	1	1500-4000	Cable-Electrical-Loom-CDA 318-Boom
30	3	8790-1210	Terminal-Bullet-Female-Crimp-Insulated-Red
31	3	8790-1240	Terminal-Bullet-Male-Crimp-Insulated-Red
32	1	1500-3100	Cable-Electrical-Loom-2 Switch Box-2.5M
33	1	1900-1410	Centre-Boom-CDA-318G2-ZP
34	3	1085-5100	Atomiser-Micron-CDA-MM84-Bare
35	1	1400-1600	Buffer-Rubber-SL Boom
36	1	4500-2250	Kit-Dry Break-CDA-8.5x10-Quick Coupler-Brass
37	1	4500-9000	Kit-Quicksmart Attachment Parts-Bagged
38	1	1500-3600	Cable-Electrical-Loom-Battery Feed-0.5M
39	1	8427-2110	Sub-Controller-Regulator-CU2 318G2

218 REGULATOR EXPLODED DIAGRAM

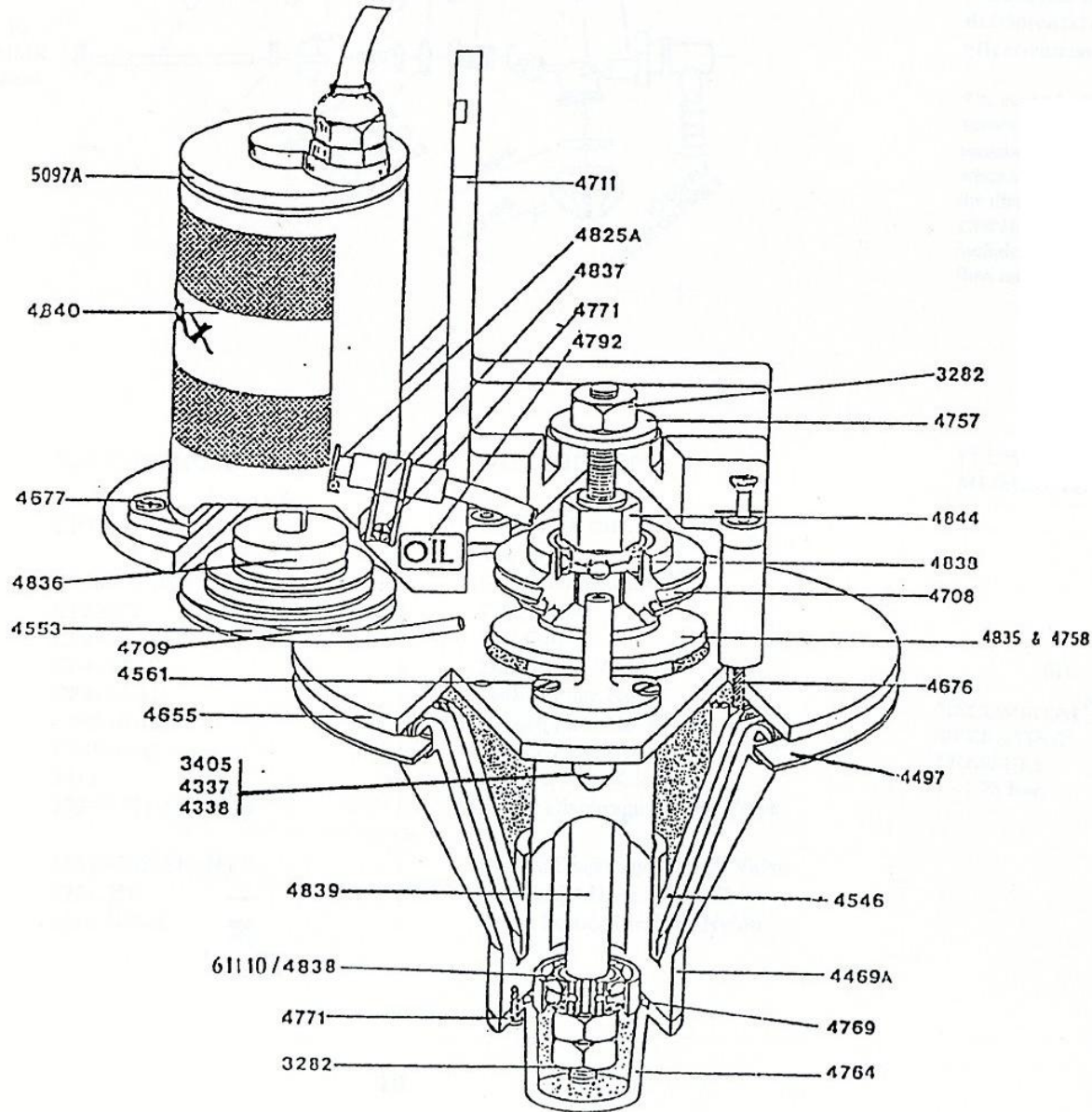


Item No.	QTY.	e9 part no	e9 description
1	1	8900-6600	Valve-Pressure Regulator-3Way-1/2BSPMx1/2BSPMxShank 10mm
2	1	3750-1500	Gauge-50mm-Back Mount-145PSI-10Bar-1/8BSPM-G/Filled
3	1	6200-9150	Pipe-Fitting-Tee-1/2BSPFx1/2BSPFx1/2BSPF-Plastic
4	2	6200-7380	Pipe-Fitting-Reducer-11/16UNCMx1/4UNFM-Straight-Plastic
5	2	3400-5410	Filter-Nozzle-Tip-Incl Check Valve-50Mesh-5PSI-SS Ball-Plastic
6	1	6200-8240	Pipe-Fitting-Straight-10 Shankx1/2BSPM-Plastic
7	2	6200-7320	Pipe-Fitting-Reducer-1/2NPTMx1/4NPTF-Straight-Plastic
8	2	5300-5000	Nozzle-Plate-Teejet-Orifice-0.055in-SS
9	2	5300-4800	Nozzle-Plate-Teejet-Orifice-0.037IN-SS
10	1	6200-8010	Pipe-Fitting-Socket-1/2BSPF-Plastic
11	2	6500-1500	Profiled-Bracket-Regulator Mounting-CU2-Stainless
12	2	3290-0650	Fastener-Set Screw-Hex-8.8 Grade-M6x50-ZP
13	2	3170-0006	Fastener-Nut-Nyloc-M6-ZP
14	1	6200-8210	Pipe-Fitting-Straight-10 Shank-Plug In-Male-CU2-Arag-Plastic

318 REGULATOR EXPLODED DIAGRAM



MM84 ATOMISER PARTS DIAGRAM



Micron Part No	C-Dax Part No	Qty	Description
3282	5305-5600	3	Nut-Micron-Spindle-Micromax-ZP
3405	NA	2	NA
4337	5300-4700	2	Nozzle-Micron-Feed-Micromax 84-Red
4338	NA	2	NA
4469a	2310-5100	1	Disk-Micron-Atomiser-Micromax
4497	7300-4900	-	Ring-Micron-Protective-MM/ Atomiser Disc
4546	1600-5100	1	Cap-Micron-Inner Cap-Micromax
4553 OR 5734	1150-1000	1	Belt-Drive-Micromax-Viton
4561	NA	4	NA
4655	5245-5020	1	Mount-Micron-Plate-Micromax
4676	7750-1200	4	Screw-Micron-6 x 2 CSK [MF Max]
4677	7750-1300	-	Screw-Micron-8 x 1/2 Panhead M
4708	6700-5000	1	Pulley-Micron-Atomiser Drive-MM84/120
4709a	6700-5050	1	Pulley-Micron-Motor-1/4"-MM84/120
4711	5245-5000	1	Mount-Micron-Plate-CDA Head
4757	3310-9108	1	Fastener-Washer-Flat-5/16"x7/8"x1.6mm-ZP
4758	NA	1	NA
4764	2250-5000	1	Cover-Micron-Bearing-Micromax
4769	5450-4630	1	O'Ring-Imperial-3/32"x1 1/16"-N70
4771	NA	4	NA
4792	NA	1	NA
4825a	8840-5050	1	Tube-Micron-Oil Feed-Micromax
4835	NA	1	NA
4836	7750-1100	-	Screw-Micron-4 BA x 7/16 grib M
4837	NA	1	NA
4838	NA	2	NA
61110	1140-0500	2	Bearing-Ball-2RS-24x8x8
4839	7920-5000	1	Shaft-Micron-[MM]
4840	NA	1	NA
4844	NA	1	NA
5097a	5240-5040	1	Motor-Micron-Micromax-12VDC