

HAYES SPRAYING P/L
TRUCK AND SKID-ON SPRAYER
OPERATION MANUAL



DECEMBER 2005

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WARRANTY POLICY

HAYES SPRAYING P/L WARRANTS TO THE ORIGINAL PURCHASOR, THAT EACH NEW HAYES SPRAYING P/L SPRAYER, PART OR ACCESSORY WILL BE FREE FROM DEFECT IN MATERIAL OR WORKMANSHIP FOR TWELVE (12) MONTHS AFTER THE DATE OF DELIVERY.

DURING THE WARRANTY PERIOD, THE DEALER, OR HAYES SPRAYING P/L, SHALL REPAIR OR REPLACE, AT HAYES SPRAYING P/L DISCRETION, WITHOUT CHARGE FOR PARTS AND LABOUR, ANY PART OF THE HAYES SPRAYING P/L PRODUCT WHICH FAILS BECAUSE OF DEFECTS IN PARTS OR WORKMANSHIP.

PUMPS, ENGINES, CONTROLLERS AND HOSES, ARE ALL WARRANTED DIRECTLY BY THE ORIGINAL MANUFACTURER, PENDING THAT MANUFACTURERS WARRANTY APPROVAL.

THIS WARRANTY DOES NOT COVER DAMAGE RESULTING FROM MISUSE, NEGLECT, ALTERATIONS, OR NORMAL WEAR AND TEAR.

IN NO EVENT SHALL THE AUTHORISED DEALER OR HAYES SPRAYING P/L BE LIABLE FOR DOWNTIME EXPENSES, LOSS OF CHEMICAL, LOSS OF MACHINE USE OR OTHER INCIDENTAL DAMAGES.

EXCLUSIONS

AT THE DISCRETION OF HAYES SPRAYING P/L, THE DEFECTIVE PART MUST BE RETURNED TO HAYES SPRAYING P/L, AT THE OWNERS COST.

TIME FOR WASHDOWN, TRANSPORTATION COSTS, OR INSURANCE COSTS FOR SPRAYERS ARE NOT WARRANTED.

TRAVEL AND COMMUNICATION ARE NOT COVERED BY WARRANTY.

2. Product information

Shipping information

Height	2.6m
Width folded	2.7 m approx
Length folded	6.4 approx
Weight empty	1940 kg approx. (6 ton Hino or Isuzu) Different models will vary 900kg for skid on utility type



Serial number



Located on the front drivers side corner.

For utility mounted units serial plate is located on the rear, left of the step.

Specifications

Tanks

1000l, 1200l, (for utility mounted booms), 2000l, 2400l and 3000l, (for truck mounted booms) polyethylene tanks with hinged lid and filling strainer
20l freshwater tank with screw top lid and tap for hand washing.

Pump

Twin impellor Davey firefighter with Honda engine fitted with viton seals.

Filtration

3 point filtration

- * 18 mesh tank basket
- * 2 pressure filters, 80 mesh
- * Nozzles filters, 50 mesh.

Booms.

Truck Boom options include 18m to 24m manual fold.

Ute boom options include 16m and 18m

Booms finished in chemical resistant two pack paint.

Booms are fitted with non drip bodies and quick release nozzle caps.

Booms have individual hydraulic tip lift, shock dampened breakaway end sections, self leveling, and hydraulic accumulators for boom suspension.

Chassis.

Fully welded box steel construction, painted with chemical resistant two pack paint.

Utility model comes with wind up unloading/park legs

Foam marker.

Seris/jenell single or double compressor foam marker with boom mounted foam generator with 90 l stainless steel tank.

Controller.

Options include tee – jet 744 manual controls, 844e or 854e, fully automatic rate controllers.

Hydraulics

The hydraulic system for truck mounted sprayers is powered by a 24 volt electric over hydraulic power pack.

The hydraulic system for a utility mounted sprayer is powered by a 12 volt electric over hydraulic power pack.

The hydraulic functions are controlled by an in cab panel.

Electrics

24 volt trucks are fitted with a 24 to 12 volt converter to run spray controllers, foam markers, and GPS systems.

An additional battery is added to power the sprayer functions.

3. Safety instructions

Operator's responsibilities

- Read and understand the operator's manual before using the equipment. All other operators of the sprayer must also read and understand the operator manual.
- Read and follow the chemical labels
- Local laws may require operators to be licensed
- Pressure test the sprayer with water before use
- Wear protective clothing
- Rinse, wash and depressurize equipment after use and before servicing or storage
- Never repair or service the equipment while it is operating.
- Disconnect power before servicing and or welding
- Do not eat drink or smoke while spraying or working with spraying equipment.
- Wash and change clothes after spraying
- Wash tools if they have been contaminated
- If poisoned seek medical advice immediately. Identify the chemicals being used
- Keep children away from spray equipment at all times
- Do not enter the spray tank
- Do not go under any equipment unless properly secured
- Be aware of power lines at all times
- Operators must not be under the influence of drugs or alcohol while operating spraying equipment.

Safe chemical use

The hazard

All agricultural chemicals and pesticides, are biologically active. They can be dangerous to all living organisms including humans fish birds bees and domestic animals and plants.

Method of pesticide entry

- Oral – by drinking and splashing into the mouth or by smoking or eating with contaminated hands. Cleaning nozzles by blowing through them with your mouth.
- Inhalation - by nose or mouth of spray drift and mist
- Dermal – absorption through the skin particularly with raw chemical or through cuts and abrasions or while perspiring.

Decontamination

- Change out of protective clothing after spraying and wash separately
- Wash thoroughly before eating or drinking
- Keep fresh water tank on sprayer full with clean water
- Replace respirator filters regularly
- Clean sprayer regularly
- Fix leaks
- Ensure cab filters are adequate for the job
- Always use the recommended type of protection clothing and equipment

Safe boomspray operation

- Always read your sprayer manual before operating.
- Make sure all other operators have read the sprayers manuals and are suitably trained in the use of the equipment and chemicals being used.
- Always wear protective clothing.
- Inspect sprayer for faults, leaks, and cracks to avoid contamination.
- Personnel only associated with the spraying operation who are suitably trained, should be in the immediate area of operation.
- Bystanders must be a safe distance away from the sprayer while operating and in the upwind direction.
- Contamination is the responsibility of the operator.
- While spraying be aware of the width of the machine. Particularly while turning or moving around obstacles.
- Boom tips move much faster while turning and may cause injury to equipment or bystanders if careless.
- Before operation check that booms are unfolded and locked into position correctly.
- Check that trailer support jack is folded up and pinned for spraying.
- Spray at speeds suitable to the ground conditions for safe operation and extended sprayer life.
- Avoid sudden turns or constant direction changes at high speed.
- Do not ride on the boomspray.

4. Boomspray operation

Programming the controller

See the tee – jet controller manual and quick guide included.

Davey twin impellor pumps

The Davey pump has been fitted with a chemical resistant Viton seal.

Run the engine at $\frac{1}{2}$ to $\frac{2}{3}$ throttle for longer engine life and good spray pressure.

Clean the Donaldson air cleaner regularly.

Folding out booms

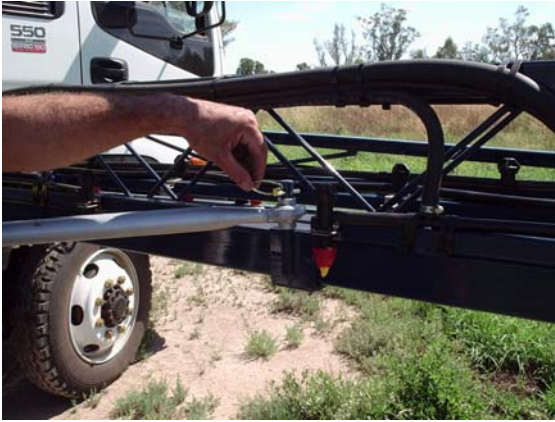
- Raise the tip lift slightly on each boom to take the weight of the boom off the rests



- From the rear of the sprayer remove the lock down pin and push the boom towards the front of the truck.



- Lock stay bars in place, with the lynch pin



- Remove the lynch pin located at the top of the boom approx. 1m from the centre section and swing the boom arm forward until it is in line with the first boom section and locks into place.



- Unclip breakaway and swing around to the front automatically.



- Use tip lift to level booms ready for spraying. When booms are level there should be 40 – 50mm travel left in the hydraulic ram .



- Pull out self leveling pin and lock out of the way.



Folding up

- Put self level pin in the locked position
- Level booms
- Lift booms to clear the side of the truck when folding
- Fold breakaway tip and clip into place.
- Release lock and swing next section around to locking position



- Release the stay bar and replace it in its bracket, and swing the boom to the rear of the sprayer.
- Pin boom in place.



lower the booms to place the weight on the boom supports. The chains will slacken slightly



Going spraying

Setting boom height

Minimum boom height is set at 950 mm which will be adequate for the majority of spraying.

To change the boom height, slide boom up and lock into position with the locking collar, or adjust with hydraulics.

Filling the tank.

filling the sprayer tank with chemical and water will depend on what system you have.

Options include;

- Fill through sprayer
- Fill through chemical hopper or vat

When the sprayer is full and ready to spray, remember to pump some chemical through the boom while stationary to spray out the clean water left in the lines after the last flush. About 30l is required or until the chemical is visible at the last spray tips on the boom.

Important: take particular note where you do this when using residual chemicals, so that the ground does not become sterilized.

Filling using a chemical hopper and load pump

Refer to the chemical hopper operation, chapter 8.

Filling the foam marker

- Foam marker has 90l capacity
- Release pressure in the foam tank by turning tap A
- Remove the top camlock and fill with foam concentrate depending on weather conditions, concentrate is mixed at 1: 60 or in harsher conditions 1: 40
- Replace top camlock with tap a still open
- Hook 1 ½ camlock to fill point B and turn on the tap.
- Fill foam tank using the side sight gauge
- Excess foam will overflow through tap A
- After filling disconnect camlock and close tap A



Refer to the Seris/Jenell foam marker insert for parts and foam marker operation

Filter maintenance

Filter maintenance is a critical part of your sprayers operation.
The number and type of filters may vary from sprayer to sprayer. They will include;

Tank filter basket located in the top of the tank
18 mesh



Pressure filters located between the pump and spray lines
80 mesh



In line boom filters located in the nozzle bodies
50 mesh



Foam marker filter located under the foam tank on the pressure side
50 mesh



Filters require regular cleaning.

Regularity will depend on the quality of water being used and type of chemical being used

As a guide

- Pressure filters should be cleaned once a day
- Nozzle filters should be cleaned once a week
- Foam marker filters should be cleaned once a week. Note that this can change to once a day in cold weather

The cleaning process

- Completely stop all sprayer functions
- Release all pressure from the spray lines
- Unscrew (anticlockwise) bottom filter bowl and remove
- Use a toothbrush to clean filter under running water
- Reseat filter into filter bowl and screw back onto filter body
- Take care not to damage or cross thread the o ring while re- assembling



5. General maintenance

Servicing

There are 7 grease nipples that require grease every 50 hrs
stay bar spring x 1 each side



First fold x 1 each side



Self level x1



Hinge and swivel points



Other maintenance

*check bolts top and bottom on the height adjust slide after the first 50 hrs, and at the beginning of every season.



* The load pump is fitted with a donaldson air filter with pre – cleaner. These should be inspected every 50 hours, and cleaned accordingly, depending on conditions.



- For the Honda motor maintenance refer to the Honda manual.



At the end of spraying

- Always flush the booms with water at the end of every day. Note when spraying liquid fertilizers, check for phosphoric acid content. If left in the pump, it can corrode the pump body and galvanized fittings in as little time as a week. Roundup can corrode a pump body in less than two years.

Daily

- Connect fill hose
- Close tank suction hose and agitation / bypass
- Pump water through spray lines
- Spray lines can be cleaned with chemical mix still in the tank

End of spraying session

- Drain any remaining spray mixture from the tank at the appropriate place
- Fill spray tank with 200l of water
- Open agitation line fully
- Set the controller to manual
- Spray 100l of water out of the boom with the end taps open
- Note that if the water flow is low the regulator valve may be closed. Open the valve manually by holding the + key down for 7 seconds.
- Close boom taps and spray 100l of water out of the nozzles.

Long term storage

- Flush as described previously
- Drain all water from the system
- Drain water from the pump.
- Fill pump with a 50 % mix of water and anti freeze. Take particular care not to have any air in the pump. Note that in frost prone areas- frost can freeze water in the pump and crack the housing
- Clean the outside of the sprayer with appropriate tank cleaner

6. Trouble shooting

Controller

Understanding the sprayer controller and its functions can help greatly when diagnosing problems.

The controller controls the rate based on the target application set before spraying. I.e. L/ha. And receiving input information from the speed sensor and the flowmeter sensor (or pressure sensor, if fitted)

For example the target application rate may be 50 l/ha using 11002 nozzles (110 degree size 2 nozzles) the controller calculates the target rate by receiving speed inputs and l/ min inputs. If the calculation is done and the rate per ha. Is too high, the controller closes the pressure regulating valve to restrict the flow to the nozzles and therefore lowers the application rate. If the calculation is done and the rate is too low the controller will open the pressure regulating valve.

The controller will also let you know when the spraying speed is too low or too high for the controller to regulate using the desired nozzle and application rate.

Most problems can be found quickly by asking the following questions.

Does the monitor record

- Speed
- Hectares
- L/minute
- Does the sprayer spray in manual
- Can you manually adjust the pressure and flow
- Are all the fuses good

If you have no speed

- Check speed sensor cable for cuts, breaks etc
- Check that the sensor is plugged in correctly
- Check that the magnets are in place
- Check that the sensor is the correct distance away from the magnets. 10 – 20mm

If you have no hectares

- See above for speed sensor
- Check that the width is correctly set in the controller

If you have no l/min

- Check that the pump is pumping liquid
- Check the flowmeter cable for cuts, breaks etc.
- Check that the flowmeter is not stuck or restricted

If you cannot adjust the flow manually

- Check that power is getting to the pressure regulating valve
- Check that the pressure regulating valve is cycling by either listening to it open and close, or watching it open or close.

The console switches itself off in 20 seconds and “clicks”

- There is a short in the electrical leads
- disconnect the sensor cables one by one to isolate the short.

Also refer to the tee jet controller manual.

Foam marker

The foam marker is manufactured by Seris/Jen-ell Agrispray.

For other start up, tuning, and trouble shooting refer to the Seris/Jen-ell manual.

If the foam is too runny

- Needle valve open too far
- Relief valve stuck open
- Air jet blocked
- Compressor reed valves bent or broken
- Air cleaner blocked
- Weak or old foam mix
- Poor air volume
- Air leak on hose or fittings
- Screen in foam generator blocked

If foam is too light or airy

- Needle valve closed too far
- Filter on the foam tank blocked
- Liquid supply blocked or leaking

Fuse blows continually or after 30 seconds of use

- Low voltage
- Brushes worn in compressor
- Seized bearings in compressor
- Electrical short
- Bad electrical connection
- Bad relay

Compressor won't run

- Fuse blown
- Relay faulty
- Seized bearings in the compressor
- brushes worn
- Bad electrical connection

Foam slows or stops

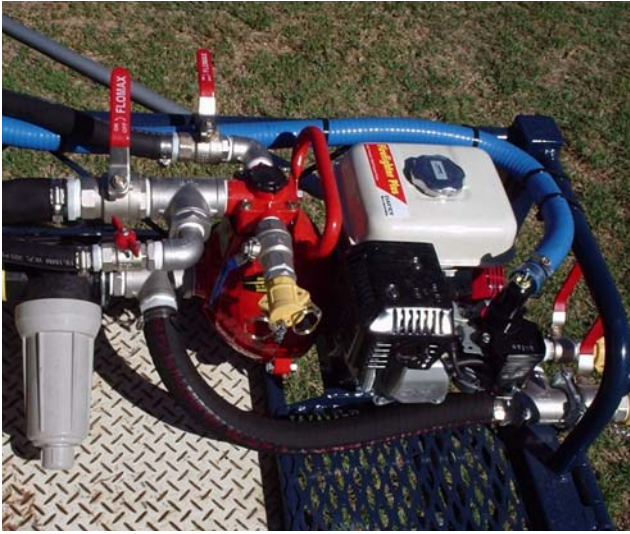
- Blocked air jet
- Blocked liquid filter
- Electrical fault to solenoid
- Low power to solenoid. Check for 12.4 volts
- Compressor stopped or running intermittently

Spray pump

Davey twin impellor

The pump is manufactured by Davey, powered by a Honda motor. Maintenance and parts schedules are included in this manual.

When running the Honda for spraying, set the throttle at $\frac{1}{2}$ to $\frac{2}{3}$ revs. For optimal performance and engine life.



7. Spraying technique

Mixing chemical

When mixing chemicals, always check and follow the label and agronomists recommendations.

If unsure, mix a small amount of concentrate in a jug to observe any reaction between the chemical mix.

For example, when mixing glyphosate and 24d concentrates together, a chemical reaction can occur causing the chemicals to go hard.

When mixing chemical fill the tank half full with water before adding chemical.

Add the chemical separately, rinsing the measuring jug each time before adding the next chemical.

If using a vat, follow the same procedure, rinsing the vat each time before adding the next chemical.

Decontamination

When changing from one chemical group to another, or from spraying one type of crop to another it may be necessary to decontaminate the tank, boom, and lines.

For example, when changing from spraying fallow ground to spraying over a crop, or from spraying a narrow leaf crop to a broad leaf crop.

- Flush all spray lines, agitation lines, delivery hoses, tank, jugs, and vat with clean water.
- Flush again with the recommended cleaner. Different chemicals require different cleaning agents to neutralize the active chemical. Check the chemical label or agronomist to use the correct cleaning agent, and time for penetration.
- Flush out the cleaning agent with clean water.
- Be sure to carry out all rinsing and cleaning, on jugs vats, delivery pumps and hoses

Calibration

For manual controlled sprayers, follow the calibration set out in the tee-jet products buyers guide attached, on page 34.

For automatic controllers, refer to the tee-jet 844e controller manual.

Also in the tee-jet buyers guide,

- **Nozzle selection guide, page 45**

For choosing which **type of nozzle** best suits your application.

- **Nozzle description, page 47**

Overview of the range of nozzles, including brief description, availability of size, spray angle, and material made from.

- **Nozzle pressure chart, page 49**

For determining which **size of nozzle** suits your application.

- **Nozzle droplet size chart, page 51**

Demonstrates droplet size of particular nozzles at given pressures.

8. Rinse bin operation

When using the rinse bin and probe, always wear protective clothing, gloves, waterproof boots, and face shield.

Do not operate the rinse bin or probe while eating or smoking, or in an area without adequate ventilation.

Check the chemical label for any other safety directions.

The delivery pump and rinse bin are plumbed to perform a number of operations.

The rinse bin has two pressure outlets.

- The drum rinse: activated by putting the drum over the nozzle and pushing down on the spring loaded rinser. Once pressure is released, the rinser will return to the off position.
- The bin rinse: activated by the ball valve on the outside of the rinse bin. Remember to have the lid closed to agitate powders or rinse the bin.
- Note that there is a tap also located on the pump. This allows you to change between drum rinsing and agitation while continuing to pump water into the sprayer.

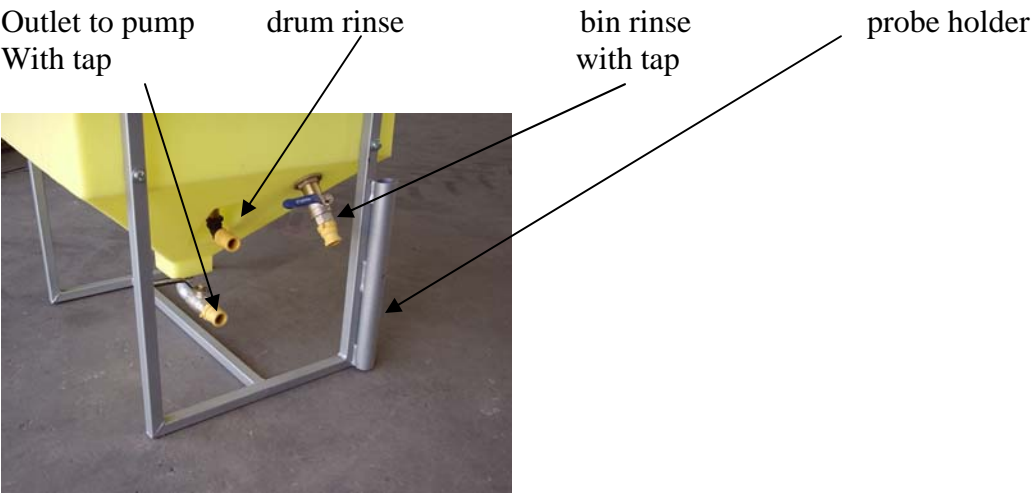
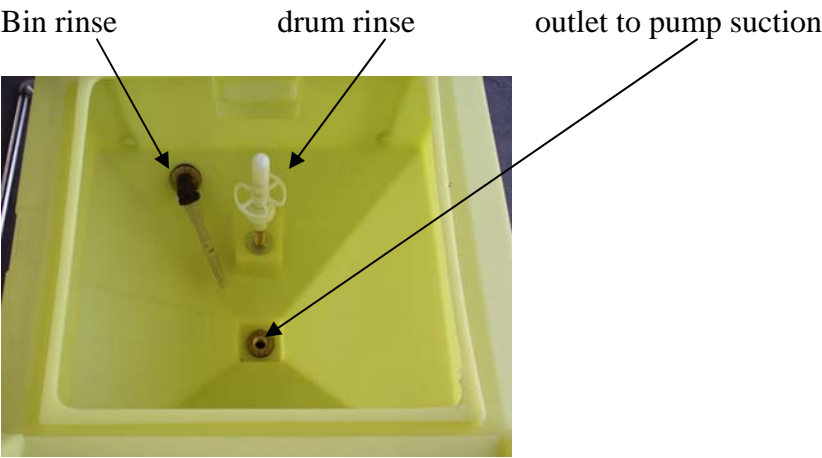
The suction side also performs two operations.

- The outlet on the rinse bin has a tap that lets the pump suck chemical from the rinse bin, and delivers it to the sprayer.
- The suction probe can also be attached to the suction line of the pump, to draw chemical straight from larger containers.
- Note that there is also a tap on the pump that allows the changing of functions while still delivering water to the sprayer.
- If the transfer of chemical through the probe, or from the rinse bin is slow, the main suction tap on the pump can be closed partially or fully, to speed up chemical transfer

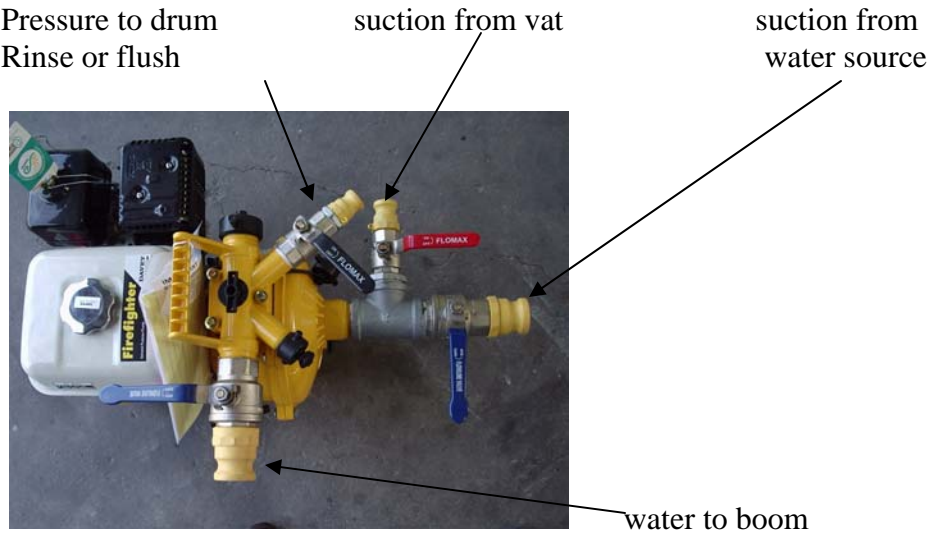
When filling the spray tank, always finish filling the last 200L with straight water, to ensure that the pump has been flushed. This will ensure a longer life of the pump, seals and o rings.

When changing chemicals, always remember to decontaminate the rinse bin, pump, jugs, and delivery hoses, with the recommended cleaner.

Rinse bin operation



Delivery pump layout



Rinse bin plumbing example

Pump pressure to
drum rinse

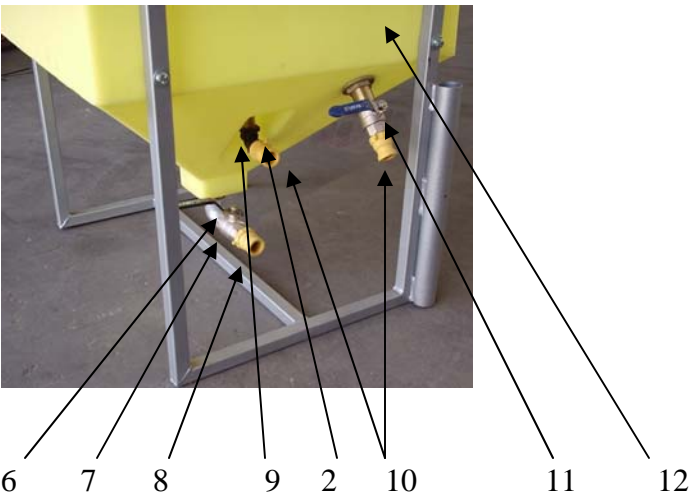
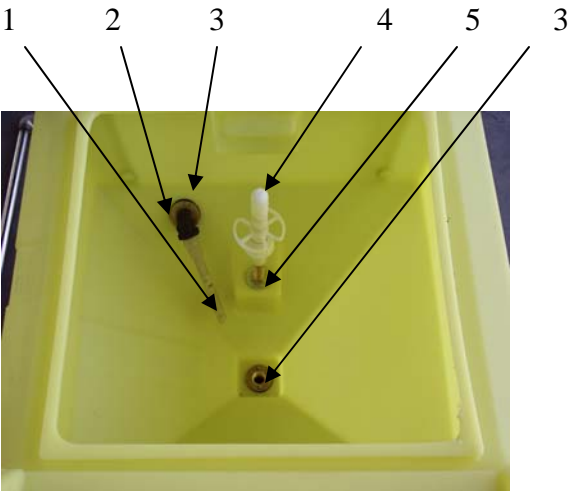


Pump suction from
bin rinse

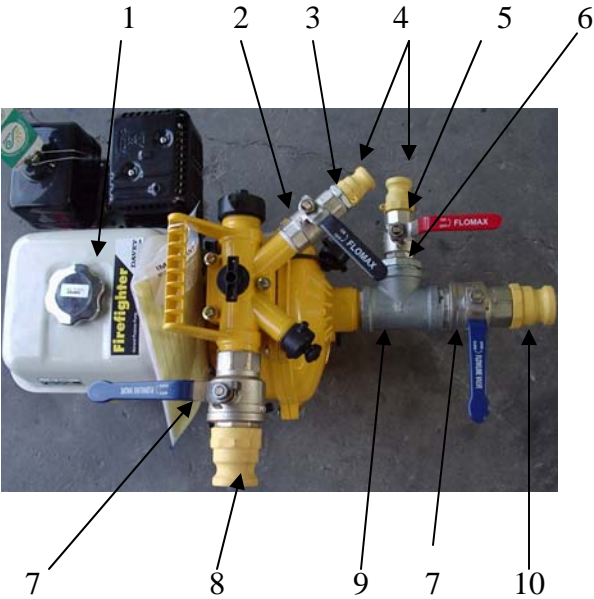
Pump suction connected to
suction probe



Rinse bin parts



Delivery pump



Delivery pump parts

1	DP – 5155H	DAVEY FIRE FIGHTER SINGLE IMPELLOR
2	BV – 25FF	1 BAL VALVE F/F NICKEL
3	GF – LB2520	1 X ¾ REDUCING BUSH GAL
4	NY – 25F	1 MALE CAMLOCK MALE BSP
5	BV – 25MF	1 BALL VALVE M/M NICKEL
6	GF – LB4025	1 ½ X 1 REDUCING BUSH GAL
7	BV – 25MF	1 BALL VALVE M/F NICKEL
8	NY – 40A	1 ½ MALE CAMLOCK FEMALE BSP
9	GF – LT40	1 ½ GAL TEE
10	NY – 40F	1 ½ MALE CAMLOCK MALE BSP

Rinse bin parts

1	HP – 33710019	HYPRO JET AGITATOR
2	BP – SMFE20	¾ ELBOW M/F BLACK POLY
3	TF – SFOMF25	1 X ¾ BRASS THRUUGH TANK FITTING
4	RB – 06	DRUM RINSE VALVE
5	BR – ATO806	½ X 6 THREADED BRASS PIPE
6	GF – LEMF20	¾ ELBOW M/F GAL
7	BV – 25MF	1 BAL VALVE NICKEL
8	NY – 25F	1 MALE CAMLOCK MALE BSP
9	BP – ½ X ¾	REDUCING BUSH BLACK POLY
10	NY – 20F	¾ MALE CAMOCK/ MALE BSP
11	BV – 20F	¾ BALL VALVE M/F NICKEL
12	RB – 09	120L RINSE BIN NO FRAME

Hose kit and probe

RB – 03	6M X 1 INCH SUCTION FEMALE CAMOCKS
RB – 04	9M X ¾ PRESSURE HOSE FEMALE CAMLOCKS
RB – 05	SUCTION PROBE S/STEEL

9. Parts assembly drawings

Electrical

24 pin deutsch plug to suit tee-jet 844e controller with regulator, flowmeter, speed sensor and foam

<u>Pin no.</u>	<u>Wire colour</u>	<u>description</u>
A	white	switch 1
B	brown	switch 2
C	green	switch 3
D	yellow	switch 4
E	grey	switch 5
F	green 4mm	negative for valves
G	brown	regulator valve
H	white	regulator valve
J	red 4mm	positive for valves
K	white/red	flow signal
L	brown	flow power
M	green	flow earth
N	white/green	wheel signal
O	brown	wheel power
P	green	wheel earth
Q	black	pressure power
R	white	pressure signal
S	white	foam right
T	green	foam compressor 1
U	yellow	foam left
V	red	foam power
W	brown	foam compressor 2
X	yellow	Honda pump - off



Deutch plug

Hydraulic system

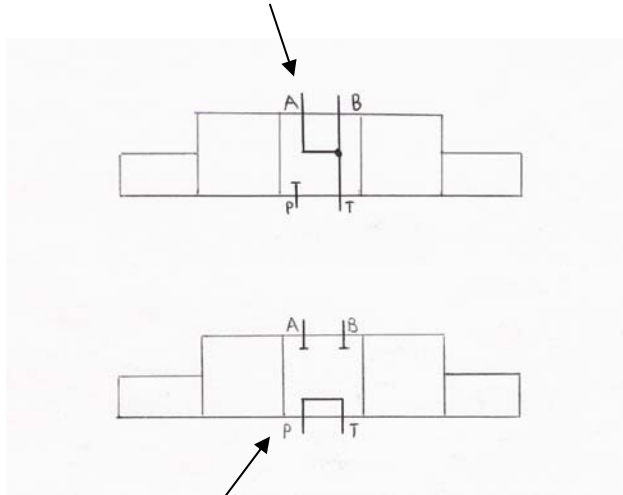
The hydraulic spool system on the boomspray has been fitted to suit your truck, and is an open system.

The electric solenoid spool valves are CE TOP 3 type.

On an open system the diagram would show P-T, on the solenoid valve.

Between the hydraulic block and the solenoid valve there is a pilot operated check valve to prevent cylinder creep.

Closed centre A-B-T

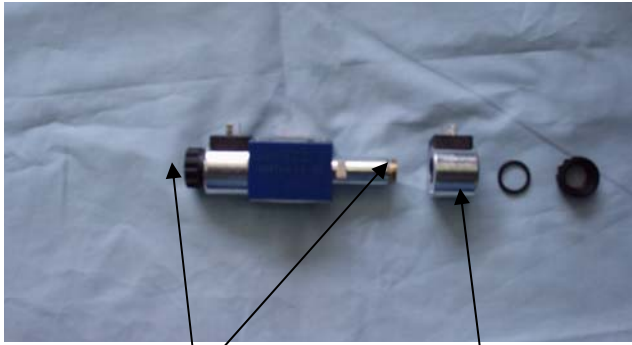


Open centre P-T

The spool valves are a maintenance free unit.

If a hydraulic function does not work, check the following.

- The wiring plugs on the solenoid valves (Herchman plugs) can be swapped from one valve to another to determine if a hydraulic fault is electrical or hydraulic. Take note of the hydraulic function the test plug is taken from so that the correct in cab control switch is used.
- Is there power getting to the Herchman plug. You can check by looking for the red LED light in the plug to light up when the switch is activated. Be careful to inspect the plug closely as a wire can sometimes be in front of the LED.
- Does the solenoid 'click' when activated? As the power requirement is low for the solenoid to work, the 'click' is not loud.
- If the solenoid is faulty, it can be swapped with another, as shown in the diagram below.
- The hydraulic function can be activated manually by pushing a small phillips head screwdriver into either end of the spool valve, opening the valve.



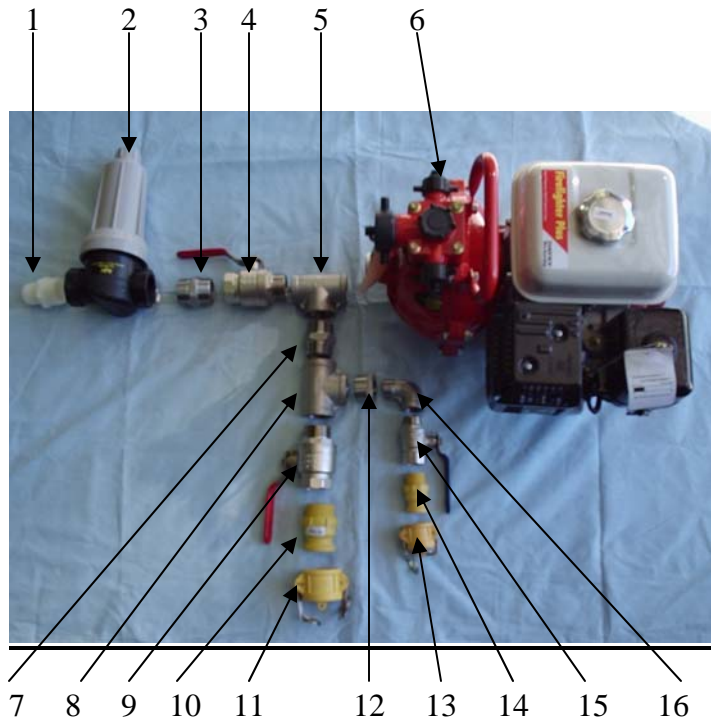
Manually open and close valve

removable solenoid coils

12v hydraulic power pack, oil tank and extra battery.



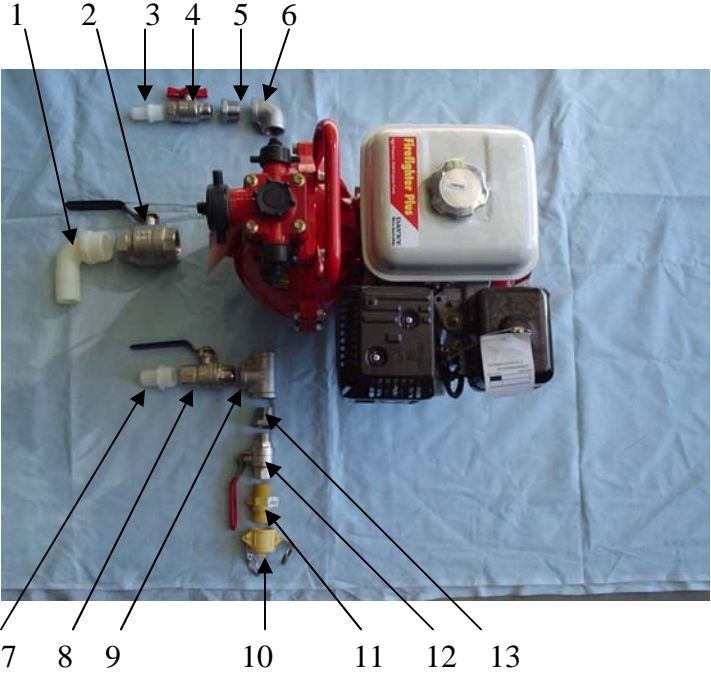
Davey firefighter spray pump parts.



Suction side

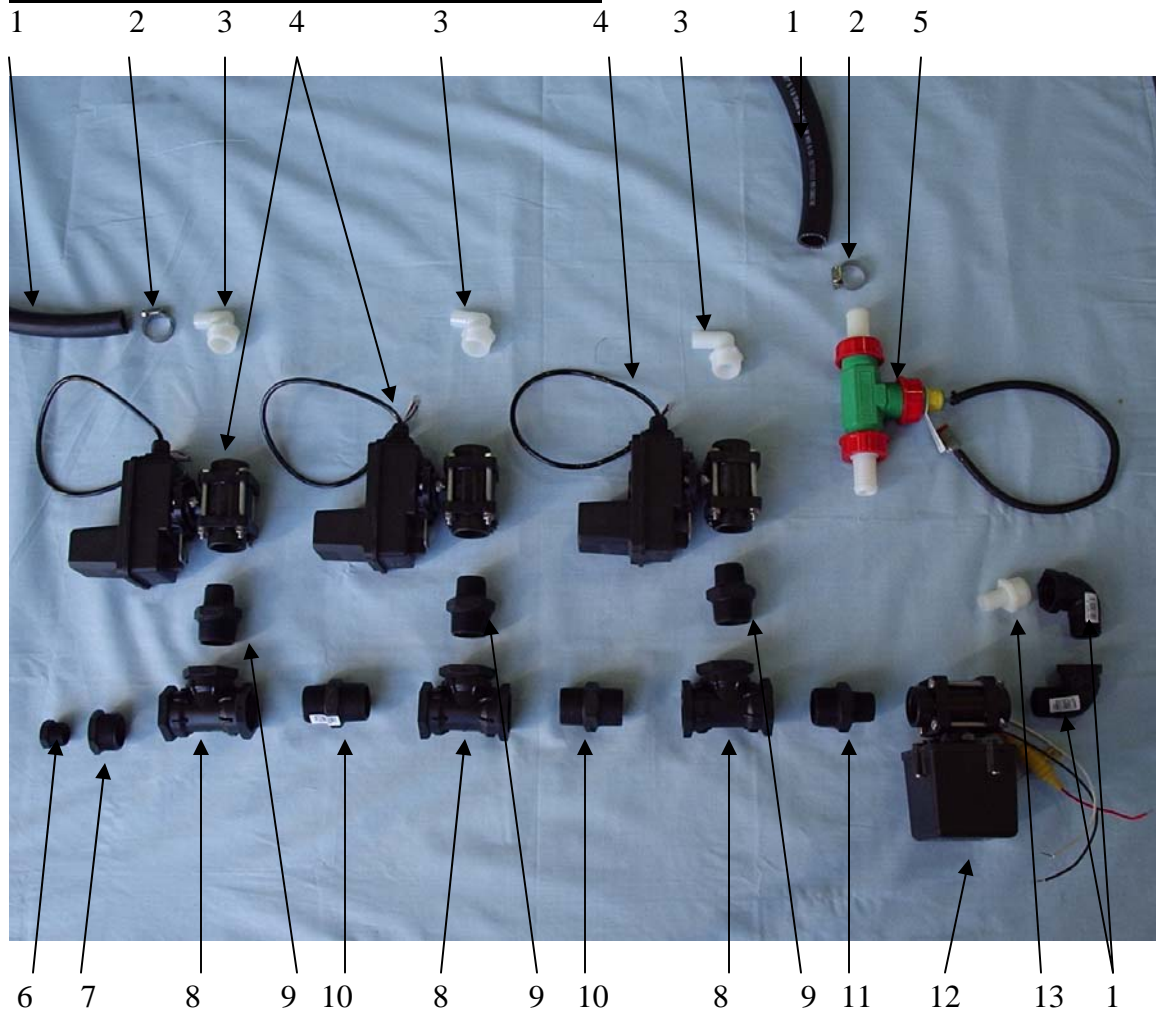
1	NF – A112	1 ½ nylon hose tail
2	SS – AAB14-1 ½	1 ½ spraying systems filter
3	SF – SS2708	1 ½ s/steel nipple
4	BV - 38MF	1 ½ ball valve m/f
5	SF - SS3508	1 ½ s/steel tee
6	DP – 93216-0	twin impellor davey firefighter
7	SF – SS2708	1 ½ s/steel nipple
8	SF – SS3508	1 ½ s/steel tee
9	BV – 38MF	1 ½ ball valve
10	NY – 40F	1 ½ male camlock male thread
11	NY – 40DC	1 ½ camlock cap
12	SF – SS2418	1 ½ x 1 s/steel red bush
13	NY – 25DC	1 camlock cap
14	NY – 25F	1 male camlock male thread
15	BV – 25MF	1 ball valve m/f
16	SF – SS2511	1 s/steel m/f elbow

Pressure side



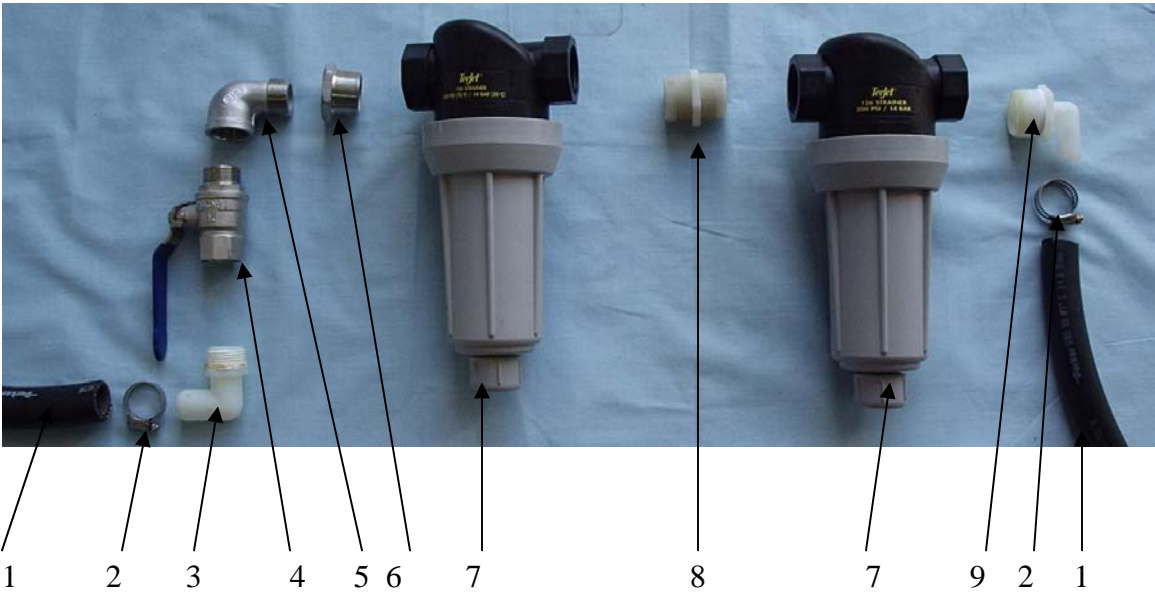
1	NF – EL112	1 ½ nylon hoesail elbow
2	BV – 12FF	1 ½ ball valve f/f
3	NF – A3434	¾ nylon hose tail
4	BV – 20MF	¾ ball valve m/f
5	SF – SS2412	1 x ¾ red. Bush
6	SF – SS3405	1 s/steel elbow f/f
7	NF – A1010	1 nylon hose tail
8	BV – 20MF	1 ball valve m/f
9	SF- SS3506	1 s/steel tee
10	NY – 20DC	¾ camlock cap
11	NY – 20F	¾ male camlock male thread
12	BV - 20MF	¾ ball valve m/f
13	SF – SS2412	1 x ¾ s/steel red. bush

Electric ball valve assembly with flowmeter



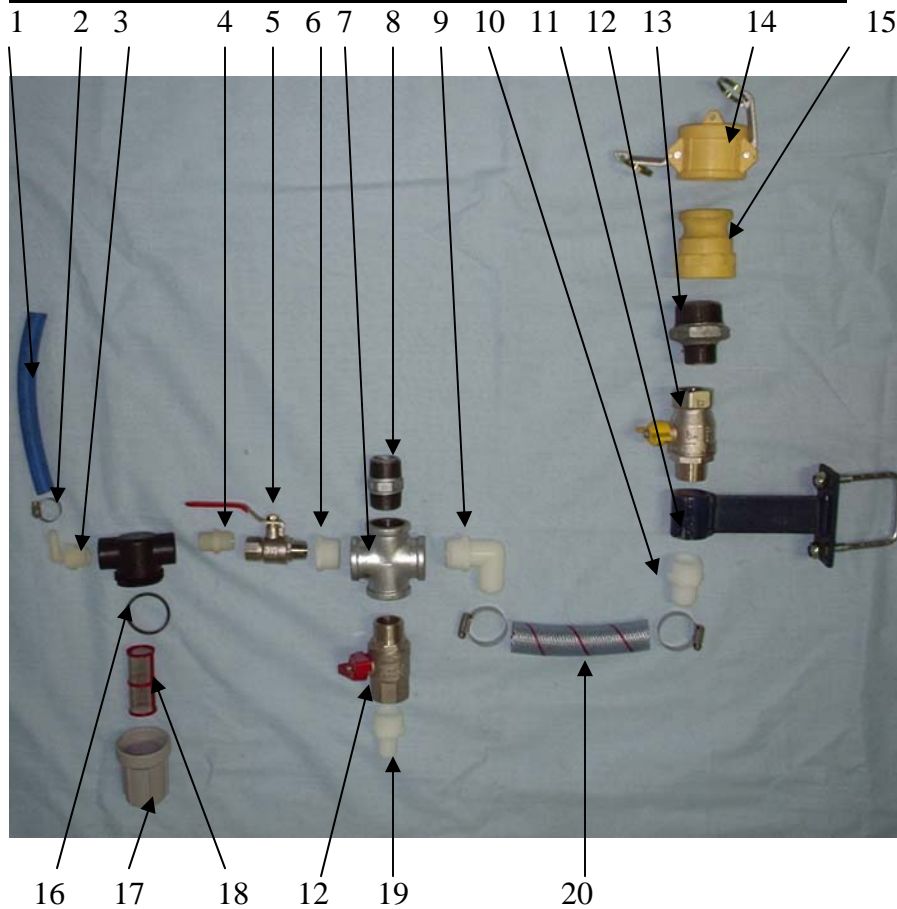
- | | | |
|----|-------------------|--|
| 1 | HO – MPT20BL | 3/4" pressure hose black |
| 2 | HC – BZ62012 | 3/4" clamp |
| 3 | NF – EL11434 | 1 1/4" x 3/4" hose barb elbow nylon |
| 4 | SS – B344BEC-24-C | s/systems elec. ball valve |
| 5 | SS – 38410-1-CER | 1" flowmeter for 24m + booms |
| | SS – 38410-3/4-BB | 3/4" flowmeter for booms below 24m |
| 6 | BP – SRB2015 | 3/4" x 1/2" reducing bush black poly |
| 7 | BP – SRB3220 | 1 1/4" x 3/4" reducing bush black poly |
| 8 | BP – ST32 | 1 1/4" tee black poly |
| 9 | BP – SRHN3225 | 1 1/4" x 1" reducing nipple black poly |
| 10 | BP – SHN32 | 1 1/4" nipple black poly |
| 11 | BP – SRHN3225 | 1" x 1 1/4" reducing nipple black poly |
| 12 | SS – B38440-344AE | s/systems regulation valve |
| 13 | NF – A1034 | 1" male x 3/4" nylon |
| 14 | BP – SMFE25 | 1" x 1" m/f elbow black poly |

Pressure filter assembly



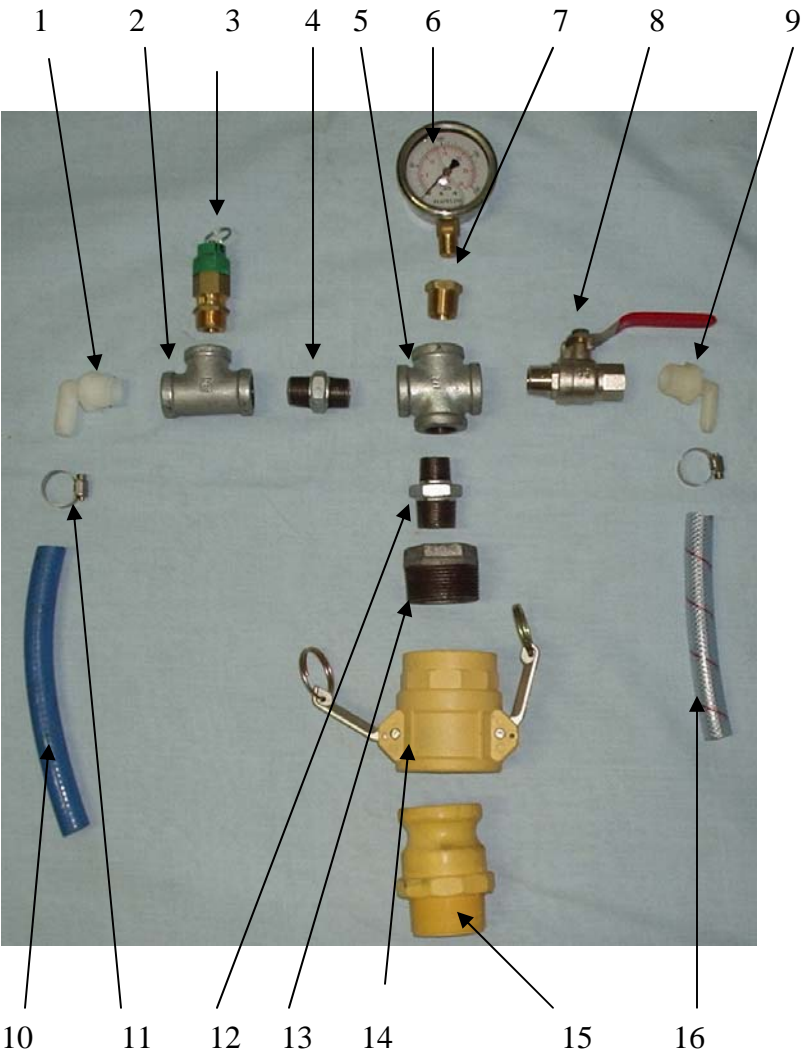
- | | | |
|---|------------------|---------------------------------|
| 1 | HO – MPT25BL | 1” pressure hose |
| 2 | HC – BZ62012 | 1” clamp |
| 3 | NF – EL1010 | 1” x1 hose barb elbow nylon |
| 4 | BV – 25MF | 1” ball valve m/f nickel |
| 5 | SF – SS2511 | 1” x 1 m/f elbow s/steel |
| 6 | SF – SS2415 | 1”x 1 ¼” reducing bush s/steel |
| 7 | SS – AAB126-5-80 | 1 ¼” spraying systems filter |
| 8 | BP – SHN32 | 1 ¼” nipple black poly |
| 9 | NF – EL11434 | 1 ¼” x ¾” hose barb elbow nylon |

Foam marker tank assembly from fill point to bottom of tank



1	HO – NPT10	3/8" pressure hose
2	HC – BZ3506	1/2" clamp
3	NF – EL1212	1/2" x 1/2" hose barb elbow nylon
4	NF – M1200	1/2" nipple nylon
5	BV – 12FF	1/2" ball valve f/f
6	NF – RB1012	1" x 1/2" reducing bush nylon
7	GF – LCR25	1" cross gal
8	GF – LN25	1" x 1" nipple gal (to tank bottom)
9	NF – EL1010	1" x 1" hose barb elbow nylon
10	NF – A1010	1" x 1" hose barb nylon
11	BRACKET	1" x 1" socket bracket with u clamp
12	BV – 25MF	1" ball valve m/f
13	GF – LN4025	1 1/2" x 1" reducing nipple gal
14	NY – 40DC	1 1/2" camlock cap
15	NY – 40A	1 1/2" male cam female thread nylon
16	SS – CP23173-EPR	filter seal
17	SS – AAB122-1/2-P	1/2" s/systems filter complete
18	SS – CP45102-3SSPP	filter screen red 50 mesh
19	NF – A1034	1" x 3/4" hose barb nylon
20	HO – NPT25	1" clear braided pressure hose
21	BS – SS90FMT	90l s/steel foam tank (not pictured)

Foam marker assembly - top of tank



- | | | |
|----|---------------|---------------------------------------|
| 1 | NF – EL1238 | 1/2" x 3/8" hose barb elbow nylon |
| 2 | GF – LT15 | 1/2" tee gal |
| 3 | JEN – 1807003 | 1/2" pressure relief valve (15 psi) |
| 4 | GF – LN15 | 1/2" nipple gal |
| 5 | GF – LCR15 | 1/2" cross gal |
| 6 | JEN – 1807003 | pressure gauge 2 bar (30 psi) |
| 7 | BR – 2405 | 1/2" x 1/4" reducing bush brass |
| 8 | BV – 12MF | 1/2" ball valve m/f |
| 9 | NF – EL1238 | 1/2" x 3/8" hose barb elbow nylon |
| 10 | HO – NTP10 | 3/8" overflow hose (clear braided) |
| 11 | HC – BZ3504 | 3/8" clamp |
| 12 | GF – LN2015 | 3/4" x 1/2" reducing nipple gal |
| 13 | GF – LB4020 | 1 1/2" x 3/4" reducing bush gal |
| 14 | NY – 40D | 1 1/2" camlock ff |
| 15 | NY – 40F | 1 1/2" male 1 1/2" male bsp camlock |
| 16 | HO – CAC010 | 3/8" clear braided hose |



1

2

3

4

Sundry Parts

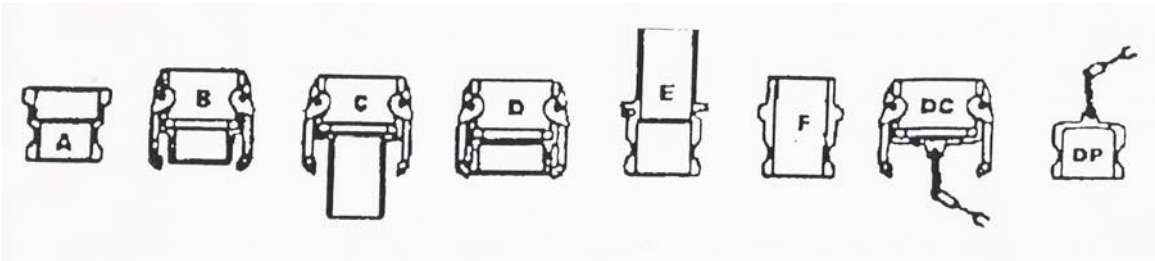
- 1 BS – Stay
- 2 BS-MG-20HD
- 3 BS- 1366-2
- 4 HY-SB0210-.32EI

- Stay bar x 2
- Fresh water tank
- Shock absorber x 2
- Accumulator x 2

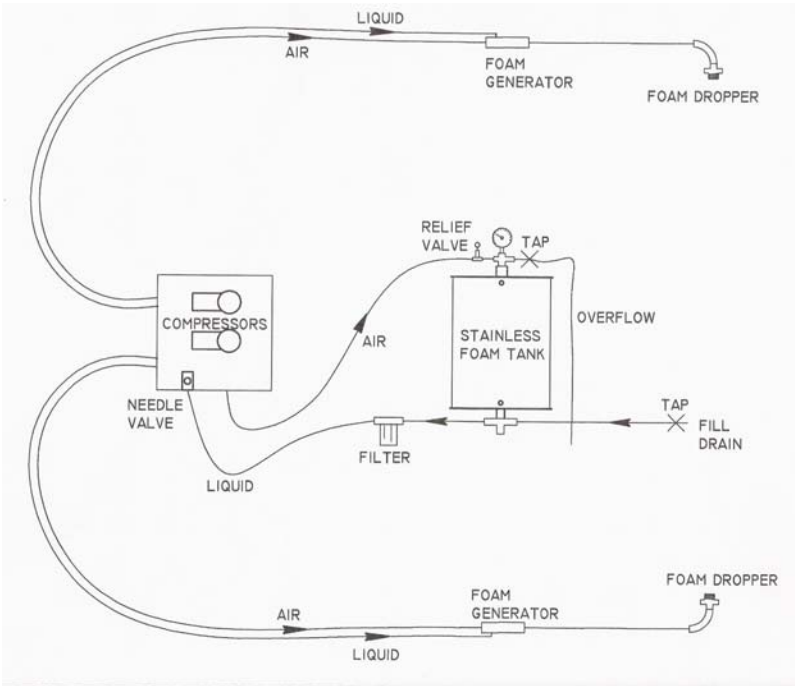
Not pictured

- PT –STA40
- PT – STA41
- PT – ST1000LP – ST3000LP
- BS – R- STOP
- BS – RR-658
- ST – HBP-6

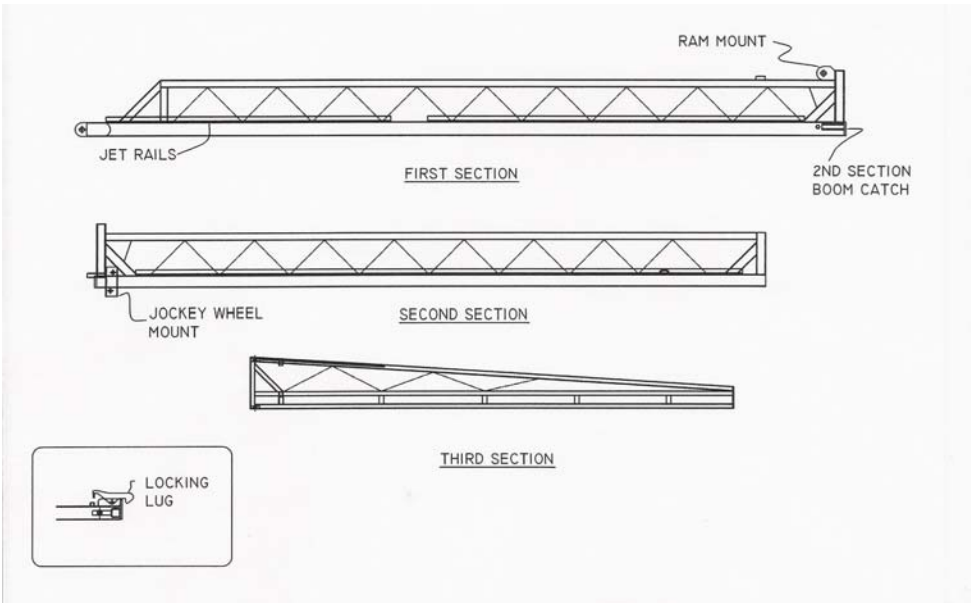
- tank lid
- mesh basket
- poly spray tank
- 2 x rocking bar bump stop
- rubber ring
- 2 x middle boom catch



Camlock codes



Foam marker plumbing diagram.



Boom sections

SPECIFICATIONS:

- MAXIMUM PRESSURE RATING: 300 PSI (20 BAR)
- FLOW RATE: 32 GPM (121 L/MIN) @ 5 PSI (.34 BAR) PRESSURE DROP FOR 2-WAY VALVE, 24 GPM (91 L/MIN) @ 5 PSI (.34 BAR) PRESSURE DROP FOR 3-WAY VALVE
- RESPONSE TIME: 0.6 SEC. FROM CLOSED TO OPEN
- CURRENT DRAW: 1.34 AMPS NOMINAL @ 13.8 VDC
- MATERIALS: POLYPROPYLENE, NYLON, STAINLESS STEEL, TEFLON®, AND VITON®

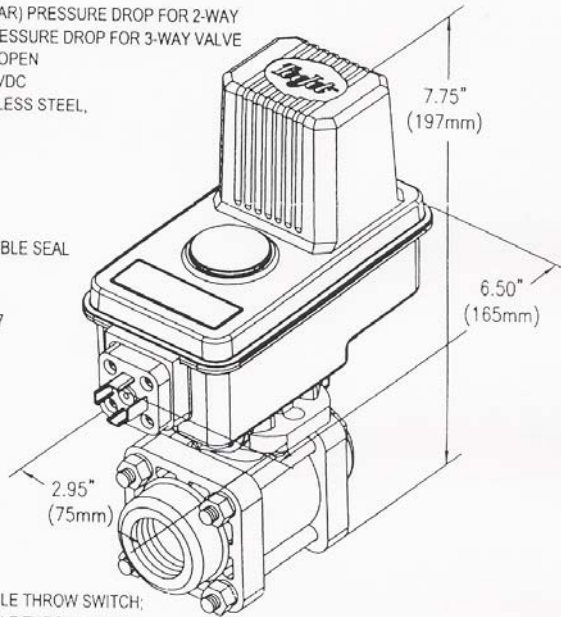
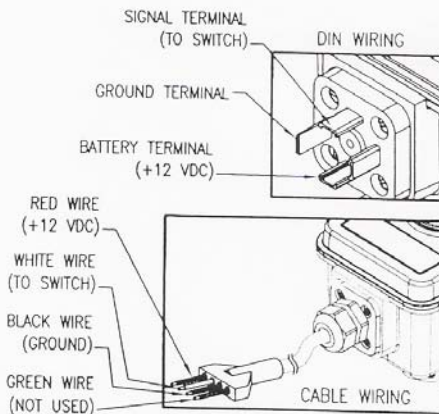
FEATURES INCLUDE:

- BUILT-IN DIN CONNECTOR (43650-A) WITH DOUBLE SEAL
- CABLE VERSION FEATURES ROUND POLYURETHANE JACKET
- MOTOR HEAD IS SEALED AND WELDED TO IP67
- QUICK RELEASE MOTOR HEAD ALLOWS MANUAL VALVE OPERATION
- GEARBOX USES DOUBLE WALL CONSTRUCTION TO ADD STRENGTH AND ENSURE PERMANENT LUBRICATION
- ALL METAL GEARS FOR STRENGTH AND DURABILITY
- AUTOMATIC RESETTABLE FUSE (DISCONNECT POWER FOR 20 SECONDS TO RESET)
- AVAILABLE FOR NEGATIVE OR POSITIVE SWITCHED SPRAYER CONTROLS
- BEC STYLE MOTOR USES A SINGLE POLE, SINGLE THROW SWITCH; BE STYLE MOTOR USES A DOUBLE POLE, DOUBLE THROW SWITCH
- INLET AND OUTLET CONNECTIONS AVAILABLE IN 3/4" OR 1" FEMALE THREADS (NPT OR BSPT), 50-SERIES FLANGE OR QUICK CONNECT.
- STAINLESS STEEL AND CHOICE OF STAINLESS STEEL OR POLYPROPYLENE BALL PROVIDE EXCELLENT CHEMICAL RESISTANCE

ORDERING INFORMATION:

344BEC-24-C - 0.5-METER CABLE CONNECTION, 1" NPT OUTLETS, POSITIVELY SWITCHED, 2-WAY VALVE
 344BEC-23-C - DIN CONNECTION, 3/4" NPT OUTLETS, POSITIVELY SWITCHED, 2-WAY VALVE
 SEE DATA SHEETS 56600 & 50515 FOR COMPLETE ORDERING INFORMATION
 NOTE: DIN CABLES ARE AVAILABLE AND MAY BE ORDERED SEPARATELY

TEFLON® IS A TRADEMARK OF DUPONT COMPANY
 VITON® IS A TRADEMARK OF DUPONT DOW ELASTOMERS

**BEC STYLE MOTOR:****DESCRIPTION:**

344BE AND 344BEC
 DIRECT VALVE
 ELECTRIC SHUT-OFF
 BALL VALVES



Spraying Systems Co.®

Spray Nozzles and Accessories
 P.O. Box 7900 - Wheaton, IL 60189-7900

Rev. No.

Ref.

DATA SHEET

344BEC

SHEET OF

Spraying Systems Co.

ITEM	PART NO	DESCRIPTION
	50515-25CP03	BEC MOTOR, 25-RPM (0.6-SEC), 0.3-METER CABLE, POSITIVELY SWITCHED
	50515-25CP03	BEC MOTOR, 25-RPM (0.6-SEC), 0.5-METER CABLE, POSITIVELY SWITCHED
	50515-25CP15	BEC MOTOR, 25-RPM (0.6-SEC), 1.5-METER CABLE, POSITIVELY SWITCHED
	50515-25CP40	BEC MOTOR, 25-RPM (0.6-SEC), 6.0-METER CABLE, POSITIVELY SWITCHED
1A	50515-25DP	BEC MOTOR, 25-RPM (0.6-SEC), DIN CONNECTION, POSITIVELY SWITCHED
	50533-25C03	BE MOTOR, 25-RPM (0.6-SEC), 0.3-METER CABLE (USE DPDT SWITCH)
	50533-25C05	BE MOTOR, 25-RPM (0.6-SEC), 0.5-METER CABLE (USE DPDT SWITCH)
1B	50533-25C15	BE MOTOR, 25-RPM (0.6-SEC), 1.5-METER CABLE (USE DPDT SWITCH)
	50533-25C60	BE MOTOR, 25-RPM (0.6-SEC), 6.0-METER CABLE (USE DPDT SWITCH)
1C	50533-25C	BE MOTOR, 25-RPM (0.6-SEC), DIN CONNECTION (USE DPDT SWITCH)
2	CP50517-SSPV	RETAINING CLIP, 304 STAINLESS STEEL
3	CP26197-7/8-SS	SOCKET HEAD CAP SCREW, STAINLESS STEEL (2 REQ'D)
4	CP50514-PP	MOTOR ADAPTER, POLYPROPYLENE (BLACK)
5	CP20125-TEF	THRUST WASHER, TEFLON
6	CP56613-SS	STEM, 303 STAINLESS STEEL (FOR POLYPROPYLENE BALL)
6A	CP56613-SS	STEM, 303 STAINLESS STEEL (FOR 2-WAY STAINLESS STEEL BALL)
6B	CP56725-SS	STEM, 303 STAINLESS STEEL (FOR 3-WAY STAINLESS STEEL BALL)
7	CP77117-M12X2.5-VI	O-RING, VITON (3 REQ'D)
8	CP20101-NYB	BODY, NYLON (BLACK) (2-WAY)
	CP20102-3/4-NYB	BODY, NYLON (BLACK) (3-WAY, 3/4" BSPT THREAD)
8A	CP20102-3/4-NYB	BODY, NYLON (BLACK) (3-WAY, 3/4" BSPT THREAD)
	CP20102-1-NYB	BODY, NYLON (BLACK) (3-WAY, 1" NPT THREAD & QUICK CONNECT)
	CP20102-1-NYB	BODY, NYLON (BLACK) (3-WAY, 1" BSPT THREAD)
9	CP20126-FELT	DUST PLUG, FELT
10	CP36435-1/4-SSNY	ELASTIC LOCKNUT, STAINLESS STEEL (2 REQ'D)
11	CP20106-1-PP	BALL, POLYPROPYLENE (WHITE) (2-WAY)
11A	CP19926-SS	BALL, STAINLESS STEEL (2-WAY)
11B	CP20109-1-PP	BALL, POLYPROPYLENE (WHITE) (3-WAY)
11C	CP45510-1-SS	BALL, STAINLESS STEEL (3-WAY)
12	CP20564-VI	GASKET, VITON (2 REQ'D)
13	CP20103-TEF	SEAL, TEFLON (2 REQ'D)
14	CP77117-2-213-VI	O-RING, VITON (2 REQ'D)
	CP20104-3/4-NYB	END CAP, NYLON (BLACK) (3/4" BSPT THREAD) (2 REQ'D)
15	CP20104-3/4-NYB	END CAP, NYLON (BLACK) (3/4" BSPT THREAD) (2 REQ'D)
	CP20104-1-NYB	END CAP, NYLON (BLACK) (1" NPT THREAD) (2 REQ'D)
	CP20104-1-NYB	END CAP, NYLON (BLACK) (1" BSPT THREAD) (2 REQ'D)
15A	CP45514-NYB	END CAP, NYLON (BLACK) (QUICK CONNECT) (2 REQ'D)
16	CP20129-SS	BOLT, 1/4"-20 X 3" HEX, STAINLESS STEEL (4 REQ'D)
17	CP20128-SS	LOCK WASHER, 1/4" STAINLESS STEEL (4 REQ'D)
18	CP45539-SS	NUT, 1/4"-20 HEX, STAINLESS STEEL (4 REQ'D)
19	CP45526-NYB	THREADED QUICK CONNECT ADAPTER, NYLON (BLACK) (3-WAY ONLY)*
*503444E-KIT, SPARE PARTS KIT (INCLUDES ALL ITEMS MARKED WITH *)		

NOTE: (B) IN PART NUMBER INDICATES B.S.P.T INLET AND OUTLET CONNECTIONS
 * NOTE FOR NEGATIVELY SWITCHED MOTORS SPECIFY "N" RATHER THAN "P" IN MOTOR PART NUMBER
 EXAMPLE: 50515-25CM05

DESCRIPTION:

344BE AND 344BEC
DIRECTOVALVE®
ELECTRIC BALL VALVE



Spraying Systems Co.[®]

Spray Nozzles and Accessories
P.O. Box 7900 - Wheaton, IL 60189-7900

Rev. No. 1	PARTS LIST PL3448EC
Ref.	SUFF. OF

11. Foam Marker

ELECTRIC VALVES These stop and start foam production electrically from the cabin. It is important when stopping the air compressor to shut off liquid, to stop the liquid flooding the system. The liquid can run back up the air line. This can cause solution to gel and block the generator.

GENERATOR The foam generator is used to inject air into the liquid stream. Blockages can occur in new systems from dirt or bugs in the hoses. If the generator is removed for cleaning, to return it to its previous setting, screw generator in fully and the back out one and a half turns, and then lock with locknut.

In double sided systems if one side is working better than the other, adjust generator on bad side in or out until foam production is the same as the other side.

Annually, or more often if needed, clean the screen in the foam generator.

THE LIQUID FILTER The liquid filter should be 80 mesh or finer. If the filter is of larger mesh, screen in foam generator will block after a time (this will be worse with a steel tank due to rust.)

NEEDLE METERING VALVE The needle valve controls the amount of liquid entering the foam generator thus controlling the quantity and quality of foam produced.

COMPRESSOR Air flows from around 1.25 cubic ft/min and above can be used. The larger the air supply the greater the production of foam. Small electric compressors are popular. These compressors work quite well and need little or no air control, only a relief valve for safety.

The back pressure of foam in the foam line being the factor influencing system pressure. Larger engine powered compressors need the air to be regulated by a relief valve or better still an air regulator. The important thing is to have a stable air supply as fluctuating air pressures will cause fluctuating foam production.

FOAM LINE The foam line **MUST** be four meters long and ¾" /19mm in diameter. This gives the foam time to pack to a fine, dense consistency.

FOAMING AGENT Mix foam agent as per label recommendations. Foam agents do not have a long shelf life so only keep enough for the season. Some foam agents do not mix readily so mixing is very important.

Either bottom filling or putting a hose to the bottom of the tank after adding the foam agent should assure even mixing.

Some foam agents will come out of suspension even while spraying, causing a weaker foam towards the bottom of the tank. Adding some extra foam agent and mixing will solve this problem. Leaving foam mixture lying around in tanks when not being used allows it to go off. This does not take long, as little as 24 hours. If stopped for ½ a day stir up foam mixture, if it doesn't work well add some more foam agent and mix.

START UP

The foam generator works well with air pressures from approx. 6 psi/40 kpa to 15 psi/100 kpa. The more air pressure the more liquid that can be added making more foam. Start compressor. Allow one to two minutes for air pressure to build then open needle valve

approx ¼ to ½ a turn. (If the system is completely dry opening the needle valve fully until liquid appears at foam dispenser then back off to ¼ to ½ a turn will get system primed quicker). When foam appears wait about 10 to 20 seconds and then if it is too runny close needle valve slightly.

If foam is stiff but has air holes in it open needle valve slightly. All needle valve adjustments should be small. With small electric compressors pressure should slowly rise as good quality foam is produced. The back pressure in the foam line sets the pressure in the system.

The stronger the foam mix the higher the pressures will be. Usually between 6 psi/55 kpa and 15 psi/100 kpa. With larger compressors the pressure must be controlled by a relief valve or preferably an air regulator to between 6 psi/55 kpa and 15 psi/100.

TROUBLE SHOOTING

Foam too runny:

- < Water too hard.
- < Mix not 50 to 1. (mixture may need to be stronger for cold or hard water). Foam weak or old.
- < Air jet blocked, usually in new system.
- < Small electric compressors can get dirt under or break the reed valves.
This will cut down the air supply.
- < Screen in foam generator blocked with dirt or rust. This is caused by liquid filter being too coarse. It should be 80 mesh.
- < Needle valve is too far open.
Close needle valve slightly.

Air pressure too low:

- < Foaming agent weak or not 50 to 1 mix.
- < Compressor worn or reed valves not sealing.
- < Needle valve set for small foam requirements. This will reduce back pressure and hence gauge pressure.
- < Relief valve or fittings leaking..

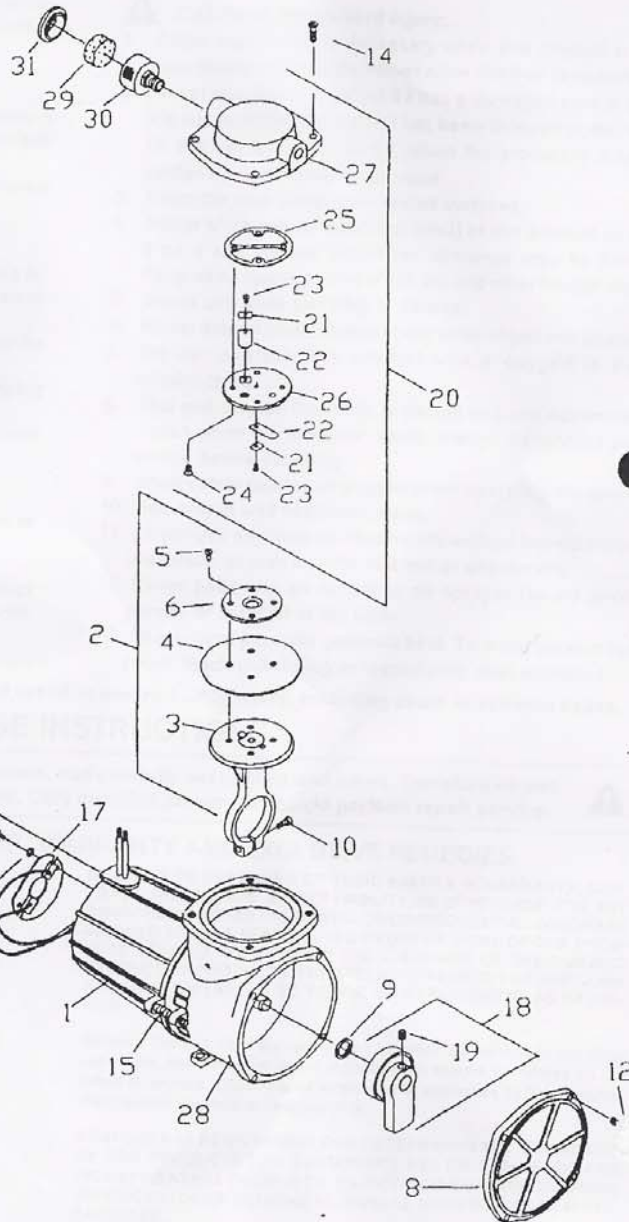
Air pressure too high:

With small electric compressors air pressure should not normally exceed 12 psi/100 kpa. It would more likely be in the range of 6 psi/40 kpa to 12 psi/100 kpa. The stronger the mix the higher the pressure. Eg 40 to 1 mix.

DRAWING AND PARTS LIST

Item No.	Part No.	Component Part	Description	Qty
1	602492-504		Motor Shell & Magnet Assembly	1
2	607180		Connecting Rod Assembly	1
3		607139	Connecting Rod	1
4		608148	Diaphragm	1
5		625540	Screw - Hold Down Plate	4
6		654649	Hold Down Plate	1
7	614381-504		Motor End Cap Assembly	1
8	614608		Front Cover	1
9	615403		Spacer - Eccentric	1
10	625114		Screw - Connecting Rod	1
11	625260		Screw - Motor End Cap	2
12	625266		Screw - Front Cover	4
13	625407		Screw - Brush Card	2
14	625444		Screw - Head	4
15	625506		Screw - Housing to Motor	2
16	626516		Lockwasher - Brush Card	2
17	627093		Brush Card Assembly	1
18	645373		Eccentric & Bearing Assembly	1
19		625244	Set Screw - Eccentric	1
20	660873-504		Head & Valve Plate Assembly	1
21		617045	Valve Keeper	2
22		621102	Valve Flapper - Intake & Exhaust	2
23		625160	Screw - Flapper	2
24		625606	Screw - Valve Plate	4
25		632439	Gasket - Head	1
26		654129	Valve Plate	1
27		660131-504	Head	1
28	664757-504		Housing	1
29	641034		Filter Foam	1
30	660783		Filter Body	1
31	660767		Filter Body Cap	1

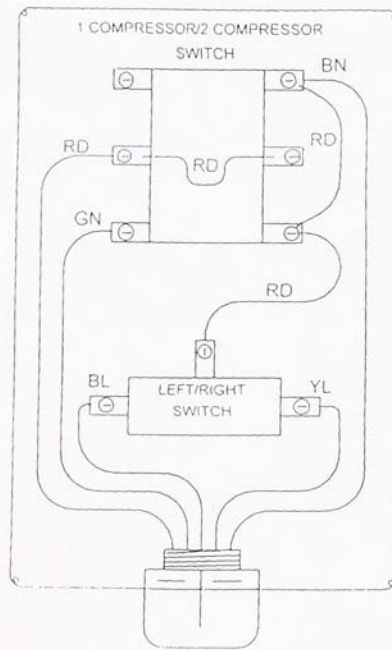
Model 107CDC20/28-88				
Item	Delete	Add	Description	Qty
1	602492-504	602492-526	Motor Shell	1
7	614381-504	614381-528	M.E.C. Assembly	1
18	645373	645374	Eccentric & Bearing Assembly	1
20	660873-504	669078-526	Head & V.P. Assembly	1
24	625606	625141	Screw - Valve Plate	4
27	660131-504	661700-528	Head	1
28	664757-504	664762-526	Housing	1



Model 107CDC20/28				
Item	Delete	Add	Description	Qty
18	645373	645374	Eccentric & Bearing Assembly	1

Model 107CDC28				
Item	Delete	Add	Description	Qty
18	645373	645374	Eccentric & Bearing Assembly	1

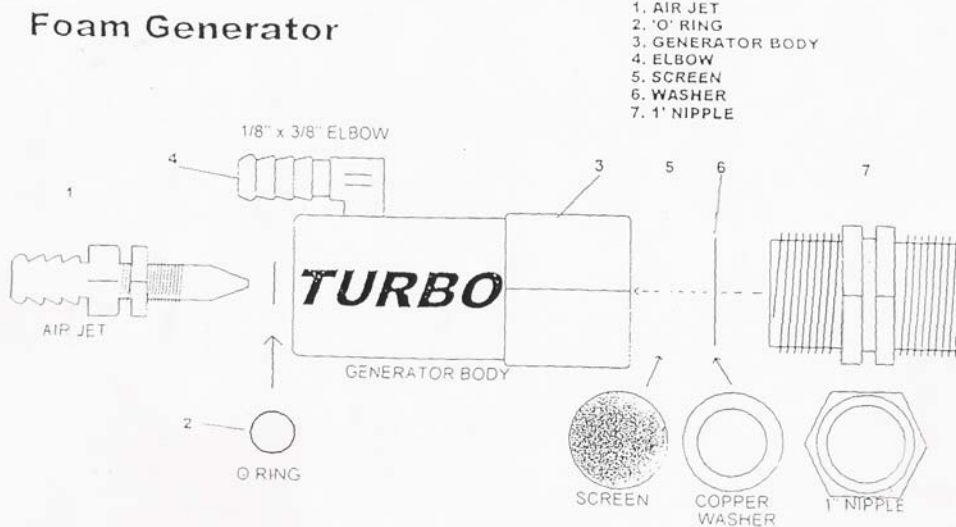
WIRING DIAGRAM

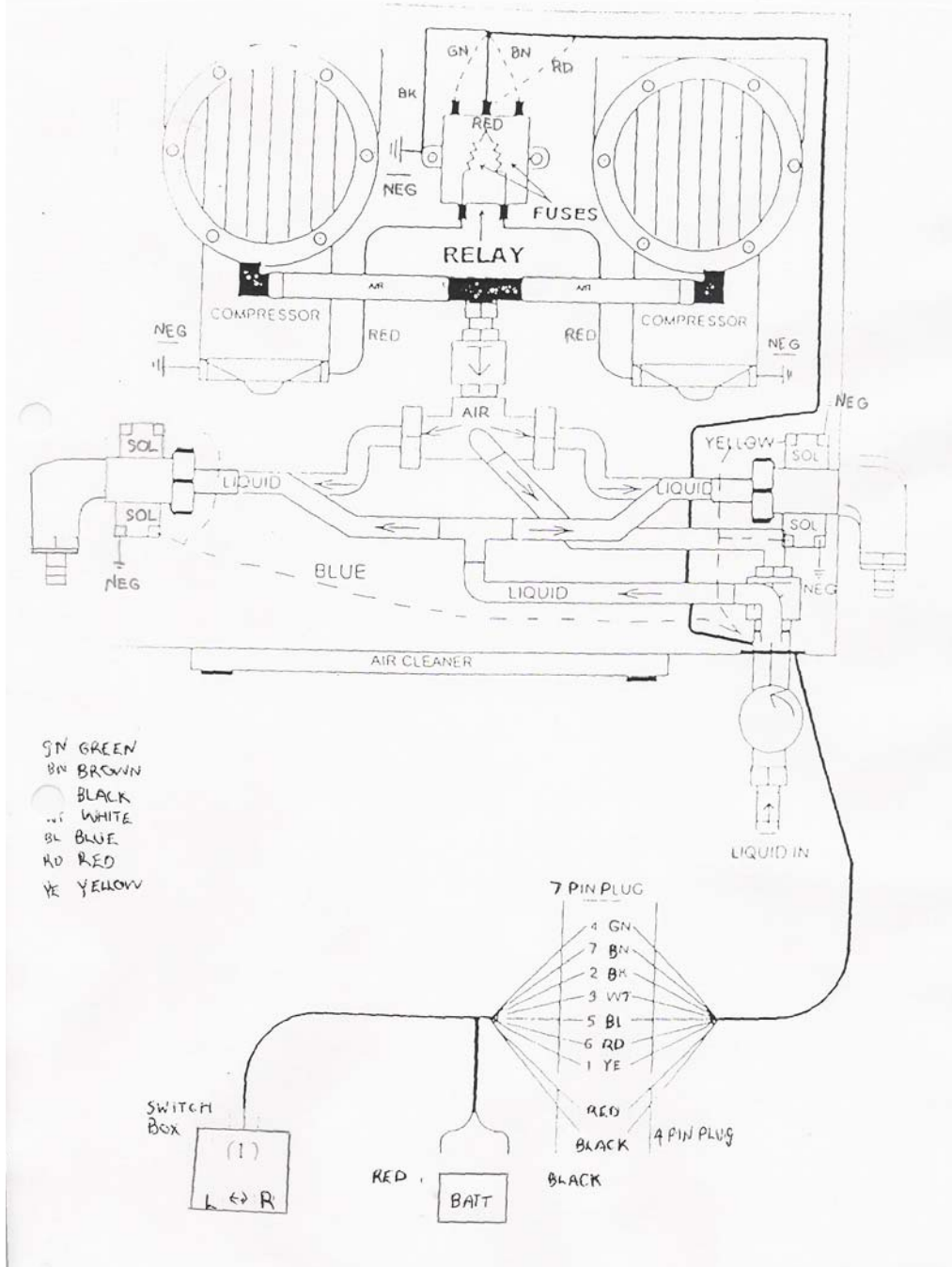


RD = RED
 BL = BLUE
 YL = YELLOW
 GN = GREEN
 BN = BROWN

PARTS LIST


1. AIR JET
2. 'O' RING
3. GENERATOR BODY
4. ELBOW
5. SCREEN
6. WASHER
7. 1" NIPPLE






















12 Nozzle Selection Charts

The following 7 pages reprinted with permission from Tee Jet catalogue 49m.

**Broadcast Nozzle Selection Guide**

	Herbicides				Fungicides		Insecticides	
	Soil Incorporated	Pre-Emerge	Post-Emerge		Contact	Systemic	Contact	Systemic
			Contact	Systemic				
 XR TeeJet Reference page 4			Excellent	Good	Excellent	Good	Excellent	Good
 XRC TeeJet Reference page 4			Excellent	Good	Excellent	Good	Excellent	Good
 XR TeeJet at pressures below 30 psi (2.0 bar) Reference page 4	Good	Good	Good	Very Good	Good	Very Good	Good	Very Good
 XRC TeeJet at pressures below 30 psi (2.0 bar) Reference page 4	Good	Good	Good	Very Good	Good	Very Good	Good	Very Good
 Turbo TeeJet Reference page 4			Very Good	Very Good	Very Good	Very Good	Very Good	Very Good
 Turbo TeeJet at pressures below 30 psi (2.0 bar) Reference page 4	Good	Good	Good	Excellent	Good	Excellent	Good	Excellent
 AI TeeJet Reference page 4	Very Good	Very Good	Good	Excellent	Good	Excellent	Good	Excellent
 AIC TeeJet Reference page 4	Very Good	Very Good	Good	Excellent	Good	Excellent	Good	Excellent
 TwinJet Reference page 5			Excellent		Excellent		Excellent	
 Turbo FloodJet Reference page 5	Excellent	Excellent		Good		Good		Good
 QCTF Turbo FloodJet Reference page 8	Excellent	Excellent						
 TurfJet Reference page 5	Excellent	Excellent		Very Good		Very Good		Very Good

Characteristics of Common Spray Tip Materials

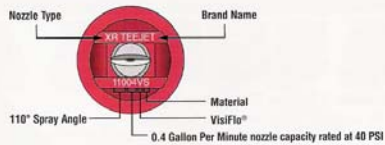
 Ceramic Superior wear life; highly resistant to abrasive and corrosive chemicals	 Hardened Stainless Steel Very good wear life; good durability and chemical resistance	 Stainless Steel Good wear life; excellent chemical resistance; durable orifice	 Polymer Good wear life; good chemical resistance; orifice susceptible to damage when cleaned improperly	 Brass Poor wear life; susceptible to corrosion, especially with fertilizers
---	--	---	--	--

www.TeeJet.com

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TeeJet® Spray Nozzle Information

Nozzle Nomenclature



Material Codes

VP	VS	VK	SS	HSS	VB	No Code
VisiFlo Polymer	VisiFlo Stainless Steel	VisiFlo Ceramic	Stainless Steel	Hardened Stainless Steel	VisiFlo Brass	Brass

Nozzle Type	Code	Nominal Spray Angle	Size	Available Materials						
				VP	VS	VK	SS	HSS	VB	SS
Turbo TeeJet®	TT	110°	01-08	*						
AI TeeJet™	AI	110°	015-08	*						
AIC TeeJet™	AIC	110°	025-05	*	*					
XRC TeeJet™	XRC	110°	025-05	*	*	*				
XRC TeeJet™	XRC	80°	025-05	*						
AI TeeJet Even™	AI E	95°	015-08	*						
XR TeeJet™	XR	80°, 110°	01-15	110°	*	*	*			110°
DG TeeJet®	DG	80°, 110°	015-05	110°	*					
DG TeeJet Even®	DG E	95°	015-05							
TeeJet Standard™	TP	65°, 80°, 110°	0067-20	*	*	*	*	*	*	*
TeeJet Even™	TP E	40°, 65°, 80°, 95°	01-15	*	*	*	*	*	*	*
TwinJet®	TJ60	40°, 65°, 80°, 110°	0134-10	*						*
TwinJet Even®	TJ60 E	40°, 80°	02-06	*						*
Turbo FloodJet®	TF	—	02-10	*	*					*
	TFW	—	12 & 20 only							*
	TKT	—	3 & 5 only	*						*
FloodJet®	TK	—	50-210	*	*					*
1/4K FloodJet®	1/4K	—	50-27				*			*
QCK FloodJet®	QCK	—	20-210	*						*
Quick Turbo FloodJet®	QCTF	—	15-120	*						*
TurtJet™	1/4TTJ	—	02-15	*	*					*
FullJet®	FL	—	5-15	*	*					*
AIUB TeeJet™	AIUB	85°	025-04	*						*
TeeJet UB™	D25143-UB	85°	0075-04			*				*
OC TeeJet™	OC	—	01-16			*				*
TQ TeeJet™	TQ	150°	01-09			*				*
TG Full Cone	TG	—	3-10			*				*
D-Disc/Core	D	—	1-16	*	*	*	*	*	*	*
ConeJet®	TX	—	1-26	*	*	*	*	*	*	*
TXA ConeJet®	TXA	80°	0050-04		*					*
TXB ConeJet®	TXB	80°	0050-04		*					*
StreamJet®	SJ3	36°	015-15	*						*
	H1/4U	0°	02-80			*				*
	TP	0°	01-40			*				*

*Additional capacities and spray angles may be available; inquire.

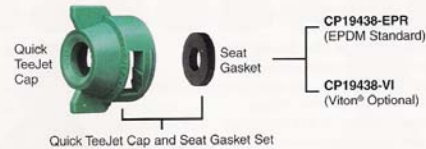
**See below for additional material information.

XR TeeJet Materials and Sizes

Nozzle Type	Spray Angle	Sizes Available				
		VP	VS	VK	VB	SS
XR TeeJet	110°	015-08	01-08	02-08	01-08	10-15
XR TeeJet	80°	—	01-08	03-08	—	10-15

Quick TeeJet® Caps

Maximum Pressure 300 PSI (20 bar).



Color Code

1	2	3	4	5	6	7	8
Black	White	Red	Blue	Green	Yellow	Brown	Orange

Quick TeeJet Cap and Seat Gasket Set		For Use with Tip Number (Capacities)	
	25612-*.NYR	XR(01-08), TP(0067-08), DG, TT, TQ	
	25610-*.NYR	XR(10-15), TP(10-20)	
	25598-*.NYR	TJ, AI, AIE, AIUB, SJ3	
	25595-*.NYR	XR(01-08), TP(0067-08), DG	
	25600-*.NYR	TF, TK-VS, TKT, TFW	
	25608-*.NYR	TK, FL, TX, TG, D*** 8400 HOSE BARB	
	26278-1-NYR**	DCER, TXB	
	QJ4676-45-1/4-NYR**	1/4TTJ	
	QJ4676-90-1/4-NYR**	1/4TTJ	
	QJ4676-1/8-NYR**	—	
	QJ(B)4676-1/4-NYR** (B) = BSPT	—	
	19843-NYR**	Shut-off Cap	

*Specify color code (see chart).

**Only available in black.

***Use seal CP18999-EPR.

TeeJet® Broadcast Nozzles

XR TeeJet® (XR)



Extended Range Flat Spray Tip

- Uniform coverage at lower pressures
- Smaller droplets at high pressures for thorough coverage
- Nozzle spacing – 20 inches (50cm)
- Spraying pressure – 15-60 PSI (1-4 bar)
- Automatic spray alignment with 25612-**-NYR Quick TeeJet® cap and gasket
- Automatic spray alignment for sizes 10 and 15 with 25610-**-NYR Quick TeeJet cap and gasket
- For application rates, see pages 6 and 7

How to order:

Specify tip number. Examples:

- XR8004VS – Stainless Steel with VisiFlo® color-coding
- XR11004-VP – Polymer with VisiFlo color-coding
- XR11004-VK – Ceramic with VisiFlo color-coding
- XR8010SS – Stainless Steel
- XR11004VB – Brass with VisiFlo color-coding



XRC TeeJet® (XRC)



Extended Range Flat Spray Tip

- XR TeeJet tip molded into Quick TeeJet cap provides automatic spray alignment
- Available in stainless steel, ceramic, and polymer in 110° spray angles...with VisiFlo color-coding, (80° stainless steel only)
- Includes tightly fitting washer that stays put and assures a good seal
- For application rates, see pages 6 and 7

How to order:

Specify tip number. Examples:

- XRC11004-VS – Stainless Steel with VisiFlo color-coding
- XRC11004-VP – Polymer with VisiFlo color-coding
- XRC11004-VK – Ceramic with VisiFlo color-coding
- XR8004-VS – Stainless Steel with VisiFlo color-coding



AI TeeJet® (AI)



Air Induction Spray Tip

- Depending on chemical, produces large, air-filled drops
- Larger droplets for less drift
- Uniform coverage in broadcast spraying
- Nozzle spacing – 20 inches (50cm)
- Spraying pressure – 30-115 PSI (2-8 bar)
- Polymer insert holder and pre-orifice with VisiFlo color-coding
- Automatic spray alignment with 25598-**-NYR Quick TeeJet cap and gasket
- For application rates, see pages 6 and 7

How to order:

Specify tip number. Example:

- AI11004-VS – Stainless Steel with VisiFlo color-coding



AIC TeeJet® (AIC)



Air Induction Spray Tip

- AI TeeJet nozzle molded into Quick TeeJet cap provides automatic spray alignment
- Available in stainless steel, ceramic, and polymer in 110° spray angles...with VisiFlo color-coding
- Includes tightly fitting washer that stays put and assures a good seal
- For application rates, see pages 6 and 7

How to order:

Specify tip number. Examples:

- AIC11004-VS – Stainless Steel with VisiFlo color-coding
- AIC11003-VP – Polymer with VisiFlo color-coding
- AIC11003-VK – Ceramic with VisiFlo color-coding



Turbo TeeJet® (TT)



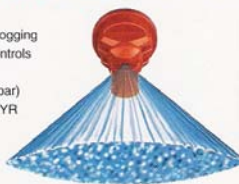
Wide Angle Flat Spray Tip

- Large, round free passages to minimize clogging
- Excellent to use with automatic sprayer controls
- Excellent spray pattern quality
- Superior drift control from 15-90 PSI (1-6 bar)
- Automatic spray alignment with 25612-**-NYR Quick TeeJet cap and gasket
- For application rates, see pages 6 and 7

How to order:

Specify tip number. Example:

- TT11001-VP – Polymer with VisiFlo color-coding



DG TeeJet® (DG)



Drift Guard Flat Spray Tip

- Large droplets to reduce drift
- Removable pre-orifice
- Nozzle spacing – 20 inches (50cm)
- Spraying pressure – 30-60 PSI (2-4 bar)
- Automatic spray alignment with 25612-**-NYR Quick TeeJet cap and gasket
- For application rates, see pages 6 and 7

How to order:

Specify tip number. Examples:

- DG8002VS – Stainless Steel with VisiFlo color-coding
- DG11002-VP – Polymer with VisiFlo color-coding



TeeJet® Broadcast Nozzles

TwinJet® (TJ60)



Twin Flat Spray Tip

- Penetrates crop residue or dense foliage
- Smaller droplets for thorough spray coverage
- Nozzle spacing – 20 inches (50cm)
- Spraying pressure – 30-60 PSI (2-4 bar)
- Automatic spray alignment with 25598*-NYR Quick TeeJet cap and gasket
- For application rates, see pages 6 and 7

How to order:

Specify tip number. Examples:

TJ60-8002VS – Stainless Steel with VisiFlo® color-coding

TJ60-8002 – Brass



TeeJet® (TP)



Standard Flat Spray Tip

- Good spray penetration
- Uniform coverage along boom
- Nozzle spacing – 20 inches (50cm)
- Spraying pressure – 30-60 PSI (2-4 bar)
- Automatic spray alignment with 25612*-NYR Quick TeeJet cap and gasket
- Automatic spray alignment for sizes 10 thru 20 with 25610*-NYR Quick TeeJet cap and gasket
- For application rates, see pages 6 and 7

How to order:

Specify tip number. Examples:

TP8002VS – Stainless Steel with VisiFlo color-coding

TP11002VP – Polymer with VisiFlo color-coding

TP11002-HSS – Hardened Stainless Steel

TP8002-SS – Stainless Steel

TP8002 – Brass



Turbo FloodJet® (TF)



Wide Angle Flat Spray Tip

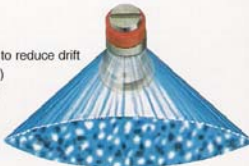
- Uniform coverage along boom
- Pre-orifice design produces large droplets to reduce drift
- Nozzle spacing – 20-40 inches (50-100cm)
- Spraying pressure – 10-40 PSI (0.7-3 bar)
- Can be used with No. 25600*-NYR Quick TeeJet cap for automatic alignment
- For application rates, see pages 7 and 8

How to order:

Specify tip number. Examples:

TF-VS4 – Stainless Steel with VisiFlo color-coding

TF-VP4 – Polymer with VisiFlo color-coding



TurfJet® (TJ)



Wide Angle Flat Fan Spray Nozzle

- Very large droplets
- Direct replacement for plastic hollow-cone, low-drift nozzles
- More precise flow and distribution pattern
- Large orifice reduces clogging
- Nozzle spacing – 20-40 inches (50-100cm)
- Spraying pressure – 25-75 PSI (1.5-5 bar)
- Use Quick TeeJet cap QJ4676*-NYR
- For application rates, see pages 7 and 8

How to order:

Specify tip number. Examples:

1/4TTJ04-VS – Stainless Steel with VisiFlo color-coding

1/4TTJ04-VP – Polymer with VisiFlo color-coding



Turbo FloodJet® (TKT)



Wide Angle Flat Spray Tip

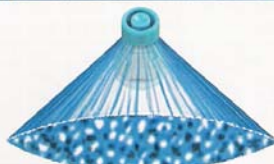
- Excellent spray distribution
- Wide spray angle at low pressure
- Ideal tip for residential and estate sprayers
- Recommended operating pressure range: 10-40 PSI (0.7-3 bar)
- VisiFlo color-coding for easy size identification
- All polymer construction
- Excellent resistance to corrosive solutions
- Can be used with No. 25600*-NYR Quick TeeJet cap for automatic alignment
- For application rates, see page 8

How to order:

Specify tip number. Examples:

TKT-VP3 – Polymer with VisiFlo color-coding

TKT-VP5 – Polymer with VisiFlo color-coding



Optimum Spray Heights

	50cm	75cm	100cm
65°	90cm	135cm	—
80°	75cm	110cm	—
110°	50cm	75cm	—
FullJets	75cm*	100cm*	125cm*
FloodJets TK, TF	60cm**	75cm**	100cm**

*Nozzle height based on 30 to 45 degree angle of orientation.

**Wide angle spray tip height is influenced by nozzle orientation. The critical factor is to achieve a double spray pattern overlap.

TeeJet® Broadcast and Turf Applications

Recommended Spraying Pressure Range:
(Consult your chemical label for specific application)

- TT, Turbo TeeJet (1-6 bar)

AI, AI TeeJet (2-8 bar)

AIC, AIC TeeJet (2-8 bar)

XR, XR TeeJet (1-4 bar)

XRC, XRC TeeJet (1-4 bar)
- TP, TeeJet Standard (2-4 bar)

DG, DG TeeJet (2-4 bar)

TJ, TwinJet (2-4 bar)


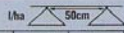
TF, Turbo FloodJet (0.7-3 bar)

TTJ, TurfJet (1.5-5 bar)
- TQ, 150" Double Outlet (1.5-4 bar)

UB, Underleaf/End of Boom (1.5-4 bar)

AIUB, Underleaf/End of Boom (2-8 bar)

OC, Off Center (2-4 bar)

 [] bar	l/min															
		4 km/h	5 km/h	6 km/h	7 km/h	8 km/h	9 km/h	10 km/h	12 km/h	16 km/h	18 km/h	20 km/h	25 km/h	30 km/h	35 km/h	
TP800050 TP1100050 (100)	2.0	0.16	48.0	38.4	32.0	27.4	24.0	21.3	19.2	16.0	12.0	10.7	9.6	7.7	6.4	5.5
	3.0	0.20	60.0	48.0	40.0	34.3	30.0	26.7	24.0	20.0	15.0	13.3	12.0	9.6	8.0	6.9
	4.0	0.23	69.0	55.2	46.0	39.4	34.5	30.7	27.6	23.0	17.3	15.3	13.8	11.0	9.2	7.9
TP800067 TP1100067 (100)	2.0	0.21	63.0	50.4	42.0	36.0	31.5	28.0	25.2	21.0	15.8	14.0	12.6	10.1	8.4	7.2
	3.0	0.26	78.0	62.4	52.0	44.6	39.0	34.7	31.2	26.0	19.5	17.3	15.6	12.5	10.4	8.9
	4.0	0.30	90.0	72.0	60.0	51.4	45.0	40.0	36.0	30.0	22.5	20.0	18.0	14.4	12.0	10.3
D25143-UB-8501 TQ150-01 (TJ60, TP, XR) 8001 (TP, TT, XR) 11001 (100)	1.0	0.23	69.0	55.2	46.0	39.4	34.5	30.7	27.6	23.0	17.3	15.3	13.8	11.0	9.2	7.9
	2.0	0.32	96.0	76.8	64.0	54.9	48.0	42.7	38.4	32.0	24.0	21.3	19.2	15.4	12.8	11.0
	3.0	0.39	117	93.6	78.0	66.9	58.5	52.0	46.8	39.0	29.3	26.0	23.4	18.7	15.6	13.4
	4.0	0.45	135	108	90.0	77.1	67.5	60.0	54.0	45.0	33.8	30.0	27.0	21.6	18.0	15.4
	5.0	0.50	150	120	100	85.7	75.0	66.7	60.0	50.0	37.5	33.3	30.0	24.0	20.0	17.1
	6.0	0.55	165	132	110	94.3	82.5	73.3	66.0	55.0	41.3	36.7	33.0	26.4	22.0	18.9
D25143-UB-85015 TQ150-015 (DG, TP, XR, XRC) 80015 (AI, DG, TP, TT, XR) 110015 (100)	1.0	0.34	102	81.6	68.0	58.3	51.0	45.3	40.8	34.0	25.5	22.7	20.4	16.3	13.6	11.7
	2.0	0.48	144	115	96.0	82.3	72.0	64.0	57.6	48.0	36.0	32.0	28.8	23.0	19.2	16.5
	3.0	0.59	177	142	118	101	88.5	78.7	70.8	59.0	44.3	39.3	35.4	28.3	23.6	20.2
	4.0	0.68	204	163	136	117	102	90.7	81.6	68.0	51.0	45.3	40.8	32.6	27.2	23.3
	5.0	0.76	228	182	152	130	114	101	91.2	76.0	57.0	50.7	45.6	36.5	30.4	26.1
	6.0	0.83	249	199	166	142	125	111	99.6	83.0	62.3	55.3	49.8	39.8	33.2	28.5
	7.0	0.90	270	216	180	154	135	120	108	90.0	67.5	60.0	54.0	43.2	36.0	30.9
	8.0	0.96	288	230	192	165	144	128	115	96.0	72.0	64.0	57.6	46.1	38.4	32.9
D25143-UB-8502 TQ150-02, OC-02 (DG, TJ60, TP, XR, XRC) 8002 (AI, DG, TJ60, TP, TT, XR) 11002 1/4TTJ02 (50) (TJ60 100)	1.0	0.46	138	110	92.0	78.9	69.0	61.3	55.2	46.0	34.5	30.7	27.6	22.1	18.4	15.8
	2.0	0.65	195	156	130	111	97.5	86.7	78.0	65.0	48.8	43.3	39.0	31.2	26.0	22.3
	3.0	0.79	237	190	158	135	119	105	94.8	79.0	59.3	52.7	47.4	37.9	31.6	27.1
	4.0	0.91	273	218	182	156	137	121	109	91.0	68.3	60.7	54.6	43.7	36.4	31.2
	5.0	1.02	306	245	204	175	153	136	122	102	76.5	68.0	61.2	49.0	40.8	35.0
	6.0	1.12	336	269	224	192	168	149	134	112	84.0	74.7	67.2	53.8	44.8	38.4
	7.0	1.21	363	290	242	207	182	161	145	121	90.8	80.7	72.6	58.1	48.4	41.5
	8.0	1.29	387	310	258	221	194	172	155	129	96.8	86.0	77.4	61.9	51.6	44.2
AIUB85025 (AI, AIC, XR, XRC) 110025 (50)	1.0	0.57	171	137	114	97.7	85.5	76.0	68.4	57.0	42.8	38.0	34.2	27.4	22.8	19.5
	2.0	0.81	243	194	162	139	122	108	97.2	81.0	60.8	54.0	48.6	38.9	32.4	27.8
	3.0	0.99	297	238	198	170	149	132	119	99.0	74.3	66.0	59.4	47.5	39.6	33.9
	4.0	1.14	342	274	228	195	171	152	137	114	85.5	76.0	68.4	54.7	45.6	39.1
	5.0	1.28	384	307	256	219	192	171	154	128	96.0	85.3	76.8	61.4	51.2	43.9
	6.0	1.40	420	336	280	240	210	187	168	140	105	93.3	84.0	67.2	56.0	48.0
	7.0	1.51	453	362	302	259	227	201	181	151	113	101	90.6	72.5	60.4	51.8
	8.0	1.62	486	389	324	278	243	216	194	162	122	108	97.2	77.8	64.8	55.5
D25143-UB-8503 TQ150-03, OC-03 (DG, TJ60, TP, XR, XRC) 8003 (AI, AIC, DG, TJ60, TP, TT, XR, XRC) 11003 AIUB8503 (50) (TJ60 100)	1.0	0.68	204	163	136	117	102	90.7	81.6	68.0	51.0	45.3	40.8	32.6	27.2	23.3
	2.0	0.96	288	230	192	165	144	128	115	96.0	72.0	64.0	57.6	46.1	38.4	32.9
	3.0	1.18	354	283	236	202	177	157	142	118	88.5	78.7	70.8	56.6	47.2	40.5
	4.0	1.36	408	326	272	233	204	181	163	136	102	90.7	81.6	65.3	54.4	46.6
	5.0	1.52	456	365	304	261	228	203	182	152	114	101	91.2	73.0	60.8	52.1
	6.0	1.67	501	401	334	286	251	223	200	167	125	111	100	80.2	66.8	57.3
	7.0	1.80	540	432	360	309	270	240	216	180	135	120	108	86.4	72.0	61.7
	8.0	1.93	579	463	386	331	290	257	232	193	145	129	116	92.6	77.2	66.2

Note: Always double check your application rates.

TeeJet® Broadcast and Turf Applications

Recommended Spraying Pressure Range:
(Consult your chemical label for specific application)

TT, Turbo TeeJet (1-6 bar)

AI, AI TeeJet (2-8 bar)

AIC, AIC TeeJet (2-8 bar)

XR, XR TeeJet (1-4 bar)

XRC, XRC TeeJet (1-4 bar)

TP, TeeJet Standard (2-4 bar)

DG, DG TeeJet (2-4 bar)

TJ60, TwinJet (2-4 bar)

TF, Turbo FloodJet (0.7-3 bar)


TTJ, TurfJet (1.5-5 bar)

TQ, 150° Double Outlet (1.5-4 bar)

UB, Underleaf/End of Boom (1.5-4 bar)

AIUB, Underleaf/End of Boom (2-8 bar)

OC, Off Center (2-4 bar)

	l/min bar	l/ha 													
		4 km/h	5 km/h	6 km/h	7 km/h	8 km/h	9 km/h	10 km/h	12 km/h	16 km/h	18 km/h	20 km/h	25 km/h	30 km/h	35 km/h
D25143-UB-8504	1.0	0.91	273	218	182	156	137	121	109	91.0	68.3	60.7	54.6	43.7	36.4
TQ150-04, OC-04	2.0	1.29	387	310	258	221	194	172	155	129	96.8	86.0	77.4	61.9	51.6
(DG, TJ60, TP, XR, XRC) 8004	3.0	1.58	474	379	316	271	237	211	190	158	119	105	94.8	75.8	63.2
(AI, AIC, DG, TJ60, TP, TT, XR, XRC) 11004	4.0	1.82	546	437	364	312	273	243	218	182	137	121	109	87.4	72.8
AIUB8504	5.0	2.04	612	490	408	350	306	272	245	204	153	136	122	97.9	81.6
1/4TTJ04 TF-2 (50)	6.0	2.23	669	535	446	382	335	297	268	223	167	149	134	107	89.2
	7.0	2.41	723	578	482	413	362	321	289	241	181	161	145	116	96.4
	8.0	2.58	774	619	516	442	387	344	310	258	194	172	155	124	103
TQ150-05	1.0	1.14	342	274	228	195	171	152	137	114	85.5	76.0	68.4	54.7	45.6
(DG, TP, XR, XRC) 8005	2.0	1.61	483	386	322	276	242	215	193	161	121	107	96.6	77.3	64.4
(AI, AIC, DG, TP, TT, XR, XRC) 11005	3.0	1.97	591	473	394	338	296	263	236	197	148	131	118	94.6	78.8
1/4TTJ05 TF-2.5 (50)	4.0	2.27	681	545	454	389	341	303	272	227	170	151	136	109	90.8
	5.0	2.54	762	610	508	435	381	339	305	254	191	169	152	122	102
	6.0	2.79	837	670	558	478	419	372	335	279	209	186	167	134	112
	7.0	3.01	903	722	602	516	452	401	361	301	226	201	181	145	120
	8.0	3.22	966	773	644	552	483	429	386	322	242	215	193	155	129
TQ150-06 OC-06	1.0	1.37	411	329	274	235	206	183	164	137	103	91.3	82.2	65.8	54.8
(TJ60, TP, XR, XRC) 8006	2.0	1.94	582	466	388	333	291	259	233	194	146	129	116	93.1	77.6
(AI, TJ60, TP, TT, XR) 11006	3.0	2.37	711	569	474	406	356	316	284	237	178	158	142	114	94.8
1/4TTJ06 TF-3 (50)	4.0	2.74	822	658	548	470	411	365	329	274	206	183	164	132	110
	5.0	3.06	918	734	612	525	459	408	367	306	230	204	184	147	122
	6.0	3.35	1005	804	670	574	503	447	402	335	251	223	201	161	134
	7.0	3.62	1086	869	724	621	543	483	434	362	272	241	217	174	145
	8.0	3.87	1161	929	774	663	581	516	464	387	290	258	232	186	155
TQ150-08 OC-08	1.0	1.82	546	437	364	312	273	243	218	182	137	121	109	87.4	72.8
(TJ60, TP, XR) 8008	2.0	2.58	774	619	516	442	387	344	310	258	194	172	155	124	103
(AI, TJ60, TP, TT, XR) 11008	3.0	3.16	948	758	632	542	474	421	379	316	237	211	190	152	126
1/4TTJ08 TF-4 (50)	4.0	3.65	1095	876	730	626	548	487	438	365	274	243	219	175	146
	5.0	4.08	1224	979	816	699	612	544	490	408	306	272	245	196	163
	6.0	4.47	1341	1073	894	766	671	596	536	447	335	298	268	215	179
	7.0	4.83	1449	1159	966	828	725	644	580	483	362	322	290	232	193
	8.0	5.16	1548	1238	1032	885	774	688	619	516	387	344	310	248	206
(TP, XR) 8010 (TP, XR) 11010	1.0	2.28	684	547	456	391	342	304	274	228	171	152	137	109	91.2
TJ60-8010 TJ60-11010	2.0	3.23	969	775	646	554	485	431	388	323	242	215	194	155	129
1/4TTJ10 TF-5 (50)	3.0	3.95	1185	948	790	677	593	527	474	395	296	263	237	190	158
	4.0	4.56	1368	1094	912	782	684	608	547	456	342	304	274	219	182
	5.0	5.10	1530	1224	1020	874	765	680	612	510	383	340	306	245	204
	6.0	5.59	1677	1342	1118	958	839	745	671	559	419	373	335	268	224
	7.0	6.03	1809	1447	1206	1034	905	804	724	603	452	402	362	289	241
	8.0	6.45	1935	1548	1290	1106	968	860	774	645	484	430	387	310	258
(TP, XR) 8015 (TP, XR) 11015	1.0	3.42	1026	821	684	586	513	456	410	342	257	228	205	164	137
1/4TTJ15 TF-7.5 (50)	2.0	4.83	1449	1159	966	828	725	644	580	483	362	322	290	232	193
	3.0	5.92	1776	1421	1184	1015	888	789	710	592	444	395	355	284	237
	4.0	6.84	2052	1642	1368	1173	1026	912	821	684	513	456	410	328	274
	5.0	7.64	2292	1834	1528	1310	1146	1019	917	764	573	509	458	367	306
TP8020 TP11020	1.0	4.56	1368	1094	912	782	684	608	547	456	342	304	274	219	182
	2.0	6.44	1932	1546	1288	1104	966	859	773	644	483	429	386	309	258
TF-10 (50)	3.0	7.89	2367	1894	1578	1353	1184	1052	947	789	592	526	473	379	316
	4.0	9.11	2733	2186	1822	1562	1367	1215	1093	911	683	607	547	437	364

Note: Always double check your application rates.

TeeJet® Drop Size

Nozzle selection is often based upon droplet size. The droplet size from a nozzle becomes very important when the efficacy of a particular crop chemical is dependent on coverage, or the prevention of spray leaving the target area is a priority.

The majority of the nozzles used in agriculture can be classified as producing either fine, medium or coarse droplets. Nozzles which produce fine droplets are usually recommended for post-emergence applications which require excellent coverage on leaf surfaces. The most common nozzles used in agriculture are those which produce medium-sized droplets. Nozzles producing medium-sized droplets can be used for contact and systemic herbicides, pre-emergence surface-applied herbicides, insecticides and fungicides.

An important point to remember when choosing a spray nozzle which produces a droplet size in one of the six categories, is that one nozzle can produce different droplet size classifications at different pressures. A nozzle might produce medium droplets at low pressures, while producing fine droplets as pressure is increased.

Droplet size classes are shown in the following tables to assist in choosing an appropriate spray tip.

VF Very Fine	F Fine
M Medium	C Coarse
VC Very Coarse	XC Extremely Coarse

Droplet size classifications are based on BCPC specifications and in accordance with ASAE Standard S-572 at the date of printing. Classifications are subject to change.

Turbo TeeJet® (TT)

	bar									
	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5
TT11001	C	M	M	M	F	F	F	F	F	F
TT110015	C	C	M	M	M	M	M	F	F	F
TT11002	C	C	C	M	M	M	M	M	M	F
TT11003	VC	C	C	C	C	M	M	M	M	M
TT11004	XC	VC	C	C	C	C	C	C	M	M
TT11005	XC	VC	VC	VC	C	C	C	C	C	M
TT11006	XC	VC	VC	VC	C	C	C	C	C	M
TT11008	XC	XC	VC	VC	C	C	C	C	C	M

AI TeeJet® (AI) and AIC TeeJet® (AIC)

	bar									
	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5
AI110015	VC	VC	VC	VC	C	C	C	C	C	C
AI11002	VC	VC	VC	VC	VC	C	C	C	C	C
AI110025	XC	VC	VC	VC	VC	VC	C	C	C	C
AI11003	XC	XC	VC	VC	VC	VC	VC	C	C	C
AI11004	XC	XC	VC	VC	VC	VC	VC	VC	C	C
AI11005	XC	XC	XC	VC	VC	VC	VC	VC	C	C
AI11006	XC	XC	VC	VC	VC	VC	VC	VC	C	C
AI11008	XC	XC	XC	VC	VC	VC	VC	VC	C	C

XR TeeJet® (XR) and XRC TeeJet® (XRC)

	bar						
	1	1.5	2	2.5	3	3.5	4
XR0001	M	F	F	F	F	F	F
XR00015	M	M	F	F	F	F	F
XR0002	M	M	M	M	F	F	F
XR0003	M	M	M	M	M	M	M
XR0004	C	M	M	M	M	M	M
XR0005	C	C	C	M	M	M	M
XR0006	C	C	C	C	C	C	C
XR0008	VC	VC	C	C	C	C	C
XR11001	F	F	F	F	F	VF	VF
XR110015	F	F	F	F	F	F	F
XR11002	M	F	F	F	F	F	F
XR11003	M	M	F	F	F	F	F
XR11004	M	M	M	M	M	F	F
XR11005	C	M	M	M	M	M	F
XR11006	C	C	M	M	M	M	M
XR11008	C	C	C	C	M	M	M

TeeJet® (TP)

	bar						
	2	2.5	3	3.5	4		
TP0001	F	F	F	F	F		
TP00015	F	F	F	F	F		
TP0002	M	M	F	F	F		
TP0003	M	M	M	M	M		
TP0004	M	M	M	M	M		
TP0005	C	M	M	M	M		
TP0006	C	C	C	C	C		
TP0008	C	C	C	C	C		
TP11001	F	F	F	VF	VF		
TP110015	F	F	F	F	F		
TP11002	F	F	F	F	F		
TP11003	F	F	F	F	F		
TP11004	M	M	M	F	F		
TP11005	M	M	M	M	M		
TP11006	M	M	M	M	M		
TP11008	C	C	M	M	M		

TwinJet® (TJ)

	bar				
	2	2.5	3	3.5	4
TJ60-6501	F	VF	VF	VF	VF
TJ60-650134	F	F	F	VF	VF
TJ60-6502	F	F	F	F	F
TJ60-6503	M	F	F	F	F
TJ60-6504	M	M	M	M	F
TJ60-6505	M	M	M	M	M
TJ60-6506	C	C	M	M	M
TJ60-8001	VF	VF	VF	VF	VF
TJ60-8002	F	F	F	F	F
TJ60-8003	F	F	F	F	F
TJ60-8004	M	M	F	F	F
TJ60-8005	M	M	M	M	M
TJ60-8006	C	M	M	M	M
TJ60-8010	C	C	C	M	M
TJ60-11002	F	VF	VF	VF	VF
TJ60-11003	F	F	F	F	F
TJ60-11004	F	F	F	F	F
TJ60-11005	M	M	M	F	F
TJ60-11008	M	M	M	M	M
TJ60-11010	M	M	M	M	M

Turbo FloodJet® (TF)

	bar				
	2	2.5	3	3.5	4
TF-2	XC	XC	XC	XC	XC
TF-2.5	XC	XC	XC	XC	XC
TF-3	XC	XC	XC	XC	XC
TF-4	XC	XC	XC	XC	XC
TF-5	XC	XC	XC	XC	XC
TF-7.5	XC	XC	XC	XC	XC
TF-10	XC	XC	XC	XC	XC

DG TeeJet® (DG)

	bar				
	2	2.5	3	3.5	4
DG80015	M	M	M	M	F
DG8002	C	M	M	M	M
DG8003	C	M	M	M	M
DG8004	C	C	M	M	M
DG8005	C	C	C	M	M
DG110015	M	F	F	F	F
DG11002	M	M	M	M	M
DG11003	C	M	M	M	M
DG11004	C	C	M	M	M
DG11005	C	C	C	M	M

TurfJet® (TTJ)

	bar				
	2	3	3.5	4	5.5
1/4TTJ02-VS	XC	XC	XC	XC	XC
1/4TTJ04-VS	XC	XC	XC	XC	XC
1/4TTJ05-VS	XC	XC	XC	XC	XC
1/4TTJ06-VS	XC	XC	XC	XC	XC
1/4TTJ08-VS	XC	XC	XC	XC	XC
1/4TTJ10-VS	XC	XC	XC	XC	XC
1/4TTJ15-VS	XC	XC	XC	XC	XC

DGE TeeJet® (DG EVEN)

	bar				
	2	2.5	3	3.5	4
DG95015E	M	M	F	F	F
DG9502E	M	M	M	M	M
DG9503E	C	M	M	M	M
DG9504E	C	C	M	M	M
DG9505E	C	C	C	M	M