

## Fault Diagnosis

If you have a problem with the applicator not running or not running as normal the following information may help diagnose the problem. Always make sure it is connected as per the user manual and check all connections, cables and pipework for damage.

Check all cable connections and cable for damage. Make sure there is sufficient voltage to power the applicator Supply Voltage 12V/DC (10.6V DC to 16.4V/DC - Current consumption 10A - Fuse rating 15A.

Check tubing for any damage of kinks as this will restrict the flow.

We stock a full range of spare/replacement parts please contact us for help or to order parts.

The Control box has a diagnostic mode which will help to check for faults with the flow sensor and supply voltage refer to the section in the User Manual or down load instruction from the website.

## Fault diagnosis and remedy

Fault	Diagnosis	Remedy
Motor will not run	Wire incorrectly connected or damaged	Check crocodile clips attached properly to the battery. Check control box wires.
	Fuse blow	Replace fuse – check for reasons for blown fuse before restarting.
	Defective motor	Contact Selmech Supplies.
Motor runs but no output	Pump leads wrongly connected	Connect leads correctly
	Jet blocked	Clean jet
	Tubing kinked	Remove kink and re-route tubing
	Drive shaft disconnected	Check Drive shaft rotates with motor
Motor runs but poor output	Suction filter blocked	Remove pump from barrel and clean filter
	Jet blocked	Clean
	Jet too small	Replace with larger jet
	Tubing kinked	Remove kink and re-route tubing
	Tube split	Replace tube
	Pump head worn or damaged	Call Selmech
Wrong application rate	Barrel empty	Fill barrel or replace
	Is the display showing check flow	Check for blockage in the system Clean Flow Sensor
	Is the calculated target within specified range of 1 to 10 litres per minute	Adjust t/h or l/t so that calculated target falls within limit.
No display on control box	Fuse blown	Check control box fuse
	wiring damaged	Check wiring
Display showing CHECK FLOW	Is the output set within the specified parameters	Set the output rate between 1 and 10.00 litres per minute.
	Is the pipe kinked or block	Check for blockage in the system
	Check the flow sensor propeller is spinning	Refer to flow sensor cleaning
Display showing SYPHON	If the application point is lower than the pump outlet, siphoning can occur.	Reposition application point higher than the pump. In some cases an anti syphon check valve could be used. Contact Selmech.

## Cleaning the Strainer

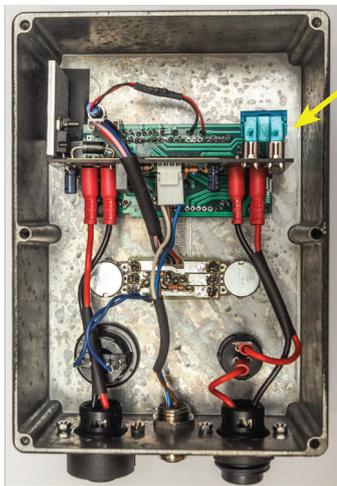
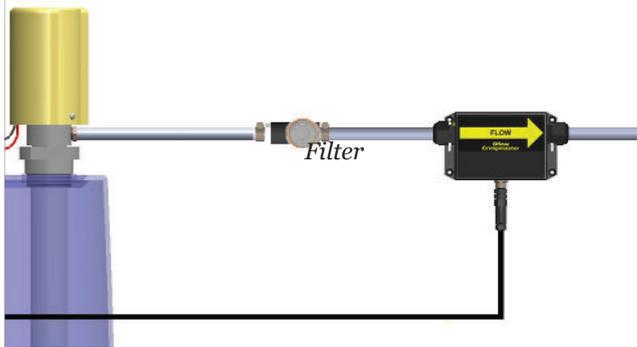
There is a filter in the application tube after the pump before the flow sensor box. This is to protect the flow sensor from being blocked or effected by debris. This filter should be cleaned regularly.

Unscrew the clear bowl and removed the strainer gauze.

Clean the gauze, body and bowl in clean water

There is a rubber seal in the filter bowl make sure this is in place and undamaged.

Re-assemble.



### Control box fuse

There is a 15 amp fuse inside the control box

To gain access to this rear cover of the control box will need to be removed. To do this the yellow cover will need to be removed from the mounting bracket and the control box removed from the mounting bracket.

If for any reason this fuse has blown a check of the wiring and connections should be made before replacing it and turning the control box on again.

The 12 volt supply to the control box should always be independently fused!



## Removing the yellow cover.

Disconnect all the cable from the controller

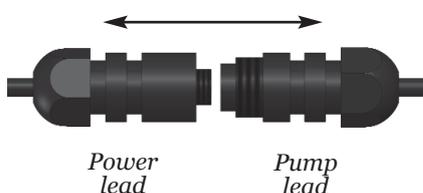
There are 3 self tapping screws each side holing the cover in place. Remove from both sides

The cover is hooked over a flange at the top of the bracket so pull the cover at an angle from the bottom and lift off.

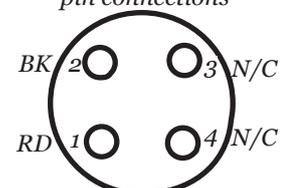
## Pump test

If the pump is not running when connected to the control box you can check if the problem is with the control box or the pump by connecting the power and pump leads together. This connects the 12-volt supply directly to the pump. **Before doing so check the cables for any damage.** If the fuse is blown in the control box damaged cables could have caused this.

If the pump runs then it is most like the problem is with the controller. Check the fuse and if blown replace with one of the same value.



Power and pump lead pin connections



## Flow Sensor Cleaning

**Warning! Please follow the appropriate safety precautions stated by the additive manufacture before carrying out the following procedure.**

**At no time should an air line be used on the flow sensor!**

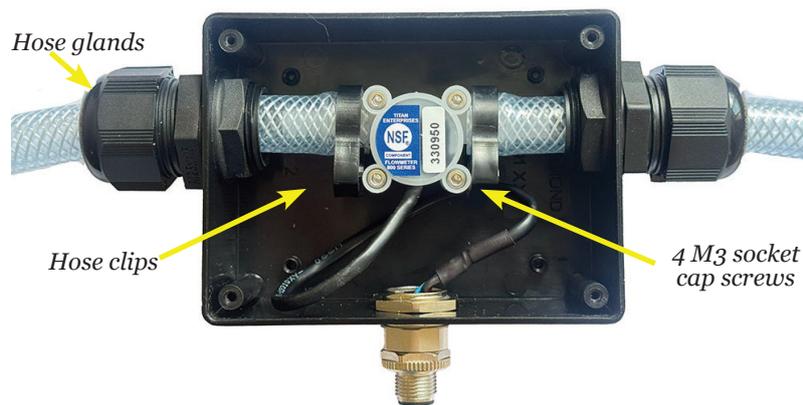
The pump and flow sensor should be thoroughly flushed through with clean water before disconnecting the hose. The flow sensor assembly should be removed from its box before taking it apart. Take care not to spill any liquid as this could cause damage.

At no time should an air line be used on the flow sensor!

Make sure the control box is turned off.

Disconnect the cable from the flow sensor box.

Remove the flow sensor box base this is held in place with 4 small cross head screws.



Loosen the hose glands each side to allow the flow sensor pipe work to turn giving more access to remove work on the flow sensor.

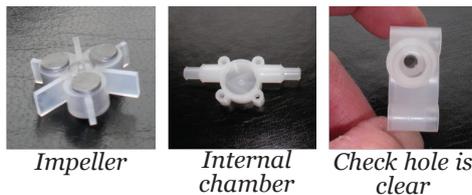
Remove the hose clips each side and gently remove the tubes from both sides.

Remove the 4 M3 socket cap screws and separate the two halves of the sensor body. Although robust when separated care should be taken with the flow sensor impeller.

Gently lift out the impeller (Mark the impeller with a marker to ensure it is replaced the right way up) and thoroughly clean it in water along with the body making sure the in-put and out-put ports of the internal chamber are clear.

Reassemble the flow sensor assembly in to the box making sure that the arrow on the flow sensor is pointing in the same direction as the flow.

### Flow sensor

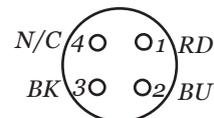


Impeller

Internal chamber

Check hole is clear

### Flow sensor pin connections



Reassemble, the impeller has 3 magnets moulded into it. One side the faces a slightly bigger diameter. This is the side that goes down onto the half with the cable.

There is a raised part and recess on each half of the flow sensor mating half that need to correspond to one another for correct alignment.

Make sure the impeller seats into its centre bearing in both top and bottom halves.

Check that the impeller spins by gently blowing into the inlet side of the flow sensor. You should hear it spin. If it does, refit the 4 M3 screws and nuts and gently tighten. Check again that the impeller spins as before.

Refit the pipes and replace the clips.

Replace the flow sensor assembly in to the box making sure that the arrow on the flow sensor is pointing in the same direction as the flow.

**In the event of a flow sensor failure the control box can be set in "NFS" mode (no flow sensor). Where the percent pump drive can be entered. Refer to changing operation mode for instructions on setting the control box in this mode.**