5206 A**utomatic** B**oom** S**witching**
Installation, Setup and User Guide

Contents

Installation – Farmlap 5200 Guidance System

Parts

	Part #	Description	Qty
1	AC-520601-00	5206 ABS TRACTOR LOOM	1
2	AC-520602-00	5206 ABS EXTENSION LOOM	1
3	AC-520603-00	5206 ABS SPRAY/SECTION LOOM	1
4	A-5206	AUTOMATIC BOOM SWITCHING POD	1
5	AH-861	SECURING KNOB ¼"	4
6	AH-3006	3006 MOUNTING BRACKET	2
7	AM-200	FARMSCAN 2 YEAR WARRANTY CARD	1
8	AM-5206	5206 INSTALLATION MANUAL	1

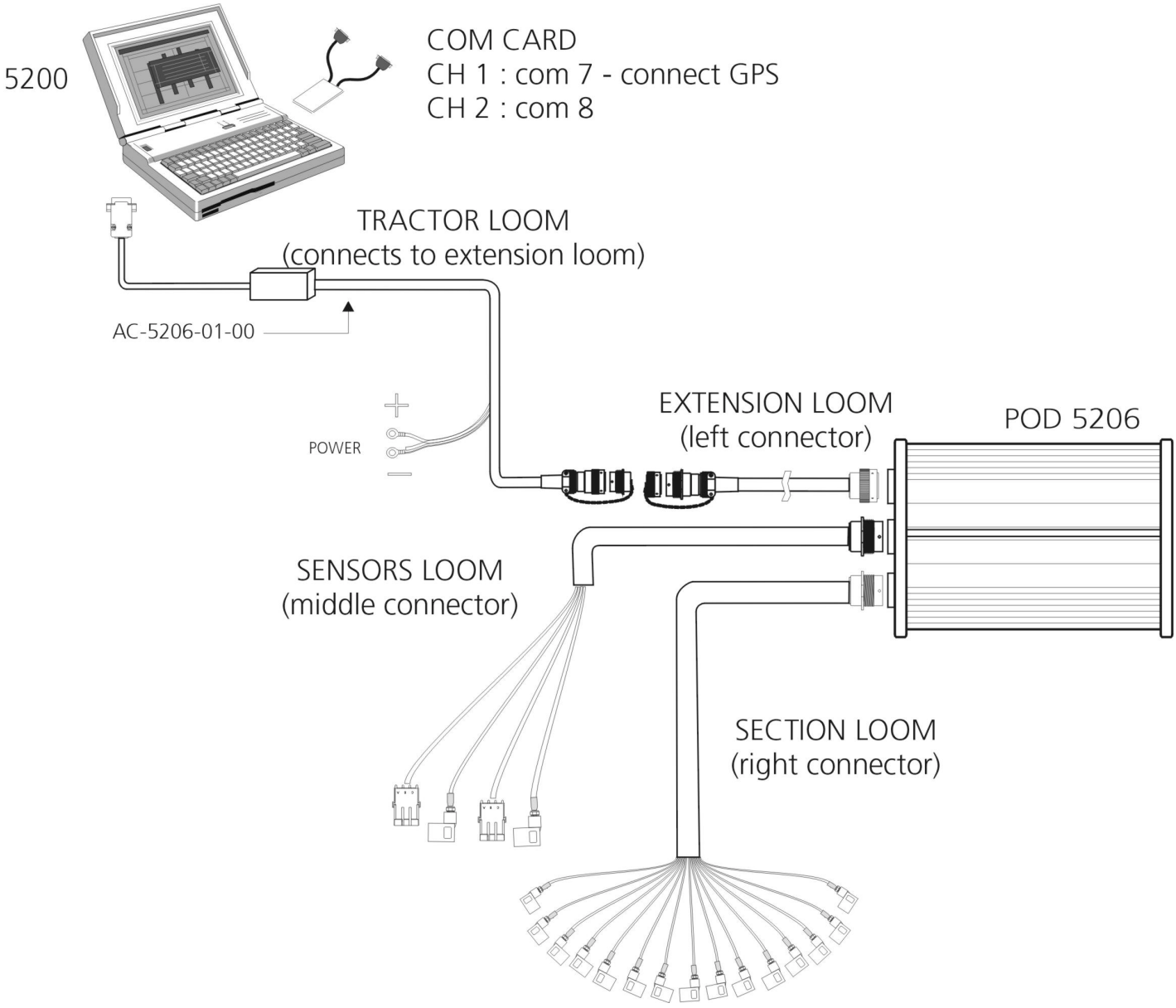
** Unit will need to be supplied with a PC-100 dual com card to allow additional COM Ports for Boom Switching. Unit will also need to be Running Windows 2000 or Windows XP. **

Please contact your dealer for further questions and pricing

Connections

- Connect the DB 9 connector of the tractor loom (AC-520601-00) to the 9 way connector on the left hand side of the computer into Com 1.
- Connect the tractor loom to the extension loom (AC-520602-00).
- Connect the extension loom to the 9 pin Deutsche connector (left) on the 5206 spray pod.
- Insert the dual channel com card into the card slot at the right of the computer. Connect the GPS to either CH1 (com 7) or CH 2 (com 8) of the com card.
- Connect the connector labelled "MIDDLE PLUG" of the spray/section loom (AC-520603-00) to the middle Deutsche connector on the spray pod.
- Connect the connector labelled "RIGHT HAND PLUG" of the spray/section loom (AC-520603-00) to the 23 way Deutsche connector on the right of the spray pod.
- Connect adaptor cables to spray/section loom for Arag (AC-079-664-01) or Utilux (AC-079-Util-01) connections to control valve and or section valves.
- Connect the tractor loom to a 12V battery last.

See the diagram on the next page.


5200
COM CARD
CH 1 : com 7 - connect GPS
CH 2 : com 8
TRACTOR LOOM
(connects to extension loom)
AC-5206-01-00
POWER
EXTENSION LOOM
(left connector)
POD 5206
SENSORS LOOM
(middle connector)
SECTION LOOM
(right connector)

Installation – Farmlap 5400 Guidance System

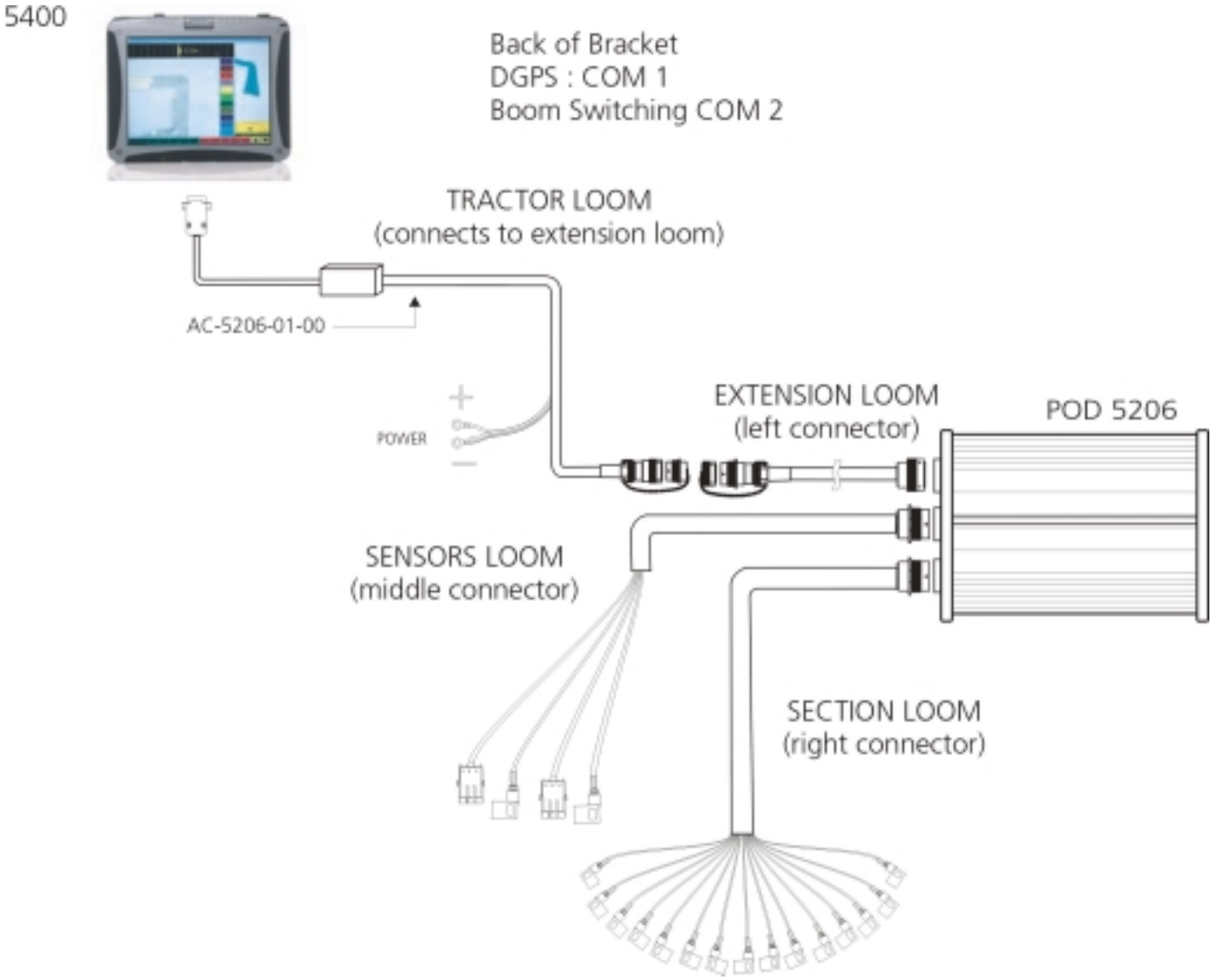
Parts

	Part #	Description	Qty
1	AC-520601-00	5206 ABS TRACTOR LOOM	1
2	AC-520602-00	5206 ABS EXTENSION LOOM	1
3	AC-520603-00	5206 ABS SPRAY/SECTION LOOM	1
4	A-5206	AUTOMATIC BOOM SWITCHING POD	1
5	AH-861	SECURING KNOB ¼"	4
6	AH-3006	3006 MOUNTING BRACKET	2
7	AM-200	FARMSCAN 2 YEAR WARRANTY CARD	1
8	AM-5206	5206 INSTALLATION MANUAL	1

Connections

- Connect the DB 9 connector of the tractor loom (AC-520601-00) to the 9 way connector in the back of the bracket into Com 2.
- Connect the tractor loom to the extension loom (AC-520602-00).
- Connect the extension loom to the 9 pin Deutsche connector on the 5206 spray pod.
- Connect the GPS to the back of the bracket into DGPS COM 1.
- Connect the connector labelled "MIDDLE PLUG" of the spray/section loom (AC-520603-00) to the middle Deutsche connector on the spray pod.
- Connect the connector labelled "RIGHT HAND PLUG" of the spray/section loom (AC-520603-00) to the 23 way Deutsche connector on the right of the spray pod.
- Connect adaptor cables to spray/section loom for Arag (AC-079-664-01) or Utilux (AC-079-Util-01) connections to control valve and or section valves.
- Connect the tractor loom to a 12V battery last.

See the diagram on the next page.


5400
Back of Bracket
DGPS : COM 1
Boom Switching COM 2
TRACTOR LOOM
(connects to extension loom)
AC-5206-01-00
POWER
EXTENSION LOOM
(left connector)
POD 5206
SENSORS LOOM
(middle connector)
SECTION LOOM
(right connector)

NOTES:
- Tie down all loose cable away from potential damage.
- See the back of this manual for loom wiring details.

Pod Mounting

1. Position the black mounting brackets (AH-3006) along the length of the pod.

2. Line up the holes in the bracket with the brass screw-in threads on both sides at each end of the pod.

3. Take the 4 securing knobs (AH-861) and screw 2 per side into the spray pod, one at each end.

4. Secure until the pod is firmly held between the two brackets.

5. The pod can then be mounted on the machine using these brackets.

NOTES:
- Mount the pod in a sheltered position away from excessive amounts of spray.
- Mount with the connectors on the pod facing down towards the ground.

Introduction

This manual is designed to provide detailed instruction regarding installation, initial setup and a comprehensive guide to all of the functions of the 5206 Auto boom-switching Pod.

The 5206 abs Auto boom switching pod integrates Farmlap guidance with spray controller functions similar to the Farmscan 24V1 Spray controller. The use of the 5206 eliminates the need for an extra controller in the cab with all functions handled through the Farmlap software.

Settings and information from the spray pod is conveniently accessed through the SprayPod Window, displayed at the bottom right-hand corner of the screen. Speed, pressure, application rate, tank volume etc can all be displayed for operator convenience.

The controller automatically controls pre-set spray rates, or can be controlled by Farmlap for variable rate applications.

The significant change in functions over the 24V1 controller is the auto boom switching function for up to 15 sections or 7 with a split 2nd line. This enables automatic switching of sections when crossing areas already covered.

5206 ABS also incorporates the use of dump and section flushing functions. If a dump valve is installed the dump function will bypass liquid back to the tank whenever the system is put on hold. Flushing individual sections can be done by the click of a button through the flush screen.

A 2nd line can be used in single and multi step mode to increase spraying speeds or application rates without increasing nozzle sizes.

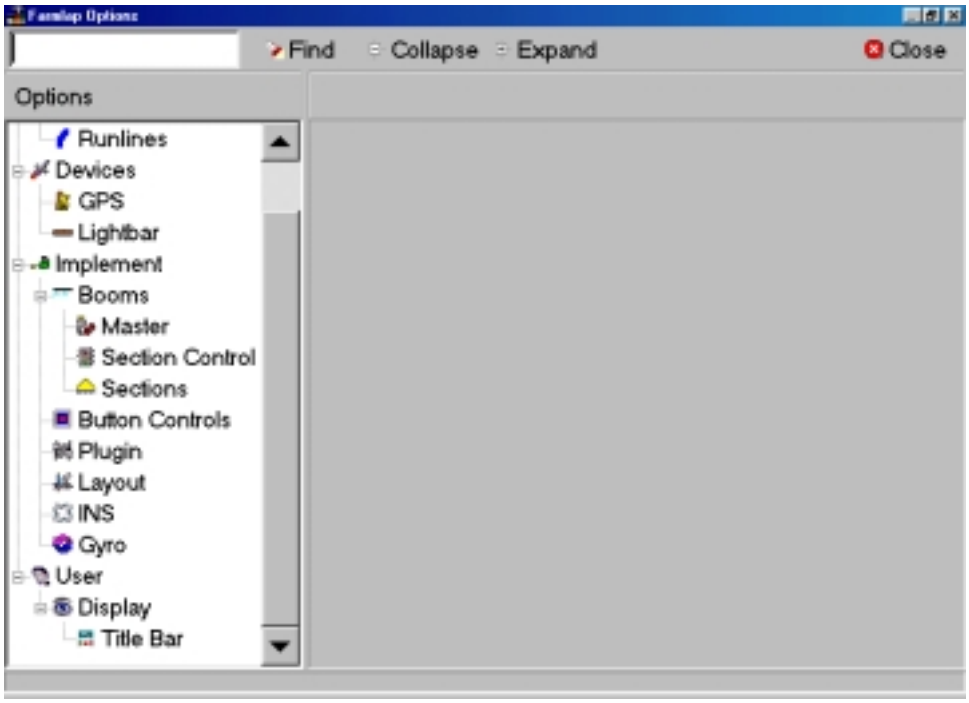
At first a lot of the functions may seem daunting to some. Time spent to familiarise with the unit and the users manual will allow the user to become familiar with all functions and benefits of what is a leading edge product in the field of guidance and spray application.

Farmlap Setup

Farmlap Software Version Required
You must be running Farmlap version 1.52.03 or higher for automatic boom switching.

Setup GPS

1. Open Farmlap, then click "View" -> "Options". A screen similar to the one below will appear.



Note:
The above screen can be seen by pressing the "Expand" button.

2. On the left of the window, double click "Devices" -> "GPS". At the bottom of the screen select "Com 7" if the GPS is plugged into (CH 1) of the com card or select "Com 8" if the GPS is plugged into (CH 2).

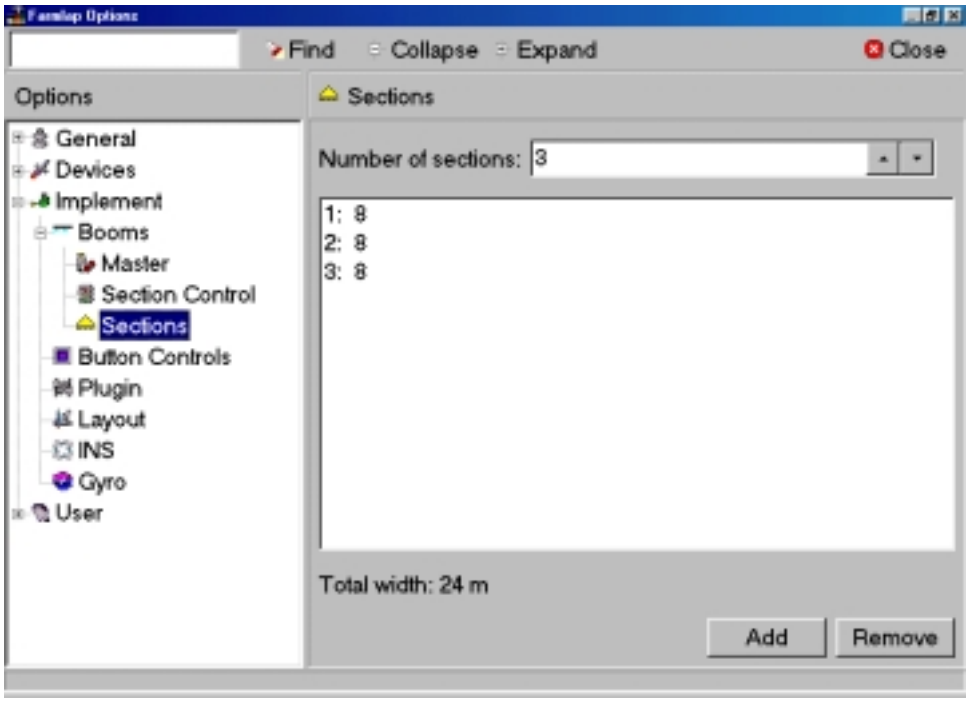
Setup Booms

1. On the left of the window already opened after setting up the GPS, double click "Implement" -> "Booms" -> "Master". Place a "check" next to "USB Button Box", to use your button box to put the system 'on hold' etc.

2. In the same window click on "Section Control" under "Booms". Click on "Plugin" and place a check in "Use Auto boom". A popup window will show “Settings will be changed on restart of Farmlap”.

   Click “Ok”. Close and re-open Farmlap and return to “Section Control” in Farmlap.

3. Under "Booms" click "Sections". Using the keyboard enter the correct number of sections and their respective widths. See image on next page.



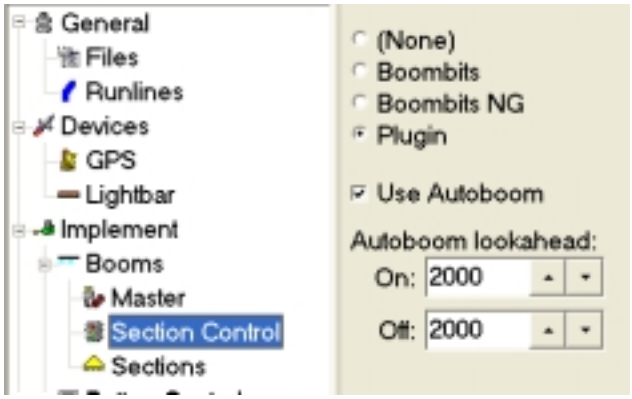
4. Under "Booms" click "Button Controls" and select "USB".

5. Under "Booms" click "Plugin" then select or change and select 'FSSpray Pod_01E.dll' and click open.

6. Click "User" -> "Display" and make sure "Perspective Guidance" is checked.

Setup Section Control

Look Ahead values in **Section control** are an important aspect of setting up Auto-Boom. The look Ahead values determine the timing of when Farmlap switches sections on and off when returning over already covered areas.



Auto boom OFF sets the time before reaching the overlapping area that Farmlap will begin to switch the section valves off (different valves take different times to go from full open to full close).

Auto boom ON sets the time before reaching the unsprayed area that Farmlap will begin to switch the section valves on.

This setting is measured in milia-seconds Eg 2000 =2 seconds.

Typical starting values are 500 for both settings.

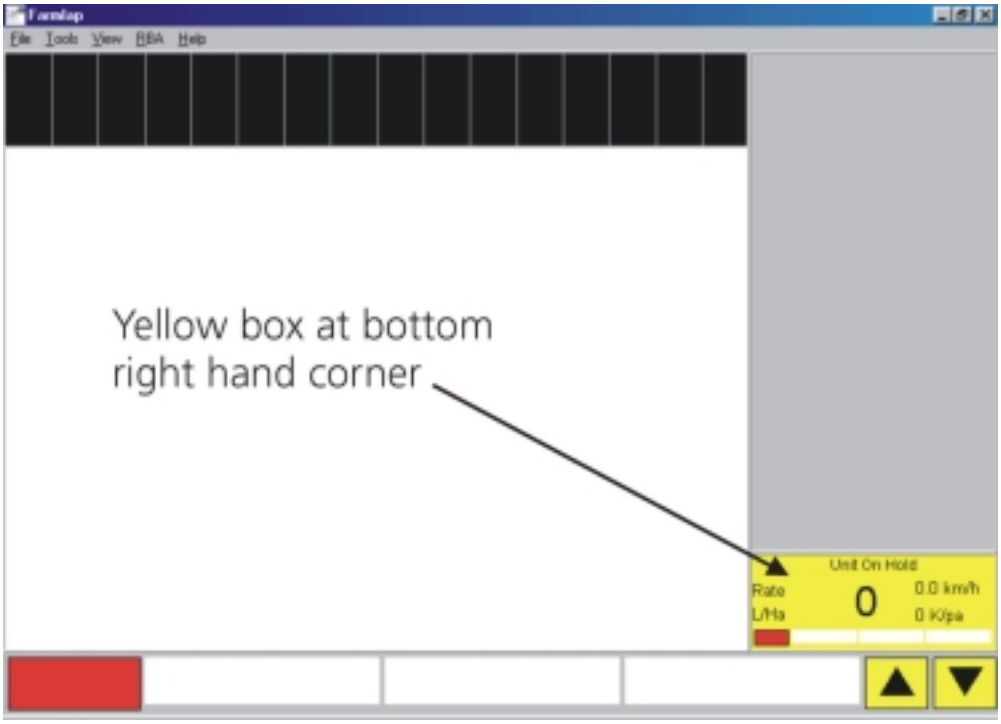
Important
The operator must consider that during the time a valve operates the rate for that section is reduced when the valve is going from open to close and vice versa.

Setup Plugins

1. Click "RBA"-> "Hardware" and select "Plugin".
2. Click "RBA" and select "Plugin Switches", the number of sections will now appear at the bottom of the screen.

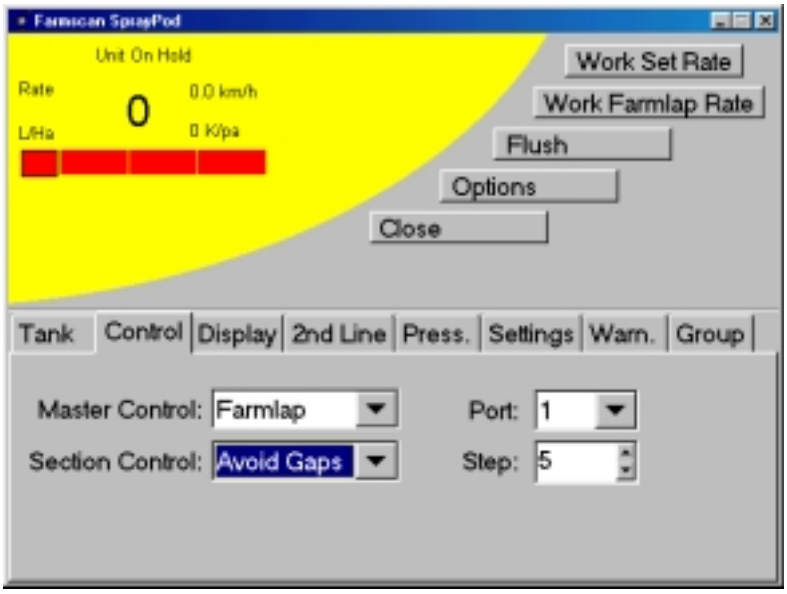
Configure Spray Settings

1. Open Farmlap. Click on the large yellow box in the bottom right hand corner of the screen. "FarmScan Spray Pod", the spray rate and other information is displayed in this box.



2. A separate window will appear. See next page. Click on the "Options" button in this window. The bottom half of the screen will change, displaying several settings ie "Control", "Display" etc.

3. Click on the "Control" tab. Set: "Port" to "1"; "Step" to "5"; "Master Control" to "Farmlap" and "Section Control" to "Avoid Gaps" or "Avoid Overlap".



4. Click the "Display" tab. Select what information you want displayed in the yellow box at the bottom right of the screen. Typical display is: "Main" set to "Rate", "Sub1" to "Speed" and "Sub 2" to "Pressure". Click on the drop down arrows to select from other options.

5. Click the "2nd Line" tab. If you have a 2nd line click "Enable" and select either single or split. If you have a pressure sensor and want the 2nd line to turn on/off at set pressures, enter the pressures in the "2nd On" and "2nd Off" boxes.

6. Click the "Pressure" tab. Enter the maximum limit of your pressure sensor. Enter a pressure offset or leave as 0. The pressure offset is a positive number which is always added to the pressure reading to compensate for losses in pressure from the sensor to the nozzles.

7. Click the "Settings" tab. Enter the PPL (pulses per litre) of your flow sensor, this will be on the flow meter tag. Set "Valve Response" to "6". Set the "Slow Hold" pressure setting. 100kPa is a typical slow hold value, meaning the system at low speeds will hold the pressure at 100kPa.
   If you are using a dump valve place a check in "Dump Enabled".

8. Click the "Warnings" tab. Set the "High Pressure" and "Low Pressure" alarms, for a 600kPa sensor, 500kPa and 100kPa are typical values. Set the rate alarm percentage - "Rate %". Setting "Rate %" to "10%"means that if the rate drops 10% below or rises 10% above the work rate, Farmlap will issue an alarm. Set the tank alarm percentage - "Tank %". Setting "Tank %" to 10% for example means an alarm will sound at 90% of capacity left.

9. Click the "Work Set Rate" in the top of the screen. The default is 100, set to a rate suitable to your application.

Testing Your Installation

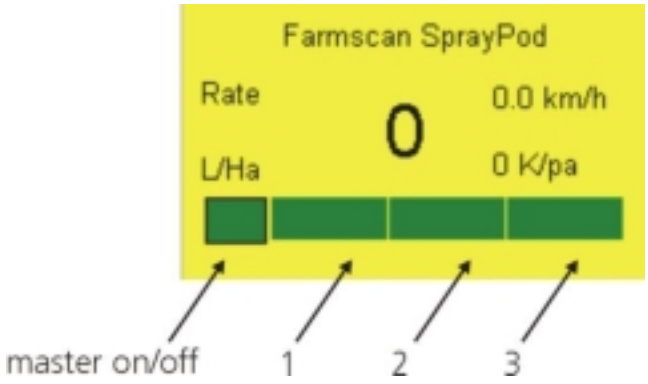
1. Click in the yellow box in the bottom right of Farmlap's main screen.
2. Click the "FLUSH" button. The control valve should open fully.

Check Control Valve

1. Click the "Close Full" button and check that the control valve fully closes.
2. Click the "Open" and "Close" buttons and check that the control valve opens and closes a little.

Check Sections

1. Click the "Line 1" button.
2. Click the master on/off button until green. The master on/off button is the left most square button.



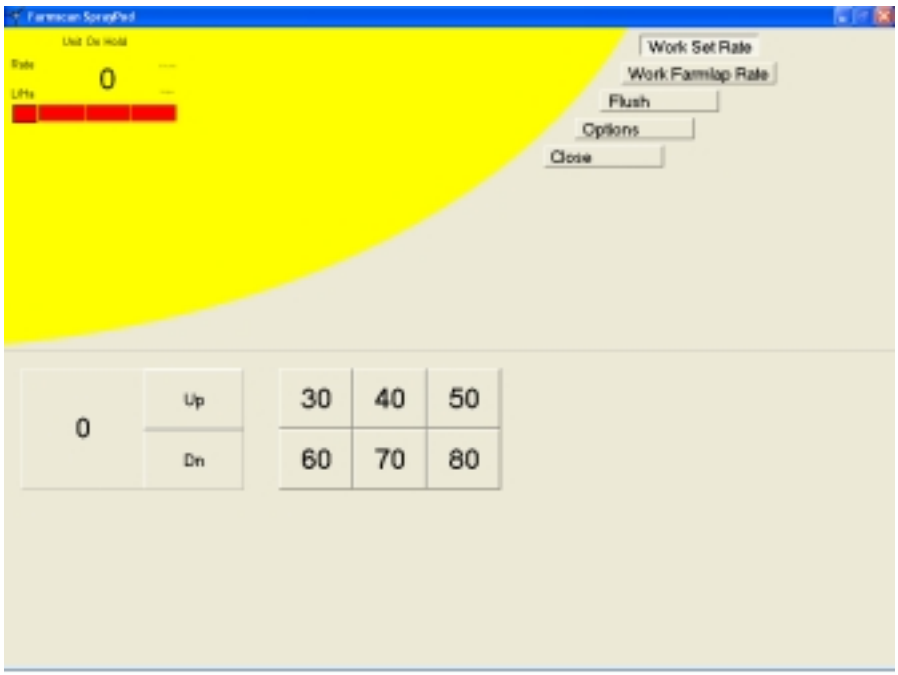
3. Check that each section switches on/off by clicking the section buttons in the top left of the window.
4. Click "Line 2" if installed, and click the "Line 1" button to deactivate the 1st line. Check the 2nd line sections by clicking the section buttons and the lines below the section buttons will appear when on and disappear when off.

Check Dump Valve

Click the "Dump" button. The dump valve will switch on when depressed and switch off when normal.

User's Guide

All spray controller functions are accessed through the "SprayPod" window. See below.



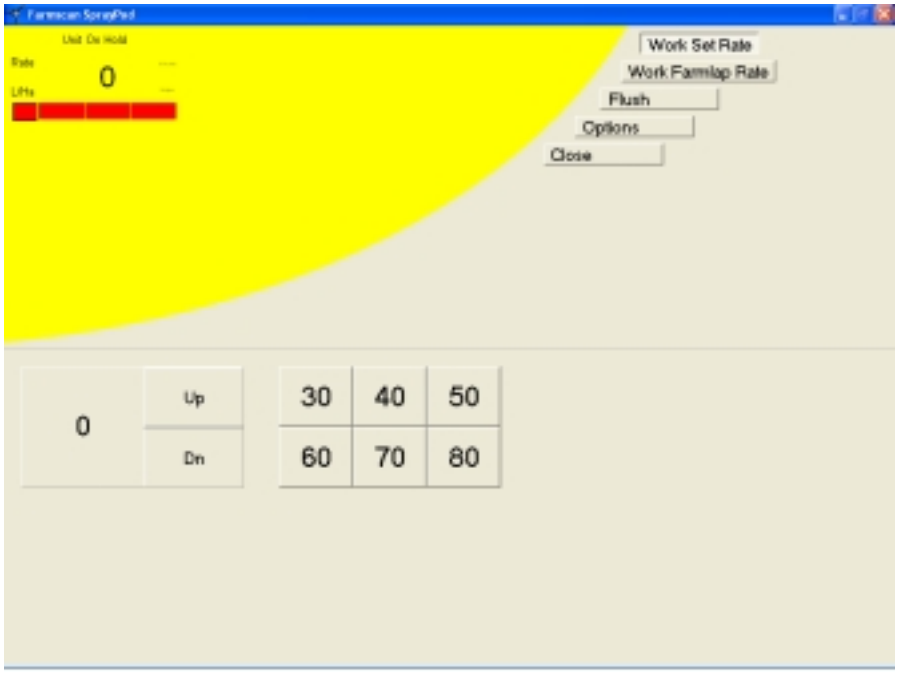
To open the "SprayPod" window (above) click or touch the yellow window at the bottom right of the main screen.

Work Set Rate

The work set rate is the user set spray rate that Farmlap will control to.

There are two ways to set the application rate:

1. Use the pre set rate buttons, see below. Click on a rate to select.



2. Click a pre set rate button closest to the desired rate. Adjust the rate up or down using the **UP** and **DN** buttons.

Note:
To adjust the step size value of the **UP/DN** buttons:
1. Select **OPTIONS/CONTROL**
2. Change the step size to the desired value.
3. Once you have adjusted the step size, return to the work set rate screen to set the target rate.

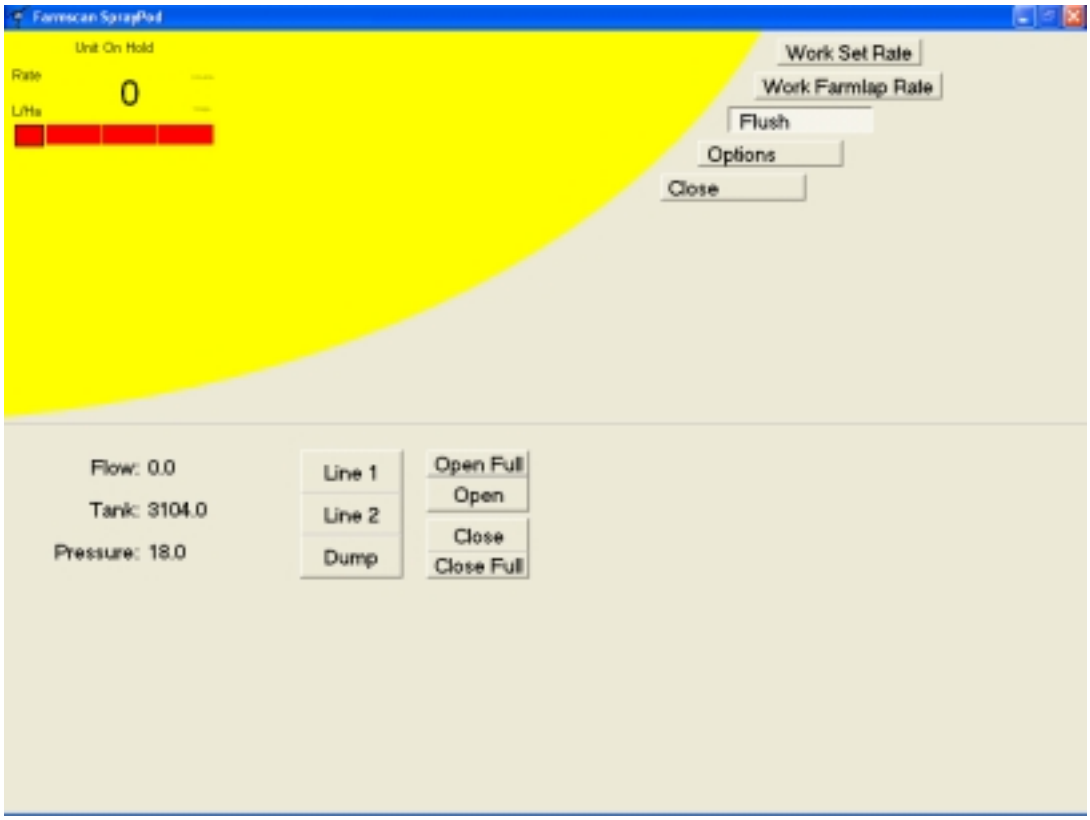
Work Farmlap Rate

Select this option when using variable rate application maps

(Requires the use of application mapping software).

Flush

The flush window allows you to flush and test sections. See below.



Line 1: When selected allows switching of Line 1 section valves.

Line 2: When selected allows switching of Line 2 section valves.

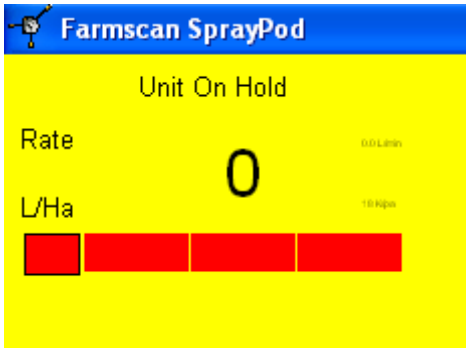
Dump: Activates the dump valve if fitted.

Open Full: Operates DC Control valve to provide maximum flow to sprayer valves.

Open: Provides stepped increases in flow rate.

Close: Provides stepped decreases in flow rate.

Close Full: Operates DC Control valve to provide minimum flow to sprayer valves.



Notes – Section Switching

Switching the appropriate section within the Interface window controls Section switching.
If the master control is set to Farmlap then Farmlap must be in working mode prior to going into flush, if master is set to manual then the square to the left of the interface window is used to switch the master on and off.

Information from the spray pod such as pressure, rate, flow are provided in the spray pod window.

 Master is off; sections switched off.

 Master is off; sections switched on return to guidance screen press start button.

 Master is on; sections switched off.

 Master is on; all sections on Line1 are on.

 Master is on; all sections on Line 2 are on.

 Master is on; all sections on Line 1 and Line 2 are on

.

Flow: 0.0

Flow rate Liters per minute

Tank: 3104.0

Volume (liters) used from the tank.

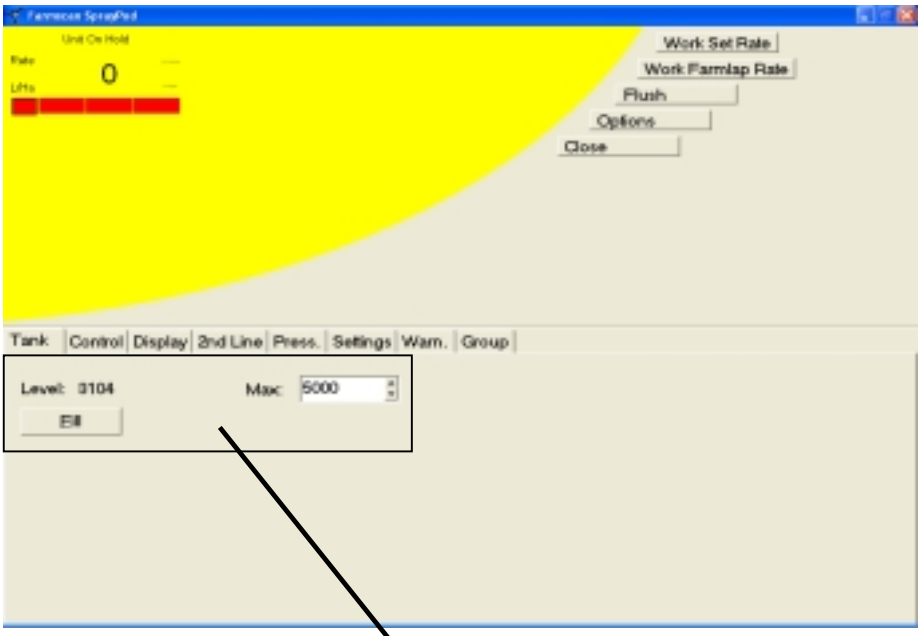
Pressure: 5.0

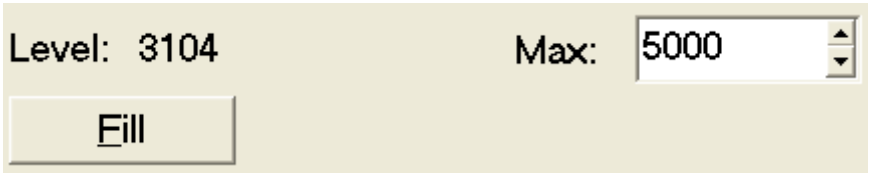
Displays the pressure reading from the pressure sensor if a sensor is fitted and enabled.

Options

The "Options" window allows you to calibrate the spray pod, and configure optional settings.

Tank





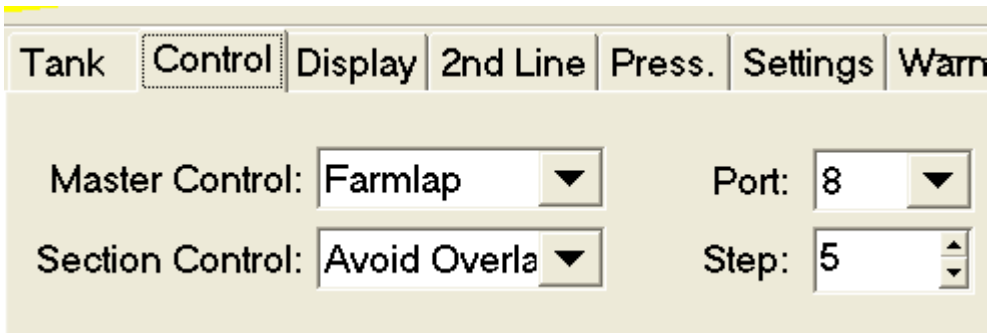
Level: Displays remaining tank volume.

Max: Enter maximum tank volume (this can be reset to accommodate part tank loads).

Fill: This will reset the tank display to the max level

Control

The control tab enables setting how the spray pod is controlled.



Master Control

Farmlap: Sets boom master switching to be controlled by *Farmlap* (button box start /stop)

Manual: Sets boom Master switching to be controlled by *master switch* shown when plugin switches are displayed at bottom of screen
(select "RBA" -> "Plugin Switches").

Section Control

Avoid Gaps: Switches sections *off* after a full section has overlapped the sprayed area.

Avoid Overlap: Switches sections *on* when they begin to overlap the sprayed area.

Port: Sets the communications port used by the spray pod. Usually COM 1

Step: Sets the "UP" "DN" step buttons to adjust the work wet rate

Display

Main: Large display in the middle of the "SprayPod" window

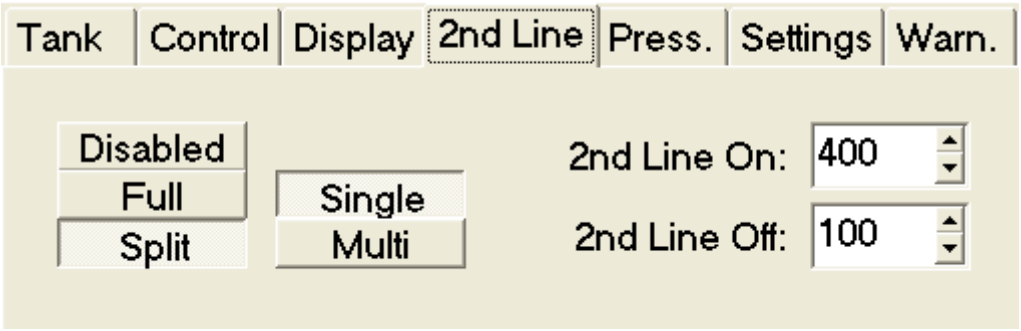
Sub 1: Small display at top of SprayPod window.

Sub 2: Small display at bottom of SprayPod window.

2nd Line

When using a second spray line, it is possible to increase the operating speed range or reduce the operating pressure range more than is possible with a single spray line on automatic control.

If a pressure sensor option is used, the second line mode has the choice of **single step** or **multi step** control.



If a pressure sensor is not used the default setting is single step control.

Disabled: 2nd Line function is not in use.
Split: The 2nd Line is split into sections.
Full: The 2nd line is not divided into individual sections.

Single Step: The second spray line is turned on after a speed (kph) or pressure (kPa) activation point has been passed.

Once the system speed or pressure drops below the activation point then the second line shuts off.

Multi Step: Both first and second spray lines are controlled in a stepped sequence.
When the second line **ON** pressure is reached, the first line is switched off and the second line is switched on.

When the second line reaches the **ON** pressure, then *both* the first and second spray lines are switched **ON**.

The second spray line must be fitted with nozzles at least one size larger than the first spray line nozzles.

2nd Line On: The desired pressure (pressure sensor enabled) or speed value (pressure sensor disabled) to activate line switching.

2nd Line Off: The desired pressure or speed value to de-activate line switching.

Calibrating Line Switching

When the 2nd line function is enabled, the spray controller will automatically activate a second spray line at a preset system pressure or ground speed.

This allows an operator to take advantage of faster spraying speeds when conditions permit, or to operate at lower pressures while at normal spraying speed.

Basic settings for single step switching when using nozzles the same size on the second line:
On 400
Off 100

Basic settings for single step when using nozzles one size smaller on the second line:
On 375
Off 150

Basic settings for multi step when using nozzles one size larger on the second line:
On 375
Off 150

When the pressure sensor is disabled second line switching is only available in single step mode, and is controlled by speed.

There are two methods to determine the second line switching speed.

First

1. If the system has a manual gauge that reads first line pressure, disable the 2nd line function.
2. Set the work rate to the desired spray rate.
3. Set display *Sub 1* to **Speed**.
4. Start spraying, increase speed until pressure readout on manual gauge reaches 400kPa.
5. With pressure stable at 400 kPa record your current speed.
6. Enter this speed into 'second line on' setting.

Second

The second method if available is to use the manufacturer's spray nozzle chart. Fine-tuning of this setting may be required.

Spray line Nozzle Choice

Single step: The choice of nozzle size for the second spray line would normally be the same as the first spray line; it is possible to use finer nozzles for a mixture of droplet sizes when the second spray line is operating.

Example: Spraying systems Green XR 110015 will deliver 50 L / ha in the approximate speed range of 8 km/h to 16 km/h on the first spray line. Therefore, a second spray line fitted with the same green nozzles will allow double the speed range at 50 L / ha, i.e. 8 km/h to 32 km/h. The best speed to activate the second spray line is when the first line nozzles are approaching full pressure (375 - 400 kPa). In the example this would be around 16 km/h. After switching the system pressure will drop to around 100 kPa.

Multi step: The second spray line must be fitted with nozzles one or two sizes larger than the first spray line nozzles (one size larger is recommended).

Example: Spraying systems Green XR 110015 will deliver 50 L/ha in the approximate speed ranges of 8 km/h (100kpa) to 16 km/h (400kpa) on the first spray line. A second spray line fitted with spraying systems Yellow XR 11002 will deliver 50 L/ha in the approximate speed range of 11 km/h (100kpa) to 22 km/h (400kpa). Both lines operating at 100 kPa will deliver 50 L/ha at approx 19km/h. Operating both lines at 400 kPa will deliver 50 L/ha at approx 38km/h.

Note the overlap in the speed range of the two spray lines in each switching step, provides flexible options for controlling the operating pressure over different speed ranges.

First step switching can occur within the lower range of yellow 11km/h (200 kPa), to the upper range of green 16km/h (400 kPa) and a max speed to 22 km/h at 400 kPa (upper range of yellow).

Second step switching can occur within the upper range of yellow, 22 km/h (400kPa) and the lower range of green/yellow combined, 19km/h (100kPa).

When determining setting pressures for switching between lines it is important to ensure that there is enough range in switching pressures to prevent erratic switching between lines over a small speed range.

As with any spraying setup it is important that the choice of nozzles installed on both the first and second spray lines is suitable to achieve the rate, speed and pressure desired.

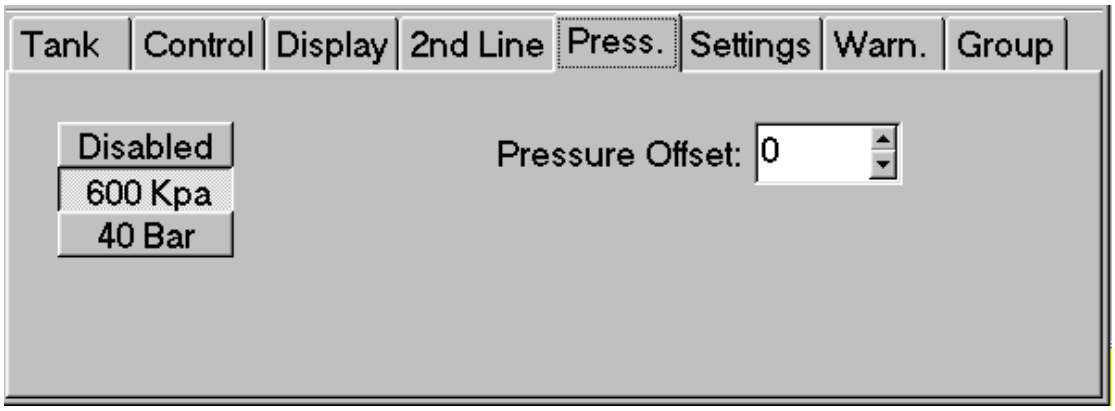
Refer to the nozzle manufacturer's reference chart to make sure the nozzles are suitable to deliver the intended rate at workable speeds.

Pressure

Disabled: No pressure sender installed

600 Kpa: Standard 600 Kpa sender installed.

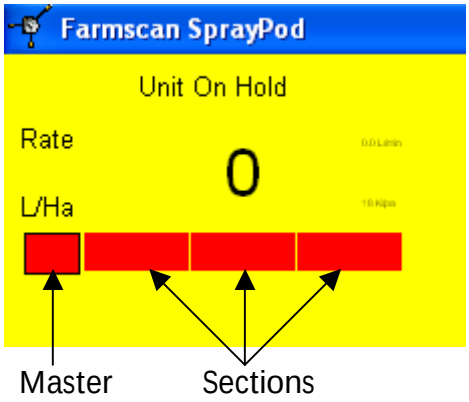
40 Bar: High-pressure sender installed (not available).



Pressure Offset

The pressure offset enables calibration of the pressure Sensor

1. Install an accurate mechanical pressure gauge on the spray boom.
2. Open the "SprayPod" window.
3. Select the control window, set master control to manual.
4. Open **Flush** window, click Line 1 and activate all sections including the master, they will be green when active.



1. Use **Close** to adjust the mechanical gauge pressure to 300 kPa or44.5 psi.
2. Take note of the spray controller pressure reading eg. 325 kpa.
3. Subtract the mechanical gauge reading from the spray controller reading eg. 325kpa -300kpa = 25kpa offset.
4. Return to the **Press** Tab within the options window; enter the pressure-offset value in the pressure-offset window.
5. Select the **Options** tab and set **Master Control** back to **Farmlap**.
6. Pressure sensor calibration complete.

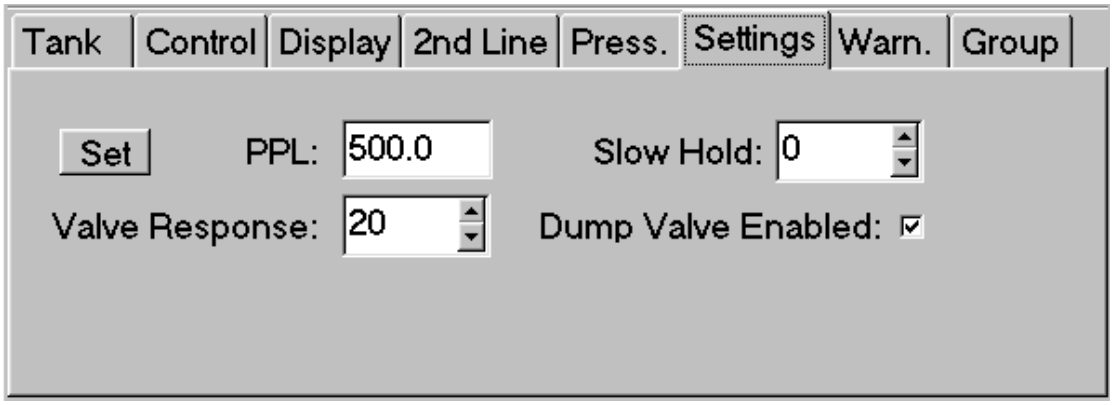
Settings

Set: This function is not available for use to calibrate the flow sensor.

PPL: Enter the pulse per liter factor that is shown on the flow meter tag for initial calibration.

Fine-tuning of the PPL value can be done after running a set quantity of liquid through the system and applying the following formula.

$$\frac{\text{spray pod liters used } \mathbf{X} \text{ PPL Factor}}{\text{actual liters used}} = \text{new PPL factor}$$



Valve Response: This setting controls the responsiveness of the flow control valve.
The default for this setting is 20. This value can be changed to fine tune the response of the control valve. If the control valve tends to overshoot the target rate, or seems erratic reduce this number. If the control valve tends to undershoot (too slow) increase this number.

Slow hold: This setting is used to maintain a spray pattern when speed or pressure drops below the range of the spray nozzles on the first line.

In the case where a pressure sensor enabled then a pressure value will be used. If this is not the case then a speed value will be used. Refer to the spray nozzle manufacturer's spray tip chart to determine these values.

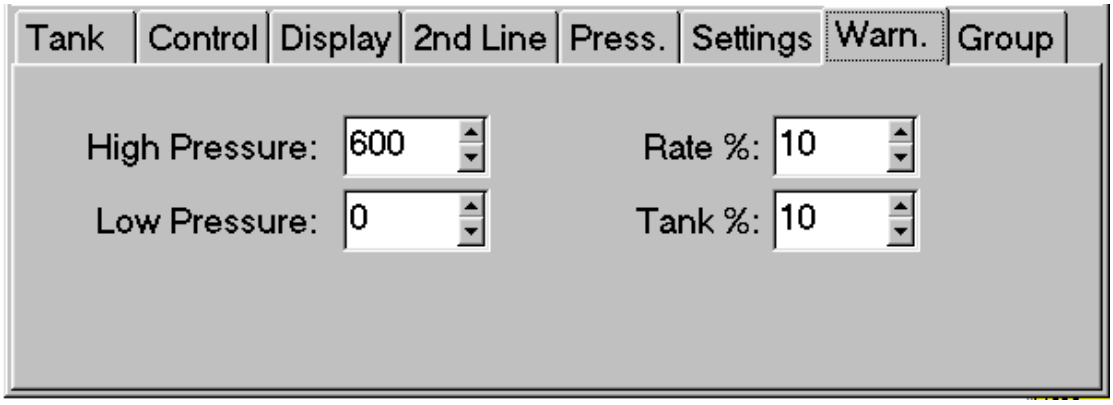
Dump Valve: Tick this box to enable operation of the dump valve if a dump **valve is installed on the machine.** The dump valve will activate whenever the unit is on hold.

Warnings

The warnings window is used to set the warning points to notify the operator that the system is not functioning correctly.

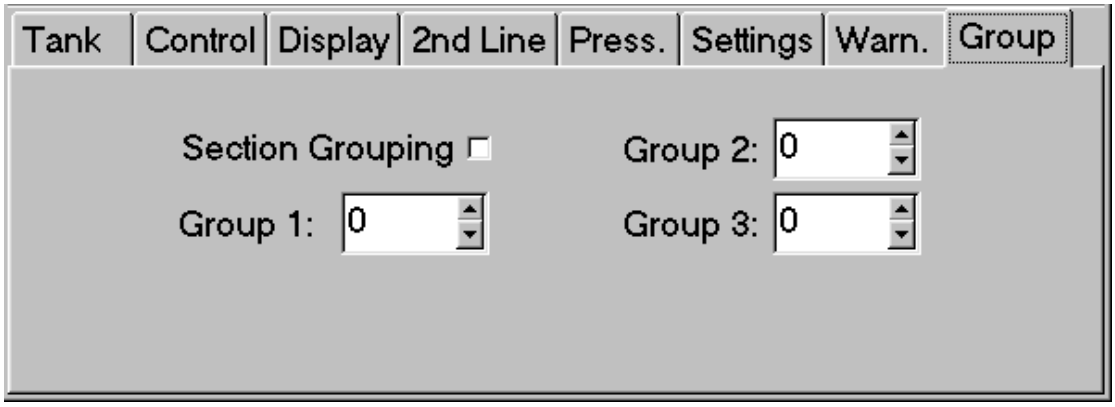
1. **High Pressure:** Warning will sound when the system pressure is above this point.
2. **Low Pressure:** Warning will sound when the system pressure is below this point.
3. **Rate %:** Warning will sound when the rate is off target by the set percentage.
4. **Tank%:** Warning will sound when the remaining tank volume is below the set percentage.

See picture on next page.



Group

When section control is set to manual, grouping allows boom sections to be switched in groups.



Enabling Section Grouping

1. To enable section grouping check the section-grouping box.
2. Define the number of sections in each group window.

Trouble Shooting Guide

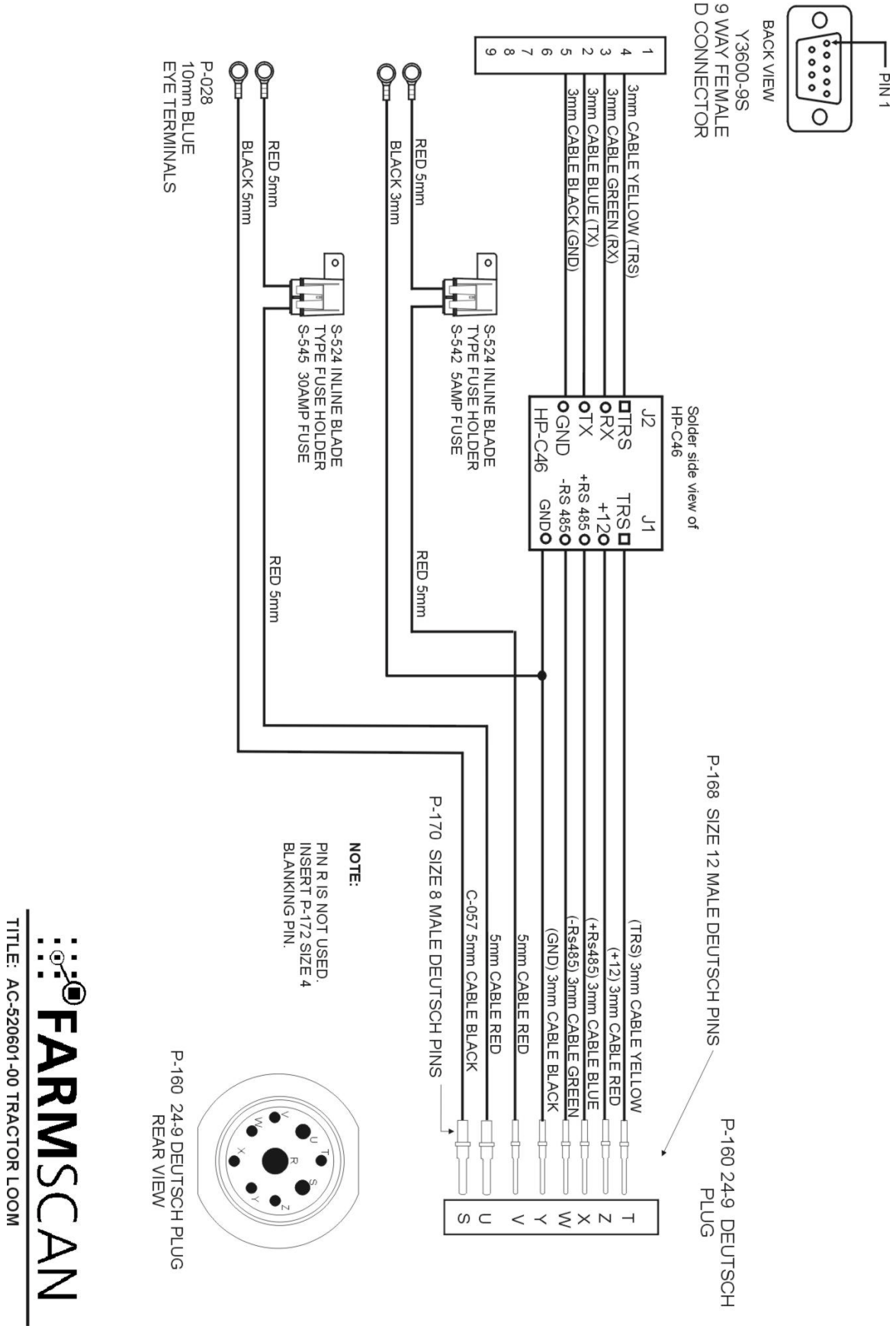
Problem		Possible Cause /Remedy
No Port Open	a	*Incorrect Com Port setting.* Set the spray pod port setting to the com port that the pod is plugged into eg. Port 1,2,7 or 8.
	b	*Other device using Com port.* Check that the GPS, light bar or other peripheral devices are not set to the same com port as the spray pod is set to.
	c	*Computer not locating correctly in computer bracket.* Remove computer from bracket; check that the plug has some movement in the bracket to allow for self-alignment of plug. If there is not, contact Farmscan support. Inspect for foreign objects or damage in either of the two plugs. Reposition computer in bracket.
	d	*Com port failure in Laptop.* Plug GPS into Com 1 rear Left hand side of computer. Set GPS com port to Com 1. With GPS on check for data scrolling through the GPS Comms window. If no data contact Farmscan support.
	e	*Com card failure.* Remove com card, restart computer, insert com card again.
	f	Other. contact Farmscan support.
No Comms	a	*Connection between computer and pod failed.* Inspect for poor connections reconnect all plugs to appropriate Connectors.
	b	*No Power to pod.* Check Both fuses at power supply
	c	***7.5 A Fuse Blown.*** Inspect Comms Loom Between Computer and Pod for damage. Repair or replace loom where necessary. Replace Fuse.
	d	*30 A Fuse Blown.* Inspect Comms Loom Between Battery and Pod for damage.
	e	***Insufficient power supply to pod.*** Check power source and connection for 12V-13.8V DC.
	f	*Other.* Contact Farmscan Support

Problem		Possible Cause /Remedy
Unit will not activate section or control valves.	a	*Master control not active.* Return to guidance screen and press start on button box, Red light will be displayed when active, title bar will show "*Working Area Covered etc.* "
	b	*No Flow at Valves.* Check Filters etc to ensure flow and pressure is getting to valves.
	c	Wiring break between pod and Valves. Check looms and plugs Reconnect all connections between the Pod and valves.
	d	*Short Circuit to pod.* When sections are activated in flush mode a Clicking sound should be heard from the pod. If there is no sound, Remove Centre and right hand Deutsch plug from the pod. Check for clicking sound again. If clicking is heard then remove all connections from sensors and valves, re connect Centre and right, re-check for clicking sound when sections activated. If clicking is heard re-connect each sensor and valve one at a time checking for clicking sound after each re-connection. This should locate the source of any short in the wiring loom or hardware.
	e	*Other* Contact Farmscan Support.
Unit will not Spray	a	*Master control not active.* Return to guidance screen and press start on button box, Red light will be displayed when active, title bar will show "*Working Area Covered etc.* " Return to spray pod select Line and activate sections (See Pg 5).
	b	*No Flow at Valves.* Check Filters etc to ensure flow and pressure is getting to valves. Check Dump Valve operation.
	c	*Other* Contact Farmscan Support
Dump Valve not Working	a	*Dump Valve is not enabled.* Enable dump Valve see Pg 13
	b	*Other* Contact Farmscan Support

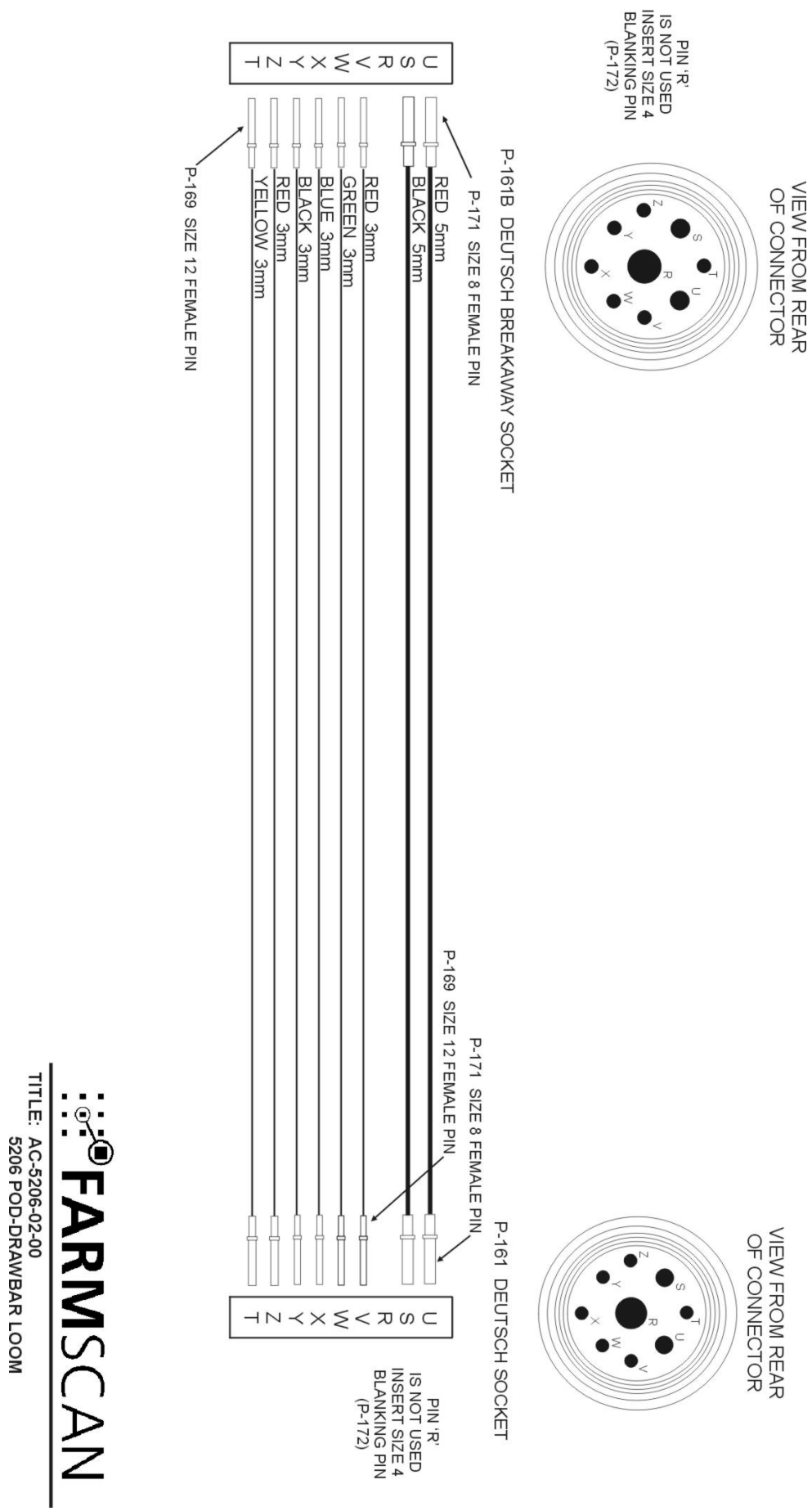
Problem		Possible Cause /Remedy
Rate Control Erratic	a	*Control valve overshooting.* Lower valve response, See Pg 13.
	b	*Other* Contact Farmscan Support
Rate Control Slow	a	*Control valve undershooting.* Increase valve response, See Pg 13.
	b	*Other* Contact Farmscan Support
Rate Control Incorrect	a	*Incorrect Rate setting* Adjust Work Set Rate to correct rate setting. Check Slow hold Setting, Pg 13.
Tank Alarm Sounding When Tank is not Empty	a	*Tank Level not reset on refill/tank level incorrect.* Reset tank or adjust tank volume see pg 7.
Sections not Switching automatically	a	*Section control not set correctly.* Set Farmlap section control to Plugin, use Auto Boom. Select: View->Options->Expand->SectionControl->Plugin -> UseAutoBoom. Set Spraypod section control to Avoid Gaps or Avoid Overlap see pg 8
Sections switching off too early or too late	a	*Look Ahead Values set incorrectly.* Adjust look ahead values In Farmlap under Section Control (See 5206 Quick Guide).
	b	*Boom Layout set incorrectly.* Adjust Boom Layout Values in Farmlap (See 5206 Quick Guide).
2nd Line Not Functioning	a	*2nd Line not Enabled.* Enable 2nd Line (see pg 9).
	b	*Other.* Contact Farmscan Support.
2nd Line Switching Erratic	a	*2nd Line step switching values not correct.* Adjust switching On and Off values, see pg 10.
	b	*Pump supply not adequate.* Test pump output matches maximum output required for speed and rate.
	c	*Incorrect nozzle selection.* See pg 10.
Access Violation when starting New Paddock	a	*Farmlap in working mode when new file is created.* Press Start/Stop button; check that not working is displayed. Open new paddock
Sections Switching on while covering sprayed areas	a	*Coverage line density value set too high.* Select: View -> Options -> Expand -> Display. Decrease the value to increase the coverage density.

Loom Drawings

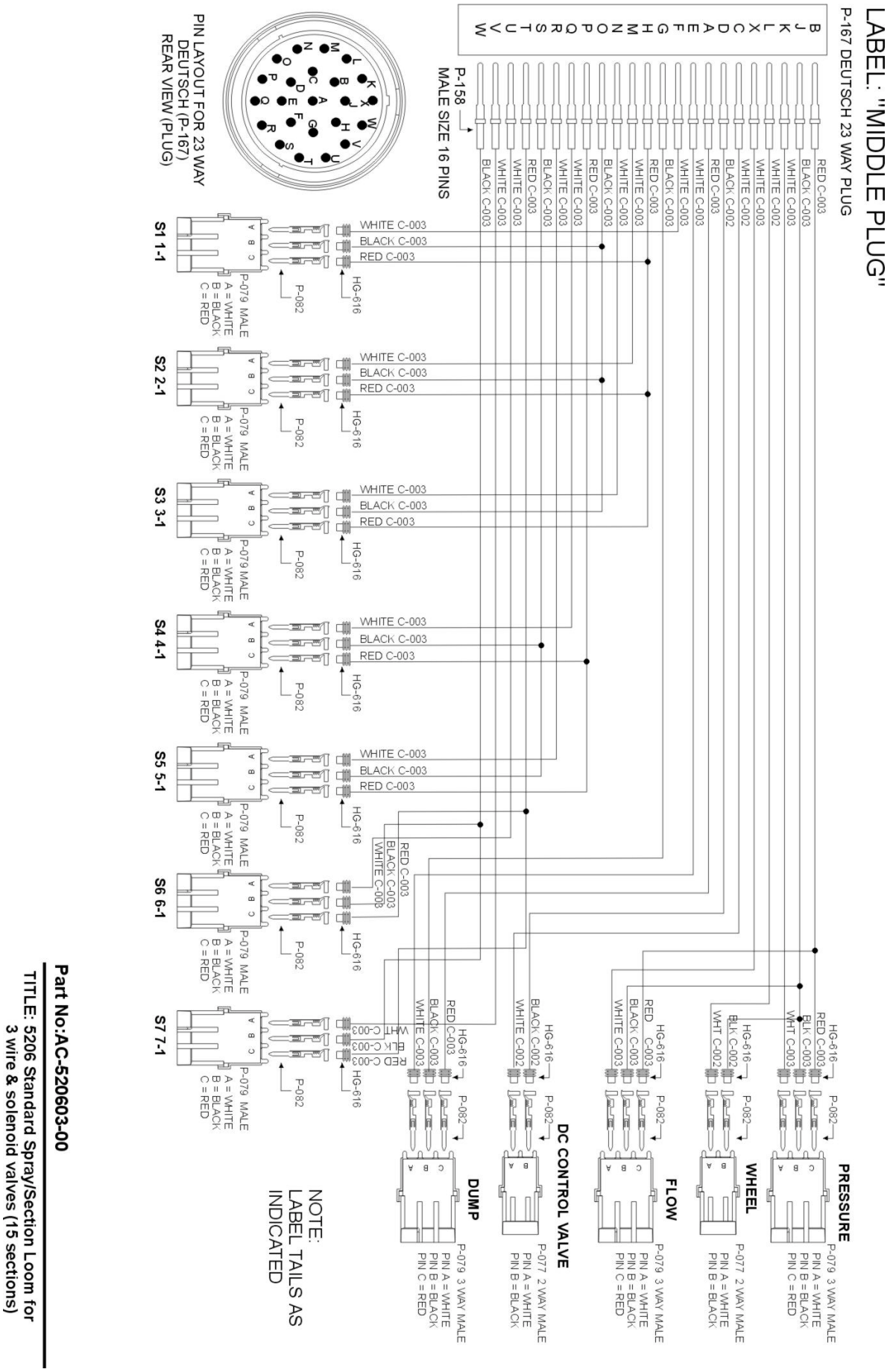
Tractor Loom (AC-520601-00)



Extension Loom (AC-520602-00)

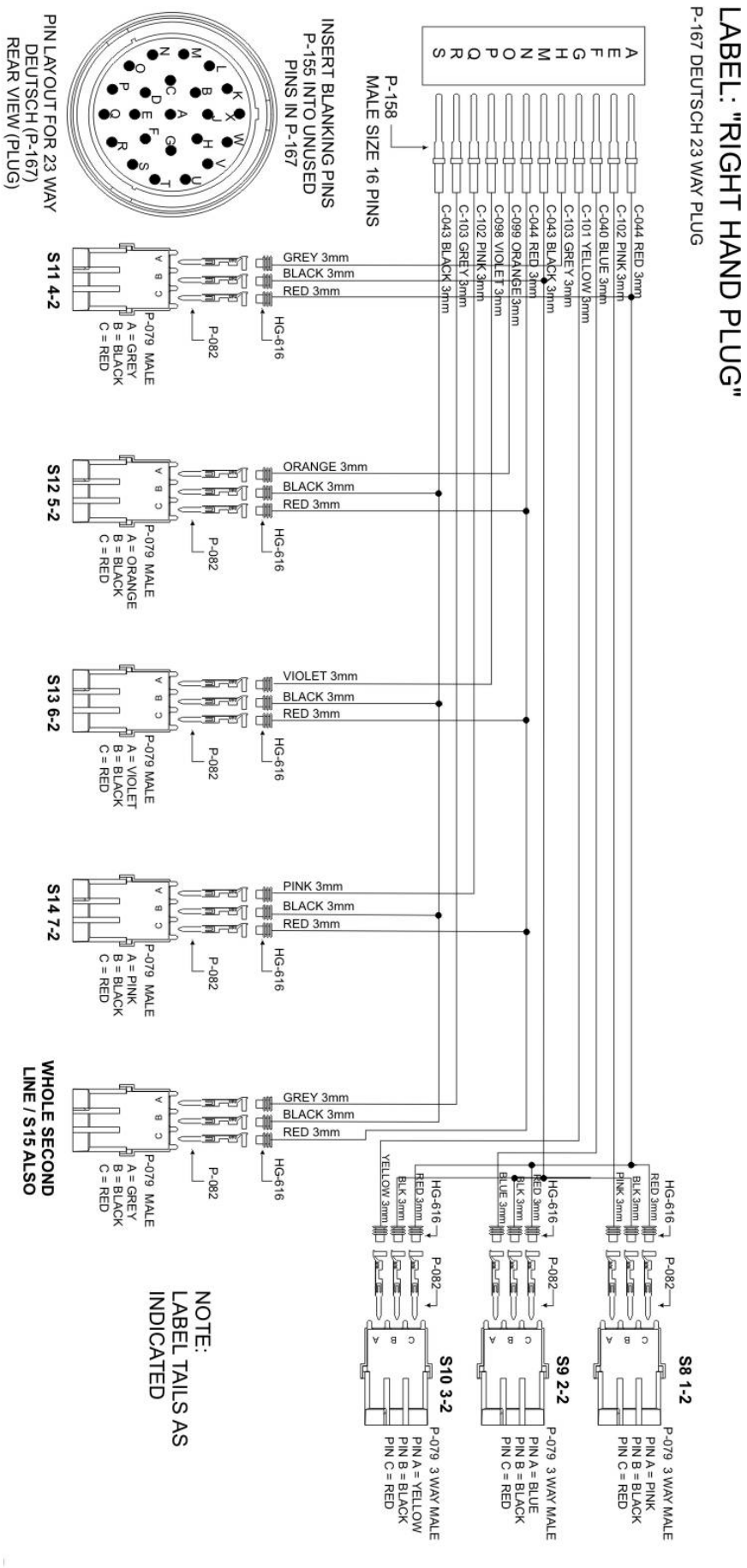


Standard Spray/Section Loom (AC-520603-00)



Part No:AC-520603-00

TITLE: 5206 Standard Spray/Section Loom for 3 wire & solenoid valves (15 sections)


LABEL: "RIGHT HAND PLUG"
P-167 DEUTSCH 23 WAY PLUG
P-158
MALE SIZE 16 PINS
INSERT BLANKING PINS
P-155 INTO UNUSED
PINS IN P-167
PIN LAYOUT FOR 23 WAY
DEUTSCH (P-167)
REAR VIEW (PLUG)
C-044 RED 3mm
C-102 PINK 3mm
C-040 BLUE 3mm
C-101 YELLOW 3mm
C-103 GREY 3mm
C-043 BLACK 3mm
C-044 RED 3mm
C-099 ORANGE 3mm
C-098 VIOLET 3mm
C-102 PINK 3mm
C-103 GREY 3mm
C-043 BLACK 3mm
S11 4-2
GREY 3mm
BLACK 3mm
RED 3mm
P-079 MALE
A = GREY
B = BLACK
C = RED
P-082
HG-616
S12 5-2
ORANGE 3mm
BLACK 3mm
RED 3mm
P-079 MALE
A = ORANGE
B = BLACK
C = RED
S13 6-2
VIOLET 3mm
BLACK 3mm
RED 3mm
P-079 MALE
A = VIOLET
B = BLACK
C = RED
S14 7-2
PINK 3mm
BLACK 3mm
RED 3mm
P-079 MALE
A = PINK
B = BLACK
C = RED
WHOLE SECOND
LINE / S15 ALSO
GREY 3mm
BLACK 3mm
RED 3mm
P-079 MALE
A = GREY
B = BLACK
C = RED
NOTE:
LABEL TAILS AS
INDICATED
HG-616
P-082
S8 1-2
P-079 3 WAY MALE
PIN A = PINK
PIN B = BLACK
PIN C = RED
S9 2-2
P-079 3 WAY MALE
PIN A = BLUE
PIN B = BLACK
PIN C = RED
S10 3-2
P-079 3 WAY MALE
PIN A = YELLOW
PIN B = BLACK
PIN C = RED
TITLE: 5206 Standard Spray/Section Loom for
3 wire & solenoid valves (15 sections)

Spray Pod Deutsch Connector Pin Outs

Pin assignment for 9 pin Deutsch connector.

PIN LETTER	DESCRIPTION
U	RAW PLUS 12 V (red)
S	RAW MINUS 12V (black)
X	DATA (blue)
W	DATA (green)
V	COMMS POWER
Y	COMMS GROUND
T	COMMS (grey)
R	-
Z	+12V (red)

Pin assignment for the middle 23 pin Deutsch connector on the spray pod.

PIN LETTER	DESCRIPTION
B	+12V OUT
K	PRESSURE
L	WHEEL
X	FLOW
J	GROUND OUT
C	DC MOTOR
D	DC MOTOR
E	DUMP
F	SECTION 1
G	SECTIONS GROUND
A	+12V SECTIONS
M	SECTION 2
N	SECTION 3
O	GROUND SECTIONS
P	+12V SECTIONS
Q	SECTION 4
R	SECTION 5
S	GROUND SECTIONS
T	+12V SECTIONS
U	SECTION 6
V	SECTION 7
W	GROUND SECTIONS
H	1ST LINE

Pin assignment for the end 23 pin Deutsch connector on the spray pod.

PIN LETTER	DESCRIPTION
B	SECTION 1 NEGATIVE
K	SECTION 5 NEGATIVE
L	SECTION 6 NEGATIVE
X	DUMP NEGATIVE
J	SECTION 4 NEGATIVE
C	SECTION 2 NEGATIVE
D	SECTION 3 NEGATIVE
E	SECTION 8
F	SECTION 9
A	+12V SECTIONS
M	GROUND SECTIONS
N	+12V SECTIONS
O	SECTION 12
P	SECTION 13
Q	SECTION 14
R	SECTION 15 (WHOLE SECOND LINE)
S	GROUND SECTIONS
T	SECTION 7 NEGATIVE
U	SECTION 8 NEGATIVE
V	SECTION 9 NEGATIVE
W	SECTION 10 NEGATIVE
H	SECTION 11
G	SECTION 10

Wiring for 2 Wire Valves

Pins marked for example "SECTION 1 NEGATIVE" are for 2 wire valves (+12V and -12V). To operate section 1 which lets say is a 2 wire valve will require wires coming from pin F ("SECTION 1") of the middle Deutsch connector and pin B ("SECTION 1 NEGATIVE") of the end 23 way Deutsch.

Wiring for 3 Wire Valves

Where as pins marked for example "SECTION 1" are the trigger signals for three wire section valves (signal, +12V and ground). To operate section 1 which lets say is a 3 wire valve will require wires coming from pin A ("+12V SECTIONS"), pin F ("SECTION 1") and pin G ("GROUND SECTIONS") of the middle Deutsch connector.

For an Arag 3 pin plug, follow the pin out below:

Pin 1	+12V	("+12V SECTIONS")
Pin ⏚	Trigger	("SECTION no.")
Pin 2	GND	("GROUND SECTIONS")