CROPLANDS

Pegasus 7000, Quick Start Guide

The Pegasus 7000 (Standard) is the latest Broadacre Sprayer from Croplands featuring a Centrifugal pump, an ARDS drawbar, air suspension and a high capacity 1,500 litre Flushing tank.

This quick start guide highlights the operational variations from Croplands older / diaphragm pump models and includes BT-PRIME information.

This print version is an update of the original Quick Start Guide dated 03/05/2018 (no part number change).

Safety.

Please read and understand all supplied manuals, guides and safety decals before operating this sprayer.

Connect Sprayer to Tractor.

It's important to note that with the 36m spray boom open and wet, with the main tank and front tank completely empty, the sprayer is fractionally back heavy. Sprayer must be connected to a tractor before opening the boom.

Drawbar Weights (aproximate).

Boom open, empty tanks = -50 kg (WARNING - tail heavy)

Boom folded, empty tanks = 800 kg

Boom open, full tanks = 5610 kg

Boom folded, full tanks = 6460 kg

Centrifugal Pump

The high capacity Ace centrifugal spray pump is identified by yellow coded hydraulic hoses. Double yellow bands for the pressure line.

Maximum hydraulic oil flow of 68 lpm (ea) will rarely (if ever) be required.

For further questions on the pump's operations, consult the separate pump instruction manual that has been supplied at the time of delivery.

Hand Wash Tank

This sprayer is equiped with a 20 litre HAND WASH tank.

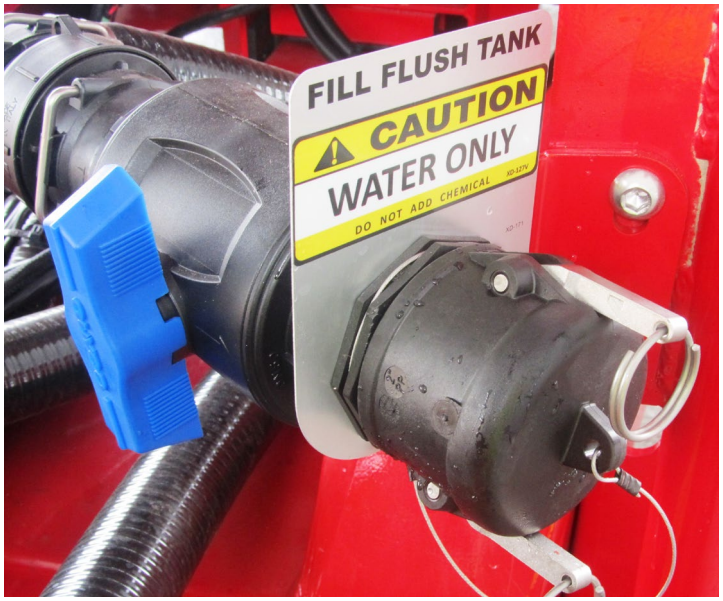
ALWAYS fill from a clean and trusted water source.

Fill Flush Tank

The Pegasus 7000 features a large capacity (1,500 Litres) Flushing tank.

Fill is via a 2" camlock from via external water source.

(Photo shows capped & valve closed position).



Fill Main Tank

The main tank has a maximum capacity of 7320 Litres, plus additional top ridges to aid foam suppression.

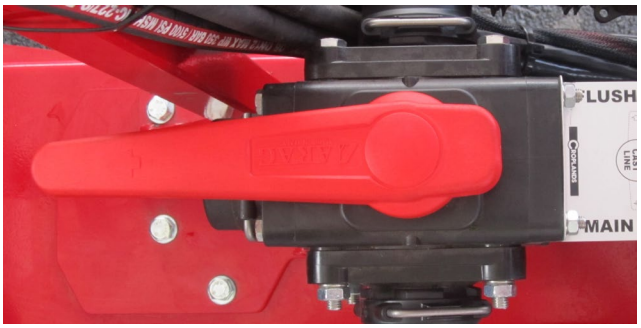
Fill is via a 2" camlock fitting from an external water (and / or chemical source).

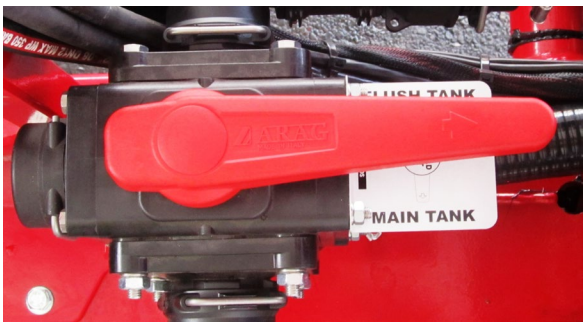
(Photo shows capped & valve closed position).

Always turn ball valve to off (as shown) for cleaning of the filter.

Fill Main Tank cont …

1. Set Tank Selection Valve (located on the drawbar) to OFF (there are 2 possible (for & aft) positions for off).





2. Set Control Panel's Fill Valve to FILL MAIN TANK.

3. Connect to Fill Camlock (not shown in photo below), Open ball valve.

Fill as required.

See the full manual for further information re fill meters etc.

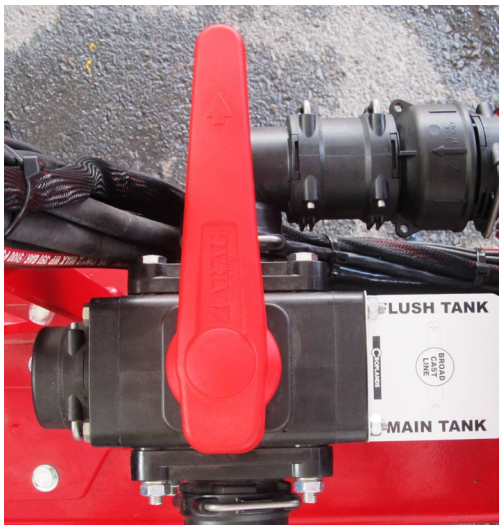
Note; position of the Pressure valve is not critical whilst filling, but best to be OFF unless required.

Transfer from FLUSH tank to MAIN tank, via Pump.

Transfer time will vary depending upon pump speed, and is normally around 300 ~ 400 litres per minutes.

Note; it's not possible to transfer from 7000 main to 1500 flush.

1. Set Tank Selection valve (on the drawbar) to FLUSH, as shown.



Transfer from Flush to Main cont …

2. Set Fill valve to FILL MAIN TANK, as shown.

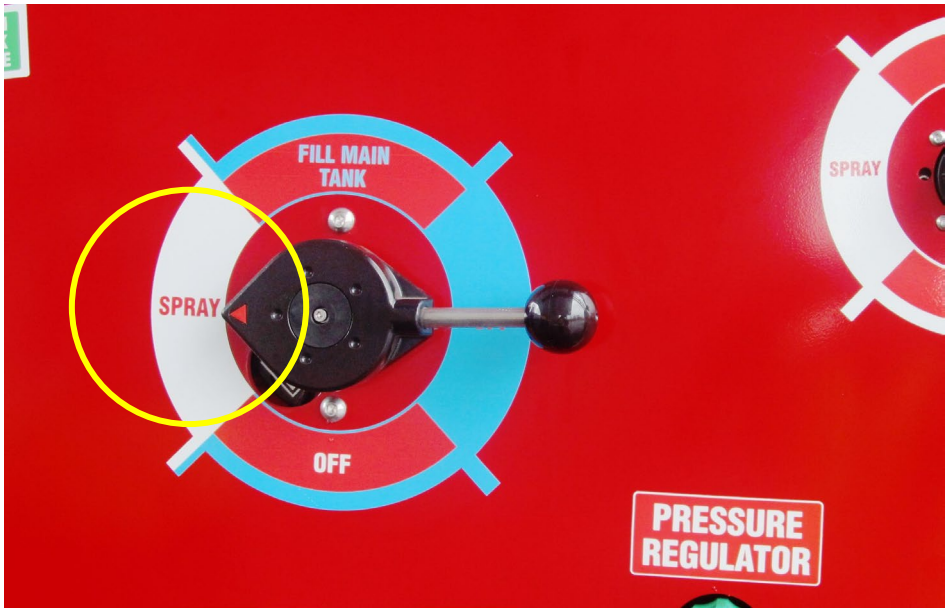
3. Engage pump until required volume of fresh water has been transferred.

Turn all valves to off when completed

Note; position of the Pressure valve is not critical whilst transferring, but best to be OFF unless required.

For the funcions Hopper, Probe & Probe Rinse, Main Tank Rinse & Agitators and Spray.

- Set the Fill valve to SPRAY, as shown here …….

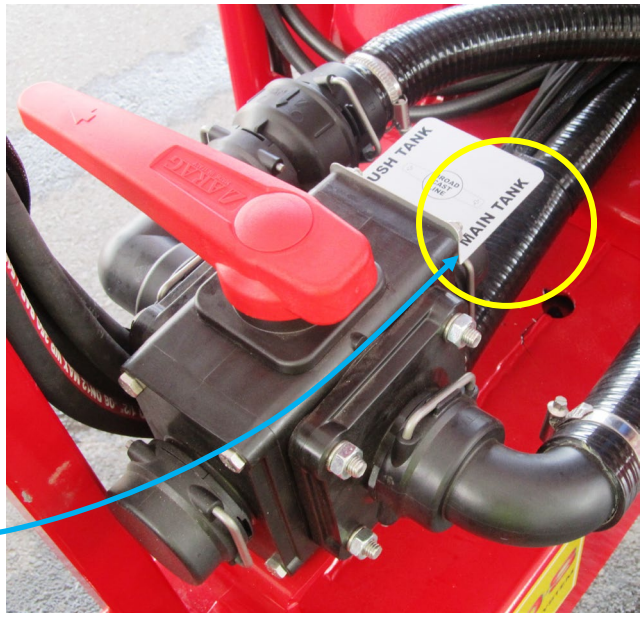


AND

- Via the Tank Selection Valve, **select the tank** from which to draw.

For all Flushing and some Hopper operations that will be from the FLUSH tank (as shown in the photo). Note all water returns to the Main tank.

For Probe, Spray, Agitation and most Hopper operations it will be the MAIN tank that's selected.



Chemical Hopper

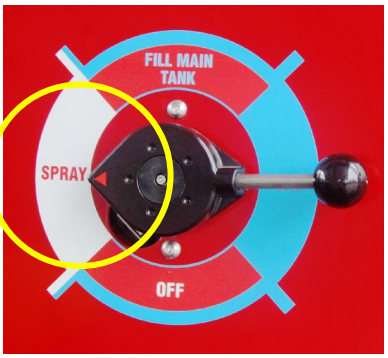
The Chem-e-flush chemical hopper can be operated by drawing liquid from both tanks.

Fill and drain speeds are dictated by the pump speed. At full pump speed, it's normally around 50 seconds to fill and approximately 60 seconds to empty.

Drum rinse and flush functions do not need full pump speed.

1. Select liquid source (Flush or Main) as per above.

2. Set Fill valve to SPRAY.



3. Set Pressure valve to HOPPER.

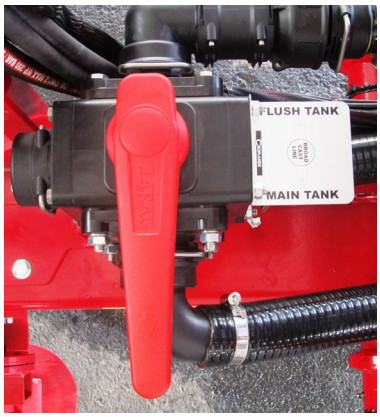
To see further information on using the Chemical hopper, please watch the video at this link …

https://youtu.be/lJo27Jf33kk

Probe

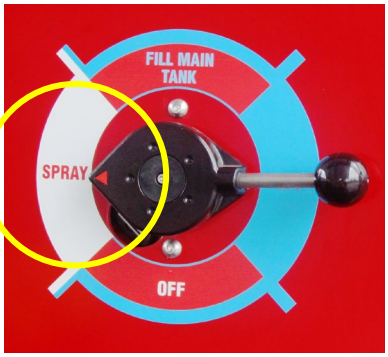
The Chemical Probe can be operated by drawing liquid from either the Flushing or Main tanks.

Performance is dictated by the pump speed.



1. Select liquid source (Flush or Main).

   This will normally be MAIN.



2. Set Fill valve to SPRAY.

3. Set Pressure valve to PROBE.

4. Connect Probe.

See the full manual for further information re Probe operations.

Probe Rinse

- Must select FLUSH TANK for water supply.
- Must Select SPRAY from the Main valve.
- Activate PROBE RINSE via toggle switch as shown.

Note; position of the Pressure valve is not critical, but best to be OFF unless required.

Spraying, from main tank.

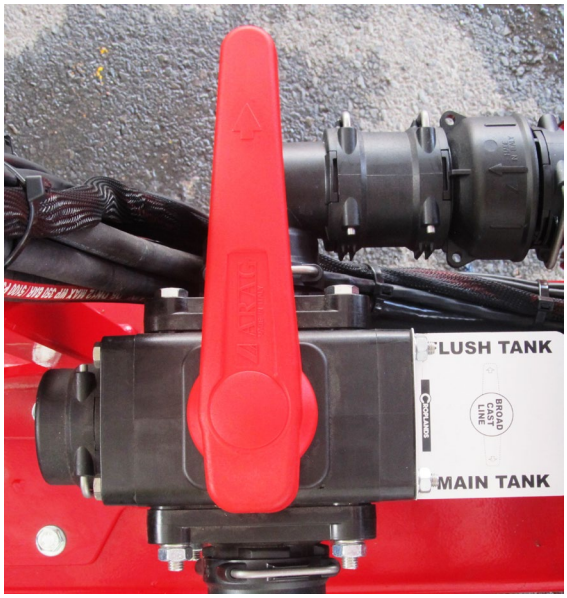
1. Set Tank Selection Valve (located on the drawbar) to MAIN TANK

The photo below shows correct valve positions.

2. Set the Fill ball valve to SPRAY
3. Set Pressure ball valve to SPRAY
4. Turn on (lift) AGITATORS MAIN TANK toggle switch. The sprayer is equiped with 2 agitators.

See the full manual for further information re Spray operations.

Flushing / Rinsing.



1. Set Tank Selection Valve (located on the drawbar) to FLUSH TANK.

2. Set MAIN TANK RINSE toggle to ON

See the full manual for further information re Flushing operations.

3. Open Drain (as required).

Notes:

This sprayer will also be delivered with the Pegasus 7000 operators manual, part no. BT-OMPEG7STD-A. For details not covered by this quick start guide or the Pegasus Manual, please contact Technical Support.

- The following 5 pages relate to the BT-PIME feature as per document PiB-101a.

NOTE

Contact Croplands Technical Support for further information:

1300 650 724

ALL PARTS INFORMATION is now listed on the Croplands website:

- Go to www.croplands.com.au
- Search in the Parts Information section linked to the home page.

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PRODUCT INFO, BROADACRE No. 101A (UPDATE)

UPDATE 2: BT-PRIME FOR PEGASUS; PRIME – RECIRCULATION- FLUSH

Pegasus models (ordered after July 1, 2021) have an added option, BT-PRIME. This is an advanced plumbing system that features high volume Boom Prime – Recirculation – Reverse Flush, for ….

- Improved spray efficiency (boom lines are always fully charged, ready to spray)
- Reduced lag times, wear and tear on the main servo valve
- Instant nozzle shut-off's

Standard* fitment for Pegasus 8000 & 7000 models (ordered after July 1, 2021) * Exceptions apply, see below.

Optional feature for Pegasus 6000 & 5000 models (ordered after July 1, 2021) * Exceptions apply, see below.

Attached are 2 plumbing schematics: for the standard AR diaphragm pump or the optional Ace centrifugal pump.

OVERVIEW:

Wherever this system is installed, the boom section valve plumbing will be revised to use Metering* and Bleeder valves fitted to the boom section valves.

* Exceptions: BA7000 Controller doesn't support metering valves (fitted with bleeder valves only). Pegasus 8000's existing boom flush system (multiple boom flush taps) is replaced by a "flush to tank" or "flush to ground" ball valve (as use on all BT-Prime's).

Metering devices maintain a constant pressure when either turned on or off. Farmers using GPS Section Control will notice the rapid response turning nozzles on at the correct pressure for better application.

(This system replaces the conventional controls whereby the Servo valve chases the pressure demands as sections turn on and off which by today's standards is too slow).

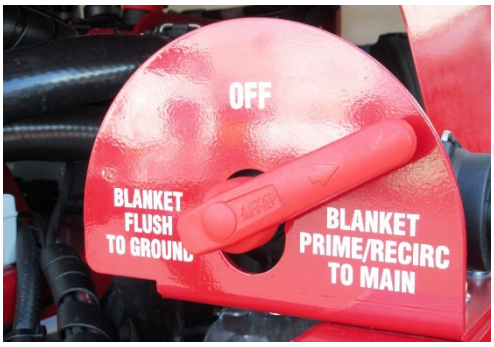
Bleeder Valves rapidly dump the residual boom line pressure trapped between the Boom Section valves and the 1.4 bar non-drip valves at the nozzle body. Operators will notice fast boom section shut off with little dripping.

The 1.4 Bar non-drip is identified by the grey coloured insert.

The BT-PRIME system is designed to aid agitation and ensure the boom is fully primed with fresh chemical from the very first headland spray hence increasing sprayer efficiency and productivity whilst also reducing product wastage and minimising environmental impact.

The system recirculates fluid from the outside of the boom towards the centre within seconds, ensuring the tank mix is correct from the very first spray.

<u>Flushing</u> the boom is safe and efficient with the system reverse flushing from the outside of the boom through the boom section valves, returning to the main tank or to ground. Using a single tap much safer. Note the ball valve shown is from a WEEDit sprayer fitted with BT-PRIME .



The system is activated via the controller master switch being set to OFF in the tractor cab making it safe and efficient for the operator.

The system also includes a proportional valve to fine tune / adjust the volume of flow.

Whilst it's possible to use the proportional valve to restrict most of the flow through the BT-PRIME system to use "normal" 0.4 Bar nozzle shut off's ... this practice is not recommended as spray efficacy is significantly reduced when spraying air-induction nozzles at pressures below 1.5 Bar which can ultimately lead to herbicide resistance issues.

OPERATION:

(1) Set the proportional valve. Where possible this valve should be used fully open (screwed in / restricting bypass flow to tank / maximising flow to the boom).

The only time this valve should be adjusted is when residual / back pressure is causing slow nozzles shut-off - by bleeding a portion of the flow back to tank.

The proportional valve (identified by the yellow knob) is shown here fitted to the blanket line of a WEEDit sprayer). Exact placement can vary from sprayer to sprayer. Also shown is one of the BT-PRIME filters.

(2) **SETTING** the Metering valves (constant pressure regulating valves).

Having well-adjusted metering valves will significantly improve the main servo valve's functionality and life cycle. Generally, the metering will only require checking when making a major change in nozzle size.

Setting up or testing is best done with fresh water in the main tank.

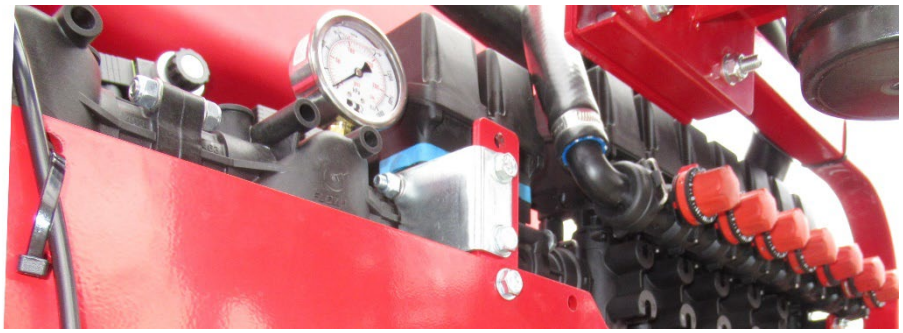
a) Pump on. Turn all sections ON (in spray mode).

b) Set the system pressure to slightly above expected operational pressures – say 4 or 5 Bar.

Setting cont …..

c) The "**secret**" is to set each section one by one. Individually turn OFF each section and see what happens to the pressure. Adjust the metering valve (red knob) until the pressure comes back to chosen pressure (i.e. 5 bar). Once set, turn the section back on – the pressure shouldn't change.

- A pressure gauge connected to the filter / bank of section valves to make this process easier from the back of the sprayer. Flow goes back to tank.



- The actual number indicated on the metering valve is not important as can be seen in the photo on the previous page.

d) Continue this process for all sections, one at a time.

e) Once completed, perform a final check by turning section(s) on and off at random. The pressure should always stay the same.

(3) The **PRIME** / Recirculation system is automatically operational once the pump is running, section valves off and the rate controller master switch is OFF.

(4) **FLUSHING** (Quick flush of nozzles to ground).

a) Select the fresh water source (Flushing tank).

b) Perform a conventional boom flush – Master on, all boom sections on.

(5) **REVERSE FLOW FLUSH**.

c) Turn sections valves OFF, turn Master OFF. The full reverse flow flush is now active, flushing to either the main tank or ground (as per below).

d) The BT-PRIME system has a Flushing ball valve located at the rear of the sprayer. Select either "flush to ground", or "flush to main tank", as required.

(6) Upon completion of flushing, turn the flushing ball valve back to "flush to main tank". Note this is the normal ball valve position for a Quick flush of the nozzles to ground – as per point #4.

(7) Refer to manual for tank rinse, agitator rinse and tank draining functions.

NOTE: With the BT-Prime option, there are no individual boom flushing taps fitted to the boom. Clean filters regularly.

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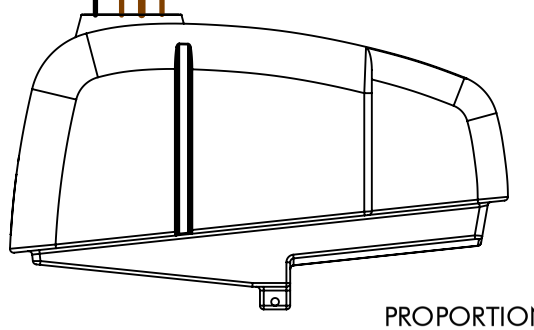
BT-PRIME FOR PEGASUS
CENTRIFUGAL PUMP REV 1



Ø25MM
Ø38MM
Ø25MM
Ø38MM
PROPORTIONAL VALVE
A463070
LINE FILTER
PRESSURE GAUGE
Ø38MM
Ø25MM
Ø25MM
Ø12 MM HOSE
Ø12 MM HOSE
Ø12 MM HOSE
Ø12 MM HOSE
Ø12 MM HOSE
Ø12 MM HOSE
Ø12 MM HOSE
Ø10MM
GROUND
PRESSURE GAUGE
SECTION VALVE
DUMP
PRESSURE ADJ. SERVO
FLOW METER
CENTRIFUGAL PUMP
Ø25MM
Ø25MM
Ø38MM
FL
1
2
3
4
5
6
7
FR
Ø12MM
Ø20MM
Ø20MM
Ø20MM
Ø20MM
Ø20MM
Ø20MM
Ø12MM
FENCE LINE
FENCE LINE
LEFT BOOM SECTION 1
LEFT BOOM SECTION 3
RIGHT BOOM SECTION 5
RIGHT BOOM SECTION 6
LEFT BOOM SECTION 2
CENTRE BOOM SECTION 4
RIGHT BOOM SECTION 7

PRIMING LINE
SPRAY LINE

YELLOW FILTER PN - A32621135.

EACH NOZZLE BODY IS FITTED WITH 1.4BAR CHECK VALVE PN - A402014.100 GREY

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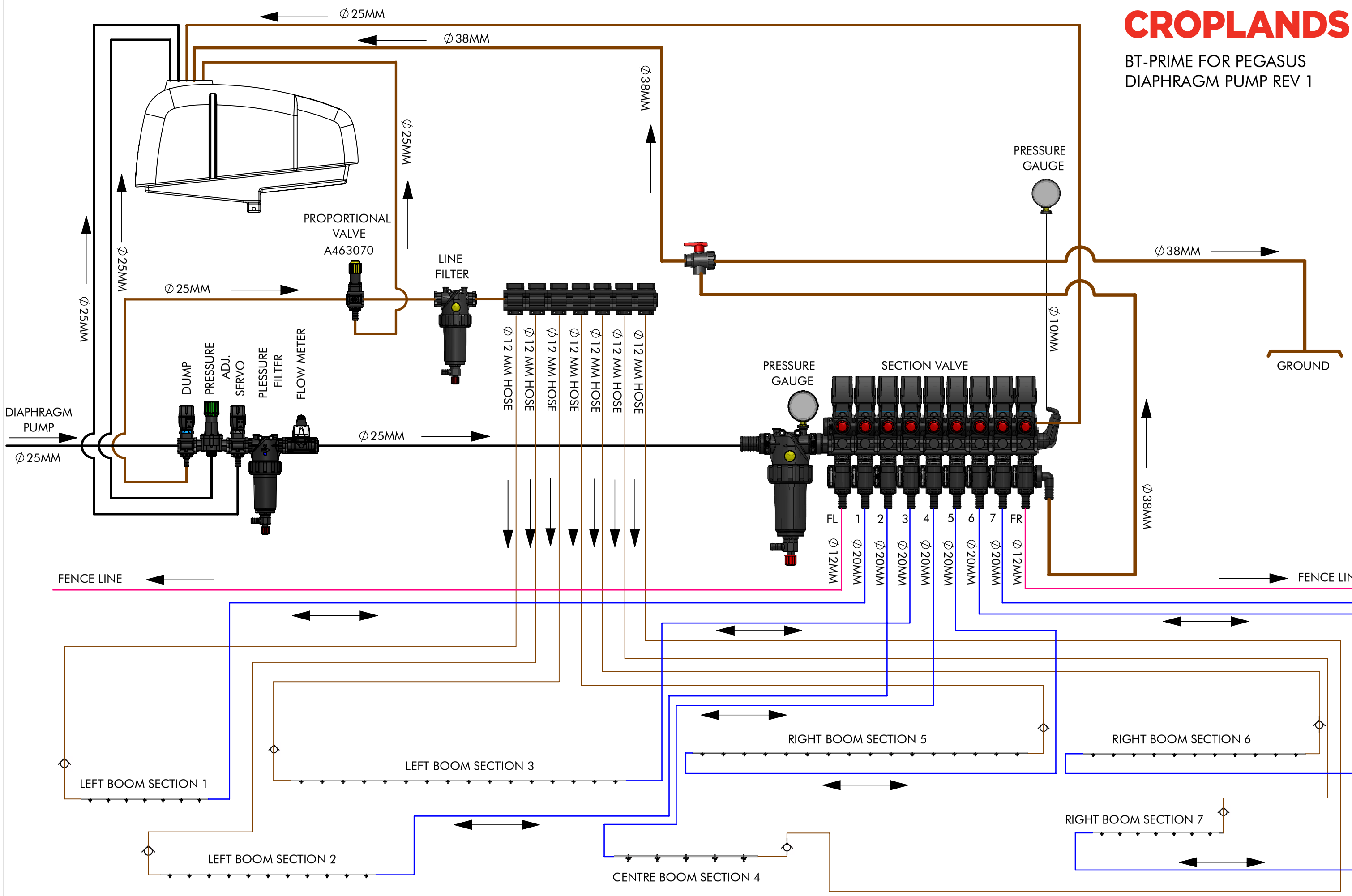
BT-PRIME FOR PEGASUS
DIAPHRAGM PUMP REV 1



PRIMING LINE SPRAY LINE

YELLOW FILTER PN - A32621135.

EACH NOZZLE BODY IS FITTED WITH 1.4BAR CHECK VALVE PN - A402014.100 GREY