

PRODUCT INFO, BROADACRE No. 101B (UPDATE 3)

UPDATE 3: BT-PRIME FOR PEGASUS; PRIME - RECIRCULATION- FLUSH

Pegasus models, 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 pressure regulator (servo) valve
- Instant nozzle shut-off's

Standard* fitment for Pegasus 8000 & 7000 models

* Exceptions apply, see below.

Optional feature for Pegasus 6000 & 5000 models

* Exceptions apply, see below.

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.

* 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).

OVERVIEW:

Wherever this system is installed, the plumbing system will utilise Metering and Bleeder valves fitted to the boom section valves.

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 pressure regulating (servo) valve slowly chases the pressure demands as sections turn on and off).

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 (note this is 1.4 bar opening / 1.0 bar closing). Operators will notice fast boom section shut off with little dripping.



1.4 Bar Nozzle non-drip valves are fitted as standard to the BT-PRIME system, it might be Arag or TeeJet.



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



The 20 psi (1.38 bar) TeeJet nozzle non-drip is identified by the number "20" printed on the cap.

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.

Flushing 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 via a single tap which is more efficient and safer (compared to a tap at the end of each boom section).



Activation; 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.

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

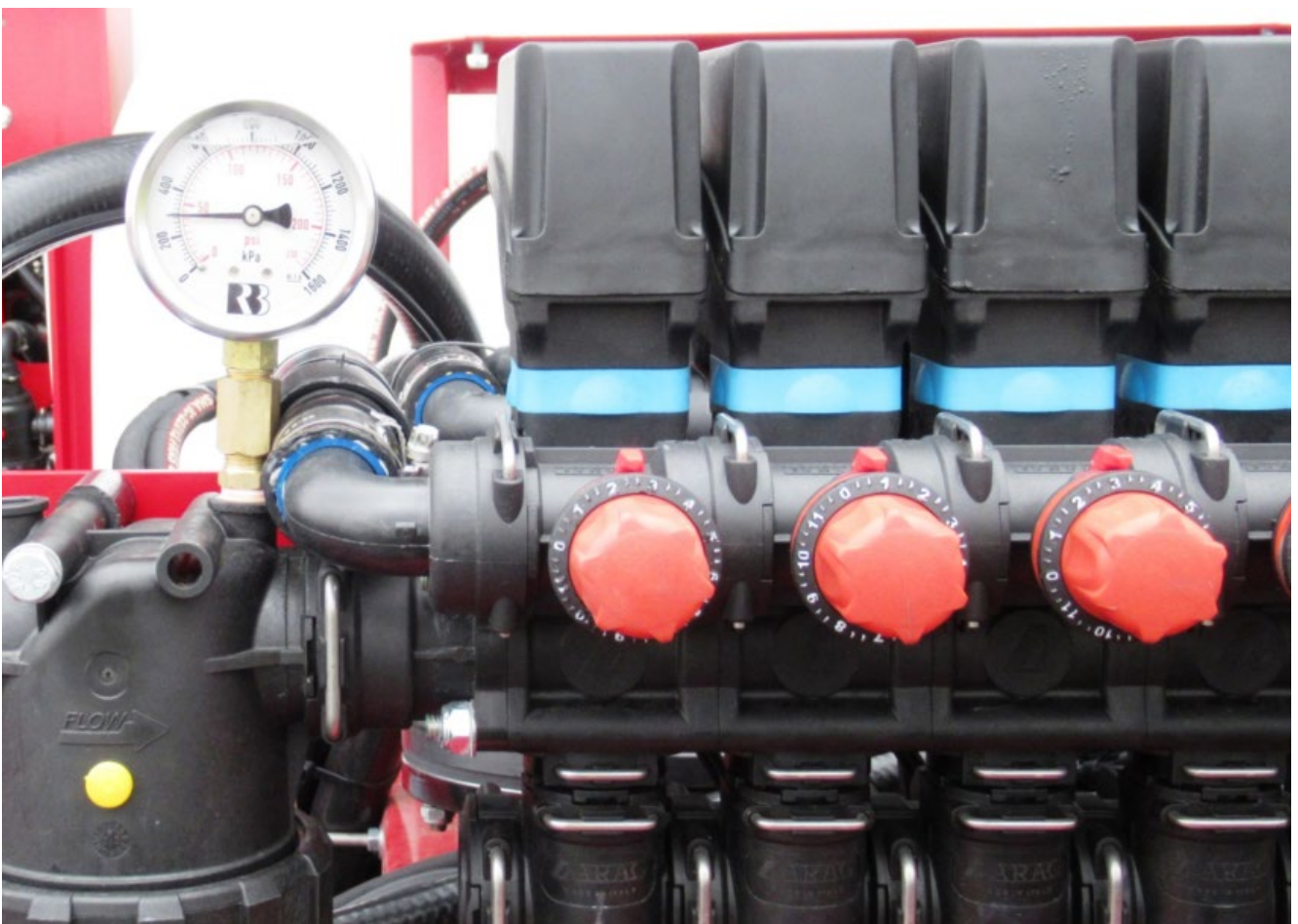
OPERATION:

(1) **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.
- 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 below.
- 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.



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

(3) **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.

(4) **REVERSE FLOW FLUSH.** (Flush of lines)

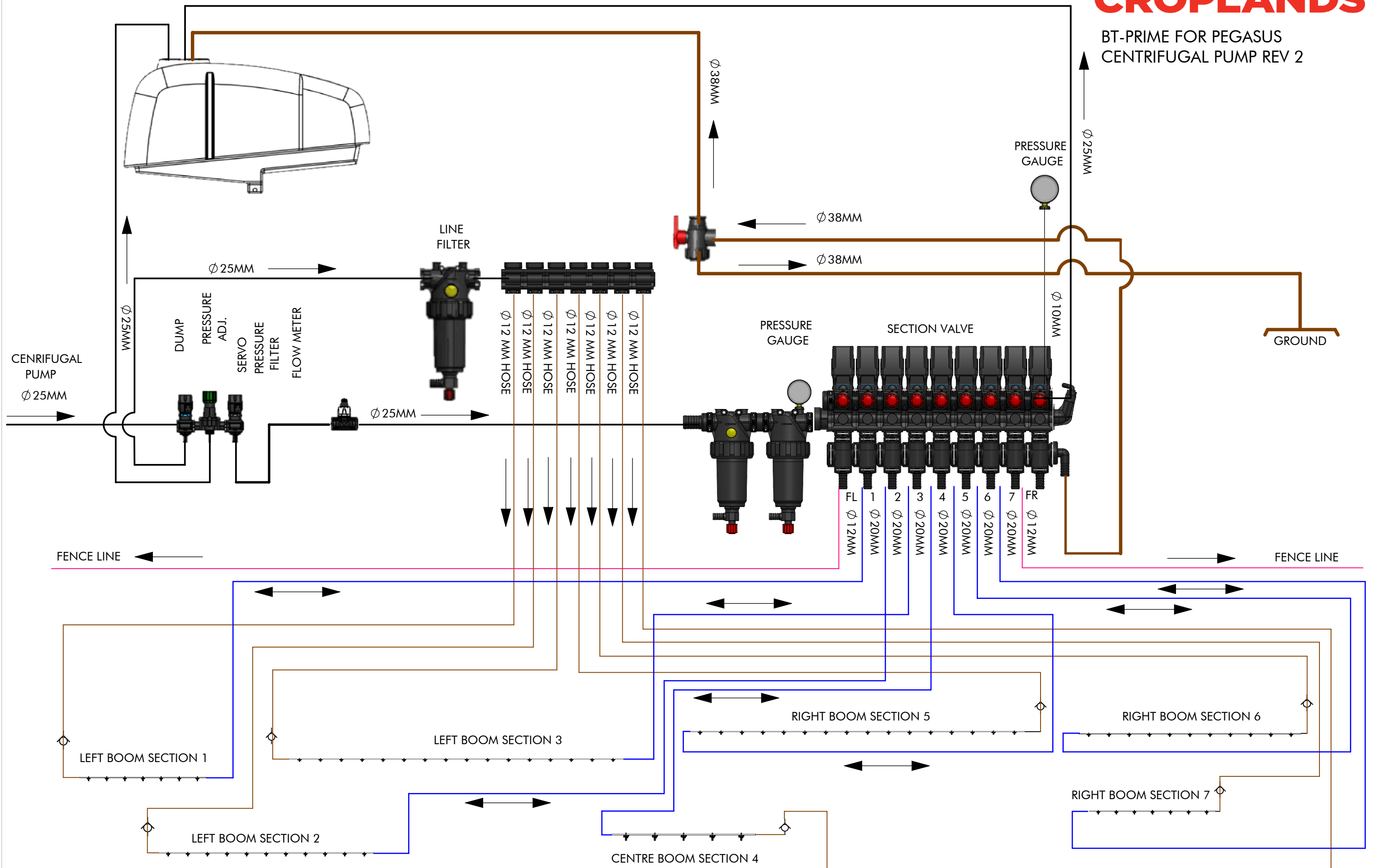
- a) Turn sections valves OFF, turn Master OFF. The full reverse flow flush is now active, flushing to either the main tank or ground (as per images below).
- b) The BT-PRIME system has a Flushing ball valve located at the rear of the sprayer. Select either “flush to ground”, or “flush (Prime / Recirc) to main (tank)”, as required.
- c) Upon completion of reverse flushing, turn the flushing ball valve back to “Prime/Recirc to main tank”. Note this is the normal ball valve position for a Quick flush of the nozzles to ground as per point #3.



(5) Refer to Operators 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 (including Pegasus 8000). Clean filters regularly.

BT-PRIME FOR PEGASUS
CENTRIFUGAL PUMP REV 2



PRIMING LINE

SPRAY LINE

YELLOW FILTER PN - A32621135.

GREEN FILTER SCREEN PN - A3262004.303.

EACH NOZZLE BODY IS FITTED WITH 1.4BAR CHECK VALVE