



BULLETIN NUMBER: SB-0008

DATE: 06/02/2023

SUBJECT: ISO-BUS Hydraulic Settings & Diagnosis

ISO-BUS Hydraulic Settings & Diagnosis

This bulletin explains the key settings for the hydraulic system to operate the Floor belt and the spinners on the K & F Series Variable Rate Spreaders. This is information only and Bredal Australia highly recommends that you use the below settings as suggested. Adjusting the settings outside of the suggested parameters will void the machines warranty cover.

In addition to the settings, this bulletin also lists seven (7) key diagnosis strategies in the event of inadequate Spinner rpm.

PID Parameters

(Main Menu > Machine > OEM > Control Channels > Regulator Config Disc > PID Parameters)

P – 0.015 (Provides the kick during start up and assists to keep a consistent Speed of the Spinners)

I – 0.012 (Maintains a consistent speed of the spinners).

D – 0.001 (Not used).

Max PWM 80%

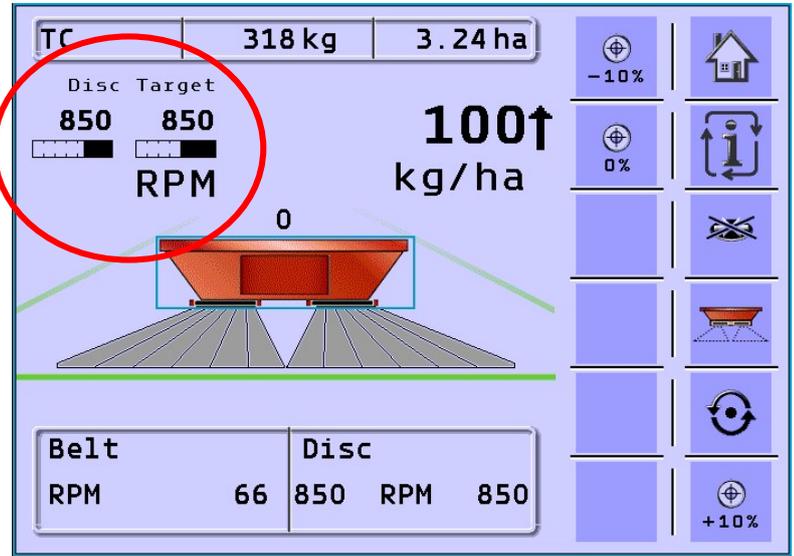
(Main Menu > Machine > OEM > Control Channels > Regulator Config Disc > PWM Offsets Left/Right)

80% is adequate for maximum flow to the spinners. Bredal suggests 80% as increasing to 100% will make NO change to the maximum spinner speed and may jeopardise the longevity of the hydraulic system.

PID parameters	
P factor	0.015
I factor	0.012
D factor	0.001

NOTE: Before you begin diagnosing hydraulic issues, the thing is to ask your client about the hydraulic flow bar graph on the Bredal work screen.

Central Bar Graph indicates optimal Hydraulic Supply. If the graph is one sided, this normally indicates an issue with O-Rings on the PWM Valves or the hydraulic supply is un-balanced.



Spinner PWM Valve



Divider Valve

If you are experiencing hydraulic pulsing or limited Spinner speed rpm, you have made the above checks, refer to the following seven (7) items to check and diagnose:

1. Check if the hydraulic filters need replacing.
2. Defective PWM Valve (Remove, check O-Rings and check the spring operation of the valve).
3. Air Trapped in the hydraulic system (Provide Maximum oil flow from the tractor and open/close the PWM valve several times). (Main Menu > Machine > Calibrations > Hydraulic System – Disc) and adjust from 0% to 100% to open and close the PWM Valve.
4. If the issue is only occurring to the left or right spinner, you can check if the problem is electrical by swapping the Left and Right PWM harness' over. Alternatively, you can swap the PWM valves from left to right to see if the problem transfers to the alternate side.
5. If the issue is occurring on both spinners, check the power supply from the batteries to the ISO-BUS module on the spreader. Check for continuity in both the negative and battery positive. An easy way to rule this out is to run a 50amp wire direct from the tractor battery to the ISO-BUS Module input wires.
Check Diagnostics Power: *Main Menu > Help > Diagnostic > Power Supply.*
6. Use a heat gun, this could lead you straight to the cause of the problem.
7. Lastly, Check operation and temperature of the Oil divider. Diagnosis of the divider is to divert the tractor oil flow around the divider and direct to the Spinner motors.

Any further support, please contact your Bredal Representative.