

Scorpio 550 SF & 710 controller operators manual

Introduction

The Scorpio 550 SF and 710 models are equipped with an ISOBUS enabled ECU and proportional valves. This gives additional features and adjustability that is not available on the base Scorpio 550. To use the machine an ISOBUS compatible tractor with an ISOBUS UT terminal is needed. Auxiliary functions is also supported through the ISOBUS AUX-N standard,

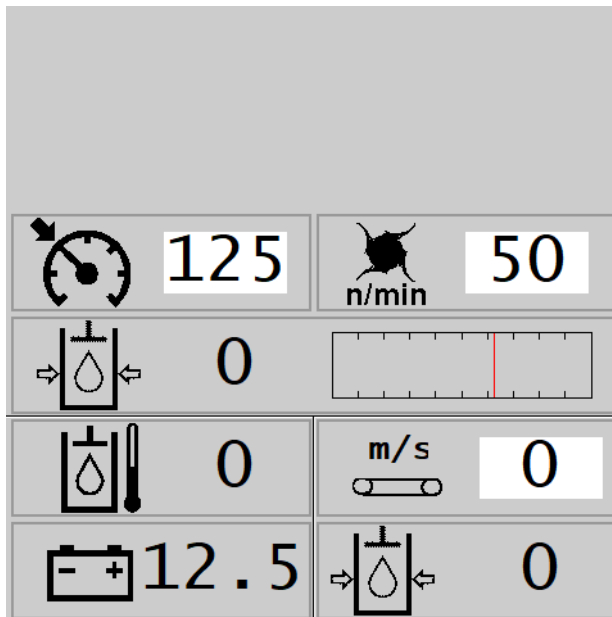
System description

The Autobalance system replaces the hydro-mechanical depth control system of the base machine. When the system is in use the depth of the machine is adjusted so that the combined load of the windrower and feed rotors are equal to the user adjustable setpoint. This allows the machine to work close to its maximum power without the rotors stalling due to changes in soil hardness and terrain fluctuations. The setpoint can easily be easily lowered by the operator top prevent the rotors from digging to deeply in soft soil.

Additionally, the system allows for automatic lift and reversal in case of blockage of the rotors during operation.

On the Sideflow model, starting and stopping of the conveyor is possible, along with conveyor speed control. Automatic reversal of the conveyor is also possible in case of blockage.

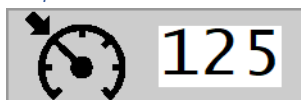
Home Screen



Field operation is normally carried out from the home screen

Settings in the home screen

Setpoint

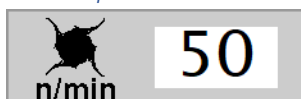


When the system is in use the depth of the machine is adjusted so that the combined load of the windrower and feed rotors are equal to setpoint. By adjusting this the working depth of the machine can be

adjusted

Recommended value: 100 – 125 Bar.

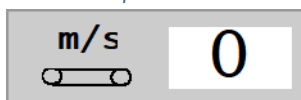
Picker Speed



Adjusts the speed of the windrower and feed rotors.

Recommended value: 70 – 85%

Elevator Speed



(Sideflow model only) Adjusts the speed of the main and side elevators. A to high value can make larger stones roll on the side elevator.

Recommended value: 75 – 80%

Meters in the home screen

Picker Pressure



Shows the combined load of the windrower and feed rotors, the Autobalance system tries to adjust the working depth of the machine to

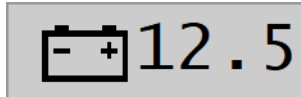
keep this pressure equal to the Setpoint, indicated by a red line in the bar graph.

Oil Temperature



Shows the temperature of the hydraulic oil.

Battery Voltage



Shows the battery voltage.

Elevator Pressure



Shows the hydraulic oil pressure for the elevators.

Softkeys in the home screen

Picker Start



Starts the windrower and feed rotors and activates the Autobalance system. A green icon indicates that the rotors are spinning and that Autobalance is activated. A yellow icon indicates that the rotors are spinning but the Autobalance system is disengaged.

When the icon is green the rotors can be stopped, and the machine lifted automatically by pressing the softkey.

This softkey is also available as a AUX-N function.

Picker Reverse



Reverses the rotors and disengages the Autobalance system if activated. Use this softkey to clear blockages manually.

This softkey is also available as a AUX-N function.

Tip Up



(Non Sideflow models only) Raises the stone container. Stops the Autobalance system if engaged.

This softkey is also available as a AUX-N function.

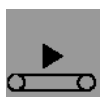
Tip Down



(Non Sideflow models only) Lowers the stone container. Stops the Autobalance system if engaged.

This softkey is also available as a AUX-N function.

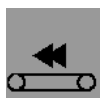
Elevator Start



(Sideflow model only) Starts the elevators. A green icon indicates the elevators are running.

This softkey is also available as a AUX-N function.

Elevator Reverse



(Sideflow model only) Reverses the elevators. Use this softkey to clear blockages manually.

This softkey is also available as a AUX-N function.

Lift Picker



Lifts the stone picker manually. Stops the Autobalance system if engaged.

This softkey is also available as a AUX-N function.

Lower Picker



Lowers the stone picker manually. Stops the Autobalance system if engaged.

This softkey is also available as a AUX-N function.

Higher Autobalance Pressure



Raises the Autobalance pressure by 5 bar. Makes the machine work deeper.

This softkey is also available as a AUX-N function.

Lower Autobalance Pressure



Raises the Autobalance pressure by 5 bar. Makes the machine work deeper.
This softkey is also available as a AUX-N function.

Slower Elevator Speed



(Sideflow model only) Lowers the Elevator Speed
This softkey is also available as a AUX-N function.

Faster Elevator Speed



(Sideflow model only) Raises the Elevator Speed
This softkey is also available as a AUX-N function.

STOP



Stops all activated functions.

Additional AUX-N functions

In addition to the softkeys there are some functions that are only available as AUX-N functions.

Picker Lift/Lower



Proportional AUX-N Function (Type 3). Raises and lowers the stonepicker.

Rotors Forward/Reverse



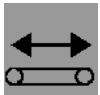
Proportional AUX-N Function (Type 3). Manual Control of windrower and feed rotors.

Stone Container Up/Down



(Non Sideflow models only)
Proportional AUX-N Function (Type 3). Raises and lowers the stone container.

Elevators Forward/Reverse

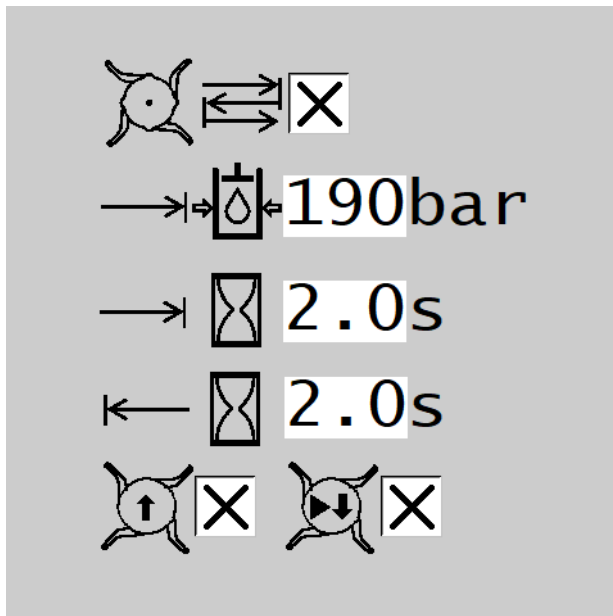


(Sideflow model only)
Proportional AUX-N Function (Type 3). Manual Control of Elevators.

Picker Auto-reverse



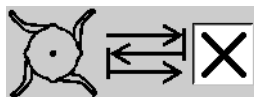
Picker Auto-reverse settings can be reached by pressing the “Settings” softkey from the home screen.



Auto-reversing can be enabled for the windrower and feed rotors, when activated the rotors will reverse for a adjustable time when a specific pressure is reached for a specific time. Autobalance must be active for Auto-reverse to activate.

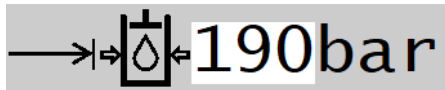
Picker Auto-reverse settings

Auto-reverse Enable



Enables the Auto-reverse functionality.

Trigger Pressure



Specifies the minimum pressure that must be held for Auto-reverse to activate

Trigger Time



Specifies the time that the Trigger Pressure must achieved before Auto-Reverse activates.

Reverse Time



Specifies how long the rotors will reverse for when Auto-reverse is activated.

Lift on Reverse




Specifies if the stone picker should lift while reversing. If disabled the picker will hold at the current position.

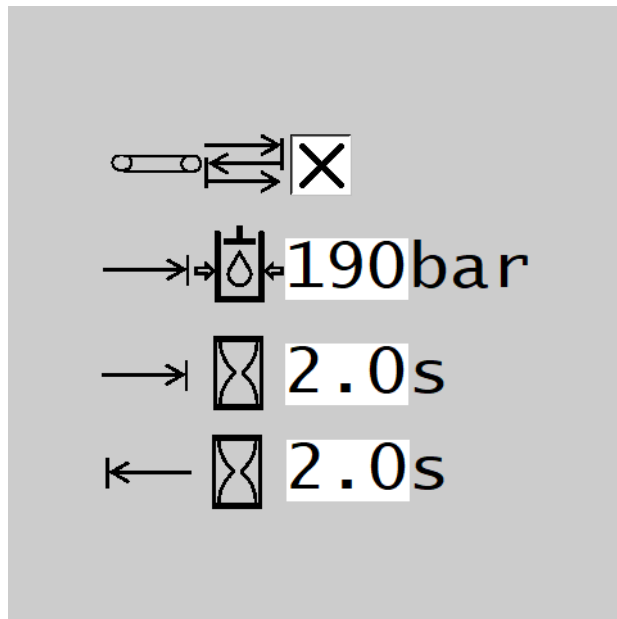
Resume after Reverse



Specifies if the Autobalance should resume after reversing. If Disabled the rotors will continue running but the AutoBalance will remain disabled.

Elevator Auto-reverse

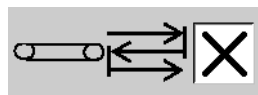
 Elevator Auto-reverse settings can be reached by pressing the “Down” softkey from the Picker Auto-reverse screen.



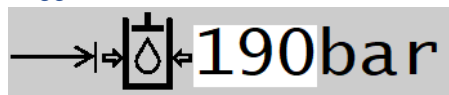
(Sideflow model only) Auto-reversing can be enabled for the elevators, when activated the elevators will reverse for an adjustable time when a specific pressure is reached for a specific time. Elevator Auto-reverse can be activated when the elevators are running in the forward direction. The elevators can be started by softkey, AUX-N Button or AUX-N proportional input.

Elevator Auto-reverse settings


Auto-reverse Enable

 Enables the Auto-reverse functionality.


Trigger Pressure

 Specifies the minimum pressure that must be held for Auto-reverse to activate

Trigger Time

 Specifies the time that the Trigger Pressure must be achieved before Auto-Reverse activates.

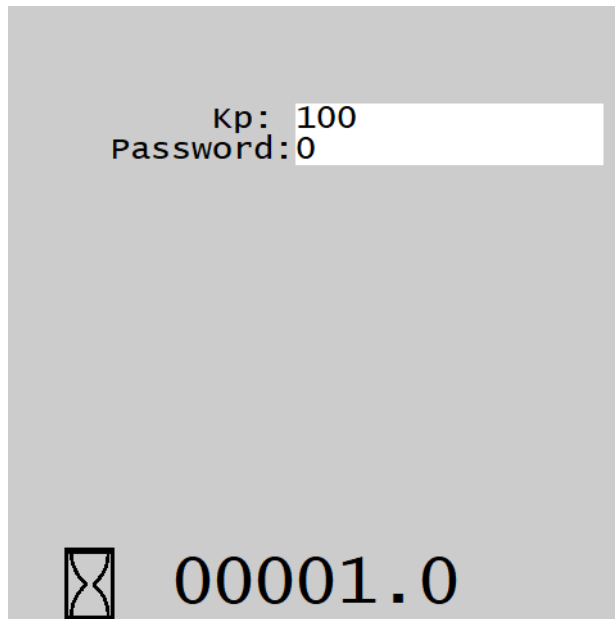
Reverse Time

 Specifies how long the elevators will reverse for when Auto-reverse is activated.

Advanced Settings



The Advanced Settings screen can be reached by pressing the “ADV” softkey from the Picker Auto-reverse screen.



Settings in the Advanced settings screen

KP

Proportional gain of the Autobalance system. A higher gain will make the autobalance system follow the ground better, but a too high value will make the system unstable and prone to oscillation. Recommended values 100%

Password

Password for entering the Service Screen.

Meters in the Advanced settings screen

Machine Hours



Shows the current machine hours of the stone picker. Machine Hours is only counted when the windrower and feed rotors are active and hydraulic pressure is present.