

S-Series Combine Optimization

“Ready To Harvest” for Sunflowers



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Preface

The content of this material is intended to help you know how to choose the best configuration and set up an S-Series combine for any Sunflower crop and condition before going to the field.

Sunflower combine and field installed bundles are explained, to enhance performance and Grain Quality in specific Sunflower conditions.

Setup and Adjustment recommendations are intended as a starting point. Additional adjustments and fine tuning will be necessary depending on crop moisture and harvest conditions.

A tips and tricks section is included to allow you to further fine tune your machine settings. Please also remember to use the on board Interactive Combine Adjustment system to gain further tips on your specific constraints if equipped on your machine.

Combine Setup and Inspection

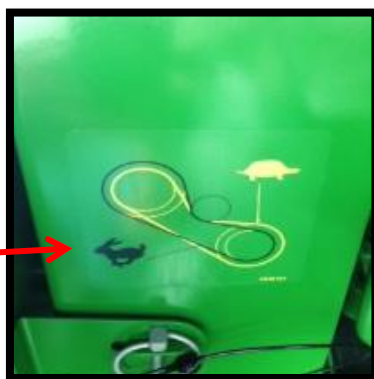
Feederhouse Drum Height and Chain Speed

- Front Drum position - Handle Up for Sunflower
- Conveyor chain speed – 26 teeth for Sunflowers.



Feed Accelerator Speed

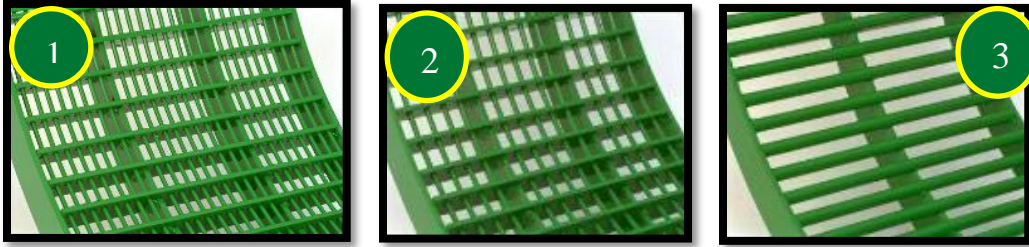
Low (550rpm) for normal and tough condition. In dry and brittle conditions the speed can be reduced further to 320rpm by installing BXE10741 (320rpm/770rpm) in order to further reduce straw damage and reduce shoe load. In dry conditions the 770rpm sprocket of BXE10741 could then be used for small grain.



Concaves

3 X large wire concave #2 in tougher threshing conditions. In easy threshing conditions you can also use 3 X round bar concaves #3. Separation is usually not a problem in sunflowers.

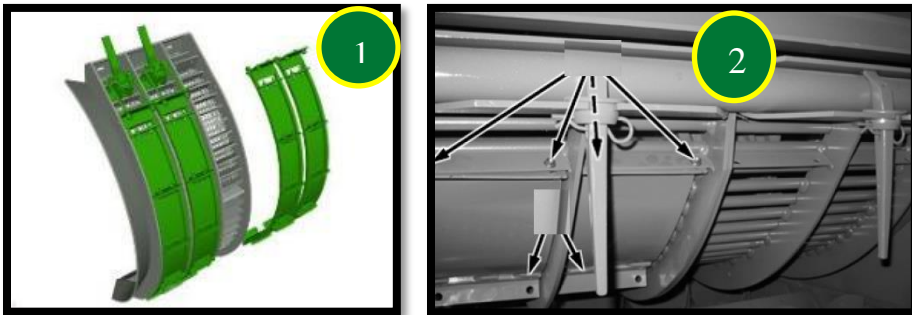
Refer to your Operators Manual for how to Level Concaves (front to rear) and calibrated to “Zero” on clearance to the threshing elements.



Concave Covers

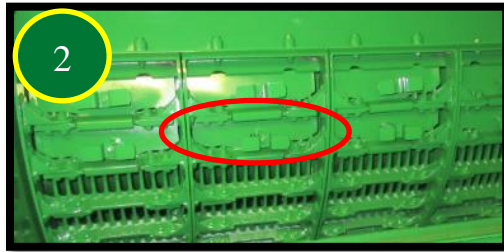
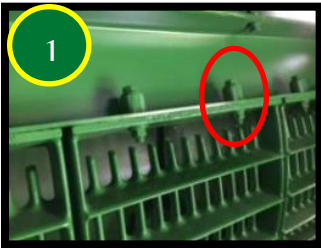
Concave covers can be used to reduce the amount of material going to the cleaning shoe or to influence the distribution on the cleaning shoe/auger bed.

Sectional concave cover plates BH84534 #1 for large wire concaves, can be used to fine tune the distribution on the cleaning shoe and in case you are using round bar concaves, please use BH84535 #3.



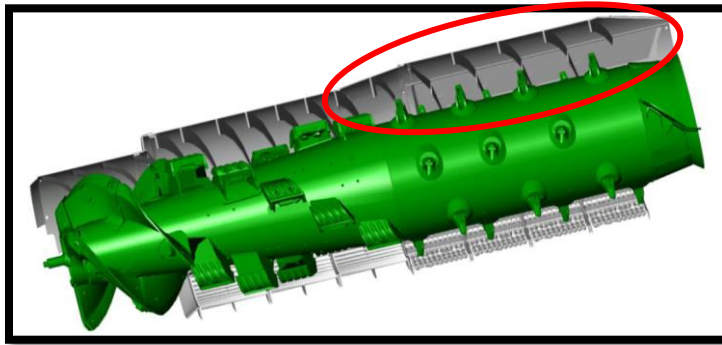
Separator Grates

Be sure separator grate spacers #1 are on top of rail for sunflowers. This will raise the grates and keep crop material flowing consistent through the separator. Separator grate covers #2 should only be used when the cleaning shoe distribution is uneven. They are used to reduce the amount of material exiting the rotor on the outside and by that reducing the shoe load on the outside of the chaffer



Rethresher and Adjustable Top Covers

The rethresher concave should be in the open position.



The rotor top covers should be in the standard position and only placed in the advanced position if you want to try to reduce the material on the cleaning shoe.

Separator Settings

The rotor gear should be on low speed.

Rotor speed - 500rpm - dry and brittle conditions

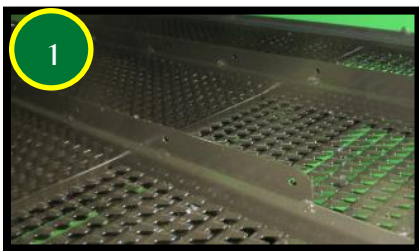
Concave clearance – 30mm - dry and easy threshing conditions

These settings are recommendations for a starting point and might need to be further optimized. Concave clearances of up to 40mm in easy threshing conditions are possible.

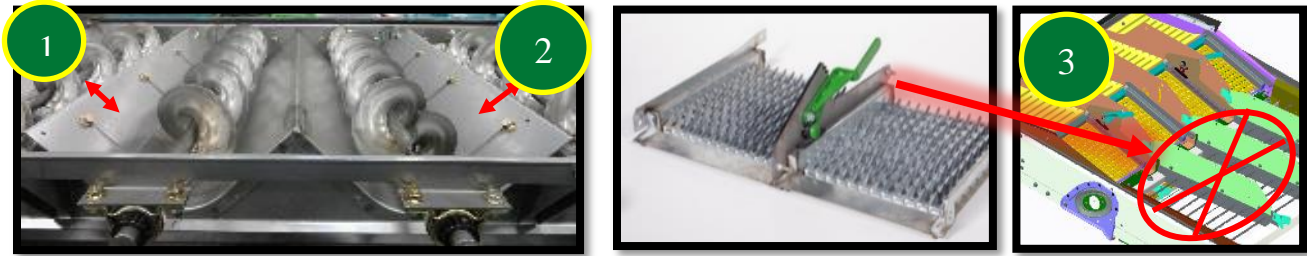


Cleaning Shoe Hardware

The general purpose chaffer #1 and general purpose sieve #3 are most commonly used. There is an option to install an HP chaffer #2 which can achieve a cleaner tank sample and reduced tailings load in cleaning shoe limiting conditions.



The auger bed dividers #1 should be adjusted, so that an even cleaning shoe distribution is reached. By pulling the sheets up, you can reduce the amount of material on the outside. It is also possible to install an adjustable front chaffer #2 which can avoid the accumulation of stems in the front chaffer in Rapeseed and sunflowers. But highly depends on the conditions if an advantage will be achieved. The front chaffer extension #3 which does not get delivered with ZX machines should not be installed for sunflowers.



Shoe Settings

Chaffer opening – 14mm – normal throughput

Chaffer opening should be 2mm higher if HP chaffer is installed

Chaffer extension – 0mm – in level and hilly conditions

Sieve opening – 5mm - normal throughput

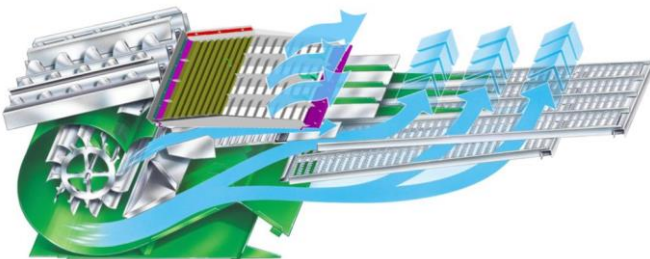
Sieve opening should be 1mm higher if HP chaffer is installed

Fan speed – 780rpm - normal throughput

Fan speed should be optimized for HP chaffer type, usually a higher fan speed is required

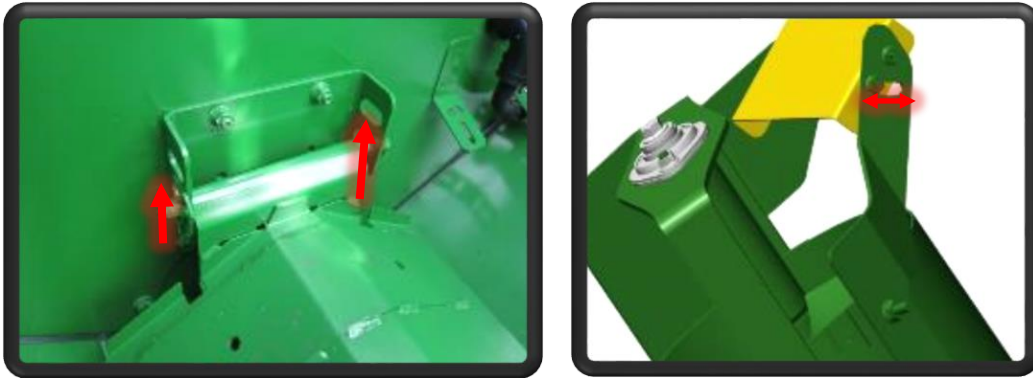
If equipped, the adjustable front chaffer should be set to 6mm.

The Active Terrain Adjustment system is very beneficial of operating even in slightly hilly conditions to get the best tank sample and manage the tailings volume.



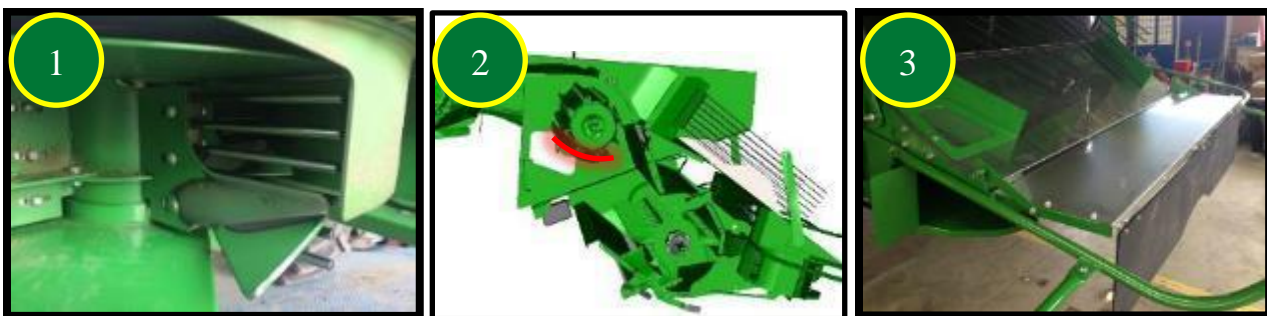
Grain Handling

The cross auger covers should be in the up position. The deflector at the grain tank filling auger can be adjusted to change the loading of the grain tank. The shown position would load the grain tank further to the right side.



Residue Hardware

The scoop paddles #1 should be installed on every second segment of the spreader disk of the APC tailboard. The cover under the Overshot beater #2 (if equipped) should not be installed since it can lead to wrapping in small grain. There is a speed bump #3 available for the premium configuration to improve the windrow shape and it helps the straw to dry out faster.

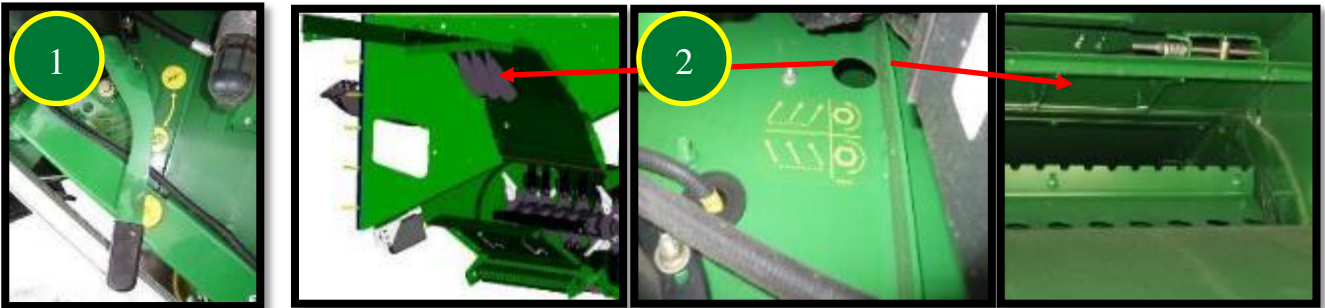


Residue Settings

The chopper speed #1 should be set to high. The counter knives #2 should only be engaged as much as needed to avoid unnecessary power consumption.



The cob deflector #1 should be in the up/small grain position. The vanes in the rear deflector or the chop to drop door #2 can be adjusted to further improve the residue distribution.



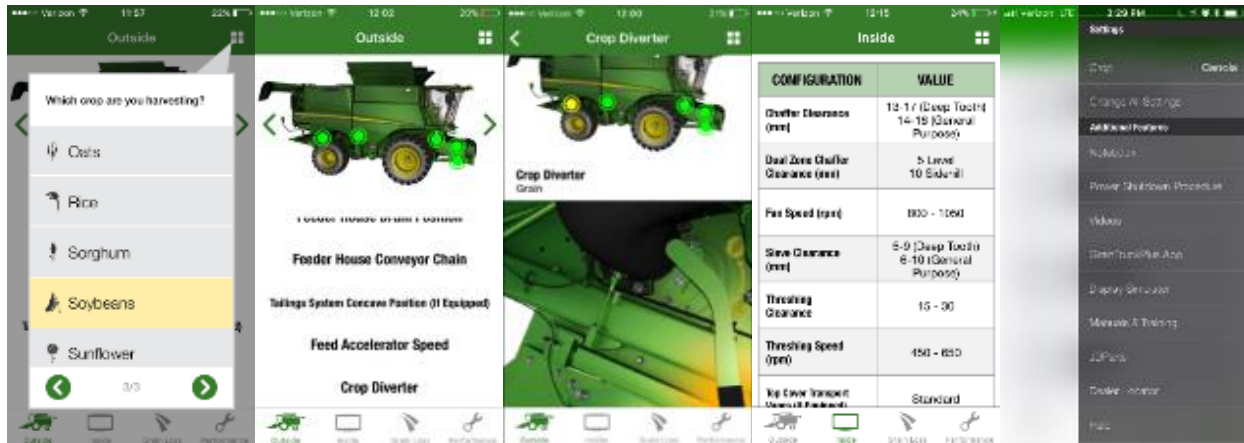
Tips & Tricks

- Understanding the source of losses is key for taking the right actions. Please ensure you know if you have pre-harvest, header, separator, cleaning shoe or leakage losses.
- Please make sure, that the distribution of the material on the cleaning shoe is even. This is very critical. Perform a power stop to evaluate this and use the auger bed dividers, separator covers and sectional concave covers for adjustments.
- If your combine is cleaning shoe limited and you would like to improve the tank sample while not increasing the losses or overloading the tailings system, you should try to change the settings of the combine to that less material goes to the cleaning shoe e.g. reduce FAST speed, reduce rotor speed, open concave further, install separator blanks. In conjunction with that you should also try to make sure that the distribution on the cleaning shoe is fairly even.
- Make small increment setting changes on the sieve, chaffer and fan to get to your optimal setting.
- Crop and field conditions have a huge impact on optimal settings and machine productivity. Make sure you evaluate those in detail before you start harvesting. In dry conditions it is especially important to cut as high as possible if you don't use a stripper header to reduce the amount of straw getting into the machine.
- Try to maintain an even crop flow and machine fill while operating. This will help cleaning shoe and total machine performance since you optimized your settings for that throughput.
- In cab values are only as accurate as the system is calibrated. Please frequently double check that those match the hardware settings.



Tools & Links

Download the GoHarvest App for addition information on, settings, loss calculator, JDParts, videos, procedures and much more.



Visit the Go Harvest link on YouTube for detailed videos on Powershut down procedure, CombineAdvisor, ActiveTerrain Adjustment, and many more.



<https://www.youtube.com/watch?v=3KR77OTdNku&list=PL1KGsSJ4CWk7jzH744F1bByhwXWAlxmFj>

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