S700 SERIES



Quick Start Harvest Guide

FAROL

Contents

Quick Start Videos	03
Combine Checklist	04-06
Header Guide	07-10
Technology Guide	11
Command Pro	12
Corner Post Display	13
Hillmaster	14
Harvest Set Up	15-16
Autotrac	17-18
AutoMaintain	19
Auto Swap	20
Combine Advisor	21-35
Active Yield	36-37
Machine Sync	38
Performance Principles	39
MyOperations App	40-41
JDLink	47
Go Harvest Mobile	_ד 43-45
Offsets	رج-رج 4 ۴
Cleaning Guide	40 47-48
Cleaning Guide	47-48







Quick Start Videos

For quick start videos, scan the QR code below, or go to https://www.youtube.com/playlist?list=PLtzw5x6F2At4s6BTkGJxLDzPSuNahV27J https://www.youtube.com/playlist?list=PLtzw5x6F2At4NcrMOK4giolBKb39bqLOX

iPhone users – Just hold your camera up to it and click the link Android users – Hold your camera up to it and select the barcode option





Machine Videos

Header Videos

My Operations App



With the John Deere My Operations app it allows quick and easy access to machine location, harvest settings, remote display access and with a connect subscription can quickly provide yield, moisture and speed maps. This will bring up fields and machines with quick access via the search facilities.

Download in the app store – *John Deere My Operations*





Combine Checklist

With any new machine, chains and belts can take a few days to bed in, so please keep an eye on all chains and belts, and adjust if necessary. There are a few pointers below to keep on top of ensuring the best experience with your new machine.

Feeder House



Feeder House elevator chains, it's perfectly normal for the feeder house chain to work loose after some initial work of the machine, but it's important to keep this adjusted correctly, we are looking to have the first elevator slat in the fully forward positon, as per the slat on the left hand side of the photo, we then want to count this as slat no.1 and count back to the 4th slat on that side, should just be touching the bottom of the feeder house, please adjust accordingly

Returns and clean grain elevators

Grain elevator chains will stretch as they bed in and it's important to keep these correctly tensioned, for chain life and grain quality. It is a very quick and easy check, if you open up the covers to access the chain, you will be looking to be able to have some side to side movement on the lower sprocket. If you have some slack in the chain and can feel a gap this is too much slack, if you can't move the chain side to side on the sprocket this is too tight. *Check these are closed and secured after winter storage, S- Series machines also have an extra inspection cover on the active returns.(please see lower picture)*



General Chain and belt tension



Operator Tip: NEW machines, pay attention to unloading auger chain and chopper belt tension

John Deere combines all have a series of belt and chain tensioner alignment tools; it's a very quick and easy visual check. It's very important to have belts and chains tensioned correctly to prevent slippage and achieve the maximum life out of the components. If you make sure the indicator is in line with the washer on the spring, that is perfect, if not please adjust as necessary

Greasing – please follow the grease charts on the machine, Hillmaster machines need the **Pivots greasing daily !!**

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Grain Tank Drain Covers



Before going in to crop please ensure that all the grain tank drain covers have been put back in the work position. There are two covers either side of the unloading auger drive as per picture on the left. There are also two covers on the opposite side as per picture on the right.







To aid the cleaning process on the combine there is the facility to open up the front of grain conveyor augers, please check this is closed before harvesting.

S - series design on the left with a handle T - series design on the right with 2 wing nuts securing.



Header

With John Deere headers, there are a few basic settings we recommend as shown on the right; sometimes you may need to come away from these

- Rape seed raise the auger from the standard position if you find crop stalling in the centre of the header, make the auger finger timing more aggressive if you are still struggling.
- Linseed if you are experiencing wrapping around the feed auger, remove all retractable fingers except one in the centre.

Operator tip: Incorrect finger timing adjustment can cause premature wear





With the spare knife on the X- headers it comes standard with a knife head only, if you have a spare knife or replace it please note how the spare knife is supported in the picture on the left, if the knife goes in further than this the extending part of the platform can foul it. The spare knife is normally a fine tooth Knife.

After the first few hours of use please check the bolts for the auger finger timing, also after adjusting the auger finger timing please check that these bolts are tight. If they work loose it can cause potential for the auger fingers to contact the bed of the header. Please see pictures of the 2 different designs







Combine Checklist

With any combine that has been cleaned, please be sure to check the following before going to work, as they will have been left open to clean it down correctly.

Returns and clean grain elevators

Check these are closed and secured after winter storage, S- Series machines also have an extra inspection cover on the active returns.



Grain Tank Drain Covers



Before going in to crop please ensure that all the grain tank drain covers have been put back in the work position. There are two covers either side of the unloading auger drive as per picture on the left. There are also two covers on the opposite side as per picture on the right.



Grain conveyor augers



To aid the cleaning process on the combine there is the facility to open the front of grain conveyor augers, please check this is closed before harvesting. S - series design on the left with a handle

T - series design on the right with 2 wing nuts securing.



700D Draper Platform

Settings and Adjustments Quick Reference Guide



In Cab Settings



FH Raise / Lower Speed

Controls the speed of the FH raise / lower

Lateral Tilt Speed

Controls the speed of the FH tilt

Height Sensitivity

Controls sensitivity to changes in terrain of header raise/lower in automatic mode

Tilt Sensitivity

Controls sensitivity to changes in terrain of the feeder house lateral tilt movements when in automatic sensing and automatic float modes.

Draper Belt Speed

Controls speed of the side belts

Float Position

Controls the pressure in the

cylinders for the gauge wheel float arms

Cutterbar Tilt

Angle of the cutter bar relative to Feeder House



Belt Speed

The side draper belt speed can be adjusted by pressing the Header Adjust switch pictured above twice. Then rolling the encoder dial to the desired speed. Once the desired speed is achieved, the belt will remain at your selected speed until adjusted again. Or you can use the touch screen. *Note: If underfeeding occurs slow down belt speed.*



Avoid One Sided feeding. If material comes from one side only there is a risk of the straw being thrown to the opposite side, and being drawn under the draper belt.

Important: This guide is to assist operators with correct setup and operation of the 700D Draper Platform. Always refer to your Operators Manual

700D Draper Platform

Settings and Adjustments Quick Reference Guide



Header Height Sensing



Ground Plane Cut Height Gauge Wheels Supporting Head

Header height sensing

- Gauge wheels are unlocked during calibration process
- Typical crops wheat, barley, oats, canola

HydraFloat – On Ground Control



Ground Plane Cut Height FH Supporting Head

> * The header height sensing value should be set lower for issues where cut height is not remaining level left to right. The steeper the side slope, the lower this value should be.

* Combines equipped with platform tilt should start with a header height sensing value of 5.

	Adjustment				
Condition	Sensitivity	Float Pressure	Center Tilt Cylinder		
Uneven cut height		Increase active header height sensitivity until system reacts accordingly			
Sensing does not react quick enough	Increase active header height sensitivity until system reacts accordingly				
ContourMaster [*] "hunts/ unstable" while sensing		Increase active header height sensitivity until system reacts accordingly			
Cutting too low, scooping rocks, damaging cutter bar			Retract tilt cylinder		

HydraFloat[™] – on ground control

 Gauge wheels are locked up during calibration process * The header height sensing value should be set lower for issues where cut height is not remaining level left to right. The steeper the side slope, the lower this value should be.
* Combines equipped with platform tilt should

- start with a header height sensing value of 5.
- Typical crops lentils, chick peas, canola

	HydraFloat ⁻ C	In the Ground Control				
	Adjustment					
Condition	Sensitivity	Float Pressure	Center Tilt Cylinder			
Bulldozing/pushing	Increase active header height sensitivity	Increase float pressure until bulldozing is eliminated	Retract center tilt cylinder			
Uneven cut height	Increase sensitivity if experiencing inconsistent cut height Decrease sensitivity for short waves in cut height	Equalize float system cylinders. See Adjustment section in Operator's Manual for more information				
Sensing does not react quick enough	Increase active header height sensitivity until system reacts accordingly	Decrease float pressure if missing crop Increase float pressure is also pushing dirt				
Cut height too low	A REAL PROPERTY AND A REAL	Increase float pressure	Retract tilt cylinder			
Cut height too high, missing crop	Increase sensitivity	Decrease float pressure	Extend tilt cylinder			

6-700X Extendable Auger Platform

Settings and Adjustments Quick Reference Guide



Basic Settings



Reel Position

Reel tube touching the heads and pushing crop over the cutter bar.

Reel Tines

Straight down

Reel Speed

Slightly above ground speed to push plants into platform.



Auger Position

Flights to Rear wall 50mm Flights to Trough 20mm Always try to keep auger down, only move up if bunching or stalling occurs.

Auger Strippers

Keep strippers as tight as possible to the auger flights. 3-5mm is recommended.

Auger Fingers

In normal conditions auger fingers are in most extended position when pointing straight forward (3 o'clock).



Cutter Bar Position

Chose Cutterbar position according to plant height. Plant Height – Cut height = Cutter bar position

Or use Wizard in Display



Adjustments



In Short Crops do not retract the Cutter bar shorter than 450mm. Also extend the table first completely and then retract it. Doing this the sealing bridge will be moved all the way forward. This will allow you to have the Reel in a better position to sweep the Cutterbar and move material to the Auger

Move the Reel to the rear positon on the Reel arms if more active feeding of the Reel is needed

IMPORTANT: This guide is to assist operators with correct setup and operation of 600X extendable Auger Platform.

Always refer to your Operator's Manual for questions

6-700X Extendable Auger Platform

Settings and Adjustments Quick Reference Guide



Material stalling in the sides Auxiliary Reel Tines BXE11039



Long Rye or Barley bunching on Crop Divider Additional long deflector BXE11102



Crop accumulating between knife and auger Keep table extended at 500mm setting. Move reel to rear position at the reel sleds. This allows the reel to operate closer to cutterbar



Reel is not level Rephase Reel by lowering it completely. Table must be in rear position, reel fully extended. Bleeding is not required. High Yielding Crop and unhetereogenous conditions Auger Speed up



Increased speed is not recommended in all conditions

Rape seed stalling in center of header

Adjust finger timing to 4:00 Raise Auger Remove Speedflights Use larger reverse flights for 635X and 640X HXE108653 and HXE108654 For S-Series: change finger configuration to T670 configuration



Check Knife and Guard wear regular



IMPORTANT: This guide is to assist operators with correct setup and operation of 600X extendable Auger Platform.

Always refer to your Operator`s Manual for questions





700FD/RDF Header Attachment – Harvesting

Ensuring Auto Control, is switched to default. This will then work in conjunction with the resume buttons on the command pro hydro – handle



- 1. Out of work *height position*
- 2. Typical work height position

3. Hybrid Flex mode – *flex pressure*

Heights in each of these positions can be set using the header adjustment dial on the command arm,





to save a reel position, press and hold the relevant resume for 5 seconds to save.

Hydraflex – adjustment dial in resume 3 adjusts flex pressure

To maximize the draper performance when harvesting crops close to the ground, operate HydraFlex[™] with pressure in the following recommended ranges:

- 7550 kPa (75 bar) (1100 psi) for firm ground conditions.
- 9000 kPa (90 bar) (1300 psi) for normal ground conditions.
- 11 030 kPa (110 bar) (1600 psi) for soft ground conditions.

Firmer settings place more force on the ground. With more force, the header carries more weight, *which improves terrain-following performance*.

Soft settings place less force on the ground. With lower force, the combine carries more weight, *reducing the overall pressure on the soil*.

Increasing pressure will reduce bulldozing in flex mode

⊿ Header 🚯 🕄)		×	Setting Draper Belt Speed Indications of incorrect belt speeds:
Draper Header Type		₽⊿ 224.5 h	40.5 ft	Indications that the belt speeds are too slow:
Raise / Lower Speed	Tilt Speed	Height Sensitivity	Tilt Sensitivity	 Heavy loading of the side belts Heavy loading of material along the sides of the centre belt Excessive plugging of the feed drum and/or feeder house
Auto Control	Belt Speed	Draper Float Pos. ↓ 26	Cutterbar Tilt	 Crops pulled under the draper by the side draper belts Indications that the belt speeds are too fast Crops feeding under opposing side draper belt Crops being pushed across the centre belt Faster belt speeds are typically required in tough crop



<u>Draper Half Speed</u> *This is used to prevent underfeeding:*

- When it should be used:
- More loading on one side of the header picture attached
- Header half widths, thin crop patches in field

Draper half speed can be programmed on the Command Pro Hydro Handle:

Factory Preset on Button A



Front-to-Back (Fore/Aft) Leveling with Hydraulic Fore/Aft Feeder House

Tilt Feeder House Fore:

- Picking up downed crop.
- Cutting closer to the ground.

Tilt Feeder House Aft:

- Material is being pushed by the cutter bar. Move aft to reduce lost material.
- For standing crop, tilting aft can optimize feeding/conveying material into the machine.



<u>Side belt tension (each side)</u> Ensure Tension Indicator, is at the centre of Tension Gauge.

If necessary adjust

Tighten tension nut, and use tension indicator to reference the amount of the belt tension applied. Indicator should be at the centre of the tension gauge.

<u>Centre belt tension</u> Ensure The Head of the bolt is flush with the chassis of the header

If necessary adjust

Tighten (clockwise) to apply more tension, slacken (counter clockwise) to release tension





Top Auger Speed Differential Top Auger Speed is adjustable, this can be sped up or slowed down 1:1 to belt speed is the preset

If necessary adjust Release locking wheel and screw in or out to adjust speed,

Scroll wheel

OSR Sealing Kit Fitted to help prevent header loss in OSR

If necessary remove If the header starts under feeding (leaving cut crop either side of the centre belt) If the header starts plugging from underfeeding





<u>Centre Pan – Clean out</u> Recommended to be cleaned out between crops, dirty conditions, post harvest





HDX Header Attachment – Harvesting



Ensuring Auto Control, is switched to default. This will then work in conjunction with the resume buttons on the command pro hydro – handle



- 1. Out of work
- 2. Typical work
- 3. Lower cutting/flat crop

Heights in each of these positions can be set using the header adjustment dial on the command arm



to save a reel position, press and hold the relevant resume for 5 seconds to save.

Ground Conditions can also be changed accordingly – using the Ground tab

- Very Firm (increased downforce with more flexibility)
- Firm
- Typical
- Soft
- Very Soft (decreased downforce with less flexibility)

Each condition places more or less force on the ground. Firmer settings place more force on the ground. With more force, the suspension becomes more free, *which improves terrain-following performance*. Soft settings place less force on the ground. With lower force, suspension becomes stiffer, which reduces terrain-following performance, *reducing the overall pressure on the soil*.

When the header is loaded on the trailer, with driveshafts and multi-coupler removed. Attach the header to the combine. *Push in the left-hand and righthand wing manual override valves (B) and turn clockwise to lock the wings*, ensure the tap (C) is in the unlocked position. Attach the multi-coupler and driveshafts. Remove Header latching pins.



Setting Draper Belt Speed

Indications of incorrect belt speeds: Indications that the belt speeds are too slow:

- Heavy loading of the side belts
- Heavy loading of material along the sides of the center belt
- Excessive plugging of the feed drum and/or feeder house
- Crops pulled under the draper by the side draper belts
 Indications that the belt speeds are too fast:
- Crops feeding under opposing side draper belt
- Crops being pushed across the centre belt

Faster belt speeds are typically required in tough crop conditions. Available Belt Speed: 5–100 –

Recommended start point of 75%

Hinged Draper Header Type		224.5 h	40.5 ft
Raise / Lower Speed	Tilt Speed	Height Sensitivity	Tilt Sensitivity
24	eesha */- 20 -	↑⊿] 74]	аны 30
Auto Control	Belt Speed	Ground	Gauge Wheels
	W7 🌡	\$₽	

Front-to-Back (Fore/Aft) Leveling with Hydraulic Fore/Aft Feeder House

If the hinged draper is used with a combine that has a hydraulic fore/aft tilt feeder house, run the tilt angle at -1° or -2° tilt for best results in most field conditions. If the ground performance is questionable, the draper can be tilted forward or rearward as needed.



Side belt tension

Ensure Tension Indicator (B) is at the centre of Tension Gauge (C)

If necessary adjust

Tighten tension nut (A) and use tension indicator (B) to reference the amount of the belt tension applied. Indicator should be at the centre of the tension gauge (C)

<u>Centre belt tension</u> Ensure Tension Indicator (C) is in line with the tension washer (B)

If necessary adjust

Adjust tension nuts (A) to align washer (B) with the tension gauge (C)





<u>Draper Half Speed</u> This is used to prevent underfeeding: When it should be used:

- More loading on one side of the header picture attached
- Header half widths, thin crop patches in field

Draper half speed can be programmed on the Command Pro Hydro Handle:

- Factory Preset on Button A



HDX Header Removal - Transport Header Transport Position

Make Sure very firm ground conditions are selected then, Press and Hold, the header transport button to activate transport position

When the header is in the transport position it will display accordingly, check reel is lowered and back, gauge wheels are raised and header is level when lifted off the ground (not hinged)



Not In Transport Position



Moving To Transport Position

1 In Transport Position

When the header is loaded on the trailer, with driveshafts and multicoupler removed. *Push in the lefthand and right-hand wing manual override valves (B) and turn counterclockwise to unlock the wings*, ensure the tap (C) is in the unlocked position. Engage header latch pins to

S700 Technology Guide

The Automated Combine



10

NOTHING RUNS LIKE A DEERE

COMMAND PRO hydro handle





Display quick keys

Programmable buttons

CORNER POST DISPLAY









<u>Hillmaster</u>

The hillmaster system has 2 positions road mode and field mode.

Engage field mode – press the button on the right-hand side so the light is illuminated, and release the hand brake. Now manually lean the machine all the way over to one side using either the left hand or right hand tilt buttons, release the manual tilt button. The machine will now level itself to the field position.



Operator tip – ensure hillmaster is in field position whilst harvesting, every time the ignition is cycled, the hillmaster light will automatically switch off, remember to engage whilst harvesting.

Engage Road Mode – Press and hold the button on the right-hand side until it flashes, release the handbrake.

Now manually lean the machine all the way to the left, once it is all the way down on the left, lean it all the way to the right. The machine should now be in the lower position for transport.

Operator tip – ensure hillmaster is in field mode before attaching/removing header.

Hillmaster machines need the Pivots greasing daily!! failure to do so can cause premature wear and uneven stable height.

Video link below

https://www.youtube.com/watch?v=hy2bQufDfSU





Harvest Set Up Work Set Up



Location		Work Summary
South 40 Deere Simulator Equipment	Type Crop Variety	Harvesting Wheat (White)
	Harvest Units	Bushel (bu)



Operator Tip: Field names need to be set for yield documentation, remember to change the field name as you change field







Calibrating the loss sensor

Default Preset	Normal Threshing	gCondition	Normal Cob Condition	
Loss Monitor Performance Target	Threshing Clea	Current Se arance	ettings Threshing	Speed
© 35	Cleaning Fan	3 + Chaffer Cle	earance Sieve	400 + • Clearance
	n/min +	_/////_	+ ///	r (+
Set to Current	×	Outside Con	figuration	



Optimise the combine until you find an acceptable loss level the press "set to current" which will set the current loss level to within the green bars.

Pressing the grain loss set to current button will not have an impact on HarvestSmart or AutoMaintain.

It will only move the current loss level to the center of the green zone.

Pressing the set performance target will calibrate grain loss indicator on the PDU together with all other targets, as soon as the performance target is valid. (See "Set Performance Target")









On-Board Systems 4640 AutoTrac - Setup

















On-Board Systems 4640 AutoTrac - Engage

















Harvest Set Up

Create a custom preset for best AutoMaintain performance

AutoMaintain[™] optimises based on the default preset if no custom preset is saved. For best AutoMaintain[™] performance, it is important that the preset fits the individual conditions. How to create a custom preset Go to Harvest Settings: Enter the harvest setting that fits best for your region or use ICA to optimize.



Harvest Settings



After the custom preset has been made, press the bar in the top of the harvest settings page. Click on "save preset"

Propert	Se	Settings Preview		
rieset	Curr	ent	New	
Custom Name 1	*Q mm	4		
	ô n/min	400		
Threshing Conditions	n/min	1000		
Normal		1000		
Cab Conditions		18		
con conditions	• //// • mm	12		
	_			
+ Save Preset	X Canco		/ ок	
)		





Residue Management Auto Swap Residue

Residu	ie Mode	Spreade	r
Chop Windrow	Door Closed	Width	Speed n/min
Chopper Low Knife	r Position vered : Bank	///	500
Separa	80% +	Direction	n Swap
) Standard		A	

- 1. Open Menu.
- 2. Select Machine Settings tab.
- 3. Open Residue Management.
- 4. Select to enable or disable Auto Swap.

NOTE: If Auto Swap is disabled, you must manually swap the spread direction. Auto Swap ON/OFF

5. Select to adjust the direction left or right.



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Combine Advisor Main Page



Access camera pages

Automation System States





Combine Advisor Functionality



ICA helps to optimise the combine

Harvest Smart controls the ground speed based on rotor target pressure to keep a constant feedrate.

Active terrain adjust controls based on pitch angle.

- Cleaning fan speed
- Chaffer opening
- Sieve opening

AutoMaintain[™] controls based on camera images and grain loss sensor

- Threshing speed
- Concave clearance
- Cleaning Fan speed
- Chaffer opening
- Sieve opening







Combine Advisor Harvest Priorities



Harvest Priorities are taken into account for AutoMaintain[™]. Harvest Priorities mean: What is generally most important? Grain Loss Broken grain Foreign Material (MOG) Straw Quality Change the order by moving the criteria up or down in the list <u>Harvest priorities are crop specific.</u> They can be set differently for each crop.

Operator Tip: Certain secondary priorities will increase performance of the machine. Don't be afraid to play with these settings.







Combine Advisor

ICA – Interactive Combine Adjust

Helps to Optimize

Helps to optimise machine and reach performance target.

Performance target is set when ICA optimisation cycle is finished

Out of cab settings changes can be recommended

Supports all crops

Operator input required

Operator needs to evaluate the impact of adjustment made to the combine

Helps to maintain performance

Maintains combine at a set performance target Cannot be active when ICA is active

Out of cab settings are not part of AutoMaintain Supports Maize, Soybeans, Barley, Wheat, OSR



Optimize Performance ()	0					×
Performance Issues			Cu	rrent Sett	ings	-
O, Separator Losses		*0	0	O.	. 1111.	-1000-
	0	3	400	1000	18	12
		-		Solution	V	
#v Unthreshed Losses	0	F.	4	scommen	ded)	1
🚱 Broken Grain		-				-
Material			Incre	ase Fan	Speed	
Nu Heavy Foreign Material	0		(- 40	50	
() Unthreshed Material	0			North C		
Straw Quality	0					
S. Excess Tailings	0	and the second				





Combine Advisor AutoMaintain Performance Target

Press "Set Performance Target" when you are satisfied with combine performance.

The following message will appear.

If yes click OK, the performance target is set. If no click Cancel and optimise combine to desired performance.

Optimise on your own or use ICA

When conditions change throughout the day you can adjust the settings without changing the performance target

Up to 5 targets can be saved (one for each crop type)

Target expires after 30 days.

Operator gets a warning when targets is older than 12 days Setting the performance target defines the level of all parameters that AutoMaintain[™] takes into account.

Setting performance target also

- calibrates loss sensors
- Sets HarvestSmart rotor target pressure and starts Rotor pressure calibration cycle

The operator is responsible for choosing the right performance target. For example, do not set the target for a very clean grain tank if this cleanliness is not needed

What parameter affects the performance target?

Losses

- Separator loss
- Shoe loss

Grain quality

- Broken grain
- Amount of Chaff in grain
- Amount of Cob or straw in grain
- Unthreshed grain

Tailings system

Harvest Smart rotor pressure (ProDrive machines only)







When you set a new performance target the system will maintain it. If a poor target (a machine not optimised to customers expectation) is set, AutoMaintain will maintain a poor target.





Combine Advisor AutoMaintain Sensitivity



A setting in blue indicates that this setting was made automatically. The Blue Circle indicates an adjustment is being made

Сгор Туре	Respo	nse Aggressiveness
Corn	Default	1 1 1 1
Instructions		
At high response aggressiveness, ICA2 follows the performance target more closely and will make adjustments	Is	ssue Sensitivity Grain Loss
	Maximum	
sooner.	0	Broken Grain
Settings are saved and recalled with crop type.	Lowered	
	Fo	oreign Material
	Increased	

The AutoMaintain[™] sensitivity is crop specific

Response Aggressiveness: Response time, How much time does it take to trigger a reaction after a problem is detected

Issue sensitivity: How severe does the problem need to be to trigger a reaction







Combine Advisor Grain Camera

Press the camera symbol on the ICA2 main page or run page module to access the camera page. You can choose to view

- Grain camera
- Tailings camera
- Both









Grain Analysis View ON/OFF - which will toggle the colour overlays of the video stream to allow them to see how the machine is analysing the grain images.

The grain view analysis shows the different quality parameters marked with the respective colours.

- Broken Kernel Amber
- Unthreshed Kernel Purple
- Light Material Turquoise
- Heavy material Yellow





Combine Advisor Performance History



The performance graphs are available for the loss performance and the grain quality performance.

Tap on either of them to open a more detailed view

The performance graph show relative performance compared to the average performance.





The adjustment history shows the adjustments that were made to the combine in their chronological order.

ATA adjustment are always on the top.

Click on the adjustment to get more details or to undo the adjustment







Short-term adjustment in progress

Combine Advisor Adjustment History

The adjustment history shows the adjustments that were made to the combine in their chronological order. ATA adjustment are always on the top.

Click on the adjustment to get more details or to undo the adjustment

	History (i)		
	Per	rformance Adjustmen	ts
	Setting Adjustment	Reason	Timestamp
	©∲ 0 - <i>1111</i> -1	Foreign Material Light	In Progress
	Official +50 n/min	Foreign Material Light	0 min ago
hort-term adjustment –	©≇ +100	Foreign Material Light	5 mins ago
	بر +50 n/min	Foreign Material Light	5 mins ago

The last adjustment

- can be undone, if AutoMaintain[™] is still evaluating whether or not the adjustment resolved the issues that were detected
- cannot be undone if AutoMaintain™ Concludes the adjustment resolved the issues that were detected

Previous adjustments cannot be undone

Auto N	laintain adjustment in	progress
≫ +50 n/min	0	Revert Adjustment
Before	After	r Undo
10 n/min	50 n/min	
Reason		Grain Camera
ain Quality reign Material Light		🗭 Live Camera

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Combine Advisor AutoMaintain Optimisation Guide

- ICA will prompt the operator to make adjustments based on performance targets and harvest priorities.
- AutoMaintain will make the changes automatically for the operator based on performance targets and harvest priorities.
- If a poor performance target is set AutoMaintain will maintain poor performance!
- Set new targets for different crops and at least once during the harvest season.
- Losses of 1% or less are acceptable, a combine with 0% losses is not operating to its full potential learn to accept some losses.
- Grain quality camera lenses must be cleaned at least once per day more often in dusty or damp conditions.
- Harvest priorities can be edited in the ICA menu, the operator can choose what priorities are most important to suit their individual needs.
- Combine performance is directly related to operator input if AutoMaintain issue sensitivity is set to maximum on each issue, the combine will constantly fight itself to try to maintain acceptable performance, which will actually cause adverse effects. Be mindful when setting sensitivity.







Combine Advisor AutoMaintain Optimisation Guide

Auto Maintain has been tuned to perform very well in most field conditions. However, if the operator is unhappy with the performance in specific field conditions, we have provided Advanced Settings to allow the operator to fine tune their system.

Potential Problems What to adjust for each potential problem

- Adjustments are made too often Decrease the Response Aggressiveness
- Adjustments are not made often enough increase the Response Aggressiveness
- Adjustments are made for Grain Loss when no issue exists Decrease the Grain Loss Sensitivity
- Adjustments are not being made for Grain Loss when an issue exists Increase the Grain Loss Sensitivity
- Adjustments are made for Broken Grain when no issue exists Decrease the Broken Grain Sensitivity
- Adjustments are not being made for Broken Grain when an issue exists Increase the Broken Grain Sensitivity
- Adjustments are made for Foreign Material when no issue exists Decrease the Foreign Material Sensitivity
- Adjustments are not being made for Foreign Material when an issue exists Increase the Foreign Material Sensitivity
- Multiple problems are present with Auto Maintain Re-optimize the machine and re-set Targets.

Step-by-step instructions to optimize

1. Modifying Aggressiveness or Sensitivity

a.Identify recommended solution for the problem that the user is experiencing (increase Broken Grain Sensitivity, decrease Response Aggressiveness, etc.).

b. Increase/Decrease the recommended slider by 1 notch.

- c. Continue harvesting for 30 minutes.
- d. Determine if the problem is resolved.
- e. If the problem is not resolved, repeat steps ii through iv up to 2 times.
- f. If the problem persists, follow the steps for Setting Targets below.
- 2.Setting Targets

a.Optimize the machine (using ICA or Operator knowledge).

b.Once the machine is performing to the operator's preferred levels, press the Set Performance Target within the Integrated Combine Adjustment 2 application.







Combine Advisor HarvestSmart



- 1. Engage HarvestSmart
- 2. Verify harvesting speed limit and engine Power target



Set this 1-2Km/hr faster than you would expect your harvesting speed to be

- 3. Verify that Master switch is ON
- 4. Start to harvest
- 5. Press button 2 on hydrohandle to start HarvestSmart calibration

Pro Drive range

- Set your ProDrive speed range to ~12 km/h. This will allow you enough reserves to speed up on the headland, and still gives you enough sensitivity to control the speed during Harvest.
- 2. Press set target when in homogeneous conditions and the machine is already filled with crop, at the desired speed and performance level.









Combine Advisor Harvest Smart

Unloading

HarvestSmart will maintain ground speed of combine when unloading auger is engaged. If engine is overloaded HarvestSmart will slow down, but will not speed up again. (MAINTAINING GROUND SPEED) When the unloading auger is shut off, HarvestSmart will change to active again and take control of the speed. (ACTIVE)

Move hydrohandle during unloading,

To deactivate HarvestSmart, and you will gain manual control of the speed. (*READY*) Press "2" or "3" to resume HarvestSmart. (*ACTIVE*) The hydrohandle position does not limit forward speed, no need to push it all the way forward.

To Disengage HarvestSmart

- Move hydrohandle
- Press service brakes (READY)



Headland turn

When approaching the headland, press "1" to raise the header. HarvestSmart will maintain the average harvesting speed. (*MAINTAINING GROUND SPEED*)

Move the hydrohandle or change speed range to gain manual control of the ground speed. (*READY*)

When approaching uncut crop press "2" or "3". The header will lower and the combine will slowly move to previously determined average harvesting speed. Move hydrohandle slightly back to gain manual control and press button 2 again when harvesting for 10 seconds. (ACTIVE)









Combine Advisor HarvestSmart Benefits and Limitation

HarvestSmart:

- keeps the crop flow through the machine at a constant level
- increases productivity and eases the strain on the operator

HarvestSmart performance may be reduced by the following:

- Steep slopes
- Down or tangled crop
- Wet and muddy ground conditions
- Quickly changing crop conditions

Best performance in

- Long fields
- Standing homogenous crop

For best performance set Engine Power target to:

- In consistent conditions 80% 90%
- In changing/ high biomass conditions 75% 85%
- Tough feeding conditions / Down crop 70% 80%

Draper Header can run 5% higher Engine Power target due to better Feeding Engine Power target above 95% is not recommended.

If engine power target is set too high in inhomogeneous conditions, the machine is overreacting, if set too low you will not reach the max capacity of the machine.

Aggressiveness = Acceleration rate Controls how fast the system reacts to changes in separator pressure. Aggressiveness can be set from 1 to 5. Aggressiveness is determined during calibration, adjustment should not be needed.

Higher aggressiveness = Less operator comfort but higher productivity

Lower aggressiveness = More operator comfort but lower productivity









Combine Advisor Harvest Smart Modes





Maximum Throughput

- Grain loss is not considered
- System maintains constant engine power
- Machine increases ground speed when engine load is lighter
- Decrease ground speed when engine load is heavier

Maximum Performance

- System maintains an engine power and grain loss while monitoring operator established parameters
- System increases or decreases the engine power target depending on the performance monitor. PDU bars will have to consistently be above/below operatordesired levels for a period before adjustment. The old system was overreactive. We are more sure of adjustments now.







Active Yield Operation

Mass Flow Vibration Calibration is recommended prior to Yield Calibration

For best accuracy mass flow calibration should be done every time the header is attached, especially after road transportation

The system starts taking data when the load cells indicate that grain is accumulating in the grain tank at 900kg. ActiveYield stops accepting measurements when the load cells indicate the grain weight at 3000kg.

Load will be saved as long as:

- Harvested crop is uniform to support constant flow during load collection
- Field terrain (roll and pitch) are within +/-4°
- No interruptions with grain flow during load collection (stoppingstarting, unloading, grain pile shift, disengaging separator).







Individual loads may be rejected by the system and will not be used because:

- Inconsistent Flow
 Grain tank fill that takes more than 400 sec. harvesting time to reach the 3000kg.(6600lb)
 grain tank sample limit. Example: Harvesting interrupted (stop-start, low yield crop)
- Uneven loading / Grain Tank sample shift detected Quick stop or start or rough terrain causing excessive grain pile shift in the grain tank.
- Pitch or roll too large of slope
 If Uphill/Downhill/Sidehill slope is more than +/- 4 degrees (+ /- 7%) during data
 collection, the load will be rejected. The pile of grain does not load evenly over the 3 load
 cells. Example: Grain tank loaded heavy to one side.

Collection interrupted

Combine stopped / slows down or unloading auger was engaged while weight collection was in progress. Example: Unloading on the go.







Active Yield Yield Correction

In case of a discrepancy between the measured yield and the actual yield, a yield correction percentage can be entered in the active yield screen

- Harvest at least 5 grain tanks with consistent moisture and consistently accepted loads
- 2. Note the yield the combine measured for these 5 loads
- Weigh these 5 loads and compare the actual weight to the measured weight.
- Calculate the difference between actual weight and measured weight and enter the yield correction.





Example 1

Measured weight 12,345kg Actual weight 11,500kg

(12345 - 115000) / 11500 = 0.074 x 100 = 7.4%

Yield correction = 7.4%

Operator Tip: Remember to set correction per crop



Example 2

Measured weight 10765kg Actual weight 11500kg

(10,765 - 11500) / 11500 = -0.064 ×100 = -6,4%

Yield correction = -6.4%





Machine Sync Machine Sync Operation

Requirements in Order to Operate

- 1. Machine Compatible with Machine Sync
- 2. Machine Sync activation must be present
- 3. MTG must be compatible
- 4. MTG must be connected by Ethernet
- 5. Machine sync must be on
- 6. Leader and Follower machines must be in communication
 - 1. Security certificate must be present
 - 2. Mobile to Machine must be on
 - 3. Machine Sync connection must be established
- 7. Shared Signal Must be on
- 8. Leader and follower must be ready to track
- 9. Follower Must Press Resume

Status	Machine Sync
Error MTG must be detected	ON OFF
Network	Follower Controls
Detecting equipment	p 🏚 Set Home Point
Map Preview	Nudging
eat (White)	
	4 +
10	-
	Nudge Increments
	1 224 db cm

Home Point

The home point is where the system guides the follower to unload product into the grain cart. Home Point is generated automatically based on header settings within machine profile application to prevent a collision between the tractor and combine.

To adjust the home point position press the "set home point" button.

Note: set home point button is only available when the follower is within the operational zone. The operational zone is marked on the map by a boundary









S – Series Performance Principles

Threshing

- Threshing is getting the grain out of the ear, please don't confuse with separation which is getting the grain out of the straw mat.
- Concave clearance is the main factor for more aggressive threshing, to tight on the concave clearance will compromise throughput and consume more horsepower.
- To optimise this setting, keep opening the concave clearance until you see un-threshed heads, then tighten the concave slightly.
- Heavier crops and easier threshing crops will require a wider setting.
- Light crops or hard threshing (Barley) will require a tighter setting.
- Standard rotor position (7 revolutions) will give more aggressive threshing than advanced (5 revolutions)

Separation

- Separation is getting the grain out of the straw mat, heavy grains and a light straw mat creates easy separation, light grains and a heavy/wet/green straw mat creates harder separation.
- As the concept of a rotary machine relies on centrifugal force to spin grain out of the straw mat work with the principle that higher rotor speed creates more separation, although to much rotor speed can comprise straw quality in brittle conditions.
- Once threshing clearance is set, start with a high rotor speed then work down until losses start to increase.
- To much rotor speed may overload the cleaning shoe, excessively damage straw and use excess power.
- Standard rotor position (7 revolutions) will give better separation than advanced (5 revolutions)

Cleaning Shoe

- Top Sieve what doesn't go through the top sieve will travel out the back of the combinecausing shoe loss – could be caused by excess wind speed or to little sieve opening. What does go through the top sieve will fall on to the bottom sieve
- **Bottom sieve** what doesn't go through bottom sieve will fall in to returns, what does go through the bottom sieve will go straight to tank, if sample is dirty consider closing the bottom sieve slightly.
- Wind speed to much wind speed will cause excessive shoe loss, to little will cause chaff overloading, if sample is dirty increase wind speed slightly.
- Setting up the cleaning shoe is finding a balance between all 3 settings; the combine will measure shoe loss and returns load to help you make cleaning shoe settings.
- If you find that the machine is becoming shoe limited before threshing or separation, it would be recommended to try the advanced rotor setting as this will reduce any over threshing/separation which may cause excess shoe load.

Please change one setting at a time as the machine will need approx. 20 metres for the new settings to start to show results.



MyOperations App Remote Display Access



Select your machine and select remote display access to see the display

Notifications

	MARKOMEARA2 C Wiltshire (BTMM)	Announcement	0	Allow Notifications
2	Settings	Diagnostic Trouble Codes	0000	Show In App
	Change Organization	File Management	0	HIGH
	Notification Preferences	Geofence and Curfew	00007	MEDIUM
	Operation Facts	Machine Maintenance	00000	INFORMATIONAL
	Customer Support	Organization Management	0	NONE
	FAQs	Terminal Management	0 0 0 0 >	Show in the notifications tab of this app.
	Submit Feedback			Alert
	Dealer Locator	-		IIGH
	Privacy & Legal			MEDIUM
	Analytics Opt-in			
	Data Privacy	-		
100	End Lloor Liconso			IN NUNE





MyOperations App Operation Overview







View your harvest data based on crop variety



Select your field to see your data.

Export your data via a PDF using your preferred method.



FAROL



JDLink Overview

JDLink[™] is John Deere's telematics system designed to take operations to the next level of productivity and efficiency. Use JDLink[™] to remotely locate your fleet, view machine information & diagnostics trouble codes (DTCs), or to get driving directions to a machine when a trip is needed. Leveraging the power of JDLink[™] enables data-based decisions that optimize productivity, increase uptime, and boost profits.







Ma	Feb 6, chine	enter Health	b 12, 2011 1
Summary			•
Measurement	Idle	Warking	Transport
Average Engine Load Factor	17.57	0.00	15.41
Average Engine Speed	889.96	0.00	1002.63
Average Ground Speed	0.01	0.00	1.26
Engine Fuel Utilization	0.00	0.00	0.00
Machine Utilization	0.00	0.00	0.00





Mobile App GoHarvest

The GoHarvest application gives S, W and T series combine operators the ability to optimize their 2012 or newer machine as they enter the harvest season. Operators choose the model of combine and type of crop. GoHarvest suggests initial settings for that crop type. GoHarvest also features a notes section and photo functionality to give combine operators a premium experience when setting their machine. Use the Seed Loss Calculator to calculate losses to optimize settings. GoHarvest is also a great guide to use in field for settings changes as conditions differ, and to document changes made to settings during harvest.



IEE 🗢	11:07 Calculator	⊕ 1 º ∩i ■
Instructions	Calculator	History
Units	US	Metric
Crop	3	Barley 4 seeds / g
Residue Disposal	\geq	Spread
Header Width (m)		9
Yield (f / ha)		6
Seed Count		18
Area	0.	3 x 0.3 m



ide
VALUE
13 - 18
Small Wire
5 Level 10 Sidehill
850 - 1100
6 - 9
5 - 22
700 - 950











Operator Tip: Returns to be set wide for rape seed.

Wheat

CONFIGURATION	VALUE
haffer Clearance mm)	13 ~ 18
oncave	Small Wire
ual Zone Chaffer learance (mm)	5 Level 10 Sidehill
fan Speed (rpm)	900 - 1250
eve Clearance (mm)	3 - 8
hreshing Clearance	8 - 16
hreshing Speed rpm)	750 - 950
op Cover Transport Janes (If Equipped)	Standard

Oats		
CONFIGURATION	VALUE	
Chaffer Clearance (mm)	18 - 22	
Concave	Small Wire	
Dual Zone Chaffer Clearance (mm)	5 Level 10 Sidehill	
Fan Speed (rpm)	750 - 900	
Sieve Clearance (mm)	6 - 10	
Threshing Clearance	15 - 25	
Threshing Speed (rpm)	600 - 900	
Top Cover Transport Vanes (If Equipped)	Standard	

CONFIGURATION	VALUE
Chaffer Clearance (mm)	10 - 14
Concave	Small Wire
Dual Zone Chaffer Clearance (mm)	5 Level 10 Sidehill
an Speed (rpm)	600 - 900
ieve Clearance (mm)	2 - 5
hreshing Clearance	15 - 40
hreshing Speed ①	350 - 550
op Cover Transport anes (If Equipped)	Standard

Outside

J

Spring Barley

CONFIGURATION	VALUE	
Chaffer Clearance (mm)	13 - 18	
Concave	Small Wire	
Dual Zone Chaffer Glearance (mm)	5 Level 10 Sidehill	
an Speed (rpm)	850 - 1100	
ieve Clearance (mm)	6 - 9	
areshing Clearance	5 - 22	
preshing Speed pm)	700 - 950	
op Cover Transport Janes (If Equipped)	Standard	

Beans

CONFIGURATION	VALUE		
Chaffer Clearance (mm)	13-17 (Deep Tooth) 14-18 (General Purpose)		
Concave	Round Bar		
Dual Zone Chaffer Clearance (mm)	5 Level 10 Sidehill		
Fan Speed (rpm)	800 - 1050		
Sieve Clearance (mm)	5-9 (Deep Tooth) 6-10 (General Purpose)		
Threshing Clearance	15 - 30		
Threshing Speed (rpm)	450 - 650		
Top Cover Transport Vanes (If Equipped)	Standard		



Je

De

1

Grain Loss

Section.









Feeder House Drum Position Down





Feed Accelerator Speed Low



Outside

Grain Loss



John Deere Combines/Header Offsets



Offsets Machine/Combine (m) HM =	W&T(5 walkers)	W&T (6 walkers) w/o	S -Serie 690
Hill Master	HM - w/ HM	HM - w/ HM	w/o HM - w/ HM
A = Lateral distance from center-line of Machine to GPS Receiver B= In-line	0,00	0,14 *	0,00
distance from non-steering axle to GPS receiver	1,95 - 1.97	1,95 - 1,97	2,20 - 2,22
C= In-line distance from non-steering axle to header attachment	2,04 - 2,05	2,04 - 2,05	2,60 - 2,61

Receiver/cab shift on left side like on picture



Offsets Implement/Header (m)	600 - Serie
A = In-line distance from connection point (header attachement) to rear of implement	0,00
B= In-line distance from front to rear of implement	1,18
A+B= Documentation location when in use	1,18
C= Lateral distance from connection point (header attachement) to control point of implement D= In-line	0,00
distance from connection point (header attachement) to control point of implement	0,00

NOTE: For 3-point mounted implements, dimension (D) does not need to be entered. NOTE: *Change Offsets* only accessible if Implement Model & Name completed

Important: all these dimensions may need to be adjusted for fine-tuning performance in the field.



John Deere S-Series Combines

Cleaning Guide

IMPORTANT: Regular and thorough cleaning of machine combined with other routine maintenance procedures listed in the Operator's Manual greatly reduce the risk of fire, chance of costly downtime, and improve machine performance.

Crop material and other debris can accumulate in various areas. Direction of wind, type of crop, and crop moisture content can all impact where and how much crop material and debris can accumulate. Be aware of harvest conditions and adjust your cleaning schedule to ensure proper machine function and to reduce the risk of fire. These areas may require more frequent cleaning, even multiple times per day,

NOTE: Some shields were removed for photo clarity.

Engine Compartment

- Top Area of Engine and Turbocharger(s) (1)
- Exhaust Manifold and Manifold Shield, Turbo Interstage Tube, Exhaust Gas Recirculation (EGR) Cooler Tube (2)
- Around Engine (3)
- Underneath Engine (4)

depending on harvest conditions. Inspect and clean these areas as needed throughout the harvest day.

Other areas not covered in this section may also collect crop debris and MUST be cleaned periodically for machine function and appearance.

Thoroughly inspect the entire machine on a regular basis throughout the harvest season. Refer to the Machine Cleanout Section of your Operator's Manual for further information.







READ SAFETY INFORMATION IN OPERATOR'S MANUAL

Always follow all safety procedures posted on the machine and in the Operator's Manual. Before carrying out any inspection or cleaning, always shut OFF engine, set parking brake and remove key.

Thoroughly clean machine from top to bottom with compressed air. First clean all

areas accessible from engine deck. Start with engine compartment and work outwards and counterclockwise to other areas around engine compartment, floor underneath engine, top rear of rotor and rear deck, including areas around Exhaust Aftertreatment Enclosure (if equipped). Once top areas of machine are clean, proceed to cleaning areas accessible from ground level.



From ground level, clean rear underside of fuel tank area and top of the rear tailboard of the residue disposal system. Exhaust Aftertreatment Enclosure area (if equipped) will also need to be cleaned from ground level. Once the cleaning from ground level is finished, recheck engine compartment for any crop debris that could have blown in from ground level cleaning.





Engine Compartment (cont)

- Top rear of rotor and areas around rotor drive (5)
- Main Engine Gearcase (6)
- Areas around and under Exhaust Aftertreatment Enclosure (7)
- On Top of Fuel Tank (8)















Ground Accessible

- Rear Tailboard and underneath Fuel Tank (9)
- Left Side Walk Area (10)
- Left Side Sidesheet Areas (11)





