## 8/9000 SERIES



# Quick Start Harvest Guide







#### Quick Start Videos

**For quick start videos, scan the QR code below, or go to -**<u>https://www.youtube.com/playlist?list=PLtzw5x6F2At7hjndyghYAxsjAcRcM4BAZ</u>

<u>I-Phone users – Just hold your camera up to it and click the link</u> Android users – Hold your camera up to it and select the barcode option







Command Arm

Machine Settings

Kemper 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





## Forage Harvester Home Page

Left Side List Boxes

They will remain on the left side of the screen when navigating to other pages





### Cab Controls & User Interface Configurable Controls







Header

Fixed or Automatic Auger Speed (in base) and Tines

Speed (Dual Drive) Auger Speed depending on LOC - Tines Speed depending on Ground speed

Auto Header Speed in WCS with Corn Header : No differentiation yet in the software between a Corn header used for Corn and a Corn head used for WCS. For WCS, customers have to use manual speed setting, as the Auto mode is made only for Corn harvest at that time.



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## Cab Controls and User Interface Header Height Control

• Kemper Grass Pickup



• Kemper Corn Header



X : Possible Selection

#### • Direct Cut Header (Zürn)



- CH Switch ON
- Auto Centering: Button 1 & PU above HRH
- Tilt Float Mode: PU below HRH (manual or Button 2/3)

Important: 🛛 🚕 🛛 🚑

- CH Switch ON
- Auto Centering: Button 1
- Tilt Float Mode: Wi



- CH Switch On
- Auto Centering: Button 1
- Tilt Float Mode:

:	Fixed Height 🛛 📕 🖊	Tilt Float Mode active
	Header Float 🛛 📕 🖊	Tilt Float Mode active
	Manual raise / lower / tilt header	Tilt Float Mode becomes inactive



## **Cutting Unit**





Knives grinding



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Kni

Please

finishing

Grind

Finish

Shearbar adjustment Regular process - 45sec



adjustment

uwant to use

Shearbar away (Stop automatical adjustment) Longer shearbar adjustment process

Knife Sharpening/Shearbar adjustment	Knife Sharpening/Shearbar a
lease chose your desired number of grinding and nishing cycles;	Please select which sharpening mode yo
Grinding cycles Grinding cycles Carinding cycles Carinding cycles Left 100 Carinding	\$\frac{1}{27} +
5 27	E A7
1/4	2/4

Important : With a KP installed, always engage first the CH forward for a few seconds, before to start knife sharpening and/or shearbar adjustment, to prevent KP belt slippage.

2.0 - KP Processing Gap mm

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Higher is the number, more sensitive is the sensor.

Metal / Stone detectors can be enabled - disabled (see next page)

## **Cutting Unit**



Operator Tip: Reset counter when stone replaced

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- Desites

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## **Additive Dosing System**





Spout





Recording Sources :

## Cab Controls & User Interface **Statistics**





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#### Engine Speed Limits + ESM (ProDrive) :



Headland 🔷 🔷		Economy 🔶	
Mode		Function	
Manual mode	- Manual control of engine speed		
Headland mode	<ul> <li>Engine speed reduction on headland and in standing still</li> <li>Engine speed increase when feed rolls are engaged</li> <li>Harvesting engine speed is user defined or pre-selected</li> <li>High idle when harvesting and spout in rear position*</li> </ul>		
Economy mode	= Headland mode + Eng controlled depending or	gine speed and ground speed are auton n engine load	natically
	Use safety road mode button to switch between road mode and field mode. The engine speed limits for road mode and for field mode can be adjusted independently		

## Cab Controls & User Interface Vehicle Settings

Greasing / Wipers / Mass Flow / Calibrations:







#### On-Board Systems 4640 AutoTrac - Setup















#### On-Board Systems 4640 AutoTrac - Engage















#### 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

S	tatus	Ma	chine Sync		
O HTG must be detected		ON	OFF		
Ne	etwork	Follo	wer Controls		
Detectin	g equipment	P. P.	Set Home Po	sint C	00
Mame Security Man Proving			Judging	-	
at (White)					
0		4		•	
		Nudge	e Increment	s	
		A	ala		

#### 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







#### SPFH Blade Config's



Curved Blade – B – Maize knife Straight Blade – A – Grass Knife Maize knives are hardened and not to be used in grass – foreign objects could cause blade failure Grass Knives – can be used in maize but will impact chop quality due to – blade sharpness, and cutting edge clearance to shear bar

## Length Of Cut

		1170 rpm Cutterhead Speed	1350 rpm Cutterhead Speed
Cutterhead Knife Configuration	Nb of Knives	Length-of-cut	
Full set of cutterhead knives	64 knives	3—16 mm (0.12—0.63 in)	3—14 mm (0.12—0.56 in)
	56 knives	4—18 mm (0.15—0.71 in)	4—16 mm (0.15—0.63 in)
	48 knives	6—21 mm (0.24—0.83 in)	
	40 knives	7—25 mm (0.28—0.98 in)	
3/4 a set of cutterhead knives	48 knives	4—24 mm (0.15—0.94 in)	4—21 mm (0.15—0.83 in)
	42 knives	6-27 mm (0.24-1.06 in)	6—24 mm (0.24—0.94 in)
	36 knives	9—32 mm (0.35—1.26 in)	
	30 knives	10-37 mm (0.39-1.47 in)	
Half a set of cutterhead knives	32 knives	6-32 mm (0.24-1.26 in)	6—28 mm (0.24—1.10 in)
	28 knives	8-36 mm (0.30-1.41 in)	8—32 mm (0.30—1.26 in)
	24 knives	12-42 mm (0.47-1.65 in)	
	20 knives	14—50 mm (0.56—1.96 in)	

# FAROL



#### SPFH Blade Config's



When installing non full sets of blades, a staggered drum configuration will allow smoother crop flow, quieter running and more even chop length, please see picture above as an example. *Also remember to alter address CHC 105 for sharpening stone dwell time* 

#### Blade bolts – 3 bolts per blade, Outer bolts 260NM, Centre bolt 230NM *This allows a blade to push back rather than twist* Clean Blade Hangers – ensures the best possible mating surface to the drum



Use Special tool to set clearance between the back of the shear bar and the cylindrical part of the drum. 3 sides to the tool, depending on blade wear

- See table below

Tool usage	Section marked (124.5)	Section marked (121.9)	Section marked (117.4)
Grass	New knives	Knives with coating of	Knives with coating of
		10—16 mm (0.39—0.63 in)	3—9 mm (0.12—0.35 in)
Corn	New knives	Knives with coating of	Knives with coating of
		12—20 mm (0.47—0.78 in)	3—11 mm (0.12—0.43 in)

## What is an Optimised SPFH?





## Factors effecting SPFH Performance



Knife Condition Shear Bar Adjustments ProStream Cutterhead Adjustments ProStream Blower Adjustments Header Adjustments Engine Speed Management Agricultural Management Solutions (AMS) Tyre Pressure FAQ – Optimisation Area's



## Grinding Procedure



When the machine is in working mode, the sharpening door is closed by the sharpening door cylinder and the sharpening device is in the park position on the right hand side. If you start a sharpening cycle the door gets open by the cylinder, the cutterhead is turning backwards with 350 rpm and the sharpening device is driven by the hydraulic motor and the chain to the left and back again.

#### Operator Tip: Chain adjustment with engine turned off



## Grinding Theory

#### Sharpening cycle

- More material removal due to the vertical stone adjustment after each cycle.
- Used in abrasive conditions (grass)
- Risk to over sharpen the knives



#### Finishing cycle

- No stone adjustment in vertical direction
- Still removes material (less with more finishing cycles
- Used to straighten the knives after sharpening cycle or to maintain the knives shape
- Good compromise between knives maintenance vs. operating lifetime



Finishing becomes a lot more important in corn, where the knife wear is much less then in grass, in such conditions the sharpening cycles can be reduced to a minimum, finishing is enough to keep the knife straight and sharped.



## Grinding Adjustments

#### Adjustment of the arrestor

It is important that the arrestor pushes the ratchet just one position during a sharpening cycle, more than one position will result in a shorter lifetime of the knives and the stone. Check and adjust the setting of the arrestor if necessary by tightening the screw (A) to have a less aggressive setting



#### Sharpening procedure:

It is always recommended to do twice the amount of finishing cycles compared to sharpening cycles. This ensures the knife has a smooth polished edge.

#### Knife Sharpening / Stationary knife adjustment





## Chop Quality Guide 8000 Series SPFH



#### **Understanding Current Condition**

#### If knives are new

- Ensure knives are set parallel to shearbar
- Ensure outer knife edge is parallel to Cutterhead side wall



• Measure distance between knives and shearbar across 3 points of every knife to ensure straight cutting edge





#### **Corrective Action**

#### Check for play in sharpening mechanism

• Remove shims as necessary

#### Gaining a straight edge across shearbar

• Do as many finishing cycles as necessary until a straight edge is gained

#### **Maintaining Chop Quality**

#### **Correct Sharpening Theory**

- Do 2 finishing cycles for 1 sharpening cycle
- Do 1 long shearbar adjust for every 3 short shearbar adjusts
- You are better doing more small sharpenings more often then few big sharpenings
- 1<sup>st</sup> shearbar adjust directly after grinding
- 2<sup>nd</sup> shearbar adjust within the following 60 min (sharpened knife edges have spline, which comes off soon)
- 3<sup>rd</sup> shearbar adjust in between the 2<sup>nd</sup> adjustment and the next grinding process (to compensate knife wear)





## Chop Quality Guide 8000 Series SPFH

#### **Common Issues**



#### **Chop Length**

**Effect on throughput** 





Processing -





Not enough finishing cycles Or Adjust stone changing direction time (dwell) in CHC 105 accordingly (default 1800ms)

Round edges  $\rightarrow$  reduce to 1400ms Ear building  $\rightarrow$  increase to 2200ms

Examples of recommended values for CHC 105 : 64K: 1400 ms - 56/48K: 1600 ms 40/32/28/24/20K: 2200 ms



Fuel

Throughput

#### **Kernal Processor Gap**



## Field Experience Knife Conditions

 Shows knives without any maintenance around the cutterhead





 To little sharpening cycles due to abrasive condition (Grass)

 Self-sharpening effect in corn. No sharpening cycles are needed. A few finishing cycles are enough to keep the knives sharp





## Field Experience Uneven wear in overlap area

- Less wear in knife overlap areas
- Heavy sharpening will not compensate this situation, as the stone backs off in overlap areas
- Unequal shearbar gap as a result, because the shape is not cylindrical
- Due to this excessive wear at the shearbar is possible





Counteraction:

- > Adjust sharpening cycles according to current knife wear.
- Add at least **10 finishing cycles** after the grinding process to straighten the knives.
- If knives are in quite good conditions just work with finishing cycles.



## How to reduce wear ? Benefit of reducing grinding intensity

Knife wear tested at a group of 6 SPFH customers. Average grinding intensity was 114 cycles / 100 ha, but the distribution is surprising, from 16 cycles to 310 cycles / 100 ha depending of the customer !

Knives wear distribution was also very different, from 0.46mm to 2.35mm of wear / 100 ha.

This study highlights the impact of the grinding intensity / frequency on the knives wear.



The outcome is clear, there are 3 different types of customers:

- Those who are over sharpening (A, B, C)
- Those who have found the optimum (D, E)
- One who is clearly under sharpening (F)

## ... MAKE SURE TO FIND YOUR OPTIMUM ...

\* Source: Claas Jaguar Journal Nº Juli /2013, Author Dominik Grothe



## Machine Optimization Shearbar Adjustment

- Too large shearbar gap impacts the cutting performance as well as the fuel consumption.
- A large gap also increases the wear on shearbar and knives, as the material is pulled through the shearbar.





#### Solution:

- 1st adjust shearbar directly after grinding.
- 2nd adjust shearbar within the following 60 min (sharpened knife edges have spline, which comes off soon).
- 3rd adjust shearbar in between the 2nd adjustment and the next grinding process (to compensate knife wear).
- Do one long shearbar adjustment process per day.



## ProStreamтм Chop Quality

#### Situation :

Some of the crop may enter the gap between cutterhead and cutterhead frame. The length of cut may be impacted with some stems being cut too long.



#### Solution :

There are 2 wear plates HXE84524, one on each side, installed on the cutterhead frame, between the cutterhead and the frame itself.

Those wear plates need to be adjusted by means of shims HXE76993. The amount of shims will depend on the type of cutterhead knives to be 2mm away from the knives the knives.

In case the knives are changed or the cutterhead replaced there is a need to re-adjust the wear plates.



## ProStream™ Spiral Band



- > Open the screws on the side and below the spiral band
- Put additional shims between frame and spiral band until there is no gap
- > Remove some shims with the thickness of 3mm
- > Tighten the screws





To create vaccum for better cropflow



## 639 Optimisation

Gauge Wheel Setting :

Tines Should be 50mm above ground

#### Rake Setting

Very wet conditions Lower rear of the Rake Dry conditions Lift rear of the Rake



#### Auger position





Distance from Auger flights to scrapers 0-2mm Distance from auger flights to deck sheet 20mm Auger Spring 37mm+/-2mm



## Engine Speed Management

To reduce fuel consumption and to increase efficiency during field operations, the engine speed management allows the operator to toggle between three different field modes

#### Manual

Engine speed and the machine ground speed are manually

#### Headland (ProDrive<sup>™</sup> machines only)

- Engine speed is automatically controlled depending on the machine field situation engine speed reduction in headland
- Engine speed reduction when machine is standing still
- Engine speed increase when feed rolls are engaged

#### Economy (ProDrive<sup>™</sup> machines only)

- Engine speed and ground speed are automatically controlled depending on engine load.
- ➤ The system automatically adapts the engine load efficiency by controlling the ground speed as well as the engine speed (described under Headland (ProDrive<sup>™</sup> machines only)).
- The machine ground speed is based on engine load which results in a throughput control to optimize the fuel efficiency.









#### On-Board Systems 2630 Active Fill Control



## Transitioning between rear and side unloading mode will be determined automatically



Side Unloading





**Rear Unloading** 





## On-Board Systems 2630 Active Fill Control





- ✓ Required components present
- $\bigoplus$
- ✓ System calibrated and free of trouble codes



- ✓ Enable AFC button in CommandCenter has been pressed, System is enabled.
- ✓ AFC button on multi-function lever has been pressed.
   System is engaged.
  - ✓ Trailer is detected







## On-Board Systems 2630 Active Fill Control



To enable system, the following conditions must be met:

- I. Image Processing Unit (IPM) ready
- II. Stereo camera ready
- III. Spout sensors and AFC calibrated
- IV. Road safety mode button in field mode

To be able, the following conditions must be met:



- I. Operator seated
- II. Main clutch engaged
- III. Header is engaged
- IV. AFC Activated

## Side Unloading





If trailer detected, AFC activation possible



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Status

Offset

Strategy

Active Fill Contro.

Target Fill Height

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Press AFC buttor



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Edge Distance

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Fill Height

Distribute material in the trailer

## **Rear Unloading**





activation possible



Press AFC button



Distribute material in the trailer





#### **On-Board Systems 2630 Innoculant Dosing System**

3 different modes available for each system: OFF / AUTO / ON

ON Mode not available when dosing rate set to I/t

Auto turns IDS on when Feedrolls engaged and crop going over the shearbar

- 1. Select Mode for Low Volume System (LV)\* Also via button A
- Select Mode for Twin Line System (TL)\* 2.

Also via button B

3. Select Mode for High Volume System (HV)\*

Also via button F

4. Adjust Dosing rate for LV System

Also through button D

5. Adjust Dosing rate for HV system

Also through button I

- 6. Ratio for Twin Line System (Display)
- Store concentrate of LV system 7.
- 8. Start / Stop cleaning process (available for LV, HV or TL System)
- 9. Switch Dosing rate unit
  - i. L/h - Litres Per Hour
  - L/t Litres Per Ton ii.
  - L/DMt Litres Per Ton Dry Matter iii.
- 10. Sub Menu (External system, nozzle choice)







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#### On Board Systems 2630 Mass Flow System

**Mass Flow Calibration** 

On the Vehicle Settings Page press the mass flow calibration page (Button A)

Perform a yield calibration for every crop and when crop conditions change.

On The Mass Flow Calibration Page:

- Press calibration button (B). Display changes to: Calibration *In progress* (C).
- Begin harvesting. Weight displayed at (D) should increase while harvesting.
- Harvest known amount of material (i.e., truck load, wagon load, etc.).
- 4. When known load is completed, press calibration button (B) again to stop calibration.
- 5. Have known amount of material in truck or wagon weighed. While waiting for scale ticket to return, you may continue harvesting.
- When scale ticket returns to machine, press net weight platform scale (E) to change weight value.
- 7. Input net weight of material from scale ticket.





- A. Mass Flow Calibration Page Access Button
- B. Calibration Status
- c. Calibration Button
- D. Displayed Weight
- E. Net Weight Platform Scale
- F. Calibration Factor

IMPORTANT: Changing the calibration factor does NOT change data already saved. After changes are made, all harvest information collected from that point will reflect the changes.





## Length Of Cut

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## **Optimisation Area's**

Optimisation Areas	SPFH Ground speed	Grass PU Compressor roll adjustment	Grass PU Tine Speed	Grass PU auger speed	Grass PU Paddles	WCS header speeds	Corn Head speed	UFFR rasp bar settings	Feedroll springs	Smooth roll scraper	Shearbar gap/ condition	Number of knives installed for the LOC	Knives edge/ Condition	Cutterhead side shims	Spiral floor position	Lower/front chute positioning	Grass chute downsteps/ positioning	KP/KS gap setting	KP/KS positioning (swing in swing out stops)	Accerator paddles	Accelerator scrapers inlet and outlet	Wear plates through the crop flow	ESM settings
The machine is feeding very lumpy and uneven feeding through the crop flow of the SPFH and out of the spout, Causing the engine RPM to surge and ground speed is inconsistent.	×	×	×	×	×	×	×		×	×	×				×	×	×	×				×	×
The SPFH has a good crop stream but sometimes produces a "tumbleweed" under the crop stream															Х	Х	Х			X	Х		
The SPFH has a very slow and messy crop stream from the spout.	×										×		×		×	X	×			×	×	×	
Feeding to the cutterhead is not consistent at short LOC			Х	Х		X	Х		Х	Х													
Feeding is not smooth causing the feedrolls to jump when chopping at long LOC	×	×	×	×	Х				Х														



## **Optimisation Area's**

Optimisation Areas	SPFH Ground speed	Grass PU Compressor roll adjustment	Grass PU Tine Speed	Grass PU auger speed	Grass PU Paddles	WCS header speeds	Corn Head speed	UFFR rasp bar settings	Feedroll springs	Smooth roll scraper	Shearbar gap/ condition	Number of knives installed for the LOC	Knives edge/ Condition	Cutterhead side shims	Spiral floor position	Lower/front chute positioning	Grass chute downsteps/ positioning	KP/KS gap setting	KP/KS positiong (swing in swing out stops)	Accerator paddles	Accelerator scrapers inlet and outlet	Wear plates through the crop flow	ESM settings
The SPFH is struggling feeding corn in to the feedroll cabinet from the header and then feeding in lumps or blocking the header	×						×	×	×														×
SPFH is blocking up between the CH and the blower in grass											×		X		×	×	X					×	X
SPFH blocking up inbetween CH and KP in corn											X		Х		Х	×		х	Х			Х	Х
Poor QOC in all crops	Х			Х		Х	Х		Х		Х	Х	Х	Х									Х
Inconsistent chop length in corn and WCS	Х			Х		Х	Х		Х	Х	Х	Х	Х	Х									Х
Engine is labouring	Х	Х		Х	Х	Х	Х		Х		Х		Х		Х	Х	Х	Х	Х	Х	Х	Х	Х
The service compartment is filling with chopped crop																X	Х		Х			Х	







## Lubricants

## Please check all oil/grease levels regularly, oil types and change intervals below.

Auto-lube System – John Deere SD Polyurea Grease

Hydraulic Oil – John Deere Hy – Gard -2yrs or 1000hr

Rear Axle beam only – John Deere Extreme Gard EP90w– 500hr/annual

**Rear Axle hub only** – John Deere Extreme Gard EP90w – 500hr/annual

**Prodrive Transmission** – John Deere Hy-Gard – 1000hr/2yrs

Power Distribution Gearbox - John Deere Hy-Gard - 1000hr/2yrs

Header Gear Case - John Deere Hy-Gard - 500hr/annual

Feedroll Gear case - John Deere Hy-Gard - 500hr/annual

Engine – John Deere plus 50 II – 500hr or annually - John Deere plus 50 II – fully synthetic – 1000hr/annually (97,98,9900 only)

X-StreamKP – Shell Corena S4 R 32 – daily level check

Coolant – John Deere Coolgard II – 4yrs or 6000hr

## Cleaning Guide 8000 Series SPFH

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, 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. Use high velocity air (from air compressor or blower) to blow crop debris off the SPFH when cleaning. 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.

#### **Engine Compartment**



Check the side air inlets on both sides of the machine



Check area above service compartment behind the Cab



Check area between side panels and top covers



Ensure there is no crop accumulation around the engine, specifically :

- Turbo and EGR cooler on JD 13.5L.
- Exhaust Manifold and cylinder head on Cummins 19L.





Remove LHS panel periodically to clean this area thoroughly, specifically around Suction Blower Fan.







Rear part of the frame on both sides of the high volume IDS tank

## Cleaning Guide 8000 Series SPFH



#### Service Compartment & Cutterhead Unit

Note : As a general reminder, ensure there is no crop accumulation around the cutterhead and feedrolls unit. Make sure to run up machine before sharpening to reduce the risk of crop accumulation in the cutterhead and the kernel processor



Ensure area around hydraulic valve block is clean



Ensure there is no crop accumulation underneath plastic panels





Corn with Kernel Processor in position Grass when Grass Chute in position





Ensure cooling package is sealed correctly and clean





Open Cutterhead to thoroughly clean this area



Clean area behind sharpening compartment on top of cutterhead



Clean sharpening door compartment





Clean area around feedrolls springs, upper and lower rear feedrolls

## **Cleaning Guide** 9700 - 9900 SPFH

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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, 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. Use high velocity air (from air compressor or blower) to blow crop debris off the SPFH when cleaning. 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.

#### **Engine Compartment**



Check the side air inlets on both sides of the machine



Check area above service compartment behind the Cab



side panels and top covers



Check area between Ensure there is no crop accumulation around the engine, specifically the Engine Valley (including cleaning the drain hole on LHS)



Remove LHS panel periodically to clean this area thoroughly, specifically around Suction Blower Fan.

Rear part of the frame on both sides of the high volume IDS tank



## Cleaning Guide 9700 – 9900 SPFH



#### Service Compartment & Cutterhead Unit

Note : As a general reminder, ensure there is no crop accumulation around the cutterhead and feedrolls unit. Make sure to run up machine before sharpening to reduce the risk of crop accumulation in the cutterhead and the kernel processor



Ensure area around hydraulic valve block is clean



Ensure there is no crop accumulation underneath plastic panels





Corn with Kernel Processor in position Grass when Grass Chute in position





Ensure cooling package is sealed correctly and clean







Open Cutterhead to thoroughly clean this area



Clean area behind sharpening compartment on top of cutterhead



Clean sharpening door compartment





Clean area around feedrolls springs, upper and lower rear feedrolls

#### XStream™ Kernel Processor End of Season Maintenance

End of season maintenance on your XStream<sup>™</sup> KP is VERY IMPORTANT and will help reduce bearing failures and greatly reduce downtime for future harvesting.

The preferred method of cleaning off the KP is to use air.

If you decide to power wash the processor, immediately dry the processor and open it to expose bearing castings and rolls. After power washing, there is a good possibility that water penetrated the bearing seals which will cause imminent bearing damage. After power washing the processor, you can prevent bearing damage by immediately servicing the processor and following a few steps.



XStream<sup>™</sup> Kernel Processor

- Remove the tops of the bearing castings

with a soft mallet and inspect the condition of the oil and bearing. Be very careful with the mating surfaces of the castings since they are machined surfaces. Keep the top half with the bottom half since they are machined as a mating pair and are numbered accordingly. If there is no contamination, simply remove the old oil and replace the felt seals (HXE131372 – qty. 12).

- If contamination is present, the bearing casting needs to be removed and cleaned thoroughly. The oil line and the temp sender should be removed in order to clean the casting. New felt can then be installed. The bearing may also need to be replaced if there is a substantial amount of contamination in the bearing casting. An inspection of the bearing rollers may also help determine if the bearing needs to be replaced.
- Make sure all bearings get 15cc of fresh John Deere Kernel Processor oil after they have been inspected or changed. TY27729<sup>12</sup>
- Inspect spool seal (HXE131373) for wear.
- After the KP is cleaned and reassembled, apply some form of anti-corrosion to the rolls. (Oil, grease or paint works well.) This is very important for the roll balance and roll wear.
- Replace the Coalescing Filter annually (HXE136039).

<sup>&</sup>lt;sup>1</sup> Kernel Processor Oil (XStream™ SPFH) 2.5 gal (9.46 L)

<sup>&</sup>lt;sup>2</sup>*Refer to the Operators Manual for additional compatible oils.* 



# FAROL