

# O'CONNORS COMBINE TRAINING MANUAL 2021



**O'CONNORS**   
KEEP GROWING

**CASE IH**

## Table of Contents

Data Card Preparation – Saving Yield Information & Formating USB or CF Card:.....	2 - 5
Viewing Yield Maps – AFS View: .....	6 - 7
Viewing Yield Maps – Using MyCaseIH (online): .....	8 - 9
Display Set up – Pro 700: .....	10-11
250 Series Multi-Function Handle (MFH) & Emergency Stop:.....	12
250 Series Right Hand Console: .....	13
230/240 Multi-Function Handle (MFH): .....	14
230/240 Series Right Hand Console:.....	15
8010 – 8230 (Legacy Cab) MFH:.....	16
8010 – 8230 (Legacy Cab) Right Hand Console: .....	17
Header / Front Reference Guide & Maintenance:.....	18 - 51
Macdon FD1 Draper Clinic Handout – Setup and Maintenance: .....	52 - 81
Case IH 3016 Pick up – Head 1 & 2 Settings:.....	82 - 83
MacDon PW8 Pick up – Head 1 & 2 Settings:.....	84 - 85
Pick Up Head with no electronics – Head 1 & 2 Settings: .....	86 - 87
Macdon D1 & FD1 – Head 1 & 2 Settings:.....	88 - 89
Macdon D60, D65, FD70, FD75, Case IH 2152/2162 - Head 1 & 2 Settings: .....	90 - 91
Case IH 3152 & 3162 – Head 1 & 2 Settings:.....	92 - 93
Case IH 3050 Varicut – Head 1 & 2 Settings: .....	94 - 95
Suggested Combine Initial Crop Settings & Harevsting Options 2021: .....	96
AFX Rotor Configurations: .....	97
Complete list of Pro 700 Run Screen items: .....	98
Suggested Pro 700 Run Screen layouts for 250 Series with Harvest Command:.....	100 - 101
Suggested Pro 700 Run Screen layouts for 2017 Onwards Flagship Combines:.....	102 - 103
Suggested Pro 700 Run Screen layouts for 2016 & Prior Flagship Combines:.....	104 -105
Flagship Greasing Tables - 250 Series:.....	106
Flagship Greasing Tables - 240 Series & Prior: .....	107
AFS Harvest Command: .....	108 -115
Feedrate Control – Flagship 250 Series :.....	116 -117
Grain Loss information: .....	118
Pro 700 Yield Monitor Calibrations: .....	119 -133

## Data Card Preparation – USB or CF Card

Prior to Harvesting the USB for Pro 700 or the CF card for Pro 600 needs to be set up



For the Pro 700 Display it is strongly recommended to use only the factory ENVOY DATA 4G USB (A) or a SanDisk Cruzer Fit 8G USB (B)

Either of these can be sourced from O'Connors. If you choose to use other brands of USB you may find Yield Maps are not recorded during the Harvest Operation

For the Pro 600 a Compact Flash Adapter with a Compact Flash (CF) Card (C) is required

If you have purchased a New Combine for this Harvest the Display will be supplied with a factory ENVOY DATA 4G USB (A).

This USB will be ready for use and can be fitted to the Display with the machine OFF.

**The combine should always be off when removing or fitting the USB (Pro 700) or CF Card (Pro 600)**

If you have purchased or been supplied a Sandisk USB (B) this will require to be formatted. If you do not, there is a strong chance that Yield maps will not record.

If you have any of (A) (B) or (C) that have been used in Previous Harvests then it is recommended to save the Harvest Data for future reference and Format the USB or CF prior to starting the upcoming harvest.

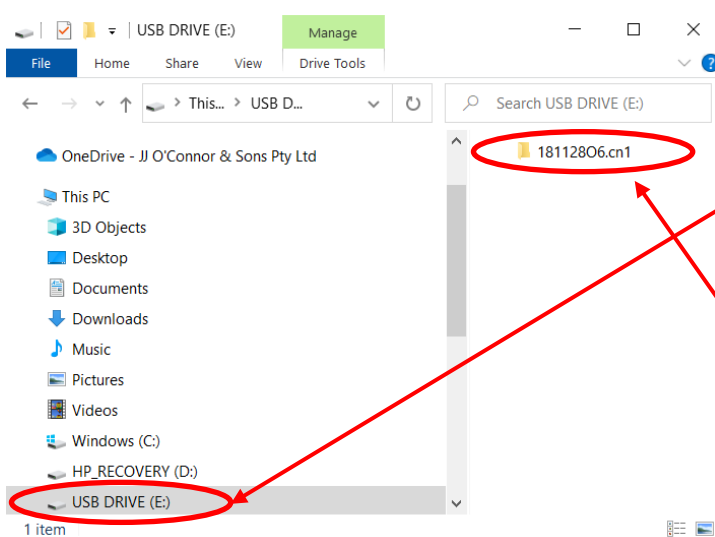
Most people's home computer should have a USB reader, but for people who have a CF Card to use with the Pro 600, you will need a CF Card reader, as an example shown to the right. O'Connors do not sell these, but they can be sourced from Officeworks easily or any other computer store should be able to source one for you if required.



## Data Card Preparation – USB or CF Card

Saving Data and FORMATTING the USB or CF Card – Important for Yield Mapping

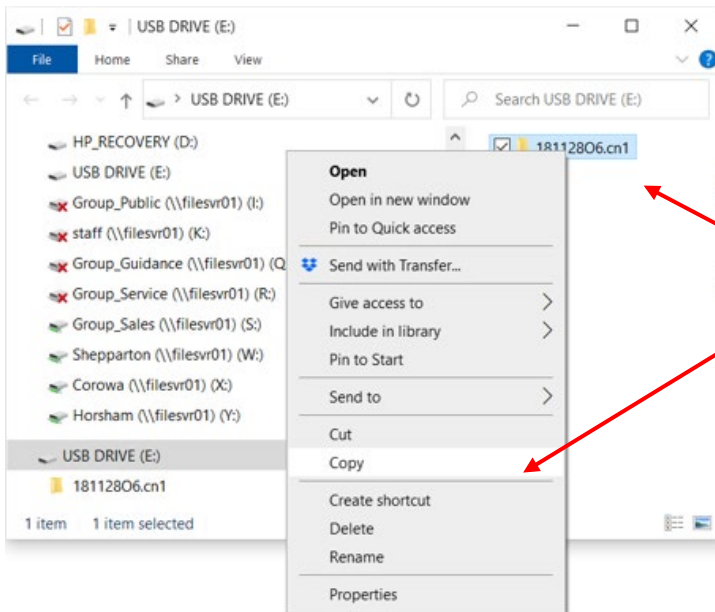
Insert the USB or the CF Card reader into your home computer



Your Computer should come up with something similar to the image on the left

Ensure the USB drive is selected and on the USB should be a file that ends in '.cn1' Example below

18112806.cn1



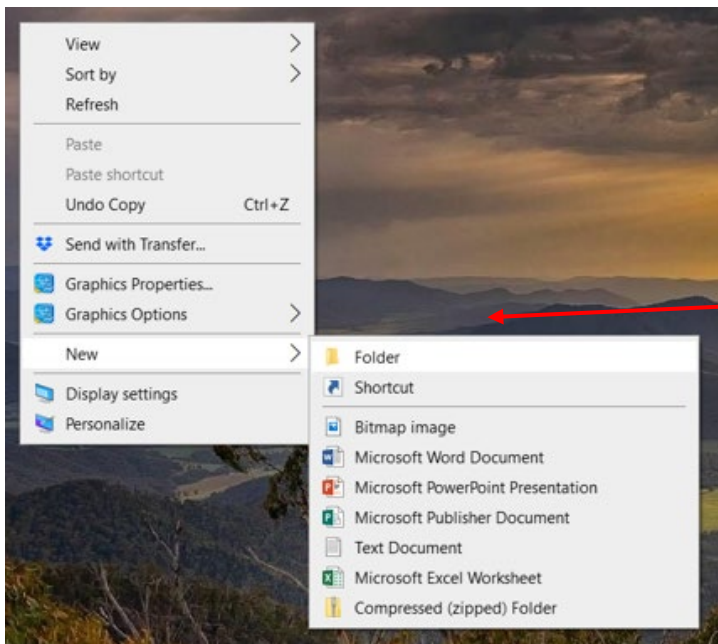
With your mouse, 'Right click' on the .cn1 file.

A menu will 'pop up' as shown, then move the mouse over and left click on 'copy'

This has now copied our Harvest Data from any previous years. Even if you aren't worried about Yield Mapping, you have the information you have gathered during harvest so why not save it for future reference. It may come in helpful one day.

## Data Card Preparation – USB or CF Card

Saving Data and FORMATTING the USB or CF Card – Important for Yield Mapping



An Easy place to save the harvest information is on the desktop of your computer.

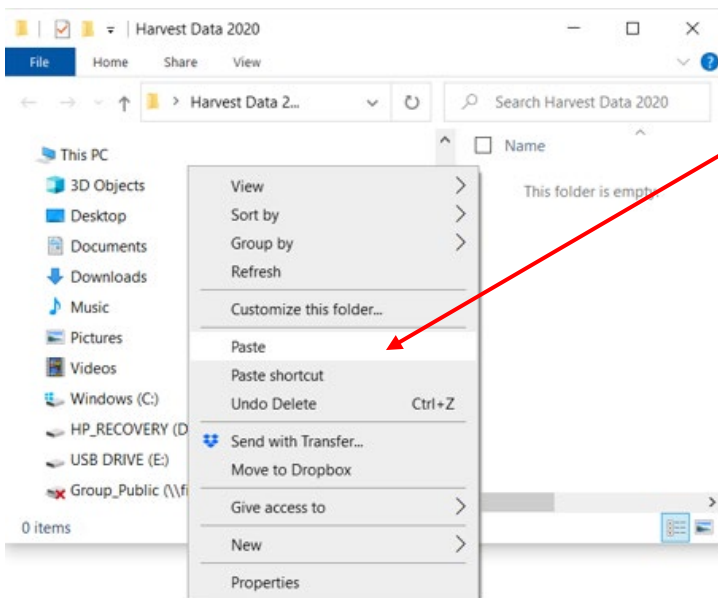
'Right click' your mouse on the desktop page and a similar image will show up,

Scroll down to 'New' and then left click on 'Folder'

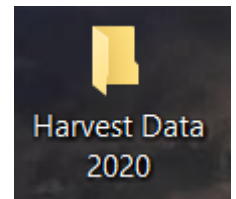
A 'New' folder will appear on the desktop. Before clicking anything else while the New folder box is highlight blue.




Type on your Keyboard 'Harvest Data and the year



If you open up the Harvest Data folder and 'Right click' in it, the menu to the left will pop up and then left click on Paste with your mouse.



The computer will now copy a folder that looks similar to the below image from the USB and save to the Harvest Data 2020 folder on the computer.  181128O6.cn1

The main thing to remember is we are copying the file that ends in, .cn1 and then saving it

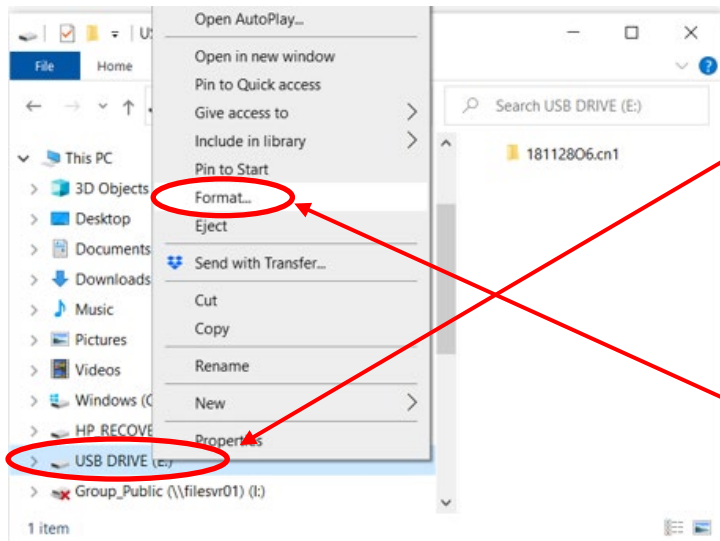
Out of those few steps we have now saved all Harvest Data from the USB, from any previous years and saved this on the computer for future reference if required

If this is not a priority to your operation, saving Harvest Data is not a necessary aspect to do. It is up to each operation to decide if you want to do this.

Formatting of the USB or CF Card is definitely required if you want to record harvest information

## Data Card Preparation – USB or CF Card

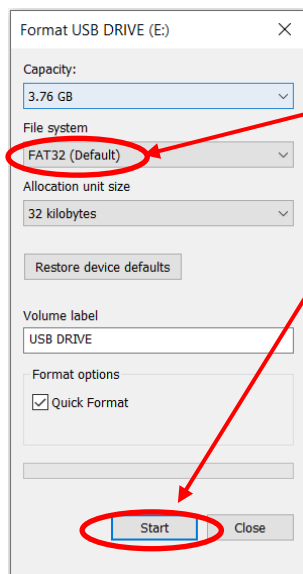
FORMATTING the USB or CF Card – Important for Yield Mapping



Next Select the USB drive by left clicking on it

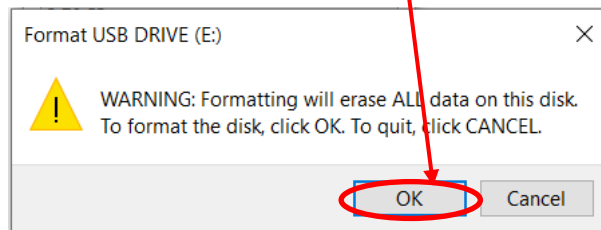
Then Right click on it and a menu will pop up that will have format listed in it

Click 'Format'

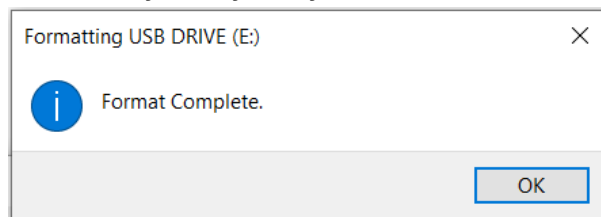


This is the next sub menu you will see.  
Ensure file system is set to 'FAT32'  
Click on Start

This warning will pop up next. Click on OK



Once the Format is complete you will receive this message.  
From here you may safely remove the USB or CF Card.



**Before fitting the USB or CF Card into the Pro 700 or Pro 600 you should delete all tasks from the Pro 700 or Pro 600**

This is done from the Run Screens by pressing: Back > Data Management > Delete  
Then Select from the Data Type: Tasks

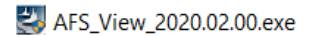
Select: Grain Harvest as the operation

Select: All Growers, All Farms, All Fields & All Tasks. Then Confirm Delete.

*This only deletes Previous Harvest Data. No Paddock Structures or Guidance information is deleted*

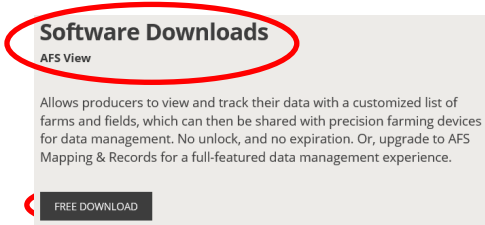
## Viewing Yield Maps – Using Case IH AFS View

If you have purchased a New Combine this year the Factory USB will have the AFS View Download on it, you can install this on your home computer from the file that looks similar to this:



Otherwise you can access the Free Basic Software Download link:

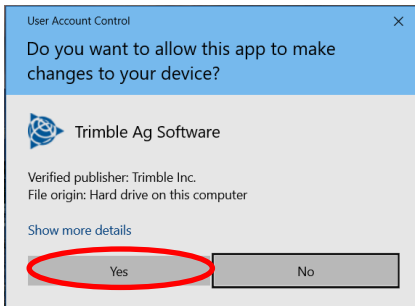
<https://www.caseih.com/emea/en-gb/products/afs%20AE-advanced-farming-systems/software>



On opening the above link, scroll down the webpage until you see the below image on the left hand side of the page

- Click on Free Download to install AFS View on your Computer.

After installing AFS View you will notice this Icon on your Desktop  
Click on the 'AFS View' Icon to open the program.



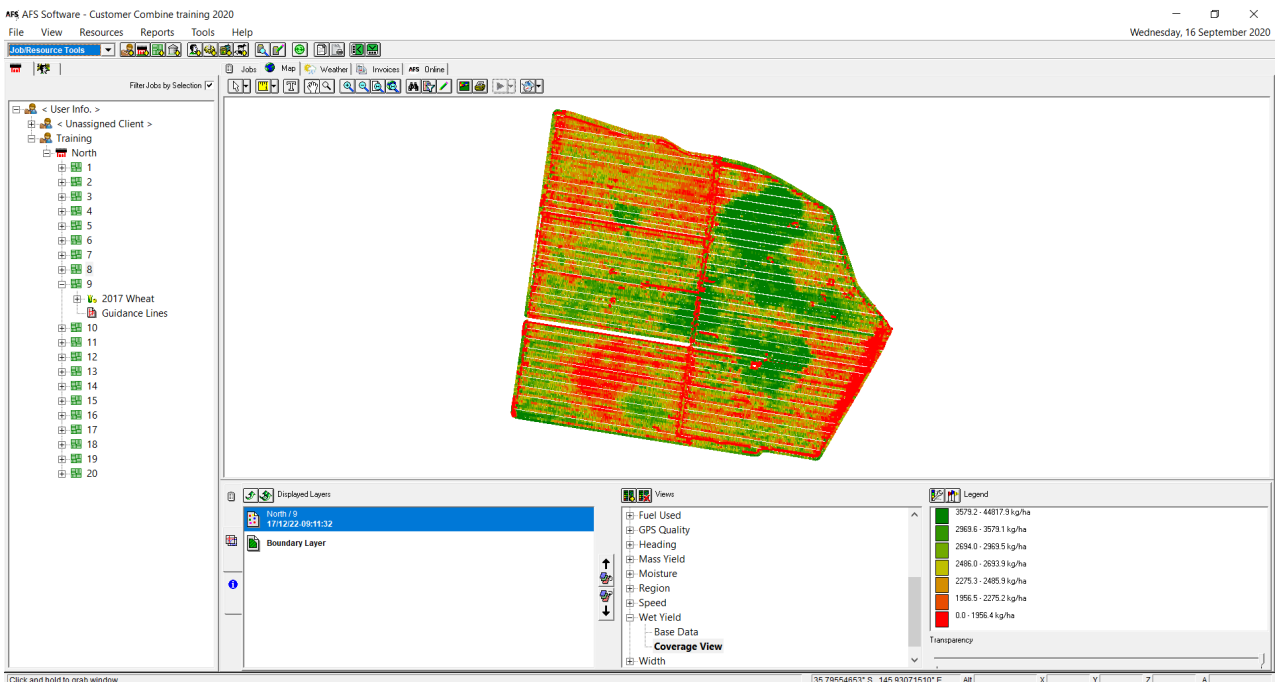
You will have to click 'Yes' to the image on the left to allow the program to open.

It will then change to the Image on the right and open the program



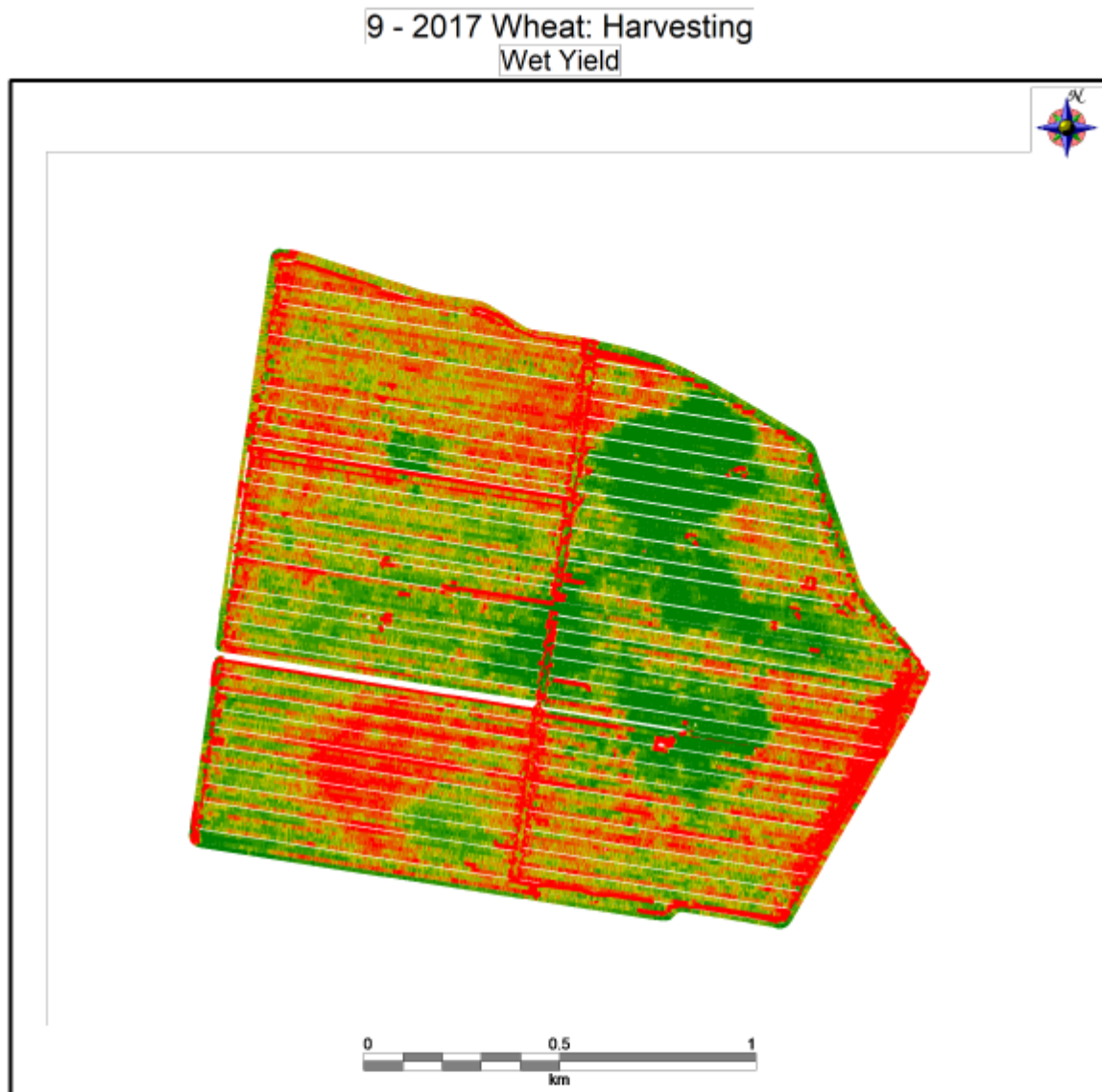
After downloading your Yield Data from your combine you will be able to 'View' Yield Maps as seen below

If you wish to Merge Data together from Multiple Combines you will need to Purchase 'AFS Software'

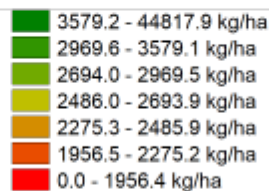


## Viewing Yield Maps – Case IH AFS View

Example below of a completed Yield Map – this can be overlaid on Google Maps if desired



**Client:** Training  
**Farm:** North  
**Paddock:** 9  
**Crop:** 2017 Wheat  
**Name:** 17/12/22-09:11:32  
**Type:** Harvesting  
**Area:** 246.35 ha  
**Start Date:** 22/12/2017 8:24 AM  
**End Date:** 22/12/2017 11:56 PM  
**Engine Hours:** 29.2 hr  
**In Operate:** 21.6 hr  
**Harvest:** 646746.095 kg  
**Avg:** 2625.31 kg/ha

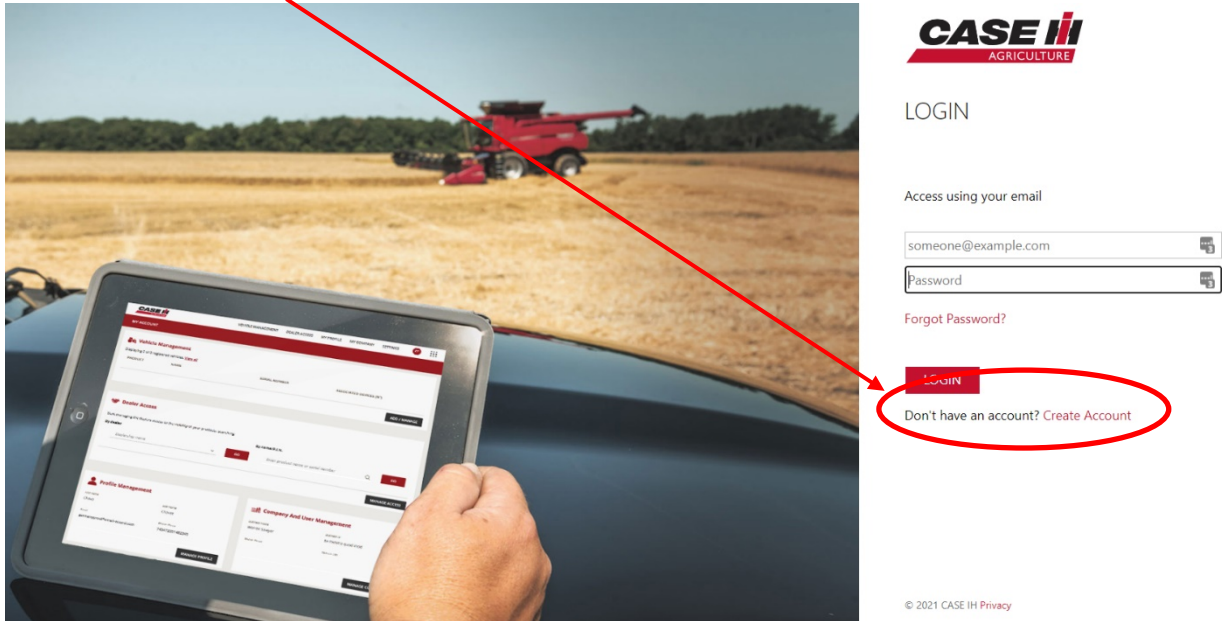




## Viewing Yield Maps – Using My Case IH (Online)

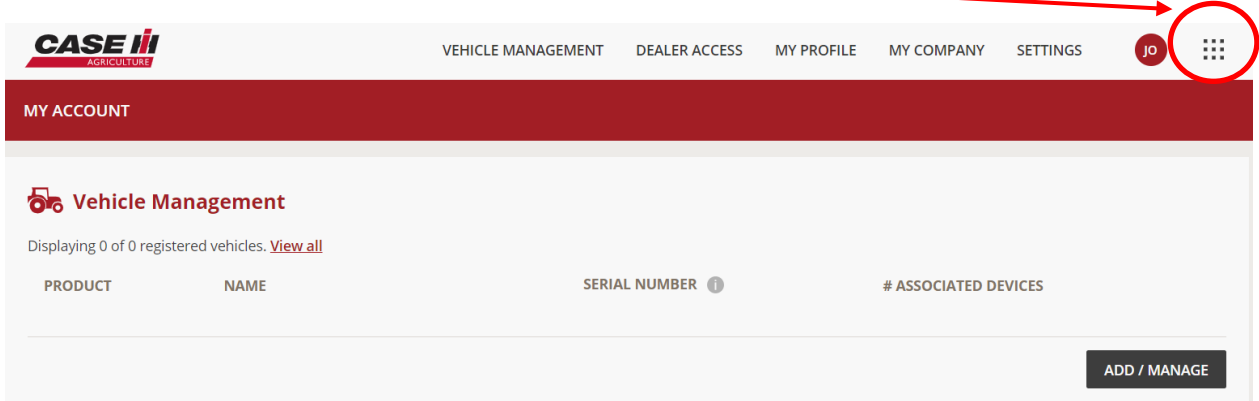
Creating a 'My Case IH' account is free and can be done at: [www.mycaseih.com](http://www.mycaseih.com)

Create a log in here

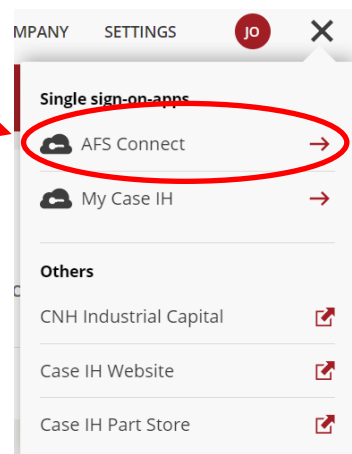


Once logged in the top of your page will look similar to the below.

Open AFS Connect by clicking here

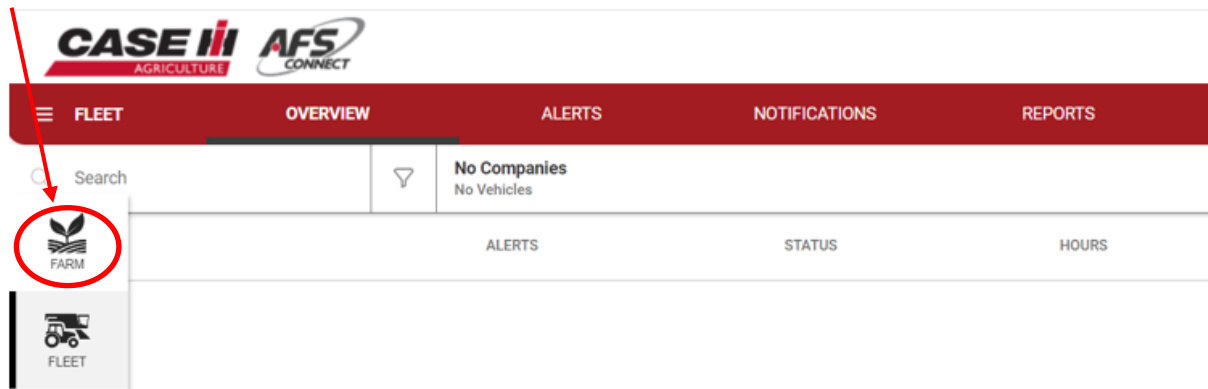
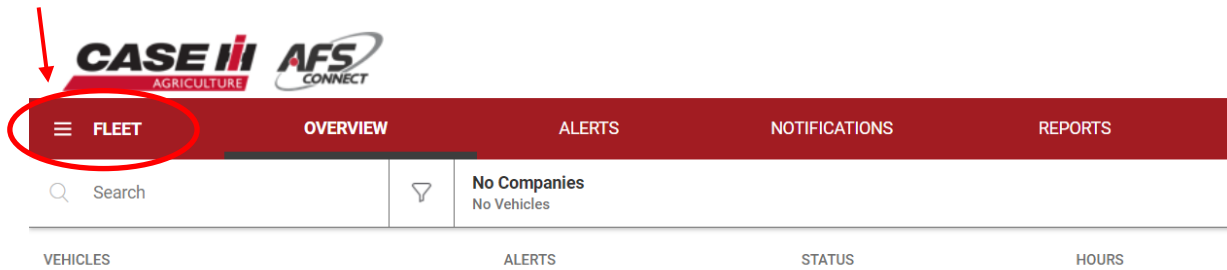


Then Click on 'AFS Connect'



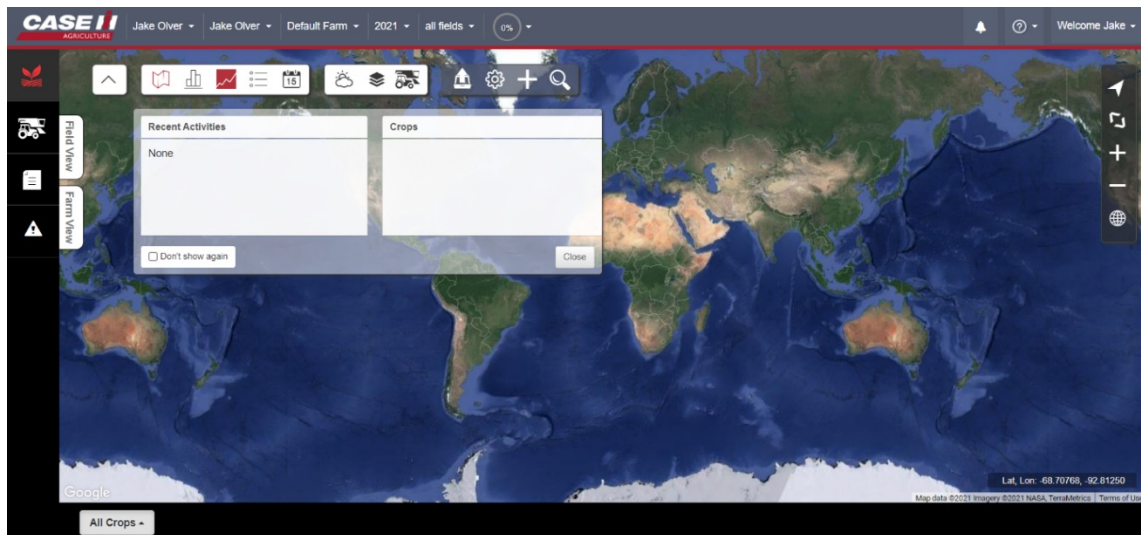
## Viewing Yield Maps – Using My Case IH (Online)

Click on fleet tab



Then the Farm Tab

This Page will launch, from here you can import Grower, Farms, Fields, Guidance and Yield Data

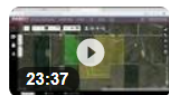


Further information on 'how to' videos can be found on YouTube when searching 'My Case IH'

Under YouTube search: Managing Your Farm Fleet & Data with AFS Connect - Part 3: Your Farm

<https://www.youtube.com/watch>

### Managing Your Farm Fleet & Data with AFS Connect - Part 3

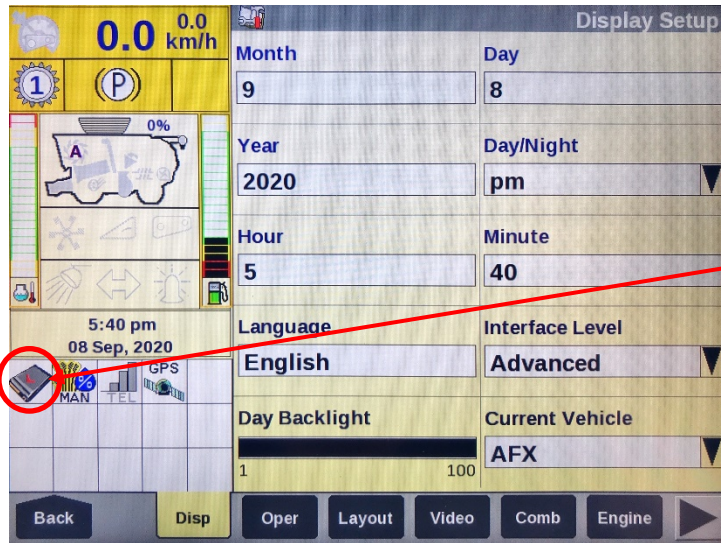


Easily organize **your** fields and applications. Gain relevant agronomic insights that **connect** you to **your farm** ...

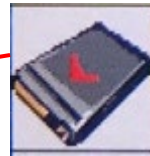
26 Aug 2020 · Uploaded by Case IH North America

## Display Set up – Pro 700

Focus is on the Pro 700 but the information will crossover closely for the Pro 600



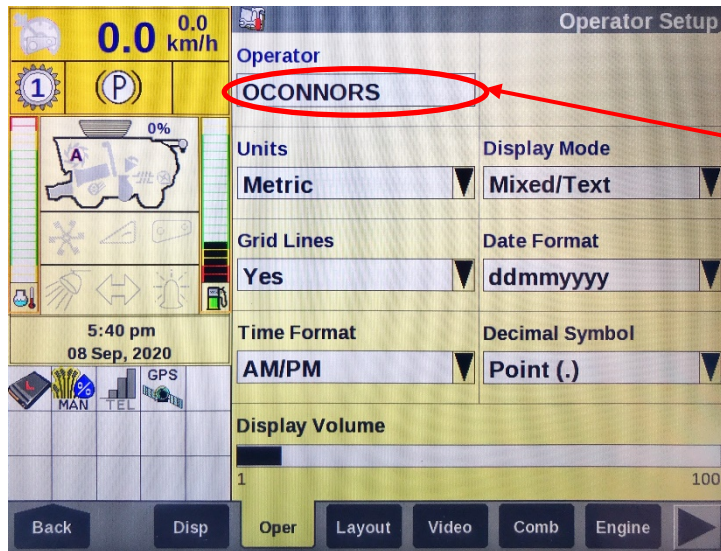
Before turning the display on, insert the formatted USB or CF card into the monitor. Make sure the machine is **always off** when fitting or removing the memory device.



When a USB / CF is fitted the card icon should have a white background as shown

Ensure the Date and Time is Correct in the Display Tab.

This is found from the Run Screens by pressing: Back > Toolbox > Disp



Next go to the Oper Tab:

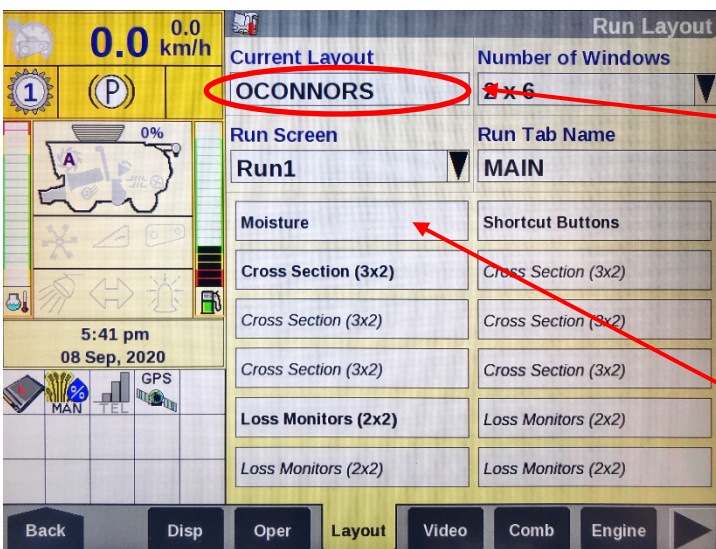
Back > Toolbox > Oper

Set an Operator name: Example shown OCONNORS

Make sure Units are Metric and the Date Format is correct: ddmmyyyy

This is where the display volume can be altered.

This can only be done when an Operator is created and not set to Default



Layout Tab

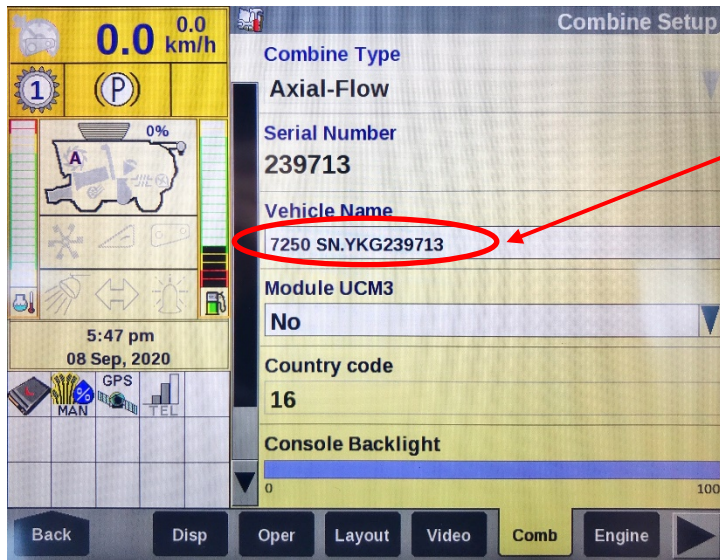
Back > Toolbox > Layout

Set a Current Layout Name

You can then set up the 6 Run Screens. Suggested Run Screen layouts for your year model combine can be found later in this training manual

Each tab can be set once a Layout name has been created and the Layout name isn't set as default

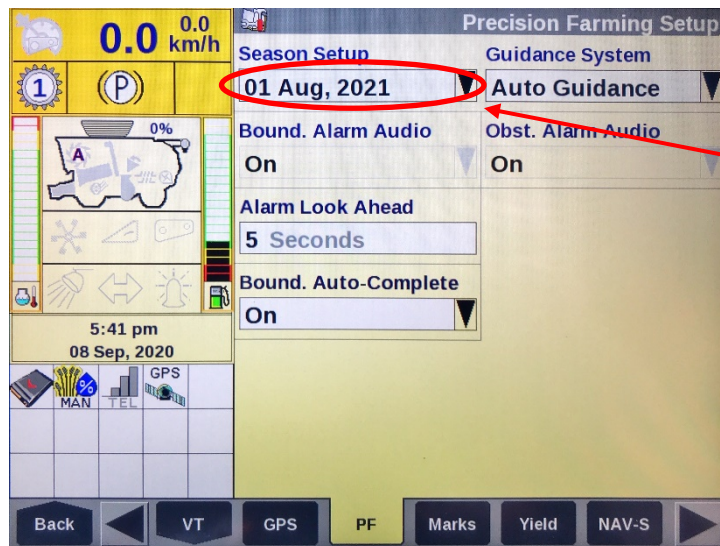
## Display Set up – Pro 700



Comb Tab:  
Back > Toolbox > Comb

As a suggestion set the Vehicle name as shown using the Combine model and the machine Serial Number

This can be helpful if moving Data between machines at a later date.

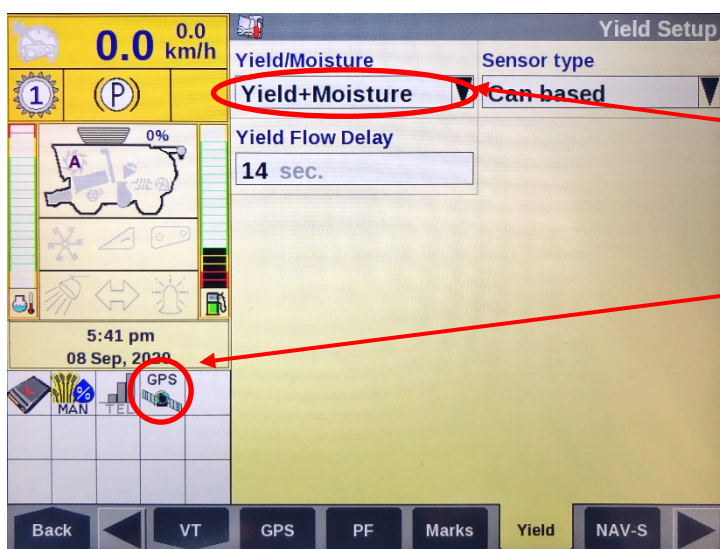


PF tab (Precision Farming)  
Back > Toolbox > PF

Set the Season Setup as a suggestion to one of the following for the next year:  
01 July  
01 August  
01 September

This will ensure that all harvest data is contained in the one calendar year.

We don't want this date to be set during the harvest period.



Yield tab  
Back > Toolbox > Yield

Make sure that Yield+Moisture is enabled as shown.

Also ensure that you have a White GPS icon that either says GPS or DGPS when outside with the Grain tank unfolded



If this Icon is staying Grey or Yellow you may need to Contact the Precision Ag team or Service for Help as you don't have a GPS position.

## Axial-Flow 250 Series MFH & Emergency Stop Button



Above: Emergency Stop Button: Located on the left hand side of the steering column. <sup>3</sup>

	No Shift	Shift (17)		No Shift	Shift (17)
	<b>1</b> Header Raise	Feedrate control Increase	<b>9</b>	Cross Auger Engage / Disengage	
	<b>2</b> Header Lower	Feedrate control decrease	<b>10</b>	Unload Auger Engage / Disengage	
	<b>3</b> Header tilt right	AccuGuide Nudge Right	<b>11</b>	Unload Auger Out	Pivot Spout out
	<b>4</b> Header tilt Left	AccuGuide Nudge Left	<b>12</b>	Unload Auger In	Pivot Spout In
	<b>5</b> Reel Raise <sup>1</sup>	Increase Floatation *	<b>13</b>	Resume Button	Headland Mode
	<b>6</b> Reel Lower <sup>1</sup>	Decrease Floatation *	<b>14</b>	Emergency Stop	
	<b>7</b> Reel Aft <sup>2</sup>	Draper Tilt Aft	<b>15</b>	Feedrate engage	
	<b>8</b> Reel Fore <sup>2</sup>	Draper Tilt Fore	<b>16</b>	Auto Guidance Engage	
			<b>17</b>	Shift Button	

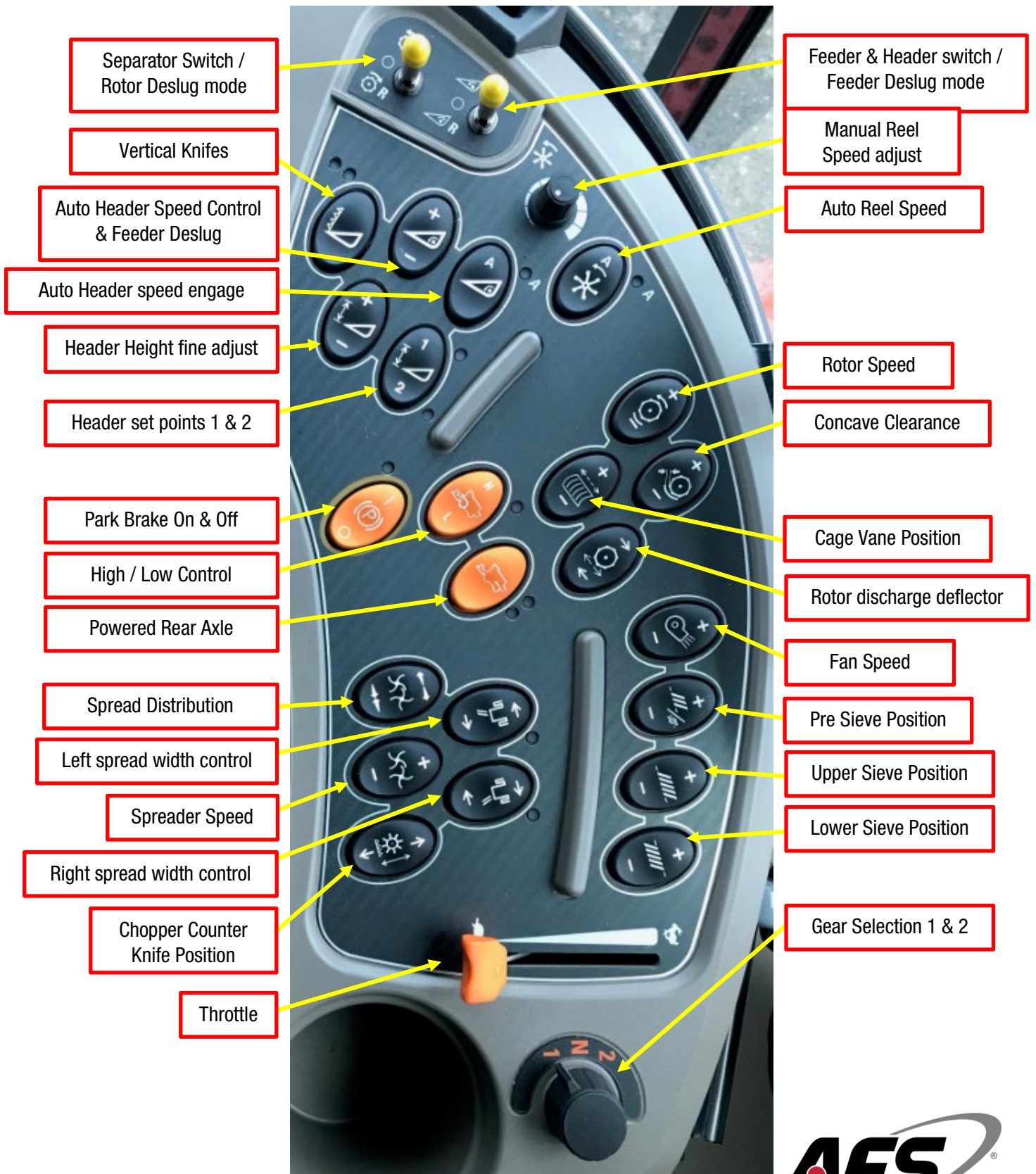
\* Using Pick up Heads such as the Case IH 3016 with Hydraulic Floatation

<sup>1</sup> Will Fold Corn Headers

<sup>2</sup> Will operate corn Header stripper plates

<sup>3</sup> If the Emergency Stop Button is used, the Engine & systems running off the engine will be stopped

## Axial-Flow 250 Series Right Hand Console



**230/240 Multi-Function Handle (MFH):**

# Axial-Flow 230/240 Series Propulsion Handle

The multifunction control handle has been enhanced to include new features such as an autoguidance engage button, grain tank cross auger, pivoting spout and auto feed rate controls. In addition to new features, the buttons on the control handle have been raised and contoured to provide better feel and button differentiation to increase operator comfort and ease of control.



	NO SHIFT	SHIFT (17)
1	Header Raise	Feedrate control increase
2	Header Lower	Feedrate control decrease
3	Header Tilt Right	Nudge / Edge Offset Right
4	Header Tilt Left	Nudge / Edge Offset Left
5	Reel Raise <sup>1</sup>	Decrease Ground Pressure*
6	Reel Lower <sup>1</sup>	Increase Ground Pressure*
7	Reel Aft <sup>2</sup>	Draper Head Aft Tilt
8	Reel Fore <sup>2</sup>	Draper Head Fore Tilt

	NO SHIFT	SHIFT (17)
9	Cross Auger Engage/Disengage	—
10	Unloading Auger Engage/Disengage	—
11	Unloader Tube Swing Out	Pivoting spout out
12	Unloader Tube Swing In	Pivoting spout in
13	Auto Header Height Resume	Headland Mode
14	Emergency Stop	—
15	Auto Feed Rate Control	—
16	Autoguidance Engage	—
17	Shift Button	—

\* On pickup, flexible draper or flexible auger headers equipped with hydraulic floatation. Will also fold optional draper header transport wheels.

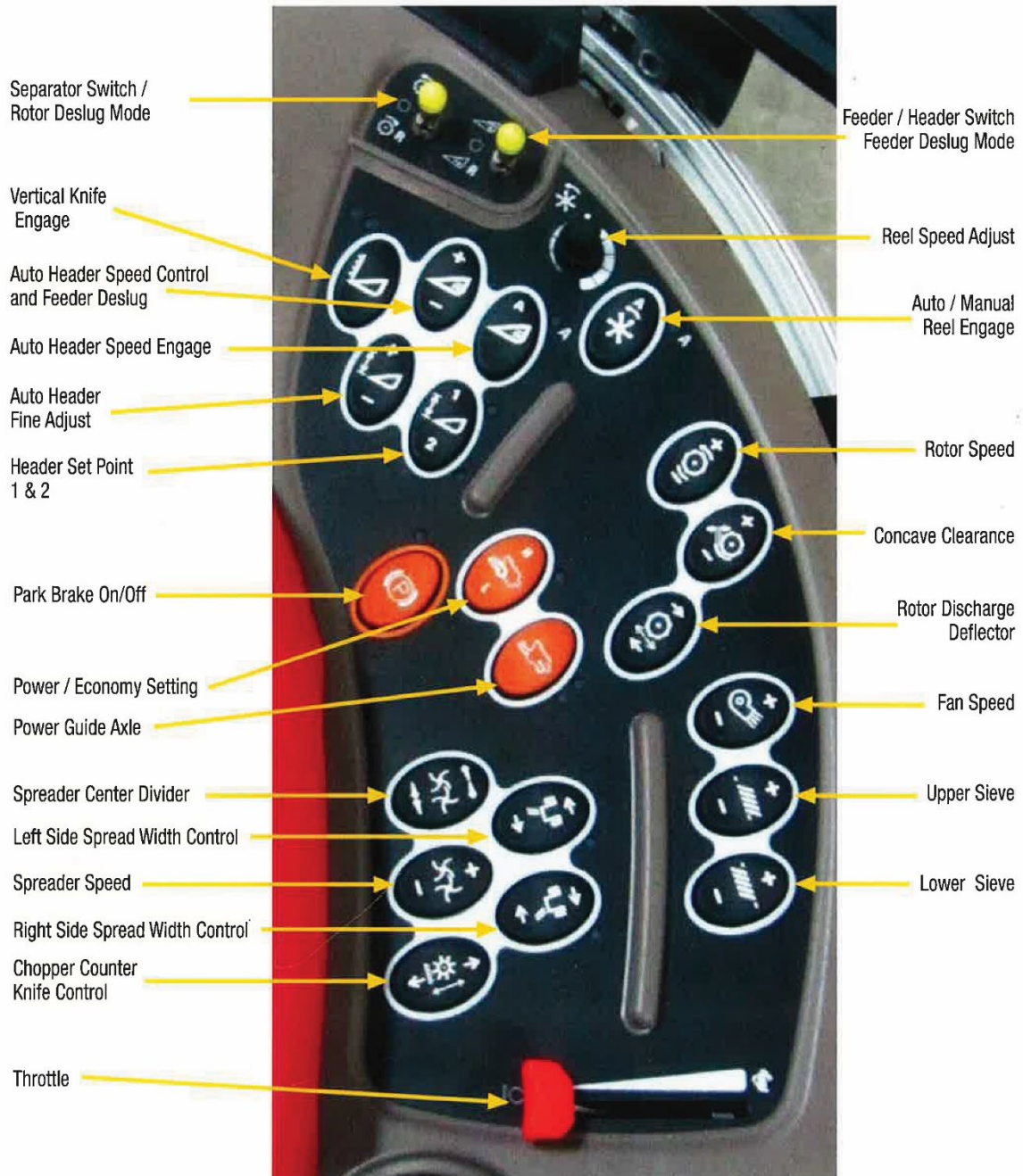
<sup>1</sup> Will fold corn header.

<sup>2</sup> Will operate corn header stripper plates.

## 230/240 Series Right Hand Console

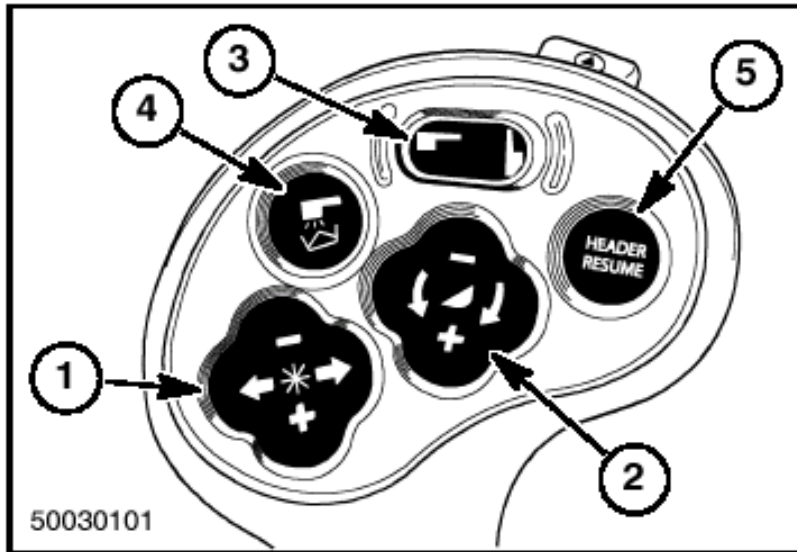
# Axial-Flow 230/240 Series Right Hand Console

The right-hand console switches are laid out in an arc pattern, grouped together for the convenience of the operator.





## 8010 – 8230 (Legacy Cab)



**1. REEL POSITION SWITCH,** This is a four-position switch which operates as follows:

**Raise** Push the bottom of the switch to raise the reel.

**Lower** Push the top of the switch to lower the reel.

**Forward** Push the switch to the left to move the reel forward.

**Aft** Push the switch to the right to move the reel to the rear.

**2. HEADER CONTROL SWITCH,** This is a four position switch which operates as follows:

**Raise** Press the (+) on the switch to raise the header.

**Lower** Press the (-) on the switch to lower the header.

**Tilt Left** Press the switch to the left to tilt the header counterclockwise (Lateral Tilt).

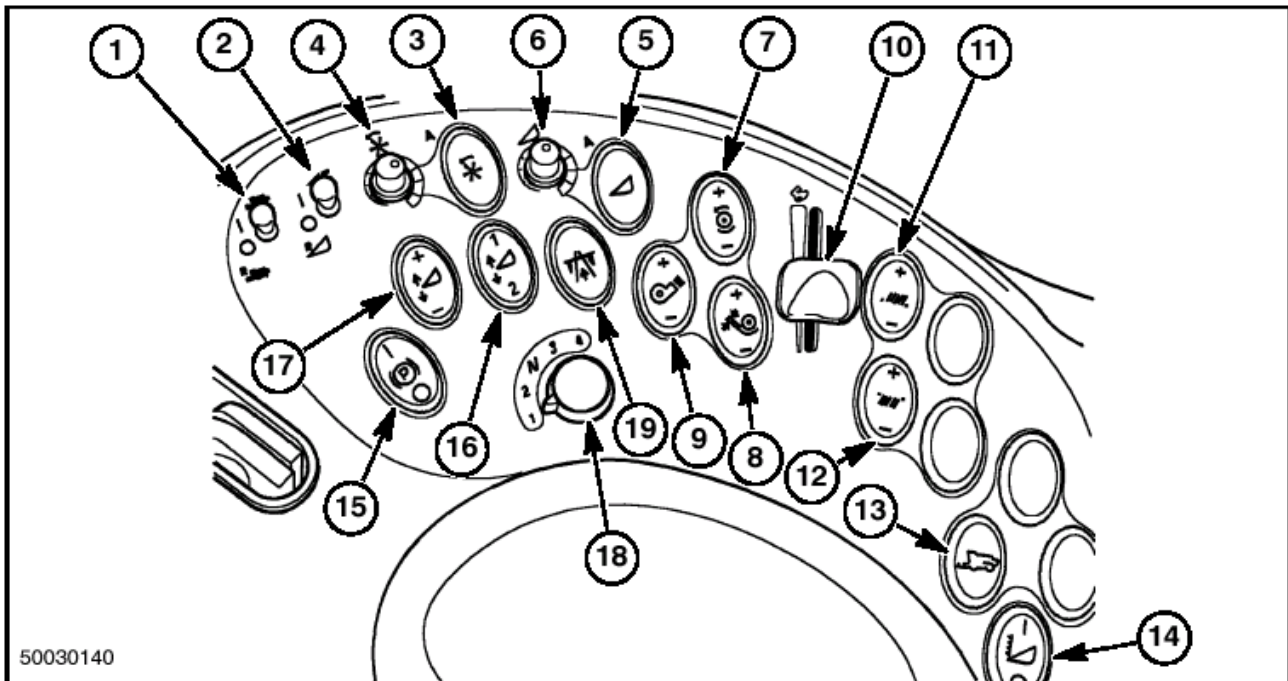
**Tilt Right** Press the switch to the right to tilt the header clockwise (Lateral Tilt).

**3. GRAIN TANK UNLOADER TUBE SWITCH,** Push the left side of the switch to swing the unloader tube out. Push the right side of the switch to swing the unloader tube in. The middle position of the switch is the NEUTRAL position. Activating the switch when the tube is in motion will stop the unloader tube.

**4. GRAIN TANK UNLOADER DRIVE SWITCH,** To start the unloader, press the switch and then release it. To stop the unloader press the switch.

**5. HEADER RESUME,** While the height system is in Auto state, if the operator momentarily actuates the RESUME function, the height system will lower or raise the header to the working setting and mode specified in Setting #1 or Settings #2 for the appropriate header type.

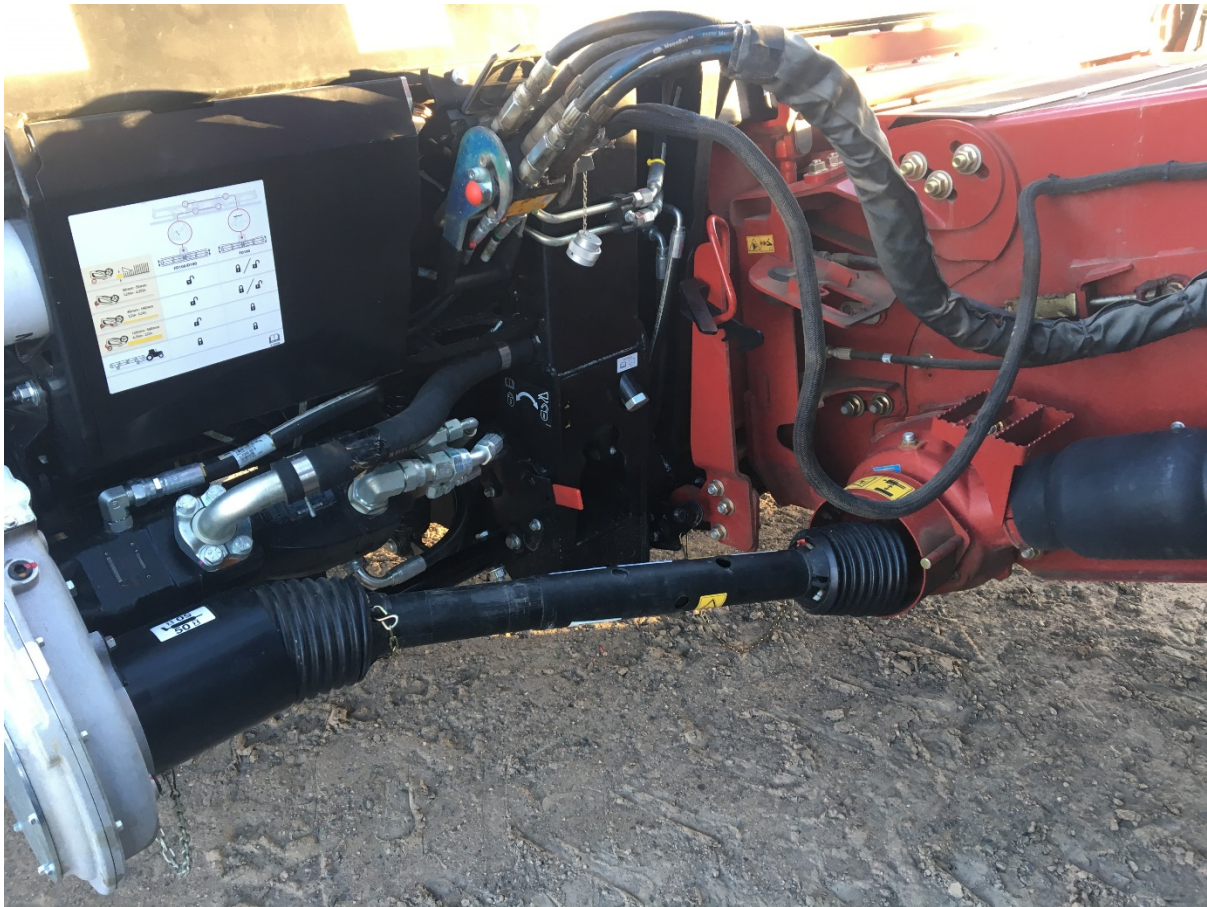
## Console



50030140

- 1. Separator Clutch Switch**
- 2. Feeder Clutch Switch**
- 3. Auto Reel speed selector switch**
- 4. Reel speed potentiometer control**
- 5. Auto/Man header/feeder drive switch**
- 6. Header speed potentiometer control**
- 7. Rotor speed control switch**
- 8. Concave position control switch**
- 9. Cleaning fan speed control switch**
- 10. Throttle control lever**
- 11. Upper sieve control rocker switch**
- 12. Lower sieve control rocker switch**
- 13. Power guide axle switch**
- 14. Vertical Knife switch (if installed, Europe only)**
- 15. Parking brake switch**
- 16. Auto Header Height Set control**
- 17. Auto Header Height Fine Adjustment control**
- 18. Gearshift selector switch (1--2--N--3--4)**
- 19. Field/Road mode switch—Safety**

## Header Info Connections



### PTO

PTO has about 30° movement to help facilitate the alignment of the PTO. This is not a fault. Pulling off the sliding shaft and greasing the slide will help with connection. Ensure you test the yoke to make sure that the locking collar has slid back and the yoke has locked on properly.

### Hydraulics

Hydraulics are connected via a “Fast Coupler” connecting 5 hydraulic connectors at the same time. Always ensure you don’t have a ram on the top link or reel fully extended or retracted when disconnecting the hydraulics. Pressure can build up in the system when disconnected and in the sun creating very high pressures. Next time you connect, it can blow out an O-ring due to the pressure.

## Latch



Latch will be sent out adjusted to suit your draper front.

If you need to adjust it for a pickup head, loosen off these bolts and adjust. Remember to reset when you get back to your draper head.

## Float locks on D1 & FD1 series



### **Locked position**

Float locks are designed to be locked up like this when you put your front down on your comb trailer.

Ensure you unlock them when operating. Damage will occur operating the header with the float locks still locked in.



**Unlocked Position**

Float locks shown  
unlocked – operating  
position.

Ensure you unlock  
both Left & Right  
sides.

**Float locks on D60, FD70, D65, FD75, 2152, 2162**



**Locked position**

Float locks are designed to be locked up like this when you put your front down on your comb trailer.

Ensure you unlock them when operating. Damage will occur operating the header with the float locks still locked in.



**Unlocked Position**  
Float locks shown  
unlocked – operating  
position.

Ensure you unlock  
both sides.

## **Electrics**

The electrical connector must be connected to operate a number of functions.

- Auto Header Height (AHHC)
- Top link – header tilt
- Header recognition

Ensure you “wiggle” the connector when twisting the ring on the connector. This will ensure all the pins fall into place as it’s connected.

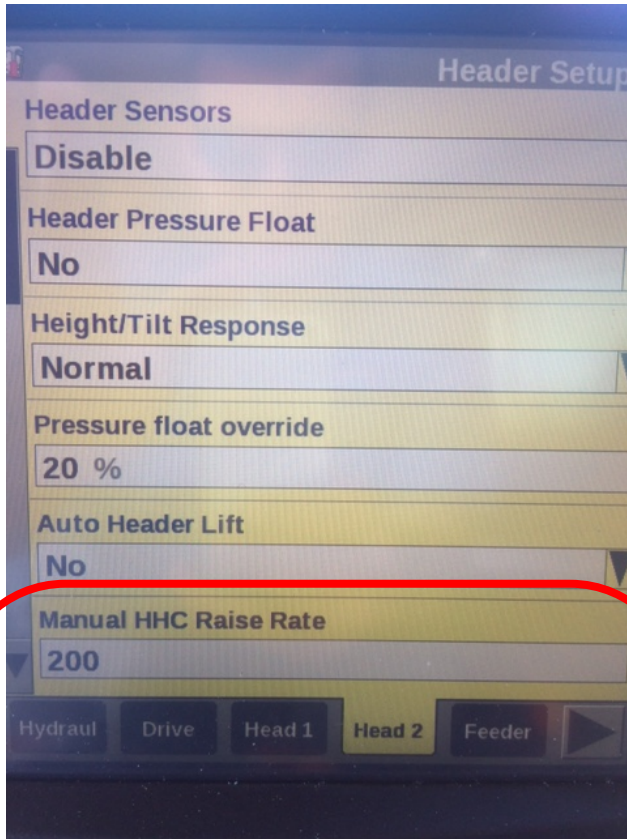
Line up the large pin with the same large slot in the connector.

Ensure to disconnect the harness from the connector on the front before driving away.



## Controls

### Raise Rate/Lower Rate



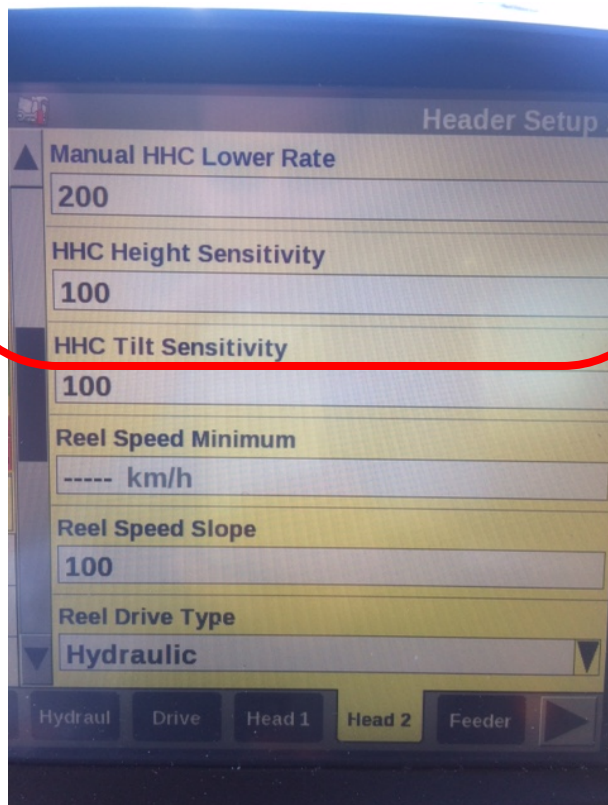
You can change the manual raise and lower rate of the header.

Go to:  
Back>Toolbox>Head2  
>Manual HHC Raise Rate or Manual HHC Lower Rate. This will affect your manual raise & lower rates.

HHC Height Sensitivity will influence the raise & lower rates with RTC Mode and AHHC Mode

Range is 0 to 250

0 least sensitive  
250 most sensitive



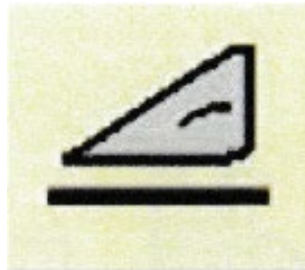
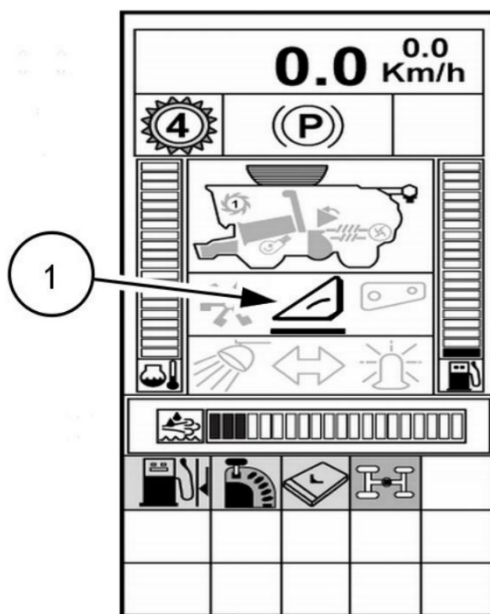
## Manual height

This is the mode you will be in when you haven't selected any mode. Just lifting and lowering will mean you are in manual height. If you have set the header height in your run screen layout, you should see that it will give the actual height in percentage and also say "Manual Height"



## RTC

Return to cut gives two pre-set positions you can quickly return back with a touch of the "RESUME" button on your MFH.



When in RTC, the height (when set on your run screen) will show the height plus say RTC.

In your left hand screen – the icon of the header (1) will now show as a dark colour plus a straight line under it. This indicates a RTC mode is being used.



To set your RTC height – lift the header to the desired height and press the 1 or 2 button on the console. It will light up a light besides the number you have set the height to, so you know which pre-set you are on.

(You must have the rotor and header engaged for RTC to work)

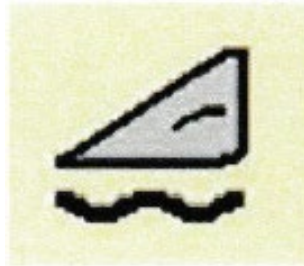
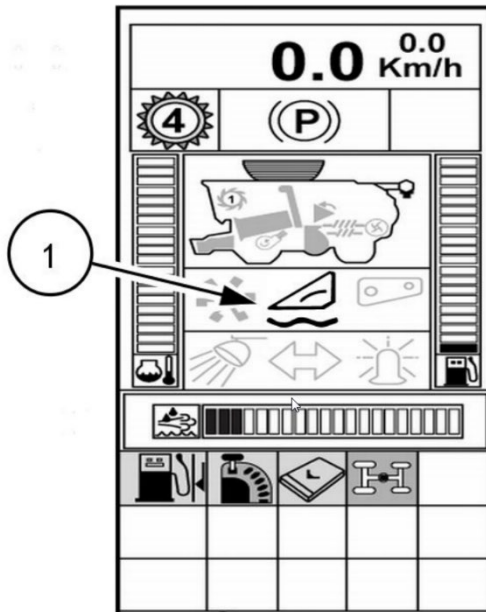


If you want to change the height – just lift the header up and press the button again. Easier still is when you are at the height (and LED light besides the pre-set is on) just press either the + or – button to change the setting. This is now the saved setting when you release the button. Touching the lift or lower button on the MFH will mean you drop out of RTC mode and you are now in Manual mode

If you find that it always goes into AHHC mode instead of RTC - even when your front is off the ground – You've probably got the wheels touching the ground with too much pressure and moving the float optimiser sensor. Lift the front so everything is off the ground. Reset height and then adjust to desired height with the +/- buttons

## AHHC

AHHC or Auto Header Height Control is used to enable the header to follow contours of the ground.



When in AHHC, the height (when set on your run screen) will show the height plus say AHHC. Note – the height shown on the Pro700 run screen will be a different set of numbers than it shows as Manual Height. This is because the two height modes use two different sensors.

In your left hand screen – the icon of the header (1) will now show as a dark colour plus a curved line under it. This indicates AHHC mode is being used.

### THIS IS NOT FLOAT MODE



To get to AHHC mode – lower the header to the ground until it actually touches the ground and moves the indicator on the float optimiser. Touch pre-set 1 or 2 and the indicator light will light up showing you which pre-set you are set to.

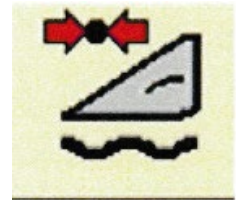
(You must have the rotor and header engaged for AHHC to work)



If you want to make changes to the height – it will be the same as adjusting the RTC mode. Use the + and – buttons to make changes to the pre-sets.

### Header Pressure Float

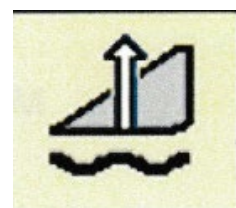
Pressure float is not used on the MacDon heads. It is enabled in Back>Toolbox>Head2>Header Pressure Float. It is used on the CNH fronts (3100 Series) and should *not be* enabled on MacDon heads.



### Pressure Float Override

Pressure float override is basically a protection for the header. If the front hits an object and the AHHC can't move quickly enough or doesn't know – or you are in RTC close to the ground and it hits something immovable, the Pressure Float Override will take over and lift the front for protection.

You can change how it operates in Back>Toolbox>Head2>Pressure Float Override. It will have a scale of 0-50%. Default is usually 20%. It monitors the weight on the feeder lift rams and if this pressure drops due to something lifting the front, it will increase pressure on the lift rams to rectify the situation thereby protecting the head. If you find that the front cycles up and down with a strange symbol on the header icon of the left hand side of the Pro 700 screen – increase this up till it doesn't do it anymore. (Pressure float override icon shown to the right) It will be mostly prevalent on pickup heads where some of the weight has been taken off the feeder by the front wheels running along the ground. Normal operation of a draper front shouldn't be an issue unless you have a lot of pressure on your gauge wheels.



## Headland Mode & Resume Button

At the end of a run and you get to the headland, rather than lifting the header up with the raise switch on the MFH, use the combination of buttons – shift and resume on the MFH. This will automatically lift the header to your pre-set position. It will also stop counting hectares and stop logging data, plus it will also allow auto level in headland.

While in Headland mode, you can make changes to the settings of the combine.

When you go back into your crop - press the “resume” button, the header will resume back to the last mode you were using, either RTC or AHHC height. Data will start to be re-logged and area will be accumulated again.

You can tell if you are in headland mode by looking for the “H” symbol in the gear icon in the left screen.

The “1” symbol in the gear indicates harvesting in either AHHC or RTC mode.

If you want to change the height that the header goes up to when using Headland Mode – go to Back>Toolbox>Head1>Maximum Work Height. You will see a bar graph. Move the header to the height you want it to go to and then press the “set” button. A red line will now line up with the black bar and you can press enter to finish.

Just be careful setting the maximum work height too low. If you try and harvest above this set height, it will see yield, but can't log it as the header is higher than this. It may give you a warning of “grain flow detected, but not logged” Just go in and reset your maximum work height to something that is higher than your harvesting height.

## Auto Level in Headlands

If you want to have the header re-level itself when you get to the end of the run – enable the Auto Level in Headland mode from Back>Toolbox>Head2>Auto Level in Headland.

When you use the shift-resume combination, the header will lift up and level itself up to 0°

## All Macdon Fronts – Knife Sections and Hold Downs

### *Daily Check – Very Important*

As part of an operator's daily routine the knife should be:

- Inspected for damaged Knife Sections or Knife Guards
- Replaced if required
- And **adjust hold downs** to ensure the knife is cutting cleanly and efficiently

**Hold down Clearance from Macdon:**

**Pointed Knife Guard Hold Down: 0.1 – 0.6mm**



**Double Knife Centre Guard Hold Down: At hold down tip: 0.1 – 0.4mm**  
**& At Rear of Hold Down 0.1 – 1.0mm**

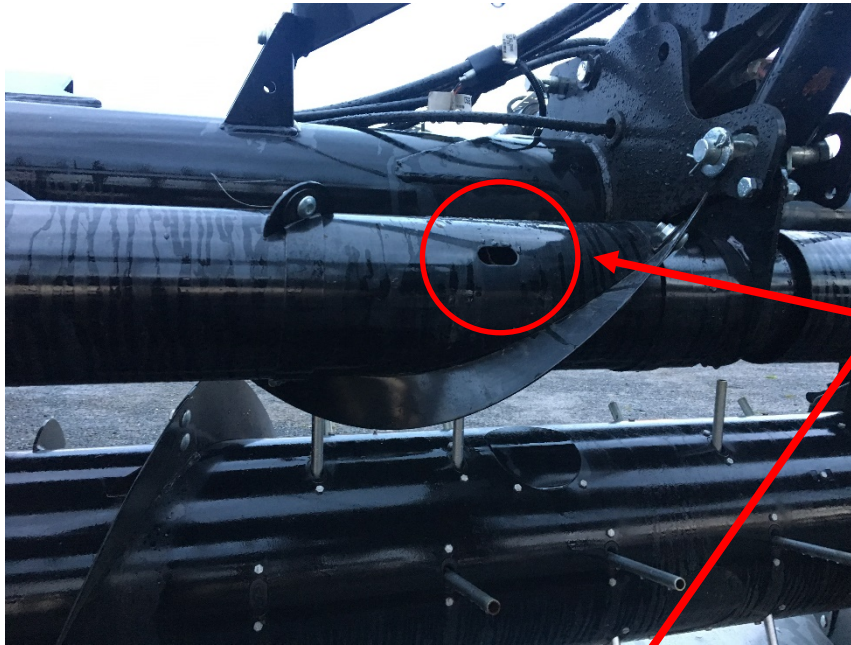


**Maintenance D100, FD100 & FM100**

*Grease points*

*Daily*

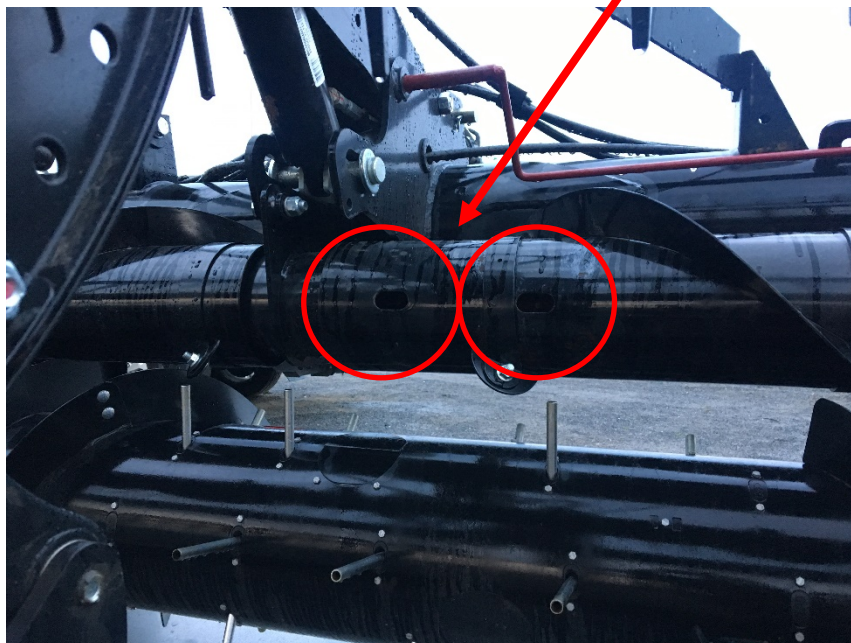
**Upper Cross Augers (If fitted)**



Macdon are recommending that any front that is fitted with a new Upper Cross Auger to leave it running all the time for the first season.

Do not turn it off.

Also greasing of the upper cross auger should be carried out daily.





**Maintenance D100, FD100 & FM100**

*Grease points*

**25hr**

**Knife head(s)**



Knife heads only need to be greased every 25 hours. Do not over grease. Over greasing will cause knife head wear or breakage.

Watch the pitman arm to knife head and check the gap as you are greasing. As soon as it starts to move the slightest – stop greasing.

**50hr Intervals**

**Centre draper roller**



FRONT RIGHT

There is one on each side of the centre draper roller. Grease at 50 hours. You can get to them from under the cutterbar



FRONT LEFT



### Rear centre draper roller

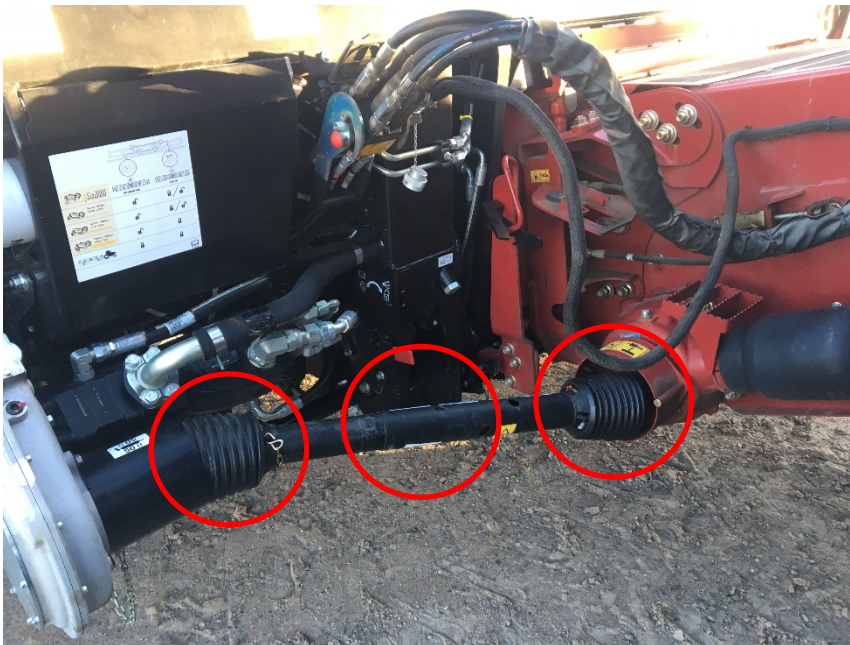


There is only 1 grease point on the rear - RHS of the draper roller as the other side has no bearing due to the drive motor acting as a bearing.

Depending on the year model of your front the sticker may say 50hrs but this should be done:

**Daily or every 10 hours!**

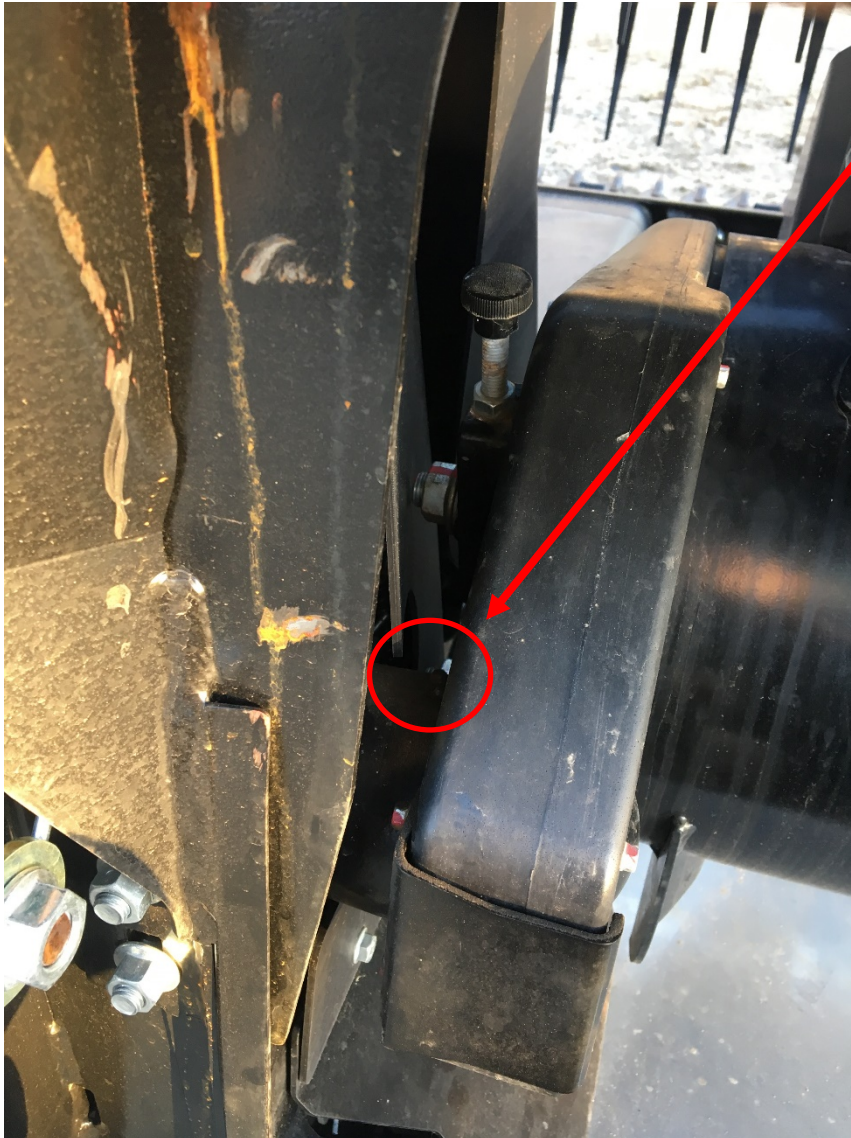
### PTO Drive shaft – 50hr



Grease points located at each end universal joint.

Lubricate the centre of the shaft also

**100hr**  
**RTD pivot LHS**



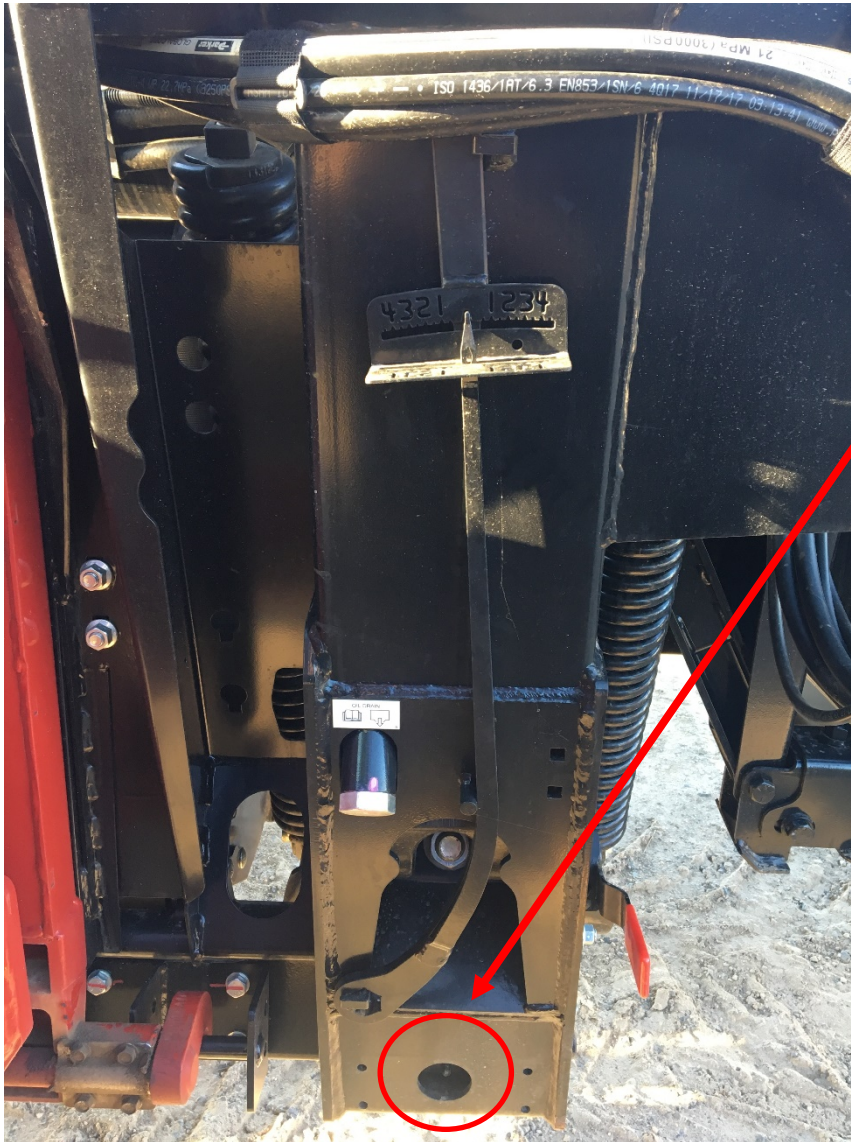
Shows LHS pivot on  
FM100

**RTD pivot RHS**



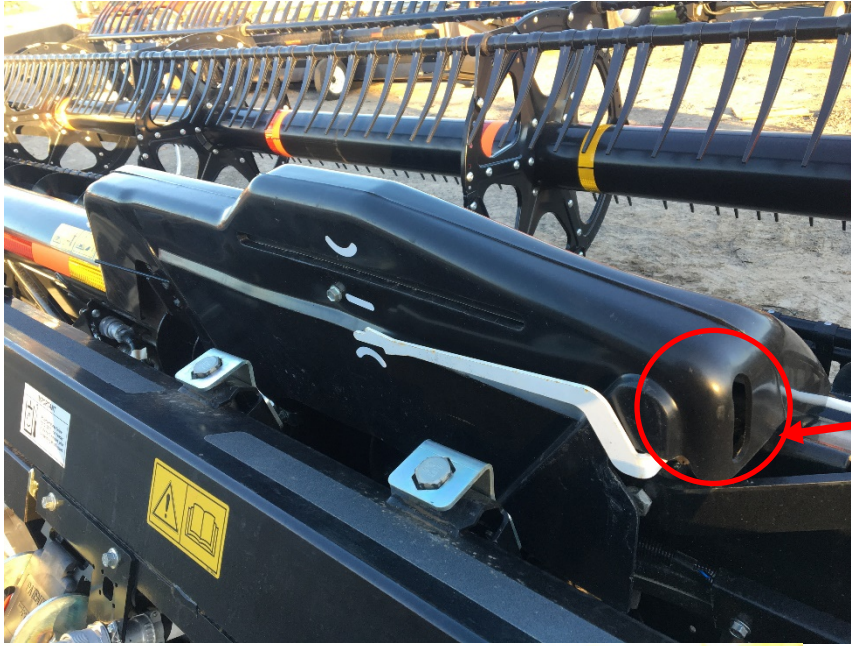
Shows RHS pivot on  
FM100

**Float pivots**

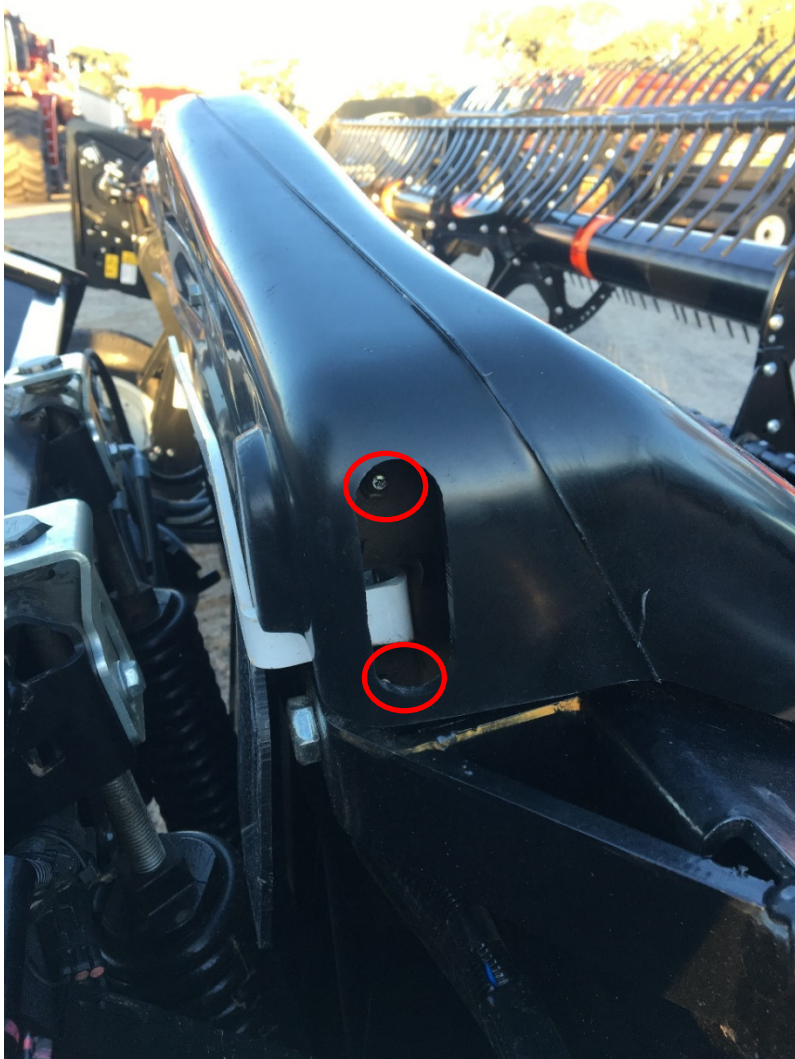


There is a float pivot grease point on each side of the FM100

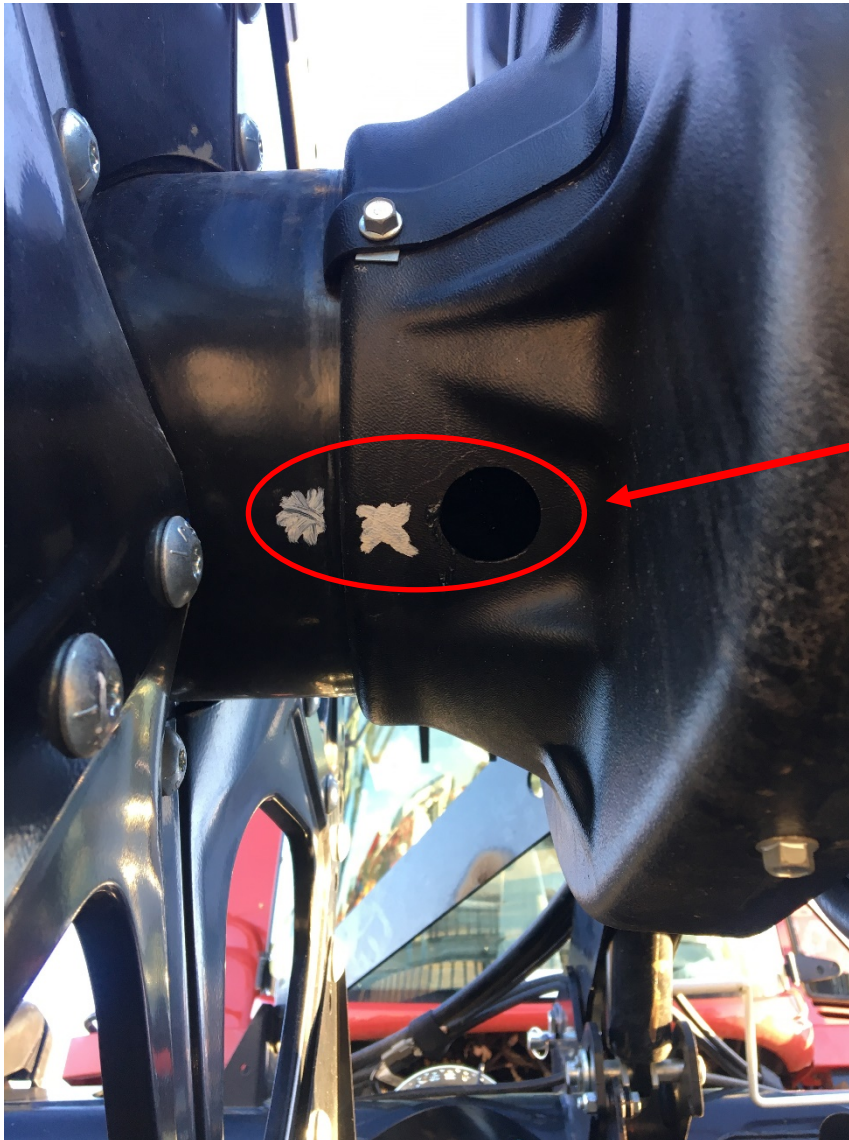
**Flex linkages**



On flex fronts – pivots on the fulcrum arm need greasing. Remove the plastic guard to get to them. There are 2 grease points in the area circled on both the left and right



**Reel drive**

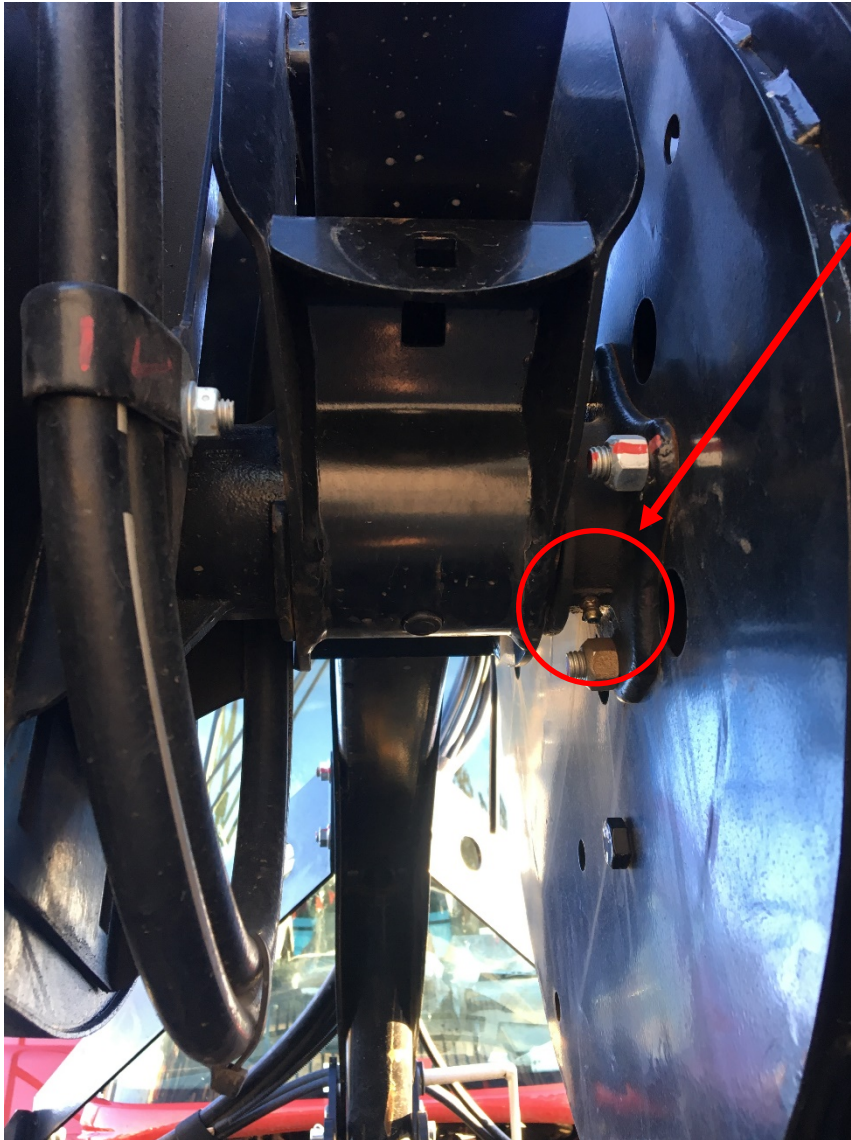


There is a universal joint on the drive of the reel. You will need to turn the reel around till the grease point lines up with the hole. Sometimes it's helpful to put a paint pen mark on the reel to the cover to line up when greasing. As Shown



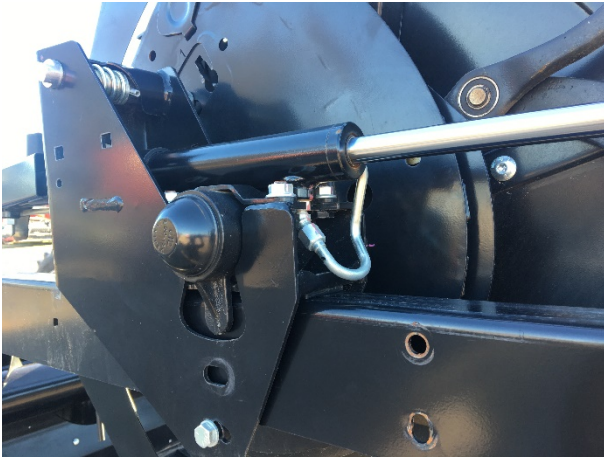
**250hr**

**Centre Reel Bearing**



These are bearings and not bushes. Don't over grease

**500hr**  
**Reel bearings**



Right Hand Reel Bearing. These are bearings and not bushes. Don't over grease as you can push out the dust seals and damage them.

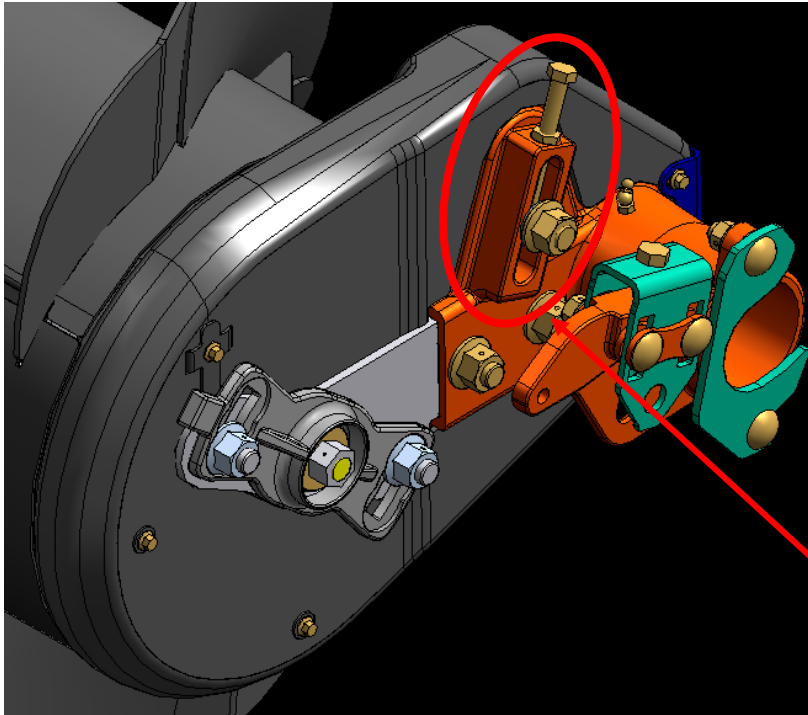


Right hand side



Left Hand side

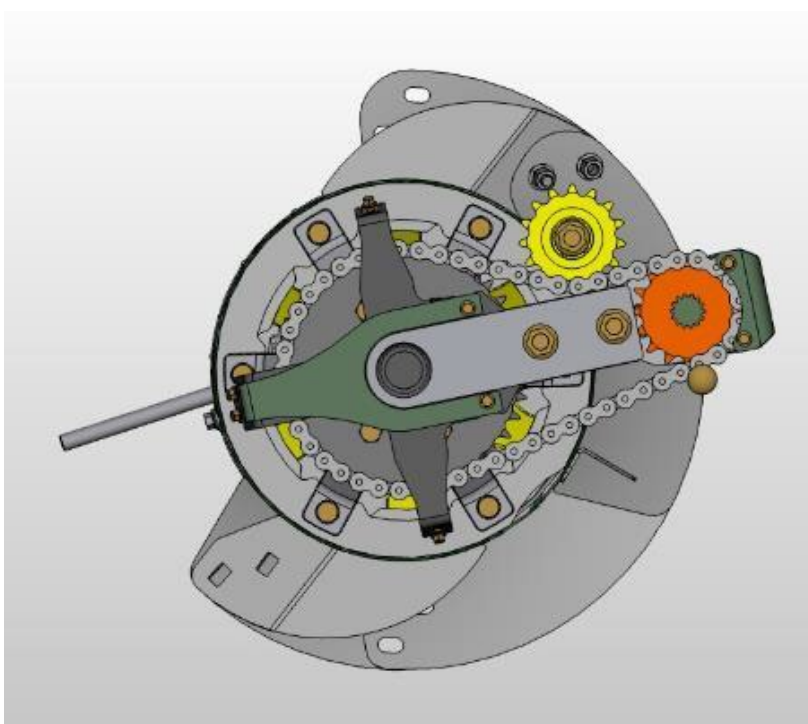
## RTD Drive Chain – D1 & FD1 Series



The RTD drive chain gets loaded up and can stretch – especially when direct heading canola.

With the front disconnected from the combine, grab the RTD and rock it back and forward. Any more than 20mm movement you should adjust the idler.

Movement range:  
5 – 20mm



The idler is on a threaded adjuster on these models

### **Knife guards**

There are 5 different types of knife guards along a dual knife drive front. Ensure you use the correct ones.

The first 4 at each end closest to the knife drive will have no rear ledger plates. This is to give the knife a little movement forward and backwards to allow for the travel arc of the pitman arm as it operates.

The centre section is different as well to allow for the overlap of the LH & RH ends of the knife. This guard is adjustable.

### **Knife sections**

There are two main types of knife sections. Coarse and fine. Fine is mainly used in windrower fronts to help with cutting green material. We find that the coarse sections keep sharper longer when harvesting dry crops.

There is also some different sections in the centre of the front where the ends of each knife crosses over one another. It's best to purchase a knife overlap kit as they are a very specific knife section with chamfers on the front side of some and back side of others. The kit also is supplied with some chamfered bolts that are specific to the overlap.

### **50 hr service**

A 50-hour service is required on all new fronts.

## Main Gearbox

The main gearbox oil will be drained and refilled with 85W/140 gear oil.

Thereafter drain at 1000 hrs and refill to level with 85W/140 oil. Earlier main gearboxes that have a black plastic cover need to be rotated around to allow draining. Oil is drained through the level plug. If you have a steep dam bank or similar – drive the combine up the dam bank with the feeder fully raised, and you will be able to drain the oil without rotating the box.



Later model fronts will use a cast aluminium housing. These have a drain plug in the bottom to ease the drain issues of the plastic cover gearboxes.

Lower the header to the ground and check the level at the rear plug.

## Knife drive gearboxes

Knife drive gearboxes are drained at the first 50 hours. Thereafter should be drained at 1000 hours.



When changing the oil – drain plug is located at the rear of gearbox.

To fill up again – ensure that the wobble box is level at the top. Fill with approximately 2.2 litres of 85W/140 oil.



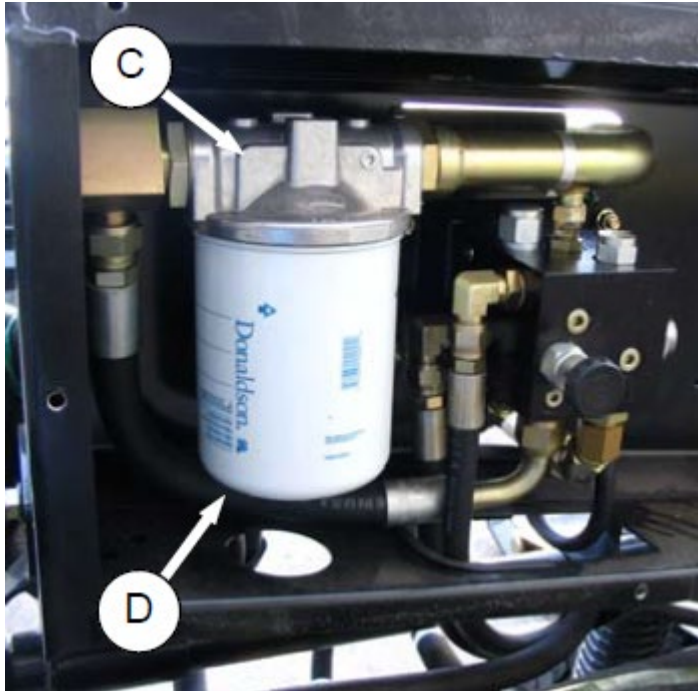
Remove the dipstick which is located under the breather. Remove and clean. Drop dipstick to the threads and remove again. There is a ring that shows the correct level.

### Filter Replace

Hydraulic oil filter will be replaced at 50hrs then it should be replaced at 250 hours thereafter.



Diagram to the left shows filter location on D1 & FD1 series



D60, FD70, D65 & FD75 Oil filter is located behind the panel that covers the draper adjustment lever/knob

Just be aware – there have been a few different styles of filters in the past 5 years. Ensure you have the right one including the same sealing ring.

*There are differences*



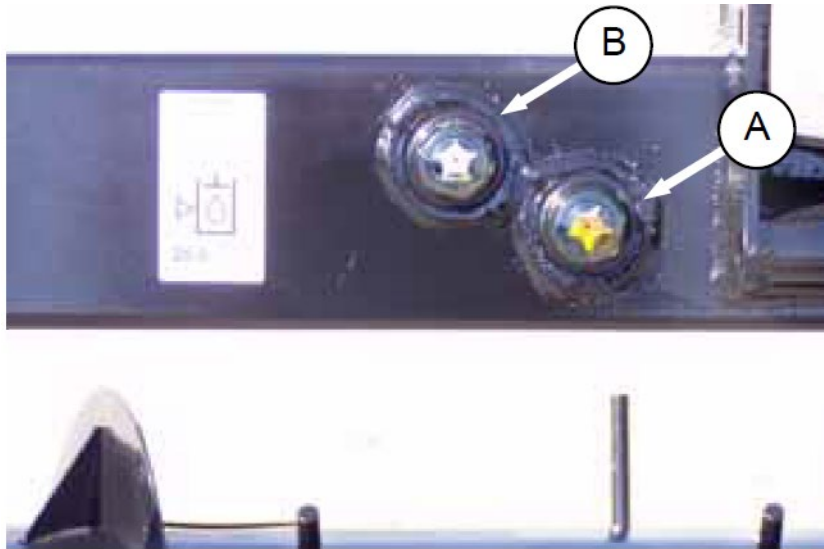
## Hydraulic Reservoir

The hydraulic reservoir is the main adapter frame. The level is two clear sight glasses on the top tube.

## IMPORTANT

**D60, FD70, D65 & FD75 - Only use engine oil 15W40**

**D1 & FD1 Series – Use Hydraulic oil**

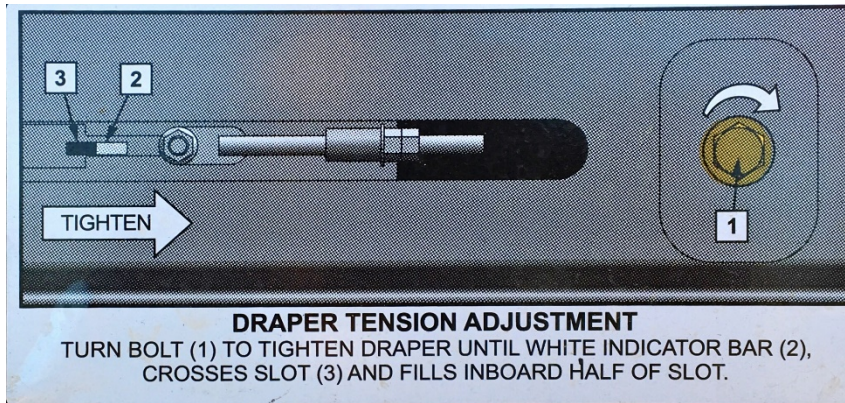


Hydraulic oil level should completely cover the bottom sight glass (A) and just into the top sight glass (B) when the header is just touching the ground and top link fully retracted.

### Centre Draper Tension

Centre draper tension is adjusted via a pull bolt at each side of the centre draper. Adjust up till the front of the plate that fits inside the RHS Tube aligns with the front of the RHS tube.

### Side Draper Tension



Draper tension should be checked periodically. Tighten till the white marker is central in the rectangular window.

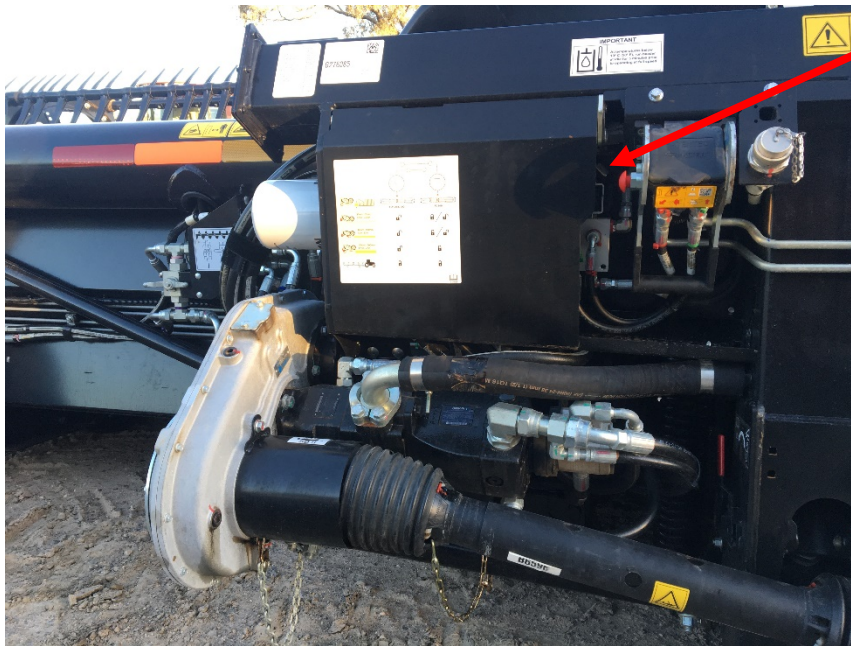


Tension with a 15/16<sup>th</sup> spanner. Clockwise tightens the tension – anti-clockwise loosens the tension off.

## Side Draper Speed

Draper speed is changed by the adjuster at the LH rear of the header. There are three types depending on the age of the front. The earlier ones are screwed in to slow them down/out to speed up. Newer ones have a lever that you roll around to your desired speed. Don't over-do the speed. You are trying to get the centre draper evenly covered with material, rather than throw it all to the middle of the centre draper mat.

This will not adjust the centre draper speed.



Location of Draper speed adjustment on D100 & FD100  
Lift the panel up to view easily



D100 & FD100 style adjuster:  
Set to 6 or 7 for a starting point.



D65 & FD75 Draper  
speed adjuster  
variation



Oldest style draper  
speed adjustment.  
Wind this one all the  
way in then out 2 ½  
turns. This is a good  
starting point.

### **Setting Floatation**

Your front should be set at PDI for cereals. Pivot pins often are tight from new, so it may quickly get lighter. If you want different characteristics with it, you can reset the floatation. Be aware that changing this setting can have different effects on the head that you may not expect. When harvesting on the ground – i.e. lentils, chickpeas etc., you should have your floatation set a little lighter than you would with cereals off the ground. Too heavy a setting when on the ground can mean you will wear out your skid plates prematurely.

The correct settings is when you lift either end of the front, it weighs 45-50kg for off the ground working and 35-40kg for on the ground workings. Don't guess – use a spring scale or the lever supplied with later model heads.

## MacDon FD1 Draper Clinic Handout: Setup & Maintenance

# MacDon®



## *Draper Clinic Handout*

FD1 FlexDraper®

*The Harvesting Specialists.*

# Table of Contents

---

Flex vs Float .....	3
Break In Service – 5 minutes .....	4
Break In Service – 5 hours .....	4
Break In Service – 10 hours .....	5
Break In Service – 50 hours .....	6
Maintenance – Lubrication Specs Chart .....	9
Maintenance – 10-25 Hours .....	10
Maintenance – 50 Hours .....	11
Maintenance – 100 Hours .....	12
Maintenance – 250 Hours .....	14
Maintenance – 500 Hours .....	15
Maintenance – 1000 Hours or 3 Years .....	16
End of Season .....	17
Knife Maintenance .....	18
Adjusting Draper Tension .....	19
Operation Tips .....	20
Auto Header Height Control .....	22
Slow Speed Transport / Stabilization Wheel Option .....	23
New Performance Options .....	24
Quick Card .....	25

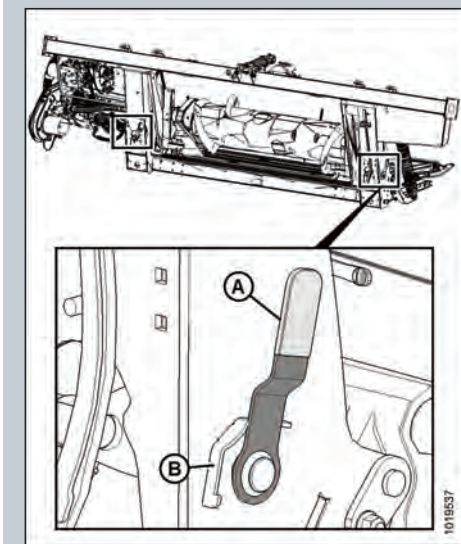
# Flex vs. Float

## When to Lock and when to Unlock

**Float** – refers to the vertical separation (or movement) of the Header from the Float Module.

**Flex** – refers to the movement of the 3 piece header frame including the knife.

## Float



Always **Lock Float** for transport.

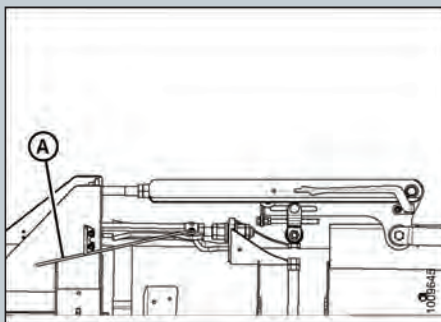
Always **Unlock Float** when operating in the field.

Handle position **(A)** is locked for transport.

Rotate handle to position **(B)** for field operation.

2 latches – one on either side of Float Module.

## Flex

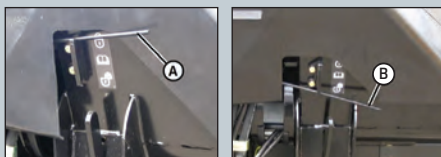


Always **Lock Flex** for transport.

Can be either locked or unlocked in the field.

2 latches either side. Each wing works independently.

Reel moves with cutterbar to maintain close relationship with knife.



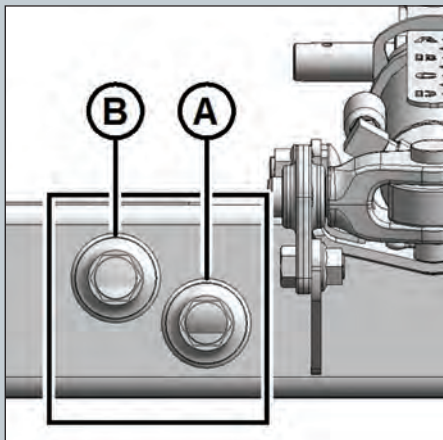
Left picture shows handle **(A)** in wing locked position.

Right picture shows handle **(B)** in wing unlocked position.

# Break In Service

## 5 Minutes

Check hydraulic oil level in reservoir (check after first run-up and after hoses have filled with oil).



Check the oil level when oil is cold, with the cutterbar just touching the ground and with center-link retracted. FM100 adapters use **Single Grade Trans-hydraulic Oil**.

### Normal terrain:

Maintain level so lower sight (**A**) is full, and upper sight (**B**) is empty.

### Hilly terrain:

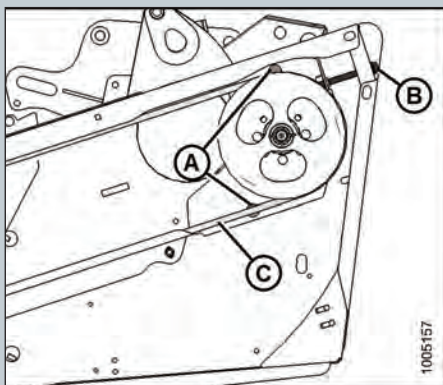
Maintain level so lower sight (**A**) is full, and upper sight (**B**) is up to one-half filled.

Refer to **Section 5.4 Hydraulics** in the Operators Manual for more information.

## 5 Hours

Check for loose hardware and tighten to required torque.

Check knife drive belt tension (check periodically for first 50 hrs).



A properly tensioned knife drive belt (**C**) should deflect 24–28 mm (15/16–1/8 in.) when 133 N (30 lbf) of force is applied at midspan.

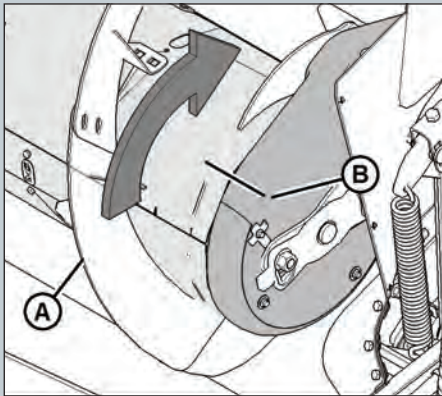
If the belt tension needs to be adjusted, loosen the two bolts (**A**) securing the motor assembly and turn the adjuster bolt (**B**) to move the drive motor until proper tension is set.

Refer to **Section 5.9.2 Knife Drive Belts** in the Operators Manual for more information.



## 10 Hours

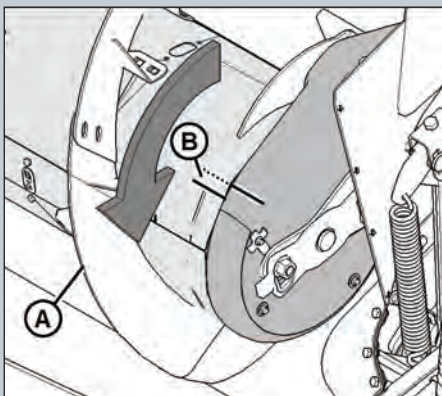
Check auger drive chain tension and knife drive box mounting hardware.



Rotate the auger **(A)** by hand in reverse direction, until it cannot turn anymore.

Mark a line **(B)** across the drum and cover.

Rotate the auger **(A)** by hand, in forward direction, until it cannot turn anymore.



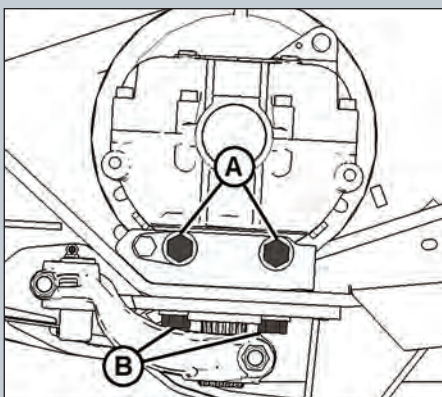
Measure the distance between the two lines **(B)**.

If the difference **(B)** is 3–8 mm (0.12–0.31 in.), no adjustment is required.

If the difference **(B)** is greater than 8 mm (0.31 in.), the auger drive chain tension needs adjusting.

If the difference **(B)** is less than 3 mm (0.12 in.), the auger drive chain needs adjusting.

Refer to **Section 5.7.2 Auger** in the Operators Manual for more information.



Check knife drive box mounting bolts.

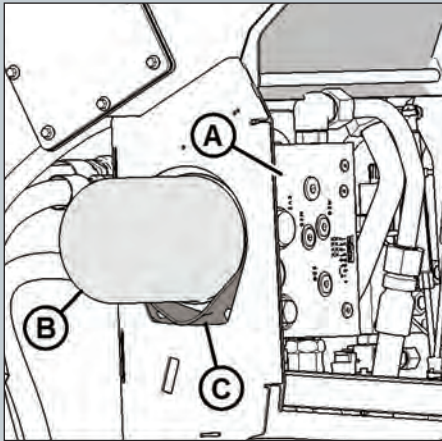
Torque the side bolts **(A)** first, then torque the bottom bolts **(B)**. Torque all bolts to 271 Nm (200 lbf-ft).

Refer to **Section 5.9 Knife Drive System** in the Operators Manual for more information.

# Break In Service

## 50 Hours

Change float module hydraulic oil filter. Change the oil filter after the first 50 hours of operation, and every 250 hours thereafter.



**New filter part number: 202986**

Clean around the mating surfaces of the filter **(B)** and manifold **(A)**.

Place a suitably sized container (approximately 1 liter [0.26 gallons]) under the oil drain spout **(C)** to collect oil runoff.

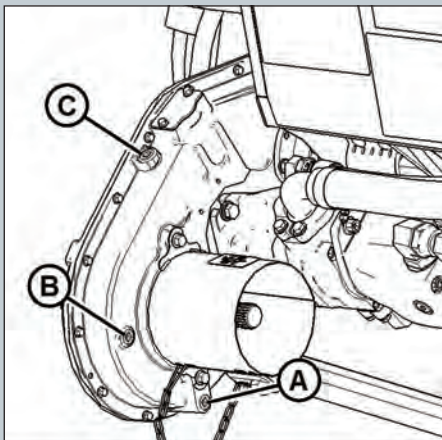
Remove the spin-off filter **(B)** and clean the exposed filter port in the manifold **(A)**.

Apply a thin film of clean oil to the O-ring provided with the new filter.

Turn the new filter into the manifold **(A)** until the O-ring contacts the mating surface. Tighten the filter an additional 1/2 to 3/4 turn by hand.

Refer to **Section 5.4.4 Hydraulics** in the Operators Manual for more information.

Change float module gearbox oil.



Remove the oil drain plug **(A)** and the filler plug **(C)**, and allow the oil to drain.

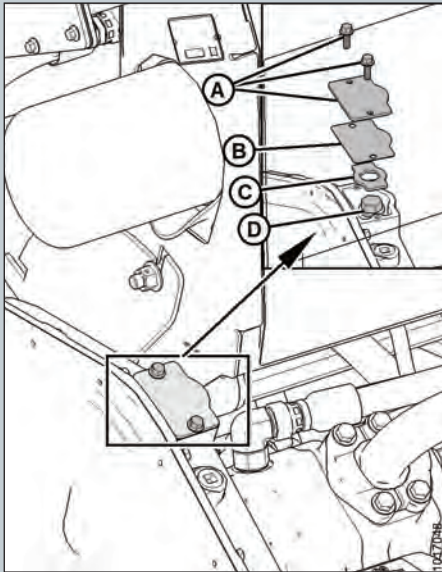
Replace the oil drain plug **(A)** and remove the oil level plug **(B)**.

Add SAE 85W-140 (API service class GL-5) oil into the filler plug **(C)** until it runs out of the oil level hole **(B)**.

**NOTE: The header drive gearbox holds approximately 2.5 liters (2.6 quarts) of oil.**

Refer to **page 387 – Lubrication and Servicing** in the Operators Manual for more information.

Check float module gearbox chain tension.



Remove two bolts and the chain adjusting cover **(A)**.

Ensure there is no gasket **(B)** damage.

Remove the retainer plate **(C)**.

Tighten bolt **(D)** to 6.8 Nm (60 lbf-in).

Refer to **Table 5.1** and back off (loosen) bolt **(D)** based on your gearbox configuration.

**NOTE: For proper tensioning, the chain should have 10–14 mm (3/8–9/16 in.) of deflection at its midpoint.**

Refer to **Section 5.6.5 Adjusting Gearbox Drive Chain Tension** in the Operators Manual for more information.

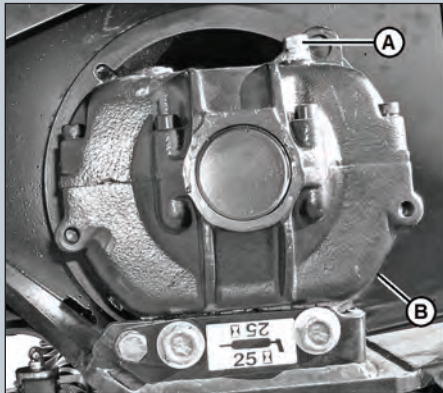
**Table 5.1 Adjusting Bolt Tightness on Configured Gearboxes**

<b>Gearbox Config</b>	<b>Gear Ratios</b>	<b>Back Off Amounts</b>
CLAAS	22/38 sprocket ratio, 74 pitch chain	1 turn
Case, New Holland, & AGCO (Challenger, Gleaner, Massey Ferguson)	29/38 sprocket ratio, 78 pitch chain	1 turn
John Deere	37/38 sprocket ratio, 80 pitch chain	2-1/2 turns

# Break In Service

## 50 Hours – Continued

Change knife drive box lubricant.



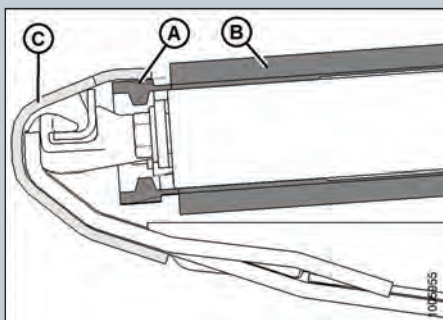
Raise the header and place a container large enough to hold approximately 2.2 liters (2.3 quarts) under the knife drive box to collect the oil.

Remove the breather/dipstick **(A)** and the drain plug **(B)**. Alternate drain plug located on forward side of the box. Drain the oil and replace the plug.

Add 2.2 liters (2.3 quarts) SAE 85W-140 to the knife drive box.

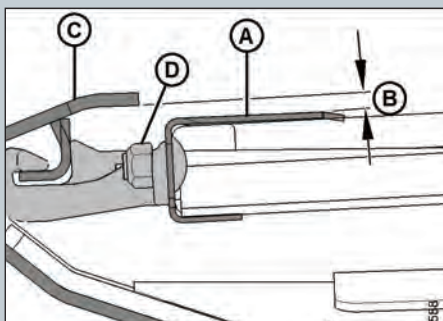
Refer to **Section 5.9 Knife Drive System** in the Operators Manual for more information.

Check side draper deck height adjustment.



Check that clearance **(A)** between draper **(B)** and cutterbar **(C)** is 0–3mm (0–1/8 in.) If not, rotate connector slat to topside, loosen tension on side draper, grab draper at connector slat and lift up and rearward to remove draper from under cutterbar and expose the deck support.

Prop draper up with bar. Measure and note the thickness of the draper belt.



Loosen the two lock nuts **(D)** on the deck support **(A)** one-half turn only.

Tap the deck **(A)** to lower the deck relative to the deck supports. Tap the deck support beside nuts **(D)** using a punch to raise the deck relative to the deck supports.

Adjust so that measurement **(B)** is the thickness of the draper plus 1mm as measured previously.

Tighten hardware then reinstall and tension draper. Recheck gap to confirm correct adjustment.

Refer to **Section 5.14.5 Header Drapers** in the Operators Manual for more information

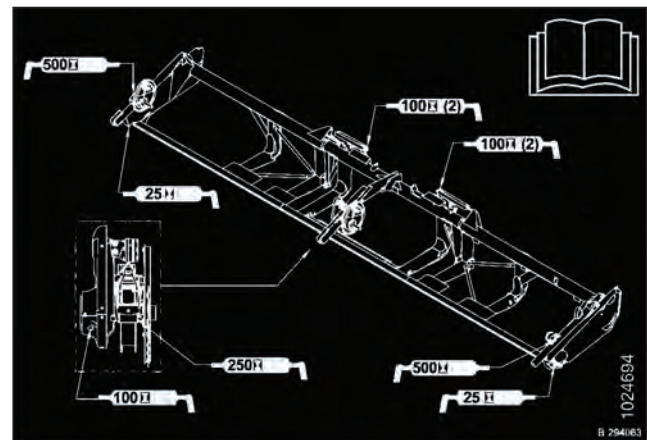
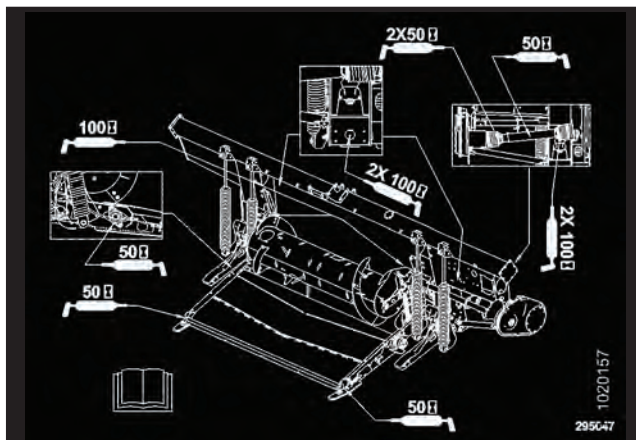
**NOTE: Correctly setting side draper deck height will limit the amount of material getting in between the drapers. This should prevent stalling and damage to side drapers.**

# Maintenance

Refer to **Section 5.3 Maintenance Requirements** in the Operators Manual for more information.

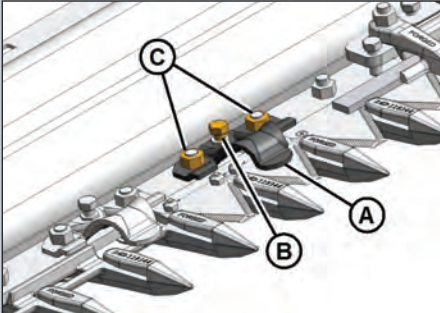
Lubrication Specs Chart				
Lubricant	Specifications	Description	Use	Capacities
Grease	SAE multi-purpose	High temperature extreme pressure (EP) performance with 1% max. Molybdenum Disulphide (NLGI Grade 2) lithium base	As required unless otherwise specified	—
		High temperature extreme pressure (EP) performance with 10% max. Molybdenum Disulphide (NLGI Grade 2) lithium base	Driveline slip-joints	—
Gear Lubricant	SAE 85W-140	API service class GL-5	Knife drive box	2.2 liters (2.3 quarts)
			Main drive gearbox	2.5 liters (2.6 quarts)
Hydraulic Oil	<b>Single grade trans-hydraulic oil recommended brands:</b> Petro-Canada Duratran John Deere Hy-Gard J20C Case Hy-Gard J20C AGCO Power Fluid 821 XL	Lubricant trans/hydraulic oil	Header drive systems reservoir	75 liters (20 US gallons)

## Grease Points



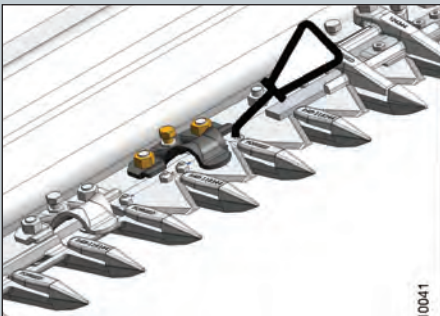
# Maintenance

## 10 - 25 Hours

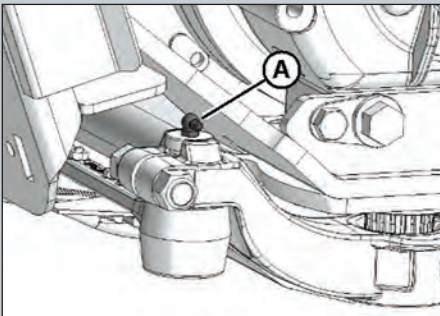


### 10 hours or daily

Check and adjust knife hold-down clips.  
Hold-down clearance is 0.1–0.6 mm (0.004–0.024 in.)



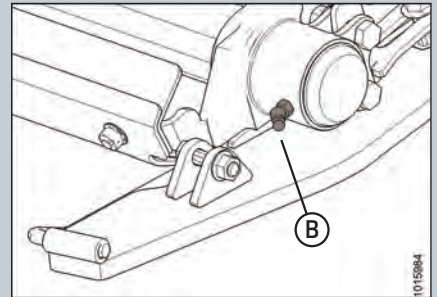
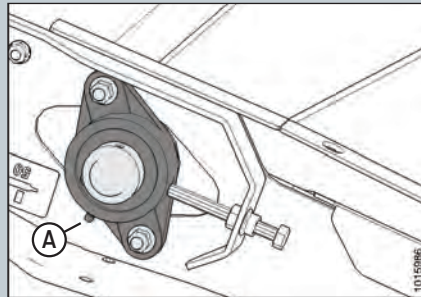
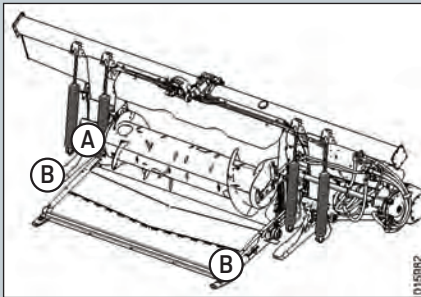
Checking knife hold downs daily will keep your knife performing at peak levels, prevent premature wear and ensure a longer life of all your cutting components (ultimately saving you money).



### 25 hours

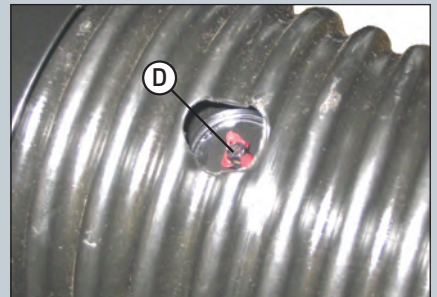
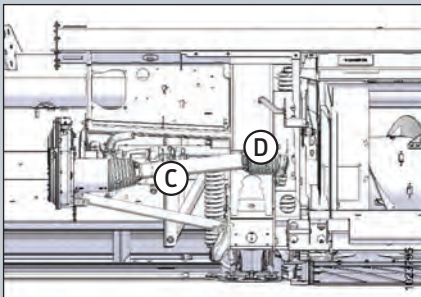
Grease knife head. 1-2 pumps only. **DO NOT OVER GREASE.**

# 50 Hours



**(A)** Drive roller bearing

**(B)** Idler roller bearing (both sides)

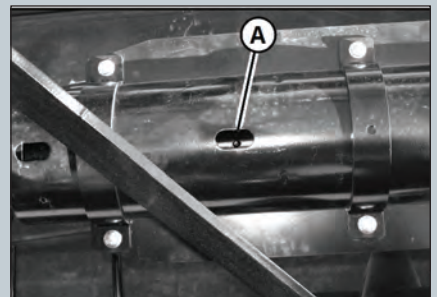
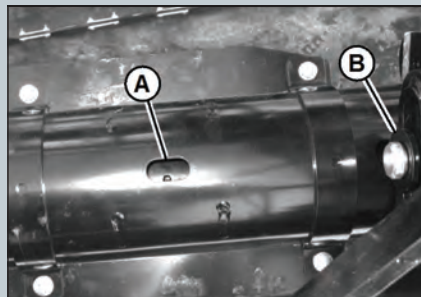


**(C)** Driveline Slip Joint

**(D)** Driveline Universal (two places)



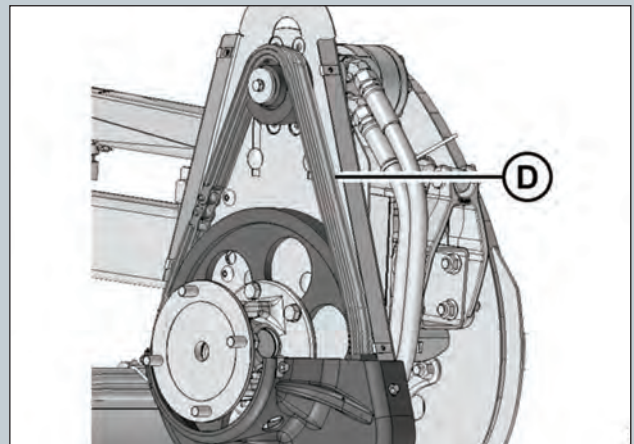
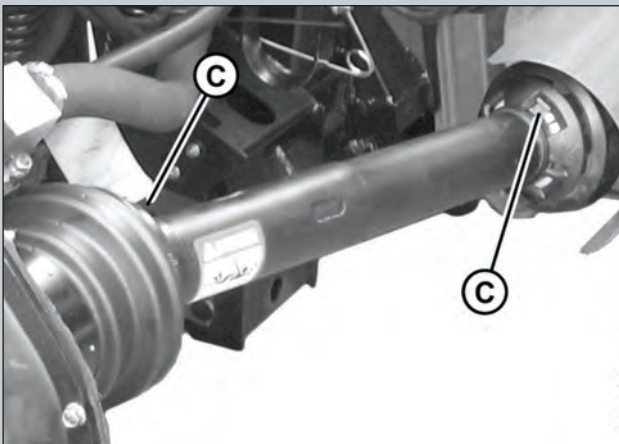
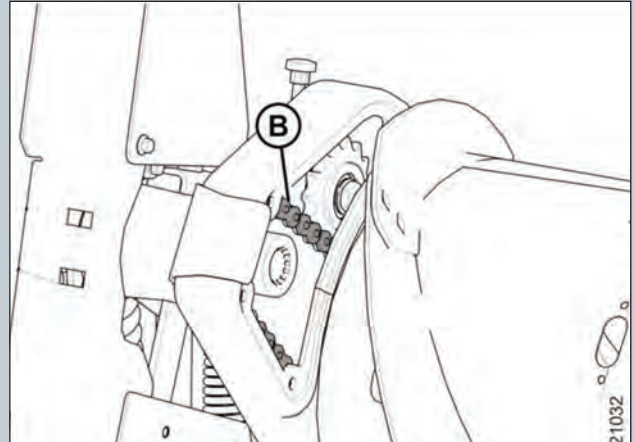
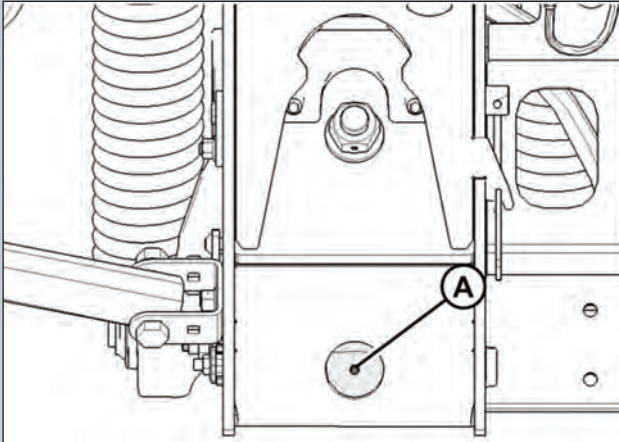
**Optional Attachment**



**(A)** Upper Cross Auger U-joint and Bearing – Upper Cross Auger Bearing (two places)

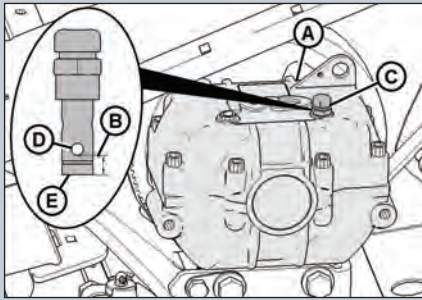
# Maintenance

## 100 Hours

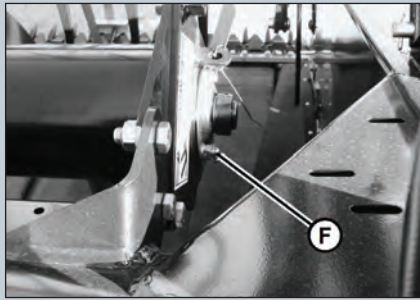


- (A)** Float Pivot – Right and left
- (B)** Auger Drive Chain
- (C)** Driveline guard
- (D)** Reel Drive Chain

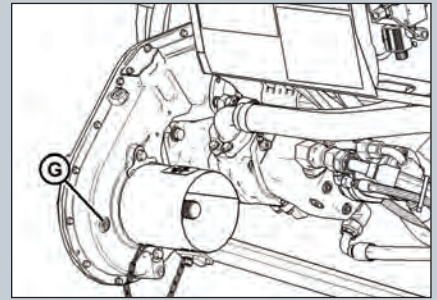




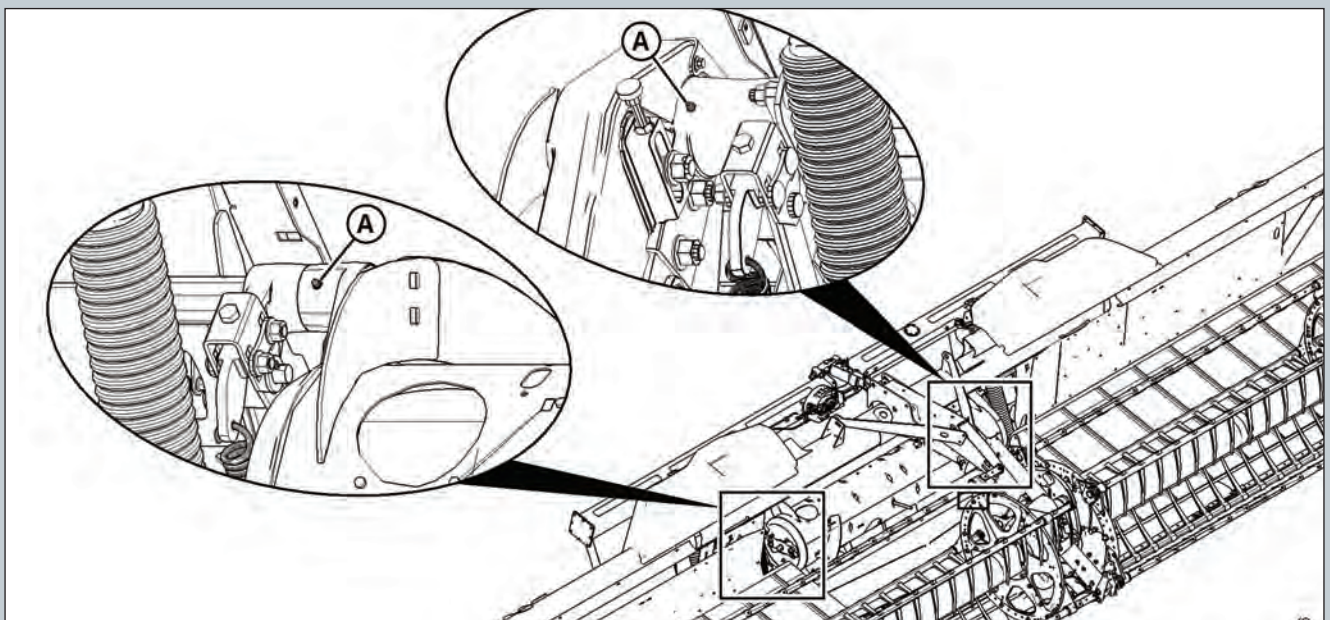
**(A)** Knife Drive Box [check oil level **(B)** on dipstick **(C)**: Between lower hole **(D)** on dipstick and dipstick bottom edge **(E)**]



**(F)** Upper Cross Auger Bearing  
**(Optional Attachment)** – one place)



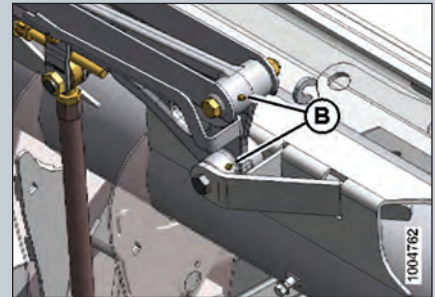
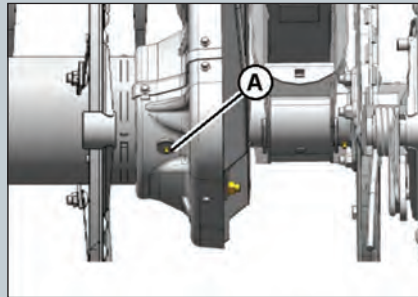
**(G)** Main Drive Gearbox Oil Level



**(A)** Auger Pivots

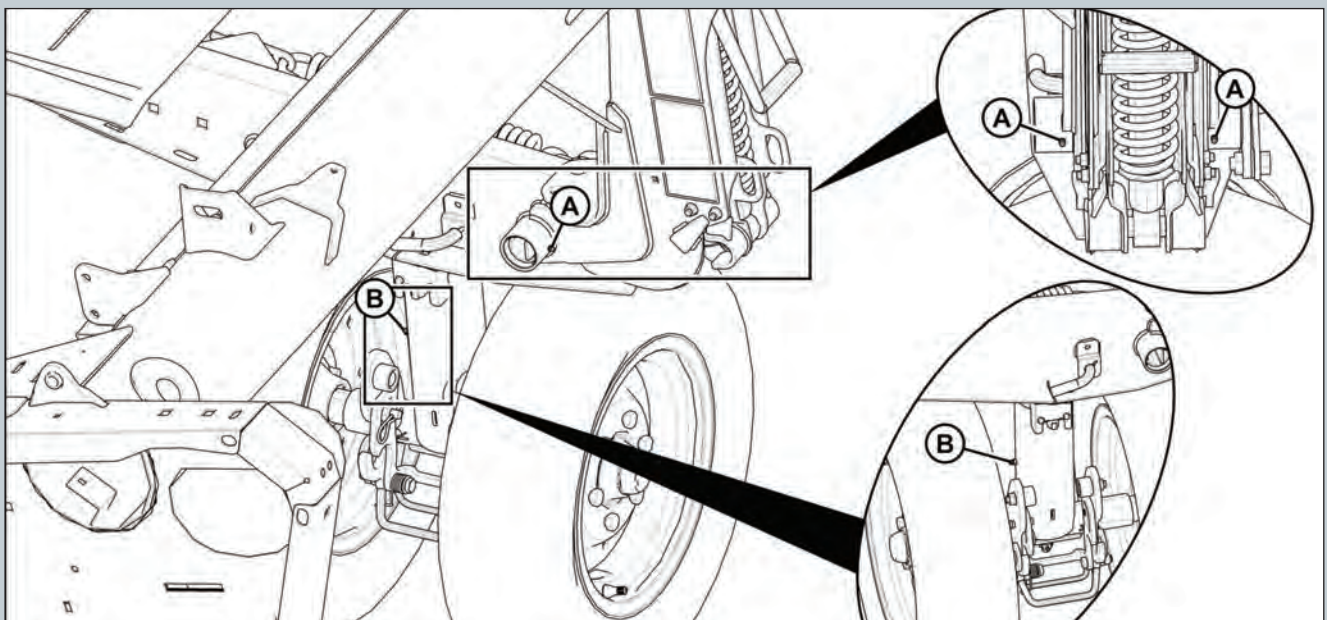
# Maintenance

## 250 Hours



**(A)** Reel U-joint (one place)

**(B)** Flex Linkage (two places)  
– Both sides

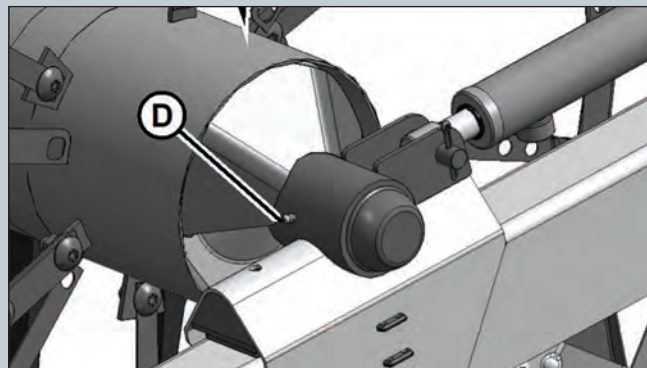
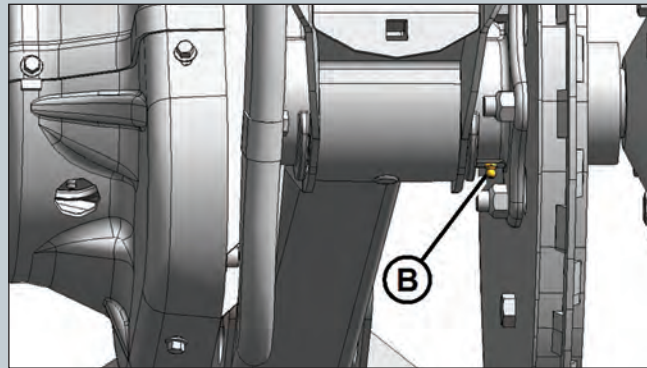
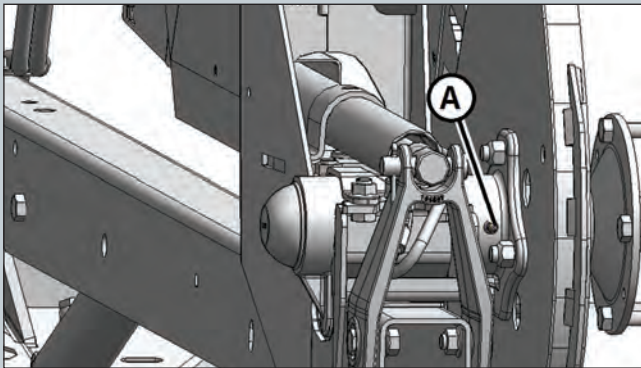
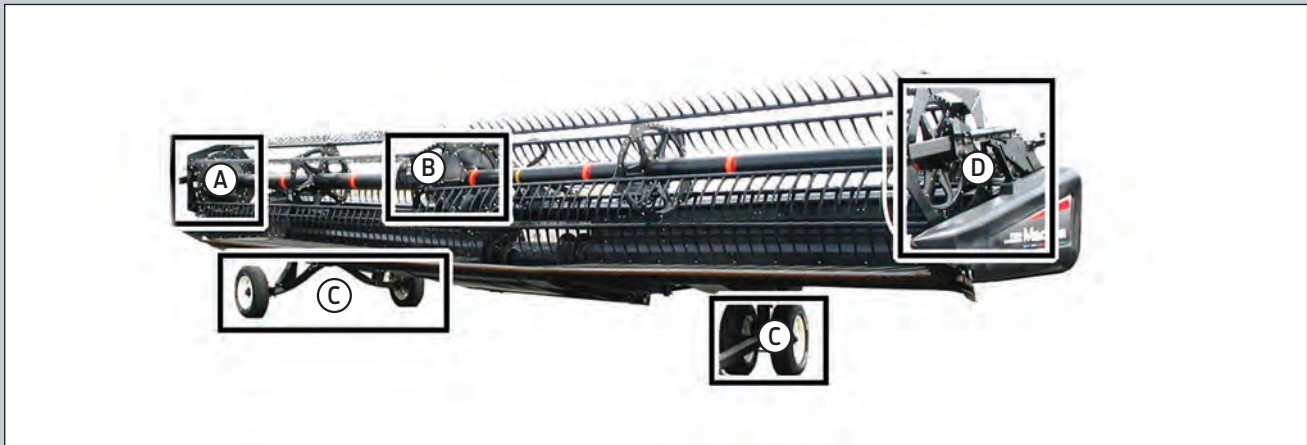


**Optional Attachment**

**(A)** Frame / Wheel Pivot (Front and Rear) – both Sides

**(B)** Front Wheel Pivot (one Place)

# 500 Hours



(A) Reel Right Bearing (one place)

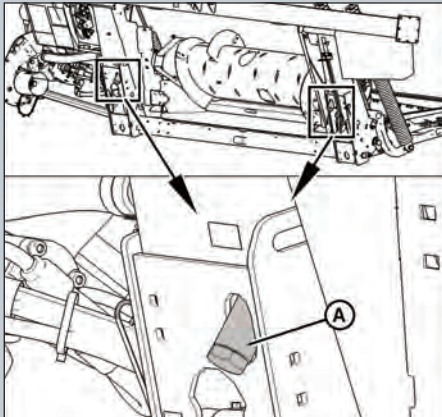
(B) Reel Center Bearing (one place)

(C) Wheel Bearings (**Optional Attachment** – four places)

(D) Reel Left Bearing (one place)

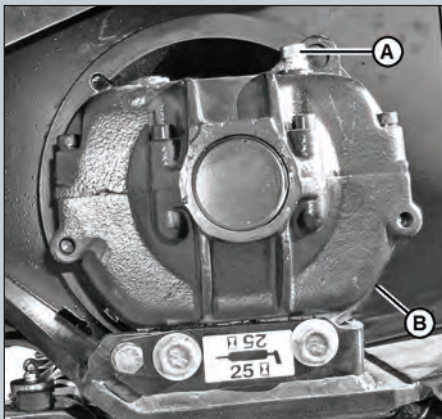
# Maintenance

## 1000 Hours or 3 Years



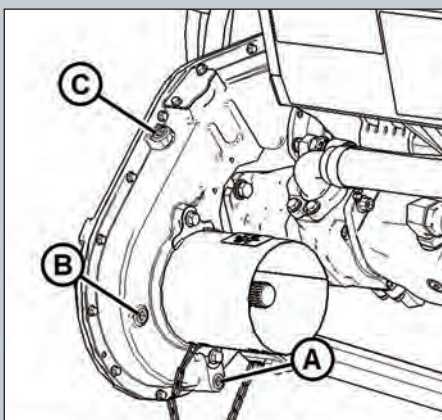
Change hydraulic oil in Float Module reservoir using approximately 75 liters (20 gallons) of **Single grade trans-hydraulic oil**.

Refer to **Section 5.4 Hydraulics** in the Operators Manual for more information.



Change oil in Knife Drive Box using approximately 2.2 liters (2.3 quarts) of 85W – 140 (API service class GL-5 oil).

Refer to **Section 5.9 Knife Drive System** in the Operators Manual for more information



Change oil in Header Drive Gearbox using approximately 2.5 liters (2.6 quarts) of 85W – 140 (API service class GL-5 oil).

Refer to **Page 387 – Lubrication and Servicing** in the Operators Manual for more information.

# End of Season

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## CAUTION

Never use gasoline, naphtha, or any volatile material for cleaning purposes. These materials may be toxic and/or flammable.



## CAUTION

Cover cutter bar and knife guards to prevent injury from accidental contact.

1. Clean the header thoroughly.
2. Park the machine for storage in a dry and protected place if possible. If storing outside, always cover the machine with a waterproof canvas or other protective material.

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**NOTE:** If storing the machine outside, remove the drapers and store them in a dark, dry place. If not removing the drapers, store the header with the cutter bar lowered so water and snow will not accumulate on the drapers.

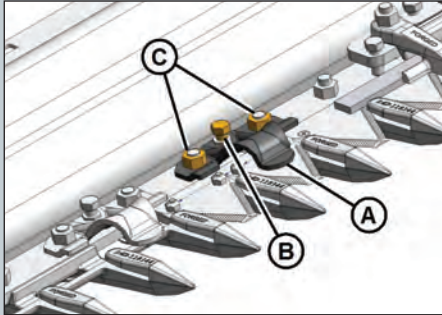
The weight of water and snow accumulation puts excessive stress on the drapers and header.

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3. Lower the header onto blocks to keep the cutter bar off the ground.
4. Lower the reel completely. If stored outside, tie the reel to the frame to prevent rotation caused by the wind.
5. Repaint all worn or chipped painted surfaces to prevent rust.
6. Loosen the drive belts.
7. Lubricate the header thoroughly leaving excess grease on the fittings to keep moisture out of the bearings.
8. Apply grease to exposed threads, cylinder rods, and sliding surfaces of components.
9. Lubricate the knife with SAE30 or equivalent oil.
10. Check for worn components and repair as necessary.
11. Check for broken components and order replacements from your Dealer. Immediate repair of these items will save time and effort at the beginning of next season.
12. Replace or tighten any missing or loose hardware.

# Knife Maintenance

## Knife Hold Down Adjustment



Check hold downs daily (every 10 hours).

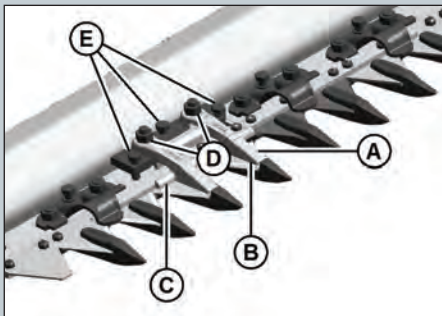
Hold down clearance is 0.1–0.6 mm (0.004–0.024 in).

Adjust bolt **(B)** to achieve clearance at **(A)**.

Checking knife hold downs daily will keep your knife performing at peak levels, prevent premature wear and ensure a longer life of all your cutting components (ultimately saving you money).

Refer to **Section 5.8.7 Knife Guards** in the Operators Manual for more information.

## Double Knife Center Guard Adjustment



Check clearance daily (every 10 hrs).

At guard tip **(B)** clearance is 0.1-0.4 mm (0.004-0.016 in).

At rear of guard clearance is .01-1.0 mm (0.004-0.040 in).

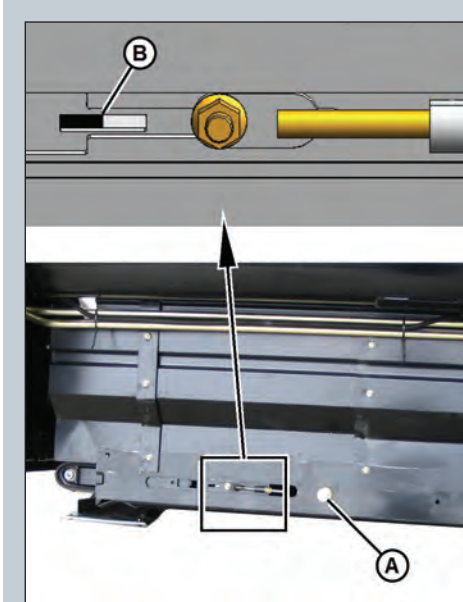
With nuts **(D)** finger tight turn adjuster bolts **(E)** to achieve clearance,

Torque bolts **(D)** to 72Nn (53 lbf-ft) after adjustments are achieved.

Refer to **Section 5.8.7 Knife Guards** in the Operators Manual for more information.

# Adjusting Draper Tension

## Side Draper Tension Adjustment

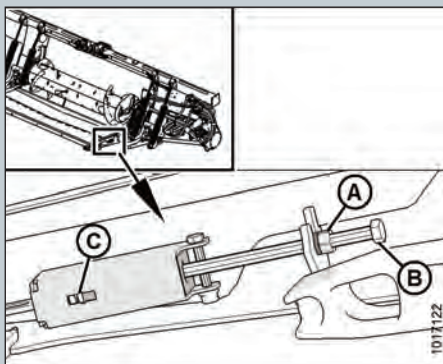


Turn bolt **(A)** clockwise and white indicator bar **(B)** will move inboard, indicating that the draper is being tightened.

Turn bolt **(A)** counterclockwise and white indicator bar **(B)** will move outboard indicating the draper is being loosened.

When properly tensioned, the white indicator **(B)** will be halfway across the inboard side of the window. (Left tension adjuster shown).

## Feed Draper Tension Adjustment



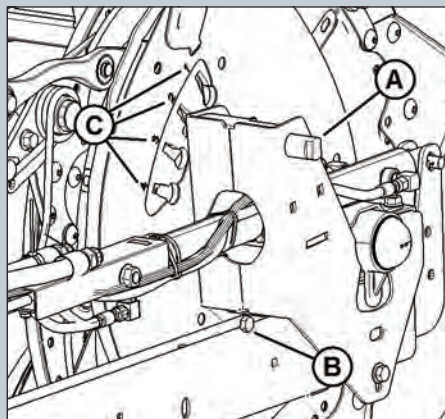
Loosen jam nut **(A)** and turn bolt **(B)** clockwise to increase center draper tension or counterclockwise to decrease center draper tension.

Tension is correct when the white indicator is centered within the indicator window on the spring box **(C)**, however it is permissible to be under-tensioned by 3mm or over-tensioned by 6mm on either or both sides to allow for proper tracking of feed draper.

Refer to **Section 5.10.2 Feed Draper Tension** in the Operators Manual

# Operation Tips

## Adjusting Reel Cam Positions

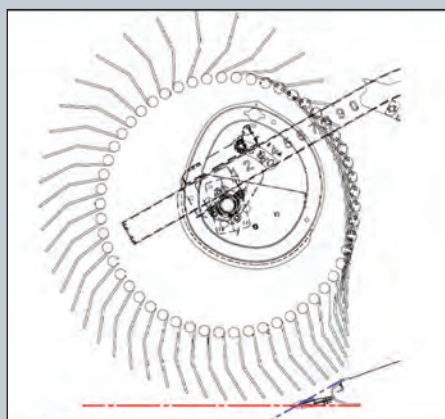


FDI and D1 series headers feature a 4 position reel cam adjustment **(C)** on the right end of each reel (Dual reel headers must be adjusted separately for each reel). The factory cam setting is position 2.

Use a 19 mm or ( $\frac{3}{4}$ " ) wrench to rotate pin **(A)** to release cam disc and adjust cam at **(B)** to desired setting.

Turn pin **(A)** to engage cam disc lock.

Refer to **Section 3.7.12 Reel Tine Pitch** in the Operators Manual for more information.



**Reel cam position 1** is recommended for straight cut canola where the reel will be pulled back behind the cutter bar and you want minimal reel finger engagement in the crop to limit loss.

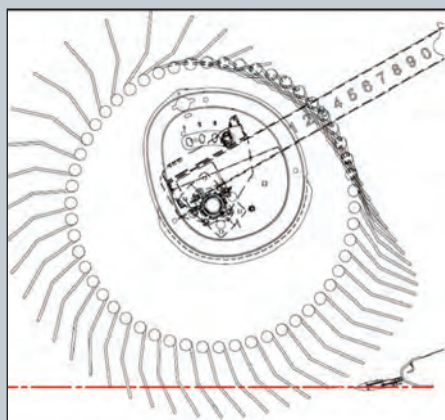
**Reel cam position 2** is for most straight standing cereals and soybeans.

**Reel cam position 3** is for moderately lodged crop conditions.

**Reel cam position 4** is for severely lodged crops where the reel will be placed in front of and possibly below the cutter bar. For best lifting action.

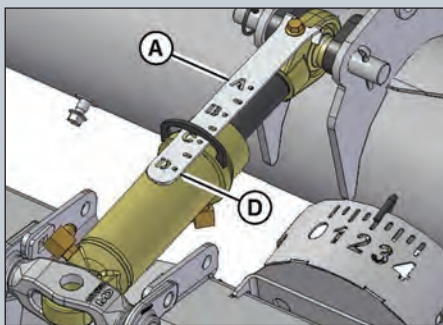
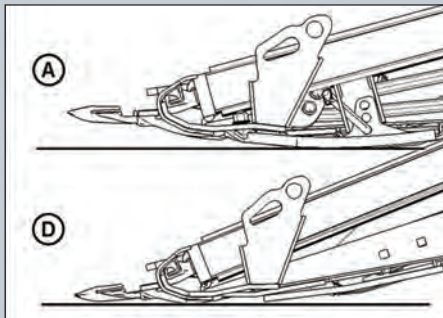
As the reel tine pitch is increased it also increases the speed of the reel tine tips relative to actual reel speed.

Refer to **Section 3.6.4 Reel Settings** and **Section 3.7.12 Reel Tine Pitch** in the Operators Manual for more information.





## Header Angle



Header angle is the relationship between the header (guard tips) and the ground.

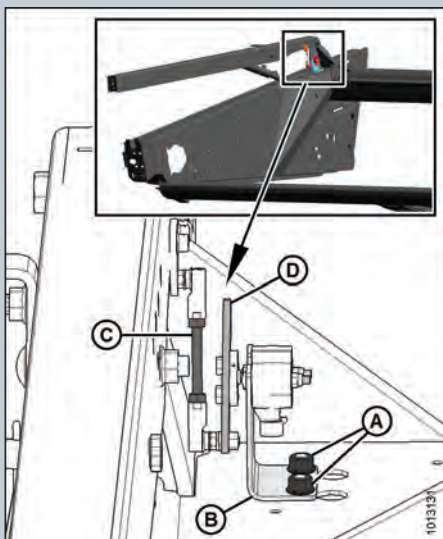
Set the header angle according to the type and condition of the crop and soil. The shallowest header angle produces the highest stubble height when cutting on the ground; the steepest angle produces the lowest stubble height when cutting on the ground.

**a.** Use shallower settings **(A)** (position A on the indicator) for normal cutting conditions or in wet soil conditions to reduce soil build-up at the cutterbar. Shallow angle settings also minimize damage to the knife in stony fields.

**b.** Use steeper settings **(D)** (position D on the indicator) for lodged crops and crops that pod close to the ground such as lentils or beans.

Refer to **Section 3.7.5 Header Angle** in the Operators Manual for more information.

## Reel Height Sensor



A reel height sensor located on the RH reel arm is a new standard feature for the FDI series headers that provides reel height position output; allowing for one touch reel height resume in conjunction with header position.

It can be set to lower the reel when lifting the header at the headland to sweep crop off the cutter bar and then return to an “in crop” height when the header is lowered back to the ground.

**Not compatible with AGCO combines.**

Refer to **Section 3.8 Auto Header Height Control** in the Operators Manual for more information on calibration and setting.

# Auto Header Height Control

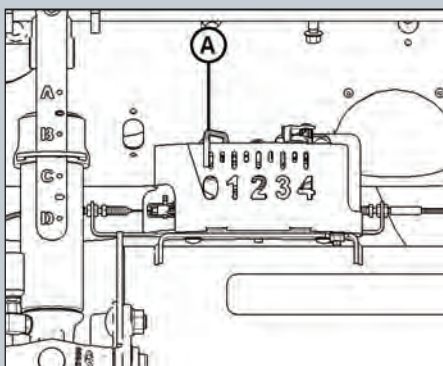
## Setting AHHC

MacDon's auto header height control (AHHC) feature works in conjunction with the AHHC option available on most current model combines.

A sensor is located in the float indicator box on the FM100 Float Module. This sensor sends a signal to the combine telling it to automatically adjust the feederhouse position to maintain a consistent cutting height and an optimum float (ground pressure) as the header follows ground contours.

1. Disengage header float locks.
2. Ensure that header float is set correctly. Refer to Quick Card.
3. Perform header calibration.
4. Set combine presets through the combine console or control handle.

**NOTE: Refer to Combine Operator's Manual and Header Operators Manual Section 3.8 Auto Header Height Control for more information on header calibration and settings.**



The indicator (**A**) should be at **0** with the header 152 mm (6 in.) off the ground. (If not it may affect the header calibration procedure.). When the header is on the ground, the indicator would be at **1** for low ground pressure, and at **4** for high ground pressure. MacDon recommends using **2** as a starting ground pressure.

Ground speed, ground conditions and crop conditions will affect the amount of ground pressure to use.

The ideal setting is as light as possible without header bouncing or missing crop.

Operating with heavy settings prematurely wears the cutterbar wearplates.

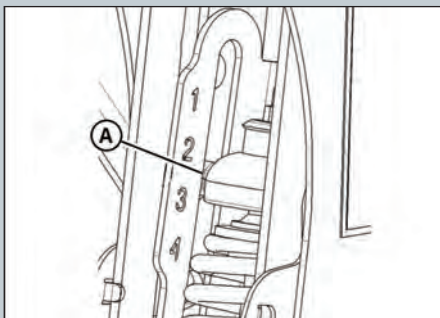
# Slow Speed Transport / Stabilizer Wheel Option

## Setting Wheel Height

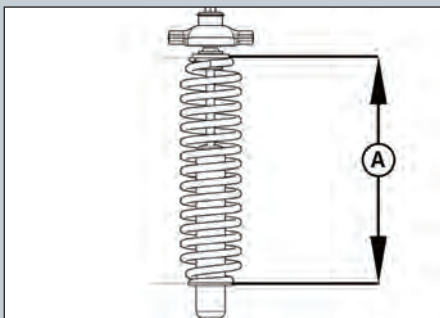
**Important:** There should only be one point of contact with the ground at any time, either the cutter bar, skid shoes or stabilizer wheels.

When cutting **on the ground:** All stabilizer wheels should be locked into the highest notch with wheels completely off the ground.

When cutting **off the ground** with Slow Speed Transport wheels or Stabilizer wheels:



Set header to desired height then position wheels to nearest notch that allows springs to be slightly compressed.



**IMPORTANT:**

Continuous operation with excessive spring compression (i.e., load indicator reading greater than 4 or a compressed length **(A)** less than 295 mm [11-5/8 in.]) can result in damage to the suspension system.

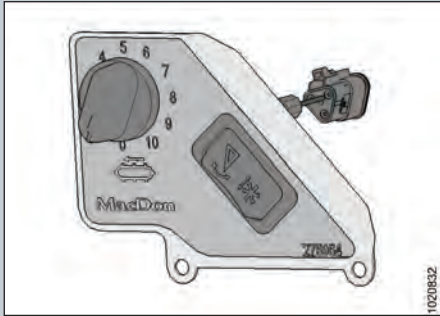
**Auto header height control when cutting off the ground:** To operate with AHHC when cutting off the ground, it might be necessary to lighten float or to add slightly more compression to stabilizer wheel springs so that the header will float upward off of adapter to sense terrain.

Ensure that float is unlocked and properly adjusted.

Do not over compress springs as this may result in hazard or damage to the shock and spring assembly.

# New Performance Options

## In Cab Draper Speed Control

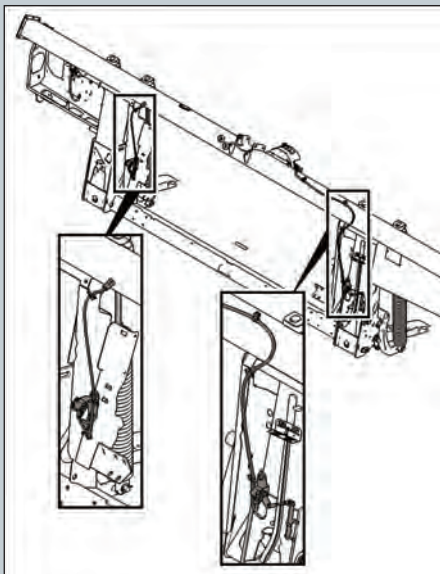


This option allows the operator the ability to adjust the speed of the side drapers from in the cab of the combine.

The kit contains a PWM valve that is installed into the hydraulic manifold and a wire harness that runs into the cab. A suction mounted control panel contains the operator interface.

**MD #B6387**

## Dual Auto Header Height



This option provides additional auto header height control sensor inputs for the combine lateral tilt circuit allowing the FM100 Float Module to automatically pivot from side to side to follow uneven terrain during operation.

The combine requires feeder faceplate tilt option.

The kit adds two additional sensors to the float linkage.

Not compatible with New Holland 10 volt AHHC system.

Not recommended for use on steep hills.

**MD #B6211**

## FD1 Series Draper Header & FM100 Float Module

### SETTING HEADER FLOAT AND WING BALANCE

Follow these five steps to set the header float and wing balance:

#### IMPORTANT:

Read your operator's manual and complete all the setup tasks before setting the header float.

#### Step 1: Preadjustments Complete before adjusting float or wing balance.

1. Park combine on a level surface, and ensure the combine feeder house is level.
2. Ensure the top of the float module is level with the combine axle and the combine tires are inflated equally.
3. Adjust header so cutterbar is 150–254 mm (6–10 in.) off the ground.
4. Set the header angle hydraulic cylinder to between B and C on indicator (A).
5. Set the reel fore-aft to midposition (5 or 6 on reel arm decal).
6. Lower the reel completely, shut down the combine, and remove key from the combine ignition.
7. Place wing lock spring handles (B) in the locked (upper) position.
8. Place both left and right header float locks in unlocked (lowered) position (C).
9. Set stabilizer/transport wheels (if equipped) to the storage position.

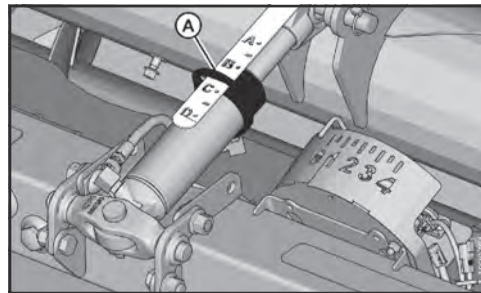


Figure 1: Center-Link

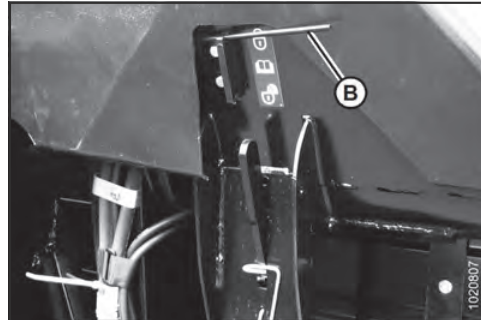


Figure 2: Wing Lock Spring Handle in Locked Position

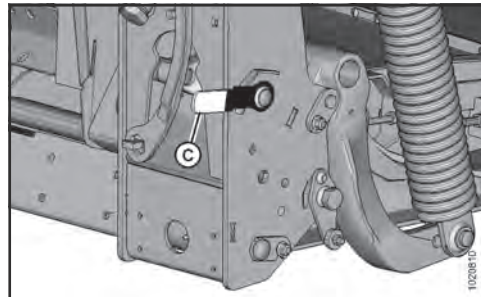


Figure 3: Float Unlocked – Right Side Shown

#### Step 2: Retrieving Torque Wrench from Storage

1. Remove the special torque wrench (A) from its storage position at the right side of the float module frame. Pull in the direction shown to disengage the wrench from its hook.

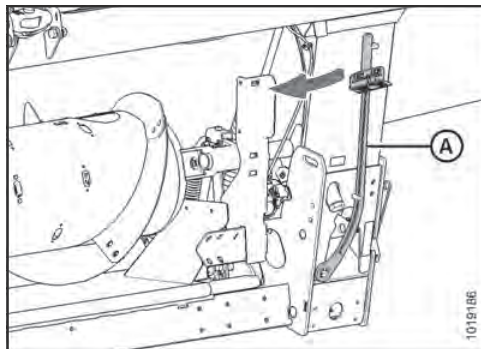


Figure 4: Torque Wrench Storage Location

# Quick Card

## Step 3: Checking Header Float

1. Place torque wrench (A) onto float lock (B). Note the change in wrench orientation when checking float module's left and right side.
2. Push down on torque wrench (A) to rotate bell crank (C) forward.
3. Continue pushing down on torque wrench until the wrench's indicator (D) reaches a maximum reading and begins to decrease. Note the maximum reading.
4. Repeat above steps for opposite side of float module.
5. Refer to Table 1.1 as a guide for float settings.
  - If the reading is high, the header is heavy.
  - If the reading is low, the header is light.

Table 1.1: Float Settings

Header Size m (ft.)	Indicator Reading	
	Cutting on the Ground	Cutting off the Ground
9.1 and 10.6 m (30 and 35 ft.)	1-1/2 to 2	2 to 2-1/2
12.1 and 13.7 m (40 and 45 ft.)	2 to 2-1/2	2-1/2 to 3

### IMPORTANT:

Torque settings in Table 1.1: Float Settings are recommended header float settings. It may be necessary to set float values outside of these ranges to suit varying crop and field conditions.

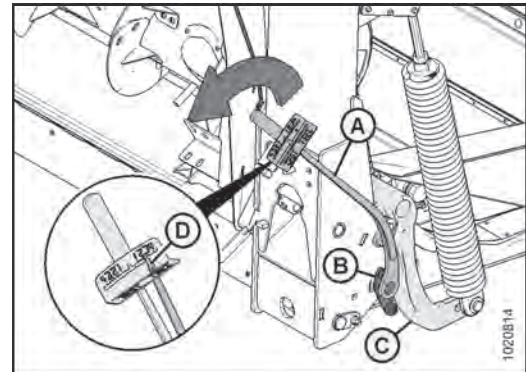


Figure 5: Checking Float – Right Side Shown

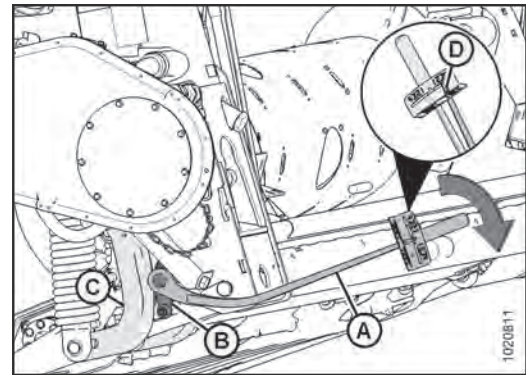


Figure 6: Checking Float – Left Side Shown

## Step 4: Setting Header Float

1. Before adjusting the float spring adjustment bolts (A), rotate the spring locks (B) by loosening bolts (C).
2. To **increase** float (decrease header weight), turn both adjustment bolts (A) on the left side clockwise. Repeat adjustment at opposite side.
3. To **decrease** float (increase header weight), turn left side adjustment bolts (A) counterclockwise. Repeat at opposite side.

### IMPORTANT:

Ensure torque wrench indicator readings are equal on both sides of float module.

### NOTE:

For 12.2 and 13.7 m (40 and 45 ft.) double-knife headers, adjust float as above, then loosen right side float spring bolts two turns.

### NOTE:

If adequate header float cannot be achieved using all the available adjustments, an optional heavy duty spring is available. See your MacDon Dealer or refer to the parts catalog for ordering information.

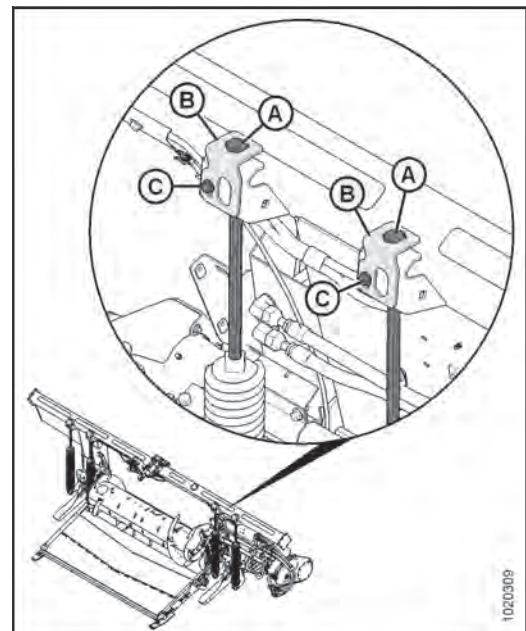


Figure 7: Float Adjustment Bolts – Left Side Shown

## IMPORTANT:

Before proceeding, the header float must be set properly. Refer to **Step 4: Setting Header Float**.

### Step 5: Check Wing Balance

1. Remove wing balance linkage cover on left side of the float module by removing securing bolt and rotating the cover upwards until the inboard end can be lifted off.
2. Place wing lock spring handles in the unlocked (lower) position.
3. Place torque wrench (A) on bolt (B).
4. Check that pointer (C) is properly positioned as follows:
  - a. Use the torque wrench (A) to move the bell crank so that the bell crank's lower edge (D) is parallel to the top-link's lower edge (E).
  - b. Ensure pointer (C) is lined up with the top-link (E). If necessary, bend the pointer it aligns with bolt hole (J).
5. Move wing upward with torque wrench (A) until the pointer's lower alignment tab (F) lines up with the upper edge of the top-link (E). Refer to Figure 8. Observe the indicator reading (G) on the torque wrench and record it.
6. Move the wing downward with torque wrench (A) until the pointer's upper alignment tab (H) lines up with the lower edge of the top-link (E). Refer to Figure 9. Observe the indicator reading (G) on the torque wrench and record it.
7. Check wing balance on opposite side of header.
  - If the difference between the readings is 0.5 or less, the wing is balanced and adjustment is not required.
  - If the difference between the readings is more than 0.5, the wing is not balanced and adjustment is required.

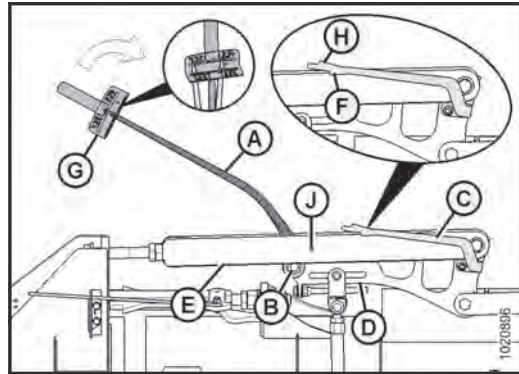


Figure 8: Wing Balance Linkage, Wings Set too Light – Left Side Shown, Right Opposite

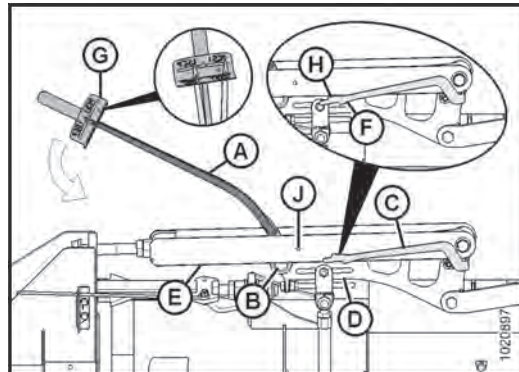


Figure 9: Wing Balance Linkage, Wings Set too Heavy – Left Side Shown, Right Opposite

### Step 6: Adjust Wing Balance

1. Place torque wrench (A) on bolt (B) on the left side of header.
2. Loosen clevis bolt (C) and jam nut (J).
3. Recheck wing balance. Refer to **Step 5: Check Wing Balance**.
4. If necessary, make the following adjustments:
  - If the wing is too heavy, turn the clevis adjuster bolt (D) to move clevis (E) outboard (F).
  - If the wing is too light, turn the clevis adjuster bolt (D) to move clevis (E) inboard (G).
5. Adjust clevis (E) position (if necessary) until the difference between torque wrench indicator readings is 0.5 or less. Tighten clevis bolt (C) and jam nut (J).
6. Place wing lock spring handles (H) in the locked (upper) position. If lock doesn't engage, move the wing up and down with the torque wrench (A) until it locks. When locked, there will be some movement in the linkage. Repeat on opposite side of header.
7. If the cutterbar is not straight when wings are in lock mode, then further adjustments are required. Contact your MacDon Dealer.
8. Return the torque wrench (A) to its storage location on the float module frame.

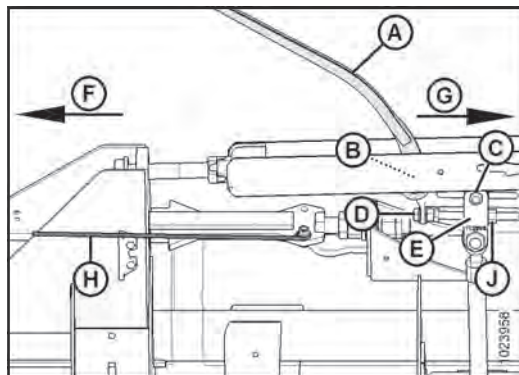


Figure 10: Wing Balance Linkage – Left Side Shown

## D1 Series Draper Header & FM100 Float Module

### IMPORTANT:

Read your operator's manual and complete all the setup tasks before setting the header float.

#### Step 1: Preadjustments Complete before adjusting float.

1. Park combine on a level surface, and ensure the combine feeder house is level.
2. Ensure combine tires are inflated equally.
3. Adjust header so cutterbar is 154–254 mm (6–10 in.) off the ground.
4. Set guard angle to mid-position (A) (between B and C on the indicator).
5. Set the reel fore-aft to mid-position (5 or 6 on reel arm decal).
6. Lower the reel completely and shut down the combine.
7. Place both header float locks in unlocked (lowered) position (B) (right side float lock shown).
8. Set stabilizer/transport wheels (if equipped) to the fully raised position.

#### Step 2: Checking Header Float

1. Remove the supplied torque wrench (C) from the storage position on the right side of the FM100 Float Module.
2. Place the torque wrench onto the float lock (D). Note the change in orientation of the wrench between the left and right side.
3. Push down on torque wrench until bell crank (E) rotates forward.
4. Continue pushing down until indicator (F) on wrench reaches MAXIMUM reading and begins to decrease. Note the maximum reading.
5. Repeat above steps for opposite side.
6. Ensure the readings match the values in Table 1.1: Float Settings.

Table 1.1: Float Settings

Header Size (ft.)	Torque Settings	
	Cutting on the Ground	Cutting off the Ground
20, 25, 30 and 35	1-1/2 to 2	2 to 2-1/2
40 and 45	2 to 2-1/2	2-1/2 to 3

### IMPORTANT:

The torque settings in Table 1.1: Float Settings are recommended header float settings. It may be necessary to set float values outside of these ranges to accommodate varying crop and field conditions.

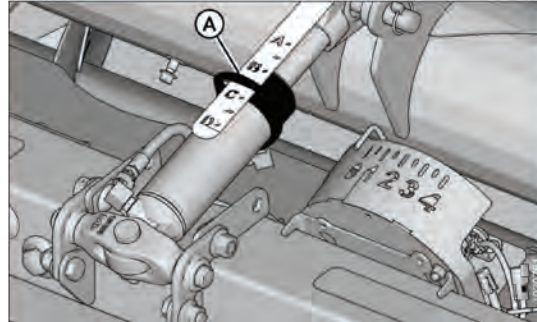


Figure 1: Center-Link

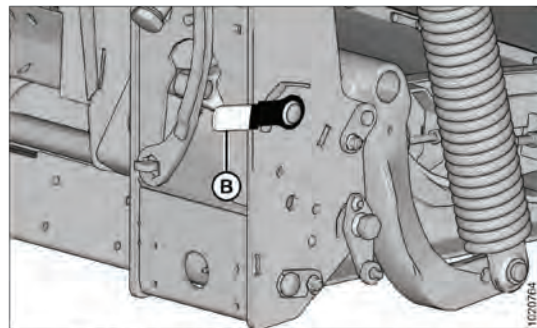


Figure 2: Float Unlocked – Right Side

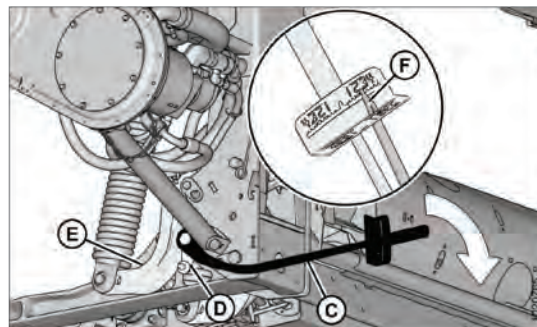


Figure 3: Checking Float – Left Side

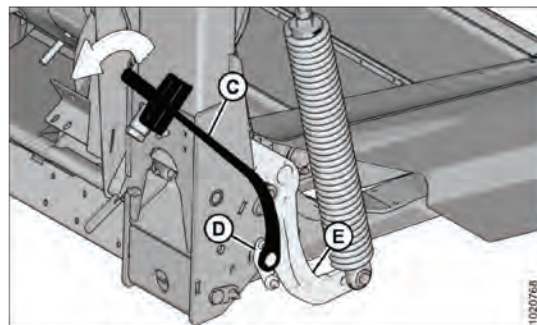


Figure 4: Checking Float – Right Side



### Step 3: Setting Header Float

1. Refer to Table 1.1: Float Settings for recommended initial float setting:  
If reading on wrench is high, header is heavy. Increase float.  
If reading on wrench is low, header is light. Decrease float.
2. Adjust the header float to match values in Table 1.1: Float Settings. Turn each bolt pair equal amounts. Before adjusting float, rotate the spring locks (A) by loosening bolts (B).

**Increase float** (decrease header weight) by turning float adjustment bolts clockwise.

**Decrease float** (increase header weight) by turning float adjustment bolts counterclockwise.

**IMPORTANT:**

Ensure torque wrench reading is **EQUAL ON BOTH SIDES**.

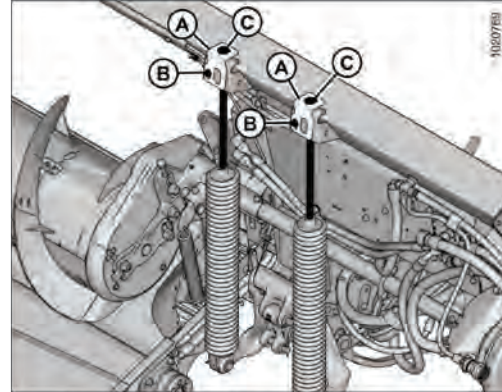


Figure 5: Float Adjustment Bolts – Left Side

### Recommended Fluids and Lubricants

Lubricant	Specification	Description	Use	Capacities
Grease	SAE multi-purpose	High temperature extreme pressure (EP) performance with 1% max Molybdenum Disulphide (NLGI Grade 2) lithium base	As required unless otherwise specified	—
		High temperature extreme pressure (EP) performance with 10% max Molybdenum Disulphide (NLGI Grade 2) lithium base	Driveline slip-joints	—
Gear Lubricant	SAE 85W-140	API service class GL-5	Knife drive box	2.2 liters (2.3 quarts)
			Main drive gearbox	2.5 liters (2.6 quarts)
Hydraulic Oil	Single grade trans-hydraulic oil Recommended brands: <ul style="list-style-type: none"> <li>• Petro-Canada Duratran</li> <li>• John Deere Hy-Gard J20C</li> <li>• Case Hy-Tran Ultraction</li> <li>• AGCO Power Fluid 821 XL</li> </ul>	Lubricant trans / hydraulic oil	Header drive systems reservoir	75 liters (20 US gallons)

### Break-In Inspections

Time	Item
<b>First 5 Minutes</b>	Check hydraulic oil level in reservoir (check after first run-up and after the hydraulic hoses have filled with oil).
<b>5 Hours</b>	Check for loose hardware and tighten to required torque. Check knife drive belts tension (check periodically for the first 50 hours).
<b>10 Hours</b>	Check auger drive chain tension. Check knife drive box mounting bolts.
<b>50 Hours</b>	Change float module gearbox oil. Change float module hydraulic oil filter. Change knife drive box lubricant. Check gearbox chain tension. Check deck height adjustment.

### Ongoing Maintenance Intervals

Time	Service
<b>Every 10 hours or daily</b>	Check hydraulic hoses and lines for leaks. Check knife sections, guards, and hold-downs. Check tire pressure. Grease knife (except in sandy conditions).
<b>Every 25 hours</b>	Check hydraulic oil level. Grease knifeheads.
<b>Every 50 hours</b>	Grease draper roller bearings. Grease driveline and driveline universals. Grease upper cross auger center support and U-joint. Change knife drive box lubricant.
<b>NOTE:</b> Refer to D1 Series / FM100 Operator's Manual for service beyond 50 hours.	

# Quick Card

## Recommended Fluids and Lubricants

Ensure your machine operates at top efficiency by using clean fluids and lubricants only.

- Use clean containers to handle all fluids and lubricants.
- Store fluids and lubricants in an area protected from dust, moisture, and other contaminants.

Lubricant	Specification	Description	Use	Capacities
Grease	SAE multi-purpose	High temperature extreme pressure (EP) performance grease with 1% max Molybdenum Disulphide (NLGI Grade 2) lithium base	As required unless otherwise specified	—
		High temperature extreme pressure (EP) performance grease with 10% max Molybdenum Disulphide (NLGI Grade 2) lithium base	Driveline slip-joints	—
Gear Lubricant	SAE 85W-140	API service class GL-5	Knife drive box	2.2 liters (2.3 quarts)
			Main drive gearbox	2.5 liters (2.6 quarts)
Hydraulic Oil	Single grade trans-hydraulic oil Recommended brands: <ul style="list-style-type: none"> <li>• Petro-Canada Duratran</li> <li>• John Deere Hy-Gard J20C</li> <li>• Case Hy-Tran Ultraction</li> </ul>	Lubricant trans / hydraulic oil	Header drive systems reservoir	75 liters (20 US gallons)

## Break-In Inspections

To help avoid major component service or replacement, perform break-in inspections on your machine for the first 50 hours of operation. Refer to your operator's manual for complete break-in inspection and adjustment procedures.

Inspection Instance	Item
First 5 Minutes	Check hydraulic oil level in reservoir (check after first run-up and after the hydraulic hoses have filled with oil).
5 Hours	Check for loose hardware and tighten to required torque.
	Check knife drive belts tension (check periodically for the first 50 hours).
10 Hours	Check auger drive chain tension.
	Check knife drive box mounting bolts.
50 Hours	Change float module gearbox oil.
	Change float module hydraulic oil filter.
	Change knife drive box lubricant.
	Check gearbox chain tension.

## Ongoing Maintenance Intervals

Refer to the operator's manual for a comprehensive maintenance schedule and record. Log hours of operation, use the maintenance record, and keep copies of your maintenance records.

Following the maintenance schedule will increase your machine's life.

## Case IH 3016 Pick Up

Parameters	Set to	Alterable	Options	Information
Maximum Work Height	50%	YES	0 - 100	Customers choice, sets the height that the front lifts to in headland mode & sets the on/off point for logging of yield data
Header Type	Pick Up	YES	Corn, Grain, Pick Up, Draper/Varifeed, Programmable	Depends on front being used
Header Sub Type	NA	YES	No Shift Function /2000 / 3000 / 16-41ft Varifeed	2000 for Macdon heads, 3000 for Case IH Heads & 16 - 41ft Varifeed for 3050
Cutting Type	Platform	NO	Row or Platform	Only changeable when Not Defined on Header Type
Frame Type	NA	YES	Rigid or Flexhead	Select rigid or Flex depending on the front being used
Header Width	9.1m (30 feet)	YES	1.00 to 25.00m	True Header (Front) Width (Crop divider to Crop Divider)
Target Work Width	9.00m	YES	1.00 to 25.00m	Guidance Width of each GPS Guidance Swath
Width Adjust Step	1.00m	YES	0.1 to 12.50m	Customer choice - Only required for accuracy of Yield Data if more than 1 Combine is harvesting a paddock
Head Centre Offset	0.00m	YES	-10 to 10m	Only required if an offset front is being used
Header Alarm	On	YES	On or Off	ON
Header Alarm Rings	1	YES	1 to 5	Default is 3, Operator preference can be set
Auto Cut Width	On	YES	Off or On	On, when one Combine is Harvesting a Paddock. If multiple combines are in one paddock set to: No
Overlap Mode	Auto	YES	Auto or Manual	Auto for one Combine Manual for Multiple Combines
Work Width Reset Mode	Auto	YES	Auto or Manual	Auto

\*\*Note the Case IH 3016 has Hydraulic flotation. Please charge the accumulator to 1000 PSI after running the Header Cal.

The Gauge is located to the left of the feeder house on the back of the 3016. Pressure can be altered by holding the shift button in, on the MFH and using the Reel up and Down buttons. Reduce the pressure down to zero for storage after Harvest

# Head 2 Settings 250 Series

## Case IH 3016 Pick Up

Parameters	Set to	Alterable	Options	Information
Header Sensors	<b>Enable</b>	YES	Disable or Enable	Enable for Functionality of AHHC or Autotilt.
Header Pressure Float	<b>NO</b>	YES	Yes or No	NO for Macdon Heads Yes for Case IH heads
Height/Tilt Response	<b>Normal</b>	YES	Normal or Fast	Normal for Macdon and Fast for Case IH 3000 series
Pressure Override Threshold or Pressure Float Override	<b>50%</b>	YES	1 to 50%	50% for Macdon Heads and 20% for Case IH 3000 Heads
Auto Header Lift	<b>NO</b>	YES	Yes or No	Yes for Case IH heads to protect AHHC sensors
HHC Raise Rate	<b>100</b>	YES	20 - 250	Customer preference of front lift speed
HHC Lower Rate	<b>100</b>	YES	100 - 1000	Customer preference of front drop speed
HHC Height Sens	<b>100</b>	YES	10 - 250	Higher number makes AHHC more sensitive & vice versa
HHC Tilt Sens	<b>100</b>	YES	10 - 250	Higher number makes Autotilt more sensitive & vice versa
HHC Tilt Rate	<b>100</b>	YES	20 - 250	Customer preference of tilt speed
Reel Speed Minimum	<b>0 or 1.6km</b>	YES	1.6 - 10km/hr	Min speed the reel will operate at when combine is stationary
Reel Speed Slope	<b>100</b>	YES	100 to 190	This No. helps match the reel to ground speed. Increase if the reel is slower than the ground speed in Auto & vice versa
Hydraulic Reel or Reel drive	<b>Yes</b>	YES	Yes or no	Yes for Hydraulic Drive Reel, which most fronts are
Reel Speed Sensor	<b>No</b>	YES	Yes or No	Yes only if a reel speed sensor is fitted
Reel Fore - Aft	<b>Yes</b>	YES	Yes	Yes always
Reel Vertical Position Sensor or Reel Height Sensor	<b>No</b>	YES	Yes or No	Yes for D1 or FD1 Macdon Fronts & Yes for 3100 / 3050 Case IH Fronts
Reel Horizontal Position Sensor or Reel Sensor Horizontal	<b>No</b>	YES	Yes or No	Yes for 3100 / 3050 Case IH Fronts
Vertical Knives	<b>NA</b>	YES	Not Installed or Elec Driven or Hyd Driven, integrated or Hyd Driven, Independent	Only installed if a Case IH 3050 Front is being used
Header Lateral Tilt	<b>Yes</b>	YES	Yes or No	Yes Always
Autotilt	<b>Yes</b>	YES	Yes or No	Depends on the front being used
Auto Level in Headland	<b>Yes</b>	YES	Yes or No	Yes

# Head 1 Settings 250 Series

## Macdon PW8 Pick up

Parameters	Set to	Alterable	Options	Information
Maximum Work Height	50%	YES	0 - 100	Customers choice, sets the height that the front lifts to in headland mode & sets the on/off point for logging of yield data
Header Type	Pick Up	YES	Corn, Grain, Pick Up, Draper/Varifeed, Programmable	Depends on front being used
Header Sub Type	NA	YES	No Shift Function /2000 / 3000 / 16-41ft Varifeed	2000 for Macdon heads, 3000 for Case IH Heads & 16 - 41ft Varifeed for 3050
Cutting Type	Platform	NO	Row or Platform	Only changeable when Not Defined on Header Type
Frame Type	NA	YES	Rigid or Flexhead	Select rigid or Flex depending on the front being used
Header Width	9.1m (30 feet)	YES	1.00 to 25.00m	True Header (Front) Width (Crop divider to Crop Divider)
Target Work Width	9.00m	YES	1.00 to 25.00m	Guidance Width of each GPS Guidance Swath
Width Adjust Step	1.00m	YES	0.1 to 12.50m	Customer choice - Only required for accuracy of Yield Data if more than 1 Combine is harvesting a paddock
Head Centre Offset	0.00m	YES	-10 to 10m	Only required if an offset front is being used
Header Alarm	On	YES	On or Off	ON
Header Alarm Rings	1	YES	1 to 5	Default is 3, Operator preference can be set
Auto Cut Width	On	YES	Off or On	On, when one Combine is Harvesting a Paddock. If multiple combines are in one paddock set to: No
Overlap Mode	Auto	YES	Auto or Manual	Auto for one Combine Manual for Multiple Combines
Work Width Reset Mode	Auto	YES	Auto or Manual	Auto

# Head 2 Settings 250 Series

## Macdon PW8 Pick up

Parameters	Set to	Alterable	Options	Information
Header Sensors	<b>Enable</b>	YES	Disable or Enable	Enable for Functionality of AHHC or Autotilt.
Header Pressure Float	<b>NO</b>	YES	Yes or No	NO for Macdon Heads Yes for Case IH heads
Height/Tilt Response	<b>Normal</b>	YES	Normal or Fast	Normal for Macdon and Fast for Case IH 3000 series
Pressure Override Threshold or Pressure Float Override	<b>50%</b>	YES	1 to 50%	50% for Macdon Heads and 20% for Case IH 3000 Heads
Auto Header Lift	<b>No</b>	YES	Yes or No	Yes for Case IH heads to protect AHHC sensors
HHC Raise Rate	<b>100</b>	YES	20 - 250	Customer preference of front lift speed
HHC Lower Rate	<b>100</b>	YES	100 - 1000	Customer preference of front drop speed
HHC Height Sens	<b>100</b>	YES	10 - 250	Higher number makes AHHC more sensitive & vice versa
HHC Tilt Sens	<b>100</b>	YES	10 - 250	Higher number makes Autotilt more sensitive & vice versa
HHC Tilt Rate	<b>100</b>	YES	20 - 250	Customer preference of tilt speed
Reel Speed Minimum	<b>0 or 1.6km</b>	YES	1.6 - 10km/hr	Min speed the reel will operate at when combine is stationary
Reel Speed Slope	<b>100</b>	YES	100 to 190	This No. helps match the reel to ground speed. Increase if the reel is slower than the ground speed in Auto & vice versa
Hydraulic Reel or Reel drive	<b>Yes</b>	YES	Yes or no	Yes for Hydraulic Drive Reel, which most fronts are
Reel Speed Sensor	<b>No</b>	YES	Yes or No	Yes only if a reel speed sensor is fitted
Reel Fore - Aft	<b>Yes</b>	YES	Yes	Yes always
Reel Vertical Position Sensor or Reel Height Sensor	<b>No</b>	YES	Yes or No	Yes for D1 or FD1 Macdon Fronts & Yes for 3100 / 3050 Case IH Fronts
Reel Horizontal Position Sensor or Reel Sensor Horizontal	<b>No</b>	YES	Yes or No	Yes for 3100 / 3050 Case IH Fronts
Vertical Knives	<b>NA</b>	YES	Not Installed or Elec Driven or Hyd Driven, integrated or Hyd Driven, Independent	Only installed if a Case IH 3050 Front is being used
Header Lateral Tilt	<b>Yes</b>	YES	Yes or No	Yes Always
Autotilt	<b>Yes</b>	YES	Yes or No	Depends on the front being used
Auto Level in Headland	<b>Yes</b>	YES	Yes or No	Yes

# Head 1 Settings 250 Series

## Pick Up Heads with No Electronics

Parameters	Set to	Alterable	Options	Information
Maximum Work Height	50%	YES	0 - 100	Customers choice, sets the height that the front lifts to in headland mode & sets the on/off point for logging of yield data
Header Type	Pick Up	YES	Corn, Grain, Pick Up, Draper/Varifeed, Programmable	Depends on front being used
Header Sub Type	NA	YES	No Shift Function /2000 / 3000 / 16-41ft Varifeed	2000 for Macdon heads, 3000 for Case IH Heads & 16 - 41ft Varifeed for 3050
Cutting Type	Platform	NO	Row or Platform	Only changeable when Not Defined on Header Type
Frame Type	NA	YES	Rigid or Flexhead	Select rigid or Flex depending on the front being used
Header Width	9.1m (30 feet)	YES	1.00 to 25.00m	True Header (Front) Width (Crop divider to Crop Divider)
Target Work Width	9.00m	YES	1.00 to 25.00m	Guidance Width of each GPS Guidance Swath
Width Adjust Step	1.00m	YES	0.1 to 12.50m	Customer choice - Only required for accuracy of Yield Data if more than 1 Combine is harvesting a paddock
Head Centre Offset	0.00m	YES	-10 to 10m	Only required if an offset front is being used
Header Alarm	On	YES	On or Off	ON
Header Alarm Rings	1	YES	1 to 5	Default is 3, Operator preference can be set
Auto Cut Width	On	YES	Off or On	On, when one Combine is Harvesting a Paddock. If multiple combines are in one paddock set to: No
Overlap Mode	Auto	YES	Auto or Manual	Auto for one Combine Manual for Multiple Combines
Work Width Reset Mode	Auto	YES	Auto or Manual	Auto

# Head 2 Settings 250 Series

Pick Up Heads with No Electronics

Parameters	Set to	Alterable	Options	Information
Header Sensors	Disable	YES	Disable or Enable	Enable for Functionality of AHHC or Autotilt.
Header Pressure Float	NO	YES	Yes or No	NO for Macdon Heads Yes for Case IH heads
Height/Tilt Response	Normal	YES	Normal or Fast	Normal for Macdon and Fast for Case IH 3000 series
Pressure Override Threshold or Pressure Float Override	50%	YES	1 to 50%	50% for Macdon Heads and 20% for Case IH 3000 Heads
Auto Header Lift	NO	YES	Yes or No	Yes for Case IH heads to protect AHHC sensors
HHC Raise Rate	100	YES	20 - 250	Customer preference of front lift speed
HHC Lower Rate	100	YES	100 - 1000	Customer preference of front drop speed
HHC Height Sens	100	YES	10 - 250	Higher number makes AHHC more sensitive & vice versa
HHC Tilt Sens	100	YES	10 - 250	Higher number makes Autotilt more sensitive & vice versa
HHC Tilt Rate	100	YES	20 - 250	Customer preference of tilt speed
Reel Speed Minimum	0 or 1.6km	YES	1.6 - 10km/hr	Min speed the reel will operate at when combine is stationary
Reel Speed Slope	100	YES	100 to 190	This No. helps match the reel to ground speed. Increase if the reel is slower than the ground speed in Auto & vice versa
Hydraulic Reel or Reel drive	Yes	YES	Yes or no	Yes for Hydraulic Drive Reel, which most fronts are
Reel Speed Sensor	No	YES	Yes or No	Yes only if a reel speed sensor is fitted
Reel Fore - Aft	Yes	YES	Yes	Yes always
Reel Vertical Position Sensor or Reel Height Sensor	No	YES	Yes or No	Yes for D1 or FD1 Macdon Fronts & Yes for 3100 / 3050 Case IH Fronts
Reel Horizontal Position Sensor or Reel Sensor Horizontal	No	YES	Yes or No	Yes for 3100 / 3050 Case IH Fronts
Vertical Knives	NA	YES	Not Installed or Elec Driven or Hyd Driven, integrated or Hyd Driven, Independent	Only installed if a Case IH 3050 Front is being used
Header Lateral Tilt	Yes	YES	Yes or No	Yes Always
Autotilt	No	YES	Yes or No	Depends on the front being used
Auto Level in Headland	Yes	YES	Yes or No	Yes



# Head 1 Settings 250 Series

## Macdon D1 & FD1 Series

Parameters	Set to	Alterable	Options	Information
Maximum Work Height	50%	YES	0 - 100	Customers choice, sets the height that the front lifts to in headland mode & sets the on/off point for logging of yield data
Header Type	Draper/Varifeed	YES	Corn, Grain, Pick Up, Draper/Varifeed, Programmable	Depends on front being used
Header Sub Type	2000	YES	No Shift Function /2000 / 3000 / 16-41ft Varifeed	2000 for Macdon heads, 3000 for Case IH Heads & 16 - 41ft Varifeed for 3050
Cutting Type	Platform	NO	Row or Platform	Only changeable when Not Defined on Header Type
Frame Type	Rigid or Flex	YES	Rigid or Flexhead	Select rigid or Flex depending on the front being used
Header Width	12.19m (40 feet)	YES	1.00 to 25.00m	True Header (Front) Width (Crop divider to Crop Divider)
Target Work Width	12.00m	YES	1.00 to 25.00m	Guidance Width of each GPS Guidance Swath
Width Adjust Step	1.00m	YES	0.1 to 12.50m	Customer choice - Only required for accuracy of Yield Data if more than 1 Combine is harvesting a paddock
Head Centre Offset	0.00m	YES	-10 to 10m	Only required if an offset front is being used
Header Alarm	On	YES	On or Off	ON
Header Alarm Rings	1	YES	1 to 5	Default is 3, Operator preference can be set
Auto Cut Width	On	YES	Off or On	On, when one Combine is Harvesting a Paddock. If multiple combines are in one paddock set to: No
Overlap Mode	Auto	YES	Auto or Manual	Auto for one Combine Manual for Multiple Combines
Work Width Reset Mode	Auto	YES	Auto or Manual	Auto

# Head 2 Settings 250 Series

## Macdon D1 & FD1 Series

Parameters	Set to	Alterable	Options	Information
Header Sensors	<b>Enable</b>	YES	Disable or Enable	Enable for Functionality of AHHC or Autotilt.
Header Pressure Float	<b>NO</b>	YES	Yes or No	NO for Macdon Heads Yes for Case IH heads
Height/Tilt Response	<b>Normal</b>	YES	Normal or Fast	Normal for Macdon and Fast for Case IH 3000 series
Pressure Override Threshold or Pressure Float Override	<b>50%</b>	YES	1 to 50%	50% for Macdon Heads and 20% for Case IH 3000 Heads
Auto Header Lift	<b>NO</b>	YES	Yes or No	Yes for Case IH heads to protect AHHC sensors
HHC Raise Rate	<b>100</b>	YES	20 - 250	Customer preference of front lift speed
HHC Lower Rate	<b>100</b>	YES	100 - 1000	Customer preference of front drop speed
HHC Height Sens	<b>100</b>	YES	10 - 250	Higher number makes AHHC more sensitive & vice versa
HHC Tilt Sens	<b>100</b>	YES	10 - 250	Higher number makes Autotilt more sensitive & vice versa
HHC Tilt Rate	<b>100</b>	YES	20 - 250	Customer preference of tilt speed
Reel Speed Minimum	<b>0 or 1.6km</b>	YES	1.6 - 10km/hr	Min speed the reel will operate at when combine is stationary
Reel Speed Slope	<b>100</b>	YES	100 to 190	This No. helps match the reel to ground speed. Increase if the reel is slower than the ground speed in Auto & vice versa
Hydraulic Reel or Reel drive	<b>Yes</b>	YES	Yes or no	Yes for Hydraulic Drive Reel, which most fronts are
Reel Speed Sensor	<b>No</b>	YES	Yes or No	Yes only if a reel speed sensor is fitted
Reel Fore - Aft	<b>Yes</b>	YES	Yes	Yes always
Reel Vertical Position Sensor or Reel Height Sensor	<b>Yes</b>	YES	Yes or No	Yes for D1 or FD1 Macdon Fronts & Yes for 3100 / 3050 Case IH Fronts
Reel Horizontal Position Sensor or Reel Sensor Horizontal	<b>No</b>	YES	Yes or No	Yes for 3100 / 3050 Case IH Fronts
Vertical Knives	<b>Not Installed</b>	YES	Not Installed or Elec Driven or Hyd Driven, integrated or Hyd Driven, Independent	Only installed if a Case IH 3050 Front is being used
Header Lateral Tilt	<b>Yes</b>	YES	Yes or No	Yes Always
Autotilt	<b>No</b>	YES	Yes or No	Depends on the front being used
Auto Level in Headland	<b>Yes</b>	YES	Yes or No	Yes

# Head 1 Settings 250 Series

Macdon D60, D65, FD70, FD75, Case IH 2152 & 2162

Parameters	Set to	Alterable	Options	Information
Maximum Work Height	50%	YES	0 - 100	Customers choice, sets the height that the front lifts to in headland mode & sets the on/off point for logging of yield data
Header Type	Draper/Varifeed	YES	Corn, Grain, Pick Up, Draper/Varifeed, Programmable	Depends on front being used
Header Sub Type	2000	YES	No Shift Function /2000 / 3000 / 16-41ft Varifeed	2000 for Macdon heads, 3000 for Case IH Heads & 16 - 41ft Varifeed for 3050
Cutting Type	Platform	NO	Row or Platform	Only changeable when Not Defined on Header Type
Frame Type	Rigid or Flex	YES	Rigid or Flexhead	Select rigid or Flex depending on the front being used
Header Width	12.19m (40 feet)	YES	1.00 to 25.00m	True Header (Front) Width (Crop divider to Crop Divider)
Target Work Width	12.00m	YES	1.00 to 25.00m	Guidance Width of each GPS Guidance Swath
Width Adjust Step	1.00m	YES	0.1 to 12.50m	Customer choice - Only required for accuracy of Yield Data if more than 1 Combine is harvesting a paddock
Head Centre Offset	0.00m	YES	-10 to 10m	Only required if an offset front is being used
Header Alarm	On	YES	On or Off	ON
Header Alarm Rings	1	YES	1 to 5	Default is 3, Operator preference can be set
Auto Cut Width	On	YES	Off or On	On, when one Combine is Harvesting a Paddock. If multiple combines are in one paddock set to: No
Overlap Mode	Auto	YES	Auto or Manual	Auto for one Combine Manual for Multiple Combines
Work Width Reset Mode	Auto	YES	Auto or Manual	Auto

# Head 2 Settings 250 Series

Macdon D60, D65, FD70, FD75, Case IH 2152 & 2162

Parameters	Set to	Alterable	Options	Information
Header Sensors	<b>Enable</b>	YES	Disable or Enable	Enable for Functionality of AHHC or Autotilt.
Header Pressure Float	<b>NO</b>	YES	Yes or No	NO for Macdon Heads Yes for Case IH heads
Height/Tilt Response	<b>Normal</b>	YES	Normal or Fast	Normal for Macdon and Fast for Case IH 3000 series
Pressure Override Threshold or Pressure Float Override	<b>50%</b>	YES	1 to 50%	50% for Macdon Heads and 20% for Case IH 3000 Heads
Auto Header Lift	<b>NO</b>	YES	Yes or No	Yes for Case IH heads to protect AHHC sensors
HHC Raise Rate	<b>100</b>	YES	20 - 250	Customer preference of front lift speed
HHC Lower Rate	<b>100</b>	YES	100 - 1000	Customer preference of front drop speed
HHC Height Sens	<b>100</b>	YES	10 - 250	Higher number makes AHHC more sensitive & vice versa
HHC Tilt Sens	<b>100</b>	YES	10 - 250	Higher number makes Autotilt more sensitive & vice versa
HHC Tilt Rate	<b>100</b>	YES	20 - 250	Customer preference of tilt speed
Reel Speed Minimum	<b>0 or 1.6km</b>	YES	1.6 - 10km/hr	Min speed the reel will operate at when combine is stationary
Reel Speed Slope	<b>100</b>	YES	100 to 190	This No. helps match the reel to ground speed. Increase if the reel is slower than the ground speed in Auto & vice versa
Hydraulic Reel or Reel drive	<b>Yes</b>	YES	Yes or no	Yes for Hydraulic Drive Reel, which most fronts are
Reel Speed Sensor	<b>No</b>	YES	Yes or No	Yes only if a reel speed sensor is fitted
Reel Fore - Aft	<b>Yes</b>	YES	Yes	Yes always
Reel Vertical Position Sensor or Reel Height Sensor	<b>No</b>	YES	Yes or No	Yes for D1 or FD1 Macdon Fronts & Yes for 3100 / 3050 Case IH Fronts
Reel Horizontal Position Sensor or Reel Sensor Horizontal	<b>No</b>	YES	Yes or No	Yes for 3100 / 3050 Case IH Fronts
Vertical Knives	<b>Not Installed</b>	YES	Not Installed or Elec Driven or Hyd Driven, integrated or Hyd Driven, Independent	Only installed if a Case IH 3050 Front is being used
Header Lateral Tilt	<b>Yes</b>	YES	Yes or No	Yes Always
Autotilt	<b>No</b>	YES	Yes or No	Depends on the front being used
Auto Level in Headland	<b>Yes</b>	YES	Yes or No	Yes

# Head 1 Settings 250 Series

## Case IH 3152 & 3162

Parameters	Set to	Alterable	Options	Information
Maximum Work Height	50%	YES	0 - 100	Customers choice, sets the height that the front lifts to in headland mode & sets the on/off point for logging of yield data
Header Type	Draper/Varifeed	YES	Corn, Grain, Pick Up, Draper/Varifeed, Programmable	Depends on front being used
Header Sub Type	3000	YES	No Shift Function /2000 / 3000 / 16-41ft Varifeed	2000 for Macdon heads, 3000 for Case IH Heads & 16 - 41ft Varifeed for 3050
Cutting Type	Platform	NO	Row or Platform	Only changeable when Not Defined on Header Type
Frame Type	Rigid or Flex	YES	Rigid or Flexhead	Select rigid or Flex depending on the front being used
Header Width	12.50m (41 feet)	YES	1.00 to 25.00m	True Header (Front) Width (Crop divider to Crop Divider)
Target Work Width	12.00m	YES	1.00 to 25.00m	Guidance Width of each GPS Guidance Swath
Width Adjust Step	1.00m	YES	0.1 to 12.50m	Customer choice - Only required for accuracy of Yield Data if more than 1 Combine is harvesting a paddock
Head Centre Offset	0.00m	YES	-10 to 10m	Only required if an offset front is being used
Header Alarm	On	YES	On or Off	ON
Header Alarm Rings	1	YES	1 to 5	Default is 3, Operator preference can be set
Auto Cut Width	On	YES	Off or On	On, when one Combine is Harvesting a Paddock. If multiple combines are in one paddock set to: No
Overlap Mode	Auto	YES	Auto or Manual	Auto for one Combine Manual for Multiple Combines
Work Width Reset Mode	Auto	YES	Auto or Manual	Auto

# Head 2 Settings 250 Series

## Case IH 3152 & 3162

Parameters	Set to	Alterable	Options	Information
Header Sensors	<b>Enable</b>	YES	Disable or Enable	Enable for Functionality of AHHC or Autotilt.
Header Pressure Float	<b>Yes</b>	YES	Yes or No	NO for Macdon Heads Yes for Case IH heads
Height/Tilt Response	<b>Fast</b>	YES	Normal or Fast	Normal for Macdon and Fast for Case IH 3000 series
Pressure Override Threshold or Pressure Float Override	<b>20%</b>	YES	1 to 50%	50% for Macdon Heads and 20% for Case IH 3000 Heads
Auto Header Lift	<b>Yes</b>	YES	Yes or No	Yes for Case IH heads to protect AHHC sensors
HHC Raise Rate	<b>100</b>	YES	20 - 250	Customer preference of front lift speed
HHC Lower Rate	<b>100</b>	YES	100 - 1000	Customer preference of front drop speed
HHC Height Sens	<b>100</b>	YES	10 - 250	Higher number makes AHHC more sensitive & vice versa
HHC Tilt Sens	<b>100</b>	YES	10 - 250	Higher number makes Autotilt more sensitive & vice versa
HHC Tilt Rate	<b>100</b>	YES	20 - 250	Customer preference of tilt speed
Reel Speed Minimum	<b>0 or 1.6km</b>	YES	1.6 - 10km/hr	Min speed the reel will operate at when combine is stationary
Reel Speed Slope	<b>100</b>	YES	100 to 190	This No. helps match the reel to ground speed. Increase if the reel is slower than the ground speed in Auto & vice versa
Hydraulic Reel or Reel drive	<b>Yes</b>	YES	Yes or no	Yes for Hydraulic Drive Reel, which most fronts are
Reel Speed Sensor	<b>No</b>	YES	Yes or No	Yes only if a reel speed sensor is fitted
Reel Fore - Aft	<b>Yes</b>	YES	Yes	Yes always
Reel Vertical Position Sensor or Reel Height Sensor	<b>Yes</b>	YES	Yes or No	Yes for D1 or FD1 Macdon Fronts & Yes for 3100 / 3050 Case IH Fronts
Reel Horizontal Position Sensor or Reel Sensor Horizontal	<b>Yes</b>	YES	Yes or No	Yes for 3100 / 3050 Case IH Fronts
Vertical Knives	<b>Not Installed</b>	YES	Not Installed or Elec Driven or Hyd Driven, integrated or Hyd Driven, Independent	Only installed if a Case IH 3050 Front is being used
Header Lateral Tilt	<b>Yes</b>	YES	Yes or No	Yes Always
Autotilt	<b>Yes</b>	YES	Yes or No	Depends on the front being used
Auto Level in Headland	<b>Yes</b>	YES	Yes or No	Yes

# Head 1 Settings 250 Series

## Case IH 3050 Varicut

Parameters	Set to	Alterable	Options	Information
Maximum Work Height	50%	YES	0 - 100	Customers choice, sets the height that the front lifts to in headland mode & sets the on/off point for logging of yield data
Header Type	Draper/Varifeed	YES	Corn, Grain, Pick Up, Draper/Varifeed, Programmable	Depends on front being used
Header Sub Type	16 -41ft Varifeed	YES	No Shift Function /2000 / 3000 / 16-41ft Varifeed	2000 for Macdon heads, 3000 for Case IH Heads & 16 - 41ft Varifeed for 3050
Cutting Type	Platform	NO	Row or Platform	Only changeable when Not Defined on Header Type
Frame Type	Rigid	YES	Rigid or Flexhead	Select rigid or Flex depending on the front being used
Header Width	12.50m (41 feet)	YES	1.00 to 25.00m	True Header (Front) Width (Crop divider to Crop Divider)
Target Work Width	12.00m	YES	1.00 to 25.00m	Guidance Width of each GPS Guidance Swath
Width Adjust Step	1.00m	YES	0.1 to 12.50m	Customer choice - Only required for accuracy of Yield Data if more than 1 Combine is harvesting a paddock
Head Centre Offset	0.00m	YES	-10 to 10m	Only required if an offset front is being used
Header Alarm	On	YES	On or Off	ON
Header Alarm Rings	1	YES	1 to 5	Default is 3, Operator preference can be set
Auto Cut Width	On	YES	Off or On	On, when one Combine is Harvesting a Paddock. If multiple combines are in one paddock set to: No
Overlap Mode	Auto	YES	Auto or Manual	Auto for one Combine Manual for Multiple Combines
Work Width Reset Mode	Auto	YES	Auto or Manual	Auto

# Head 2 Settings 250 Series

## Case IH 3050 Varicut

Parameters	Set to	Alterable	Options	Information
Header Sensors	<b>Enable</b>	YES	Disable or Enable	Enable for Functionality of AHHC or Autotilt.
Header Pressure Float	<b>Yes</b>	YES	Yes or No	NO for Macdon Heads Yes for Case IH heads
Height/Tilt Response	<b>Fast</b>	YES	Normal or Fast	Normal for Macdon and Fast for Case IH 3000 series
Pressure Override Threshold or Pressure Float Override	<b>20%</b>	YES	1 to 50%	50% for Macdon Heads and 20% for Case IH 3000 Heads
Auto Header Lift	<b>Yes</b>	YES	Yes or No	Yes for Case IH heads to protect AHHC sensors
HHC Raise Rate	<b>100</b>	YES	20 - 250	Customer preference of front lift speed
HHC Lower Rate	<b>100</b>	YES	100 - 1000	Customer preference of front drop speed
HHC Height Sens	<b>100</b>	YES	10 - 250	Higher number makes AHHC more sensitive & vice versa
HHC Tilt Sens	<b>100</b>	YES	10 - 250	Higher number makes Autotilt more sensitive & vice versa
HHC Tilt Rate	<b>100</b>	YES	20 - 250	Customer preference of tilt speed
Reel Speed Minimum	<b>0 or 1.6km</b>	YES	1.6 - 10km/hr	Min speed the reel will operate at when combine is stationary
Reel Speed Slope	<b>100</b>	YES	100 to 190	This No. helps match the reel to ground speed. Increase if the reel is slower than the ground speed in Auto & vice versa
Hydraulic Reel or Reel drive	<b>Yes</b>	YES	Yes or no	Yes for Hydraulic Drive Reel, which most fronts are
Reel Speed Sensor	<b>No</b>	YES	Yes or No	Yes only if a reel speed sensor is fitted
Reel Fore - Aft	<b>Yes</b>	YES	Yes	Yes always
Reel Vertical Position Sensor or Reel Height Sensor	<b>Yes</b>	YES	Yes or No	Yes for D1 or FD1 Macdon Fronts & Yes for 3100 / 3050 Case IH Fronts
Reel Horizontal Position Sensor or Reel Sensor Horizontal	<b>Yes</b>	YES	Yes or No	Yes for 3100 / 3050 Case IH Fronts
Vertical Knives	<b>Hyd Driven, Integrated</b>	YES	Not Installed or Elec Driven or Hyd Driven, integrated or Hyd Driven, Independent	Only installed if a Case IH 3050 Front is being used
Header Lateral Tilt	<b>Yes</b>	YES	Yes or No	Yes Always
Autotilt	<b>Yes</b>	YES	Yes or No	Depends on the front being used
Auto Level in Headland	<b>Yes</b>	YES	Yes or No	Yes



<b>Suggested Combine Initial Settings 2021</b>											
	Canola	Canola Dry	Lentils	Early Barley	Later Barley	Wheat	Tough Wheat	Chick Peas	Beans	Lupins light crop	Vetch light crop
<b>Rotor</b>	630	440	600	950	870	900-950	1000	540	550	500-550	500
<b>Concave</b>	20	45-50	25	18	18	12	2	15	26	12	15 -20
<b>Fan</b>	650	650	1000	920	910	920	920	1020	980	1000	900-1000
<b>Top Sieve</b>	11	6	18	16	16	14	14	15	12	16	15
<b>Bottom Sieve</b>	9	9	18	17	17	8	8	12	18	16	17
<b>Pre Sieve</b>	1	1	4	5	5	4	4	3	5	3	4
<b>1st Module</b>	SW	SW	SW	SW	LW	SW	SW	SW	LW	SW	SW
<b>2nd Module</b>	SW	SW	SW	LW	LW	LW	LW	SW	LW	LW	LW
<b>3rd Module</b>	SL	LW	LW	LSW	LSW	LSW	LSW	LSW	LSW	LSW	LSW
<b>4th Module</b>	SL	SL	SL	LSW	LSW	LSW	LSW	LSW	LSW	LSW	LSW
<b>Notes</b>	Standard setting	Helps to stop loading of the sieves		Use when straw is green but grain is ready. Early on - expect some rotor loss if straw is green still. Can try some Straight Separator Bars in 3rd & 4th area							

**Rotor Gear Box Speed Ranges**

**Gear 1: 220 - 450 RPM**

**Gear 2: 420 - 780 RPM**

**Gear 3: 730 - 1180 RPM**

**\*Straight Separator Bars can be used in modules 3 & 4 to help with Separation. Two pairs in each module can be used**

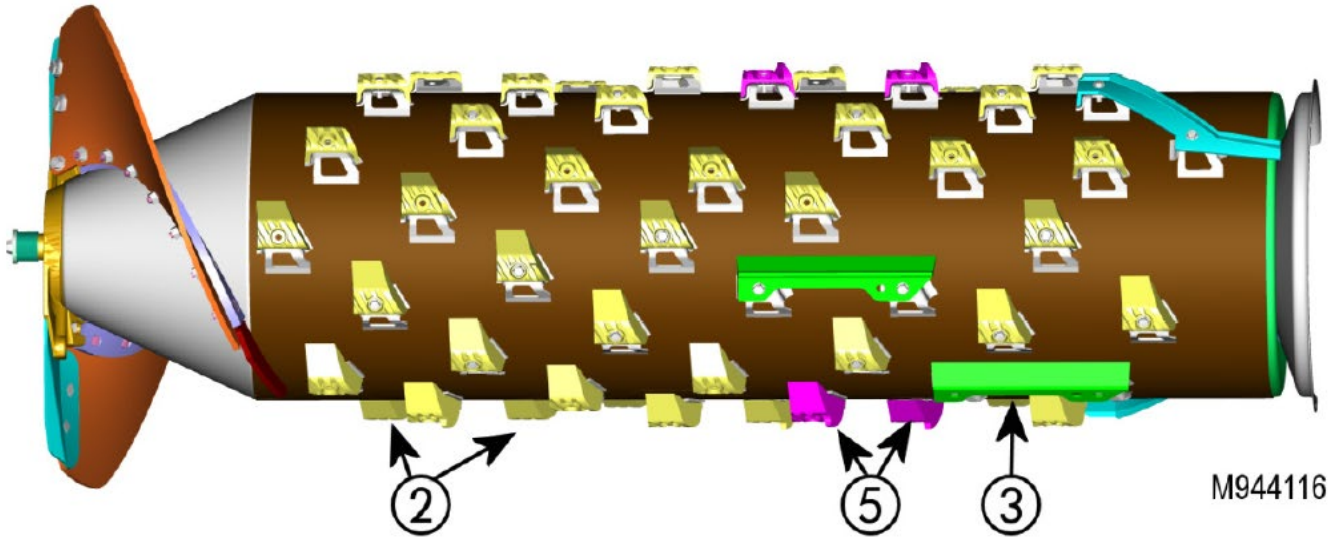
**\*In easy threshing cereals a set of straight separator bars can be used in module 2 to start the separation earlier**

**\*Straight Separator bars are designed to create mass disturbance to the crop flow and aid with separation**

**\*In Green Heavy Crops if Straight Separator bars are fitted beware this may increase HP use**

**\*Spike Rasp Bars can be used fully through modules 3 & 4 to assist with opening up the crop mat and aid with separation**

**AFX Rotor Options**



**Item 5**



Difference options can be used in the rotor for different crops and conditions as referenced on the previous page. Item 2 shows standard rasp bars. These are used in modules 1 & 2. Item 5 shows a spiked rasp bar, these can be used in modules 3 & 4 to help open the crop mat up

Item 3 Shows Straight Separator bars that can be used in modules 3 & 4 mainly. In some cases they can also be used in module 2 as referenced on the previous page.

**Item 3**



**Cameras**  
Video 1X1  
Video 1X2  
Video 2X3  
Video 2X4  
Video 2X5

**HVAC**  
Blower Speed  
Defog  
Set Temperature

**Hydraul**  
Charge Filter  
Control Pressure  
Hydraulic Oil Temp  
Hydro Mtr Temp  
Park Brake Press.  
PTO Lube Press.  
Reservoir Filter  
Rotor Motor Spd

**Flow/Yield**  
Est Wt Rem, Dry  
Est Wt Rem, Wet  
Flow Dry  
Flow Wet  
Flow, Avg - Wet  
Flow, Avg - Wet\*  
Flow, Avg- Dry  
Grainbin Level  
Instant Rate  
Weight , Dry  
Weight Counter\*  
Weight, Wet  
Yield, Avg - Dry  
Yield, Avg - Wet  
Yield, Avg - Wet\*  
Yield, Dry  
Yield, Wet

**Combine**  
Barometric Press.  
Cage Vanes  
Chop to Swath  
Chopper Speed  
Combine Long. Incl.  
Concave Opening  
Cross Section (3x2)  
Elevator Speed  
Fan Speed  
Fan Speed Setp.  
Feeder Position  
Feeder Speed  
Feedrate Ctrl  
Feedrate Gain Reset  
Folding Tube  
Fuel Level  
Left Spread Width  
Loss Monitors (1 Col)  
Loss Monitors (2 Col)  
Loss Monitors (2x2)  
Mode  
Pivot Spout  
Res Distr Ctrl  
Right Spread Width  
Rotor Speed  
Shortcut Buttons  
Sieve Angle  
Sieve Offset  
Sieve Press. Left  
Sieve Press. Right  
Sieve Shake Spd  
Sieve, lower  
Sieve, pre  
Sieve, upper  
Spread Distribution  
Spread Set Point  
Spreader Speed  
Tailings Speed  
Tailings Vol Alrm  
Tailings Volume  
Thresher Loss Sensitivity  
Threshing Hours

**Fuel**  
Fuel Econ, Fld, Avg  
Fuel Time, Road\*  
Fuel Used, Field  
Fuel Used, Field \*  
Fuel Used, Road  
Fuel Used, Road\*  
Fuel Used, Total  
Fuel Used, Total\*  
Fuel, Road Avg  
Fuel, Road Avg\*  
Fuel/Area, Fld, Avg  
Fuel/Area, Fld, Avg\*  
Fuel/Distance, Fld, Avg  
Fuel/Hour, Fld, Avg  
Fuel/Hour, Fld, Avg\*  
Fuel/Weight field  
Fuel/Weight field\*

**Engine**  
Air Filter  
Atmospheric Press  
Battery Voltage  
Battery Voltage Graph  
Boost Air Temp  
Boost Air Temp Graph  
Boost Pressure  
Coolant Temp  
Engine Oil Pressure  
Engine Oil Pressure Graph  
Engine Oil Temp  
Engine Speed  
Engine Speed Graph  
Fuel Rate  
Fuel Temp  
Gnddrive fw pres  
Gnddrive rev pres  
Left Brake Pres.  
Right Brake Pres.  
Water in Fuel

**GPS**  
Aggressiveness  
Boundary Record  
Cross Track Err  
Cross Track Err Avg  
DGPS SNR  
Field Marks 1-2  
Field Marks 3-4  
GPS Altitude  
GPS HDOP  
GPS Heading  
GPS Latitude  
GPS Longitude  
GPS PDOP  
GPS Status  
Guidance Engage  
Headland  
Nav Performance  
Nudge  
Obstacle Record  
Re-Mark  
Show Errors  
Steering Angle  
Swath 1 Record 2X1  
Swath Acquisition  
Swath Finder 1X1  
Swath Finder 2X1  
Swath Manage  
Swath map 1X4  
Swath Map 2X5  
Swath Number  
Swath Select  
Swath Skipping  
Swath2 Record 2X1  
Temporary Swath  
Tramlines

**Header**  
Area On/Off  
Floatation Pres.  
Head Lat Tilt Graph  
Header Height  
Header Lat Tilt  
Header Lift Pressure  
Header Type  
HHC Ht Sens.  
HHC Lower Rate  
HHC Raise Rate  
HHC Tilt Sens.  
Knife Engagement  
Lateral Inclination  
Overlap Mode  
Reel Speed  
Reel Speed Min  
Speed Sensor Type  
Stubble Ht, Avg  
Stubble Ht, Cntr (L)  
Stubble Ht, Cntr R  
Stubble Ht, Left  
Stubble Ht, Right

<b>Trip Computer</b>	
ACS Save	Moisture, Avg
Area	Mositure Mode
Area Remaining	Operation Instance
Area*	Operator
Area, Total Field	Rotor Loss, Avg
Boundary Area	Sieve Loss
Console Backlight	Sieve Loss Sens
Crop Temp	Tag
Crop Type	Task
Date / Time	Time, Total*
Distance, Field	Time, Work
Distance, Field*	Time Remaining
Distance, Road	Time, Field
Distance, Road*	Time, Field*
Distance, Total	Time, Road
Distance, Total*	Time, Road*
Distance, Work	Tot Bound Area
Eng Load, Wrk, Avg	Total Area*
Engine Hours	Transport
Engine Load	Variety
Engine Load Graph	Variety Legend
Farm	Variety Tracking
Field	Vehicle Name
Grower	Work Condition
High Range Max	Working Width
Low Range Max	Work Rate, Fld, Avg
Map 1X4	Work Rate, Fld, Avg*
Map 2X3	Work Rt, Wrk, Avg
Map 2X4	Work Speed, Avg
Map 2X5	Work Width Reset Mode
Moisture	

**Flagship Complete List of Run Screen Items**

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Suggested Run Screen Layout 250 Series with HC

Run Screen 1	
Run Screen Name = MAIN	
Moisture	Shortcut Buttons
Cross Section (3x2)	<i>Cross Section (3x2)</i>
<i>Cross Section (3x2)</i>	<i>Cross Section (3x2)</i>
<i>Cross Section (3x2)</i>	<i>Cross Section (3x2)</i>
Loss Monitors (2x2)	<i>Loss Monitors (2x2)</i>
<i>Loss Monitors (2x2)</i>	<i>Loss Monitors (2x2)</i>

Run Screen 2	
Run Screen Name = JOB	
Flow, Wet	Grower
Weight, Wet	Farm
Weight Counter*	Field
Area	Task
Area*	Crop Type
Area ON/OFF	Tag

Run Screen 3	
Run Screen Name = MAP	
Yield Avg - Wet	Moisture, Avg
Map 2X5	<i>Map 2X5</i>
<i>Map 2X5</i>	<i>Map 2X5</i>
<i>Map 2X5</i>	<i>Map 2X5</i>
<i>Map 2X5</i>	<i>Map 2X5</i>
<i>Map 2X5</i>	<i>Map 2X5</i>

Run Screen 4	
Run Screen Name = SETTINGS	
Spread Set Point	Moisture
Spread Distribution	Crop Temp
Left Spread Width	Header Height
Right Spread Width	HHC Ht Sens.
Spreader Speed	HHC Raise Rate
Engine Speed	HHC Lower Rate

Run Screen 5 - (If ACCUGuide Fitted)	
Run Screen Name = GPS	
Swath Finder 2X1	<i>Swath Finder 2X1</i>
Swath 1 Record 2X1	<i>Swath 1 Record 2X1</i>
Swath Map 1X4	Swath Select
<i>Swath Map 1X4</i>	Swath Manage
<i>Swath Map 1X4</i>	Re-Mark
<i>Swath Map 1X4</i>	Guidance Engage

Run Screen 6 - (If Cameras Fitted)	
Run Screen Name = CAMERAS	
Video 2X5	<i>Video 2X5</i>
<i>Video 2X5</i>	<i>Video 2X5</i>
<i>Video 2X5</i>	<i>Video 2X5</i>
<i>Video 2X5</i>	<i>Video 2X5</i>
<i>Video 2X5</i>	<i>Video 2X5</i>
Threshing Hours	Engine Hours

**Suggested Run Screen Layout 2017+ Combines**

Run Screen 1	
Run Screen Name = MAIN	
Engine Load	Header Height
Engine Speed	Yield Wet
Rotor Speed	Fan Speed
Crop Temp	Moisture
Loss Monitors (2 Col)	<i>Loss Monitors (2 Col)</i>
<i>Loss Monitors (2 Col)</i>	<i>Loss Monitors (2 Col)</i>

Run Screen 2	
Run Screen Name = JOB	
Flow, Wet	Grower
Weight, Wet	Farm
Weight Counter*	Field
Area	Task
Area*	Crop Type
Area ON/OFF	Tag

Run Screen 3	
Run Screen Name = MAP	
Yield Avg - Wet	Moisture, Avg
Map 2X5	<i>Map 2X5</i>
<i>Map 2X5</i>	<i>Map 2X5</i>
<i>Map 2X5</i>	<i>Map 2X5</i>
<i>Map 2X5</i>	<i>Map 2X5</i>
<i>Map 2X5</i>	<i>Map 2X5</i>

Run Screen 4	
Run Screen Name = SETTINGS	
Rotor Speed	Fan Speed
Concave Opening	Fan Setp.
Sieve, upper	Sieve, lower
Spreader Speed	HHC Ht Sens.
Yield, Wet	Manual HHC Raise Rate
ACS Save	Manual HHC Lower Rate

Run Screen 5 - (If ACCUGuide Fitted)	
Run Screen Name = GPS	
Swath Finder 2X1	<i>Swath Finder 2X1</i>
Swath 1 Record 2X1	<i>Swath 1 Record 2X1</i>
Swath Map 1X4	Swath Select
<i>Swath Map 1X4</i>	Swath Manage
<i>Swath Map 1X4</i>	Re-Mark
<i>Swath Map 1X4</i>	Guidance Engage

Run Screen 6 - (If Cameras Fitted)	
Run Screen Name = CAMERAS	
Video 2X5	<i>Video 2X5</i>
<i>Video 2X5</i>	<i>Video 2X5</i>
<i>Video 2X5</i>	<i>Video 2X5</i>
<i>Video 2X5</i>	<i>Video 2X5</i>
<i>Video 2X5</i>	<i>Video 2X5</i>
Threshing Hours	Engine Hours



Suggested Run Screen Layout 2016 & Previous

Run Screen 1	
Run Screen Name = MAIN	
Engine Load	Header Height
Engine Speed	Yield Wet
Rotor Speed	Fan Speed
Crop Temp	Moisture
Loss Monitors (2 Col)	<i>Loss Monitors (2 Col)</i>
<i>Loss Monitors (2 Col)</i>	<i>Loss Monitors (2 Col)</i>

Run Screen 2	
Run Screen Name = JOB	
Flow, Wet	Grower
Weight, Wet	Farm
Weight Counter*	Field
Area	Task
Area*	Crop Type
Area ON/OFF	Tag

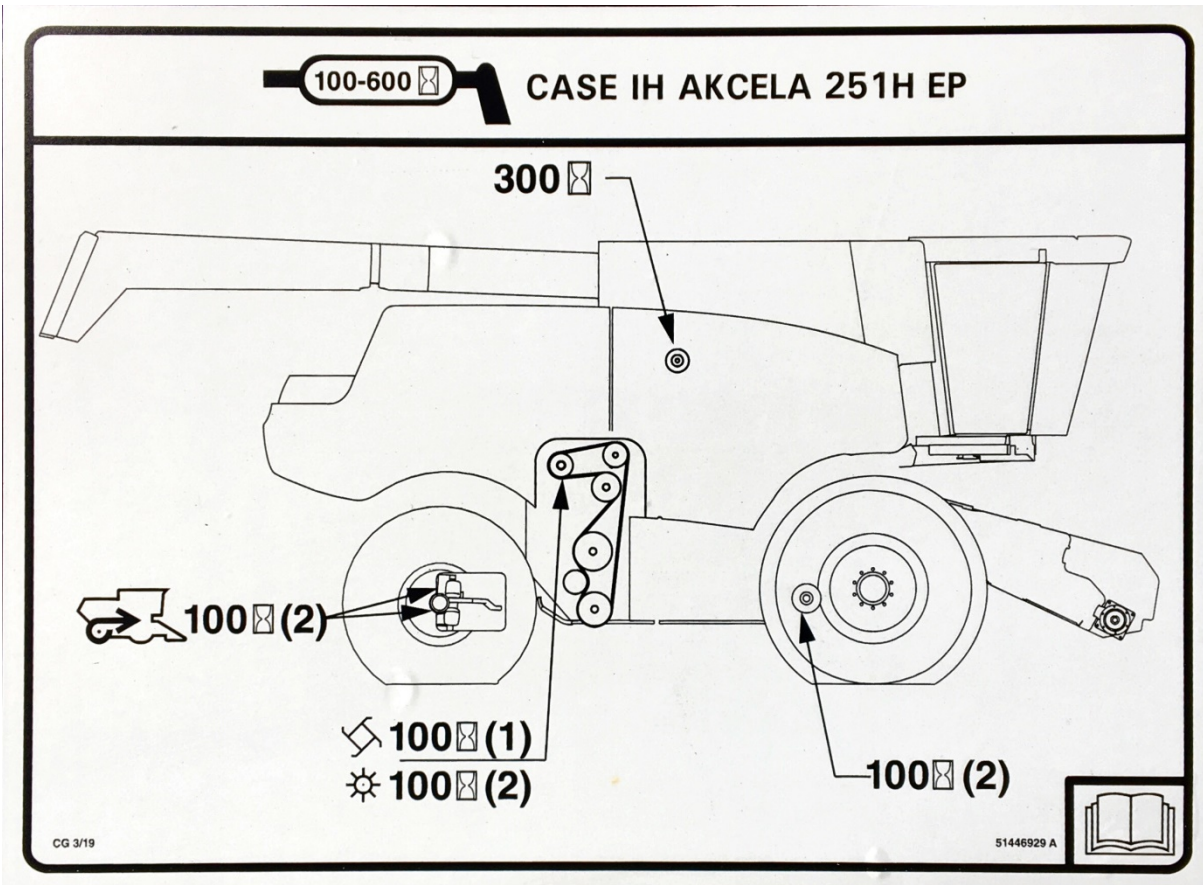
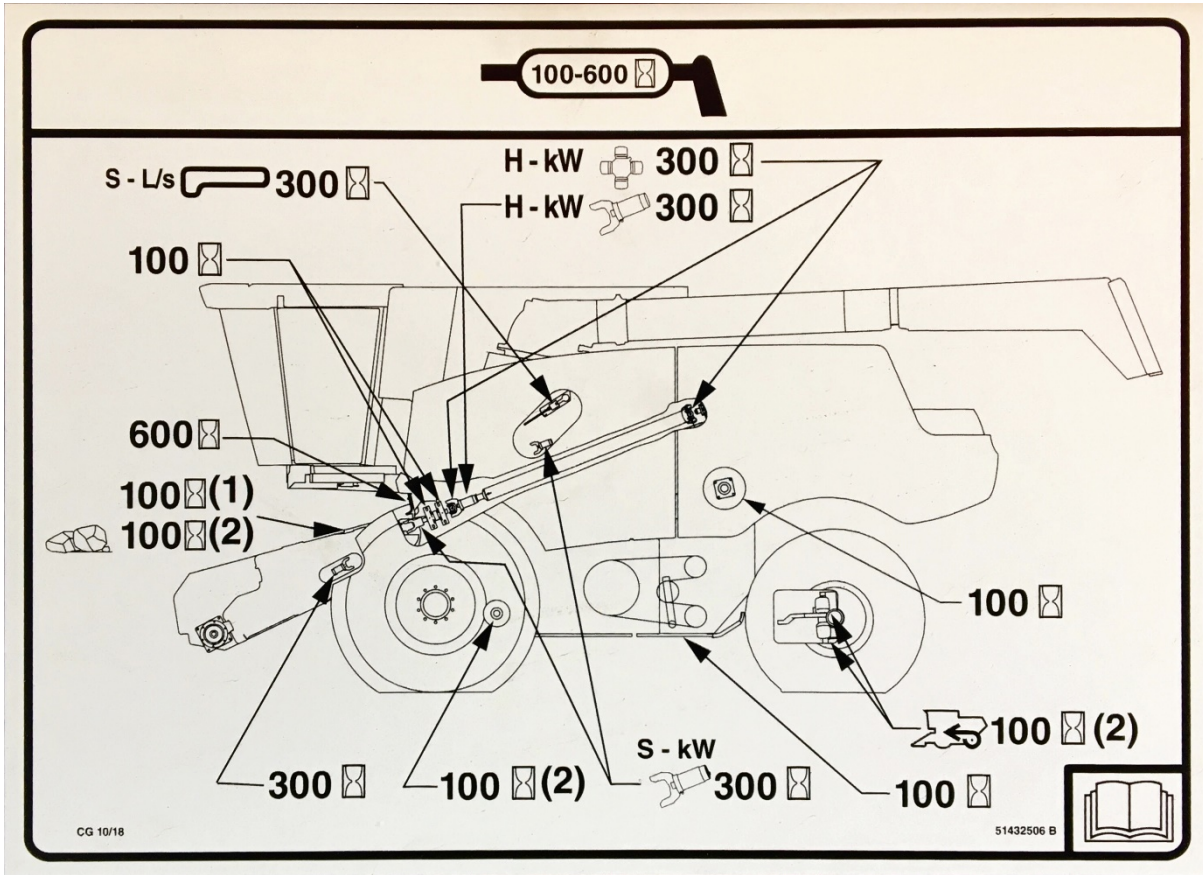
Run Screen 3	
Run Screen Name = MAP	
Yield Avg - Wet	Moisture, Avg
Map 2X5	<i>Map 2X5</i>
<i>Map 2X5</i>	<i>Map 2X5</i>
<i>Map 2X5</i>	<i>Map 2X5</i>
<i>Map 2X5</i>	<i>Map 2X5</i>
<i>Map 2X5</i>	<i>Map 2X5</i>

Run Screen 4	
Run Screen Name = SETTINGS	
Rotor Speed	Fan Speed
Concave Opening	Yield Wet
Sieve, upper	Sieve, lower
Spreader Speed	HHC Ht Sens.
Spreader Distr Ctrl	Manual HHC Raise Rate
ACS Save	Manual HHC Lower Rate

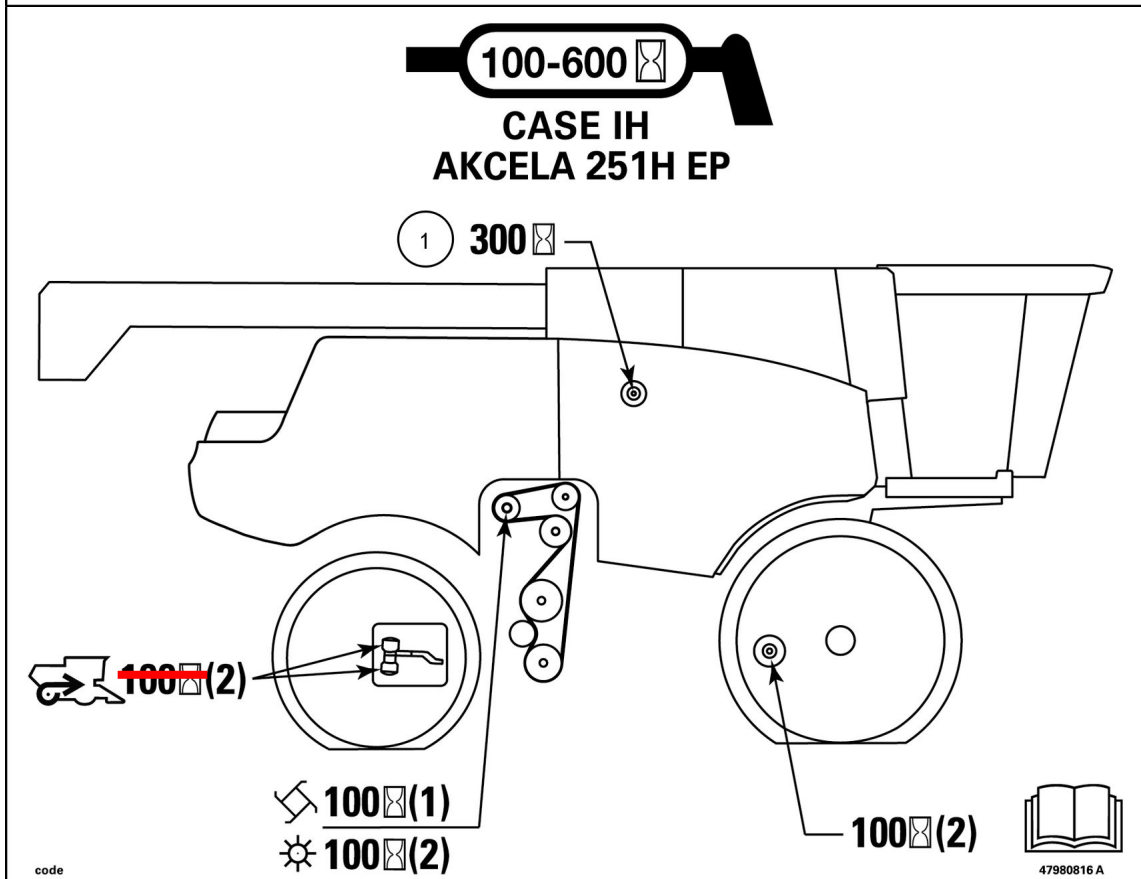
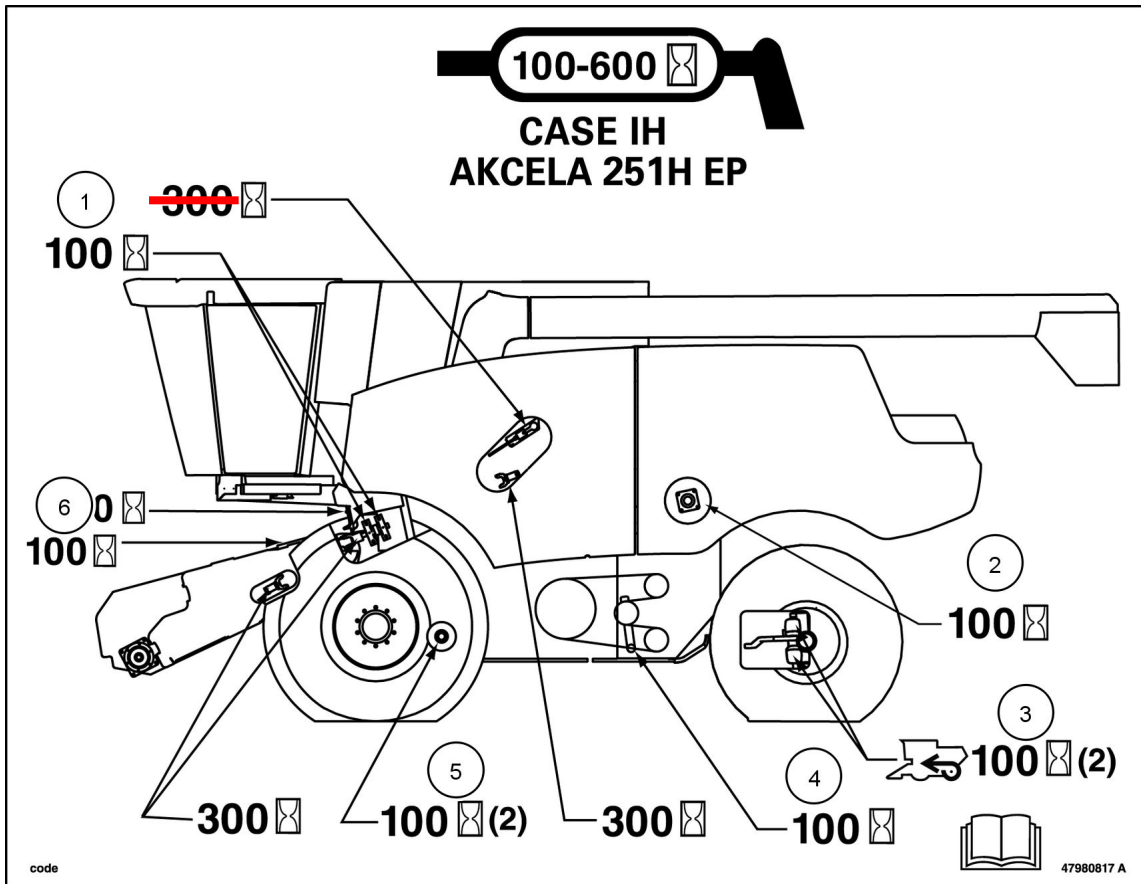
Run Screen 5 - (If ACCUGuide Fitted)	
Run Screen Name = GPS	
Swath Finder 2X1	<i>Swath Finder 2X1</i>
Swath 1 Record 2X1	<i>Swath 1 Record 2X1</i>
Swath Map 1X4	Swath Select
<i>Swath Map 1X4</i>	Swath Manage
<i>Swath Map 1X4</i>	Re-Mark
<i>Swath Map 1X4</i>	Guidance Engage

Run Screen 6 - (If Cameras Fitted)	
Run Screen Name = CAMERAS	
Video 2X5	<i>Video 2X5</i>
<i>Video 2X5</i>	<i>Video 2X5</i>
<i>Video 2X5</i>	<i>Video 2X5</i>
<i>Video 2X5</i>	<i>Video 2X5</i>
<i>Video 2X5</i>	<i>Video 2X5</i>
Threshing Hours	Engine Hours

**Flagship Greasing Tables – 250 Series**

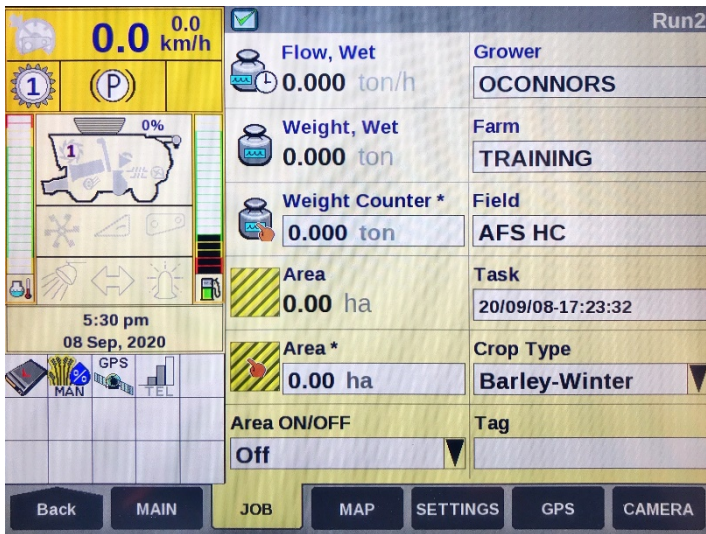


**Flagship Greasing Tables – 240 Series & Prior**



## AFS Harvest Command (AFS HC)

Making a start



To Begin you must have selected on the JOB Tab or Run 2:

- Grower
- Farm
- Field
- Crop Type

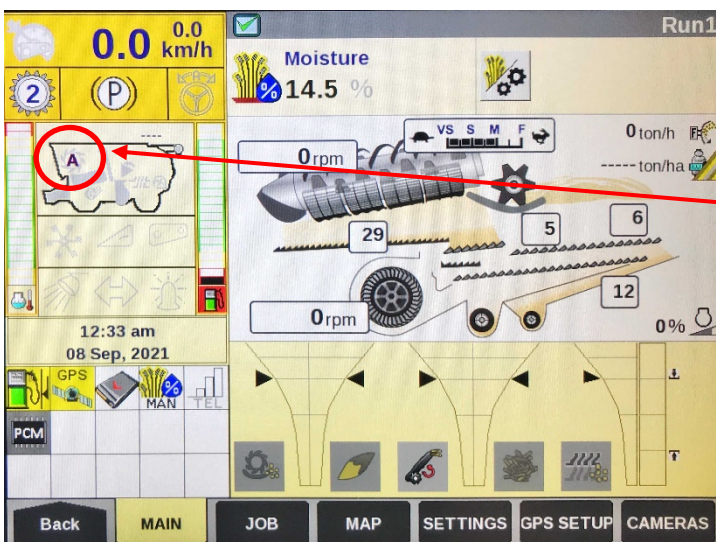
Available AFS Harvest Command Crops:

- Canola
- Wheat
- Barley
- Corn
- Soy Beans\*\*\*

(\*\*\*Can be used on any Beans)



Next you must enable the Automation with a switch on the combine located on the overhead console



Before activating the Automation, a '1' icon will be located here



Once pressing the Automation switch for the selected crop type the '1' will change to an 'A'



The next step is to use the 'Shortcut' Icon to enter the AFS Harvest Command set up. This is located at the top on the MAIN tab or Run 1



## **AFS HARVEST COMMAND™ STRATEGIES**

### **OPTION 1. GRAIN QUALITY MODE**

#### **Target**

- This selection will make adjustments to prioritise grain quality and sample cleanliness.
- The combine will increase the throughput until the maximum engine load or maximum ground speed is reached and no grain quality issues are found. **The priority is grain quality whilst maximising throughput.**

### **OPTION 2. PERFORMANCE MODE**

#### **Target**

- This selection will make adjustments to equalise combine performance based on throughput, losses, and grain quality.
- The combine will increase the throughput until the maximum engine load or maximum groundspeed is reached and as long as losses are low. **The priority is grain savings whilst maximising throughput.**

### **OPTION 3. MAXIMUM THROUGHPUT MODE**

#### **Target**

- The combine will increase the throughput until the maximum engine load or maximum ground speed is reached and will not slow down due to loss or grain quality issues.  
**We are looking to maximise throughput, with minimal grain losses. These are both prioritised over grain quality.**

### **OPTION 4. FIXED THROUGHPUT MODE**

#### **Target**

The combine will vary the ground speed to maintain a targeted throughput which can be limited by the maximum engine load or ground speed. **The priority is to achieve a constant crop flow (at a fixed throughput) and minimum losses.**



## AFS Harvest Command



### ○ GRAIN QUALITY

- This selection will make adjustments to prioritise grain quality and sample cleanliness.  
*Grain quality is prioritised over losses.*

### ○ PERFORMANCE

- The combine will increase the throughput until the maximum engine load or maximum groundspeed is reached and as long as losses are low.  
*The priority is grain savings with minimal losses.*

### ○ MAX THROUGHPUT

- The combine will increase the throughput until the maximum engine load or maximum ground speed is reached and will not slow down due to loss or grain quality issues.  
*Maximum throughput is the priority whilst minimising losses.*

### ○ FIXED THROUGHPUT

- The combine will vary the ground speed to maintain a targeted throughput which can be limited by the maximum engine load or ground speed. *Constant crop flow and minimum losses.*

## Adjust Frequency

### ○ Low

- This setting will take 40 seconds before making adjustments, using a large number of sensor samples, making automation less sensitive to small crop condition changes.
- Use this setting if you have very consistent crop conditions such as moisture, yield etc

### ○ Medium

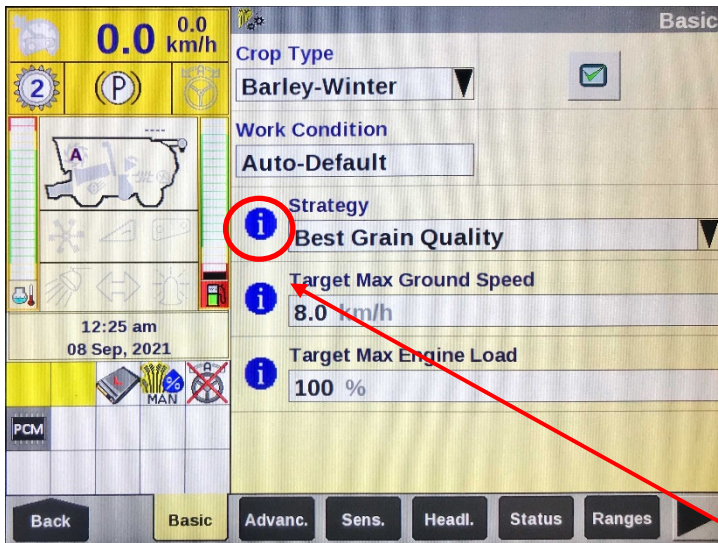
- This setting will take 20 seconds before making adjustments, using a medium number of sensor samples, making automation more sensitive to crop condition changes.
- Use this setting if you have average crop conditions

### ○ High

- This setting will take 20 seconds before making adjustments, using a lower number of sensor samples, making automation highly sensitive to crop condition changes.
- Use this setting if you have varying crop conditions.

“Medium” is recommended to start.

## AFS Harvest Command



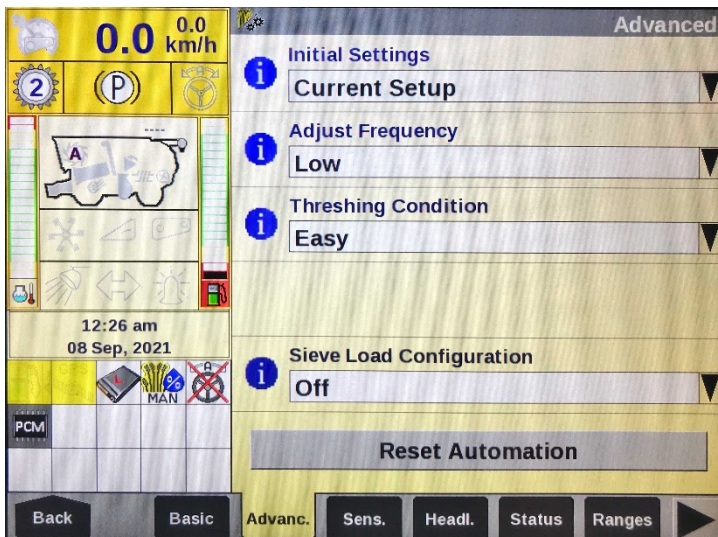
This shows the AFS HC 'Basic' set up tab.

You must have selected:  
 Crop Type  
 Add a – Work Condition  
 Strategy  
 Target Max Ground Speed  
 Target Max Engine Load

Once this has been set you can press this Icon & Start Harvesting



Strategies are explained on previous pages or can be viewed here



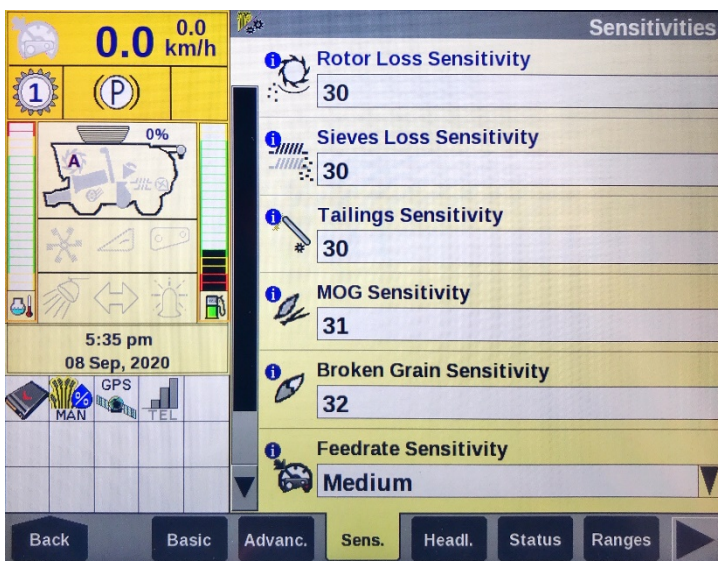
AFS HC 'Advanc. Tab'

Initial settings – Automatic is suggested although you can use Current Setup

Adjust Frequency – Low, Medium or High. Explained on previous page

Threshing Condition – Operators judgement required of the crop

Sieve Load Configuration – options are On Or Off - This will give you Sieve load on the run Screen



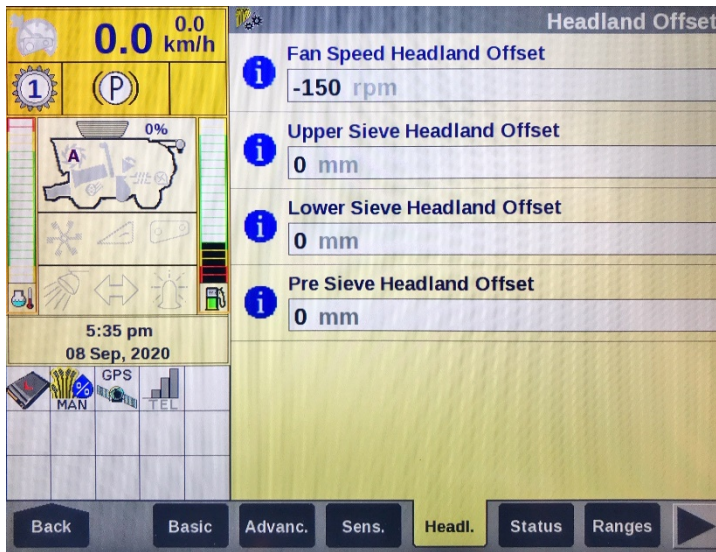
AFS HC Sens. Tab where sensitivities can be set.

Recommended Sensitivities	Wheat	Canola	Corn	Soybeans	Barley
Rotor loss	70	40	35	55	69
Sieve Loss	55	60	40	50	53
Grain/ Quality	35	30	30	40	32
MOG	40	20	55	35	31
Tailings Vol.	35	40	50	50	30

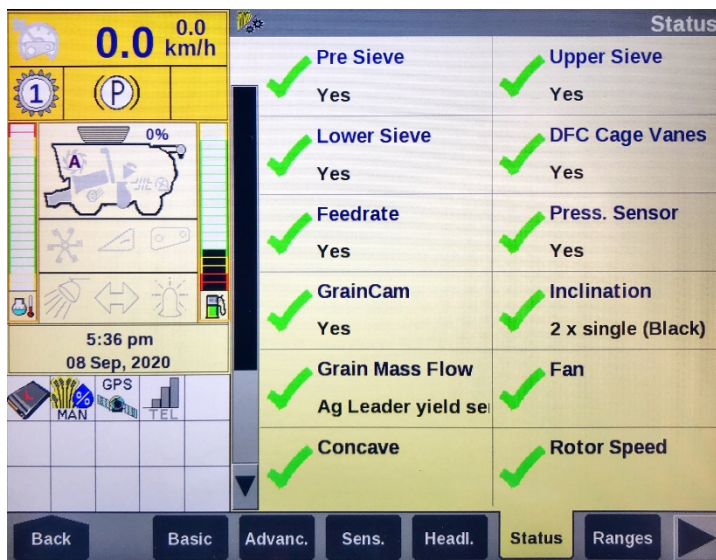
Please see above suggested settings from Case IH 2019 & added Barley for 2020



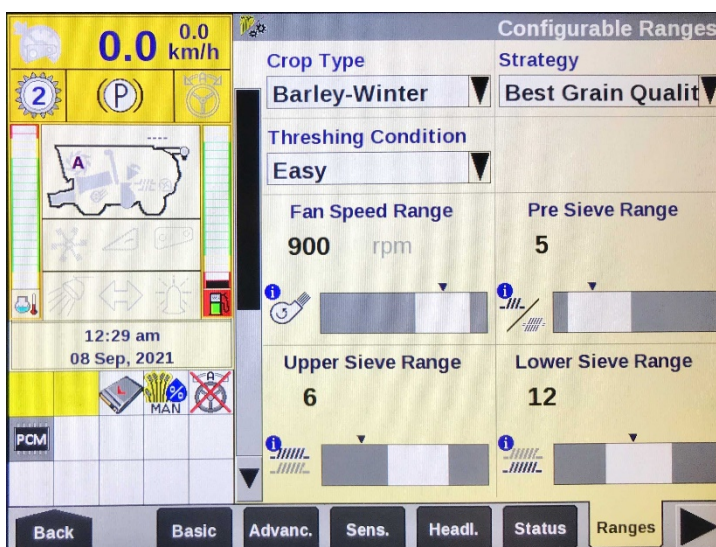
## AFS Harvest Command



**AFS HC Headl. Tab**  
This can be used to create offsets for the fan or sieve positions if using the headland function



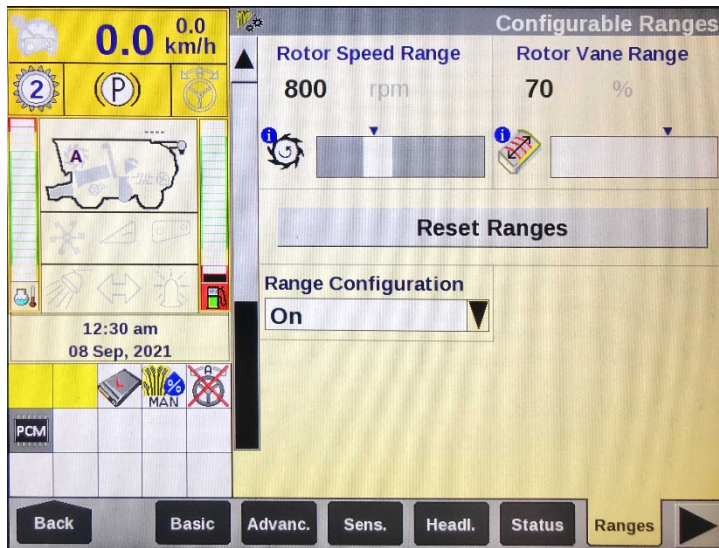
**AFS HC Status Tab**  
Shows the operator the status of the AFS HC sensors



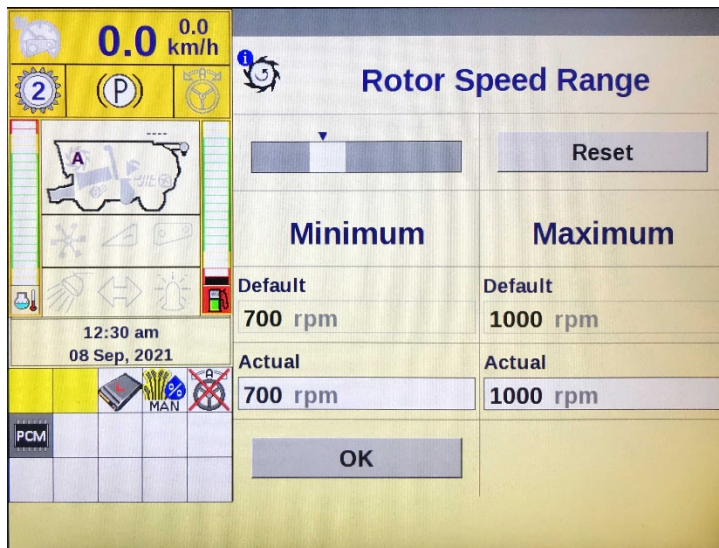
**AFS HC Ranges Tab**  
Ensure this is turned on  
It gives the operator the ability to set range function on:

- Fan Speed
- Pre Sieve Position
- Upper Sieve Position
- Lower Sieve Position
- Rotor Speed
- Rotor Cage Vane Position

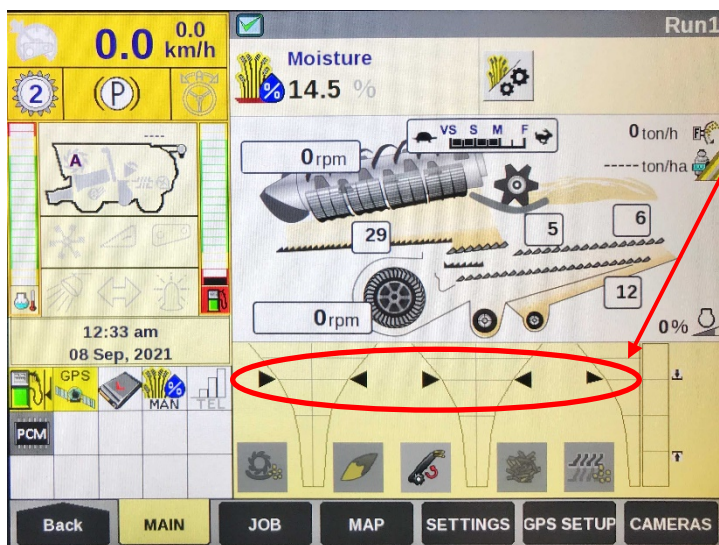
## AFS Harvest Command



AFS HC Ranges Tab

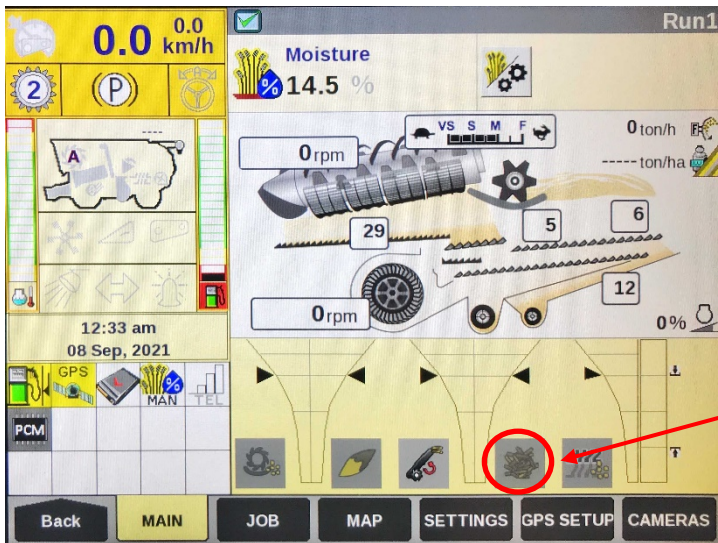


Example showing how to set a minimum and maximum range on an aspect of the machine



AFS HC Main tab or Run 1  
While automation is activated you will notice that position arrows appear on the loss funnels  
You will need to run your sensitivities higher than you may have traditionally done.  
The aim is to have the funnels operating at the arrows while harvesting  
If you do not, the AFS HC will not alter machine set up & will only drive at your max ground speed or max engine load as previously set in the basic tab at the start

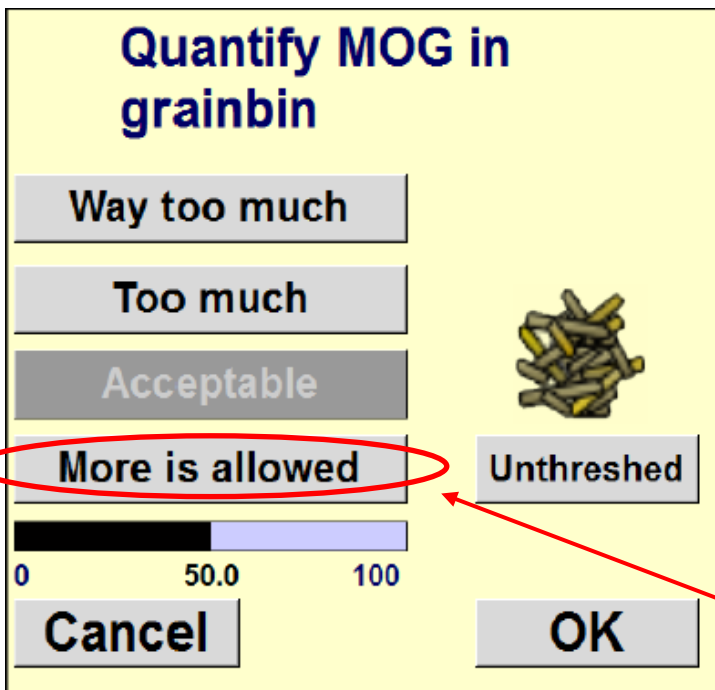
**AFS Harvest Command**



AFS HC Sensitivities can also be altered on the Main Tab.

Example of Altering MOG (Material other than Grain) Sensitivity from the Main Tab

Press the MOG icon



This will be displayed now  
You can tell the machine with regard to MOG in the sample that you have:

- Way too Much
- Too Much
- Acceptable
- More is allowed

Think of these as 4 pre-set options that adjust the sensitivity to pre-defined numbers. 'More is allowed' lowering the sensitivity through to 'Way too much' increasing the sensitivity

The sensitivity can be altered by touching here and increasing or decreasing the number

Once done, give the machine time to react & determine if this is now satisfactory or a change is required

**AFS Harvest Command**

Cross Section View Layout:



Rotor RPM    Concave opening    Cage Vane position    Pre Sieve    Upper Sieve

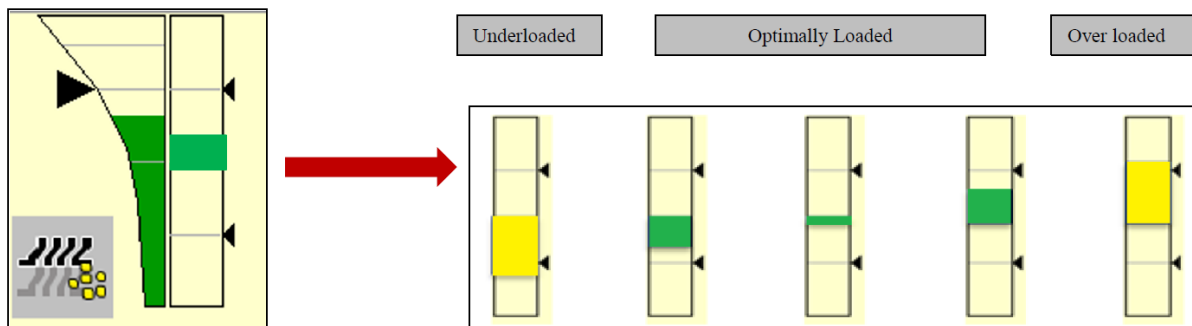
Fan RPM    Lower Sieve

12:33 am  
08 Sep, 2021

Back    MAIN    JOB    MAP    SETTINGS    GPS SETUP    CAMERAS

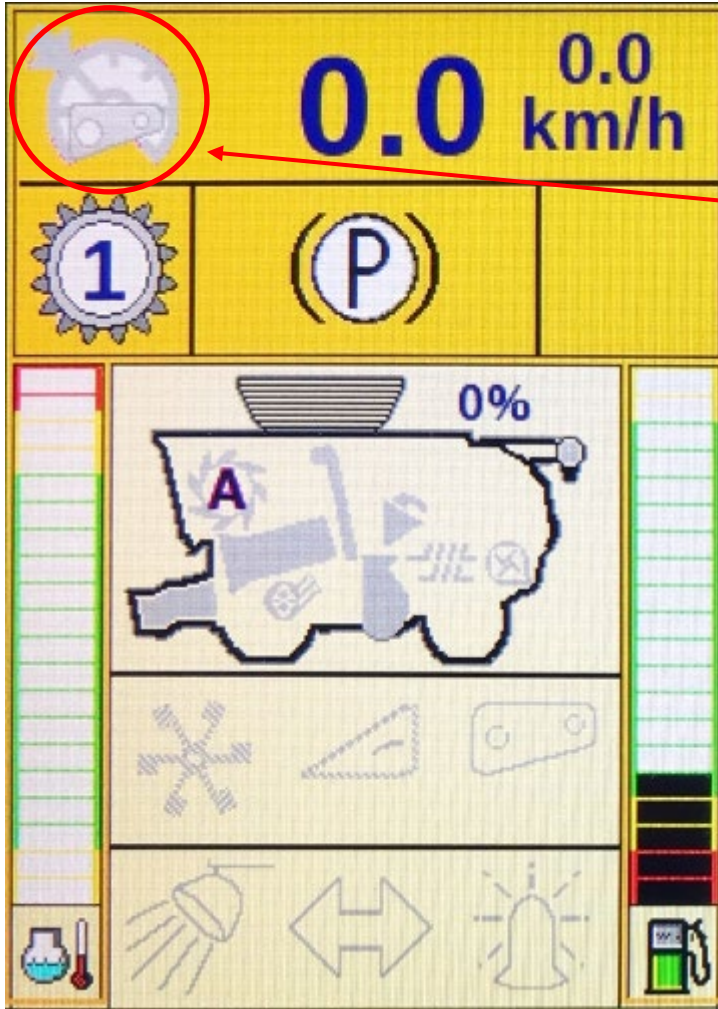
Rotor loss    Broken Grain    Returns    Mog    Sieve loss    Sieve load

Sieve Load indication below:



## Feedrate Control

Standard on 50 Series Flagship Combines



This icon indicates the machine has Feedrate Control and when greyed out means that it is inactive.

Feedrate Control can be used in conjunction with AFS Harvest Command (if fitted) to help optimise machine performance.

Feedrate Control can also be utilised on crops that currently do not have Automation capabilities in the following modes:

- Performance
- Fixed throughput
- Max throughput

Limitation parameters	Mode		
	Fixed throughput	Performance	Max throughput
Maximum ground speed	X	X	X
Maximum engine load	X	X	X
Engine speed	X	X	X
Sieve loss	-	X	-
Rotor loss	-	X	-

## Feedrate Control – Zero Load Calibration

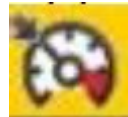
Before using Feedrate control, a Zero Load Calibration needs to be carried out.

This is done as follows:

1. Warm the machine up to operating temperature
2. Have the Grower, Farm, Field, Task and Crop Type Selected
3. Engage the Rotor and the Feeder/front (with the front on the machine)
4. Set the Engine to Full RPM (2100 rpm)
5. Using HEADLAND MODE (Press Shift and Resume at the same time)
6. Do this with the machine stationary or moving at less than 1km/h
7. Zero Calibration will take place after 5 seconds, but ensure to leave the machine in HEADLAND MODE for a further 15 seconds (20 seconds in total)

\*Please note you will not receive any acknowledgment of this process being completed on the display but it is required to be performed before using Feedrate control

## Set Point Calibration

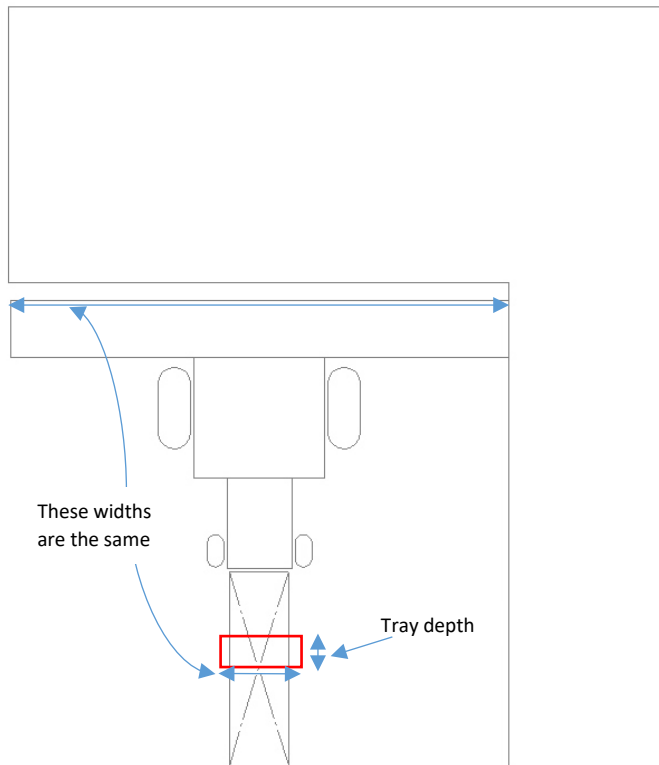
1. Start harvesting the crop
2. Manually drive the machine to a suitable and desired speed
3. Make sure you have given yourself enough time to stabilize the throughput of the machine (Minimum 20 seconds is advised)
4. Press and Hold the Feedrate button on the MFH for 2 seconds and an audible beep will sound.  
(A new Set Point can be established at any stage of harvesting if required)
  - a. The Feedrate icon on the screen will change to an Hourglass
  - b. The hourglass will then change back to the Feedrate icon but it will be in colour. This signifies that Feedrate control now has a Set Point and is engaged 
  - c. To disengage pull back on the MFH and drive the machine manually and the Feedrate Icon will go grey again
  - d. To re-engage briefly press the Feedrate Button on the MFH and the Feedrate icon will be in colour
5. Feedrate control can be increased and decreased by using
  - a. The Header Raise and shift button will increase Feedrate Control
  - b. The Header Lower and shift button will decrease Feedrate Control

\*Please note a new Set Point Calibration should be established for a new crop type or change of a Header / Front.

\*\*For further information please see the operator's manual\*\*

## Grain Loss in Combines

Grain loss is quite easy to check and should be part of your setup in different crops.



The most accurate way is to throw a tray or some shifter belting under the combine windrow. Don't try with the spreaders running as it will not give you an accurate number

The width of the tray is not important, but it must catch the whole windrow width.

1. Catch the windrow
2. Sift out the grain from the chaff and straw
3. Weigh the grain with some kitchen scales accurate to 1 gram
4. To work out the area of the tray, multiply the width of the combine front by the depth of the tray.
5. Divide the grams collected by this number to get grams per m<sup>2</sup>
6. Multiply this number by 10 to get kg/ha

## Working Example

Lets say we have a tray with the dimensions of 1.2m by 0.3m and we lay it on the ground in the centre of the machine. As we drive over the tray and windrow our straw/chaff over the tray, we collect 15 grams of barley in the tray.

If we have a 12m (40') front, we simply multiply the width of the front - 12m by the depth of the tray - 0.3m which gives us 3.6m<sup>2</sup> of tray area

If we want to see what grain has landed in 1 m<sup>2</sup> we need to divide the grams fallen over our tray by 3.6. – therefore  $15g/3.6m^2 = 4.1$  grams per m<sup>2</sup>

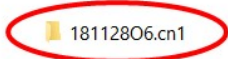
To get our actual tonnes per hectare – multiply the grams per m<sup>2</sup> by 10 – therefore we have 4.1 X 10 or 41kg/ha



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## Tips – Prior to starting Harvest

**O'CONNORS**

- Save Harvest Data from the previous year 
- Make it manageable – store Data annually on your home computer
- Yield Maps are recorded to the Memory Device – Not the display
- Memory Devices are: Compact Flash Card with a Pro 600  
or USB with a Pro 700
- USB or CF Card need to be in the display while harvesting  
**or Yield maps will not be recorded**



## Tips – Prior to starting Harvest

- Only insert or remove the CF or USB with the display off
- Clear Combine Display of previous years Harvest data
  - With the CF or USB out of the display
  - Go to Data Management > Delete > Data Type > Tasks > Operation > Grain Harvest > All Growers > All Farms > All Fields > All Tasks > Delete.
  - Confirm this action.
  - No Paddock structures or Guidance Lines will be deleted under this process
- Format memory card – either the CF card or USB
  - After saving CN1 file first. Example  18112806.cn1
- Check GPS Signal prior to starting Harvest

3

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## Approved / Reliable memory device

- Older models with Pro 600 require an Envoy Data Compact Flash
  - Talk to your local O'Connors Branch in spare parts for Help with this
- Pro 700 use only factory option
  - Envoy Data 4GB USB
  - Or SanDisk Cruzer Fit 8GB USB
- Other Brands or larger USB sizes will cause loss of yield data



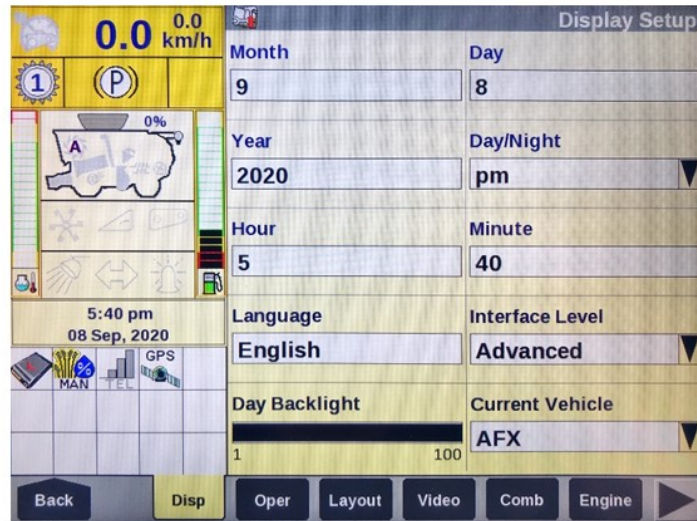
4

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Pre Harvest Set Up



- Check Time and Date is correct & Interface level is on Advanced
  - Found from Run Screens by pressing: Back > Toolbox > Disp



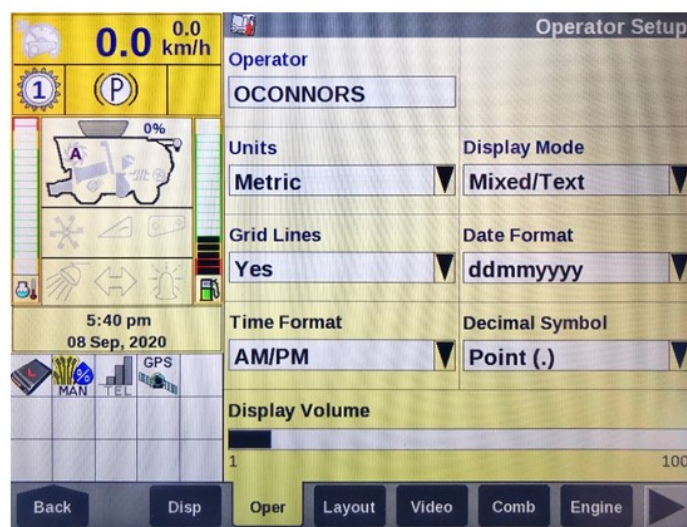
5

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Pre Harvest Set Up



- Check an Operator is created & it is not listed as Default
  - Found from Run Screens by pressing: Back > Toolbox > Oper



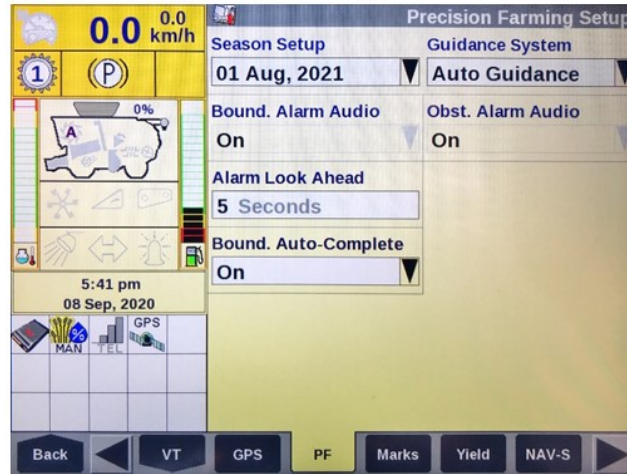
6

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Pre Harvest Set Up

- Check Season Set up is correct
  - Found from Run Screens by pressing: Back > Toolbox > PF
  - Set a date to a time that isn't during your harvest period

- Suggestions are:
  - 01 July
  - 01 August
  - 01 September
  - 01 October
  - All of the year to come
- We don't want this date to occur during harvest

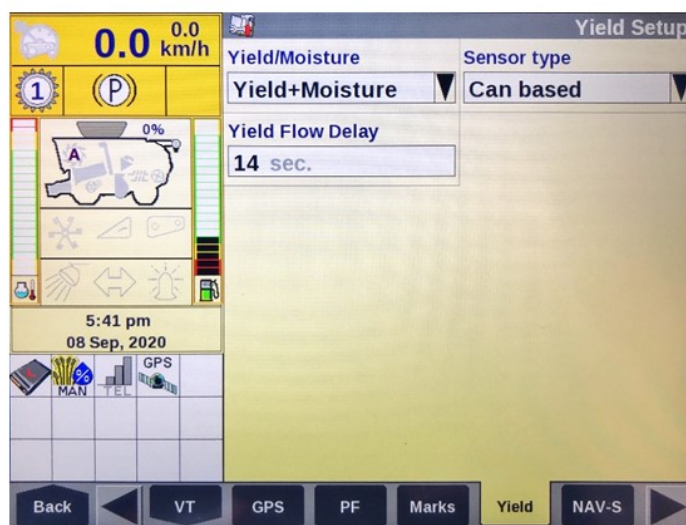


7

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Pre Harvest Set Up

- Check your Yield & Moisture is enabled
  - Found from Run Screens by pressing: Back > Toolbox > Yield



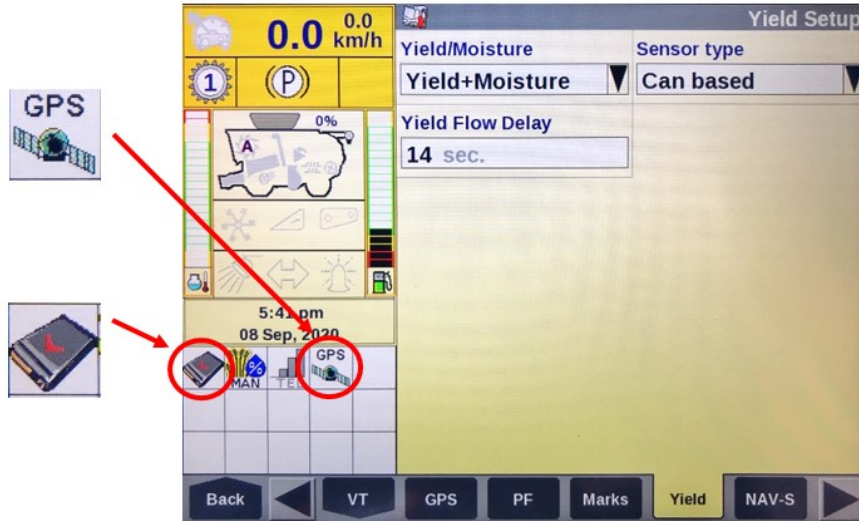
8

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Pre Harvest Set Up



- Check your GPS signal & Memory device is detected
  - Both icons need a white background to be ok for use
  - GPS icon will read GPS or DPGS depending on GPS accuracy





9

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Pre Harvest Set Up



- Check your Header (Front) settings are Accurate
  - Found from Run Screens by pressing: Back > Toolbox > Head 1
- **Header Width** – true width of the front.  
Crop divider to Crop Divider
- **Target Work Width** – GPS Width the machine is operating on
- **Example:**

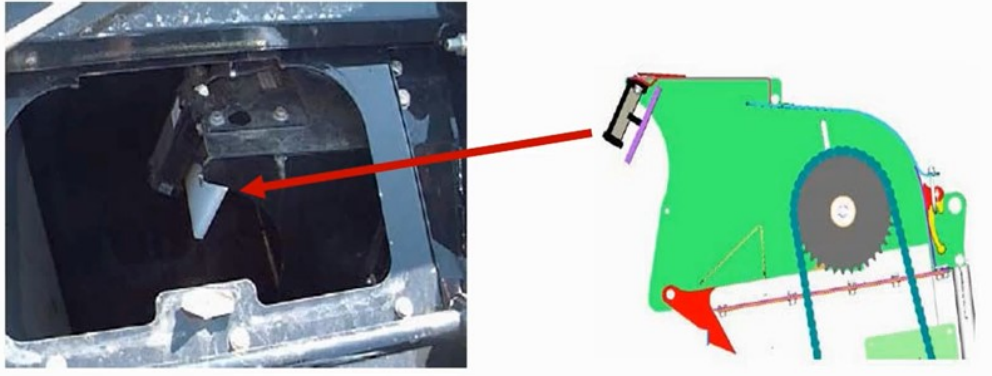
Header Width of Macdon FD140	12.19m
Target Work Width on RTK	12m
- Ensure your maximum work height is set above the height the front will be at while harvesting. Set under Toolbox > Head 1 > Maximum Work Height
-  While the front is out of the crop & lifted you will have a Grey arrow pointing up on the left of Display
-  While Harvesting you will have a Green Arrow pointing down
- Run a 'Header' (Front) Cal before starting Harvest

10

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## Pre Harvest Set Up

- Check the Grain flow (Yield) sensor at the top of the clean grain elevator is clean – only required on used machines
- Check clean grain elevator chain tension is correct.

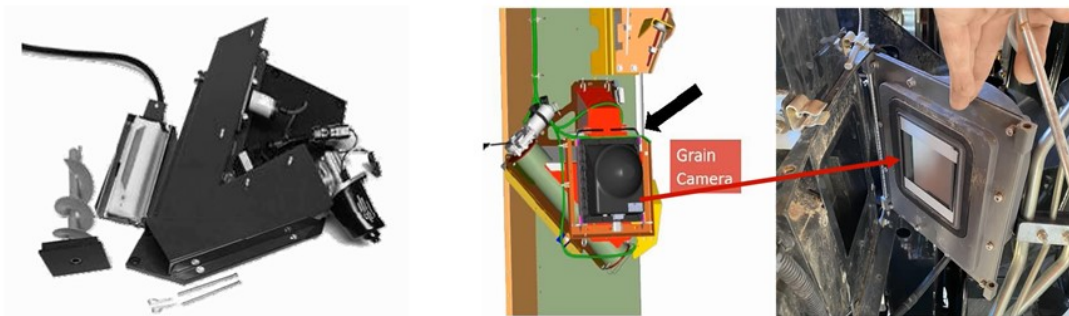


11

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## Pre Harvest Set Up

- Check the Moisture sensor is clean on the clean Grain Elevator
  - This needs to be done on used machines and when changing crop types to ensure a clean sample



12

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## Begin Harvesting



- A Yield Calibration isn't required on the first box full of Harvest
- Or Even on the first day.
- Get the operation underway and it can be done at a later stage.



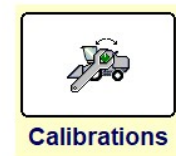
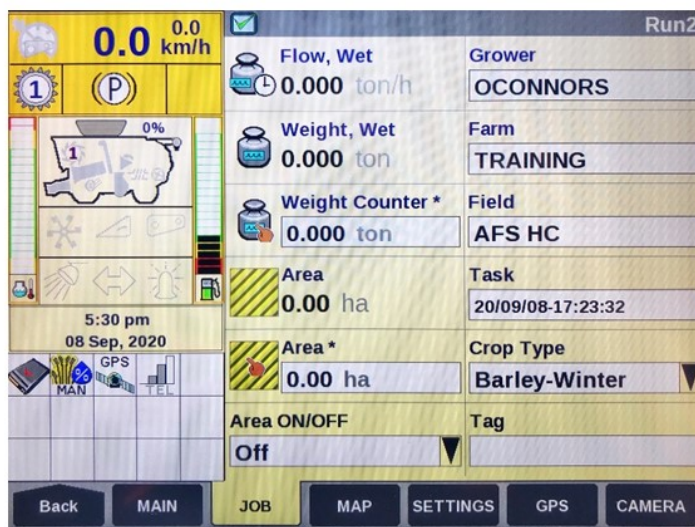
13

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## While Harvesting



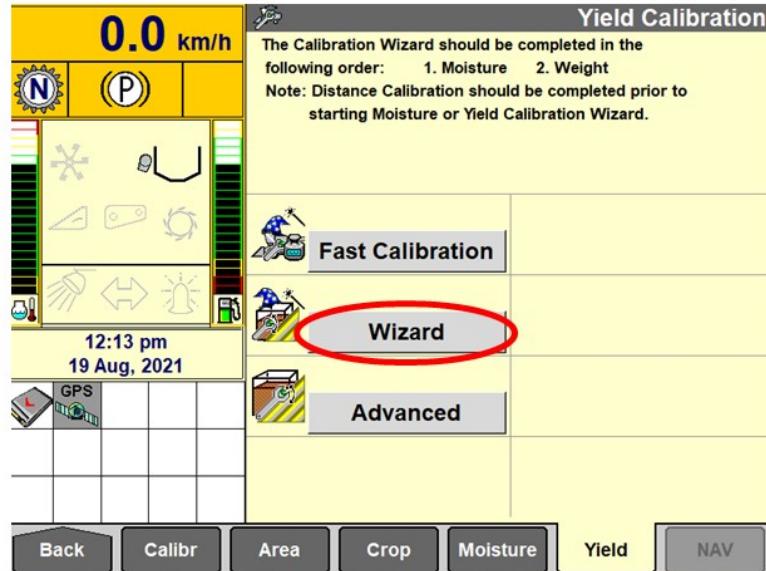
- To Run a Yield Calibration – Firstly have the paddock selected correctly
  - Then go into Yield Calibration: Press Back > Calibrations > Yield



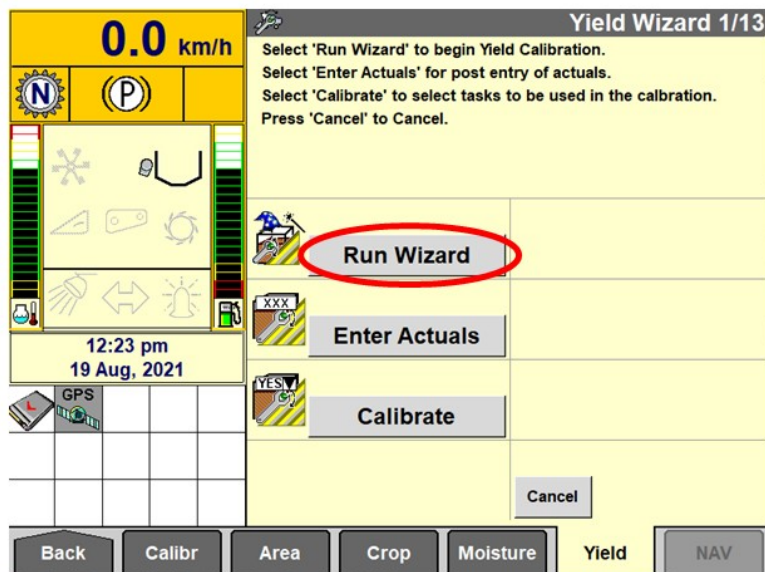
14

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- Go to Wizard



- Run Wizard



Yield / Moisture Calibration



- Make sure the following has been done:
- Distance Calibration
- Moisture Calibration
- Grain Tank is empty
- The truck you are unloading into is empty

**1. Verify Distance Cal has been performed.**

**2. Verify Moisture Cal has been performed.**

**3. Make sure grain tank is empty.**

Cancel                      OK

Yield / Moisture Calibration



- Select Grower & Press Proceed

Yield Wizard 2/13

Select the Grower Name for the calibration Task.

0.0 km/h

Grower

OCONNORS

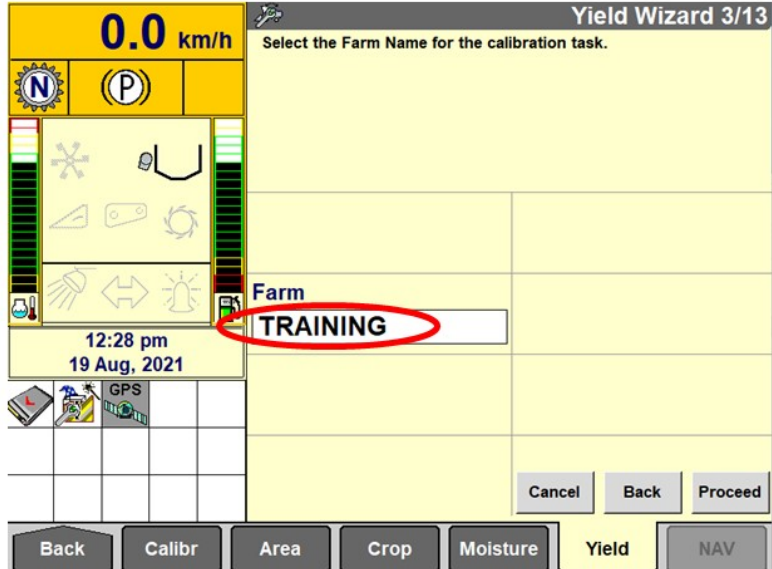
12:27 pm  
19 Aug. 2021

Cancel      Proceed

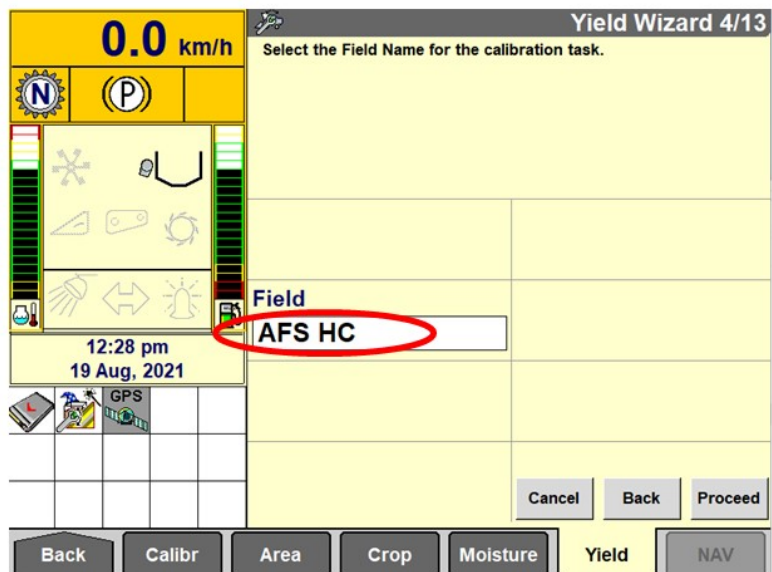
Back    Calibr    Area    Crop    Moisture    Yield    NAV



- Select Farm & Press Proceed



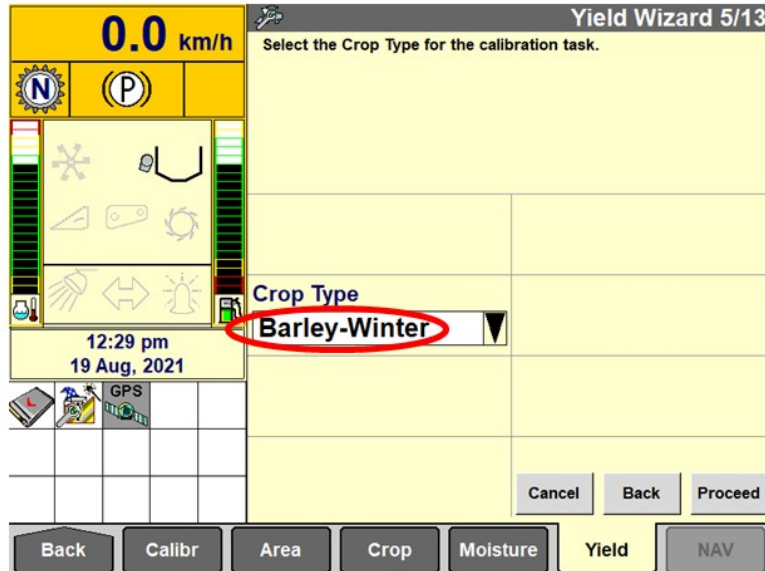
- Select Field & Press Proceed



Yield / Moisture Calibration



- Select Crop Type & Press Proceed

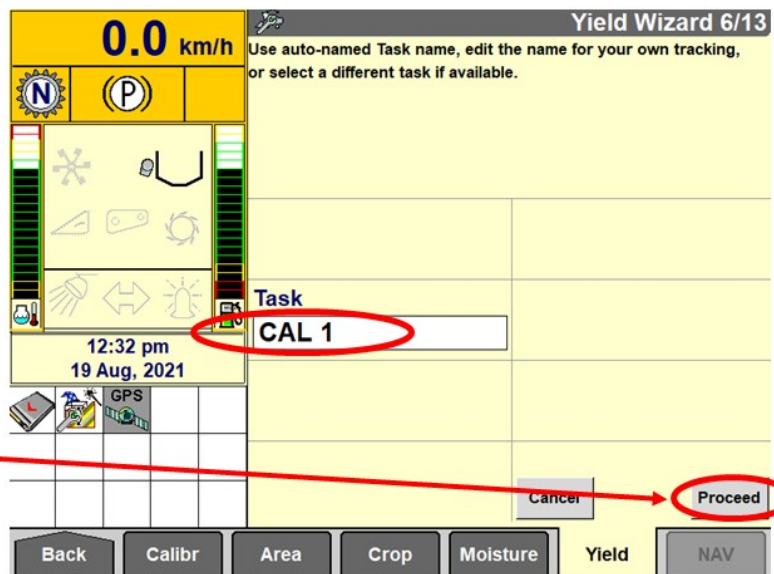


Yield / Moisture Calibration



- Select Task & Edit Task Name so that it is easily identified

- Suggestion is
  - Cal 1 etc
  - Something the driver can identify at later stage if required

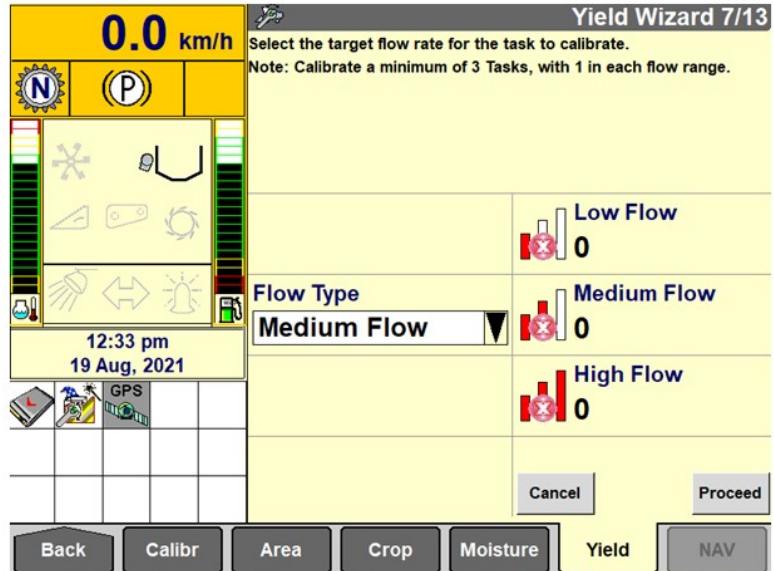


- Then press

Proceed

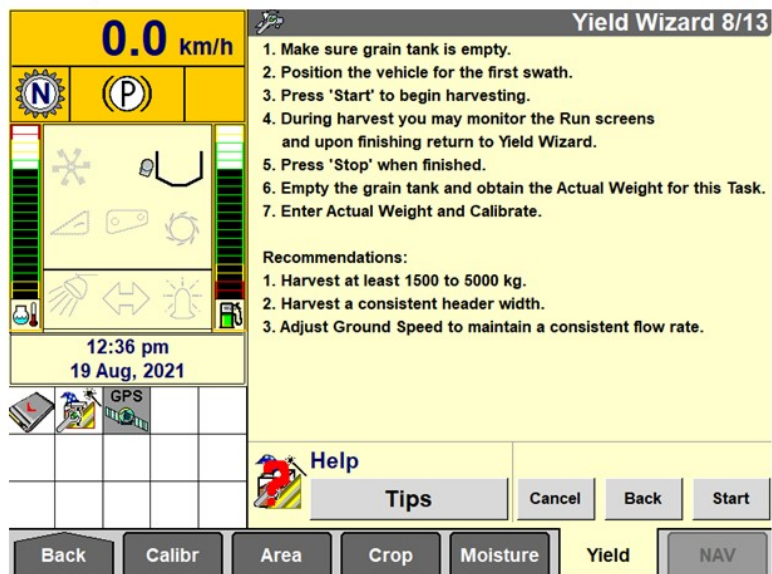
Yield / Moisture Calibration

- Select Target Flow Rate & Press Proceed
- Advised flow to select is Medium



Yield / Moisture Calibration

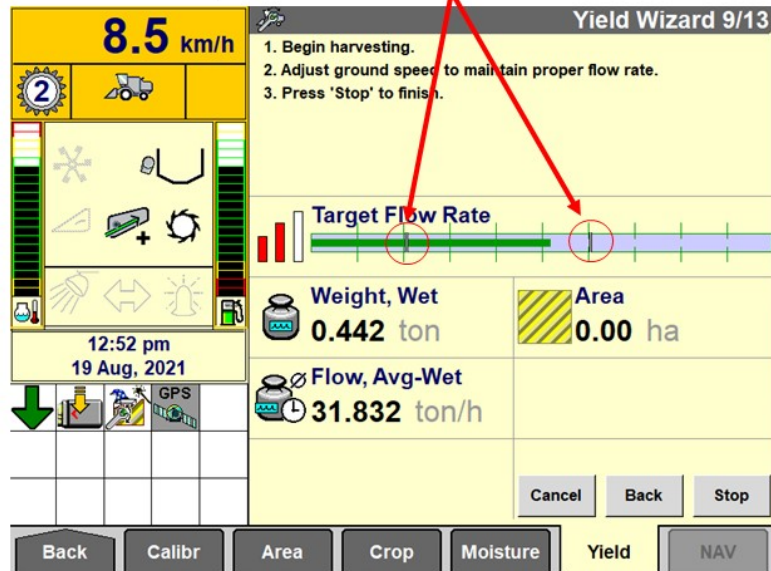
- Start the Calibration from this Menu
- Ensure all steps are followed



Yield / Moisture Calibration



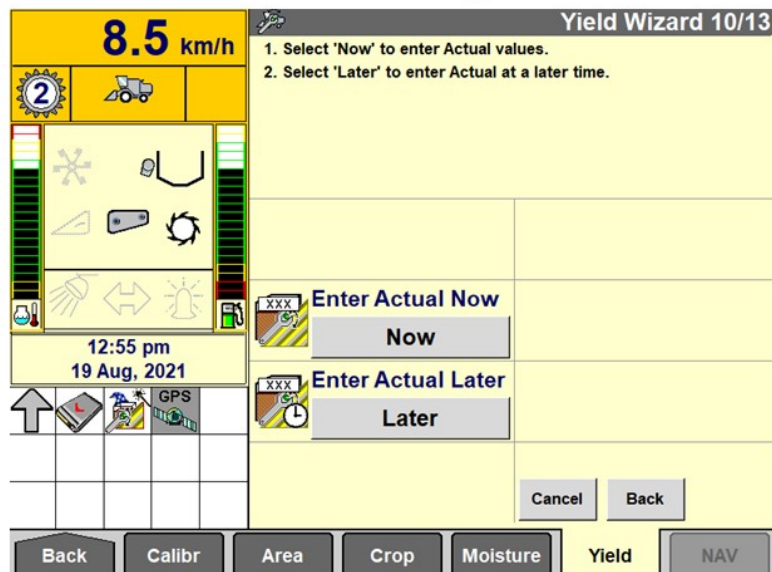
- Starting the calibration
- Ensure the crop flow indicator is keep between the 2 marks
- When you have harvested enough press Stop



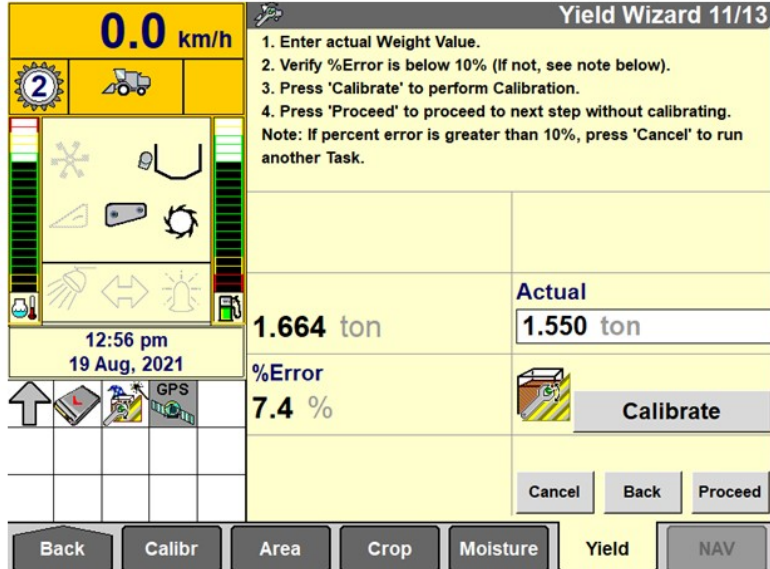
Yield / Moisture Calibration



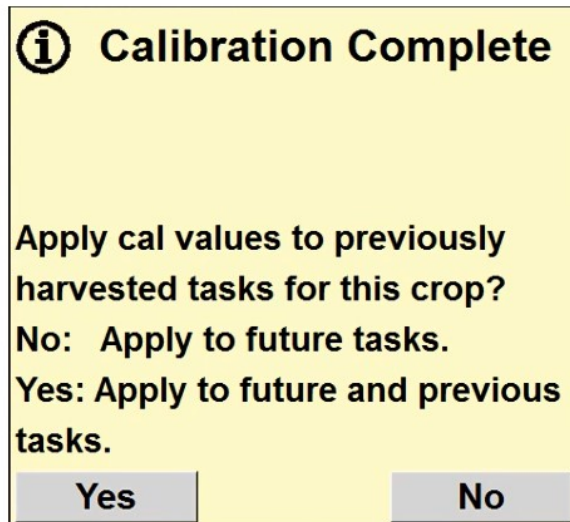
- Choose Now or later to enter the actual weight



- Enter Weight under Actual and then press Calibrate



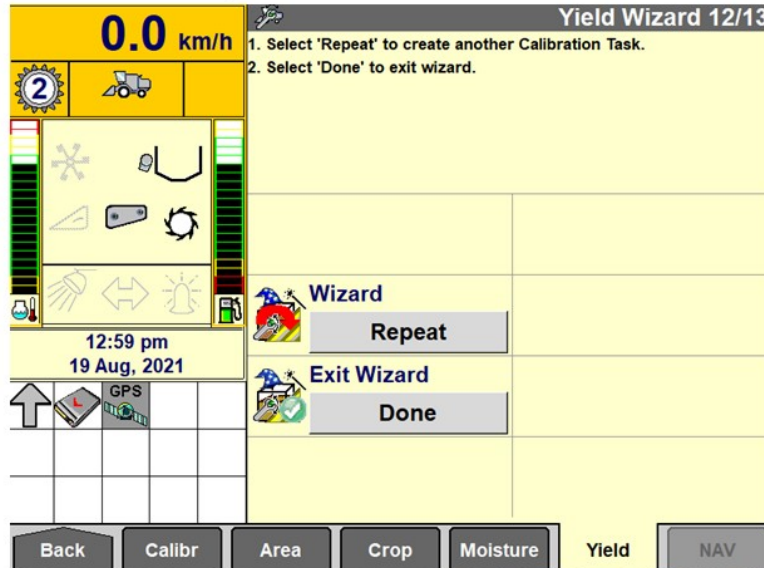
- You will be asked if:
- So if you want previously harvested tasks & Future corrected then choose Yes
- If you only want future tasks corrected choose No



## Yield / Moisture Calibration



- The Calibration is now complete
- The more Calibrations performed the more accurate the machine will be



29

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## Revision – What did we learn



- Save the CN1 file from the USB or CF Card 18112806.cn1
- Save Data Annually
- Format USB or CF Card before starting harvest
- Clear Tasks from the Display before starting Harvest each year
- Use Specified USB's or risk not recording Yield Maps
- Ensure User interface level is set to advanced in toolbox menu
- Run a Header Calibration and make sure Maximum Work Height is correct
- Make sure Ground Speed Calibration is completed
- Complete Moisture Calibration before starting Yield Calibration
- Don't rush calibrations if accurate Yield Data is important to you
- Accurate information in, is Accurate information out
- The More calibrations completed under a crop type the more accurate the data will be

30

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