





IMPORTANT!

This guide is a supplement to the operators manual, do not attempt to operate your equipment without first reading and understanding the full operator manual.

\land DANGER!

When you exit the combine, shut off the combine, engage the parking brake, and wait for all moving parts to come to a complete stop before approaching the header.

If working on a raised header, ensure the feeder house cylinder locks are in place.

Do not wear loose clothing or jewelry around moving parts.

Avoid high pressure hydraulic spray. Seek medical attention immediately if it punctures your skin.

Ensure all equipment is secured against sudden drops.

Read and understand all safety instructions in the operator manual before proceeding.

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Header Preparation







Finish Mounting







- (1) Secure the transport cart and draw bar cart together, secure with pins as illustrated and place in a storage location.
- (1) Lower all roller sensors to their operational position.
- Evenly adjust the left and right eye bolts on the feed auger drum so it is moved to within 1/2"(1.3 cm) of the combine feeder house protrusions.
- (3) Set the feed auger drum upper and lower stop bolts to prevent the drum from contacting the rest of the header (ensure distance A is less than distance B).
- (14) Rotate the auger drum by hand to ensure it will not contact the protrusions, tighten the lock nuts on the eye bolts.
- (15) Set Feed Auger finger timing so the feed auger fingers maintain adequate clearance from the components surrounding the feed auger drum.
- (16) Check All Clearances around the feed auger drum and adjust accordingly.



Make Connections





Header Calibration Overview

1. Tighten/Loosen the indicated adjuster bolt on the left and right hand dividers so the dividers are 'heavy' enough to rest at the bottom of their travel with the divider extensions removed. Reinstall the extensions.



- 2. Ensure the center sensor(s) are lowered to their field positions and dividers are secured and capable of their full range of motion.
- 3. Ensure each sensor 'flag' contacts its roller at the 'heel' of each strut at the rear of the header.

\sim	Roller		TETE
		\$5T	Flag
		a -/	

The header must be in RIGID mode for this step!

- 4. Set combine settings required for header calibration.
 - FLOAT Set to OFF
 - **HEADER TYPE** Draper, Rigid, Platform (or similar), do not select Flex type unless specifically instructed.
 - AUTO HEADER HEIGHT Set to ON
 - AUTO TILT/LATERAL/CONTOUR Set to ON
- 5. Park the combine in a ditch with the header in the air over the road. Engage the parking brake. (Remain in this position through header & combine calibration)



- Select combine make via the Automatix menu (last option).
- 7. Set header to FLEX mode prior to calibrating (this calibrates both RIGID & FLEX modes).
- 8. Fully extend the hydraulic tilt cylinder.
- 9. Select 'H/H CALIBRATION' via Automatix main menu. Follow onscreen instructions.

The header calibration is complete when the calibration done message appears on the screen with no errors.

Note: Refer to operator manual for detailed instructions.

IMPORTANT: Don't make assumptions, don't skip steps, fix all errors that occur before continuing.

Combine Calibration

Ensure the combine-specific settings are entered as described in the make-specific sections at the end of this document.

- 1. The combine must be run at maximum RPM (harvest speed) and the hydraulic oil must be up to operating temperatures during calibration.
- 2. Check the oil level to ensure there is no air in the system (normally heard as a whining noise).
- 3. Set the AirFLEX to RIGID mode via the Automatix control panel.
- 4. Set combine hydraulic header raise rate so it takes 5 seconds to lift the header from the lowest position to the highest position.
- 5. Set combine hydraulic header drop rate so it takes 7 seconds to lower the header from the highest position to the lowest position.
- 6. Calibrate the combines header height settings as described in the combine's operator manual.
- 7. Slowly increase header height sensitivity via combine controls until the header starts hunting up and down. Decrease sensitivity by 10-20% until the header stops hunting. Set the tilt sensitivity to halft the height sensitivity minus 10%, so if the header height sensitivity is set to 200, the tilt sensitivity should be set to approximately 90 (200/2 = 100, 100 10% = 90).
- 8. When the combine calibration is done, lower and run the header and combine rotor so automatic header height is enabled. Record a set-point for header height on the combine (i.e. 4" (10 cm)). Raise the table all the way up and laterally tilt it all the way to the left or right. Press the return to set point button on the combine. The header should lower back to the set point AND level out automatically. If this fails, it may indicate a combine software problem.

NOTE:

The combine specific settings listed on the following pages are recommendations only. Optimal settings will vary by equipment configuration and conditions. It is the equipment operator's responsibility to ensure they operate their equipment in a safe, efficient manner.



Set combine feeder house angle.

- 1. Move the combine away from the slope (as discussed in the previous section) and park it on a firm level surface.
- 2. Start the combine and activate FLEX mode by pushing the FLEX button, then tilt the header back by retracting the hydraulic tilt cylinder.
- 3. Press 'INFO' button until the header height live view is displayed.
- 4. Slowly lower the header until the cutter bar is pushed all the way up (no bars showing on live view)
- 5. Slowly raise the header until 2 bars are showing on the live view.
- 6. Measure the distance from rear of the end paddles to the ground. Adjust the faceplate angle then remeasure until the measurements listed below are achieved.
 - If the low profile paddle is installed, it should be 8" from the ground at the indicated location (see illustration).
 - If the high profile paddle is installed, it should be 4" from the ground at the indicated location (see illustration).

Raise header until 2" (2 bars) show on FLEX Header Height Live View



Reel Setup

Set the pitch of the reel fingers via the adjuster at the end of the reel. The middle position is a good place to start. If crop is wrapping around the reel, set a less aggressive finger pitch.

Ensure the reel is level and that the reel fingers maintain a minimum distance of 1-1/2'' (3.8cm) from the cutter bar. Adjust the reel height adjustment bolts located on the underside of the reel arms if necessary.

Calibration Troubleshooting:

Access the header height sensor raw voltage view by pressing the INFO button. Ensure the sensor output voltage varies by at least 1.5V through its full range of operational motion.

Check that the combine is receiving the correct sensor voltages from the Automatix. Access diagnostics screen on Combine display, compare voltage values to the HH Values shown on the sensor info screen on the automatix display. The values should be similar (usually not identical).

Verify the correct combine settings have been entered.

Inspect crop dividers, metal should contact metal if they are lifted and dropped. If the springs are too tight, the dividers will ride up.

If header is not reacting quick enough, sensitivities may need to be increased. If header is hopping or jumping then sensitivities may need to be decreased.



John Deere Combine Calibration/Settings

1. Ensure all options indicated below by the arrows are enabled.



2. Enter the width of your header (in feet) and set the stop height to approximately 80%.

Combine - Header Setup AHC



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New Holland Combine Calibration/Settings

1. Enter the following settings on the Head 1 screen of the combine systems. Enter the width of your header in the Header Width field and Target Work Width field.



2. Ensure the following settings are entered in the Head 2 screen of the combine systems. Use all the values below as a starting point, adjust as necessary to suit your conditions.





LEXION Combine Calibration/Settings

1. Select the front attachment type "Grain cutterbar, make from other manufacturer"



 Enter the width of your header minus your intended overlap (the example below is the value entered for a 45ft header with 1ft overlap)



3. Ensure the settings listed below are entered into the sensitivity screen.

$2 \square \bigcirc$	
Sensitivity CAC	
Setting	%
Cutting height adjustment	-19
Cross levelling	19
fast manual raising	20
fast manual lowering	25
Automatic drop rate	-30

4. Run the learning endstops procedure in the Cross Leveling section of the menu.



5. Run the learning endstops procedure in the Front Attachment Height section of the menu.



6. Set the feeder house angle for the combine to 0 as shown below. This value may require further adjustment depending on your equipment configuration.



7. Set the Working position for area calculation to approximately 80%.



Setting the working position for area calculation Learning the working position for area calculation





Massey Ferguson Combine Calibration/Settings

NOTE: In order for header height control to function on a Massey Ferguson combine, a ball valve must be installed on the accumulator and closed.

1. In the combine setup screen:

- Select the "Flex" header type
- Enter the width of your header under "Header Width"
- Set the "Cutoff Height" to 80%.
- Ensure the Reel PPR matches he value in the Automatix system (accessible via the automatix system menu). This value should automatically match when the combine type is selected in the main Automatix menu.



2. In the Header Control Table settings tab:

- Set both Max UP PWM and Max DOWN PWM to 100.
- Set both Max RIGHT PWM and Max LEFT PWM to 80.



- Ensure Automatic Header Height Control is enabled (check mark)
- Set the sensitivity to 50% as a starting point.



- 4. On the Tilt tab:
 - Set the Autotilt sensitivity to 20%
 - Set the Autolevel sensitivity to 20%



Note: The optimal lateral tilt sensitivity value is directly related to the auto header height control sensitivity and can be found using the following equation:



3. On the AHHC tab:

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Gleaner Combine Calibration/Settings

Because Gleaner combines are equipped with 'Bang-Bang' style control valves, an aftermarket modification must be made to the combine so the Automatic Header Height Control system can operate effectively. There are two options:

- From AGCO dealer: Pulse Width Modulated Proportonal Valve Upgrade Kit (Headsight)
- From Honey Bee: BeeBox

If neither of these kits are installed, the Automatic Header Height Control system will not function correctly.

Calibration



- Close the ball valve on the accumulator to disable it during the calibraiton process. The ball valve can be partially opened after calibration to allow partial flow (up to 30%). Do not fully open the valve when operating the AirFLEX.
- 2. Open the combine settings screen and enter the following values:
 - Enter the header width in the Header Size field.
 - Set your cut height in the Header Ht Cal field.
 - Set the Width Reduce value to the amount you will overlap your swaths. If you are running a 40ft AirFLEX, and you want 2ft of overlap, then you would enter 5% (2ft is 5% of 40ft).



- 3. Start combine and bring engine rpm to just over 2000 RPM.
- 4. Press hold Cal1 until lights flash on the combine control panel.

- 5. Lower the header all the way to the ground, then press the Cal 2 button.
- 6. Raise the header to highest position, then press the Cal 2 button.
- 7. Tilt header down to the left, then press the Cal 2 button.
- 8. Tilt header down to the right, then press the Cal 2 button.
- 9. All lights should flash, level the header and press the Cal 1 button to exit calibration.
- 10. If all lights remain off, the combine is calibrated. Refer to your combine operator's manual for further details.
- 11. Set the header height sensitivity to the highest possible setting for optimal performance. Turn up the sensitivity until the header starts 'hunting' up and down, then turn it down until the 'hunting' stops.
- 12. The lateral tilt sensitivity must be set to a lower value than the Header Height sensitivity. The optimal lateral tilt sensitivity can be found using the following equation:

AHHC Sensitivity - 10% Lateral Tilt Sensitivity =



CASE Combine Calibration/Settings

- 1. Enter the following settings in the Run4 screen in the combine system. These values are recommendations and may be adjusted to suit conditions. The tilt sensitivity must always remain lower than the height sensitivity.
 - The header height raise rate and lower rate should be adjusted so the header takes 7 seconds to lower from its highest position to its lowest position and 5 seconds to raise from the lowest position to the highest position.

0.0	متل ا	Run 4
U.U Mph	Rotor Speed	Header Lat Tilt
	∽ 0 rpm	-0.00
	Concave Opening	+ M HHC Raise Rate
	≈#1 <	200
	Fan speed	HHC Lower Rate
	🕑 0 rpm 🛛 🧹	90
■ ◇ ◇ 茨 ■	Sieve, upper	HHC Ht Sens.
11:42 AM	-/////- 14 🧹	170-200
Apr 32, 2017	Sieve, lower	HHC Tilt Sens.
	-/////.6 🖌	90
		Spreader Speed
	▼ACS Save	З 0 грт
Back Run1 R	kun2 Run3 Run4	Run5 Run6

2. Enter the following settings on the Head 1 screen of the combine systems. Enter the width of your header in the Header Width field and Target Work Width field.

	J.	Header Setup 1
U.U Mph	Maximum Work Height	
	80%	
	Header Type	
	Grain See Note!	
205	Cutting Type	
	Platform	
■ ※ <> ※ ■	Frame Type	
11:42 AM	Flex Header	
Apr 32, 2017	Header Width	
	36.0 ft	
	Target Work Width	
	▼ 36.0 ft	
Back Hydraul	Drive Head 1 Head 2 Feeder	Thresh

3. Ensure the following settings are entered in the Head 2 screen of the combine systems. Use all the values below as a starting point, adjust as necessary to suit your conditions.

0.0	Period Header Setup 2
0.0 Mph	Header Sensors
(P)	Yes
	Header pressure float
	Yes
	Height/Tilt Beenenge
	Normal
	5-10%
11:42 AM Apr 32, 2017	
	Auto header lift
	HHC Raise Rate
	▼ 200
	HHC Lower Rate
	90
	HHC Ht Sens.
	200
	HHC Tilt Sens.
	90
	Reel drive
	Hydraulic V
	Reel Fore-Aft
	Yes
	Reel height sensor
	No
	Reel distance sensor
	No
	Header/Knife Fore-Aft
	No
	Yes/No (depending on options installed)
	Header Lateral Tilt
	Yes
	Autotilt
	No
	Autolevel in Headland
	No
Back Hydraul	Drive Head 1 Head 2 Feeder Thresh

Note: If configurating a 700 series or newer combine, 'Verifeed' must be selected for the combine type.