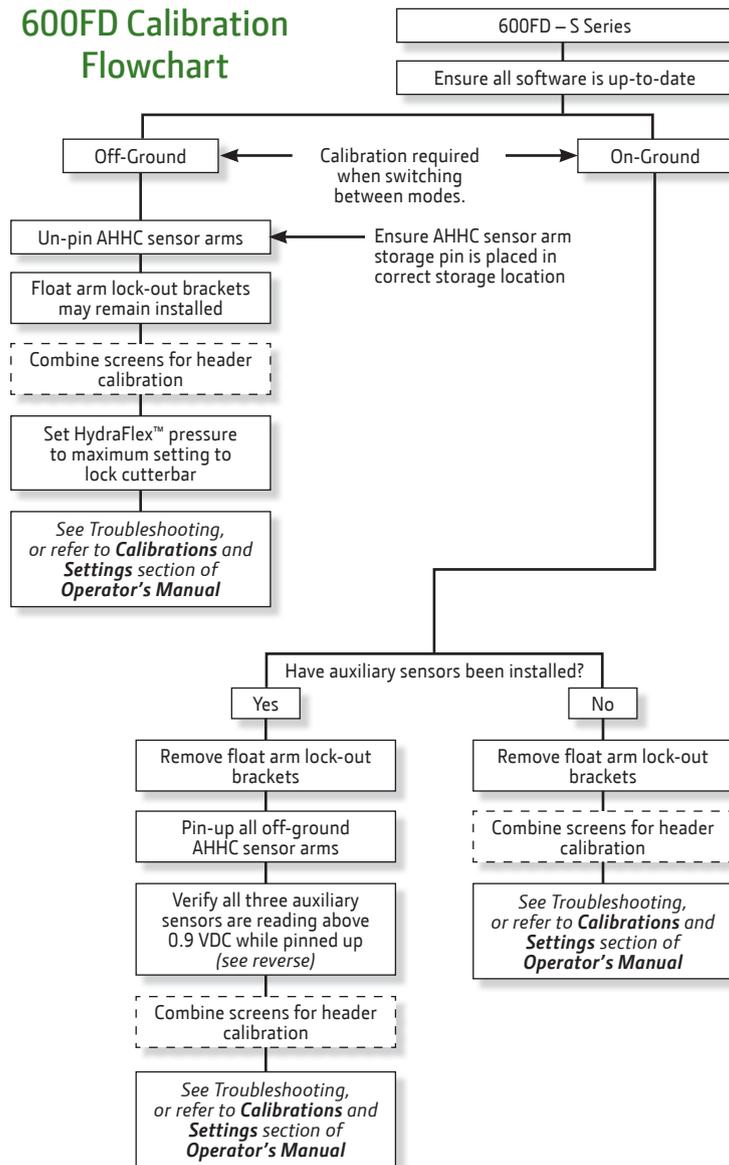


## 600FD Calibration Flowchart



## 600FD-Flexible Draper Active Header Height Control (AHHC) Quick Reference Guide



### 600FD-Flexible Draper Platforms are compatible with John Deere S-Series Combines.

- Refer to this guide for basic setup and adjustments, AHHC information, and cleaning instructions.
- S-Series information can also be found in this guide for 600FD related functions.

**IMPORTANT:** This guide is to assist operators with correct setup and operation of 600FD Flexible Draper Platform.

*Always refer to your Operator's Manual for questions.*

## Adjustments

### Draper Ground Engagement Angle

The HydraFlex™ Draper engagement angle is designed for optimum performance on your combine. It is recommended that the factory feederhouse fore/aft tilt frame setting be used. If adjustments are desired, please refer to your combine Operator's manual for proper instructions.

#### Attention:

Excessive rearward tilt may result in frame assembly being pushed into the ground, causing material accumulation in float system components.

Excessive forward tilt may result in cutterbar pushing the crop.

### Hydraulic Feeder House Fore/Aft Tilt Adjust (if equipped)

Hydraulic feeder house fore/aft tilt adjust (A) or (B) allows operator to increase or decrease angle of feeder house tilt frame enhancing cutting performance.

#### System Requirements:

- Engine is running.
- Road transport disconnect switch must be in field position.
- Multi-function lever switches are functionally assigned.

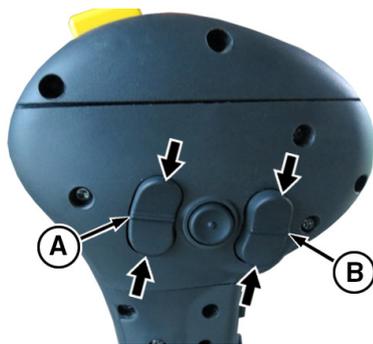
#### On Screen

1. Touch plus (+) or minus (-) symbol or rotate selection dial to adjust angle of feeder house tilt frame.
  - Increase tilts feeder house tilt frame angle forward.
  - Decrease tilts feeder house tilt frame angle rearward.
2. Display shows operator adjustment settings.

### Multifunction Handle

Push and hold top of switch to tilt feeder house rearward.

Push and hold bottom of switch to tilt feeder house forward.



Button (A) or (B) can be configured to control hydraulic fore/aft.

### Belt Speed Adjust

Draper belt speed adjust allows operator to increase or decrease belt speed.

1. Press Header Adjust Switch twice.
2. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease belt speed.
3. Display shows operator adjustment settings.

### Quick Side Belt Speed Reduction Switch

Slowing side draper belts speed enhances feeding performance when crop is harvested on one side of platform, due to irregular shaped fields.

Side belt speed reduction switch allows speed of draper belt to automatically slow to a factory setpoint speed.

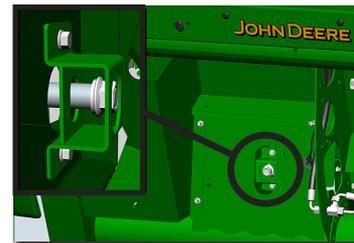
1. Press side belt speed reduction switch.
2. Slow speed mode engaged will appear on display and draper belt speed automatically slows to factory setpoint speed.
3. Pressing belt speed reduction switch again or attempting to make manual belt speed adjustments while in slow speed mode automatically returns belt speed to original speed set by operator.



**NOTE:** If original draper belt speed set by the operator is slower than the factory setpoint speed, the system will not engage and a diagnostic trouble code will appear.

See your John Deere dealer if factory setpoint speed needs to be adjusted.

### Required Draper Belt Tension Setting



**Critical:** On the 630FD only, the idler belt tensioning bolt should be even with the outside shield.



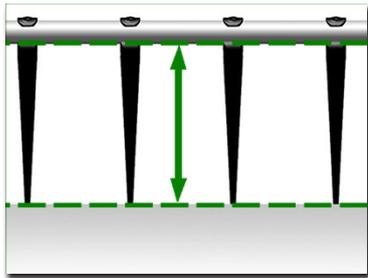
**Critical:** Draper belt tension indicator must be in the position shown to ensure proper draper function in all conditions.

## Adjustments (cont.)

### Reel Replacement/Reel Finger Adjustment

Recommended reel position for the Flex Draper is directly over the cutterbar, and only low enough so that the lower portion of the reel fingers engage crop (not the tube).

**Rule of Thumb:** Out and Up!



Reel finger pitch is adjustable. Adjustment levers are located at both ends of the reel. A more advanced finger pitch will help pick up downed crop. A less advanced pitch will reduce material wrapping on the reel.

### Additional Recommended Settings

#### Header Height/HydraFlex™ Pressure Control Knob

- With AHHC engaged, use the knob to adjust the header set point.
- While operating in flex mode the knob will adjust flex pressure set point.
- Higher pressure = Less ground force.
- While operating in rigid mode the knob will adjust height set point.



#### Header Adjust Switch

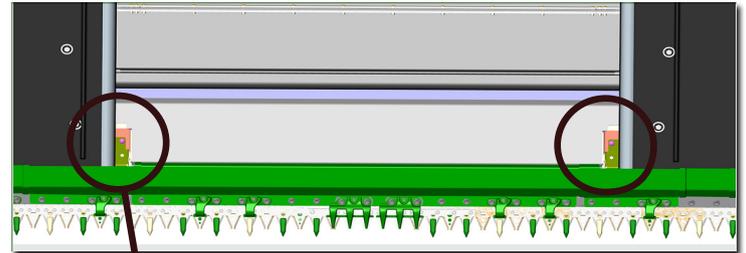
- Single button push displays manual HydraFlex™ float pressure adjustment.
- Double button push displays the belt speed adjustment.



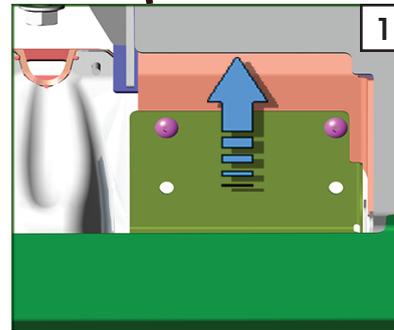
## Material Accumulation Inspection

### Pivoting Idler Recommended Daily Inspection

Inspect the highlighted area for debris material build up contacting the belt causing excessive belt wear. The sump plates pictured below can be moved to the “open” position to allow material to exit during operation.

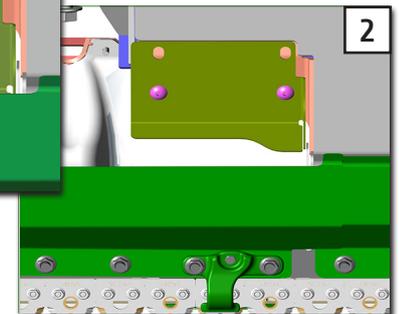


Refer to OM for short skid shoe option if additional reduction of material build up is required.

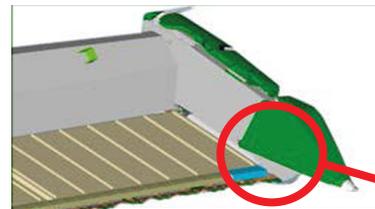


1. Remove hardware and move sump plate from “Closed” position.

2. Reassemble hardware with sump plate in “Open” position.



### Outer float arms



Recommended Daily or Weekly Inspection

Keep the areas highlighted clean.



## Material Accumulation Inspection (cont.)

### Side Draper Belts

Recommended  
Daily Inspection



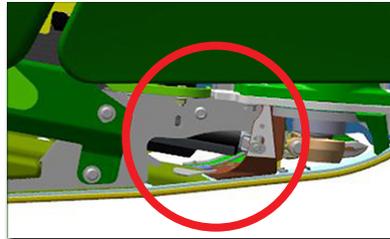
As Required

Only open the belts for internal cleaning when bulges appear due to accumulation.



Important

Remove material using cleanout tool when material is visible in highlighted area.



The highlighted components below are unique skid shoes that must be installed in the highlighted location to reduce material accumulation. This is symmetrical to both LH and RH side of the head and are painted green.

(10 total, 5 per side) - 645FD, 640FD, 635FD

(8 total, 4 per side) - 630FD uses (4) per side on the outer ends of the cutterbar



## Tension Indication and Belt Drive Area

Recommended  
Daily Inspection



Keep the areas  
highlighted clean.

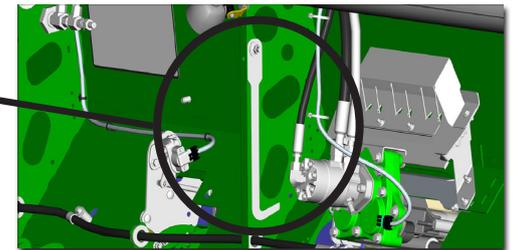
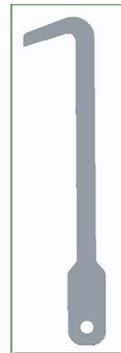


## Crop ramps

Recommended  
Daily Inspection



Remove the material  
using the cleanout tool  
when material is visible  
in highlighted areas.



Cleanout Tool Storage Location

## AHHC Mode Options

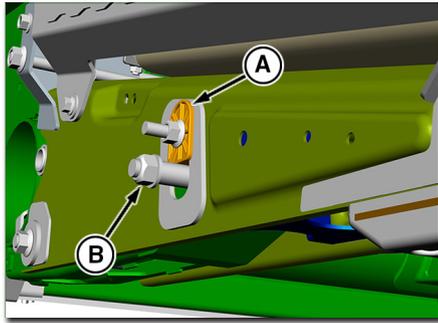
For Flex Draper, there are two unique Active Header Height Control (AHHC) modes:

- On-ground (“flex mode”) – soybeans, lentils, chickpeas
- Off-ground (“rigid mode”), auxiliary attachment – wheat, barley, oats, canola

Float arm brackets may be reinstalled for operating in off-ground mode after the feeder house speed calibration and header calibration has been completed.

For on-ground mode, lock-out brackets must be removed. Ensure that only the lock-out bracket cross bolt is removed when unlocking float arms. The second “float arm stop bolt” is critical for function.

When using off-ground mode with the ground-engaging sensor arms unpinned ensure grease has been added to sensor arm pivot shaft and that sensor arm rotates freely.



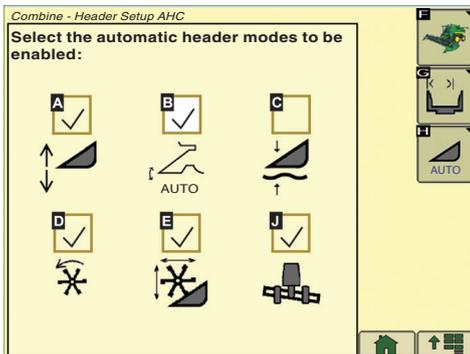
- A. Lock-out bracket-REMOVE
- B. Float arm stop bolt-DO NOT REMOVE



Also, ensure storage pin is placed in correct location highlighted above.

## Recommended Header Modes to Enable

Multi-function lever buttons 2 and 3 will Activate Header. Height Control (AHHC) with boxes (A) and (B) enabled.



**IMPORTANT:** Performing any header calibration may automatically enable all six header modes. It is recommended to revisit header setup AHC screen and turn off box (C) before returning to harvest. Box (C) enables Feeder House float mode, which does not utilize functionality of AHHC system on header.

## Calibrations

Calibrating the feeder house speed and then the AHHC sensors is required to initially use system. Calibration verifies AHHC sensors are set within operating range. A failed calibration often means a sensor is not set properly. See Troubleshooting and Sensor Voltage Maps for more information.

Tuning Calibration is also available after a Header Calibration is performed. This tuning operation improves sensitivity of Height Sensing function and is recommended to be performed whenever possible.

## AHHC Troubleshooting

If a Header Calibration fails, there are several common causes and solutions:

### Sensors out of range

- Sensors may not be adjusted properly: *see Sensor Voltage Settings.*
- Damaged wiring harness: *Inspect wiring harness leading to all AHHC sensors.*
- Broken sensor or components: *Inspect sensors.*

### Sensors seeing less than 1.2 V of range

- Broken sensor or components: *Inspect sensors.*
- Lock-out brackets still installed in float arms.
- Off-ground sensor arm still pinned up.
- Off-ground sensor arm unable to fully rotate due to lack of lubrication: *add grease to fitting on float arm.*
- Damaged wiring harness: *Inspect wiring harness leading to all AHHC sensors.*

### Sensors seeing too much voltage range

- Float arm stop bolt was removed: *Check float arms for stop bolts.*

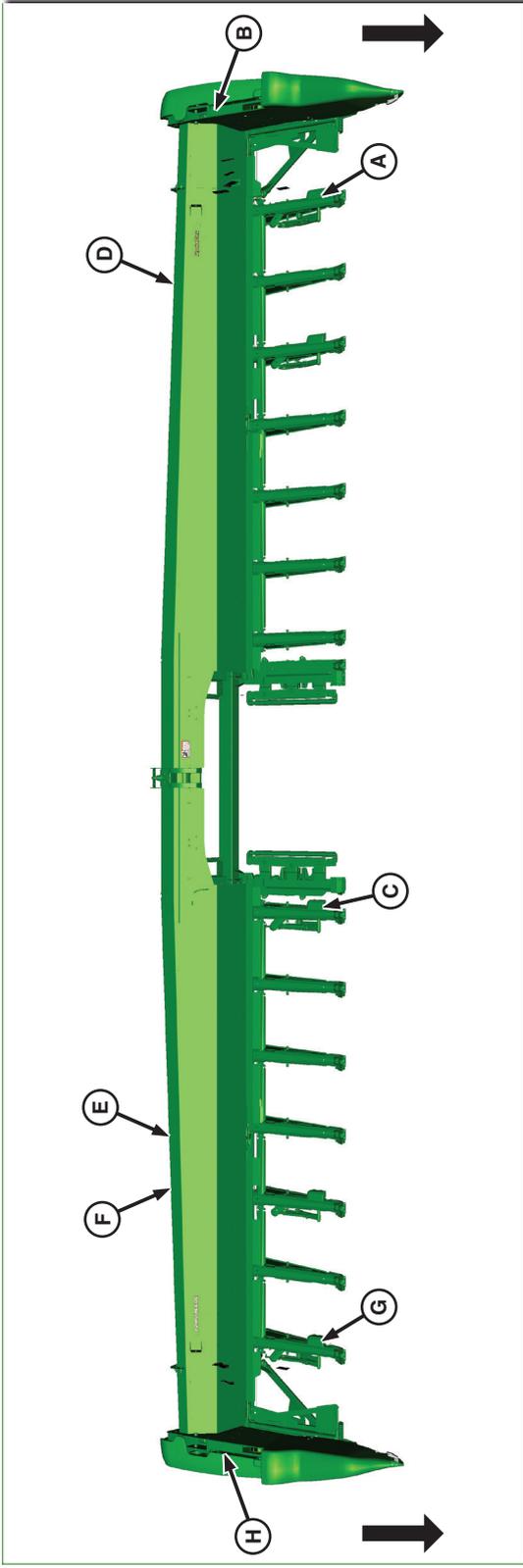
## Sensor Voltage Settings

Operating range while harvesting of AHHC sensor is 0.6 – 4.4V. Sensor voltage readings can be viewed in LC1 Diagnostic Addresses – see *Calibrations and Settings* section of the *Operator's Manual*.

It is highly recommended to set the sensors at 0.9 – 4.1 volts to ensure the sensor does not shift out of the operating range.

If a Header Calibration fails, see the **600FD Sensor Voltage Maps** to ensure all sensors are set correctly.

## 645FD Sensor Voltage Map



## S-Series LC1 Address

Controller	Address	Display	Description
LC1	21	--_nnnXXX	(A) Left-Hand Auxiliary Height Sensor Voltage (cc #9826)
LC1	21	--_XXXnnn	(B) Left-Hand Main Height Sensor Voltage (cc #9816)
LC1	22	--_nnnXXX	(C) Center Auxiliary Header Height Sensor Voltage (cc #9803)
LC1	22	--_XXXnnn	(D) Center Main Header Height Sensor 1 Voltage (cc #9817)
LC1	30	--_nnnXXX	(E) Cutterbar Flex Pressure Sensor
LC1	23	--_nnnXXX	(F) Center Main Header Height Sensor 2 Voltage (cc #9804)
LC1	24	--_nnnXXX	(G) Right-Hand Auxiliary Height Sensor Voltage (cc #9828)
LC1	24	--_XXXnnn	(H) Right-Hand Main Height Sensor Voltage (cc #9818)