Training Manual

Brandt

S600 SERIES COMBINE

OUR DEALERSHIP LOCATIONS

ALBERTA AND BRITISH COLUMBIA

Bassano
Old Highway 1
(403) 641-3813

Brooks
Highway 873 North
(403) 362-3486

Calgary
292177 Crosspointe Rd
(403) 280-2200

Claresholm
8500 Alberta Road
(403) 625-4421

Coronation
4420 Victoria Avenue
(403) 578-3744

Creston
1617 Northwest Blvd
(250) 431-9002

Drumheller
3049 Highway 10 East
(403) 823-8484

Hanna
302 Pioneer Trail
(403) 854-3334

High River
498114 - 121 St East
(403) 652-7797

Olds
4310 - 50th Avenue
(403) 556-6961

Pincher Creek
1165 Main Street
(403) 627-4451

Ponoka
3600 Highway 2A South
(403) 783-3337

Red Deer County
37043 Hwy 2 Service Rd. (Northbound)
(403) 343-2238

Stettler
Highway 12 West
(403) 742-4427

Trochu
102 - 1st Avenue North
(403) 442-3982

Vulcan
311 Service Road North
(403) 485-2231

SASKATCHEWAN

Melfort
2320 Saskatchewan Dr S
(306) 752-9344

Nipawin
2002 Highway 35 South
(306) 862-9344

Prince Albert
Highway 3
(306) 763-6686

Rosthern
Highway 312 West
(306) 232-4852

Saskatoon
1125 North Service Rd
(306) 933-3303

Watrous
Highway 2 South
(306) 946-3362

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S-SERIES COMBINE SETTING TIPS AND TRICKS

- Set the combine to recommended initial settings for the grain you are going to harvest
- Use the Operator's Manual, Crop Settings Adjustment guide, GoHarvest App or the Active Combine Adjust on the combine
- Harvest until the separator is completely full, up to 100 feet before you start to do your preliminary tests
- Check your four key indicators
    - Straw condition, Grain Tank sample, Tailings and Grain Loss at the rear of combiwe either the shoe or the rotor
- Try to maintain as long of straw as possible and still get the grain out of the head
- Start with concave at a wider range of the recommended settings, fill combine, stop, and check for kernels in the heads
- If some kernels are left, pull up the concave at increments of two on the display until the kernels are gone and you have the longest straw length possible
- Once there are a couple of kernels left in the head, leave concave at the achieved setting, and increase rotor speed to remove the final kernels
- On a S760 and S770, the engine RPM will go to **2150** when the separator is engaged
- On a S780 and S790, combine the engine RPM will go to **2050** when the separator is engaged
- These combines have an Isochronous governor that does everything it can to maintain these engine RPMs
- Do drop box checks, then use the seed loss charts in Operator's Manual or GoHarvest App
- Don't be fooled by pre-harvest grain loss that's already on the ground before the combine passes the test area
- Use the Combine Operator's Manual, Interactive Combine Adjust if equipped or the GoHarvest App to walk you through setting your combine

The goals are to have an acceptable grain tank sample, very little grain loss at the rear of the combine at acceptable ground speeds (both on the shoe and the rotor), very low tailings and the longest straw length possible out the rear of the combine.

MAKING INITIAL ADJUSTMENT TIPS ON STS COMBINES

Feeder chain in slow speed, feed accelerator on slow speed to start within all crop conditions.

WHEN CROP IS TOUGH:

Concaves: on the tighter side of the initial adjustments. Try not to tighten up more than a setting of 10 (anything less than 10 will burn unnecessary fuel). If you must go tighter than 10, (crops such as protégé/harvest wheat), a setting of 7 with a high rotor speed may be successful.

Rotor Speed: on the high end of the specifications. Increase the speed as needed to raise the centrifugal force and separate the grain. Use rotor speed when grain is hard to thresh rather than tightening the concave. Increase the rotor speed until you start cracking grain, then back off the RPM until the grain just stops cracking. Do not run your rotor speed slower than 300 RPM**.** If this is difficult to achieve, contact your local Brandt Agriculture Dealer about a Discharge Flight (Paddle) Kit for Tri-Stream Rotor (BH84581). The variable stream rotor has the discharge paddles built onto the rotor.

Fan Speed: on the high end of initial adjustments, when fine tuning, use your tailings indicator to set maximum fan speed for the chaffer and sieve settings. Increase your fan speed until your tailings indicator begins to rise – this is an indication you are blowing clean grain into the return system.

Shoe Settings: at the larger openings of the adjustments.

WHEN CROP IS DRY:

Concave: on the open side of adjustments, **no higher than 30.**

Rotor Speed: at the lower end of adjustments. Do not run the cylinder slower than **300 RPM** unless you have installed a rear discharge kit (BH84581) and Discharge Flights (Paddles) Kit on Tri-Stream rotor.

Fan Speed: on the high end of initial adjustments.

Shoe Settings: at the mid-range openings of the adjustments.

CONCAVE FILLER PLATES

S650, S660, AND S670 MODELS

Leave the concave filler plates out until you determine if you will need them or have excessive partial heads in the grain tank. Start by installing one plate in the front of the front concave #1 position, then add one more in the center of the front concave #2 position, if you still have issues add another plate into the #5 position, center of the middle concave where the returns come back to the threshing area. If you are still experiencing issues or are working in extreme conditions, especially with protégé/harvest wheat, cover all three on the front concave and all three on the middle concave. This is not typically recommended as it cuts down your concave capacity dramatically and you will have to slow down your ground speed as rotor losses may/will occur.

S680, AND S690 MODELS

Leave the concave filler plates out until you determine if you will need them or have excessive partial heads in the grain tank. Start by installing one plate in the front of the front concave #1 position, then add one more in the center of the front concave #2 position, if you still have issues add another plate in #3 position in the front concave.

TINE SEPARATOR FILLER PLATES

On the S-Series combines with a Tri-Stream/Variable Stream rotor, start with the filler plates in to prevent overloading of the shoe. On standard tine separator grate machines, start with three rows of four on the left-hand side and two rows of four on the right-hand side. For heavy-duty separator grates in the Tough Grain Package, start with two rows of four on the left-hand side and one row of four on the right-hand side. If the crop is expected to yield over 80 bushels per acre remove the filler plates to give extra separation capacity. If you encounter pieces of straw or pods in the grain tank when harvesting canola in very dry conditions or in desiccated wheat straw in dry conditions, you could have an excessive shoe load. In order to reduce the shoe load, you can start by installing the filler plates one row on the left-hand side and one row on the right-hand side. We can also work with the fan and the chaffer settings to clean up the grain tank sample. If the combine is equipped with an Adjustable Front Chaffer, you can also tighten up the settings there.

CONCAVE TYPES

CONCAVE TYPE	SOYBEANS	WHEAT, BARLEY, SMALL GRAINS	SUNFLOWER (OIL)	CANOLA
Small Wire	Not Recommended	Best	Average	Best
Large Wire	Good	Good	Best	Good
Round Bar	Best	Average	Best	Average

Best: Provides the Best Level of Performance **Good:** Provides a Good Level of Performance **Average:** Provides an Average Level of Performance

HOW TO MAKE ADJUSTMENTS ON STS COMBINES

The following adjustments are not final. You will have to continue to adjust the combine accordingly throughout the day. Always be sure to only make **ONE** adjustment at a time after the initial settings are made.

- Adjust Rotor speed by 30 RPM increments
- Adjust Cleaning Fan speed in 30 RPM increments
- Adjust Concave in 1/8" increments or two numbers at a time on the display read out
- Adjust Chaffer and Clean Grain Sieve in 1/8" increments or one number at a time on the dials or readout
- Be aware if you close the Chaffer, you may have to reduce the Cleaning Fan speed
- Be aware if you open the Chaffer, you may have to increase the Cleaning Fan speed
- Remember: The Chaffer is for cleaning & the Clean Grain Sieve is for sizing
- On STS combines, use the tailings indicator on the corner post if you are not sure of what your Cleaning Fan speed should be. Turn up Cleaning Fan speed until the tailings indicator on VisionTrak starts to rise suddenly, then back off fan 30 RPM at a time, until the tailings indicator drops back close to where it started, or four to five bars

USE THESE FOUR KEY INDICATORS TO SET A COMBINE:

1. **Straw Condition, as long as possible**
2. **Check Grain Tank Sample (work with your grain buyer)**
3. **Check the amount of Tailings**
4. **Check Cleaning Shoe losses (chaffer and sieve area) and Tine Separator Area losses**

Be aware of pre-harvest losses when checking for losses behind the combine.

Once you have the combine set where you want, turn on Auto Maintain.

Power shut down procedure in the Operator's Manual or on the Combine Adjustment Guide can also be used to diagnose what the combine is doing to help you make the settings needed to set your combine. It is only recommended when acceptable loss levels cannot be achieved.

Use a drop box so you know exactly what is being thrown over and from where.

All the above suggestions are irrelevant if the concave is not levelled and proportioned to the rotor. This adjustment should be made before the start of a new harvest season to ensure maximum productivity of your combine.

If the swath you are picking up is intertwined and butts of grain would feed in first, it is almost impossible to clean up the sample. Ideally you want the heads to be feeding in first.

When straight cutting, if the heads and stand of straw are hanging sideways to your direction of travel you will again have a hard time cleaning up the sample. If the crop is standing straight things will work fine.

Do not pull your power meter to the red zone for extended periods of time. Doing so will cause your grain tank sample to go dirty very quickly.

CROP SETTINGS

Note: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.

	CANOLA	CHICKPEAS	WHEAT (DIFFICULT)	WHEAT (NORMAL)	ALFALFA	BARLEY
FEEDERHOUSE DRUM POSITION	Up	Down	Down	Down	Down	Down
FEEDERHOUSE CONVEYOR CHAIN*A*B	26 Tooth	26 Tooth	26 Tooth	26 Tooth	26 Tooth	26 Tooth
FEED ACCELERATOR SPEED *B*J	High	Low	High	High	High	High
FEED ACCELERATOR WEAR STRIPS	Serrated	Serrated	Serrated	Serrated	Serrated	Serrated
THRESHING SPEED (RPM)*B*E	350-550	400-600	800-1000	750-950	600-800	700-950
THRESHING CLEARANCE	15-40	18-24	3-15	8-16	0-5	5-22
CONCAVE TYPE (NORTH AMERICA)*D	Small Wire	Round Bar/Large Wire	Small Wire	Small Wire	Small Wire	Small Wire
SEPARATOR GRATE COVERS*D	Use As Required	Use As Required	Use as required	Use as required	Use As Required	Use As Required
SEPARATOR GRATE SPACERS	In Storage Position	In Storage Position	In Storage Position	In Storage Position	In Storage Position	In Storage Position
TOP COVER TRANSPORT VANES*O *(IF EQUIPPED)*	Standard	Standard	Standard	Standard	Standard	Standard
FAN SPEED (RPM)	600-900	800-1100	900-1250	900-1250	550-700	850-1100
ADJUSTABLE FRONT CHAFFER (MM) *(IF EQUIPPED)*	5-10	24	24	24	5-10	24
CHAFFER CLEARANCE (MM)	10-14	15-20	13-18	13-18	10-20	13-18
DUAL ZONE ADJUST REAR CHAFFER CLEARANCE (MM)	5 Level, 10 Sidehill	5 Level, 10 Sidehill	5 Level, 10 Sidehill	5 Level, 10 Sidehill	5 Level, 10 Sidehill	5 Level, 10 Sidehill
SIEVE CLEARANCE (MM)	2-5	6-10	3-8	3-8	1-4	6-9
TAILINGS SYSTEM CONCAVE POSITION *(IF EQUIPPED)*	Corn	Corn	Grain	Grain	Grain	Grain
CROP DIVERTER	Grain	Grain	Grain	Grain	Grain	Grain
KNIFE BANK ENGAGEMENT	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed
CHOPPER SPEED	High	High	High	High	High	High

	OATS	PEAS	FLAX	GRASS SEED	LENTILS	RYE
FEEDERHOUSE DRUM POSITION	Down	Down	Down	Down	Down	Down
FEEDERHOUSE CONVEYOR CHAIN*A*B	32 Tooth	26 Tooth	26 Tooth	32 Tooth	26 Tooth	26 Tooth
FEED ACCELERATOR SPEED *B*J	High	Low	High	High	Low	High
FEED ACCELERATOR WEAR STRIPS	Serrated	Serrated	Serrated	Serrated	Serrated	Serrated
THRESHING SPEED (RPM)*B*E	600-900	300-400	800-1000	500-850*N	350-500	700-900
THRESHING CLEARANCE	15-25	15-30	0-10	12-25	7-12	13-26
CONCAVE TYPE (NORTH AMERICA)*D	Small Wire	Round Bar/Large Wire	Small Wire	Small Wire	Round Bar/Large Wire	Small Wire
SEPARATOR GRATE COVERS*D	Use as required	None	Use As Required	Use As Required	Use as required	Use as required
SEPARATOR GRATE SPACERS	In Storage Position	In Storage Position	In Storage Position	In Storage Position	In Storage Position	In Storage Position
TOP COVER TRANSPORT VANES*O *(IF EQUIPPED)*	Standard	Advanced	Standard	Standard	Standard	Standard
FAN SPEED (RPM)	750-900	850-1050	700-1050	350-600*I	800-1000	750-950
ADJUSTABLE FRONT CHAFFER (MM) *(IF EQUIPPED)*	24	24	24	5-10	24	24
CHAFFER CLEARANCE (MM)	18-22	16-20	8-15	12-18	2-18	16-18
DUAL ZONE ADJUST REAR CHAFFER CLEARANCE (MM)	5 Level, 10 Sidehill	5 Level, 10 Sidehill	5 Level, 10 Sidehill	5 Level, 10 Sidehill	5 Level, 10 Sidehill	5 Level, 10 Sidehill
SIEVE CLEARANCE (MM)	6-10	6-11	5-10	5-12	3-10	6-10
TAILINGS SYSTEM CONCAVE POSITION *(IF EQUIPPED)*	Grain	Corn	Grain	Grain	Corn	Grain
CROP DIVERTER	Grain	Grain	Grain	Grain	Grain	Grain
KNIFE BANK ENGAGEMENT	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed
CHOPPER SPEED	High	High	High	High	High	High

	TRITICALE	MUSTARD	NAVY BEANS	SOYBEANS	CORN (DRY)	CORN (WET)
FEEDERHOUSE DRUM POSITION	Down	Down	Down	Down	Up	Up
FEEDERHOUSE CONVEYOR CHAIN*A*B	26 Tooth	26 Tooth	22 Tooth*P	26 Tooth	26 Tooth	26 Tooth
FEED ACCELERATOR SPEED *B*J	High	High	Low*C	Low	Low*C	Low
FEED ACCELERATOR WEAR STRIPS	Serrated	Serrated	Backswept Serrated	Serrated	Serrated	Serrated
THRESHING SPEED (RPM)*B*E	850-1000	600-900	300-350*L	450-650	250-450	350-500
THRESHING CLEARANCE	18-24	10-20	15-30	15-30	20-35	20-35
CONCAVE TYPE (NORTH AMERICA)*D	Small Wire	Small Wire	Round Bar	Round Bar/Large Wire	Round Bar	Round Bar
SEPARATOR GRATE COVERS*D	Use As Required	Use As Required	None	None	None	None
SEPARATOR GRATE SPACERS	In Storage Position	In Storage Position	In Storage Position	Either	Installed	Installed
TOP COVER TRANSPORT VANES*O *(IF EQUIPPED)*	Standard	Standard	Advanced	Standard	Standard	Standard
FAN SPEED (RPM)	750-1000	500-800	800-1100	800-1050	900-1300	1000-1300
ADJUSTABLE FRONT CHAFFER (MM) *(IF EQUIPPED)*	16-18	5-10	24	24	24	24
CHAFFER CLEARANCE (MM)	8-15	10-14	14-18	14-18 (General-Purpose) or 13-17 (Deep-Tooth)	15-20 (Depp-Tooth), 17-22 (General-Purpose)	16-21 (Deep-Tooth), 18-22 (General-Purpose)
DUAL ZONE ADJUST REAR CHAFFER CLEARANCE (MM)	5 level, 10 sidehill	5 level, 10 sidehill	5 level, 10 sidehill	5 level, 10 sidehill	5 level, 10 sidehill	5 level, 10 sidehill
SIEVE CLEARANCE (MM)	6-10	2-5	6-10	6-10 (General-Purpose) or 5-9 (Deep-Tooth)	11-15 (General-Purpose) or 10-14 (Deep-Tooth)	11-15 (General-Purpose) or 10-14 (Deep-Tooth)
TAILINGS SYSTEM CONCAVE POSITION *(IF EQUIPPED)*	Grain	Grain	Corn	Corn	Corn	Corn
CROP DIVERTER	Grain	Grain	Grain	Grain	Corn	Corn
KNIFE BANK ENGAGEMENT	Allowed	Allowed	Allowed	Allowed	Disengaged Only	Disengaged Only
CHOPPER SPEED	High	High	High	High	Low	Low

FOOTNOTES

(A)* For poor feeding straw crops due to high volume, green, or windrowed conditions, the 32-tooth drive sprocket is recommended.
(B)* For improved straw quality in dry crops and grain quality, use lower speed. For dry, brittle sunflowers a 15-tooth drive sprocket can be used.
(C)* For improved grain quality, use slow down kit to 320 RPM.
(D)* In shoe overloading conditions in dry crops, with small wire concaves, initially install two rows on right side and three rows on left side of the separator grates. With large wire concaves, initially install three rows on right side and two rows on left side of separator grates. Adjust number and pattern as required by condition.
(E)* 15 elements is the standard configuration. In most conditions 15 elements will require less power leading to higher capacity, less shoe load, and less straw damage. An additional 9 element locations (Dense Pack) are available on tough crop rotors which can be used in tough material handling conditions.
(F)* For improvement in threshing, grain tank sample, and chaff load distribution in small grain, first install concave covers in front concave. Additional covers can be added to other concaves as needed.
(G)* Recommendations other than Serrated Tough Crop will require conversion of Feed Beater.
(H)* Tailings sump cover recommended.
(I)* Cleaning Fan slow down kit may be required.
(J)* For increased material handling use High speed.
(K)* Wires may be removed for increased cob capture.
(L)* Discharge paddles can be installed for improved material handling in rotor if using TriStream™ Rotor.
(M)* Utilize Corn Cob Mix separator grates.
(N)* In extremely tough material handling conditions, threshing tines may be installed in place of threshing elements (threshing performance may be reduced).
(O)* Advanced setting may be used for improved straw quality and/or material handling. Note: Separator loss may increase when advanced. Wheat Difficult / Wheat Normal.
(P)* Available through service parts.

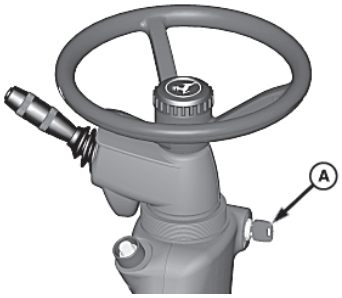
DUAL ZONE CHAFFER RECOMMENDATION

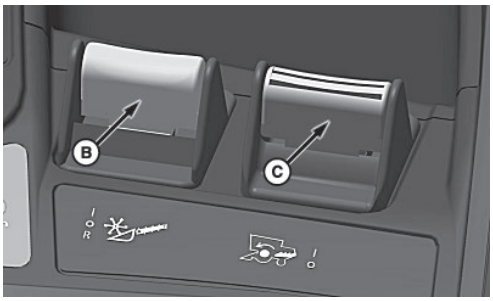
- 5 MM on level land
- 10 MM on hill side
- Closed completely when lots of greens in the sample to reduce tailings load
- If tailings indicator is low in a clean crop, open the rear louvers to the same as the front part of the chaffer

POWER SHUT DOWN PROCEDURE

A power shutdown is used to determine the machine's performance in the threshing and separating areas by taking a "snap-shot" of the material in the separator. This is valuable in determining where the losses behind the machine are generated and what adjustments can be made to correct the condition. Be sure to verify that crop condition and material intake are similar for each shutdown.

1. Locate the engine speed indicator on the corner post display and threshing speed readout on the armrest display
2. Lock the brake pedals together
3. Operate the machine at optimized throughput levels in the desired crop
4. Move the steering wheel forward for free motion (both hands are needed)
5. Press the low idle engine speed switch on the armrest
6. Depress brake pedals
    i) Non-ProDrive™ machines: Fully depress brake pedals (quickly pulls engine speed down by loading propulsion system)
    ii) ProDrive™ machines: Lightly depress brake pedals (ProDrive™ attempts to repower and will downshift changing machine dynamics if brakes are fully depressed)
7. As engine speed drops to near low idle speed (1200 RPM), quickly disengage header (B) and separator engage (C) switches on the armrest
8. Quickly move the multi-function lever to the neutral position





LEGEND:
A - Key Switch
B - Header Engage Switch
C - Separator Engage Switch

9. Allow engine to cool for a minute
10. Turn key switch (A) to shut OFF the engine, set park brake and remove key
11. Inspect for excessive grain damage, kernels left on the cobs, and free grain loss before making any adjustments
12. Decide what adjustments are needed. Open threshing clearance and engage separator (avoids undue stress to cylinder drive area during clean out)
13. Adjust machine to desired settings and continue harvesting
14. Repeat this procedure and verify grain quality and losses behind machine
15. Once acceptable loss levels are attained, calibrate VisionTrak™ Monitor and continue to harvest

2630 S-SERIES HARVEST SETUP

This setup sheet is meant to be used when setting up a S Series combine with 2630 display on the armrest or with two 2630 displays or 2630 with a 7" touch screen on armrest.

ON THE ARMREST 2630 IF USING SINGLE DISPLAY OR ON THE 2630 MOUNTED IN THE UPPER RIGHT CAB CORNER WHEN USING DUAL DISPLAYS

Step 1: Complete the setup of GS3 resources. Press Main Menu,  press GS3,  press Resources (G).  Fill in your Client, Farm, and Field on the left of the screen. Select Harvest in the drop-down menu beside Task. Change the crop season to the current year.

Step 2: Setup the Equipment button. Press Equipment (H),  press the Machine tab on the top of the screen, confirm that the machine type, model and name on the left off the screen are filled in and that there are offsets filled into the right of the screen. Press the Header tab at the top of the screen, fill in the implement type, model, and name on the left of the screen, press Change Offsets 

on the right and fill in the header offsets using the following chart and then press Accept. 

	615P	600D	600FD	600F
OFFSET A	0 FT.	0 FT.	0 FT.	0 FT.
OFFSET B	8 FT.	7 FT.	6 FT.	4.5 FT.
OFFSET C	0 FT.	0 FT.	0 FT.	0 FT.
OFFSET D	8 FT.	7 FT.	6 FT.	4.5 FT.

Press Change Widths 

on the bottom of the screen and fill in the desired track spacing (for pickup header, use the track spacing from the swather, for straight cut header with SF1 receiver use half a foot less than the header width) press Accept.

Step 3: Setup the Documentation screens. Press Document (I),  press the Harvest tab at the top of the screen, press Change Harvest Settings 

and fill in the Crop Type and Variety. These are the 2 areas that must be filled in for proper operation, all of the other areas can be left blank or filled in if more documentation data is desired. Press Accept, it is recommended that the load name and load destination are filled in and the check mark is put in the box beside Auto Increment Load Number.

Make sure that the only tabs on the top of the screen are "Harvest" and "New". If there are any other tabs named on the top of the screen, press on them and then press the "Remove" button on the lower left corner of the screen.

ON THE 2630 OR 7INCH TOUCH SCREEN ON THE ARMREST

Step 4: Navigate to the combine main screen. Press Main Menu  on the lower right corner of the screen, then the combine icon, press the combine icon  again in the top right corner of the screen.

Step 5: Setup moisture meter. Press the setup button "H"  press the moisture setup button "I"  confirm that the check mark is in moisture alarm off, or if the moisture alarm is turned on, make sure the customer has setup the minimum and maximum moisture as desired. Ensure the check mark is beside moisture correction (not fixed moisture) so the moisture sensor is turned on, check that yield units on the bottom of the screen is set to "Bushels"

Step 6: Setup Residue Management. Press the residue management button "C".  In this screen, check that the separator vanes (variable stream rotor only) have a check mark beside "standard" position for most crops except dry canola or peas. If the combine is equipped with the premium residue system check the position of the chop or drop door depending on customers preference (check mark beside chop or drop straw)

Step 7: Use Automatic Crop Adjustment to set the combine initial settings. Press the ACA setup button "G"  engage the separator and bring the engine up to full throttle, select "Default" in the drop down menu on the upper right area of the screen and then press the "Auto" button on the lower left-hand corner. The combine will set itself to the desired settings. ***Note:*** *If the combine does not reach the desired rotor speed, you may have to turn the separator off and shift the two speed shifter on the rear of the rotor to another speed. Turn the separator off and return the engine to idle.*

Step 8: Setup the header minimum reel speed, width, and width change. Press the combine button "F"  the upper right-hand corner, then press the header setup button "I"  put in the desired minimum reel (or pickup belt) speed beside "Min Reel Speed", put in the header width beside "Width", put in the desired width change beside "Width Change." ***Note:*** *width change is used when you (or the GPS) change the header width during operation in a narrow area of the field where a full width swath is not present. Raise the header up off the ground to the desired recording stop point (should be below the out of crop position set on #1 on the hydro handle) and press the enter button beside "Record Stop Height."*

Step 9: Setup Active Header Control. Press the Auto button "H"  (third button down on the right-hand side) place a check mark in the box above Active Header Height Sensing  for all Deere Headers, place a check mark above Header Height Resume  for all headers, place a check mark above header float.  Only if using a 900 series or third party header and only if desired, place a check mark above Dial A Speed.  If ground speed matching of the pickup belts or reel is desired, place a check mark above reel position resume.  Only if the header is equipped (all 600 series cutting platforms are) and only if the customer desires to use that function, put a check mark above Contour Master  if the combine is equipped with feeder house tilt.

Step 10: Make Adjustments and Calibrate Grain Loss Monitor. Make all adjustments needed to get acceptable threshing and grain loss results then press the combine button "F"  in the top right corner, press the setup button "H"  (third button down on the right-hand side), press the crop setup button "H"  (third button down on the right-hand side). Drive the combine at the same speed and in the same crop conditions as earlier when checking settings and press the calibration button "D" below "Grain Loss Calibrate"

Additional Steps: Setup Guidance and Mapping screens as desired.

S-SERIES COMBINE 7" COMMAND CENTER DOCUMENTATION

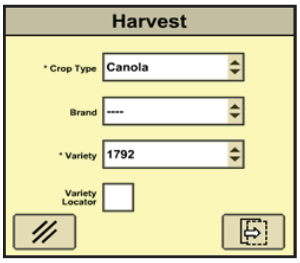
1. Pess 
2. Select 
3. Select 
4. Two Options (Select Standard)
   - Quick Straight Track Guidance Setup 
   - Setup Field, Equipment, Documentation 
5. Machine Offsets (Should be preset for S Series). Press  to continue
6. Implement Type - Enter in the correct Implement Model, and Name. Then select 
7. Implement Offsets - Enter in the correct offsets for the header you are using. Then select 
8. Enter in the correct track spacing. Implement width will be greyed out because it is setup in the  and  (the pick-up header width is set to the width of the swath and not the width of the actual pick-up select 
9. Coverage Recording Source - This will be greyed out and set to Auto. Select 
10. Fill out the Client, Farm and Field. This needs to be filled out in order to document yield data properly. Select 
11. Guidance - Select a tracking mode and create a name for your A-B line, such as East or West. Then select 
12. Main Guidance Page - Select  to set your (A) point when in position
13. 3 Options to Set B point
    -  Drive to the other end of field and set your B point
    -  Select this and drive the direction you want to travel, and it will automatically set your B point after 40-50 feet
    -  Select this and enter in the degree and direction you want to travel. Example: East 90°

STEP BY STEP PROCEDURES

SETTING UP HARVEST DOC ON 2600/2630 MONITOR

Harvest Doc Tips:

- Remember to hit through every page as you work through the monitor
- Fill out everything  with an **asterisk*** to the left of it



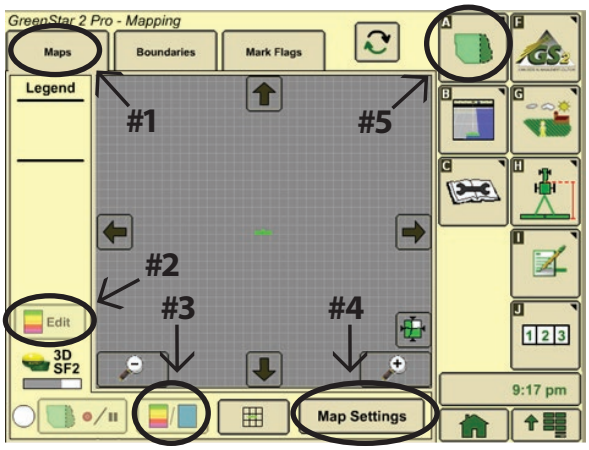
CROP TYPE & VARIETY: have asterisks* to the left of them. These must be entered

BRAND: does not have an asterisk to the left of it, therefore it is optional to enter

SETTING UP HARVEST DOC

1. Push the bottom right Menu button 
2. Push the Greenstar Pro button
3. Push the button G: Client/Farm/Field 
4. Fill in the following:
   a. Client
   b. Farm
   c. Field
   d. Task (Harvest)
5. Push the button H: Machine & Implement
6. Under the Machine tab at the top fill in the following:
   a. Machine Model
   b. Machine Name
   c. Push the Change Offsets button and put in the dimensions

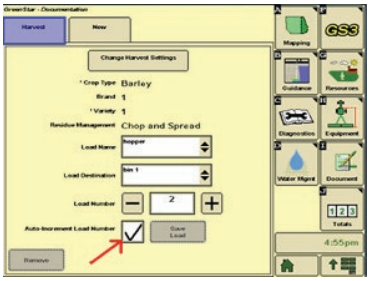
7. Under the HEADER tab at the top fill in the following:
    a. Implement Type
    b. Implement Model
    c. Implement Name
    d. Physical Width – most of the time same as implement width
    e. Implement Width – most of the time same as physical width
    f. Track Spacing – i.e. how far apart you're A/B lines are i.e. 29.5' for 30' header is common. For pickup header operation – your track spacing should be the same as the windrower header width
    g. Push the Change Offsets button and put in the dimensions – these dimensions are mostly for setting up a visual picture of the combine on the screen however if the header has an offset you can compensate for it here
    h. Cut Width Increment allows you to reduce the width of your header. For example, if you are only cutting 10 feet of crop with a 30 foot header this setting will allow your bushels per acre to be more accurate
8. Push button I: Documentation Setup
    a. Push the "Change Harvest Settings button"
    b. Fill out everything with an asterisks to the left of it. I.e., Crop Type and Variety are required, however the other fields are optional
    c. You can only have one Harvest Operation setup at a time. I.e., at the top of the page it has to say Harvest and New
9. Push button J: Totals
    a. If you have setup the documentation correctly you will notice multiple zeros in the totals button – if documentation is not setup properly it will read No Totals Available
10. Push button A: Mapping (green button). I.e. #5



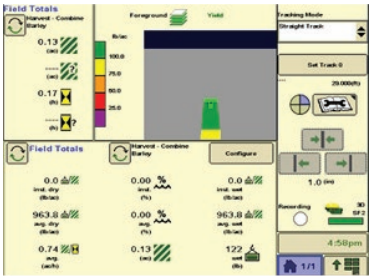
a. Under the Maps tab (#1), select Map Settings (#4)
b. Push the white box to the right of Foreground and select Yield or Moisture depending on what you want to see on the screen
c. After you have selected either Yield or Moisture you can push (#3) and switch between the BLUE guidance map and the Multi–Color Yield or Moisture maps
d. Push the Edit button (#2), to edit the legend. Enter

SHOWING DRY BUSHELS HARVESTED ON THE GO

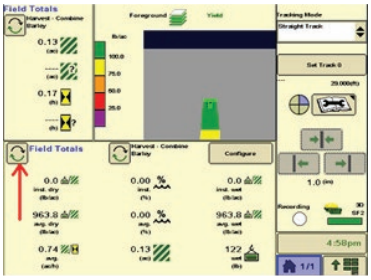
1. Setup documentation, fill in the load name and destination then check off Auto Increment Load Number



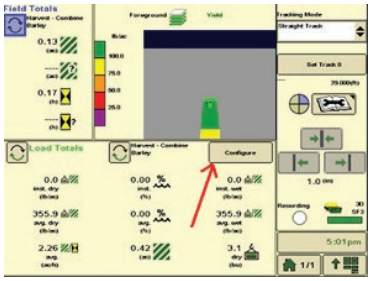
2. Use layout manager to setup a home page that looks like this: (all sections are found in the GreenStar pages)



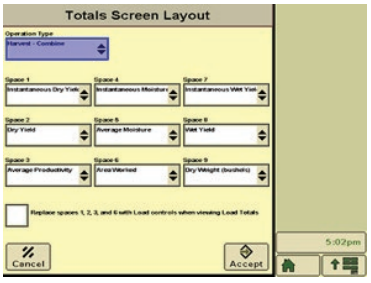
3. Press the circular arrows beside Field Totals to display Load Totals



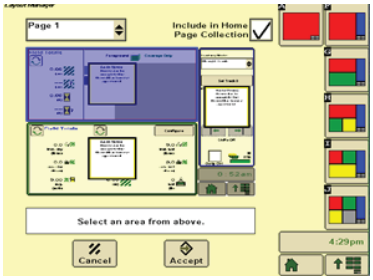
4. Press the Configure button on the totals area of the screen



5. Select the area that you want to display your wet or dry weight (bushels). Select wet weight (bushels) from the drop down menu for that area of the totals screen layout. Once you have done this the wet weight (bushels) will display on the go and will zero out each time the unloading auger is swung out and the grain tank is unloaded. This can be helpful for the operator as they are informed how full the tank is before the level sensors are triggered



6. Lay Out Manager - setting up what is displayed on the screen



S-SERIES YIELD AND MOISTURE CALIBRATIONS

ACCESS AG YIELD MONITOR (AYM) CALIBRATIONS:

1. From the homepage go to the Diagnostics Screen 
2. Press the user calibration soft key ▼
3. Select the desired user calibration from the drop-down list.
4. Select the Enter soft key to begin the calibration 
5. Follow the on-screen instructions in the calibration wizard

MOISTURE SENSOR TEMPERATURE

1. Access the Moisture Sensor Temperature calibration through the user calibrations page
2. Increase (+) or Decrease (-) until the desired temperature is reached. The Moisture Sensor Temperature should match the current ambient temperature.
3. Press the confirm switch when the enter/accept icon is highlighted to save sensor temperature

NOTE: The calibration must be done before harvest begins, when the moisture sensor is empty, and periodically throughout the day as the temperature varies.

MOISTURE SENSOR CORRECTION

1. Go to the Combine Setup page, then select the Moisture Setup Icon
2. Place a check mark in the Moisture Correction Box
3. Select the value change box
4. Touch the plus (+) or minus (-) symbols to input the moisture difference from the combine measured value and grain elevator value
5. Select the confirm switch

NOTE: The moisture difference can be either a positive or negative number.

MASS FLOW VIBRATION

1. Make sure the combine is empty and the crop applicable header is connected to the combine
2. Access Mass Flow Vibration calibration through the user calibrations page
3. Press the confirm switch when the enter/accept icon is highlighted to save the Mass Flow Vibration calibration

NOTE: The Mass Flow Vibration will fail calibration if the clean grain elevator speed is less than 250 RPM for the duration of the calibration. 

YIELD CALIBRATIONS

1. Access Yield calibration through the user calibrations page
2. Press the confirm switch when the word Yield is highlighted

   This screen will allow [give] the user the following options:

   - Manage existing calibration loads
   - Start new calibration load
   - Cancel the calibration process

COLLECTING CALIBRATION LOADS

Information Displayed: Calibration load being collected and estimated weight for calibration load.

1. Pressing the "Return" button will direct the user to the combine calibration selection screen
2. Pressing the "Next Step" button will end the calibration load collection
3. After pressing the "Next Step" the user will be directed to the first yield calibration screen
4. Minimum of 3000 lbs has to be collected to accept the calibration load
5. Only 13 loads per crop type are allowed

MANAGING CALIBRATION LOADS

1. Select a load for calibration:
   - Enter Scale Weight
   - Remove it as a calibration load
2. After selecting the loads to be used for the calibration factor select the "Calibrate" icon
3. Calibration calculates new calibration factor numbers based on the currently selected loads
4. "Return" button will direct the user to the yield calibration opening screen

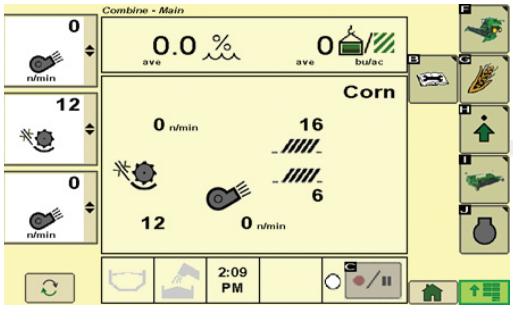
MULTI-POINT YIELD MANAGEMENT

- Up to 13 loads can be stored for each crop type harvested
- User can select which loads to use within each crop that match the field conditions

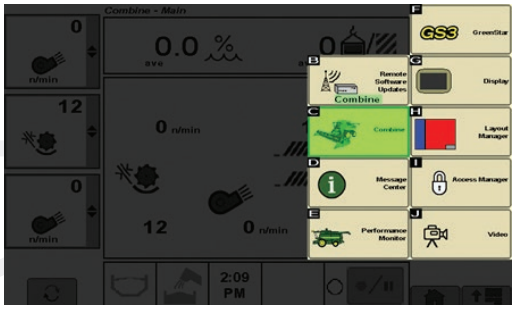
Remember:

- Limited Accuracy – user calibration has not been performed. System defaults to a fixed internal setting. 20% Accuracy
- Medium Accuracy – One to three loads have been selected. Better than 3% for flow rate used for calibration
- Highest Accuracy – User has selected minimum of four loads. Better than 3% for multiple flows

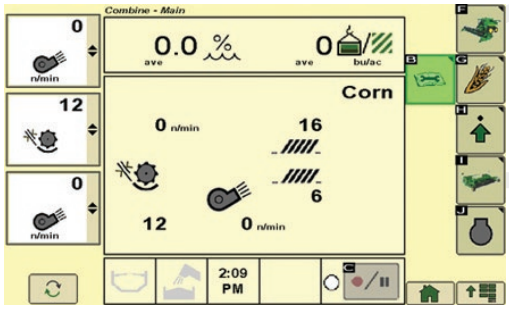
S-SERIES HEADER CALIBRATION



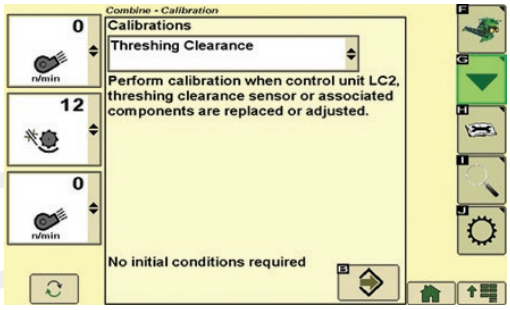
1) Press Main Menu



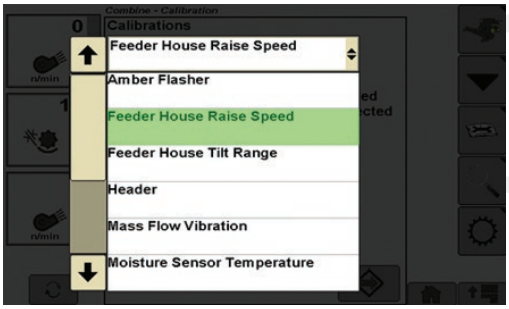
2) Select Combine



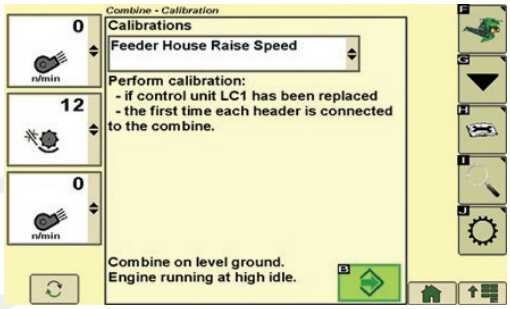
3) Select Book and Wrench (soft key B)



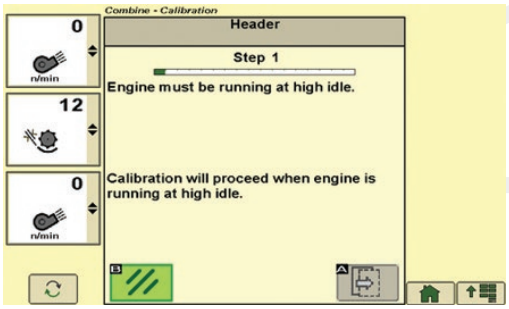
4) Select Calibrations (soft key G)



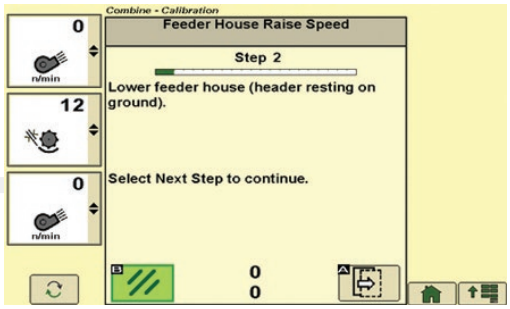
5) Press on white drop-down box and select Feeder House Raise Speed



6) Select Accept to begin calibration

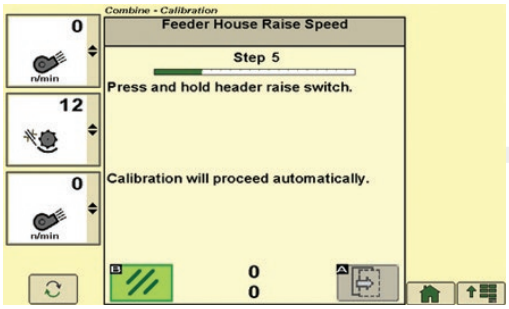


7) Engine must be running at a high idle

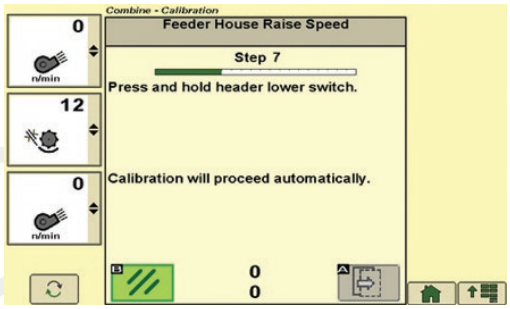


8) Lower Feeder House and follow directions on the screen

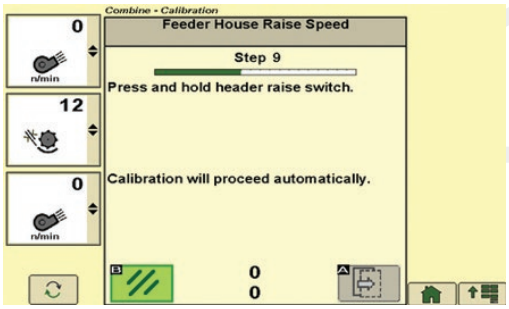
S-SERIES HEADER CALIBRATION CONT.



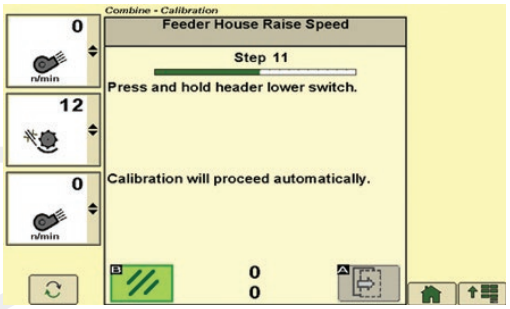
9) Press and hold header raise switch and follow directions on the screen



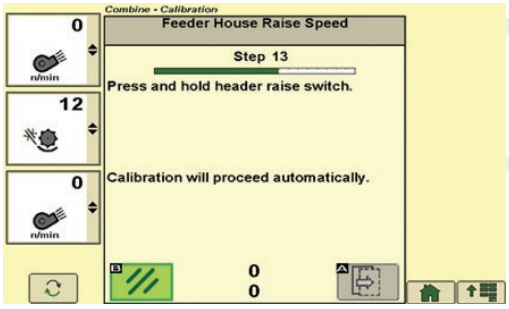
10) Press and hold header lower switch and follow directions on the screen



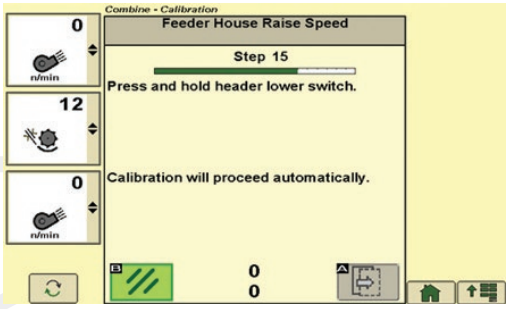
11) Press and hold header raise switch and follow directions on the screen



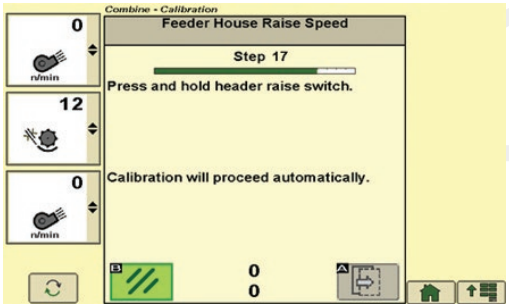
12) Press and hold header lower switch and follow directions on the screen



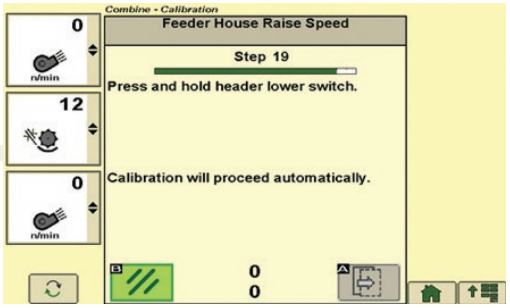
13) Press and hold header raise switch and follow directions on the screen



14) Press and hold header lower switch and follow directions on the screen

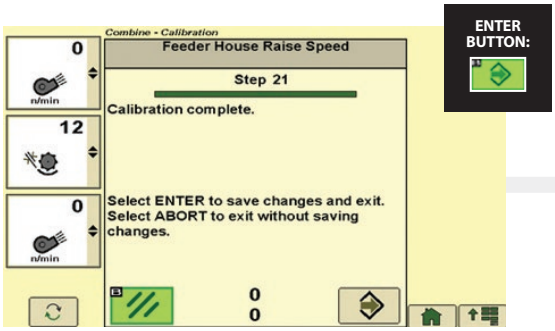


15) Press and hold header raise switch and follow directions on the screen

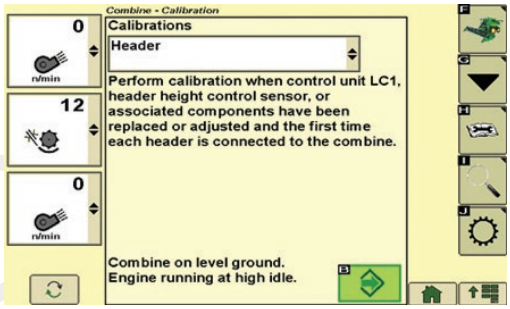


16) Press and hold header lower switch and follow directions on the screen

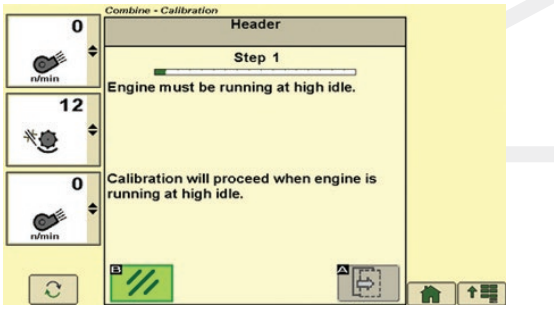
S-SERIES HEADER CALIBRATION CONT.



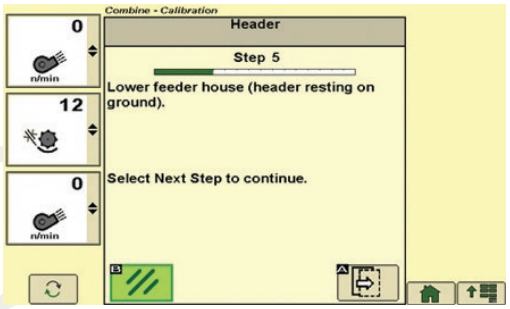
17) Calibration complete. You must select the Enter button to save the calibration



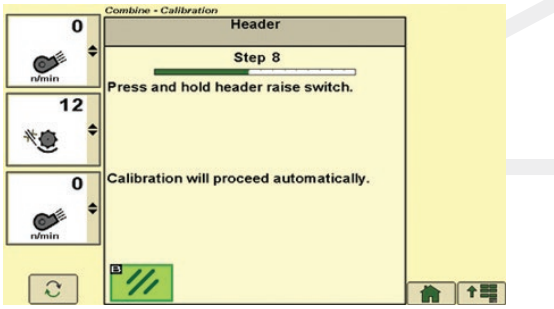
18) Next select Header from the Calibrations drop down box and press Accept



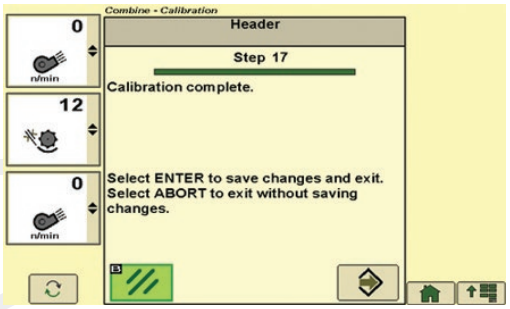
19) Engine High Idle and follow directions on the screen



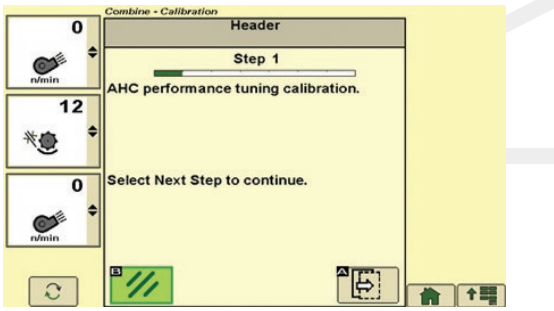
20) Lower Feeder House (header resting on ground). Select (A) Next Step to continue



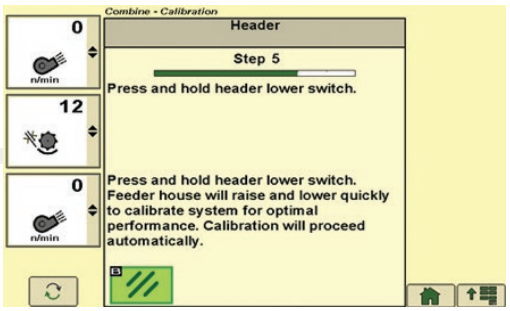
21) Press and hold the header raise switch and follow directions on the screen



22) Calibration Complete – Must select the Enter to save the calibration

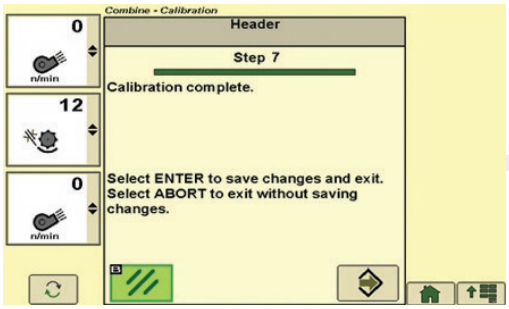


23) This calibration will automatically begin – Automatic Height Control (AHC) Performance Calibration. Select (A) Next page to continue

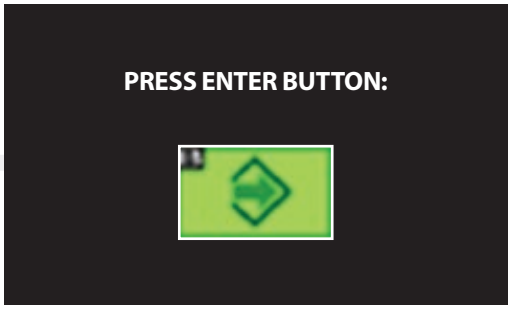


24) This step will jerk the header up and down (this is normal) – Press and hold lower switch to continue

S-SERIES HEADER CALIBRATION CONT.



25) Calibration is complete



26) Must select the Enter button to save the calibration

WHEN TO CALIBRATE

This list shows all of the possible calibrations. Depending on your machine options and header types, the listing shown below may not match the calibration menu shown on your display. **NOTE:** Error codes may show on the display if a problem exists during a calibration procedure. Conditions causing the error must be corrected before continuing calibration.

Amber Flashers: Perform calibration when control unit RC1, Amber Flasher bulbs, or associated components are replaced/adjusted

Corn Header Deck Plate Spacing Calibration: Perform calibration when control unit LC1 or deck plate position sensor or associated components are replaced/adjusted

Feeder House Speed Calibration: Perform calibration;

- If control unit LC1 has been replaced
- First time each header is connected to combine
- If attachments or significant weight are added to or removed from header

Feeder House Tilt Calibration (If Equipped): Perform calibration;

- If control unit LC1 has been replaced
- If lateral tilt sensor or associated components are replaced/adjusted
- Before connecting header to combine

Feeder House Tilt Speed Calibrations (If Equipped): Perform calibration;

- If lateral tilt sensor or associated components are replaced/adjusted
- Before connecting header or first-time header is connected to combine

Header Calibration: Perform calibration;

- If control unit LC1 has been replaced
- If a header height control sensor or associated components are replaced/adjusted
- First time each header is connected to combine

Mass Flow Vibration Calibration (If Equipped): Perform calibration when control unit Ag Yield Monitor or associated components are replaced/adjusted

- Mass Flow Vibration Calibration must be performed when changing headers and in every crop that is harvested

Moisture Sensor Temperature (If Equipped): Perform calibration when control unit AYM or associated components are replaced/adjusted. **NOTE:** When prompted during self-leveling shoe calibration to level chaffer/sieve, use switches on the side of the machine to level bays

Self-Leveling Shoe Calibration (If Equipped): Perform calibration when control unit LC2 or chaffer/sieve actuator has been replaced/adjusted or bays not level

Chaffer Opening Calibration: Perform calibration when control unit LC2 or chaffer actuator has been replaced/adjusted or louver openings are out of adjustment

Sieve Opening Calibration: Perform calibration when control unit LC2 or sieve actuator has been replaced/adjusted or louver opening are out of adjustment

Threshing Clearance Calibration: Perform calibration when control unit LC2, threshing clearance sensor, or associated components are replaced/adjusted. **IMPORTANT:** Calibration should not be completed with round bar concave covers installed. It will result in an incorrect zero position

Unloading Auger Engage Calibration: Perform calibration when control unit RC2, unloading auger belt or associated components are replaced/adjusted

Yield Calibrations (If Equipped): Perform calibration when control unit AYM or associated components are replaced/adjusted. **NOTE:** Yield calibration must be performed every year and in every crop that is harvested to achieve accurate grain weight measurements. Refer to Yield Calibration in CommandCentre Display Screens section for more information

- **Limited Accuracy:** user calibration procedure has not been performed. System defaults to a fixed internal calibration value which is not adjustable
- **Medium Accuracy:** user has collected and selected one to three loads. System uses these values to adjust the internal calibration value
- **Highest Accuracy:** user has collected and selected a minimum of four calibration loads. System uses these values to adjust the internal calibration value. **NOTE:** 13 load identification numbers can be saved before memory is full and a load identification number must be deleted

FEEDER HOUSE RATE/SENSITIVITY ADJUST SWITCH

(A) FEEDER HOUSE RATE/SENSITIVITY ADJUST SWITCH

The Feeder House rate/sensitivity adjust switch (A) allows the operator to compensate for uneven ground and controls the horizontal and vertical positions of header. The system continuously compares preset positions and actual positions, thus keeping the header in the desired working position.

MANUAL RAISE/LOWER SPEED:

Manual raise/lower speed controls the response rate of the header raise/lower functions for manual control or when in automatic height resume mode.

NOTE: Rate setting shown on display when adjusting. Settings are adjusted between 0 and 100.

1. Press the Feeder House rate/sensitivity adjust switch (A) once to select manual raise/lower speed
2. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease response speed
3. Displays shows the operator the adjustment settings
4. Header Height Sensitivity:

Height Sensing and Active Header Float Pressure Sensitivity (Automatic Functions) controls the speed of response for header movements when in automatic sensing and automatic float modes.

NOTE: Sensitivity setting is shown on display when adjusting. Settings are adjusted between 0 to 100

1. Press feeder house rate/sensitivity adjust switch (A)twice to select header height sensitivity
2. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease sensitivity
3. Displays shows the operator adjustment settings

MANUAL TILT SPEED:

Manual tilt speed controls response for lateral tilt movements when in manual rate mode.

NOTE: Rate setting is shown on the display when adjusting. Settings are adjusted between 0 to 100. Manual tilt speed function only works on closed-center hydraulic machines equipped with lateral tilt.

1. Press Feeder House rate/sensitivity adjust switch (A) three times to select manual tilt speed
2. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease tilt speed
3. Displays shows the operator adjustment settings

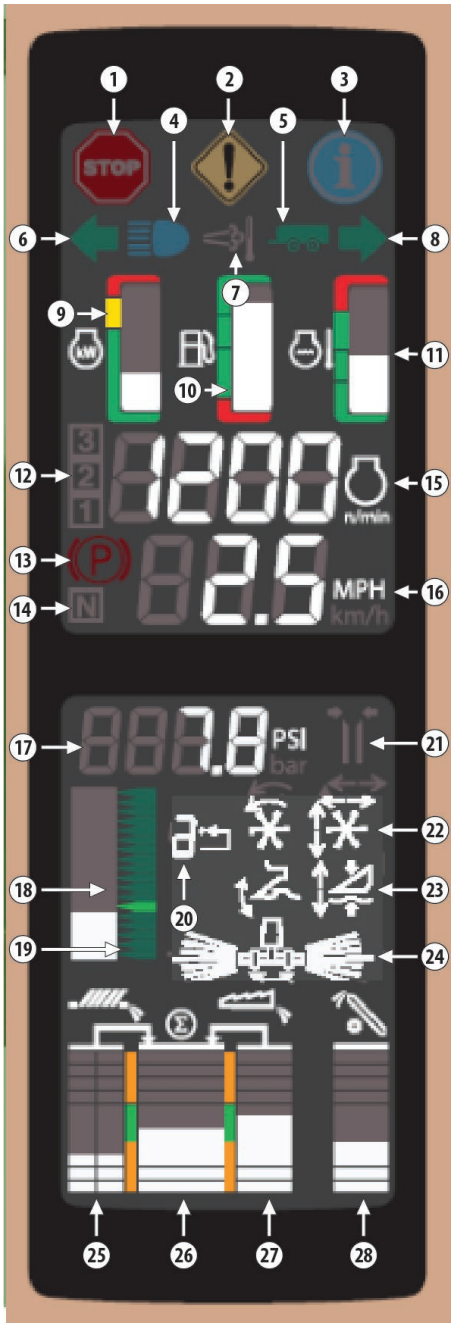
AUTOMATIC TILT SENSITIVITY:

Automatic tilt sensitivity controls the speed of response for lateral tilt movements when in automatic sensing and automatic float modes. Sensitivity setting is shown on the display when adjusting. Settings are adjusted between 0 to 100.

NOTE: Automatic tilt sensitivity function only works on lateral tilt-equipped machines. Feeder House lateral tilt sensitivity speed function only works on lateral equipped machines.

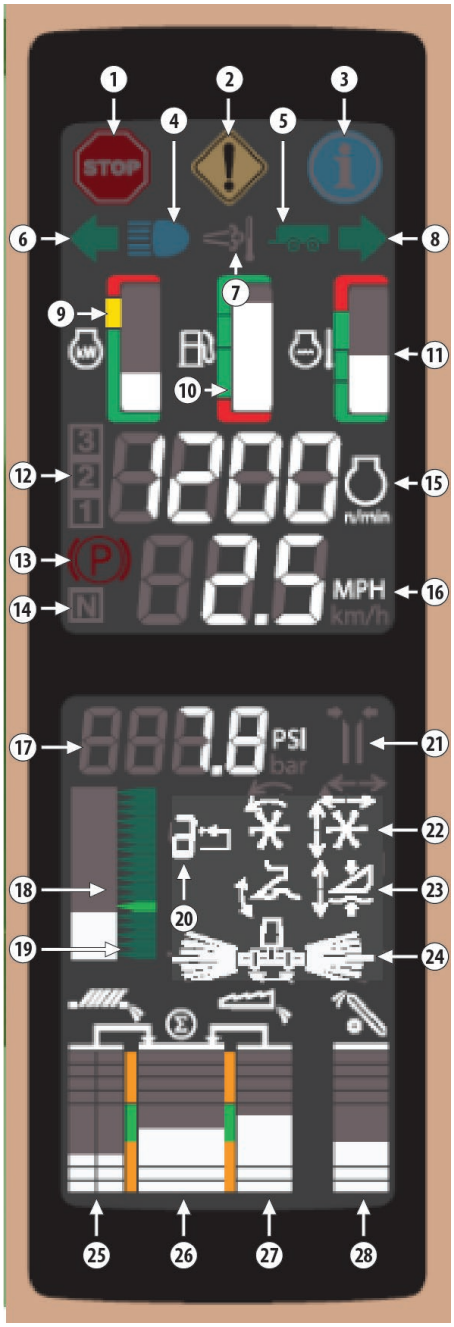
1. Press feeder house rate/sensitivity adjust switch (A) four times to select automatic tilt sensitivity
2. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease tilt sensitivity
3. Displays shows the operator adjustment settings

COMMANDTOUCH CAB CORNERPOST



1. **Step Engine Warning Indicator (Red):** illuminates and requires the machine to be stopped at once and the problem corrected. Diagnostic trouble code is shown on armrest display until problem is resolved
2. **Service Warning Indicator (Yellow):** illuminates and flashes when a problem exists with a machine. Requires machine to be stopped at the earliest convenience. Diagnostic trouble code is shown on armrest display
3. **Information Warning Indicator (Grey):** illuminates and flashes when diagnostic trouble code is active. Alerts operator to be aware of a condition. When a warning is acknowledged, screen message disappears, and the warning indicator turns OFF
4. **High Beam Indicator:** shows operator that high beam lightsare currently selected
5. **Trailer Lights Indicator:** illuminates when the trailer harness is hooked up and turn signal is applied
6. **Left Turn Signal Indicator:** shows operator that a left turn is planned
7. **Exhaust Filter Cleaning Indicator (Interim Tier 4/ Stage III B):** illuminates when exhaust filter system is actively performing exhaust filter cleaning
8. **Right Turn Signal Indicator:** shows operator that a right turn is planned
9. **Engine Power Meter Indicator:** shows operator percentage of power that engine is currently using at any given time. **Important:** If the indicator moves into the red region, engine power is maximized, and machine could stall. Reduce load on machine until indicator moves back into green and yellow regions
    - Green Region (35 to 100%)
    - Yellow Region (101 to 107%)
    - Red Region (108 to 114%)
10. **Fuel Gauge Indicator:** shows how much fuel is left in the tank. When level reaches 10% (approximately one hour of operation) of remaining fuel, fuel indicator flashes, alarm sounds and low fuel message appears
    - Indicator shows zero bars when fuel tank is empty
11. **Engine Temperature Indicator:** seven to nine bars are displayed for normal operating temperature. If the alarm sounds and engine temperate message appears, stop engine and check problem immediately

12. **Transmission Gear or Range Indicator:**
    - 3 Speed Non-ProDrive Machines: shows which gear is currently selected. 1, 2, 3 indicators illuminate depending on gear selection
    - 2 Speed ProDrive Machines: shows which range is currently selected. 1 and 2 indicators lluminate depending on gear selection
13. **Park Brake Indicator:** illuminates when park break is selected
14. **Neutral Indicator:** shows that the machine is currently in neutral position
15. **Engine Speed Indicator:** shows engine RPM speed
16. **Ground Speed Indicator:** shows the machine ground speed (km/h or mph)
17. **Header Height Numeric Display:** shows current header height
18. **Header Height Position Display:** shows current header height position
19. **Header Heights Setpoint Display:** shows operator desired setpoint
20. **Header Activation Number:** shows currently selected activation button
21. **Deck Plate Position Resume:** shows system is currently active
22. **Dial-A-Speed/Reel Resume:**
    - Dial-A-Speed (Left Icon): shows system is currently active
    - Reel Resume (Right Icon): shows system is currently active
23. **Header Height Resume/Header Height Sensing/Active Header Float:**
    - Header Height Resume (Left Icon): shows system is currently active
    - Header Height Sensing (Right Icon): shows system is currently active
    - Active Header Float (Right Icon): shows system is currently active
24. **Lateral Tilt Display:** shows position of Feederhouse frame
25. **Shoe Loss Indicator:** shows grain loss from shoe
26. **Total Loss Indicator:** shows averages grain loss from shoe and separator area
27. **Separator Loss Indicator:** shows grain loss from separator area
28. **Tailings Volume Indicator:** shows volume of tailing return



ACTIVATION BUTTON MODE COMBINATIONS

Note: Press and hold activation buttons 1, 2, or 3 on the multi-function lever for two seconds to enter desired modes into memory.

A few common modes are shown below, but many combinations exist.

CONTROL MODES ENABLED	ACTIVATION BUTTON 1	ACTIVATION BUTTON 2	ACTIVATION BUTTON 3
Height Resume	Height Resume		
Height Resume, Height Sensing	Height Resume	Height Sensing	
Height Resume, HydraFlex™ Height Sensing	Height Resume	HydraFlex™ Height Sensing	
Height Resume, Height Sensing, HydraFlex™ Height Sensing [See your John Deere dealer to enable Height Sensing and HydraFlex Height Sensing, requires 600F or 600FD with auxiliary height sensors or 600D with gauge wheels.]	Height Resume	Height Sensing	HydraFlex™ Height Sensing
Height Resume, Height Sensing, HydraFlex™ Height Sensing [Default mode with 600D platform if gauge wheels are unpinned during calibration, requires 600D with gauge wheels.]	Height Resume	Height Sensing	HydraFlex™ Height Sensing
Height Resume, Height Sensing, Active Header Float	Height Resume	Height Sensing	Active Header Float
Height Resume, HydraFlex™ Height Sensing, Active Header Float	Height Resume	HydraFlex™ Height Sensing	Active Header Float
Height Resume, Active Header Float	HydraFlex™ Height Sensing		Active Header Float
Height Sensing	Height Sensing		
HydraFlex™ Height Sensing	HydraFlex™ Height Sensing		
Height Sensing, HydraFlex™ Height Sensing [See your John Deere dealer to enable Height Sensing and HydraFlex Height Sensing, requires 600F or 600FD with auxiliary height sensors or 600D with gauge wheels.]	Height Sensing		HydraFlex™ Height Sensing
Height Sensing, HydraFlex™ Height Sensing [Default mode with 600D platform if gauge wheels are unpinned during calibration, requires 600D with gauge wheels.]	Height Sensing		HydraFlex™ Height Sensing
Height Sensing, HydraFlex™ Height Sensing, Active Header Float [See your John Deere dealer to enable Height Sensing and HydraFlex Height Sensing, requires 600F or 600FD with auxiliary height sensors or 600D with gauge wheels.]	Height Sensing, HydraFlex™ Height Sensing		Active Header Float
Height Sensing, Active Header Float	Height Sensing		Active Header Float
HydraFlex™ Height Sensing, Active Header Float	HydraFlex™ Height Sensing		Active Header Float
Active Header Float	Active Header Float		
Reel Position Resume	Reel Position Resume		
Deck Plate Position Resume	Deck Plate Position Resume		
Hydraulic Feederhouse Fore/Aft Tilt (If Equipped)	Hydraulic Feederhouse Fore/Aft Tilt		

SPREADER SPEED ADJUST SWITCH

SINGLE SPEED SPREADER (IF EQUIPPED):

Spreader speed can be adjusted with separator disengaged. This allows operator to adjust spreader set point speed. When separator is engaged, spreader operates at preset speed.

Spreader speed has a range of 0 RPM - 550 RPM. Increase spreader speed until desired spread width is reached.

Spreader speed adjust switch (A) increases or decreases the speed of both spreader disks from inside cab.

1. Press spreader speed adjust switch
2. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease spreader speed
3. Display shows operator adjustment settings

NOTE: Set spreader speed to zero when spreader is not being used.

DUAL SPEED SPREADER (IF EQUIPPED):

NOTE: Spreader speed can be adjusted with separator disengaged. This allows operator to adjust spreader set point speed. When separator is engaged, spreader operates at preset speed.

Spreader speed has a range or 0 RPM - 550 RPM. Increase spreader speed until desired spread width is reached.

Spreader speed adjust switch (A) increases or decreases the speed of both spreader disks together or independently from inside cab.

1. Spreader speed adjust switch:
    - Press switch **once** to adjust both spreader disk speeds
    - Press switch **twice** to adjust left-hand spreader disk speed
    - Press switch **three times** to adjust right-hand spreader disk speed
2. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease spreader speed
3. Display shows operator adjustment settings

NOTE: Set spreader speed to zero when spreader is not being used.

POWERCAST TAILBOARD SPREADER (IF EQUIPPED):

NOTE: Spreader speed can be adjusted with separator disengaged. This allows operator to adjust spreader set point speed. When separator is engaged, spreader operates at preset speed.

Spreader speed has a range of 0 RPM - 550 RPM. Increase spreader speed until desired spread width is reached.

Spreader speed adjust switch (A) increases or decreases the speed of both spreader disks together or independently from inside cab.

1. Spreader speed adjust switch:
    - Press switch **once** to adjust both spreader disk speeds
    - Press switch **twice** to adjust left-hand spreader disk speed
    - Press switch **three times** to adjust right-hand spreader disk speed
2. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease spreader speed
3. Display shows operator adjustment settings

ADVANCED POWERCAST TAILBOARD SPREADER (IF EQUIPPED):

NOTE: Spreader speed can be adjusted with separator disengaged. This allows operator to adjust spreader set point speed. When separator is engage, spreader operators at preset speed.

Spreader speed has a range of:

- 350 - 550 RPM (Corn) (Default 500 RPM)
- 600 - 800 RPM (Small Grain) (Default 700 RPM)

Adjust values until desired spread width or offset is reached. See residue Management Setup in CommandCenter Display Screens section for further information.

Spreader speed adjust switch (A) increases or decreases the shroud spread width percentage or offset on both spreader disks from inside cab.

Advanced PowerCast Tailboard Spreader uses independently adjustable shrouds to cover the spreader disks, which adjusts residue spread width and direction. When shrouds are adjusted to cover more of the spreader disk, the material is pushed further from the machine and in that direction.

Width Adjustment:

1. Press switch **once** to adjust spread width
2. **NOTE:** Entering a range 1 to 100% moves both shrouds and evenly increases spread width on both spreader disks
   - Example: Machine is equipped with a 10.7 m (35 ft.) header with no wind. Default spreader width is 0%. A 0% setting residue is spread 1 m (3 ft.) short from the end of the header. Press switch once and adjust spread width value. Increase spread width to 50% allowing both shrouds to move the same amount, which increases spread width on both the left and right to approximately the desired spread width.
   - Touch or press confirm switch when desired digits are highlighted

   NOTE: Repeat procedure until desired value is shown
3. Touch or press confirm switch when enter/accept icon is highlighted to save desired value
4. Display shows operator adjustment settings. Offset Adjustment:

Spreader Offset Adjustment:

1. Press switch **twice** to adjust spreader offset
2. **NOTE:** Entering a range 1 to 100% left or right (indicated by arrow on display) moves residue spread towards that direction. Touch or press confirm switch when desired digits are highlighted
   - Repeat procedure until desired value is shown
3. Touch or press confirm switch when enter/accept icon is highlighted to save desired value
4. Display shows operator adjustment settings

BEST PRACTICE GUIDE: AUTOTRAC ON COMBINES

This guide will assist the operator in determining the best methods to operate AutoTrac on their combine which will optimize performance and increase combine capacity for their preferred farming methods.

Tips to Remember:

- AutoTrac is activated by pressing resume button 2 or 3 on the hydro handle
- If cutting lands, do not use the shift track feature to clean up any areas of the field. Doing this may result in a platform width, which is less than full at the end of the field
- If cutting lands, the GPS accuracy indicator should be 80% or higher (see the information bar on the RUN Page in the left bottom corner)
- The combine must be moving forward above 1.5km/hr for AutoTrac to activate

Headlands:

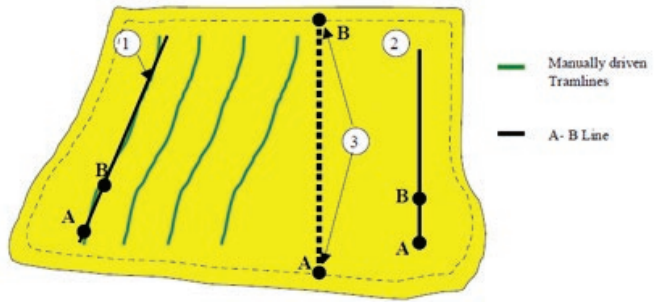
A headland will need to be cut at each end of the field for turning. The number of cuts for the headland will depend on the operator's turning preference. In order to perfectly line up the combine to its next track, a large headland (i.e. four cuts) is beneficial so that you do not have to back up to line up with the next A-B line.

Setting up a Straight Track:

There are several methods of setting a straight track, which the operator can choose from.

Before starting, decide how you want to cut the field from the list below. The tips will then assist in setting up the track.

1. Follow tramlines
    i. Align combine with tramline at the beginning of the cut and save point A. Drive combine approximately 100 meters and save point B, then continue with AutoTrac activated
2. Use the straightest edge of the field
    i. Position the combine at your desired start point and save point A. Manually drive approximately 100 meters, following the edge of the field to point B (in a straight line), save point B
3. Drive between a preferred point A on one side of the field, and B on the other side
    i. While cutting the headland, save point A on one side of the field and point B on the other side of the field
4. When setting up the A-B lines it is recommended to use A + heading. This makes it much easier when more than one combine is working in the field to get all of the combines on the same A-B lines
5. In APEX/Operations Center, you can preset A-B lines that can then be on all combines when they arrive at the field



Shift Track Function:

- Shift track is designed to compensate for satellite drift. Use it if the track has drifted
- Drift is usually noticed if land is cut and left for a few hours. In such case it may be necessary when returning to the land, to re-center the machine at the beginning of the cut
- Do not use this feature to compensate for overlap and skip. This can only be prevented by adjusting Track Spacing (platform width). Check your StarFire receiver or platform offset in your monitor if you are continuously using shift track
- Use the feature to correct for differences, if you drive with an additional combine (convoy), which does not have AutoTrac and may be a different platform width

Methods of Turning Into the Cut:

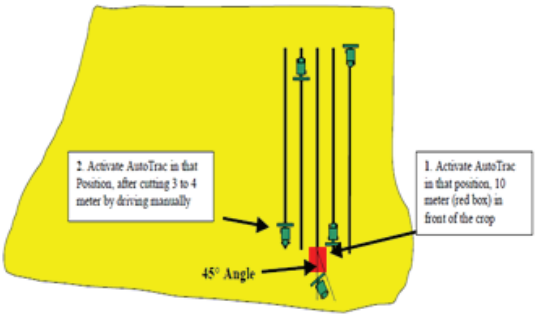
Drive the combine past 45 degrees in the direction you want to cut, close to the track you want to follow.

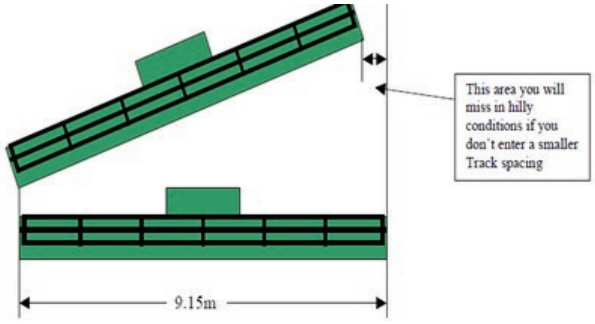
1) Activate AutoTrac (resume button 2 or 3) and let the system guide the combine to the track
    - The combine needs to be within 3 meters of the desired track for the system to find it. The turning view screen on the GreenStar display can be used to assist in finding the track
    - AutoTrac will need to be activated no less than 10 meters from the crop to allow the system time to steer on track
    - This method works better if an additional cut is taken from the headland, otherwise corners may be missed at the ends while AutoTrac is aligning to the path

Determining Track Spacing:

Track spacing is determined by the width of the platform, the levelness of the field, cutting lands, the performance of the system, and the comfort level of the operator.

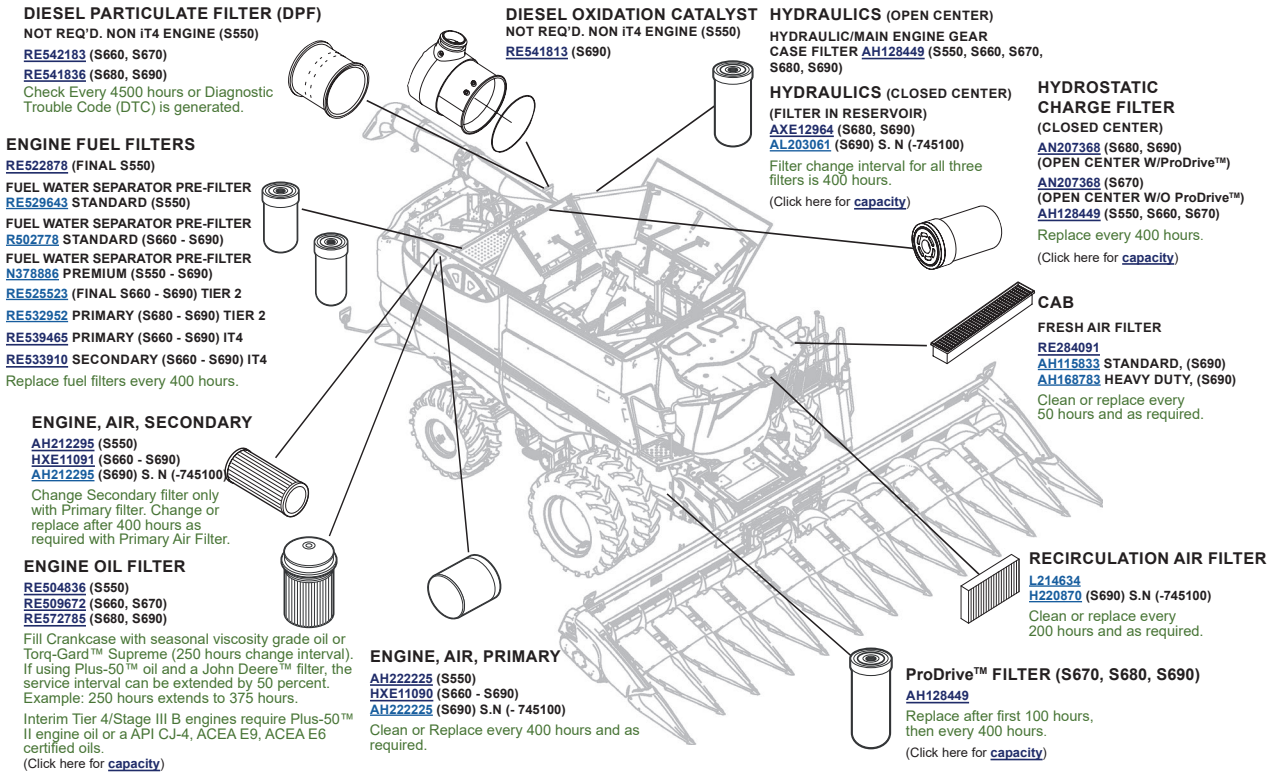
- An initial setting of 30 cm (12") less than the platform width is a good starting point. *Note: 600 series platforms are true width in feet, i.e. a 630R has exactly a 30-foot cut (1 foot = 30.48cm)*
- If cutting lands on hilly ground, a setting of approximately 50cm (20") less than the platform width may be needed
- Different values can be used and may be preferred by the operator





FILTER OVERVIEW & CAPACITIES

Click Here to Open Full Size Filter Overview and Capacities Chart



CAPACITIES (Approximate):

Fuel Tank:
S550 ..... 757 L (200 gal)
S660, S670 ..... 950 L (250 gal)
S680, S690 ..... 1,250 L (330 gal)

Cooling System with Heater:
Cool-Gard™ II
S550 ..... 43 L (11.4 gal)
S660, S670 ..... 53 L (14 gal)
S680, S690(IT4) ..... 85 L (22.45 gal)
S680, S690(Tier 2) ..... 61.2 L (16.16 gal)

Engine Crankcase with Filter:
Plus-50™ II
S550 ..... 32 L (8.5 gal)
S660, S670 ..... 27.5 L (7.3 gal)
S680, S690 (IT4) ..... 43 L (11.4 gal)
S680, S690 (Tier 2) ..... 39 L (10.30 gal)

Transmission:
GL-5
S550, S660, S670 ..... 9.6 L (2.53 gal)

Final Drives:
GL-5
All Models ..... 8 L (2.11 gal)

Countershaft Drive Gearcase:
GL-5
All Models ..... 1.2 L (0.31 gal)

Heavy-Duty Feeder House Reverser Gearcase w/out Cooler:
ISO VG 460 Fully Synthetic
S550, S660, S670 ..... 2.3 L (0.60 gal)

Heavy-Duty Feeder House Reverser Gearcase with Cooler:
ISO VG 460 Fully Synthetic
S550, S660 ..... 3.5 L (0.92 gal)

Extra Heavy-Duty Feeder House Reverser Gearcase without Cooler:
ISO VG 460 Fully Synthetic
S680, S690 ..... 3.6 L (0.95 gal)

Multi-Speed Feeder House Reverser with Cooler (Optional):
ISO VG 460 Fully Synthetic
S670, S680, S690 ..... 5.2 L (1.37 gal)

Extra Heavy-Duty Feeder House Reverser Gearcase with Cooler:
ISO VG 460 Fully Synthetic
S660, S670 ..... 4.9 L (1.29 gal)

Loading Auger Gearcase:
GL-5
All Models ..... 3.8 L (1 gal)

Two Speed Separator Drive Gearcase:
GL-5
S550 ..... 2.4 L (0.63 gal)
S660 - S690 ..... 4.7 L (1.24 gal)

Engine Gearcase with Transfer:
Hy-Gard™
S550, S660 ..... 21.3 L (5.6 gal)
S670 (Non ProDrive™ Machines) ..... 21.3 L (5.6 gal)
S670, S680, S690 (ProDrive™ Machines) ..... 51 L (13.5 gal)

Premium Overshot Beater Gearcase (if equipped):
GL-5
All Models ..... 0.2 L (0.05 gal)

Hydraulic/Hydrostatic Reservoir:
Hy-Gard™
S550 ..... 35 L (9.2 gal)
S660, S670 ..... 31 L (8.2 gal)
S680, S690 ..... 47 L (12.4 gal)

BRANDT S600 COMBINE SERVICING TIPS

Contour Master Feeder House: Check and clean out any pinch points for packed material, which could prevent the header from tilting completely and damaging the metal on the floor corners

Feeder House Reverser Gear Case: Check the torque on all three of the mount cap screws. If you have a variable speed feeder house drive, grease as per the Owners Manual but cycle the sheaves open and closed then set them so that the bottom sheaves are closed slow speed

- In the Reverser Gear Case, use synthetic oil and change every two years

Platform Drive Pump Sheave Bearing: Apply 20 shots of grease at the start of every season and then six shots of grease every 50 hours following

Hydraulic Control Valve 50 and 60 Series Combines: Lubricate at the start of the season and ensure it moves freely

Unload Auger Lower Gear Case Bearing: Apply 12 – 20 shots of grease at the beginning of the season. These bearings were changed to a grease-less bushing on 2015 combines

Chopper/Unloading Auger Drive Bearing: Rotate the sheave to access the fitting in the bottom of groove on the engine gear case output pulley. Apply 20 shots of grease seasonally

Separator Drive and Driven Sheaves: Apply 20–25 shots of grease every 50 hours. Then, cycle the separator through the full speed range to distribute the grease. DO NOT OVER-GREASE. At the start of the season, remove the pipe plug and give 45 shots of grease. *TY6341 High Temp Extreme pressure grease*

Separator Drive Sheave Gap: Check and adjust as needed, 8MM (5/16). If you cannot achieve 1000 RPM rotor speed this is the issue

Straw Chopper Rotor Bearings: Factory charged with grease

Chopper Jackshaft: Factory charged with grease. Leave it alone

Hydraulic/Hydrostatic Oil: Check with header on the ground

- Recommended: *Hy-Gard Hydraulic Oil*

Rear Axle, Tie Rod Ends: Grease every 50 hours and check for play, if any play replace the worn tie rod

Tire Pressure, Front and Rear: Check every 50 hours refer to OM for proper pressures

Wheel Bolt Torques: Check after first 50 hours and then every 200 hours

PowerCast™ Tailboard: Daily, remove cover and clean out. Watch for static build up. **NOTE:** Dragging a chain will reduce the static electricity build-up

Fuel Pre-Cleaner Screen and Sediment Bowl: Empty to remove debris and clean the screen if restricted. Use fuel treatment to prevent blackening

Fuel Tank Breather: Clean off accumulated dirt

Radiator and Coolers: Clean every day or more often as needed. Check coolant daily

- Recommended: *Premixed Coolant, Cool Gard II*

Moisture Sensor: Clean moisture sensor and auger when in weedy, green crop, peas or small grain/Canola

Mass Flow Sensor: Lower the auger and clean the sensor plate. Clean as required

Active Tailings Slip clutch: Grease every 10 hours if slipping otherwise leave alone

Tailings Auger Slip Clutch: Rotate sheave to access fitting. Do not over grease

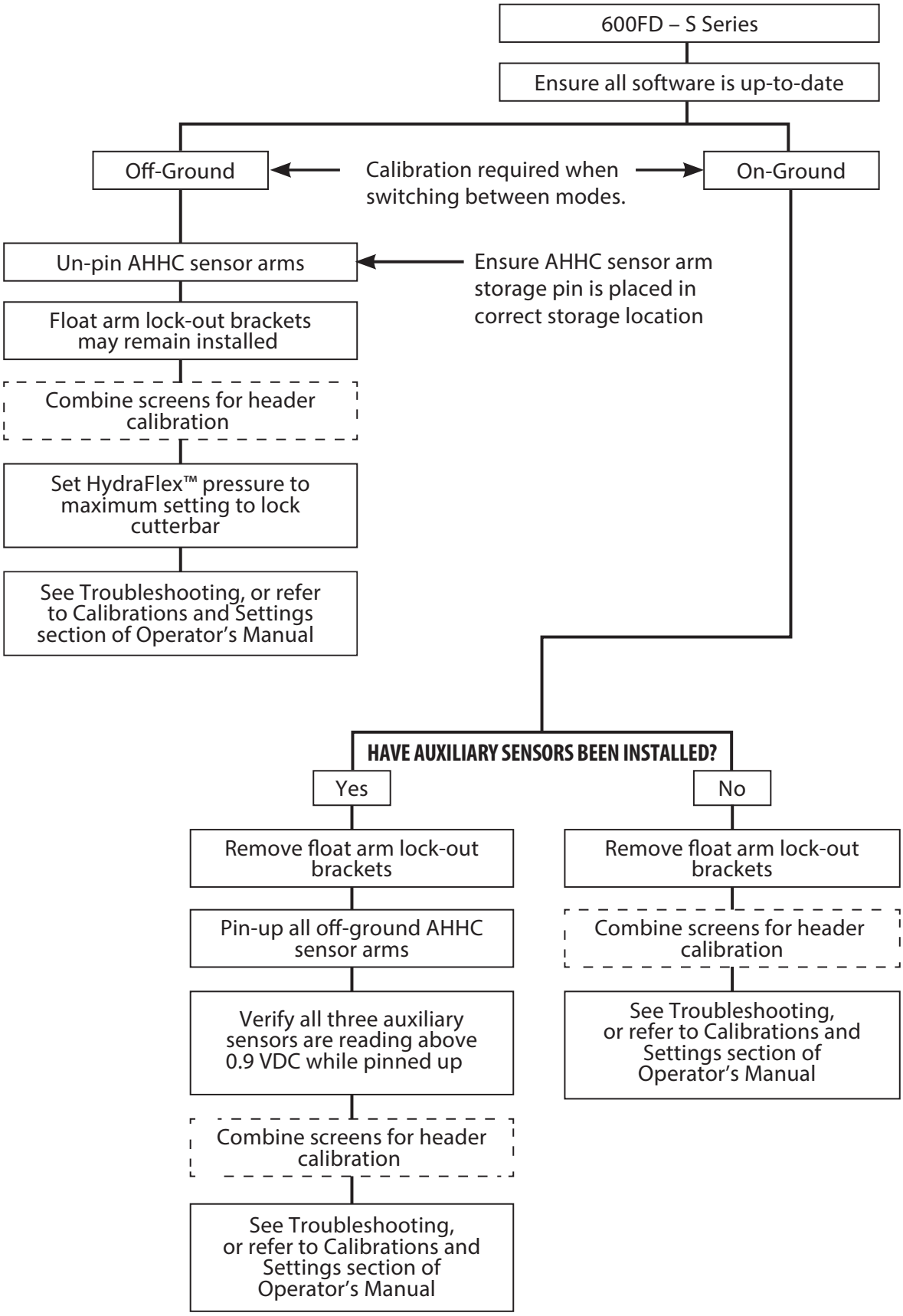
Conveyor Auger Slip Clutch: Rotate sheave to access fitting. Do not over grease

Feeder House Slip Clutch: Grease evenly on each fitting, if it has been slipping grease it

Stone Trap: Empty at the end of each day. More often in stony conditions

600FD QUICK REFERENCE GUIDE

CALIBRATION FLOWCHART



ADJUSTMENTS

DRAPER GROUND ENGAGEMENT ANGLE

The HydraFlex™ Draper engagement angle is designed for optimum performance on your combine. It is recommended that the factory feeder house 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

BELT SPEED ADJUST

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

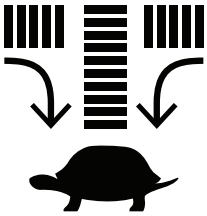
1. Press Header Adjust Switch twice
2. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease belt speed
3. Display shows operator adjustment settings

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.

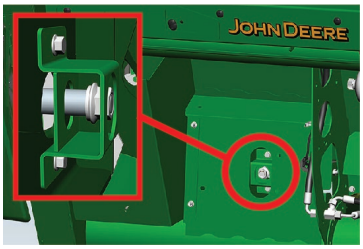
Side belt speed reduction switch allows speed of draper belt to automatically slow to a factory set point speed.

1. Press side belt speed reduction switch
2. Slow speed mode engaged will appear on display and draper belt speed automatically slows to factory set point 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 set point speed, the system will not engage and a diagnostic trouble code will appear. See your Brandt Agriculture John Deere dealer if factory set point speed needs to be adjusted.

REQUIRED DRAPER BELT TENSION SETTING



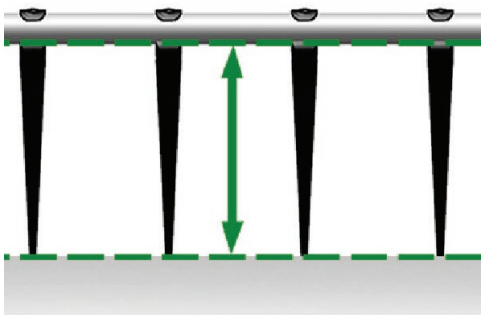
Critical: On the 630FD only, the idler belt tensioning bolt should be even with the outside shield.

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

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 the 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 the 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 the flex mode, the knob adjusts the flex pressure set point
- Higher pressure = less ground force
- While operating in rigid mode, the knob adjusts the height set point

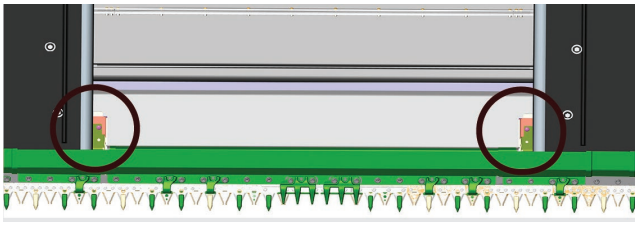
HEADER ADJUST SWITCH

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

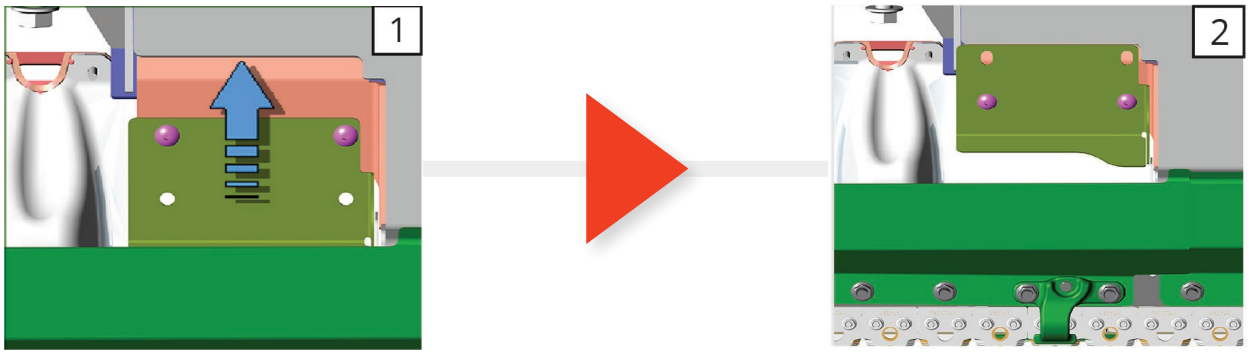
MATERIAL ACCUMULATION INSPECTION

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 the Operator's Manual for short skid shoe option if additional reduction of material build up is required.



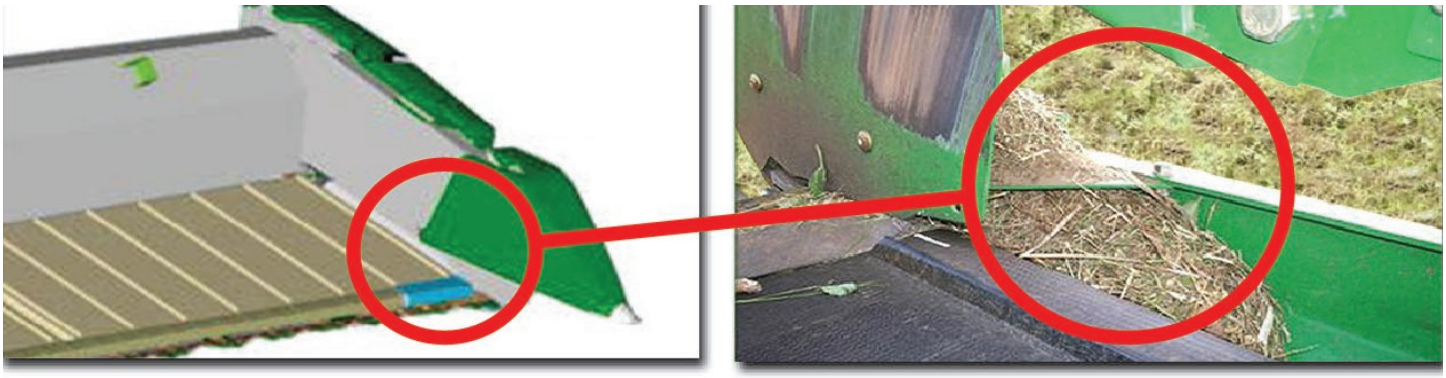
1) Remove hardware and move sump plate from "Closed" position

2) Reassemble hardware with sump plate in "Open" position

OUTER FLOAT ARMS

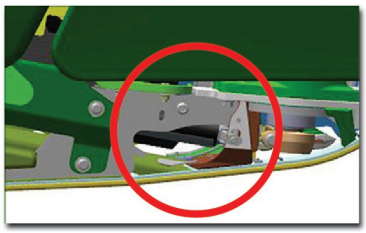
Recommended Daily or Weekly Inspections

Keep the areas highlighted clean



SIDE DRAPER BELTS

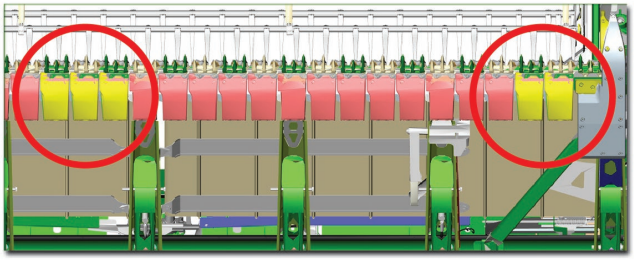
Recommended Daily Inspections



Important: Remove material using a clean out tool when material is visible in highlighted area.

As Required: Only open the belts for internal cleaning when bulges appear due to accumulations.

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 left-hand and right-hand 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

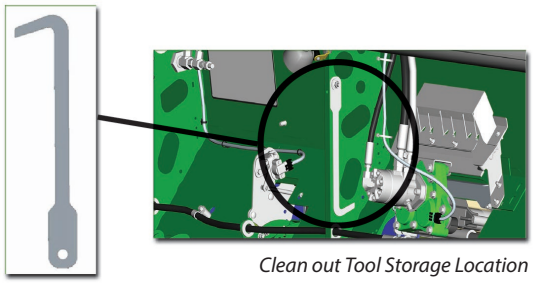
TENSION INDICATION AND BELT DRIVE AREA

Recommended Daily Inspections

CROP RAMPS

Recommended Daily Inspections

Remove the material using the clean out tool when material is visible in highlighted areas



Clean out Tool Storage Location

ACTIVE HEADER HEIGHT CONTROL (AHHC) MODE OPTIONS

For flex draper platforms, there are three unique AHHC modes:

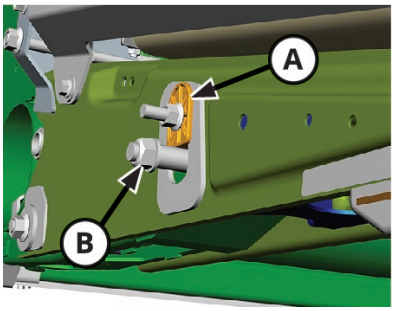
- On-Ground (“flex mode”) – soybeans, lentils, chickpeas
- Off-Ground (“rigid mode”), auxiliary attachment – wheat, barley, oats, canola
- On-Ground and Off-Ground AHHC are selected. AHHC resume button 2 is Off-Ground, AHHC resume button 3 is On-Ground (“hybrid mode”)

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

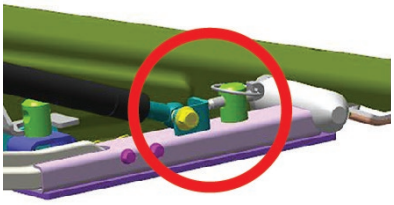
For on-ground mode, lockout brackets (A) must be removed. Ensure that only the lockout bracket cross-bolt is removed when unlocking the float arms. The second float arm stop bolt (B) is critical for function (Do Not Remove).

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

Ensure that the storage pin is placed in the correct location.

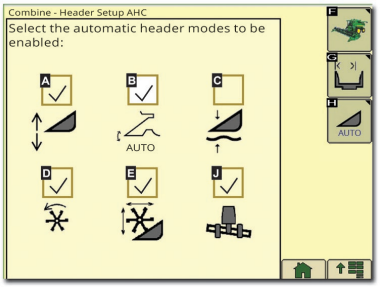


A. Lock-out bracket-REMOVE B. Float arm stop bolt-DO NOT REMOVE



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.

ACTIVE HEADER HEIGHT CONTROL (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

SENSOR SEEING TOO MUCH VOLTAGE RANGE:

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

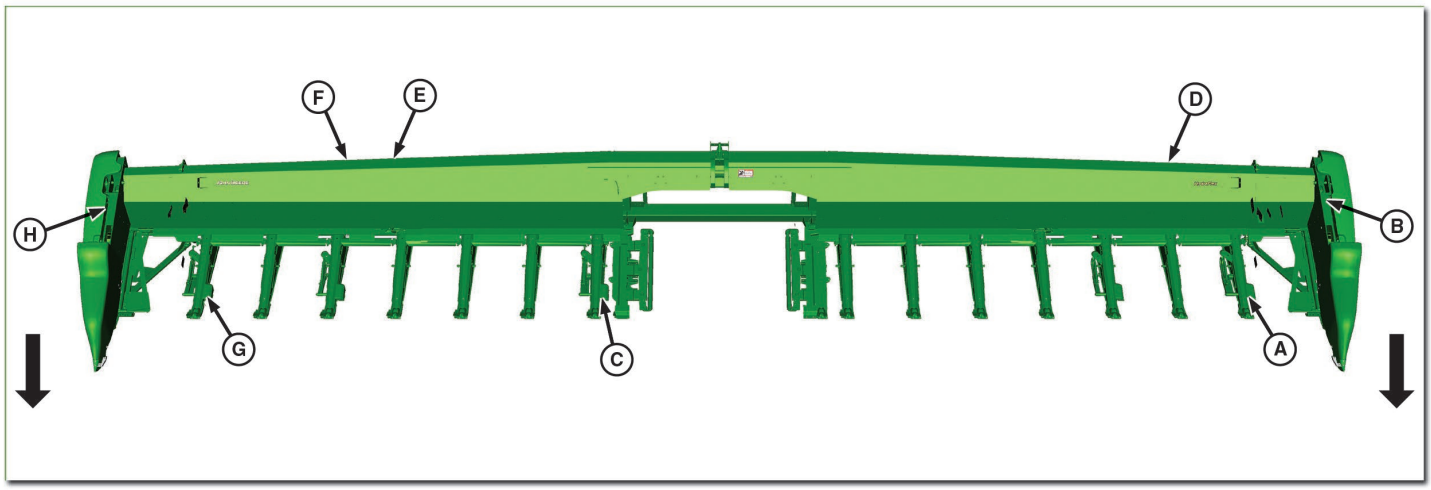
SENSOR VOLTAGE SETTINGS

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	_ _ n n n X X X	**(A)** Left-Hand Auxiliary Height Sensor Voltage (cc #9826)
LC1	21	_ _ X X X n n n	**(B)** Left-Hand Main Height Sensor Voltage (cc #9816)
LC1	22	_ _ n n n X X X	**(C)** Center Auxiliary Header Height Sensor Voltage (cc #9803)
LC1	22	_ _ X X X n n n	**(D)** Center Main Header Height Sensor 1 Voltage (cc #9817)
LC1	30	_ _nn n X X X	**(E)** Cutterbar Flex Pressure Sensor
LC1	23	_ _ n n n X X X	**(F)** Center Main Header Height Sensor 2 Voltage (cc #9804)
LC1	24	_ _ n n n X X X	**(G)** Right-Hand Auxiliary Height Sensor Voltage (cc #9828)
LC1	24	_ _ X X X n n n	**(H)** Right-Hand Main Height Sensor Voltage (cc #9818)

APPENDIX

CLEANING GUIDE

FILTER OVERVIEW & CAPACITIES

HEADSIGHT QUICK-REFERENCE JD600D

STRAIGHT CUTTING CANOLA WITH THE 600D

STANDARD WEIGHT CHART

BRANDT CUSTOMER PORTAL

GOHARVEST APP - IPHONE

GOHARVEST APP - ANDROID

OPERATOR'S MANUAL

CONCAVE RECOMMENDATIONS

POWER SHUT DOWN PROCEDURE

PAYABLE MOISTURE AND DENSITY CHART

YIELD CALIBRATION PROCEDURE

YIELD CALIBRATION GUIDE

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