



# Information and Basic Field Settings for LEXION 780 - 740





# Content

Introduction	4
Safety	5
Overview	6
Cab Controls, Layout	10
Cab Controls, CEBIS	16
Service Maintenance	23
Settings	26
Losses	40
EASY CRUISE PILOT	44
EASY CEMOS	48
EASY Steering	53
Frequent Questions	56
Wet Harvest Recommendations	57
Recommendations	59

# Introduction

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This guide has been produced as a reference to operator's training. The aim is to aid operators with familiarisation and settings of CLAAS LEXION combine harvester.

This guide does not replace the operator's manual. More in depth information is available within the operator's manual.

Your CLAAS combine is designed for output and efficiency but this can only be achieved with the correct operation and maintenance of the machine.



# Safety

**Make sure you are familiar with the operator's manual before using the machine.**

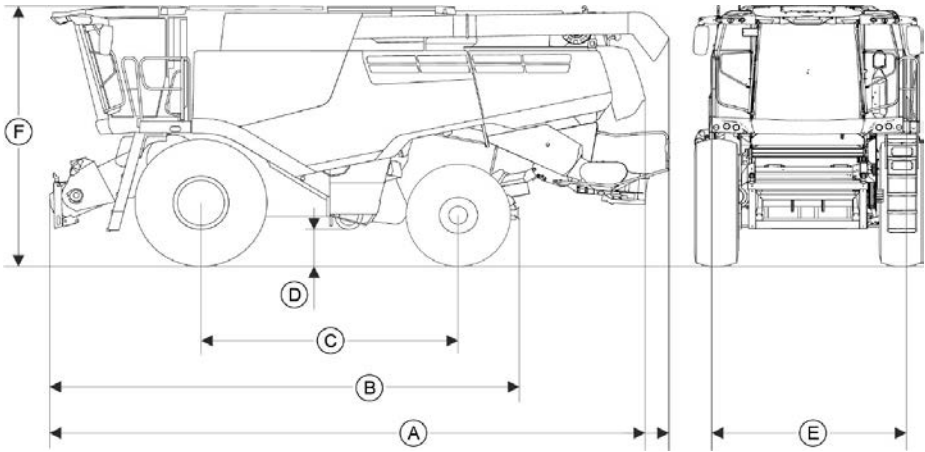
The operator's manual is an integral part of the machine. It addresses the user and contains safety relevant information. Only procedures specified in the operator's manual are safe.

Read and observe the operator's manual before starting work.

If you need help understanding the content, contact your local CLAAS Dealer.



# Overview: Safety - Dimensions with front wheels

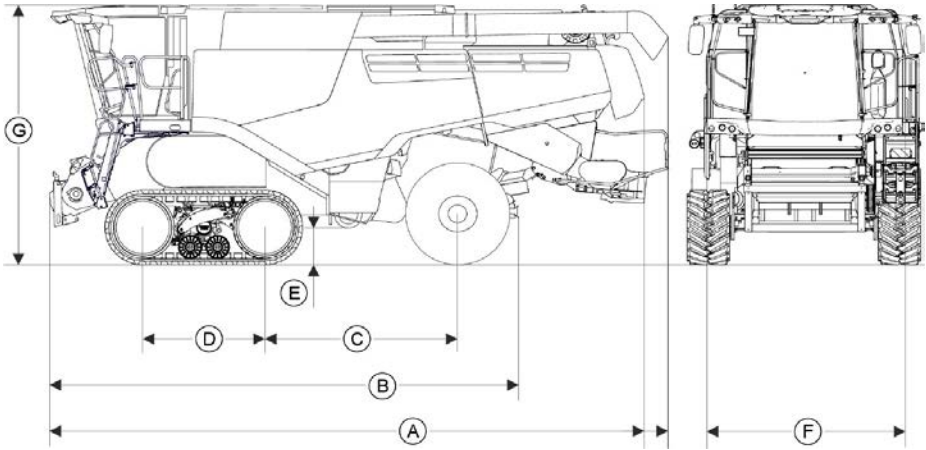


A	Length up to tailgate	8990	mm
A	Length up to safety frame of radial spreader	9330	mm
A	Length, with XL grain tank unloading tube	9270	mm
A	Length, with XXL grain tank unloading tube	9850	mm
A	Length, with 3XL grain tank unloading tube	10450	mm
A	Length, with 4XL grain tank unloading tube	10850	mm
A	Length, with 7XL grain tank unloading tube folded in	10450	mm
A	Length, with 7XL grain tank unloading tube folded out	12900	mm
B	Length up to trailer hitch	6890	mm
C	Wheel base	3840	mm
D	Ground clearance up to elevator boot Applies to: LEXION 780 LEXION 770	450	mm
D	Ground clearance up to elevator boot	430	mm
E	Width over body without tyres	3000	mm
F	Height, with grain tank closed	3950	mm
F	Height, with grain tank open	4880	mm

Measurements made with the necessary tyre inflation pressure.

On solid ground. With 680/85 R32 and 500/85 R24 tyres.

# Overview: Safety - Dimensions with TERRA TRAC

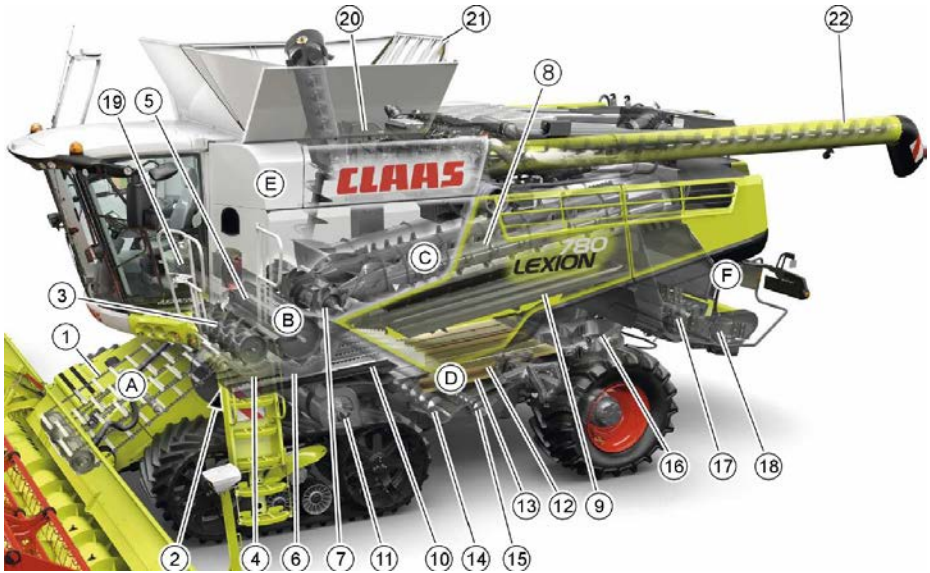


A	Length up to tailgate	8990	mm
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A	Length, with 4XL grain tank unloading tube	10850	mm
A	Length, with 7XL grain tank unloading tube folded in	10450	mm
A	Length, with 7XL grain tank unloading tube folded out	12900	mm
B	Length up to trailer hitch	6975	mm
C	Wheel base	2890	mm
D	TERRA TRAC ground contact length	1825	mm
D	Ground clearance up to elevator boot Applies to: LEXION 780 TERRA TRAC LEXION 770 TERRA TRAC	450	mm
E	Ground clearance up to elevator boot	430	mm
F	Width over body withouttyres	3000	mm
G	Height, with grain tank closed	3950	mm
G	Height, with grain tank open	4880	mm

The height was measured with the necessary tyre inflation pressure.

On solid ground.  
With 500/85 R24 tyres.

# Overview: LEXION 780 - 740



	Function	Description
A	Collecting the crop.	The feeder chains (1) accept the crop from the front attachment and convey it to the accelerator drum.



# Overview: LEXION 780 - 740

B	Threshing the crop.	<p>The stone trap (2) can collect stones and foreign objects.</p> <p>The accelerator drum (3) accelerates the crop and feeds it to the threshing drum (5).</p> <p>The preconcave (4) deposits some of the grain, chaff and broken straw on the preparation floor (10).</p> <p>The threshing drum (5) threshes the remaining grains.</p> <p>The threshing concave (6) deposits a large proportion of the grain, chaff and broken straw onto the preparation floor (10).</p> <p>The feeder drum (7) feeds the remaining grains and the straw evenly onto the rotors (8).</p> <p>The lower returns auger (15) transports the parts that are larger than grain into the returns elevator.</p> <p>The returns elevator conveys all parts to the upper returns auger (19).</p> <p>The upper returns auger (19) conveys all parts to the accelerator drum (3) again.</p>
C	Separating grain.	<p>The rotors (8) convey the straw to the rear and the remaining grains fall through the rotor concaves on the return pan (9).</p> <p>The straw is discharged from the machine through the rear hood or is fed into the straw chopper (17).</p>
D	Cleaning grain.	<p>The return pan (9) conveys the grains on the preparation floor (10).</p> <p>The preparation floor (10) transports the crop to the upper sieve (12). There, it is pre-sorted into grain (below) as well as chaff and broken straw (above).</p> <p>The fan (11) produces an air blast blowing all lightweight parts (chaff) out of the machine to the rear.</p> <p>All grains fall through the upper sieve (12) onto the lower sieve (13). Parts that are larger than grain fall into the trough of the bottom returns auger (15).</p> <p>All grains fall into the grain auger (14) through the lower sieve (13). Parts that are larger than grain fall into the trough of the bottom returns auger (15).</p>
E	Delivering grain.	<p>The grain auger (14) transports the grains into the grain elevator (20).</p> <p>The grain elevator (20) transports all grains from the trough of the grain auger (14) into the grain tank (21).</p> <p>Grain is stored temporarily in the grain tank (21).</p> <p>The grain tank unloading tube (22) conveys the grain from the grain tank (21) onto a transport vehicle.</p>
F	Discharging straw.	<p>The chaff spreader fan or the chaff spreader (16) spreads chaff and broken straw evenly behind the machine.</p> <p>The straw chopper (17) chops up the straw and conveys it to the radial spreader or the deflector spreader (18).</p> <p>The radial spreader or deflector spreader (18) spreads the broken straw evenly behind the machine.</p>

# Cab Controls: Layout



- |     |   |     |                                 |
|-----|---|-----|---------------------------------|
| 1.  | CEBIS rotary switch   | 13. | Gear selection switch           |
| 2.  | HOTKEY rotary switch  | 14. | Park brake                      |
| 3.  | Main menu rotary switch   | 15. | LASER PILOT left & right switch |
| 4.  | ESC button  | 16. | Overdrive switch                |
| 5.  | Value select rotary switch  | 17. | POWER TRAC/4TRAC switch         |
| 6.  | Information button  | 18. | Engine speed switch             |
| 7.  | Quick access button   | 19. | Grain tank extension            |
| 8.  | Front attachment engagement   |     |                                 |
| 9.  | Threshing engagement  |     |                                 |
| 10. | Front attachment reverser   |     |                                 |
| 11. | Left hand rape knife switch   |     |                                 |
| 12. | Front attachment cross levelling/<br>VARIO length adjustment/HOTKEY |     |                                 |

# Cab Controls: Layout MONTANA



1. Front attachment
2. Threshing engagement
3. Front attachment reverse
4. Left rape knife switch
5. Front attachment cross levelling/  
HOTKEY/VARIO adjustment
6. Gear change
7. Park brake
8. MONTANA cutterbar
9. MONTANA axle
10. Manual control, axle or cutterbar
11. MONTANA neutral
12. MONTANA automatic
13. Engine speed control
14. LASER PILOT left right
15. Grain tank cover

**TIP.** Before starting combining in the field make sure the MONTANA automatic is active. Press the button once and the light will turn on.

**TIP.** To get the correct angle of the cutterbar when working on a slope, press 8 then adjust the cutterbar using 10, when the cutterbar is correct then press and hold 12 till there is a beep from the CEBIS screen.

**TIP.** Before travelling on the road make sure that the combine is level by engaging the MONTANA neutral switch 11.

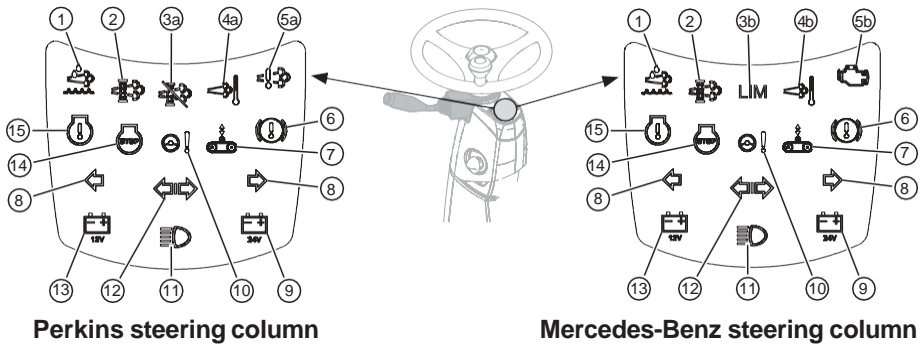
# Cab Controls: Layout



1. Hazard warning lights
2. Road travel switch
3. Front attachment folding
4. LED working main beam

# Cab Controls: Layout

## Symbols for steering column:



1.	Urea minimum level	8.	Indicator
2.	Diesel particulate filter loading condition	9.	24 V power supply
3a.	No function	10.	Emergency steering pump monitoring (only with emergency steering pump)
3b.	Power reduction	11.	Main beam
4a.	Regeneration active	12.	Hazard warning flasher
4b.	No function	13.	12 V power supply
5a.	Exhaust treatment error	14.	Serious engine fault, stop the engine
5b.	No function	15.	Engine fault
6.	Brake pressure monitoring (only MONTANA)		
7.	Rubber track tension monitoring (only TERRA TRAC)		

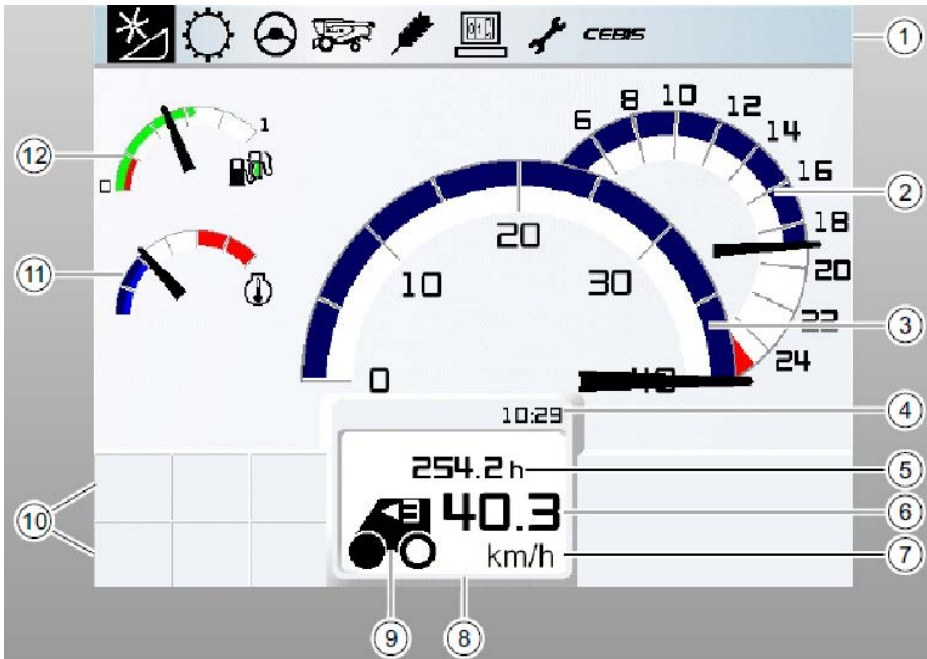
# Cab Controls: C-MOTION Multifunction Lever



1. Lower reel
2. Reel forward
3. Raise reel
4. Reel back
5. AUTOPILOT on
6. Raise front attachment, slow and fast
7. Cutting height control
8. Lower front attachment, slow and fast
9. Pre-set height
10. Front attachment stop
11. Manual cross levelling, HOTKEY adjustment, table in and out
12. Grain tank unloading
13. Swing out the unloading tube
14. Swing in the unloading tube



# Cab Controls: CEBIS

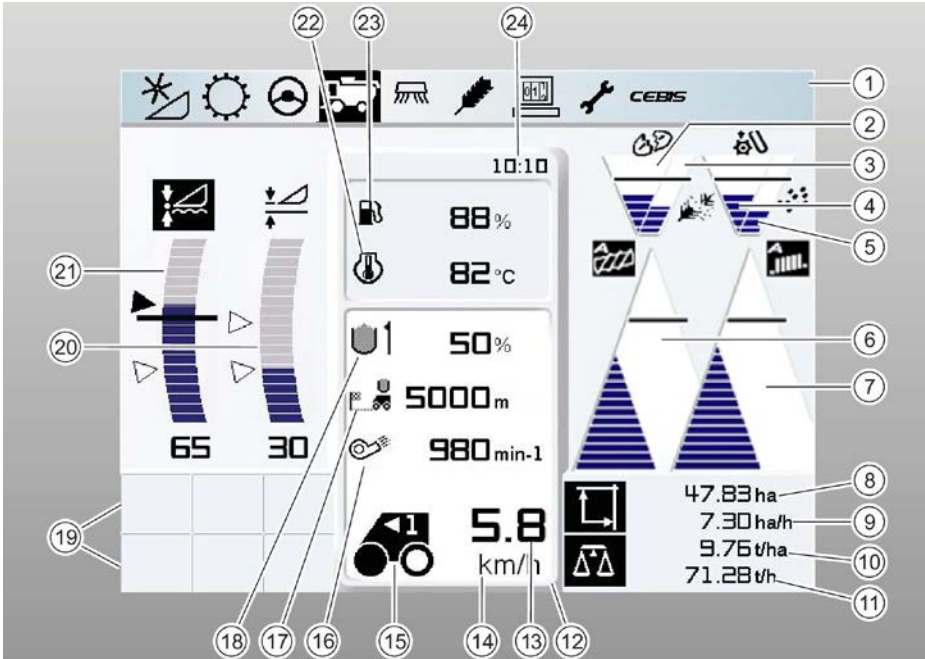


- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. Main menu</li> <li>2. Engine RPM</li> <li>3. Speedometer</li> <li>4. Time</li> <li>5. Operating hours</li> <li>6. Ground speed</li> <li>7. Ground speed units</li> </ol> | <ol style="list-style-type: none"> <li>8. Vehicle control display</li> <li>9. Drive status</li> <li>10. Message fields</li> <li>11. Coolant temperature</li> <li>12. Fuel (pointer)<br/>urea level* (green bar)</li> </ol> |
|--|--|

\*Engine HP is reduced if urea tank is below 20%

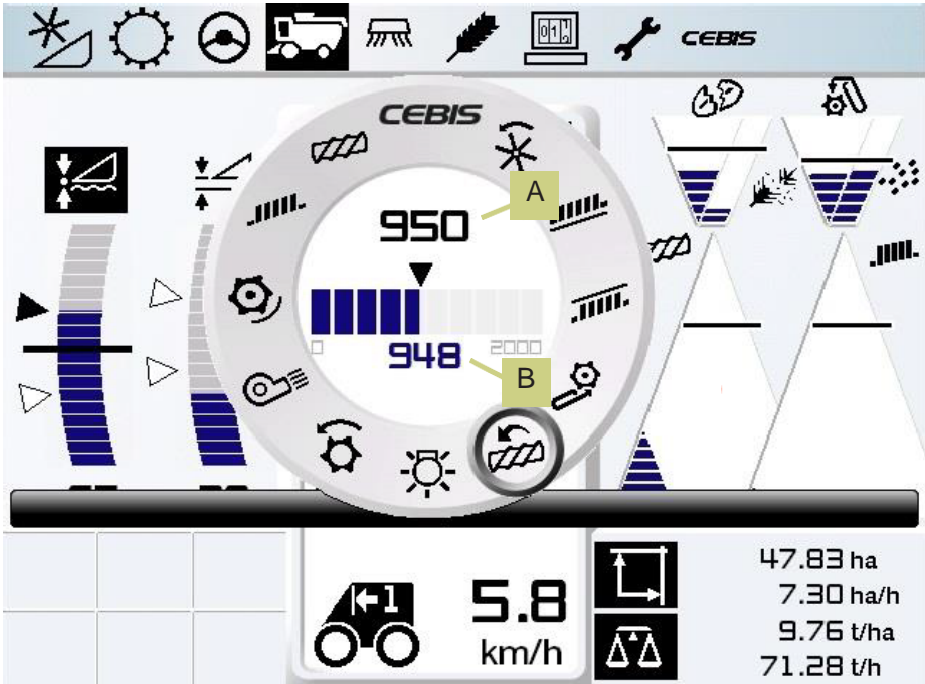


# Cab Controls: CEBIS – Harvest Display



- |                                   |                            |
|-----------------------------------|----------------------------|
| 1. Main menu                      | 13. Drive status           |
| 2. Returns meter                  | 14. Variable display       |
| 3. GRAINMETER                     | 15. Variable display       |
| 4. Separation performance monitor | 16. Variable display       |
| 5. Cleaning performance monitor   | 17. Message fields         |
| 6. Area counter                   | 18. Cutting height control |
| 7. Area work rate display         | 19. Pre-set cutting height |
| 8. Yield display                  | 20. Variable display       |
| 9. Yield output display           | 21. Variable display       |
| 11. Ground speed                  | 22. Time                   |
| 12. Ground speed units            |                            |

# Cab Controls: CEBIS Keys



Using the CEBIS rotary switch (1) the combine settings can be adjusted. The picture shows the operating settings that can be adjusted. To navigate through the settings, turn the CEBIS rotary switch (1).

Inside the CEBIS display there are two large numbers. The top number (A) shows the desired value and the lower number (B) shows the actual value.

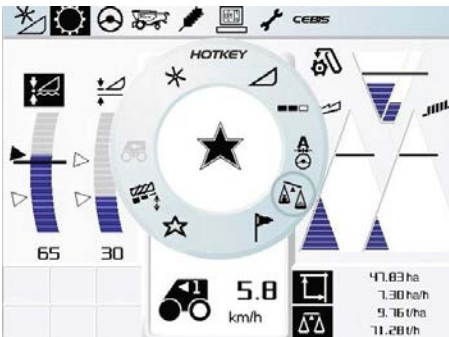
To adjust the value turn switch (3) left or right to increase or decrease, after the required setting is completed turn the CEBIS rotary switch (1) back to the CEBIS icon on the display screen (12 o'clock).

# Cab Controls: HOTKEY

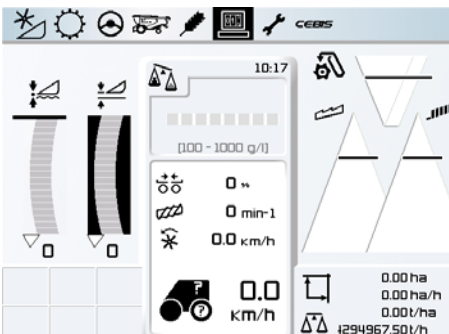


The HOTKEY (2) is used to adjust the more frequently changing settings on the combine for example all the AUTOCONTOUR settings.

To adjust any of the HOTKEY values turn the rotary switch (2) and the HOTKEY dial will appear on CEBIS which is shown in the picture below. Turn the dial to select the required icon to make adjustments.



After 2 seconds the HOTKEY dial will disappear from CEBIS and the settings will be displayed in the window shown below. To change the HOTKEY setting value turn switch (4) either left or right to either increase or decrease the value.



To remove the adjusted settings from the window, turn the HOTKEY switch (2) back to the CEBIS (12 o'clock) position and the previous screen will be displayed.

# Cab Controls: CEBIS Symbols



Exits the menu and returns to CEBIS main screen



Manual reel speed adjustment



Upper sieve adjustment



Lower sieve adjustment



Front attachment speed adjustment (if fitted)



Rotor speed adjustment



CEBIS screen brightness adjustment



Drum speed adjustment



Fan speed adjustment



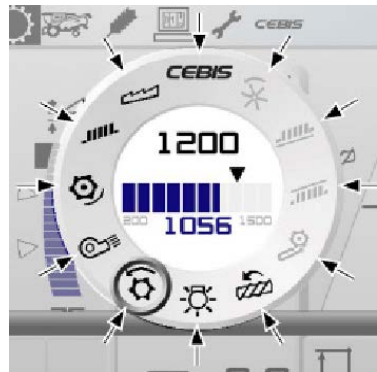
Concave clearance adjustment



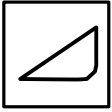
Cleaning throughput monitor adjustment (sieve loss)



Separation throughput monitor adjustments (rotor loss)



# Cab Controls: HOTKEY Symbols



Cutting height, VARIO length, end snapping plate adjustment



Partial working width adjustment



LASER PILOT adjustment



Hectolitre weight adjustment



Flagging function for yield mapping



Left / Right chopper bias, working width, central overlap (only with power spreader) and crosswind compensation if fitted



Favourite crop settings



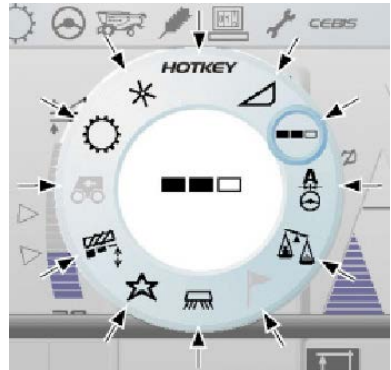
Open close rotor cover plates



CRUISE PILOT

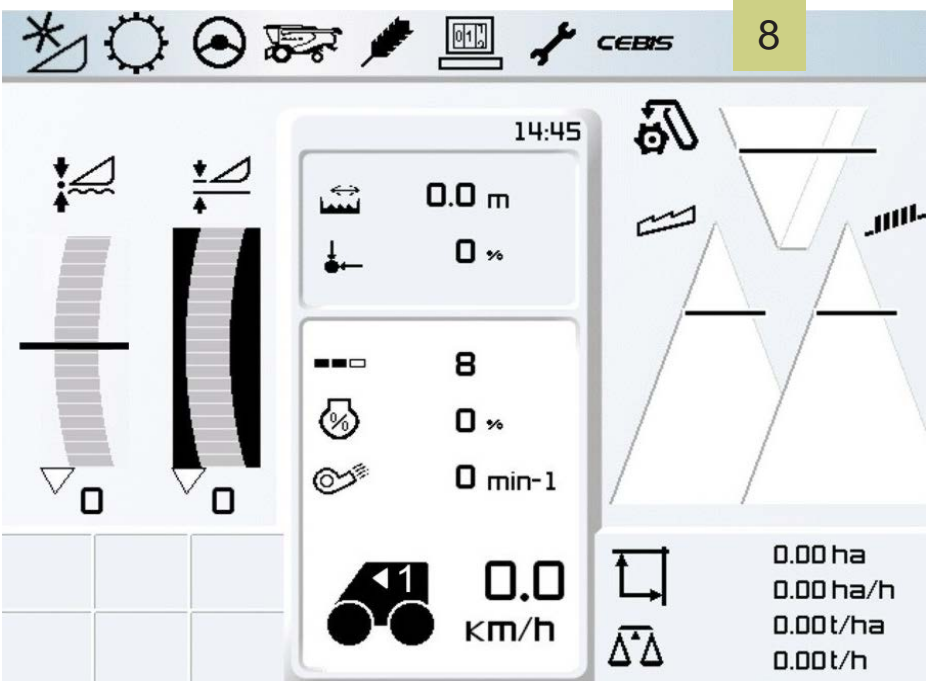


Automatic reel speed, reel height, reel fore & aft position



# Cab Controls: CEBIS Menu Navigation

To navigate through the CEBIS menu turn the switch (3) shown below and the different icons at the top of the CEBIS screen will be highlighted in black (8).



When the desired menu is highlighted push switch (3) to enter it, with any menu turn switch (3) to select the required section and push it to enter it. If a value needs to be changed within a menu push the switch (3) to display the + - signs and turn the switch the correct value and push it again to enter and save the value.

To exit any of the menu within CEBIS use the ESC button (5), this will return the screen back to the previous menu.

# Service Maintenance



When carrying out any service operation make sure that the correct procedures are followed. See operator's manual chapter 9.1 for the complete service requirements.

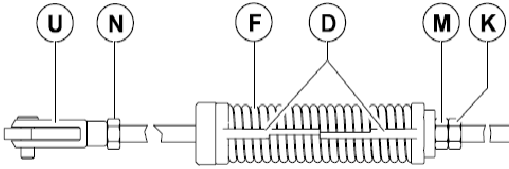


Grease the appropriate grease points as per the operator's manual. It is recommended to grease the rotor bearings everyday.

**TIP.** When blowing down the whole combine taking extra care in the following areas

- Engine
- Gearbox
- Transfer gearbox pulley
- Dynamic cooling pack
- Stone trap
- Prep trays

# Service Maintenance



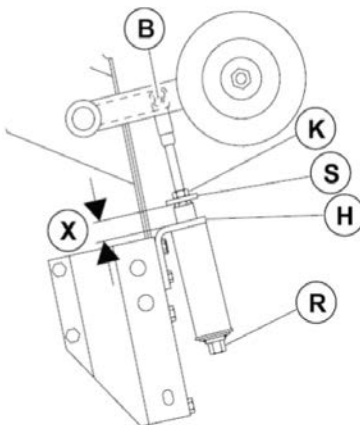
## 1. End to end guides

Correct tension is achieved when the ends of “D” are end to end. To tension the belt, slacken nut K from M and wind M in a clockwise direction until the ends of D meet then lock nuts M and K. If the belt needs removing please consult section 14 of the operator’s manual.



## 2. Centre to centre guides

Work in exactly the same way as the end to end tensioners except the belt is at the correct tension when the tabs overlap the full length of the recessed part of the tabs.

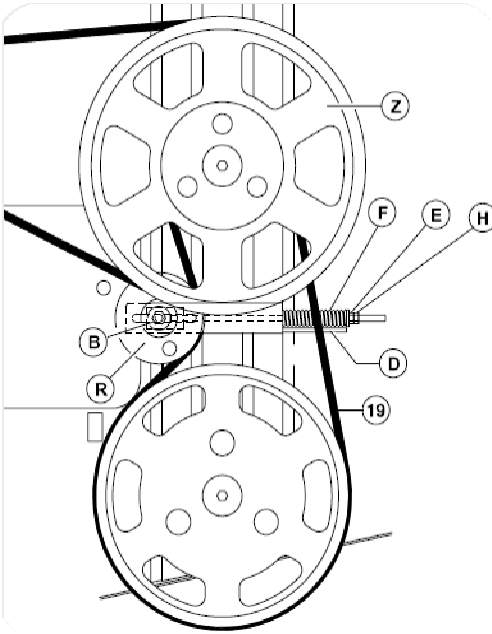


## 3. Gold tube type

Under the correct tension the gold tube should be just able to turn by hand, if loose it will need tightening. To tension slacken Nut K slightly, tighten “R” until it meets the gold tube. It should still be possible to rotate the tube by hand with a firm grip. Then lock the assembly with the nut K.

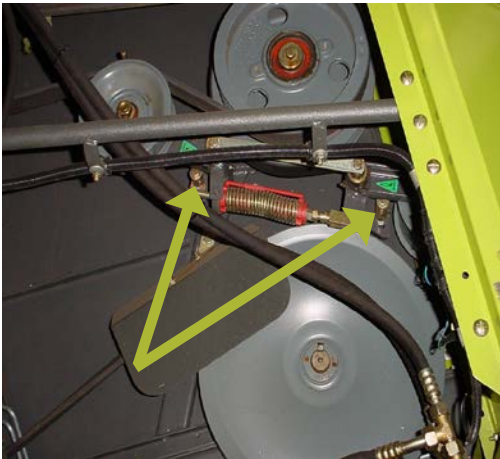


# Service Maintenance



## 4. Sieve box drive

The sieve box drive belt differs slightly from the others on the machine in that to check the tension of the belt the nut, B, needs slackening, then the spring length F can be set to the guide D. If nut B is not slackened, the pulley will look to be at the correct tension, even if this is not the case.



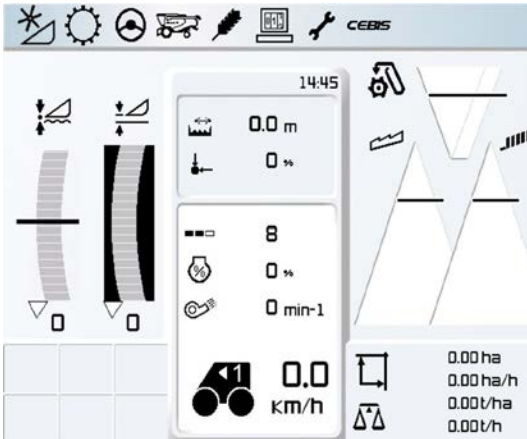
## 5. Chopper stops and belt

Make sure the chopper belt is tensioned daily and that the chopper stops shown in the picture are pushed upwards so they make contact.

**TIP.** Do not force the stops up, this will not increase the tension on the belt.

# Settings: CEBIS Calibration

To allow the machine to display accurate information, certain parameters need to be learnt either on a daily or seasonal basis.



## Daily zeroing

This should be carried out with the machine running with threshing engaged at maximum no load speed. The following items should be zeroed on a daily basis:



1. Set 'Zero returns'

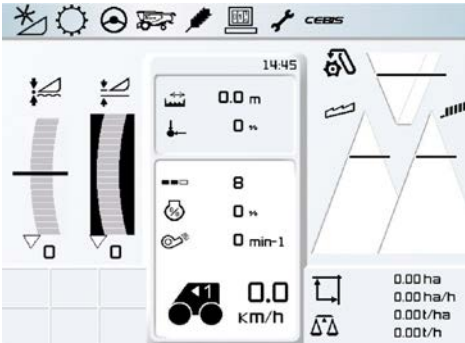


2. Set 'Zero yield'

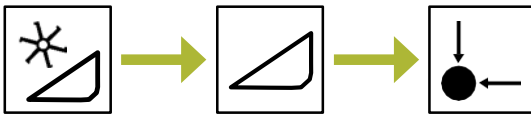
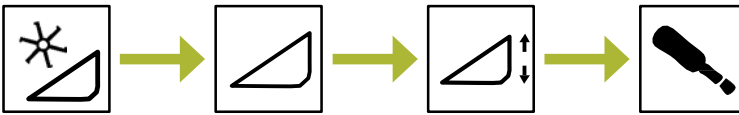


3. Set 'Zero Throughput'  
(Combines with CRUISE PILOT only)

# Settings: CEBIS Calibration

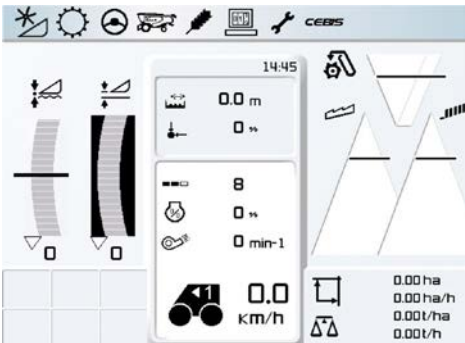


1. Learn the AUTOCONTOUR end stops at the start of the season.



**TIP.** Learn the working position of the cutterbar within CEBIS.

This may also need to be changed when combining different crops.



2. At the start of each crop make sure you have selected the correct crop type, or your personal crop settings.



# Settings: Cutterbar



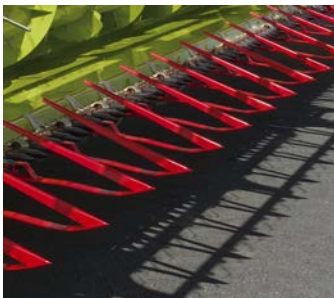
The cutterbar is one of the most important parts of the combine harvester. It is designed to cut and gather the crop from the field.

## Dividers

The first part of the cutterbar to make contact with the crop are the dividers. There are two types, a standard and a long divider.

**TIP.** To make the crop lie down, before the auger to aid the feed into the centre of the cutterbar, move the table in or out.

**TIP.** Make sure that the height of the divider is set so it does not run on the ground. Set the height the same as the stubble.



## Lifters

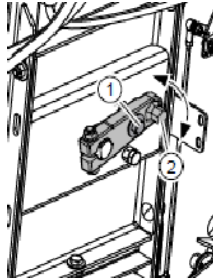
It is recommended that lifters should be fitted to CLAAS cutterbars. The lifters should be fitted by placing the first one on the fifth finger from the RHS of the cutterbar and then on every fourth one thereafter.

**TIP.** Check the lifters everyday, if they are loose or bent remove and replace them.

# Settings: Cutterbar

Check that the knife is in good condition in order for it to work effectively. This involves replacing damaged or broken sections.

**TIP.** Remove any knife play by adjusting the keeps, and make sure that the fingers are not rounded or bent. A cleaner cutting knife will reduce stress on the knife drive.



## Table Auger

The table auger is important for the transportation of material to the front elevator.

The timing of the retractable fingers can be adjusted for different crops by opening up the guard on the RHS of the cutterbar and adjusting the lever with a spanner. Use the top holes for short crops and the lower holes for tall crops. The third hole from bottom is the standard setting.

## Crop Wrapping

If an issue occurs with crop wrapping around the table auger in difficult conditions, there are a number of procedures that can be carried out; try one thing at a time.



Adjust the stripper plates behind the auger.

There is a second scraper under the auger that can be accessed over the top of the auger.

# Settings: Cutterbar Adjustments



**TIP.** Check the height of the auger within the trough of the cutterbar. There should be a minimum gap of 20mm between the trough and the auger flights.

**TIP.** Remove the intermediate retractable fingers along the length of the auger leaving just the middle ones.

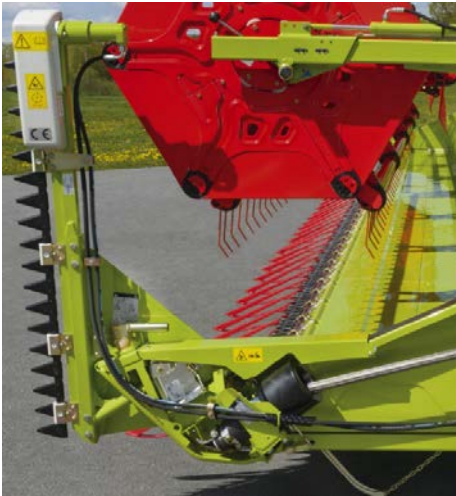
**TIP.** In exceptional wrapping conditions, the speed of the auger can be slowed by optional sprockets on the chain drive shaft. With the split reel cutterbar, two sets of sprockets are required.

The skids underneath the cutterbar should be set to suit the local conditions.



**TIP.** Lift the skids as high as possible to get as much movement for the sensor bands.

# Settings: Side Knife/Divider



Both the side knife and the divider use the new fork locating and locking device.

For the side knife simply slide into the lock and turn the handle to lock in place. Make sure the lever has locked into the locking device.



The side knife is easily attached with a simple twist lock turnbuckle.

**TIP.** When fitting the side knife make sure that the cradle is tight to the underside of the tube.

Once the side knife is fitted and locked, all that is required is for two hydraulic pipes to be connected to the quick release couplings on the side of the cutterbar.

**TIP.** Make sure the cutterbar VARIO table is pushed out to the mark on the side of the cutterbar before fitting the knife.

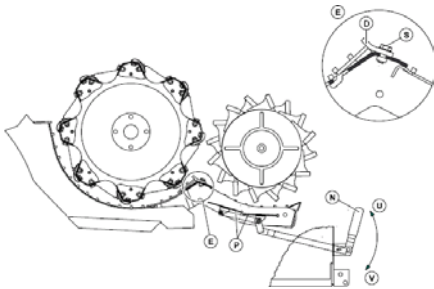
**TIP.** There is no need for a link pipe to be connected when the side knife is removed.

# Settings: Pre-Separation



## De-awning

De-awning can be carried out by operating the lever by the right hand front wheel of the machine, which in turn closes or opens a set of plates under the APS concave. This gives the crop an extra 'rub' which in turn threshes it harder.



**TIP.** Only engage these plates if it is necessary. Try other settings first.

**TIP.** The threshing segment should only be fitted in hard to thresh crops. Don't forget you have fitted them.



## Stone trap

The stone trap is situated between the front elevator and the APS concave. It is important that the stone trap is emptied regularly to allow for foreign objects to be expelled before they enter the drum.



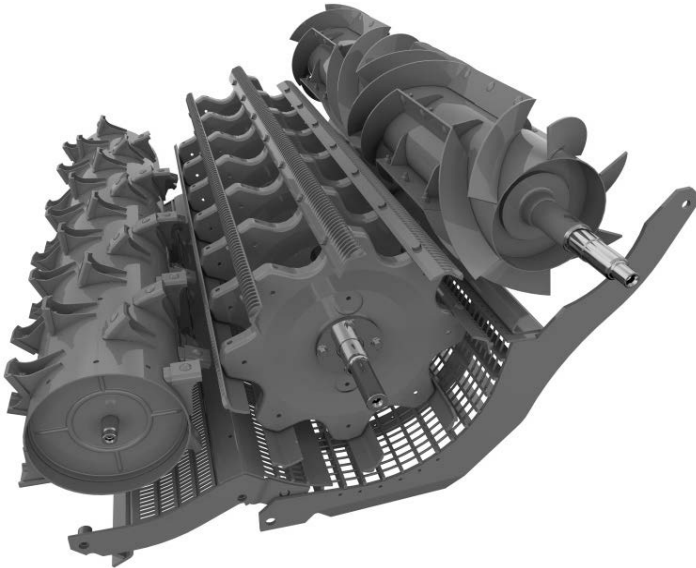
# Settings: Threshing

To obtain initial settings it is recommended that the 'CLAAS settings' are loaded through CEBIS, these are to only be used as a starting point, then adjustments should be made from there.

**TIP.** Only make one adjustment at a time.

**TIP.** Only do just enough threshing, over threshing causes overloading of the sieves and uses power unnecessarily.

**TIP.** It is recommended that the drum speed is adjusted by 100rpm at a time.



The prime objective here is to remove the maximum amount of seed with the minimum of damage to seed and straw. Over-threshing cracks grains, produces more chaff and uses more power.

It is imperative for the performance of the machine that the concaves are kept clean. Generally wider concave gaps are accepted when using your LEXION.

# Settings: Separation Rotors

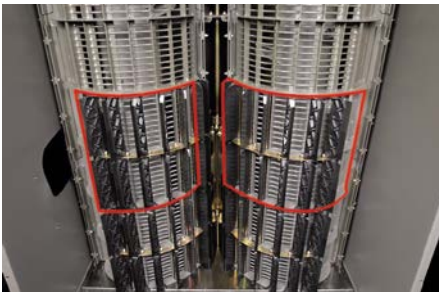
Approximately 70% of the grain needs to be separated from the straw by the time the crop leaves the drum. This means that the remaining 30% has to be separated by the rotors.



If the rotor speed is too fast, broken straw and chaff is produced which could lead to overloading of the sieves.

**TIP.** Rotor speed changes should be made at about 50rpm increments.

The straw will only travel along the rotor at one speed. This will differ for every crop, machine and condition.



Rotor cover plates can be opened or closed during threshing. Both covers should be open when maximum separation is needed.

If fitted with 4D SEPARATION there are now three sets of doors. They can be operated in the same manner as the standard rotor cover plates.



**TIP.** In situations where the straw is breaking up, it may be beneficial to close either one, two or all three to reduce sieve overloading problems.

**TIP.** To find the correct speed, start with the rotor speed at a high rpm and then adjust the rotor speed till the desired separation is achieved.

# Settings: Cleaning



The preparation pan (1) is the first part of the cleaning system that the grain will come into contact with. Its function is to separate the grain and the chaff. The grain is heavier and therefore goes to the bottom, the lighter chaff goes to the top. It is important that this is kept clean, to allow this to happen effectively. A dirty preparation pan will cause a poor sample and reduce output.

**TIP.** Clean the preparation trays daily, this will help keeping a clean sample.

**TIP.** When removing the prep trays for cleaning, blow off the top of the gear box area to remove any chaff and dust.

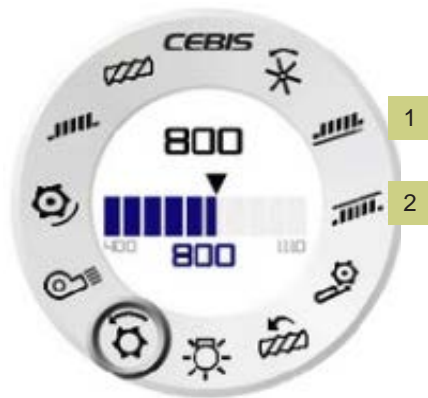


The fan (2) speed is shown on the CEBIS screen. The speed range of the fan is 680rpm – 1600rpm.

With the jet stream on the LEXION 700 machines there are no other adjustments needed apart from the speed.

**TIP.** Only make adjustments of 50rpm at a time.

# Settings: Cleaning



Both the top (1) and bottom (2) sieves are adjustable from 0 – 20mm in the cab. The sieves need to be open enough to cope with high volumes of grain. With wide sieve settings there is a need for high wind speed.

**TIP.** It is recommended that the sieves are only adjusted by 1mm at a time.



The returns should be monitored regularly both in terms of volume and composition.

**TIP.** The centre shaft of the auger should always be visible.

The volume of grains (1) and chaff (2) in the returns is monitored and displayed on the bar display next to the returns monitor. The returns monitor can be adjusted in CEBIS.



**TIP.** If too much clean grain is present, open the bottom sieve by 1mm at a time.

**TIP.** If too much chaff is present reduce threshing, or increase fan speed.

**TIP.** If un-threshed heads are present increase threshing.

# Settings: Straw and Chaff Management

The chaff spreader can be adjusted to spread chaff wider. See operator's manual for adjustments.



The straw chopper can be engaged and disengaged from work by operating the buttons on the rear of the machine or via CEBIS. The chopper cannot be moved if the chopper is rotating. Turn switch up or down this will move the spreader into the first position if it needs to be moved further, release the switch and turn it again.

**TIP.** Make sure the hood has stopped moving before releasing the switch.



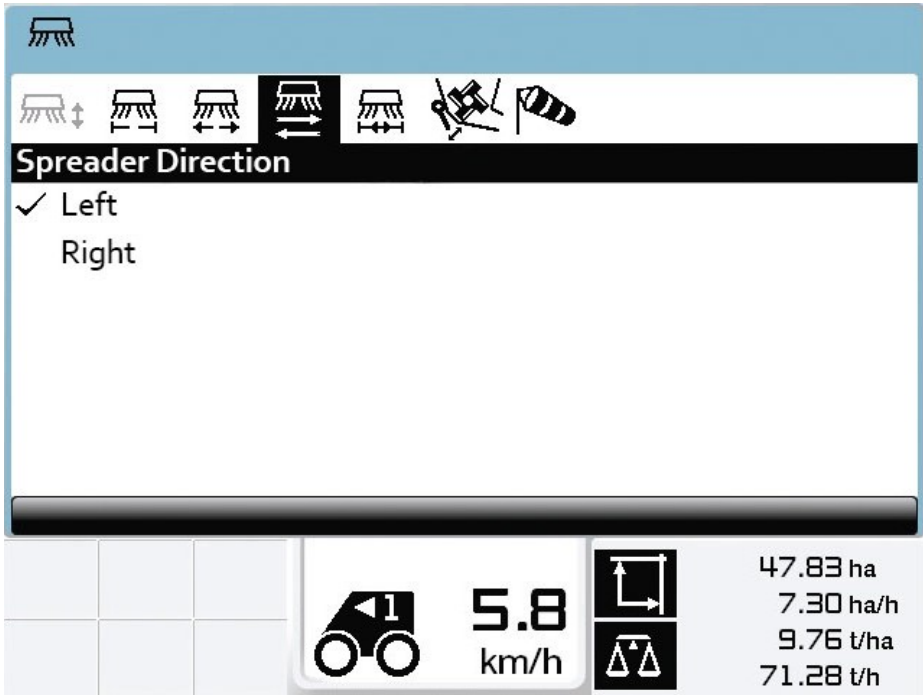
When using the chopper do just enough.

**TIP.** Make sure the chopper blades are kept in good condition and worn or damaged ones are either turned or replaced.

**TIP.** Back off the stationary knives until the desired chop length is met.

**TIP.** On machines equipped with Special Cut II choppers make sure that the fine chop step is only used when necessary.

# Settings: Straw and Chaff Management



The width that the POWERSPREADER spreads can be adjusted from the cab in CEBS.

**TIP.** Make sure that the spreader is not spreading too wide and that it is not in the standing crop.

**TIP.** Make one adjustment at a time.

# Settings: Aid

## Grain Tank



Pieces of straw

- 1. Increase fan speed
- 2. Open concave
- 3. Reduce drum speed
- 4. Close rotor cover plates
- 5. Close both sieves

Unthreshed heads

- 1. Close the lower sieve
- 2. Increase the drum speed
- 3. Close the concave

Broken grains

- 1. Increase the drum speed

## Grain Tank



High sieve losses

- 1. Open upper sieve
- 2. Increase fan speed
- 3. Reduce the rotor speed
- 4. Close rotor cover plates

## Rotors



High rotor losses

- 1. Increase the rotor speed
- 2. Close the concave
- 3. Increase the drum speed

# Losses

When deciding what to adjust on the combine to reduce the amount of loss, it is important to understand where the loss is coming from and what is acceptable.

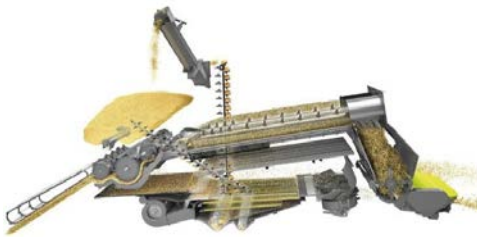


At the front of the machine -

- Is the loss happening before or after the cutterbar?
- If before, it is not cutterbar related.

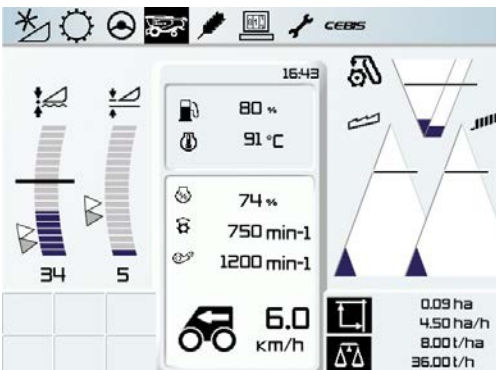
**TIP.** Adjust the reel position or check the knife for damage or wear.

**TIP.** Fit lifters to lift any laid crop.



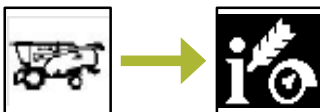
At the rear of the combine -

- Are the losses acceptable?
- Are they coming from the sieves and/or rotors?



**TIP.** Always check the losses behind the combine after making an adjustment and then set up the monitors to show what is happening.

**TIP.** In the CEBS screen there is a guide. There is also a free app, CEMOS Advisor. This will give you another tool to set up the combine and take out the guess work.





# Losses



## Where are the losses coming from?

To work out what is coming from the rotors engage the chaff spreader and carry out a check behind the combine, count the grains on the floor.

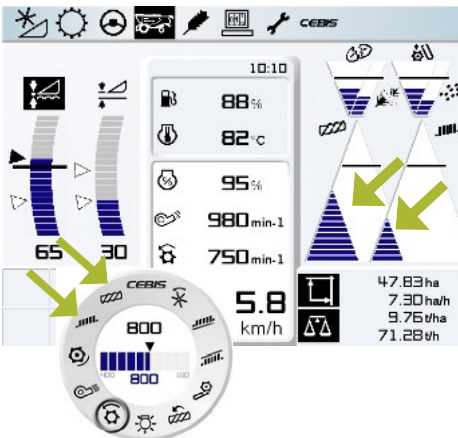
To check the losses from the sieves disengage the chaff spreader and engage the chopper and spread this as wide as possible and then count the grains.

Take into account what the grains look like, unthreshed heads etc. Now make the corresponding adjustments.



**TIP.** The easiest way to check for losses is in the swath with the chaff spreader and chopper disengaged.

**TIP.** Count the number of grains within your hand print. 1 grain per foot of cutterbar is close to 1% loss.



After adjusting the combine make sure that the monitors also reflect what you will accept as a loss. Adjust monitor sensitivity so that the blue area is approaching the limit lines, the black line. This is particularly important when running CEMOS AUTOMATIC.

# Losses

## Straw



Grains in the ears



1. Increase drum speed
2. Close the concave

Poor straw quality



1. Open the concave
2. Reduce drum speed

## Returns



Unthreshed heads



1. Increase drum speed
2. Close the concave

Pieces of straw



1. Increase fan speed
2. Open the concave
3. Close the upper sleeve

Threshed grains  
in the returns



1. Open the lower sieve

Other grains



1. Increase the fan speed

Returns-  
quantity and  
quality of  
grains OK

Returns  
volume below  
30%



1. Close the lower sieve/  
open the upper sieve

Returns above  
30%



1. Close the lower sieve/  
open the upper sieve



# EASY: CRUISE PILOT

CRUISE PILOT adjusts the ground speed while combining. There are three different driving strategies that can be selected with CRUISE PILOT.

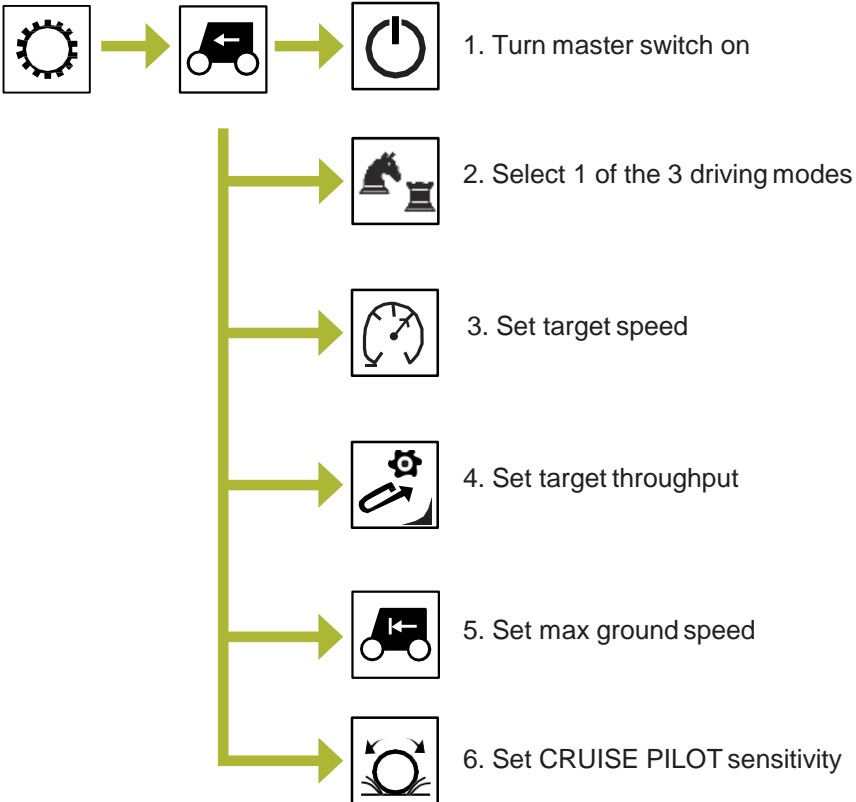


CRUISE CONTROL (constant ground speed)

Performance (constant throughput)

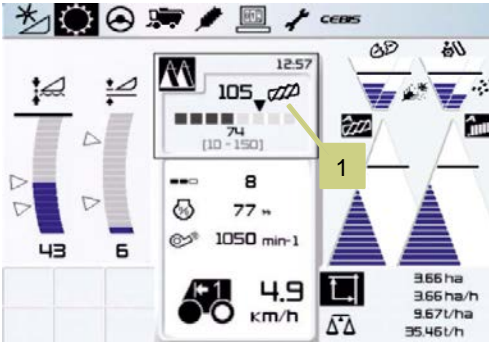
Throughput (throughput with control)

**TIP.** It is important that the “zero throughput” value is learnt after long periods at standstill/idle or after adjustment to the feeder housing.  
**See daily zeroing**





# EASY: CRUISE PILOT Symbols



The symbol displayed in the HOTKEY section (1) is the limiting factor for CRUISE PILOT. Now adjust the relevant limiting value.



Maximum throughput is reached



Maximum diesel engine load reached



Ground speed limit, the maximum pre-set ground speed has been reached



The separation loss limit has been reached



The sieve loss limit has been reached



The returns volume limit has been reached



The headland turn identified



The machine is adapting and cannot display the limiting value



The returns grain limit has been reached



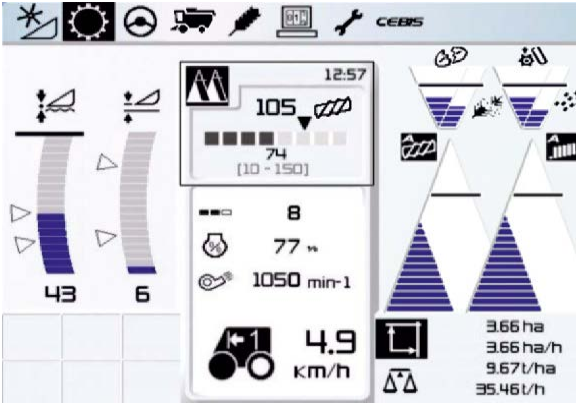
The maximum layer height has been reached



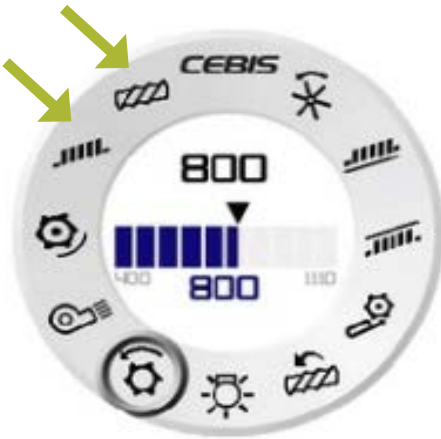
The unloading mode is activated

# EASY: CRUISE PILOT

To set throughput, drive the combine into the standing crop so that the loss monitors are full. Now check the losses. Are these losses acceptable? If not then increase or decrease the sensitivity to show what is acceptable.



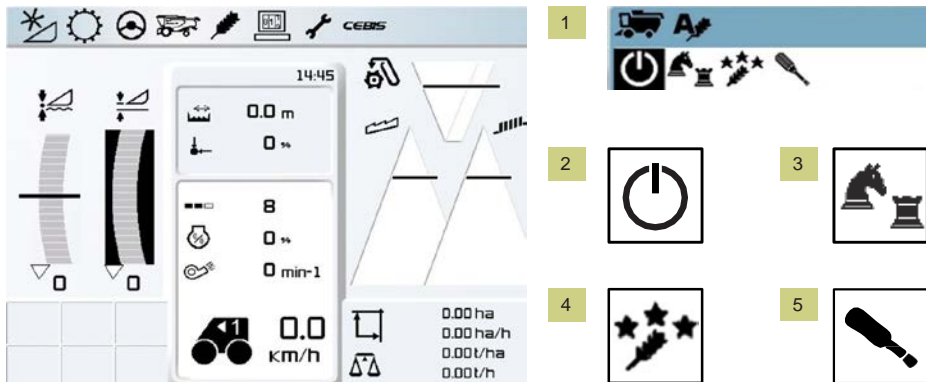
Adjust the rotor loss sensitivity so that the loss triangles are shown 3/4 up to the solid line.



During unloading the CRUISE PILOT automatically changes to CRUISE CONTROL mode which gives a constant speed, this will be 7% - 15% slower than the current forward speed.

**TIP.** Use the QR code on the back of the booklet to get the video for setting up CEBS in the field.

# EASY: CEMOS AUTOMATIC in CEBIS



If fitted CEMOS AUTOMATIC can be in the CEBIS menus, there will also be no extra screen in the cab, the CEBIS mobile screen is not needed.

1. In the CEBIS menu

2. Bring up the CEMOS AUTOMATIC menu turn on the master switch, AUTO CLEANING, AUTO SEPARATION and if fitted 4D CLEANING and 4D rotor cover plates

3. Set the desired strategy. Maximum throughput, minimum fuel used, high threshing quality, balanced

4. Adjust the desired cleanliness of the grain (4)

5. Learn the inclinometer, only needs to be learnt once a year

**TIP.** When changing the crop type make sure that these are turned back on.



# EASY: CEMOS CONTROLS



1. Main display

Touch the screen in the area to be selected. Once selected the function is displayed

2. Addition display

Displays various machine parameters. If a function is selected then the function contents are displayed.

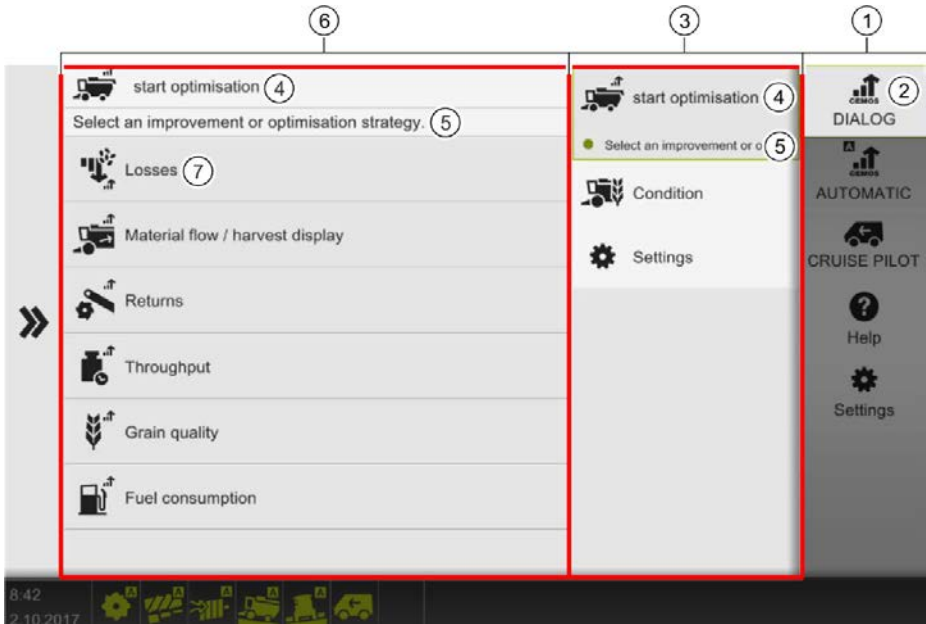
3. Main menu

Select the menu to be adjusted

4. Status bar

What is active and not active

# EASY: CEMOS CONTROLS



- |                           |   |
|---------------------------|---|
| 1. Main menu              | Select main menu  |
| 2. Menu menu display      | Bring up the function                                     |
| 3. Function menu          | Displays the function menu items                          |
| 4. Function menu          | Opens the dialog  |
| 5. Function menu item     | Displays the selected function                            |
| 6. Function contents      | Displays the functions and settings in the selected menus |
| 7. Function contents item | Change settings. Select the function that needs improving |

# EASY: CEMOS CONTROLS

Before starting make sure that all the CRUISE PILOT settings are set and all daily zeroing has been carried out.

Turn on CEMOS AUTO, then AUTO THRESHING, AUTO SEPARATION, AUTO CLEANING, 4D CLEANING, AUTO SLOPE\*.



CRUISE PILOT(1) daily zeroing can be done from the CEMOS screen (2,3).



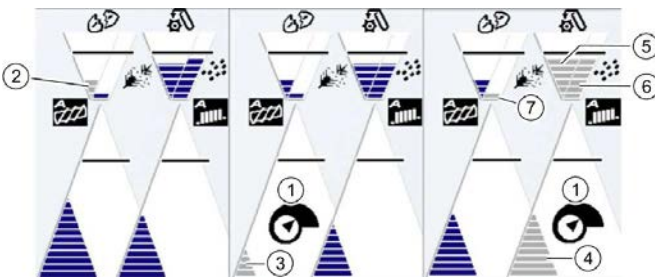
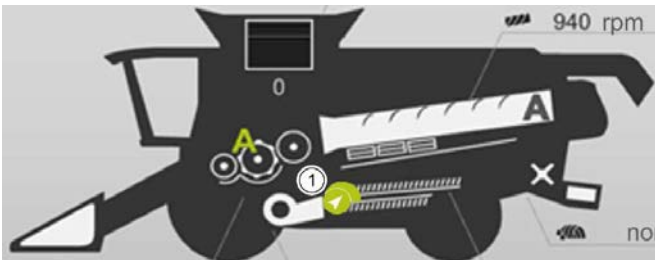
\* If fitted

# EASY: CEMOS CONTROLS



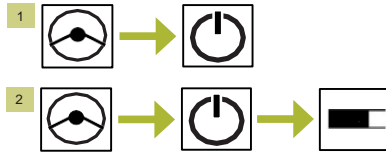
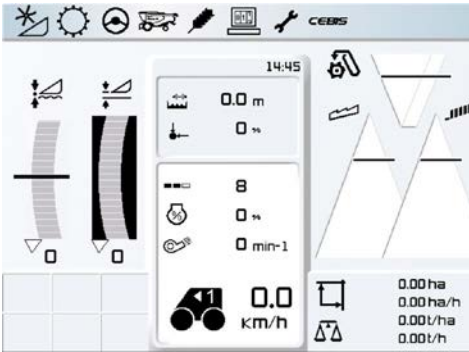
To optimise the system: Tap area 2, this opens a window, now move the sliders.

CEMOS AUTOMATIC will carry out learning phases (between 4 - 40 minutes, this should last a couple of seconds). This is done so that CEMOS knows what the combine is doing and how it is performing.



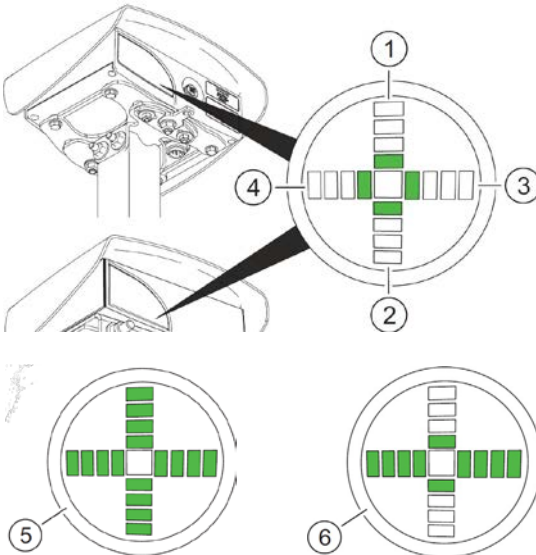
These learning phases will show up on both the CEBIS and the CEMOS mobile screen as follows.

# EASY: Steering



To activate LASER PILOT make sure it is turned on in CEBS (1) and that LASER PILOT is selected (2).

Line up with the crop edge before pressing the AUTOPILOT button on the joystick.



To set up the LASER PILOT, make sure the combine has a straight edge and is lined up with the crop.

With the engine running, threshing engaged the LEDs on the back of the LASER PILOT should all be in the middle.

If the LEDs are up to  
1 - too high  
2 - too low  
3 - too far right  
4 - too far left

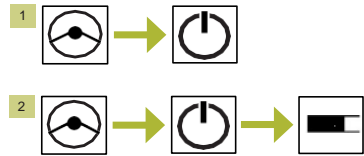
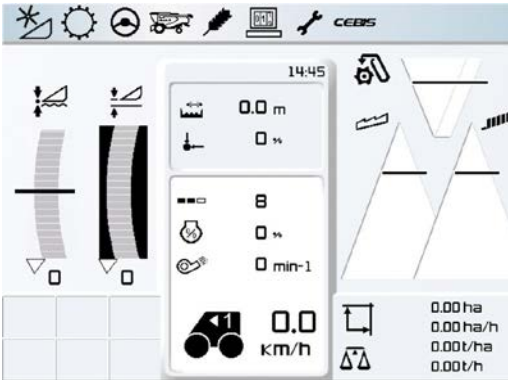
To adjust the LASER PILOT you only need the panel spanner.

**TIP.** If the LASER PILOT is not steering straight ahead, check the adjustments in the HOTKEY first.

**TIP.** Check the back of the LASER PILOT.

- 5 - adjust up or down and left or right, or clean glass.
- 6 - no crop edge, adjust left or right.

# EASY: Steering - S10



To activate GPS turn it on in CEBIS (1). Make sure that the screen is on and that GPS is selected (2).

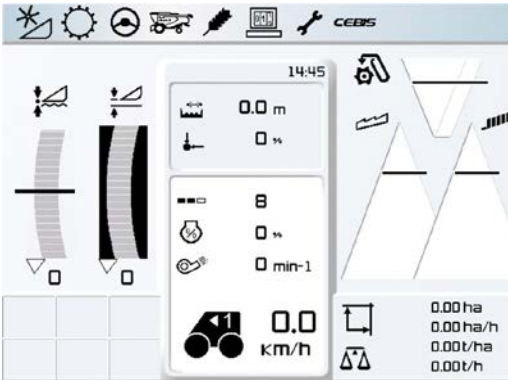
Press the AUTOPILOT button on the joystick when you are near the A=B line.



If a new AB line is required use the corresponding screen to set your AB line.

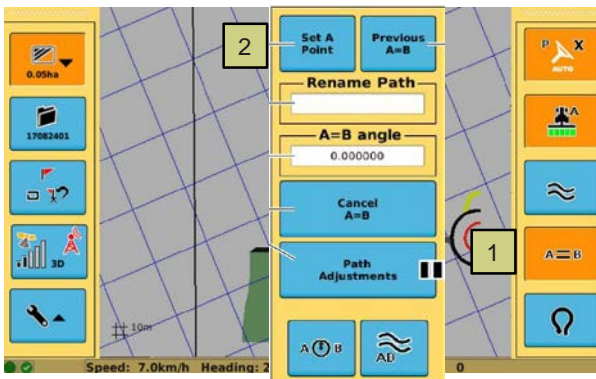
S10 screen select 2 and then follow the screen instructions or if you have already saved this field then press 1 and then select the field line.

# EASY: Steering - S7



To activate GPS turn it on in CEBS (1). Make sure that the screen is on and that GPS is selected (2).

Press the AUTOPILOT button on the joystick when you are near the A=B line.



For the S7 screen to set a new A=B line press 1 then press 2 and after a short distance press 2 again.

**TIP.** Point B will not appear until the combine has travelled far enough.

# Frequent Questions

**Threshing won't engage and none of the hydraulics are working.**

Check that the road travel switch is not engaged.

**Threshing has engaged but the engine will not go to full rpm when the engine speed dial is turned.**

Check that the combine is not in 3rd gear.

**Getting a poor sample in Oilseed Rape.**

Check that the preparation floor is clean.

**The machine will not change gear.**

Make sure that the multifunction lever is in its neutral position and both the footbrake pedals are applied, then briefly press the gear rocker switch once to select a gear.

**The machine goes off course when AUTOPILOT is engaged.**

Make sure that the LASER PILOT is set up correctly.

**The machine is lacking performance.**

What are the settings in CEBIS, what are the crop and field conditions. Make sure that threshing segment is removed from the main concave and that the crop is not being over threshed.

When chopping check that the fine chop step is not engaged and the stationary knives are backed off.

**CRUISE PILOT or CEMOS will not engage**

Make sure the cutterbar in work and the cutterbar is below the working position.



# Wet Harvest Recommendations

## **In wet and laid crops**

It is even more important to get a good cut and feed into the combine. Check the knife and fingers regularly, paying particular attention to the knife to finger gap.

## **To pick up laid crops**

The skids under the bar must be raised into their highest position. This will also reduce the amount of soil sticking to the underside of the cutterbar.

## **Do not try to go too low with the cutterbar in laid crops**

You only need to place the point of the lifter on the ground. If you go too low, the point of the lifter will lift and hold the crop down.

## **Soil and foreign objects**

These are more likely to enter the combine in a wet harvest, it is vital that the stone trap be emptied at least daily. The worse the conditions, the more frequently this should be done.

## **Emptying the stone trap**

Check that the APS concaves are clean. To do this, simply open the concave to 50mm before switching off and emptying the stone trap.

## **Under the concave is the preparation pan**

This will become dirty as wet grain and soil passes over it. The dirtier it becomes, the less effective it will be, and hence, the dirtier the sample will become. With wet grain it is important to try to keep to a cleaner sample than normal, as you then waste less fuel drying chaff etc.

## **If the preparation pan is dirty**

This is your first indication that further cleaning inside the combine may well be required. When cleaning the rest of the combine, follow the path of grain through the machine, and open covers as you come to them.

# Wet Harvest Recommendations

## **When unloading wet grain**

Reduce the flow into the unloading auger by shutting down the slides on both the cross augers in the grain tank. This will reduce the load on the unloading system, bringing it down to a 'normal' level.

## **If wet and dirty grain is being unloaded**

It is also likely that dirt will build up in the turret auger. This can and should be checked regularly through the inspection doors, and cleaned if required.

## **If the shear bolt on the unloading drive fails**

This is often the first sign that either the slides in the tank are too high, or there is too much dirt in the system, check auger timing.

## **Chopping wet straw**

This adds an extra load to the chopper drive. Regularly check the tension of the drive belts and the blade condition. Do not forget the 2 'stops' at either end of the main tensioner.

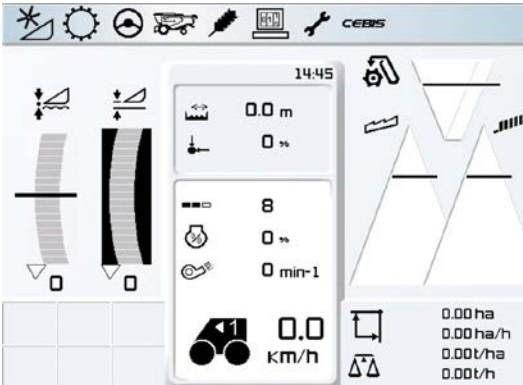
## **Chopper blade wear**

This can be accelerated when chopping wet straw due to the increased levels of soil in it. Check the condition of the blades regularly. Do not forget to check the stationary blades.

## **In wet conditions**

It is possible for material to stick to the return floor under the rotors. This then impedes the flow of grain back to the preparation pan and affects the sample. Check the pan regularly and clean as required.

# Recommendations

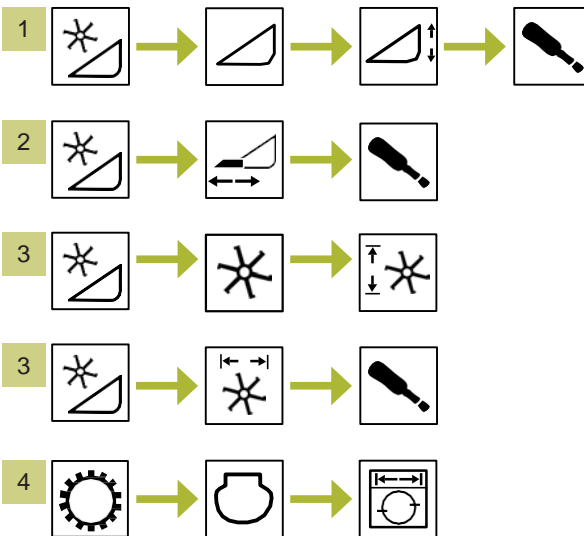


## Seasonal calibration

At the beginning of the season before the combine is used, it is advised that the following items are learnt:

A. Learn AUTOCONTOUR limits (1), VARIO (2) and reel (3) 'end stops' in the cutterbar section of CEBIS.

B. With threshing and cutterbar engaged and the machine running at full throttle, learn the 'Max no-load speed' (4).



**TIP.** If using CEMOS AUTOMATIC learn the inclinometer.

To see the end of season video, follow the QR code for the link.

**DEMO mode for CEMOS and CRUISE PILOT is available for the first 50 hours, once this has been reached please consult your local dealer if you wish to invest in this option.**



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