



CLAAS combining innovations 2014

CLAAS driver assistance systems – innovations and attractive entry-level models

Harsewinkel / Hanover, 11./12.09.2013. With their combining innovations for 2014, CLAAS is once again demonstrating its innovative strength, particularly in the area of intelligent driver assistance systems and, by introducing new models in the lower power range, facilitating access to these modern combining technologies.

After the introduction last year of CEMOS AUTOMATIC, the world's first fully automatic combine harvester setting for separation and cleaning, just one year later CLAAS has extended its driver assistance technology offering with the addition of three new systems:

- Automatic throw direction adjustment for straw distribution
- A tyre pressure control system for the rear tyres
- The new GRAIN QUALITY CAMERA.

LEXION 740

For the 2014 season, CLAAS has extended the LEXION model series towards the lower end of the power range with the addition of the LEXION 740 model. Although the LEXION 740, with its 294/400 kW/PS (maximum engine output according to ECE R 120) has slightly less power than the next bigger model, the LEXION 750, it has the same engine – a 6-cylinder Caterpillar C 9.3, and shares other equipment features: a 10,000 litre grain tank capacity (optionally 9000 litres) and 1420 mm-wide APS threshing system.

Its APS HYBRID SYSTEM combines the tangential APS threshing system with ROTO PLUS residual grain separation. It is distinctive in that the speed of the drums in the threshing system is adjusted independently of the speed of the two rotors and means that the APS HYBRID system threshes particularly gently whilst maintaining a high throughput rate.

Automatic throw direction adjustment

With the introduction of the new LEXION 740, CLAAS has not only provided entry-level access to the tried-and-tested technology of the APS HYBRID system but at the same time has also introduced two new features - throw direction adjustment and rear axle tyre pressure control.

Automatic throw direction adjustment is available on all LEXION models with a radial spreader and automatically adjusts the throw direction on the radial spreader according to side wind and slope incline. Two electromechanical sensors fitted on the lighting arms at the rear of the combine harvester continuously measure the side wind and slope incline. After calculation, the measurement values are passed to the control system that controls the side adjustment of the paddles on the radial spreader, so that straw is always distributed evenly across the whole working width of the cutterbar.

Automatic tyre pressure control system

The new automatic tyre pressure control system is optionally available for all five models in the 700 model series. It reduces the ground pressure loading produced by the rear axle to the low level of a front axle with TERRA TRAC drives. In the field, the adjusted tyre pressure prevents soil compaction and slip, and increases traction. When on the road, the automatic tyre pressure control system ensures a higher level of driving stability, less tyre wear and lower fuel consumption.

The basic settings for the tyre pressure control system are made using the CEBIS terminal in the cab. When the road travel switch is pressed, the tyre pressure is automatically adjusted to the value previously set for road travel. After arriving back on the field, the tyre pressure is automatically reduced back to the pressure set for fieldwork.

GRAIN QUALITY CAMERA

Using the third innovation, the GRAIN QUALITY CAMERA, the driver can now assess the quality of the threshed grain in real time and continuously, and immediately draw conclusions on which to base any changes in his combine harvester settings. Previously, the threshed product could only be assessed visually by looking through the grain tank window but that is now possible via the CEBIS terminal. The technology involved includes a high-definition colour photo camera that is mounted on the head of the combine harvester's grain elevator, from where it takes high-precision pictures of the crop in the elevator every second. These pictures are passed to internal picture evaluation software which uses these images to calculate the non-grain components, such as straw, chaff and awns as well as the proportion of broken grains. These values are sent to the CEBIS display where they are either shown as bar diagrams or as real images, with areas of low grain quality marked in colour. The driver receives an active visual alert if limit values have been exceeded.



The GRAIN QUALITY CAMERA will initially only be available for the LEXION 780 and 770 model series.

Another innovation for the LEXION

For next harvest CLAAS will also have available a new TERRA TRAC model, the LEXION 750 TT, which will provide a new entry level option for those wanting access to tracked combines.

A particularly distinguishing feature of the CLAAS TERRA TRAC track roller unit is its hydropneumatic suspension. This reduces shocks because of hydraulic cylinders which automatically adjust each of the individual drive wheels, land wheels and support rollers to ground contours, thereby ensuring the levelling required, improved cornering stability for the combine harvester and more comfort for the driver. In comparison to a wheeled machine, the track roller unit



also has less adverse impact on the soil, with the advantage of better traction in wet conditions and on slopes. CLAAS offers a total of four different TERRA TRAC running tracks in three widths for driving speeds of up to 40 km/h.

The LEXION 600 has been given a nice new four-wheel drive axle, in which the two hydrostatic motors are centrally integrated into the axle. This design ensures a higher level of efficiency and more free space at the axis portals. Thanks to the increase in free space, a wider range of tyres can now be fitted to this model series.

In addition, the central lubrication system, which was previously reserved exclusively for the LEXION 700 model range, will now be available for all 600 models, with the exception of the MONTANA.

In addition, the complete LEXION model series is also being given the upgrade of a new rear camera, the view from which is displayed directly on the CEBIS monitor and appears automatically when reversing.

TUCANO 420

For those who have been attracted to the CLAAS TUCANO model series and its APS 5-straw walker technology there is the option of the new TUCANO 420 entry-level model. Its APS threshing system is notable due to the accelerator in the threshing mechanism. With the accelerator, an increase in performance of up to 20 % can be achieved in comparison to a combine with a conventional threshing mechanism, while still using the same amount of fuel. The TUCANO 420 model has a grain tank capacity of 7500 litres, an APS threshing mechanism width of 1320 mm and works with a maximum power output of 175/238 kW/PS (according to ECE R 120).



AVERO 240

With the AVERO 240, CLAAS has launched the first CLAAS combine harvester into the race to meet the Stage IV / Tier 4 exhaust emission standards. The AVERO 240 works with CLAAS APS 4-straw walker technology. Its new and more powerful engine, a Perkins 1206F with a maximum output of 151/205 kW/PS (ECE R 120), is still more economical on fuel than the previous model. But because of its design, the main feature is the increase in free space above the straw walker, which means that even long straw can be easily transported using the straw walker racks. This improvement in crop flow ensures greater



separation efficiency and ultimately leads to an increase in efficiency for the entire process.

A rotating radiator screen in the new AVERO 240 provides the required engine cooling and ensures low maintenance costs. It works with automatic dust extraction and allows easy access to the cooling system.

All AVERO models can be equipped with the PROFI CAM camera, fitted on the rear hood. It not only assists the driver when reversing but enables him to easily monitor the distribution of chopped crops or straw discharge from his cab via a colour monitor. Even more driving comfort is provided by the electrically adjustable rearview mirrors, and front and side roller blinds.