

CLAAS  
TELEMATICS

**CLAAS**

TELEMATICS:  
Increasing performance.



Maximum Combine Capacity –  
over the Whole Season.





Telematics –  
The Technology to  
Manage your Harvest.....4

From Data to  
Decisions.....6

Optimising Seasonal  
Efficiency.....8

Harvesting the Statistics –  
Analysing your Efficiency and  
Performance.....10

The CLAAS Helping Hand –  
Seamless Support from  
your Dealer.....12

Machine Data Management  
for Perfect Harvesting.....14

Harvesting performance and harvest costs. Two of the most important criteria that accompany the completion of every crop growing cycle. And two of the most important criteria for your crop profit margin.

CLAAS LEXION combines provide you the highest harvesting performance. But turning your combine's installed capacity into a full season's harvesting performance is a significant management challenge. CLAAS offers a new technology which will provide a significant support to ensure that you enjoy the performance that CLAAS combines can deliver.

Over the full harvesting season.

# Telematics – The Technology to Manage your Harvest.

CLAAS Telematics enables you to monitor the performance of your combine from anywhere that you have access to the internet. From the your office, the farm kitchen, or in the workshop – or even from a mobile connection when you are travelling. Monitoring analysing and comparing provides the best foundation for sound business decisions which enhance your harvesting performance and improve your profit margins.



## Telematics components

- Teleservice Module
- Flat antenna
- Antenna cable
- PCMCIA Card
- Not supplied: Telephone SIM Card





## How Telematics works – for the non-technically minded.

CLAAS Telematics uses an on-board datalogger to record selected information “copied” from the CAN BUS system – every 15 seconds. This data is converted, bundled and

stored on a PCMCIA card in the CEBIS monitor. Every 15 minutes an on-board mobile telephone modem calls a data-transfer station and downloads the machine’s data to the internet. The data is stored on a secure server, and can be accessed, viewed and analysed at anytime via the internet.



To view the CLAAS Telematics data on the dedicated web-site you will need:

- A personal computer or laptop
- Microsoft® Windows Explorer® version 6.0 or higher
- A (high-speed) internet connection.
- Google™ Earth (License required for commercial use)

The internet connection can be hard-wired, WLAN or “roaming” (UMTS, GPRS etc). For hard-wired versions a broadband connection is recommended for optimum data transfer.

# From Data to Decisions.

Structure in the information jungle.



The best business decisions require information. CLAAS Telematics can provide you with more machine information than you can handle! The data is therefore divided into categories to help support your decision making.



## Optimising performance

CLAAS build high-capacity combines to provide peak performance in a wide range of conditions. But each year is different – the crop, the weather, the field, the variety ...

And setting a combine is notoriously difficult – especially finding that final “tweak” to achieve optimum performance. CLAAS Telematics provides an new level of possibilities. you can compare your combine performance and settings with those of others. Up to 3 machines “internally”. Or you can use the COMBINE LEAGUE function to compare with similar machines in similar conditions.

You may even be able to compare with a CLAAS demonstration machine!



## Protecting your data

- Your data is collected and stored by an independent server provider with multiple back-ups.
- Access to the CLAAS Telematics website is user name and password protected with 128 bit SSL encoding.



## Combine League.

For single machine users COMBINE LEAGUE offers you the possibility to allow others to view your performance data and settings – anonymously. In doing so, you can view their machine data in return. By adopting the days “best settings” you can be sure that you have tweaked your machine for the best possible performance – every day!



Machine settings can be viewed and compared.

- Platform engaged [I/O]
- Platform reel speed [rpm]
- Vario-platform location [%]
- Platform cutting height [position]
- AUTO CONTOUR [I/O]
- Threshing drum speed [rpm]
- Concave position [value]
- Cleaning fan speed [rpm]
- Rotor / walker speed [rpm]
- Separation sensitivity [value]
- Upper sieve setting [value]
- Lower sieve setting [value]
- Grain cleaning sensitivity [value]
- Returns elevator speed [rpm]
- Straw chopper [I/O]
- Graitank 70% [I/O]
- Graitank 100% [I/O]
- Graitank unloading [I/O]

Performance data analysis shows the effect of machine settings

- Harvesting spot-rate [t/h]
- Harvesting performance [ha/h]
- Crop spot yield [t/ha]
- Harvested area [ha]
- Separation performance [value]
- Grain cleaning performance [value]

# Optimising Seasonal Efficiency.

Getting the peak performance from your machine is however, only the start. You need to keep it performing day-in and day-out, right through the harvest. The machine efficiency analysis function provides accurate data on how and when you machine is performing, and data on when its not! Optimising operating methods, harvesting techniques and machine logistics can provide you with the detailed information to significantly enhance the machine's overall performance.

## Machine performance information data

- o Machine location (lat/long) [°, ", ']
- o Engine operating hours [h]
  - Engine speed [rpm]
  - Engine load [%]
  - Travel speed [km/h]
  - Working (threshing) hours [h]
  - Fuel tank status [%]
- o Slope [%]
- o Side slope [%]



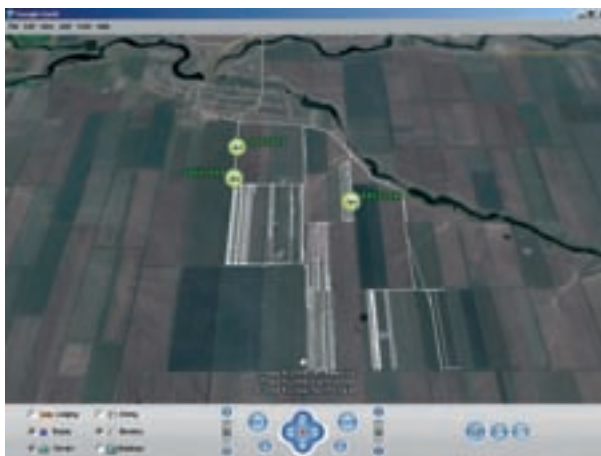


## Tracking your machine's performance - visually.

Pinpointing the machine's current location is the key logistical and organisation perfection. Do we need to send another trailer? How much crop is still left to be cut? Which varieties are still to be harvested? These, and many other questions, can be answered using two location display tools.

**Google™ Earth** shows the machine's location superimposed onto satellite photographs. You can clearly see your field outlines and features, with the machines track-lines superimposed.

**MapQuest®** shows the machines location in relation to the public highway network. This enables a quick spatial orientation and ensures that machine can be found quickly – even by those not familiar with your farm.



# Harvesting the Statistics – Analysing your Efficiency and Performance.

Up to now harvest operations, and their associated costs, have been treated as fixed. CLAAS Telematics provides a detailed analysis of the total harvest operation. You may, for example, assess if different varieties caused different specific fuel consumptions.

Check the differences between running with and without straw chopper, investigate the time taken to harvest different crop types or areas – and even analyse the transport data of the entire harvest. This detailed information provides a valuable insight into the allocation of harvesting costs in a detail that has not previously been possible. Important information in the constant battle to keep your production costs to a minimum.

## Machine counter analysis

- Machine engine hours
- Threshing hours
- Straw chopper hours
- Straw chopper area
- Harvested crop in t
- Harvested crop area
- Crop subtype area
- Distance travelled - total
- Distance travelled during transport
- Distance travelled during threshing
- Fuel consumption – total
- Fuel consumption during transport
- Fuel consumption during threshing.

## Machine counter analysis according to:

- Job counter – which can be reset for each new parcel or job.
- Daily counter – collects harvesting data for each harvesting day.
- Crop counter – harvesting data for each crop type.
- Total counter – harvesting data for each season.



## The contractors advantage.

Contractors will appreciate the special benefits of being able to analyse data on a job or customer basis – making the allocation of costs for accounting much easier. In addition you can allocate your contracting customers CLAAS Telematics temporary “visiting rights” so that they can enjoy the added value of detailed crop data. Provide additional crop management data to your customers.

Provide an accurate breakdown of your harvesting charges and the materials used. Documentation of each job, crop, or daily harvesting activity.

Customers can be involved in the planning and execution of the crop harvest – especially useful for speciality crops.



# The CLAAS Helping Hand – Seamless Support from your Dealer.

Combine harvesters are operated in some of the most unpredictable environments farming knows. In the processing of biological crops. If things start to go wrong, your CLAAS dealer – closely supported by the renowned CLAAS service organisation – is there to help you.

CLAAS Telematics also transfers valuable service codes and information to the CLAAS Telematics Dealer View.

By allocating your dealer “access rights” to your machine data he can pre-analyse and therefore prepare for a service call – before he leaves the dealership. By gathering potentially needed diagnostic details and spare parts the cause can be located quickly and a return journey to installed a repair part can be prevented - reducing downtime considerably. This can save significant lost harvesting and crop transport capacity time as well as preventing crop quality deterioration through delayed harvesting.





Using the CLAAS CDS 5000 electronic analysis tool your dealer can establish direct real-time contact with your combine via CLAAS Telematics to conduct interactive remote diagnostics – even referenced to the CLAAS service organisation if necessary. With CLAAS Telematics help from your CLAAS dealer is much closer than you think – wherever you are harvesting.

Via CLAAS Telematics your dealer can also monitor your combine's maintenance requirements. This allows him to plan routine maintenance around your harvesting schedule. Another big step in your journey to increased harvesting efficiency.



# Machine Data Management for Perfect Harvesting.

## CLAAS Telematics – reducing costs and increasing efficiency

All these can reduced lost machine output and the costs which are associated with not being able to harvest: lost crop quality, additional manpower costs, wasted fuel, crop transport idle time, delayed establishment of following crops,

### The bench mark

Comparing the performance of your machine with last year doesn't tell you how you are performing today. The conditions were different, the crops an the area different. And of course the weather was different too. By "publishing" your data to other CLAAS Telematics users – anonymously of course. Knowing how good – or not so good – your performance is, helps you to start asking the right questions to find improvements. CLAAS Telematics provides you, and your CLAAS dealer, with the management and service information that you need.

## Maximising Harvesting Capacity

The higher a machine's capacity, the greater the harvesting loss when the full machine's potential is not utilised. CLAAS Telematics is the technology that will help you to utilise that capacity.

### Spot-rate

CLAAS Telematics provides you with a remote overview of all your machines that are working. By sharing your data with others, you can also check your performance and output refining it with information from the machines that are performing best.

### Field efficiency

CLAAS Telematics allows you to analyse your field efficiency. A tabular and graphically analysis will help you find the weak-spots in the field operating efficiency of your machine.

### Seasonal efficiency

CLAAS Telematics provides a seasonal analysis of machine use efficiency. A comparison with other machines can help to understand the absolute and comparative efficiency.



## Support logistics

Using the CLAAS Telematics Google™ Earth and Map-Quest spatial view the current location of the machine and the actual area already harvested can be interpreted. Expensive unnecessary journeys and machine waiting time can be avoided.

## Down time

Down-time is frustrating and costly at the best of times, but the variability of crop harvesting makes it often difficult to avoid. CLAAS Telematics provides a range of information which can help to avoid, or reduce downtime.

- Regular maintenance  
CLAAS Telematics tracks the time to the next scheduled maintenance, to maintain your machine when you are not harvesting.
- Unexpected downtime  
CLAAS Telematics provides your dealer with a view to current machine service codes, enabling a pre-diagnosis of potential causes. He can carry out a live real-time diagnosis using the service tool CDS 5000 to conduct detailed diagnostics.

- Diagnostic time  
CLAAS Telematics enables remote machine diagnostics, allowing parallel access to additional service information, the expertise of colleagues, and CLAAS technical specialists.
- The right part - first time  
Following a CLAAS Telematics pre-diagnosis the technician can identify and take with him to the machine a selection of potentially required parts CLAAS Telematics – reducing costs and increasing efficiency.

CLAAS KGaA mbH  
Postfach 1163  
33426 Harsewinkel  
Deutschland  
Tel.+49 (0)5247 12-0  
claas.com

01/09 (GI) englisch 1/000 256 088.1