

A JOHN DEERE COMPANY



WIRTGEN GROUP

WITOS FleetView

The telematics solution from WIRTGEN GROUP



CLOSE TO OUR CUSTOMERS

WHAT IS

WITOS FLEET VIEW?





WIRTGEN GROUP TELEMATICS AND ON-SITE SOLUTIONS

With its intelligent telematics system WITOS FleetView, WIRTGEN GROUP supports fleet and servicing management for WIRTGEN GmbH, JOSEPH VÖGELE AG, HAMM AG and KLEEMANN GmbH machines.

Thanks to system-based preprocessing, transmitting, visualising and evaluating of machine and position data, fleet and servicing management is becoming increasingly more efficient in day-to-day operations. WITOS FleetView ensures that you always have a clear overview of your machine fleet.

WHAT DOES WITOS FLEET VIEW OFFER?

The service portfolio of WITOS FleetView ranges from targeted monitoring of machines in their day-to-day operation to supporting maintenance and diagnostics processes.

Thanks to a comprehensive range of features, WITOS FleetView is an ideal complement to the WIRTGEN GROUP Smart Service machine-specific inspection and maintenance agreements.



THE WITOS FLEET VIEW BENEFITS AT A GLANCE

- > WITOS FleetView keeps you informed of the location and operational state of your machines, any time and anywhere*
- > It simplifies scheduling and planning processes and helps avoid unnecessary machine transports
- > Intuitive user interface for efficient scheduling
- > Simplifies the entire maintenance process and saves time and effort in day-to-day operations
- > Minimises downtimes by facilitating timely service appointments
- > Faster response times in the event of faults
- > Detailed and targeted analyses of operational behaviour and usage patterns of the machines make service as well as maintenance easier and guarantee that your machines retain their value in the long term
- > Analysis of machine utilisation to optimise use of the machine

*Data transmission is dependent on mobile network coverage.



PERFORMANCE CHARACTERISTICS

ASSET

- > Position data
- > Machine identification
- > Operating status
- > Fuel fill levels
- > Machine data

MONITORING

- > Position monitoring
- > Time fence monitoring
- > Maintenance monitoring
- > Movement monitoring
- > Error monitoring
- > E-mail notification

MAINTENANCE MANAGEMENT

- > Maintenance schedules
- > Status indicators
- > Maintenance entries
- > Maintenance histories

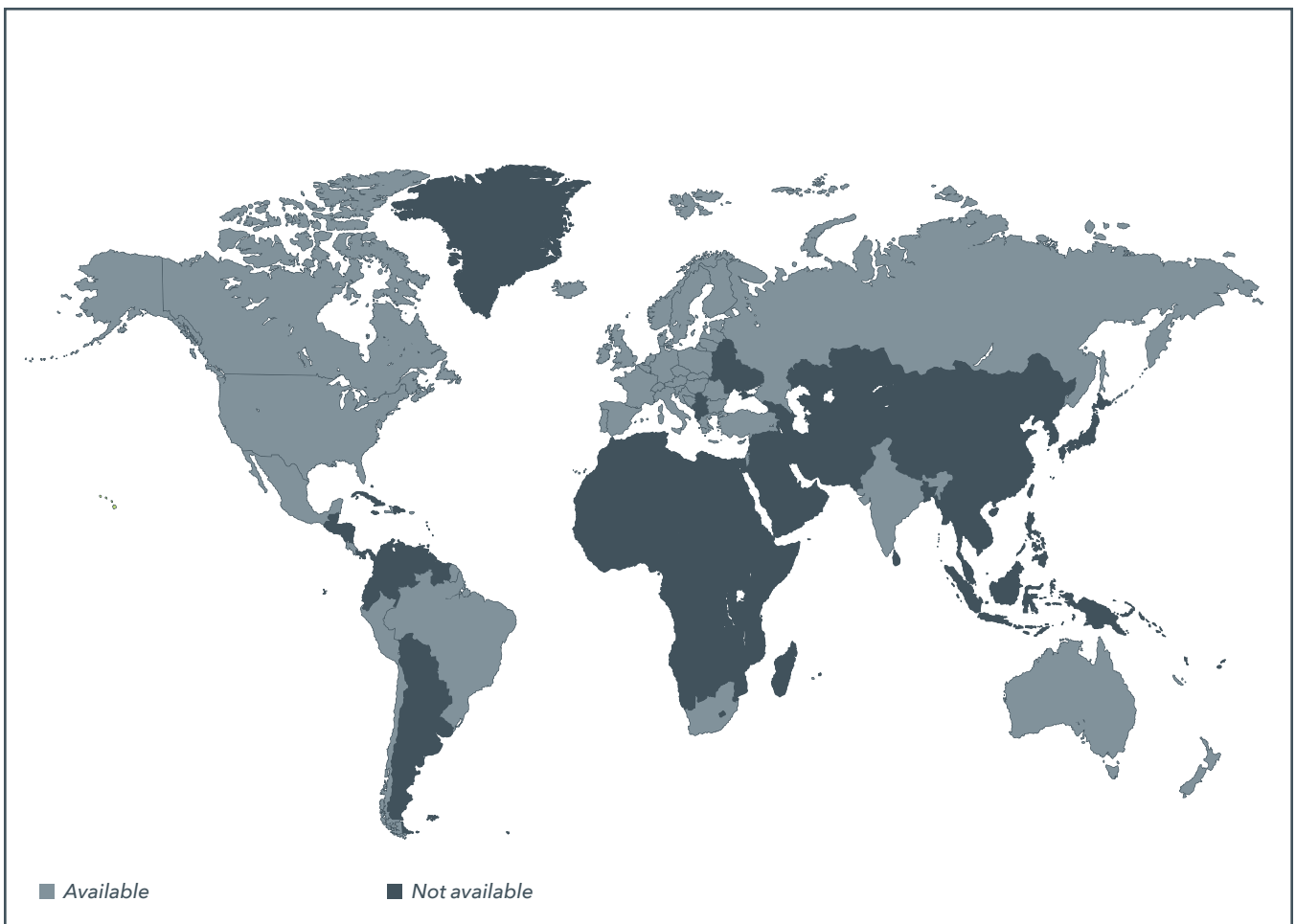
DIAGNOSIS

- > Machine warning messages
- > Machine error messages
- > Engine messages
- > Message histories

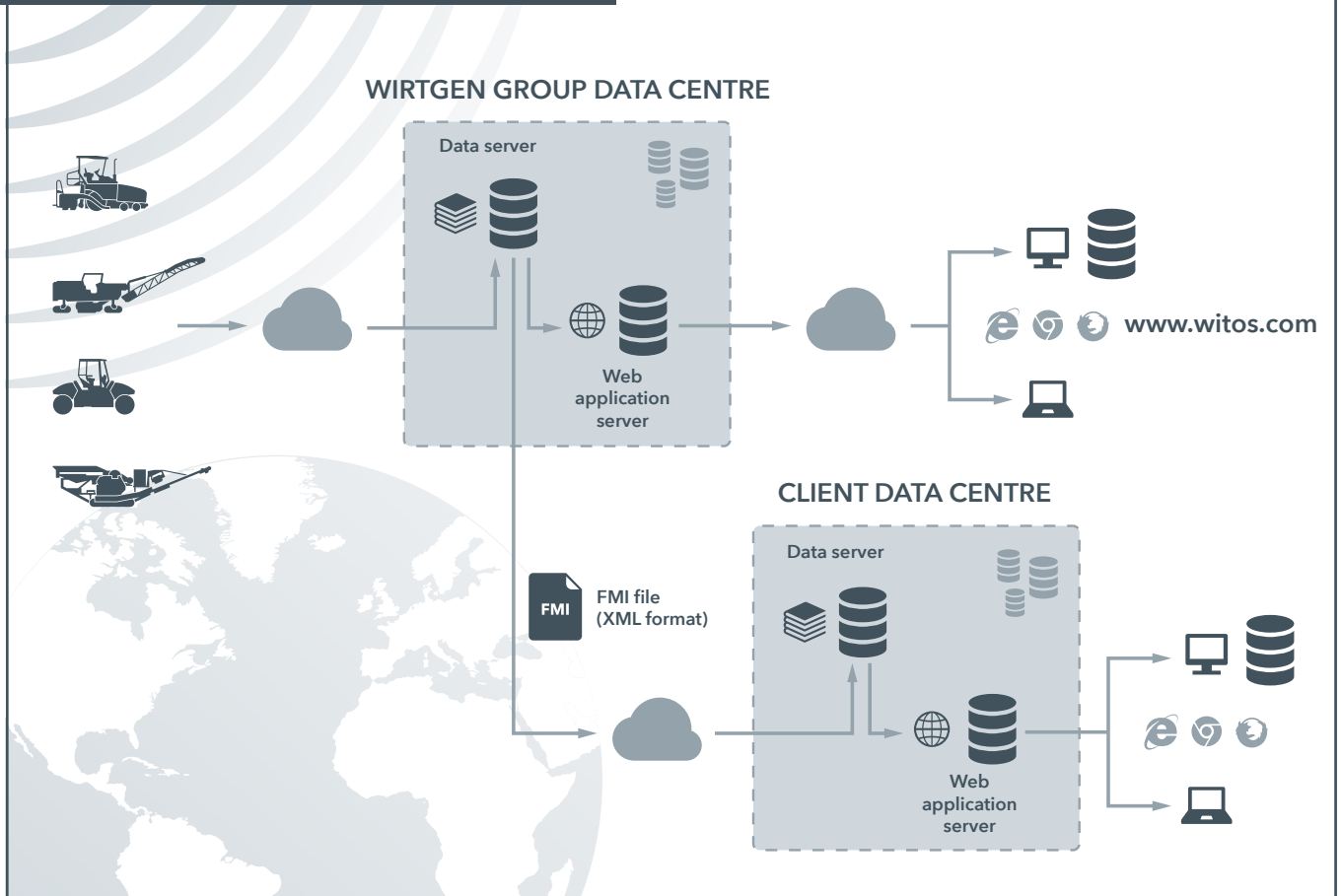


WITOS AVAILABILITY

TO DATE, WITOS FLEETVIEW AND WITOS FMI HAVE BEEN AVAILABLE IN THE COUNTRIES MARKED BELOW. WE ARE PLANNING TO ADD AUTHORISATIONS FOR OTHER COUNTRIES IN THE FUTURE.-----



WITOS FMI



> The Fleet Management Interface (FMI) also allows you to import data from existing systems via a standardised server-2-server interface.

THE WITOS FMI BENEFITS AT A GLANCE

- > You can retrieve the machine data from the WITOS server and import and evaluate it in your own telematic or ERP system.
- > The scope of the data accessible with the WITOS FMI interface varies. It can include the AEMP 1.2 or ISO ITS 15143-3 standard data, or the data of WIFMS, which is WIRTGEN's own standard.
- > WITOS FMI is included in the WITOS FleetView supply package.



For integration in existing systems, please contact your WIRTGEN GROUP subsidiary.

SCOPE OF DATA OF THE WITOS FMI INTERFACE

SCOPE OF DATA OF WIFMS

- > Manufacturer
- > Machine serial number (SN/OBU)
- > Global positioning system time
- > Global positioning system latitude
- > Total operating hours
- > Total distance
- > Fuel rate
- > Engine speed
- > Coolant temperature
- > Customer designation for machine
- > Global positioning system altitude
- > Global positioning system longitude
- > Speed
- > Total fuel consumption
- > Fuel fill level
- > Load factor
- > DEF fill level*

SCOPE OF DATA OF ISO/TS 15143-3 (AEMP 2.0)

- > Installation date
- > Manufacturer
- > Machine type
- > Customer designation for machine
- > Machine serial number (SN)
- > PIN (product identification number)
- > Fuel fill level
- > Distance
- > Average engine load last 24 h
- > Fuel consumption last 24 h
- > Total idle time
- > Total regeneration time
- > DEF fill level*
- > Engine status
- > Total fuel consumption
- > Maximum engine speed last 24 h
- > Diagnosis messages

SCOPE OF DATA OF AEMP V1.2

- > Installation date
- > Machine type
- > Machine serial number (SN/OBU)
- > Global positioning system time
- > Global positioning system latitude
- > Total operating hours
- > Fuel consumption last 24 h
- > Manufacturer
- > Customer designation for machine
- > Global positioning system altitude
- > Global positioning system longitude
- > Total fuel consumption
- > Total distance



Scope of data depends on model

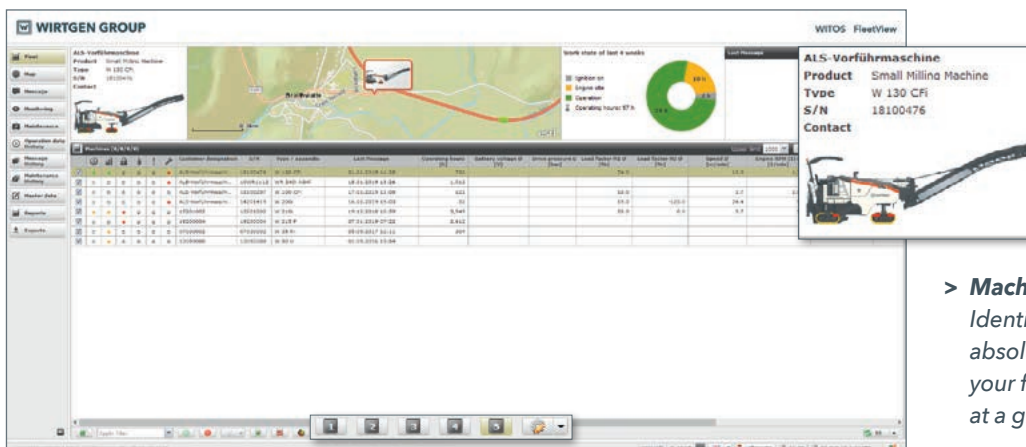
* AdBlue® is a registered trademark of Verband der Automobilindustrie (VDA) e. V. (German Association of the Automotive Industry).

WEB APPLICATION

MACHINE OVERVIEW

The fleet overview provides a compact overview of the current operational state of your machines. You can select one or several machines for more detailed views and analyses. Comprehensive filtering and sorting functions will help you to customise the overview to your

requirements. You can predefine up to five different views based on parameters defining your needs. Once customised and saved locally, this ensures that the information you want is always quickly available to you at a glance.



> Machine data

Identify your machines with absolute certainty and see your freely definable contact at a glance.

Load factor M1 Ø [%]	Load factor M2 Ø [%]	Speed Ø [m/min]
54.0		13
18.0		1
19.0	-125.0	24
28.0	0.0	5

> Operational data

Look inside your machines and see current data such as minimum, maximum and average operational data values.

Geo position (latitude longitude)	
Degree / minute / second	53°31'29.3814120"
Degree / minute	53°31.4896902' 10"
Degree	53.5248282 10.102

> Position data

Transmitted position data will tell you exactly where your machines are.

Machines (8/8/8/8)						Customer
⌚	📊	🔒	🔧	!	🔧	Customer
🟢	🟢	🟢	🟢	🟢	🟢	ALS-Vorfü
🟢	🟢	🟢	🟢	🟢	🟢	ALS-Vorfü

> Data from WITOS FleetView

Always able to act: compactly displayed machine statuses provide you with a fast overview of the operational state of your machines.

> Monitoring status, upcoming maintenance and current warning and error messages - the most important information is available at a glance, allowing a rapid response.

MAP

The map view shows the current location of one or several machines.*

The machine path function enables you to track the route that the machine takes during operation and transport.

You can use the radius search to select several machines or individual ones, such as those on a construction site. You can then look at the machines in more detail in other views, such as the fleet view, message view or history view.



> Short machine information

The message window contains information on the machine's operational, error, monitoring and maintenance status.

* Brief information is available for individual machines to report on the status of the machine concerned.

APPLICATION

MONITORING

Define times and places when and where your machines are permitted to operate. By activating monitoring protection, you will receive immediate e-mail notification of unauthorised access to the machine. To minimise unnecessary downtimes for your machines, emails can notify you of upcoming machine maintenance,

allowing you to plan in the staff and material required in good time.

You can also be notified of error and warning messages by email.



Monitoring activation

Monitoring feature	Status
Monitoring Geo-Fence	Off
Monitoring curfew	Off
Monitoring shock sensor	Off
Monitoring alarm notif.	Off
Monitoring fault notifications	Off
Pending Service (OH)	Off
Overdue Service (OH)	Off

Surveillance Activation

Day	Work day start
Sunday	hh:mm
Monday	07:00 + - hh:mm
Tuesday	07:00 + - hh:mm
Wednesday	07:00 + - hh:mm

> Curfews

A notification is sent if the machine is switched on within the freely definable time curfew.

> Geo fencing

Receive a message the moment that the machine is outside the defined, permitted geo fence during monitoring.

> Motion sensor

The integrated motion sensor generates position messages even when switched off. This ensures that transport movements are documented.

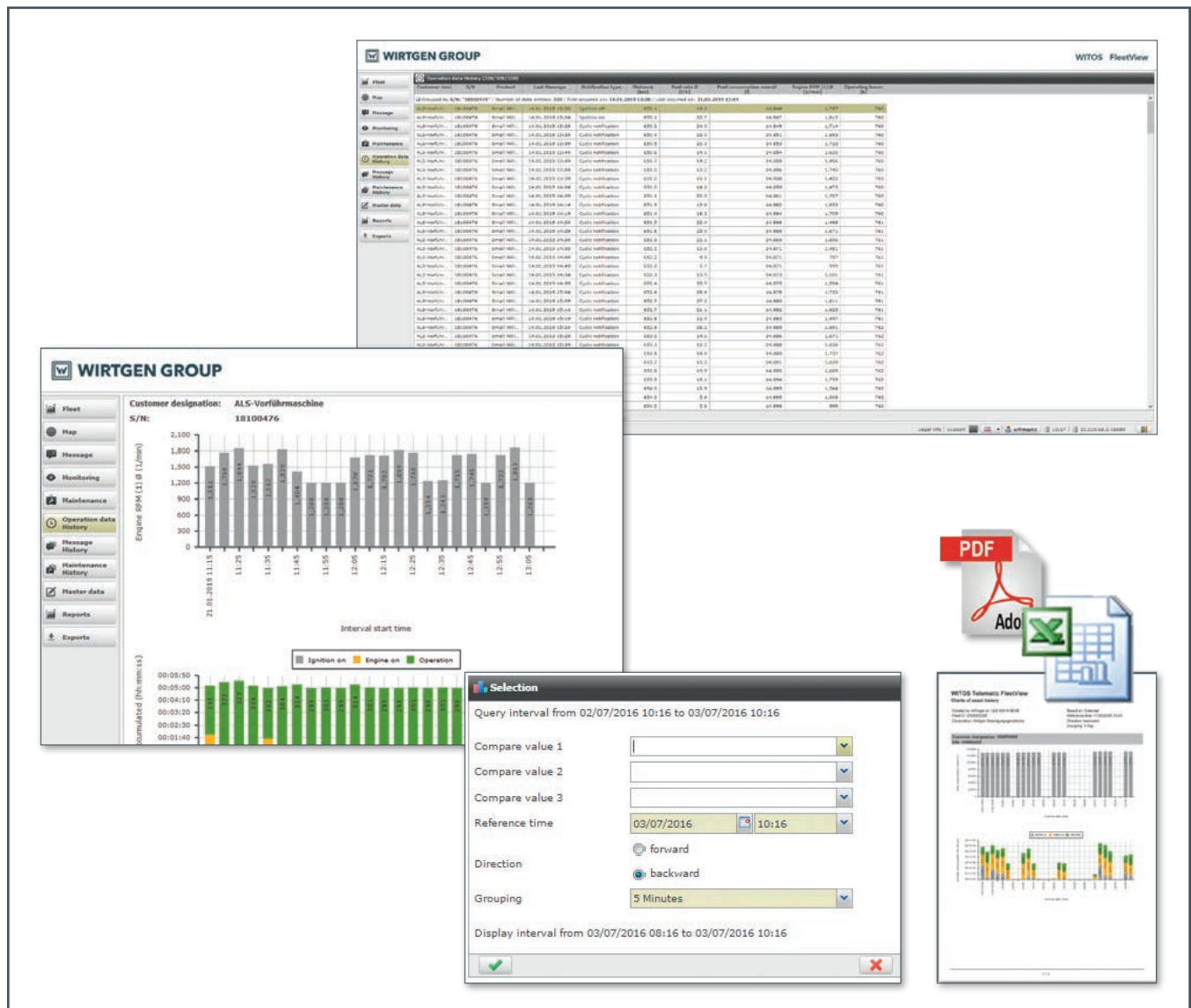
When the machine is shut off, the telematics unit can be "woken" if the motion sensor is triggered, automatically forwarding a message to designated persons. This means that you are instantly informed of any non-scheduled movements, for example.

OPERATIONAL DATA / HISTORY

Take a look back into the past of your machines. The history view allows you to display operational and position data for your machines over a freely definable period in a clear and easily readable layout.

Depending on your selection, you can also display up to three additional parameters in graphic form on the operating status indicator and generate them in PDF format.

At the push of a button all tabulated data can easily be generated as CSV file.



APPLICATION

MESSAGES / HISTORY

All current and past messages from the machines at a glance: See a summary and specify which detailed information shall be displayed with the messages.

All messages are displayed and described exactly as they are on the machines. Clear message categorization and documented display/deactivation times enable you to draw significant conclusions regarding the machines' service statuses.



S/N	Category	Reported until	Reported from	Location
18100140	Software condition: Cultivar steering / new height	02/08/2016 07:47	02/08/2016 07:51	113.5
18100140	Software condition: Cultivar steering / new height	02/08/2016 07:47	02/08/2016 07:51	113.5
18100140	Software condition: Cultivar steering / new height	02/08/2016 13:37	02/08/2016 13:46	113.7
18100140	Software condition: Cultivar steering / new height	02/08/2016 13:40	02/08/2016 13:40	113.8
18100140	Software condition: Cultivar steering / new height	02/08/2016 13:49	02/08/2016 13:50	113.9
18100140	Software condition: Cultivar steering / new height	02/08/2016 14:02	02/08/2016 14:05	114.1
18100140	Software condition: Cultivar steering / new height	02/08/2016 14:04	02/08/2016 14:05	114.2
18100140	Software condition: Cultivar steering / new height	02/08/2016 14:11	02/08/2016 14:16	114.3
18100140	Software condition: Cultivar steering / new height	02/08/2016 14:11	02/08/2016 14:16	114.3
18100140	Software condition: Cultivar steering / new height	02/08/2016 14:13	02/08/2016 14:16	114.3

> **Blue messages** indicate particular non-critical states of the machine system that must be taken into account when operating the machine.

S/N	Reported-	Reported until	Operating hours [h]
18100140	02/08/2016 07:47	02/08/2016 07:51	113.5
18100140	02/08/2016 07:47	02/08/2016 07:51	113.5
18100140	02/08/2016 13:37	02/08/2016 13:46	113.7
18100140	02/08/2016 13:40	02/08/2016 13:40	113.8
18100140	02/08/2016 13:49	02/08/2016 13:50	113.9
18100140	02/08/2016 14:02	02/08/2016 14:05	114.1
18100140	02/08/2016 14:04	02/08/2016 14:05	114.2
18100140	02/08/2016 14:11	02/08/2016 14:16	114.3
18100140	02/08/2016 14:11	02/08/2016 14:16	114.3
18100140	02/08/2016 14:13	02/08/2016 14:16	114.3

> **Yellow messages** represent an abnormal and impending critical state, allowing you to specifically monitor it and avoid subsequent damage to the machines.

> **Red messages** indicate critical states that require the machine to be stopped immediately.

> **Black messages** keep you informed of the machine's drive engine status and are shown in SPN/FMI code.

SERVICE / HISTORY

The history view of the maintenance section contains all the information you need to ensure optimally maintained machinery. From maintenance reports on previous workshop visits to information on the type and

schedule of upcoming maintenance work, the service functions reliably ensure that your machines remain operational.



WIRTGEN GROUP

WITOS FleetView

Plant	21 Week: Status	Crack maintenance
Map	Crackmap Integration: ZL 8500/8500/8500	Maintenance type: <input type="text"/>
Message	Type: ZL 8500	Entered on: <input type="text"/>
Monitoring	Operating hours: 104 576	Maintenance at: <input type="text"/>
Performance data	Last maintenance: 04.11.2017 06:53	Entered by: <input type="text"/>
History	Last maintenance at: 04.11.2017 06:53	Entered for: <input type="text"/>
Maintenance	Last maintenance type: 500h-Service	Daily job number: <input type="text"/>
Signature data	Entered by: Service Center Wirtgen GmbH, Mannheim	Job: <input type="text"/>
History	Next maintenance at the latest (UTC): 00000	Job maintenance type: <input type="text"/>
Maintenance	Plant Area (km²): 00000	
Machine data	Can and note maintenance: 00000	
Machine data		

Maintenance History									
	Confidence	Energy	Act	Type / description	Operating hours	Last maintenance	Last maintenance at	Last maintenance by	Last maintenance for
1	250h-Service	11/11/2014 06:53	976	250h-Service	11/11/2014 06:53	976	250h-Service	11/11/2014 06:53	976
2	1000h-Service	11/11/2014 06:55	976	1000h-Service	11/11/2014 06:55	976	1000h-Service	11/11/2014 06:55	976

Create service

Service type

500h-Service

Executed on

03/07/2016 11:18

Serviced at

498

Executed by

Max Muster

Entered by

wifringst

Order number

123456

Info

Next service type

1000h-Service

Maintenance History			
Maintenance type	Executed on	Maintenance at [h]	Executed by
250h-Service	11/11/2014 06:53	976	Reperaturabteilung
1000h-Service	11/11/2014 06:55	976	Reperaturabteilung

APPLICATION

MASTER DATA

A client-specific machine ID can be added to the master data. There is also the option of indicating a contact person for each machine, such as the machine operator (1).

Owners can transfer or lend the machine to other WITOS FleetView users. The machine then appears in the new user's WITOS FleetView system for the time period specified by the owner (2).

The starting value can be individually configured in the operating hours calculation (3). In the case of machines without CAN bus connection, WITOS FleetView can count the number of hours that a machine has operated based on the D+ alternator signal.



The screenshot displays the WITOS FleetView software interface. The main window shows a table of machine data with columns for Customer designation, S/N, Product, S/N TCU machine, S/N TCU master data, S/N no. machine, S/N no. master, Type / appendix, Operating h, Brand, Headquarters, Dealer, Owner, and Holder. The table lists several machines, including ALB-Vorfurhrmaschine and ALB-Vorfurhrmaschine.

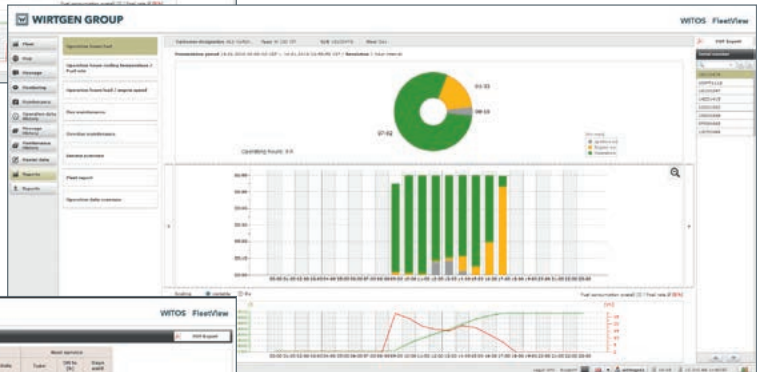
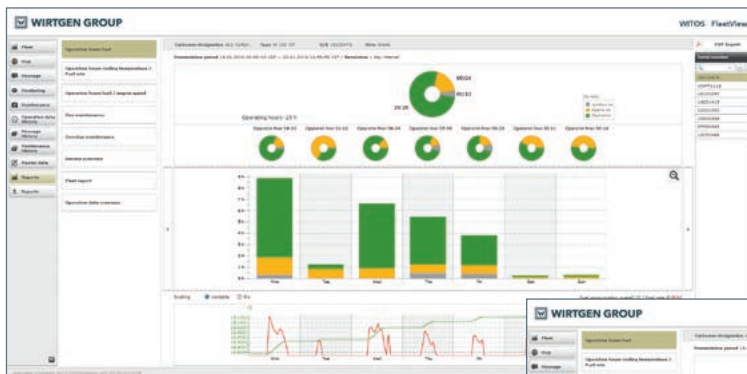
Overlaid on the main window are three sub-windows:

- Machine Configuration (1):** A window for editing machine data. It includes fields for Customer designation, S/N, S/N TCU master data, Type / appendix, Name, First name, Email, Phone, Headquarters, Subsidiary, Dealer, Service s., Responsible service s., Owner, and Holder.
- Distribute (2):** A window for distributing machine data. It includes fields for Number of machines, Owner (Fleet ID), Owner (Name), and Distribute up to. It has 'Ok' and 'Abort' buttons.
- Oh. calculation (3):** A window for configuring operating hours calculation. It includes fields for Customer description, Oh. calculation, Setpoint, New setpoint, S/N, Operating hours, Setpoint delta, and Last setpoint change.

REPORTS

There are three pre-defined reports available as an interactive graph. They show the user a breakdown of the operating hours over a defined period of time. The reports also show fuel consumption, fuel rate, engine speed, coolant temperature and engine load.

There are also five pre-defined reports in list format to give an overview of statuses throughout the machine fleet.



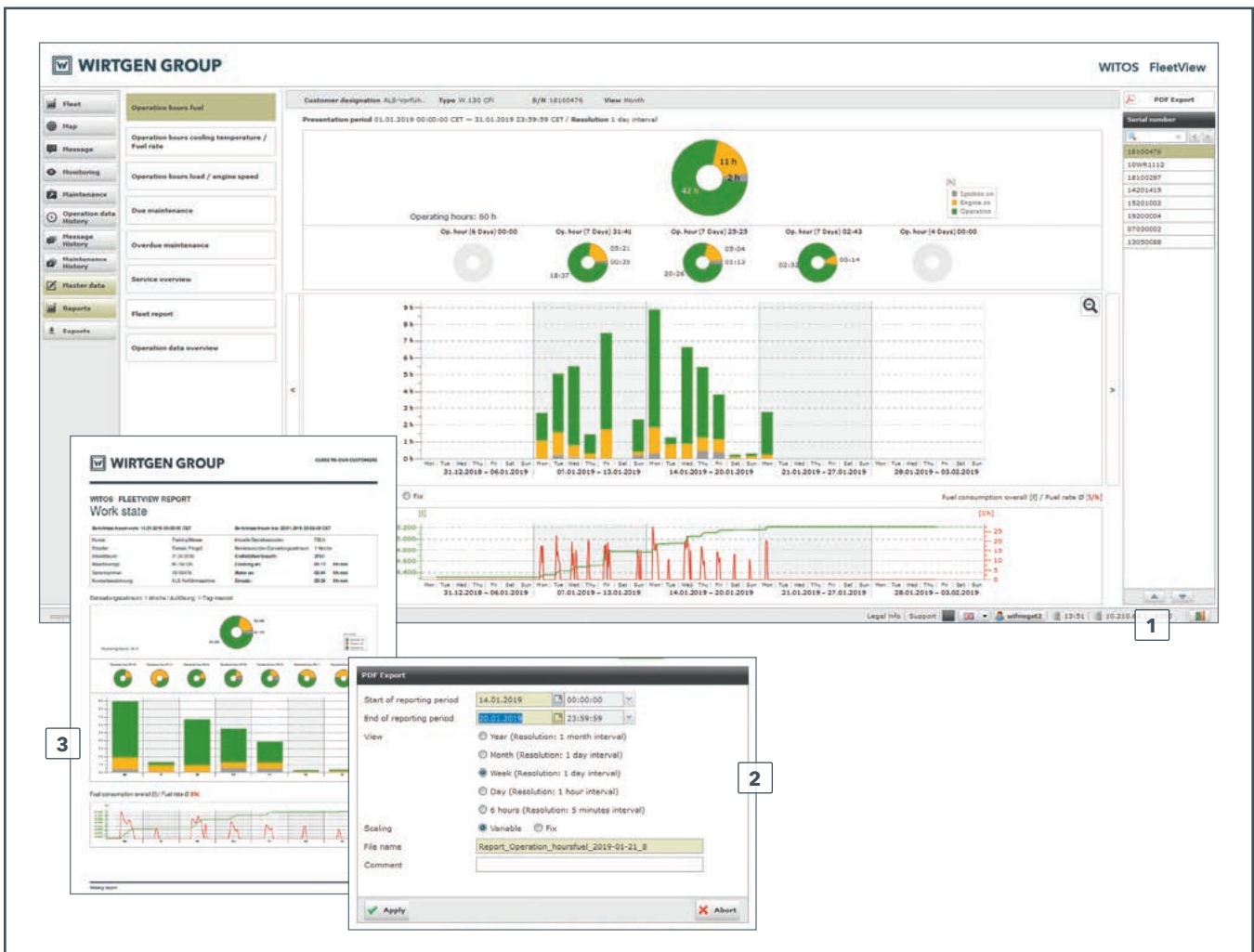
Machine ID	Machine Name	Machine Type	Machine Status	Machine Location	Machine Fuel Consumption (l/h)	Machine Fuel Rate (l/h)	Machine Engine Speed (RPM)	Machine Coolant Temperature (°C)	Machine Engine Load (%)
10000001	WITOS 10000001	WITOS 10000001	WITOS 10000001	WITOS 10000001	WITOS 10000001	WITOS 10000001	WITOS 10000001	WITOS 10000001	WITOS 10000001
10000002	WITOS 10000002	WITOS 10000002	WITOS 10000002	WITOS 10000002	WITOS 10000002	WITOS 10000002	WITOS 10000002	WITOS 10000002	WITOS 10000002
10000003	WITOS 10000003	WITOS 10000003	WITOS 10000003	WITOS 10000003	WITOS 10000003	WITOS 10000003	WITOS 10000003	WITOS 10000003	WITOS 10000003
10000004	WITOS 10000004	WITOS 10000004	WITOS 10000004	WITOS 10000004	WITOS 10000004	WITOS 10000004	WITOS 10000004	WITOS 10000004	WITOS 10000004
10000005	WITOS 10000005	WITOS 10000005	WITOS 10000005	WITOS 10000005	WITOS 10000005	WITOS 10000005	WITOS 10000005	WITOS 10000005	WITOS 10000005
10000006	WITOS 10000006	WITOS 10000006	WITOS 10000006	WITOS 10000006	WITOS 10000006	WITOS 10000006	WITOS 10000006	WITOS 10000006	WITOS 10000006
10000007	WITOS 10000007	WITOS 10000007	WITOS 10000007	WITOS 10000007	WITOS 10000007	WITOS 10000007	WITOS 10000007	WITOS 10000007	WITOS 10000007
10000008	WITOS 10000008	WITOS 10000008	WITOS 10000008	WITOS 10000008	WITOS 10000008	WITOS 10000008	WITOS 10000008	WITOS 10000008	WITOS 10000008
10000009	WITOS 10000009	WITOS 10000009	WITOS 10000009	WITOS 10000009	WITOS 10000009	WITOS 10000009	WITOS 10000009	WITOS 10000009	WITOS 10000009
10000010	WITOS 10000010	WITOS 10000010	WITOS 10000010	WITOS 10000010	WITOS 10000010	WITOS 10000010	WITOS 10000010	WITOS 10000010	WITOS 10000010

➤ Users can zoom in and out on the interactive graph to quickly determine how the machine was used in the selected period of time.

APPLICATION

REPORTS

The displayed report (1) can be exported in PDF format (3) to show a freely defined time period (2), allowing users to generate analyses for individual fields.





ADVANTAGES

ADVANTAGES FOR CUSTOMERS, CUSTOMER SERVICE & HIRERS

CUSTOMERS

- > Comprehensive, single-source fleet management
- > Greater availability thanks to fast machine status detection
- > Fewer downtimes thanks to fuel monitoring
- > Optimum machine scheduling thanks to GPS position and machine status
- > Surveillance to prevent unauthorised access to the machine
- > Greater availability thanks to predictive maintenance work planning

CUSTOMER SERVICE

- > Predictive planning for maintenance work
- > E-mail notification when servicing is due
- > Prioritisation of maintenance operations
- > Faster telephone troubleshooting thanks to machine messages
- > Target-oriented preparation of servicing operations thanks to fault localisation
- > Precise information on machine position for service technician deployment

HIRER

- > Precise machine location detection
- > Reports on the machine's usage
- > View of machine handling history
- > Clear basis for calculating machine hire

The WITOS FleetView telematics system with WITOS FMI includes the WITOS control unit (TCU), use of the web-based fleet management system and the WITOS maintenance fee for 3 years from start-up (further free use of the system is possible after this term has elapsed, but cannot be guaranteed due to changes to mobile phone standard (e.g. from 2G to 3G), network coverage problems or similar).





WIRTGEN GROUP



WIRTGEN GROUP

Branch of

John Deere GmbH & Co. KG

Reinhard-Wirtgen-Str. 2

53578 Windhagen

Germany

T: +49 2645 / 13 10

F: +49 2645 / 13 13 97

customersupport@wirtgen.de

 www.wirtgen-group.com