



## JCB and Groeneveld

### **A reliable combination for productivity**

*Increased safety*

*Improved uptime*

*Reduced costs*

*Increased  
comfort for the  
machine operator*

The highest priority for modern earth moving contractors is safety. This applies also to the companies that work in mining and construction. With the large number of machines on site guaranteeing safety is a continuous challenge. Groeneveld's Greensight obstacle detection system offer an excellent solution for increasing safety. The main benefits at a glance:

- Ultrasonic acoustic warning system
- Improved safety around the machine
- Less chance of damage
- Increased uptime
- Fully integrated and modular system
- No information overload for the machine operator
- Fully adjustable to the application and to customer's wishes
- Can be enhanced with Smart alarm

JCB offers this high-end safety support system ex-factory for their wheel loaders. Professionally installed with the solid back-up of both the global JCB and Groeneveld organisations.



**GROENEVELD**

LUBRICATION SOLUTIONS  
BY TIMKEN

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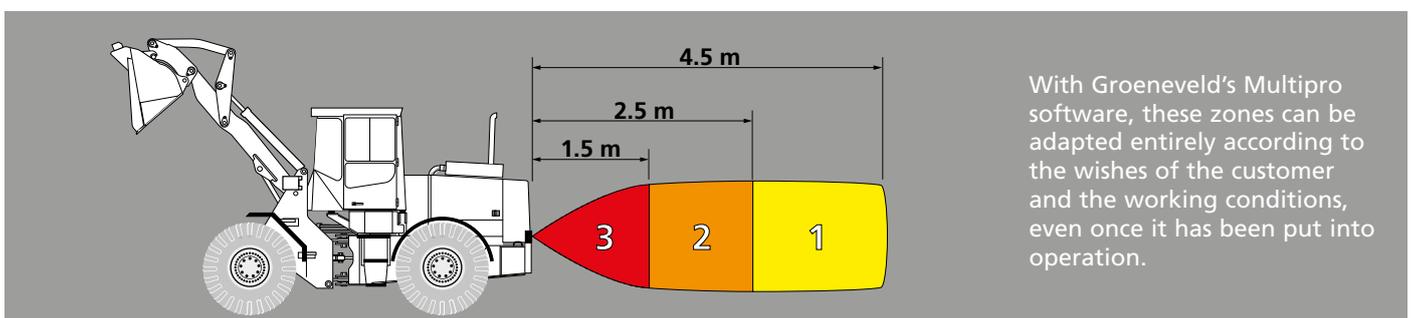


## Greensight for off-road equipment

Greensight is an ultrasonic acoustic obstacle detection system. Thanks to the ultrasonic operation the system detects obstacles in the pre-set zones very accurately. As soon as an obstacle is detected, an acoustic signal is sounded for the operator in the cab. Therefore he is able to concentrate fully on his work, being warned if there is a person or object in the detection area.



The obstacle detection system offers the operator safety information about the free space in the surroundings of the machine.



With Groeneveld's Multipro software, these zones can be adapted entirely according to the wishes of the customer and the working conditions, even once it has been put into operation.



## Modular concept

The Greensight safety support system is based on a modular concept. Moreover, it is an integrated solution that can be adapted to the application perfectly. A wheel loader has different requirements for a detection system than other machines. The detection areas can be adjusted as desired after it has been put into operation. All of the components shown below can be connected individually on the control unit.

### 1. Control unit

The control unit is the core of each Greensight system. For smaller systems, a control unit with six connections is available. For more extensive systems, there is an control unit with 15 connections. On this basis, each system can be built up modularly.

### 2. Sensors

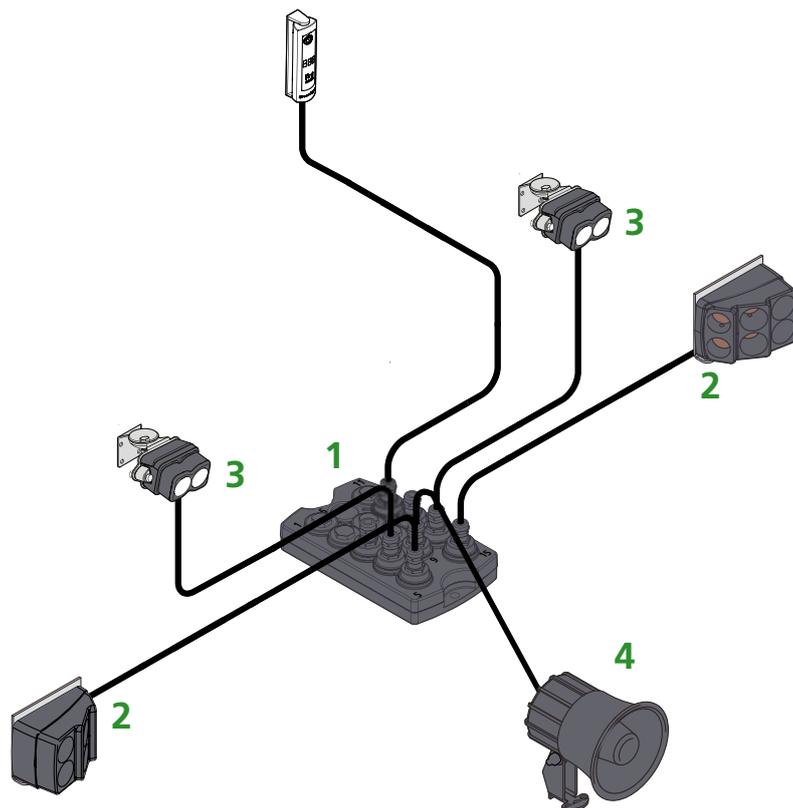
The basic components of the Greensight detection system are the two sensors on the rear of the vehicle or machine. The sensors detect objects that have a diameter larger than 75 mm. The in-cab display warns the operator by means of light and acoustic signals.

### 3. Additional sensors

To expand the obstacle detection system, sensors are available to mount on top of or on the sides of the vehicle or machine. This increases the detection area of the vehicle or machine.

### 4. Smart alarm

The Greensight ultrasonic safety support system warns the operator by means of acoustic and light signals. By expanding the system with a Smart alarm, people located near the vehicle or machine are also warned as soon as Greensight observes them or an obstacle. Only then does the smart alarm begin operating; it is not standard while reversing. Thus an acoustic signal is given only when it is necessary, warning bystanders to stay alert. The volume of the Smart alarm is automatically adjusted depending on the amount of noise in the background.





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## GROENEVELD LUBRICATION SOLUTIONS

### A global player

Since its foundation in 1971 in Gorinchem, the Groeneveld company has developed into a global concern with approximately 600 employees. Groeneveld has over 30 branches in more than 20 countries.

In many countries, the company is also represented by independent distributors and dealers – all just as driven as our own organisation to offer added value to the customer's company.



**Service is only a  
phone call away!**

### Twin

#### Parallel lubrication system

Twin is a dual-line lubrication system that offers the perfect solution for, e.g. large wheel loaders, dump trucks and excavators, which often have long lines. The system works with relatively low pressure, allowing the preservation of the quality and structure of the grease. Twin is also characterized by a very accurate dosing per lubrication point, regardless of the ambient temperature.



### Unique characteristics

- Grease delivery and quantity independent to ambient temperature and grease viscosity
- Modern pump with real-time clock, memory, CAN-Bus connection and follower plate
- Suitable for bio-degradable greases
- High quality metering units and distribution blocks
- In-cab display comes as a standard
- Available with reservoir capacity from three up to 200 litre
- Easy to program
- Coupling with filter prevents pollution during refilling

[www.jcb.com](http://www.jcb.com)  
[www.groeneveld-group.com](http://www.groeneveld-group.com)