



*No need for manual  
oil level checks*

*Increased uptime  
and productivity*

*Supporting  
preventative  
maintenance*

## Groeneveld Oilmaster Always the perfect engine oil level

Ever expanding global goods flows drive the need for increased efficiency, productivity and safety. It's a race without a finish.

With continuity of the operation as the overriding theme. Groeneveld is there to support port operators and contractors, all over the world. With the well-known industry-leading automatic lubrication systems. And with the unique Oilmaster oil management system, which makes daily oil checks unnecessary, while ensuring the right oil level. Always. That's why the new VDL Automated Guided Vehicles offer this unique system as a standard. Professionally designed and installed ex-factory, offering great benefits to port operators and contractors.

### Benefits of the Oilmaster oil management system

- Automatic oil level monitoring and topping-up when needed
- Always the right oil specification
- Supporting longer maintenance intervals
- Avoiding engine damage as a result of a too low or too high oil level
- Avoiding damage of the after treatment system
- Reduced oil consumption
- Electronic data storage of oil consumption

*Lower cost . . . higher productivity!*





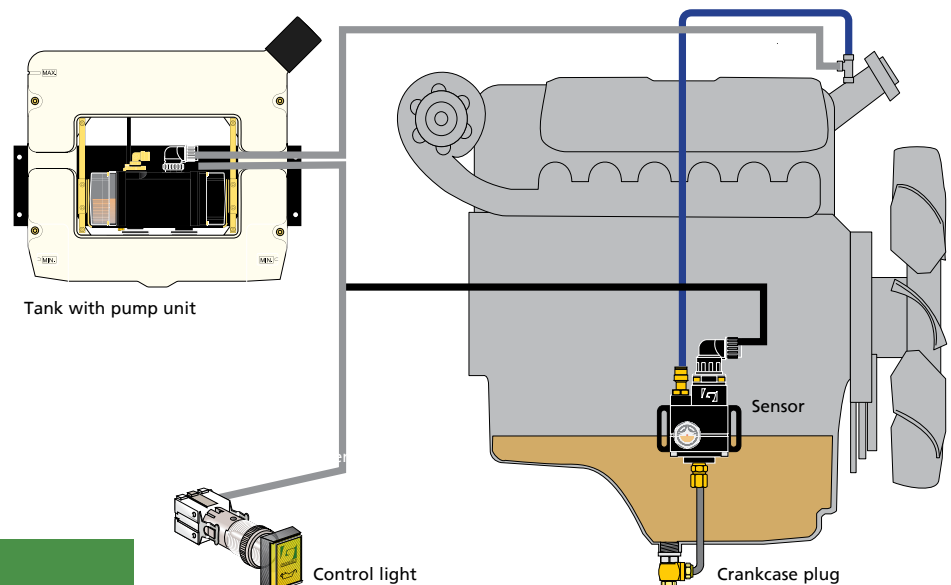
## Groeneveld Oilmaster

### *Best invention since sliced bread*

The principle of the Groeneveld Oilmaster oil level monitoring system is simple and smart at the same time. The system monitors the oil level in the engine by means of a dedicated sensor and tops up from the integrated tank when the engine oil is below the pre-set level. And according to a fixed, engine specific protocol.

When topping-up, the oil is pumped out of the tank and transferred into the filling chamber in amounts of 0.5 liter each time. In this way exactly a half a liter of oil is delivered to the engine sump, independent of temperature and viscosity. Every time when 0.5 liter of oil is pumped into the engine, it is stored in the internal memory bank of the Oilmaster. This allows for easy and accurate monitoring of the oil consumption of the engine, thus supporting preventative maintenance.

### Oilmaster system overview



#### Other Port Equipment Applications:

- Automated Guided Vehicles (AGV's)
- Straddle carriers
- Terminal tractors
- Mobile harbor cranes
- Reach stackers and empty container handlers
- And many other applications where continuity and productivity are key ...

