

## Automatic OnePlus Greasing System

Your vehicle is equipped with a Groeneveld Automatic OnePlus Greasing System. Designed specifically for compact off-road machines, industrial machines and trucks that specifically require NLGI-2 grease. The system will lubricate all points connected to the lubrication system on a timed cycle, with the correct quantity of grease.

### The system consists of

- an electric grease pump with integrated control unit
- progressive distribution block(s)

### Optional

- a pressure gauge at the pump outlet
- a distribution block switch combined with an indicator lamp on the dashboard

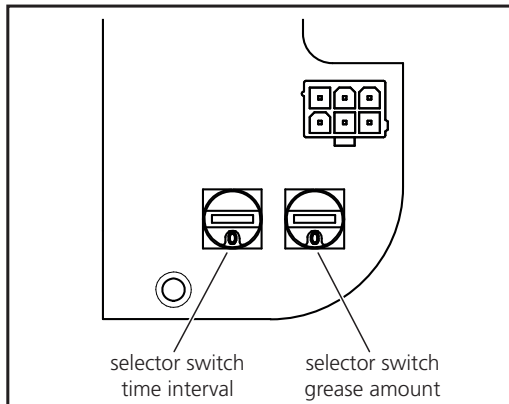
### System performance

The system performs all operations automatically. After ignition is switched on the pump supplies at pre-defined intervals measured quantities of grease to all connected points. With the test switch at the pump a test cycle can be triggered. The interval and grease amount can be selected on the integrated timer, behind bottom cover of the pump. An optional block switch can be used to monitor the function of the distribution block. An indicator lamp, delivered with the optional block switch, warns the operator in case of a system failure.

### Selector switches

The integrated electronic timer features 2 switches for controlling:

- the interval in between the cycle starts and
- the amount of grease per greasing cycle



### Setting possibilities

	Time interval	Grease amount
1	5 minutes	1 cc per cycle
2	10 minutes	2 cc per cycle
3	15 minutes	3 cc per cycle
4	30 minutes	4 cc per cycle
5	45 minutes	5 cc per cycle
6	60 minutes	6 cc per cycle
7	90 minutes	7 cc per cycle
8	120 minutes	8 cc per cycle
9	180 minutes	9 cc per cycle
10	240 minutes	10 cc per cycle

### Note

In individual cases the times and amounts behind the selector settings can be customized and differ from the above displayed factory settings.

### Test

In order to check the system a single lubrication cycle can be performed.

- Switch ignition on.
- Depress test button for 2 to 5 seconds.

The pump will start a test cycle the moment the test button is released. During this test cycle the optional lamp will flash (1 second on / 1 second off).

### Filling of the reservoir

If the follower plate of the reservoir has reached the minimum grease level (indicated on the reservoir), the reservoir has to be refilled as soon as possible.

- Remove the dust cap from the filler coupling.
- Carefully clean the filler coupling and the coupling on the filler-hose.
- Fix the filler hose on the filler coupling.
- Fill the reservoir up to the maximum level indicated on the reservoir.
- Remove the filler hose and fit the dust cap.

### Grease recommendations

Grease should not contain graphite or PTE. Use of the correct grease in the system is of utmost importance. Groeneveld recommends the use of GreenLube grease. The use of the incorrect type of grease can lead to:

- excessive component wear.
- reduced efficiency of the system.

### Fault diagnosis

Fault	Cause	Action
All connected grease points are dry.	<ul style="list-style-type: none"> <li>- grease reservoir is empty.</li> <li>- grease output pump too small or interval period too long.</li> <li>- system is blocked by a contaminated distribution block (max. pump pressure reached).</li> <li>- system is blocked by a contaminated grease point.</li> </ul>	<ul style="list-style-type: none"> <li>- fill the reservoir and bleed pump.</li> <li>- choose larger output and or shorter interval period.</li> <li>- check which block is causing the blockage and clean or replace the block.</li> <li>- check which point is causing this and resolve the blockage.</li> </ul>
All connected grease points are over greased.	<ul style="list-style-type: none"> <li>- grease output pump too large or interval period too short.</li> </ul>	<ul style="list-style-type: none"> <li>- choose smaller output and or longer interval period.</li> </ul>
All points of a single distribution block in the system do not receive sufficient grease.	<ul style="list-style-type: none"> <li>- chosen quantity for this block on the main divider block is too small.</li> <li>- main divider block damaged.</li> </ul>	<ul style="list-style-type: none"> <li>- install main divider block layer with larger output for this block.</li> <li>- replace main divider block.</li> </ul>
All points of a single distribution block in the system are over greased.	<ul style="list-style-type: none"> <li>- chosen quantity for this block on the main divider block is too large.</li> <li>- main divider block damaged.</li> </ul>	<ul style="list-style-type: none"> <li>- install main divider block layer with larger output for this block.</li> <li>- replace main divider block.</li> </ul>
One point is dry, while others receive sufficient grease.	<ul style="list-style-type: none"> <li>- grease line is damaged.</li> <li>- chosen quantity for this point too small.</li> <li>- block is damaged.</li> </ul>	<ul style="list-style-type: none"> <li>- repair grease line.</li> <li>- install block layer with larger output for this point.</li> <li>- replace the block.</li> </ul>
One point is over greased, while others receive sufficient grease.	<ul style="list-style-type: none"> <li>- chosen quantity for this point too large.</li> <li>- block is damaged.</li> </ul>	<ul style="list-style-type: none"> <li>- install block layer with smaller output for this point.</li> <li>- replace the block.</li> </ul>

### Signals optional failure indicator lamp

Signal	Cause / Meaning	Action
Lamp does not light up the moment ignition is switched on.	<ul style="list-style-type: none"> <li>- Lamp broken.</li> <li>- System fuse broken.</li> <li>- Wiring problem.</li> </ul>	<ul style="list-style-type: none"> <li>- Replace the lamp.</li> <li>- Replace the fuse.</li> <li>- Check the wiring.</li> </ul>
Lamp lights up for 3 seconds, direct after ignition is switched on.	<ul style="list-style-type: none"> <li>- System is powered and the lamp is OK.</li> </ul>	
Lamp blinks for a short period, with a frequency of 1second on and 1 second off.	<ul style="list-style-type: none"> <li>- An automatic greasing cycle is performed.</li> <li>- A test cycle is performed.</li> </ul>	<ul style="list-style-type: none"> <li>- Lamp flashing during a cycle can be switched off on request with a diagnostic tool.</li> <li>- Somebody pushed the test button.</li> </ul>
Lamp continuously lit.	<ul style="list-style-type: none"> <li>- Serious system error is detected.</li> </ul>	<ul style="list-style-type: none"> <li>- Check the functionality of the pump and distribution block(s).</li> <li>- Contact your Groeneveld dealer.</li> </ul>

### Regulations

This pump complies to UN/ECE Regulation 10, European Directive 2004/104/EC and the International Standard ISO13766.