

TriPlus Truck-3 and Trailer-3



F211955R00

EN

User's Instruction



Your efficiency is our Challenge



Automatic TriPlus Greasing System

This vehicle is equipped with a Groeneveld Automatic TriPlus Greasing System.

Featuring key

The TriPlus Greasing System will automatically and unconditionally grease all connected grease points on a timely basis (cycle) with the correct quantity of grease.

The system consists of

- a grease pump with integrated control unit
- progressive distribution blocks
- a failure indicator lamp
- an optional cycle mode switch with an integrated lamp

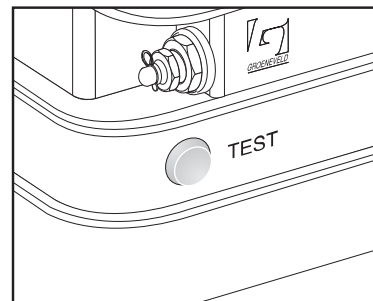
System performance

The system performs all operations automatically. After the ignition is switched on or is in operation the pump will at pre-defined intervals supply measured quantities of grease to all the points. Five seconds after the ignition is switched on the signal lamp will light up for three seconds.

The test push-button

The test push-button on the pump unit has three functions:

- Performing a cycle test via one of the grease outlet(s) of the pump unit.
- Retrieving error messages stored in the memory of the control unit.
- Lamp reset after solving the error.



Performing a cycle test

A cycle test can be performed using the test push-button, as follows:

1. The supply voltage for the pump unit must be available (ignition, brake lights or tail lights on).
2. Push the test push-button (less than 1 second) 1, 2 or 3 times to perform a cycle test at outlet 1, 2 or 3 respectively. Provided that the preset delivery amount per outlet is more than 0cc.
3. After two seconds the cycle test starts.

During the cycle test the signal lamp will flash at a particular frequency (see table on page 4). The flashing frequency indicates at which outlet the cycle test is being performed.

To end the cycle test immediately press the test push-button once.

Any errors that occur during the cycle test will not be indicated by the signal lamp and will not be stored in the memory of the control unit.

Grease recommendations

Grease should not contain graphite or PTFE. The use of correct grease in the TriPlus system is of utmost importance. The use of grease with a maximum of 5% molybdenum disulphide (MoS₂) is permitted.

Groeneveld recommends the use of its GreenLube grease.

Consult your local Groeneveld dealer prior to change of grease (specifications) or any other inquiries you may have.

Regularly checks of the greasing system

Check the following points of the TriPlus greasing system:

1. The grease level in the reservoir of the pump unit (refill on time);
2. The pump unit for damage and leakage;
3. The operation of the whole greasing system. Perform a cycle test for every grease outlet of the pump unit. Retrieve the fault codes stored in the control unit, either by using the test push-button on the pump unit or by connecting a UniGINA to the control unit;
4. The primary and secondary grease lines for damage and leakage;
5. The grease points, collar of fresh grease should be present at all grease points.

Filling the grease reservoir

The grease pump must be suitable for class 2 grease.

First fill the filling hose with grease (if the filling pump or grease barrel is new).

This prevents air being introduced in the grease reservoir.

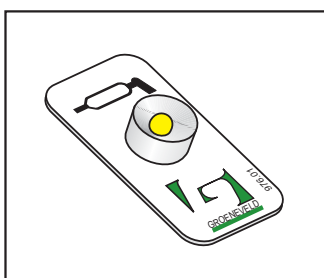
1. Remove the dust cap of the filler coupling.
2. Clean the filler coupling and the coupling on the hose thoroughly.
3. Lock the hose onto the filler coupling or position the grease gun onto the filler coupling.
4. Fill the reservoir up to its maximum level, as indicated on the reservoir. Never fill the reservoir any higher than the maximum level indicated, otherwise the follower plate may become damaged.
5. Remove the filling hose.
6. Clean the dust cap and filling coupling with a clean rag. Place the dust cap back onto the filler coupling.

NOTES

If the pumping action seems to go heavy, check the filter behind the filling coupling on the pump unit. Clean the filter and the filler coupling. Also check the filling hose for obstructions and clean it.

Any air that may be introduced beneath the follower plate will escape through an opening at the top of the guide rod of the follower plate. These air inclusions, together with any excess grease, will exit via the de-aerating opening at the side on the pump unit.

The signal lamp



The signal lamp is mounted in the field of vision of the driver and out of direct sunlight, because of the visibility of the signals. The lamp shows the status of the greasing system and malfunction reports by means of flashing codes. In the table below, an overview of normal signals is given. For malfunction signals refer to paragraph "The signal lamp error flash codes" on page 5.

The signal lamp flash codes

Flash code	Moment	Significance
1 x 3 seconds on	5 seconds after switching on contact.	The supply voltage for the control unit is available and the signal lamp is OK.
	After the additional timer input switch S1(P3) or S2(P7) becomes active.	Only happens when the parameter lamp display function has been set correctly.
Repeatedly: 1 x 0.3 seconds on, followed by a pause of 2 seconds	After momentarily pressing the test push-button once.	A cycle test is being performed via grease outlet 1.
Repeatedly: 2 x 0.3 seconds on, followed by a pause of 2 seconds	After momentarily pressing the test push-button twice.	A cycle test is being performed via grease outlet 2 (truck mode only).
Repeatedly: 3 x 0.3 seconds on, followed by a pause of 2 seconds.	After momentarily pressing the test push-button three times.	A cycle test is being performed via grease outlet 3 (truck mode only).
Continuously	When a pump cycle was interrupted.	The maximum number of attempts (parameter set by an UniGINA) to perform a grease cycle has been reached.
	When a fatal error is detected.	Precisely which error occurred can be determined by using an UniGINA.
1 second on, 1 second off continuously	When a low grease level is detected.	Provided the parameter settings have been set to act this way.
0.5 second on, 0.5 second off continuously	When pump cycle is executed.	Provided the parameter settings have been set to act this way.

The signal lamp error flash codes

The signal lamp indicates the fault codes by flashing. Dozens are shown by long pulses (0,5 seconds). Units are shown by short pulses (0,15 seconds).

Examples

Pulses	Error code
long, short, short, short, short	14
long, long, short	21

Error code	Malfunction
10	Currently no pending errors
11	Block switch A fault
12	Outlet 1 blocked
13	Outlet 2 blocked
14	Outlet 3 blocked
15	Empty reservoir. (See "Filling the grease reservoir" on page 3).
16	Low level. (See "Filling the grease reservoir" on page 3).
21	Revolution fault
22	Open load pump motor
23	Over current pump motor
24	Open load valve A
25	Over current valve A
31	Open load valve B
32	Over current valve B
35	Short circuit pump motor
41	Voltage drop
42	Clock fault
43	Clock battery low
44	Parameter fault
45	Power relay fault
51	Block switch B fault
52	Block switch C fault
53	Open load block switch A
54	Open load block switch B

Error code	Malfunction
55	Open load block switch C
61	High temperature PCB exceeded
62	Low temperature PCB exceeded

At any malfunctions with the automatic greasing system, please contact your Groeneveld dealer as soon as possible.



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