

**Operating instructions and spare parts book**

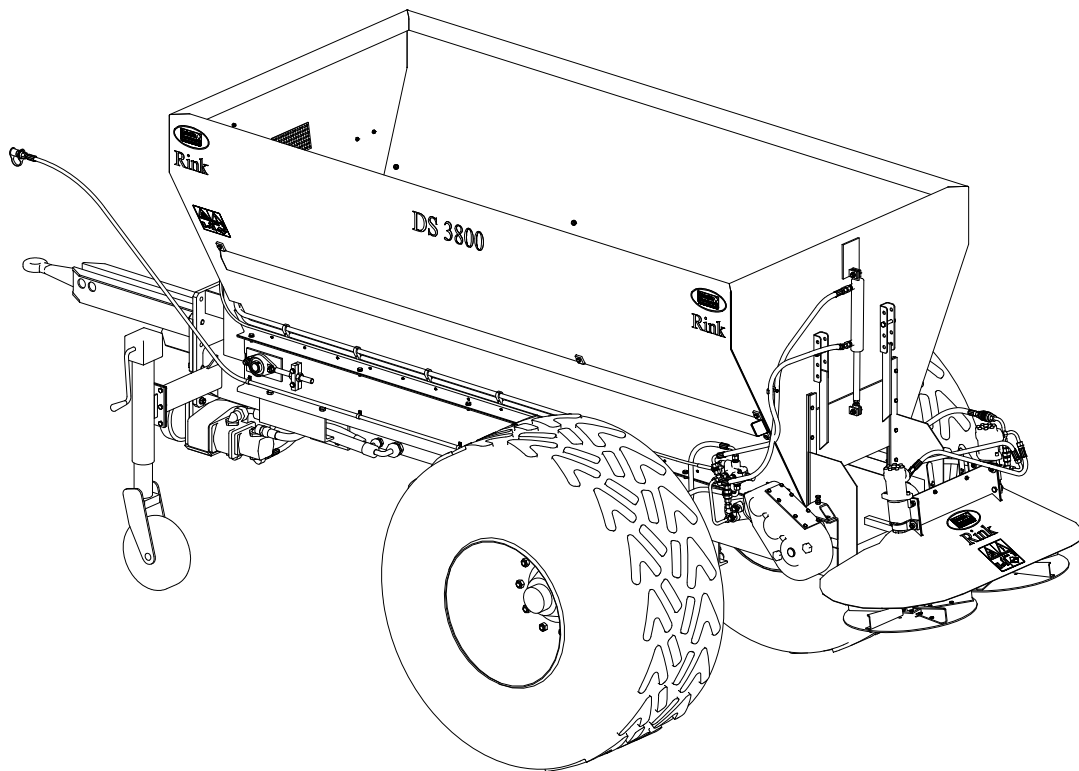


## **RINK Model DS 3800**

**Serial number:**

Kwekerijweg 8  
3709JA Zeist  
The Netherlands  
T: (31)306933227  
F: (31)306933228  
E: [verti-drain@redexim.com](mailto:verti-drain@redexim.com)  
[www.redexim.com](http://www.redexim.com)

**Original operating manual**



**TO ENSURE SAFE USE OF THE MACHINE AND OPTIMAL RESULTS, IT IS NECESSARY TO READ THESE INSTRUCTIONS CAREFULLY BEFORE OPERATING THE MACHINE**

## **TABLE OF CONTENTS**

<b>Operating instructions and spare parts book</b> .....	<b>1</b>
<b>SAFETY REGULATIONS</b> .....	<b>3</b>
<b>BRIEF DESCRIPTION</b> .....	<b>5</b>
<b>TECHNICAL DATA</b> .....	<b>5</b>
<b>INITIAL OPERATION</b> .....	<b>6</b>
<b>SERVICE</b> .....	<b>7</b>
Attaching and detaching .....	7
Before each use .....	7
Loading .....	7
<b>SPREADING</b> .....	<b>8</b>
Control elements .....	8
Setting spreading thickness .....	9
Spreading table .....	9
Spreading various scatter materials .....	10
Disc setting for uneven spreading pattern .....	10
<b>CARE and MAINTENANCE</b> .....	<b>11</b>
Lubricate bearings with multipurpose grease (after every 50 hours of operation) .....	11
Change oil of the conveyor belt transmission (every 100 operating hours) .....	12
Adjusting overpressure and throttle valve .....	12
Service shaft (every 100 operating hours) .....	13
Tensioning conveyor belt (if slipping) .....	13
Removing and installing conveyor belt .....	14
Tensioning the conveyor belt after installation .....	14
External oil supply # .....	15
Lighting system .....	16
Troubleshooting .....	17
<b>REPLACEMENT PARTS</b> .....	<b>18</b>

**Subject to technical changes.**

***The equipment marked # is only available as special equipment.***



## SAFETY REGULATIONS



- The **DS3800 RINK disc spreader** is built exclusively for spreading fine-grained, loose grit such as sand, trickle, granules or the like.
- Any other use shall be deemed improper use. The manufacturer shall not be liable for any damage resulting. The user alone bears the risk.
- Proper use also includes compliance with the operating, maintenance and service conditions prescribed by the manufacturer.
- The **DS3800 RINK disc spreader** is state-of-the-art and reliable; however, the **RINK DS3800 disk spreader** may **pose a risk** to life and limb of the user and strangers unless used, maintained or repaired by persons familiar with and aware of the dangers.
- Every person who is responsible for the operation, maintenance and repair of the spreader must have read and understood the operating instructions and in particular the chapter on **safety regulations**.
- For repairs only use **original spare** parts from **the manufacturer**.
- In addition to the instructions in this operating manual, the general **safety and accident prevention regulations** must be observed.
- When using public roads, the respective provisions (StVZO) apply.
- The spreader may only be carried on public roads if registered to do so. TÜV's full report and necessary additional safety devices (lighting, wheel chocks)# are available on request.
- Giving other people a ride is not allowed!
- **Climbing onto the loading bridge is prohibited while the spreader is in use.** A note is attached to the wheel cover on both sides of the **DS3800 RINK disc spreader**. This note must always be easy to read and must be replaced if damaged.
- The user **must** inspect the **RINK disc spreader DS3800** for **visible damage and defects before use**. Modifications to the **DS3800 RINK disc spreader** (including operation), that may negatively affect safety, must be eliminated immediately. For safety reasons, no modifications to the **DS3800 RINK disc spreader** (with the exception of modifications/additions approved by the manufacturer) may be made to the machine. If modifications are made to the **DS3800 RINK disc spreader**, the current CE of the machine will become **invalid** and must be renewed by the person who made these modifications.



## SAFETY REGULATIONS



- The permissible vertical load of the towing vehicle must be observed.
- Before starting, check that visibility in the area around you is sufficient.
- During operation, nobody should be in the danger area of the spreader, owing to the risk of injury from rotating parts and thrown foreign objects.
- Be sure to wear appropriate clothing. Wear safety shoes and long pants. Long hair must be tied up. Do not wear loose clothing. Use appropriate personal protective equipment in accordance with applicable health and safety regulations.
- On the **DS3800 RINK disc spreader**, a noise of 74 dB (a) develops in the immediate vicinity of the machine.
- Wear certified hearing protection when working with the machine.



- Adjustment and repair work may only be carried out by authorised personnel. Before carrying out any repairs to the hydraulic system, make sure it is depressurised. Check hydraulic hose lines regularly and replace if damaged or ageing. The hydraulic hose lines must meet the technical requirements of the equipment manufacturer.



***Used oil poses a risk to the environment; please dispose of used oil in an environmentally friendly manner.***

## BRIEF DESCRIPTION

The **DS3800 RINK disc spreader** is meant exclusively for spreading fine-grained, loose grit such as sand, trickle, granules or the like. The spreader is driven by a transmission with hydraulic motor for a conveyor belt and a hydraulic motor for the spreading disc. The speed of the hydraulic motors for the conveyor belt and the spreading discs are infinitely adjustable via a respective flow regulator. The spreading material can therefore be precisely metered. Spread width or spread rate can be determined by driving speed, spreading plate and conveyor belt speed.

## TECHNICAL DATA

### Dimensions of the DS3800PB RINK disc spreader

Length .....	5.20 m
Width .....	2.45 m
Height .....	2.25 m

**Load quantity** ..... 3.8 m<sup>3</sup>

### Weights

permissible total weight .....	8000 kg
permissible axle load .....	7000 kg
permissible total load .....	1000 kg
Empty weight .....	1800 kg

**Spreading width** (infinitely adjustable) ..... up to 14 m

**Spreading thickness** ..... 0.3 - 20 mm

**Tires** ..... 710/50 R 26.5  
..... Vredestein Pro

**Tire pressure** ..... 2.0 bar

**Perm. Top speed** ..... 25 km/h

**Tractor strength** ..... at least 44 KW (60 HP)

**The nameplate is attached front right of the spreader.**

## INITIAL OPERATION

- Tighten the wheel nuts.
- Check wheel hub clearance and adjust if necessary.
- Check the tyre pressure.
- If the **RINK DS3800 disc spreader** is to be used on public roads, the licence plate must be mounted on the rear left on the bracket provided. (Only possible after approval and registration)
- Check lighting system #.



**Check these points again after the first drive under load!**

# SERVICE

## Attaching and detaching

- Couple **DS3800 RINK disc spreader** to towing vehicle.
- Connect hydraulic lines (3) and (4) to towing vehicle as a closed oil circuit is required. (see page 9 – Fig. 1)
- Secure the valve actuator (5) for the conveyor belt to the towing vehicle using the supplied holder (see page 9 - Fig. 1).
- **For external oil supply** # (see page 16) plug the plug-on pump onto the PTO shaft of the tractor and secure against twisting using the attached torque support. The power take-off may only be engaged when the motor is not running, as switching on the PTO shaft under load can cause the gear-pump connecting pinion to break. For optimum operation, the PTO speed should be about 450 1/min; this corresponds to 25 l/min. The oil temperature should be around 25°C when starting work; if necessary, warm up the hydraulic system. A too low PTO speed or too low oil temperature, will affect the spreading power. Before starting work, check the oil level on the hydraulic tank (middle of inspection glass). The hydraulic system is filled with **Plantosyn 3268 ECO** hydraulic oil at the factory. Too little oil can damage or destroy the hydraulic pump.
- Attach the seven-pin plug of the lighting system to the towing vehicle. (See page 17 – Fig. 10).
- Fully crank up the jockey wheel, then loosen the jockey wheel clamp and pull the jockey wheel up as far as possible and clamp.



**Assemble hydraulic lines in such a way that they do not touch the ground or rub against the towing vehicle.**

### Couple in reverse!



**Depressurise hydraulics to towing vehicle before coupling.**

### Before each use

- Check the **RINK DS3800 disc spreader** for **any** externally visible damage and repair, if necessary.
- Check the tyre pressure.
- Check the running track of the conveyor belt; readjust if necessary, as the conveyor belt must not touch the side (see page 15).
- Check lighting system #.

### Loading

- Note the desired maximum ground pressure.
- When loading observe the permissible total weight.

# SPREADING

The disc spreader is automatically activated once the hydraulics are turned on. The conveyor belt and gate (6) are activated by opening the valve (5), after which the gate (6) and then, after a short delay, the conveyor belt is activated. Before starting work, preselect gate position AG.

(see page 10)

## Control elements

- (1) Speed controller of conveyor belt
- (2) Speed controller of spreading discs
- (3) Return line
- (4) Pressure hose
- (5) Valve actuation for conveyor belt and gate
- (6) Gate (see page 10 Fig. 2)
- (7) Guide plate (see page 11 Fig. 3)

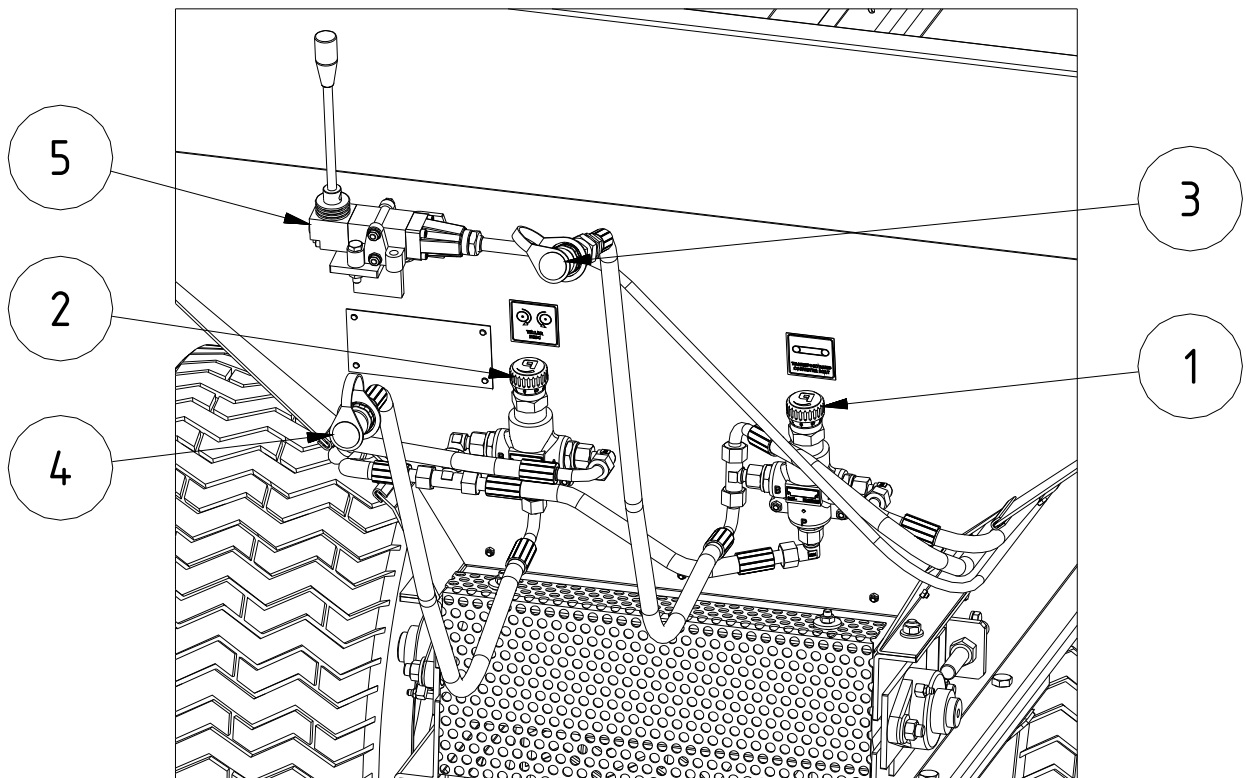


Fig. 1: Control elements



## Setting spreading thickness

The spreading thickness depends on:

- the speed of the towing vehicle
- the speed of the conveyor belt - regulator (1)
- the speed of the spreading discs - regulator (2)
- the opening (AD) of the automatic gate (6)

## Spreading table

Spreading rate	Spreading disc	Conveyor belt	Slide position	Spread width
	Controller (2)	Controller (1)	Gate (6)	
<b>Slightly</b>	8-10	8-10	A	10 m
<b>Middle</b>	6-7	8-10	B	8 m
<b>Thick</b>	4	8-10	C-D	4 m

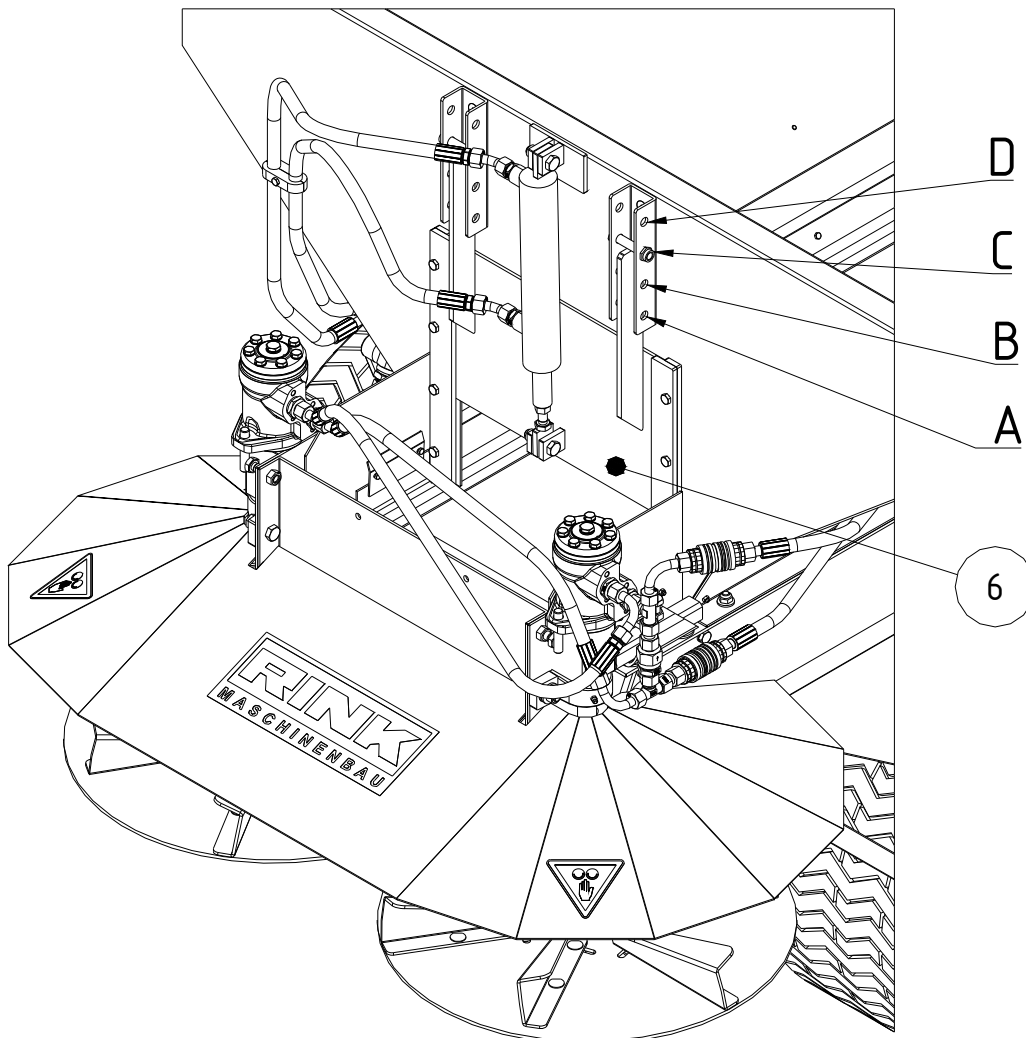


Fig.2: Control elements

## Spreading various scatter materials

Different scatter materials require different settings. The **DS3800 RINK disk spreader** can be adapted to all scatter materials by choosing the following options.

- Rotation of the mechanical shovels (see disc setting for uneven spreading pattern - Fig. 4)
- Regulating the conveyor belt speed using the controller (1) (see page 9 - Fig.1)
- Regulating the conveyor spreading speed using the controller (2) (see page 9 - Fig.1)
- Adjusting the opening A-G of the automatic gate (6) (see page 10 - Fig. 2)
- Increasing or decreasing the driving speed
- When using very moist material and large spreading thickness, the guide plate (7) can be removed from the spreader (using nut M8) (Fig. 3).

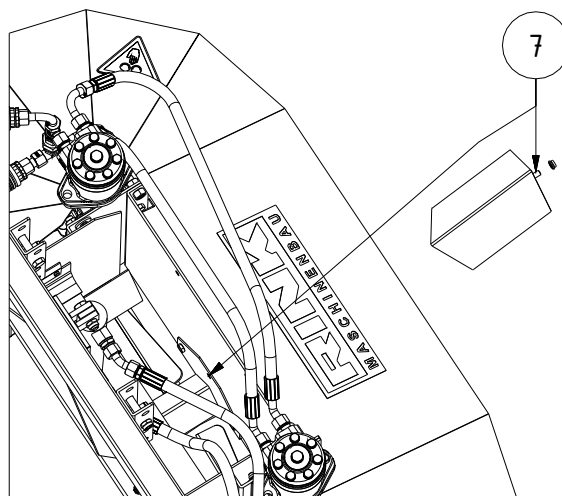


Fig.3: Spreader

## Disc setting for uneven spreading pattern

### Rotating the spreading disks

The mechanical shovels (8) can be adjusted as needed inside the (Fig. 4) slots.

Material concentration on the outside - set every other disc (8) in direction X

Material concentration on the inside - set every other disc (8) in direction Y

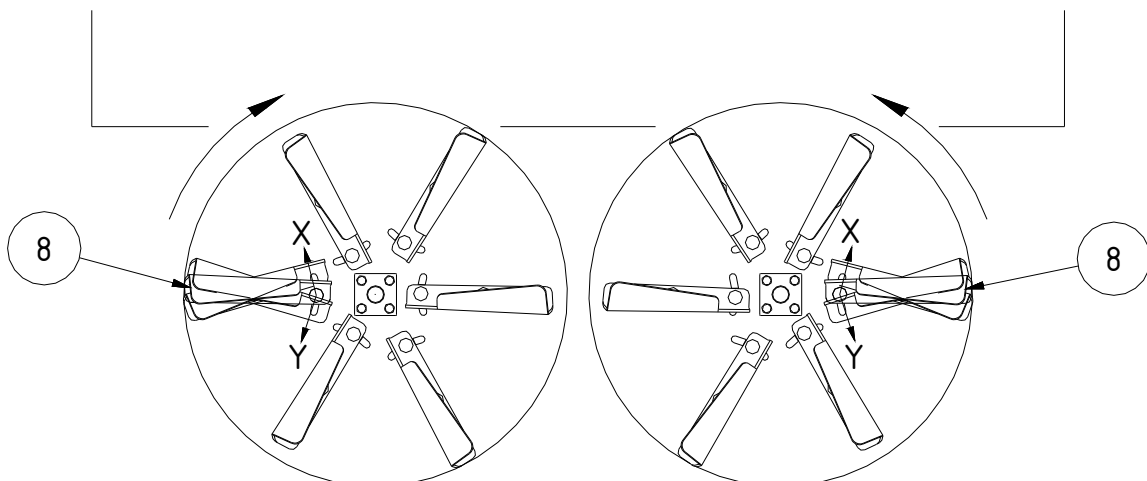


Fig.4: Spreading disc

## CARE and MAINTENANCE

**Lubricate bearings with multipurpose grease (after every 50 hours of operation)**

- (1) Bearings on both sides of the spreading disc
- (2) Bearings on both sides of the rear conveying shaft
- (3) Bearings on both sides of the front conveying shaft

***Bearings without grease nipples are maintenance-free.***

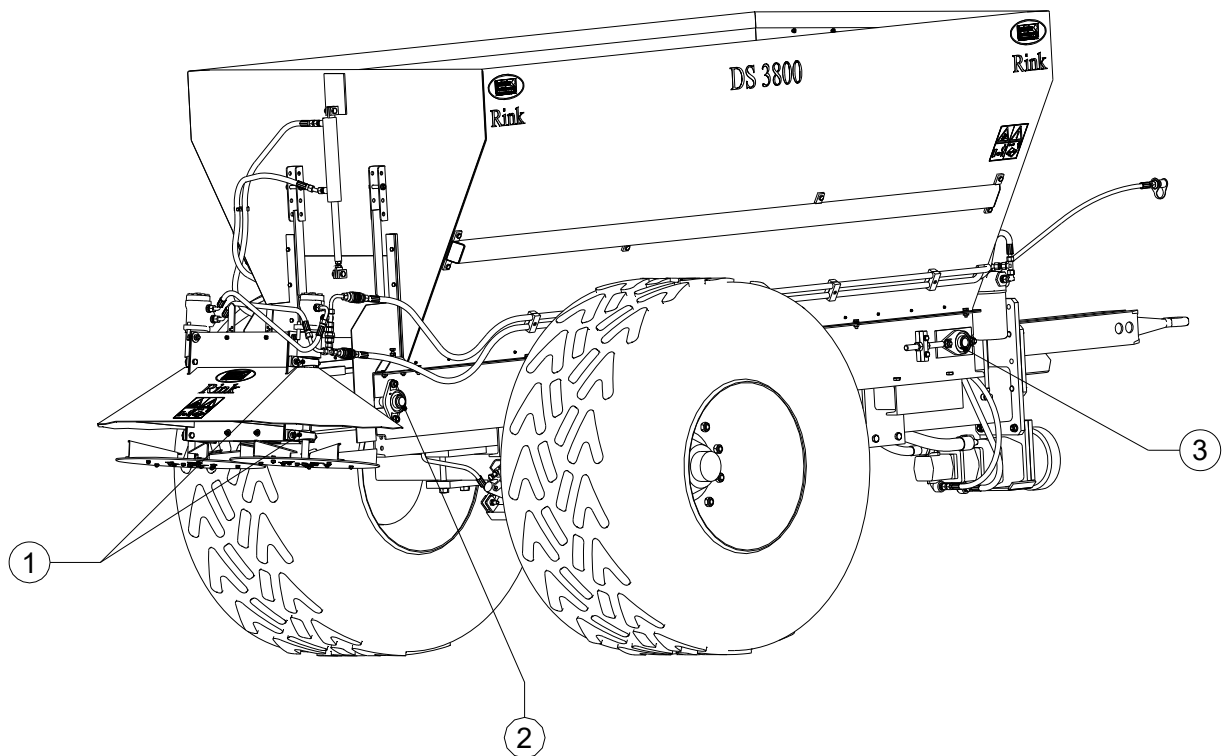


Fig.5: Lubrication points

## Change oil of the conveyor belt transmission (every 100 operating hours)

- Unscrew filler plug (11).
- Release the drain plug (12) on the inside at the bottom and drain the oil.
- Screw in the drain plug (12) using a new gasket.
- Add 0.6 l of **SAE85-W140 oil**.
- Screw in the drain plug using a new gasket.



**Used oil poses a danger to the environment; please dispose in an environmentally friendly manner.**

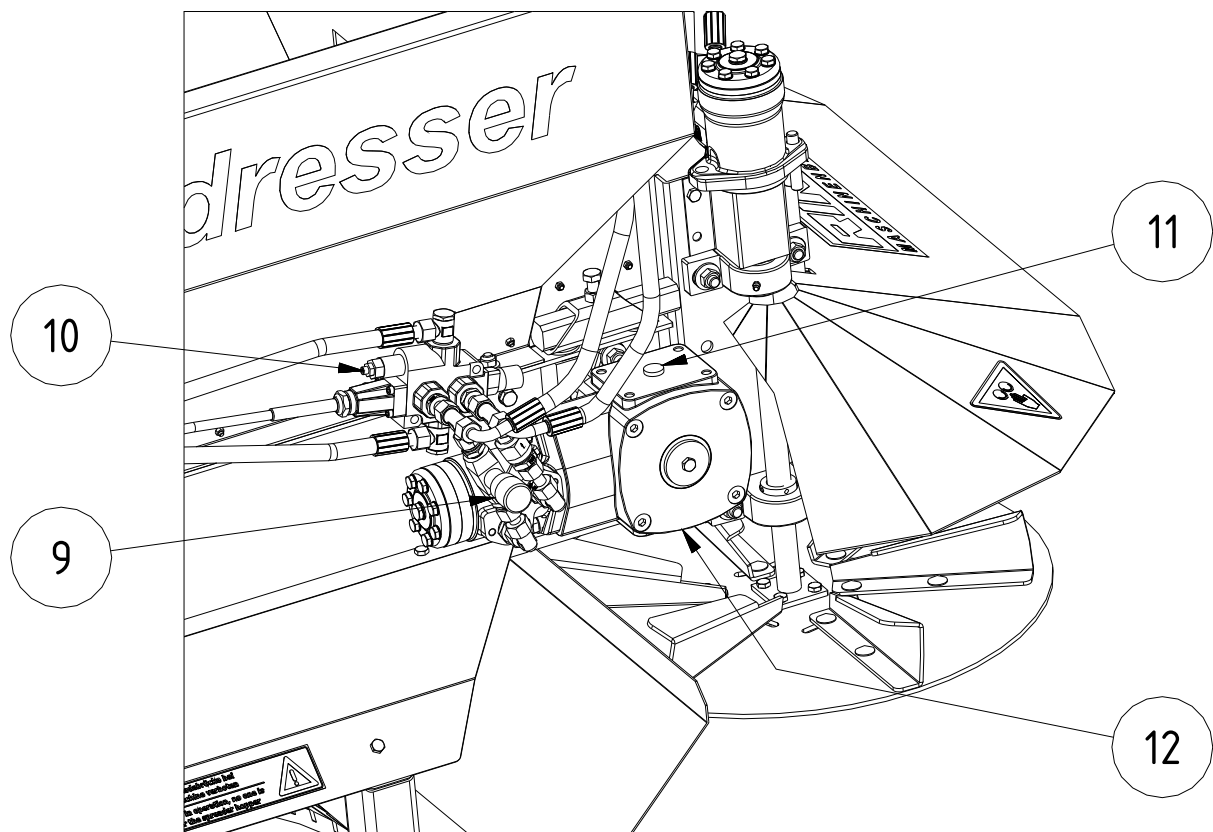


Fig.6: Transport gear

## Adjusting overpressure and throttle valve

- Pressure relief valve (10) can be adjusted precisely on the hexagon socket (Fig. 6).
- Throttle valve (9) (Fig. 6) for regulating the slide (6) (see page 10 - Fig. 2). Only make adjustments when the machine is empty. Only turn the throttle valve until the gate opens.



**If set incorrectly, there will be overpressure in the system. This can lead to considerable damage to the machine!**

## Service shaft (every 100 operating hours)



Maintenance work on the shaft may only be carried out by authorised personnel.

- Tighten the wheel nuts.
- Check wheel hub clearance and adjust if necessary.

## Tensioning conveyor belt (if slipping)

- Release counter nut (13) on both sides.
- Tighten nut (14) on both sides evenly, clockwise, each  $\frac{1}{2}$  turn, gradually.
- Tighten counter nut (13) on both sides.



Too much tension will shorten the service life of the conveyor belt!

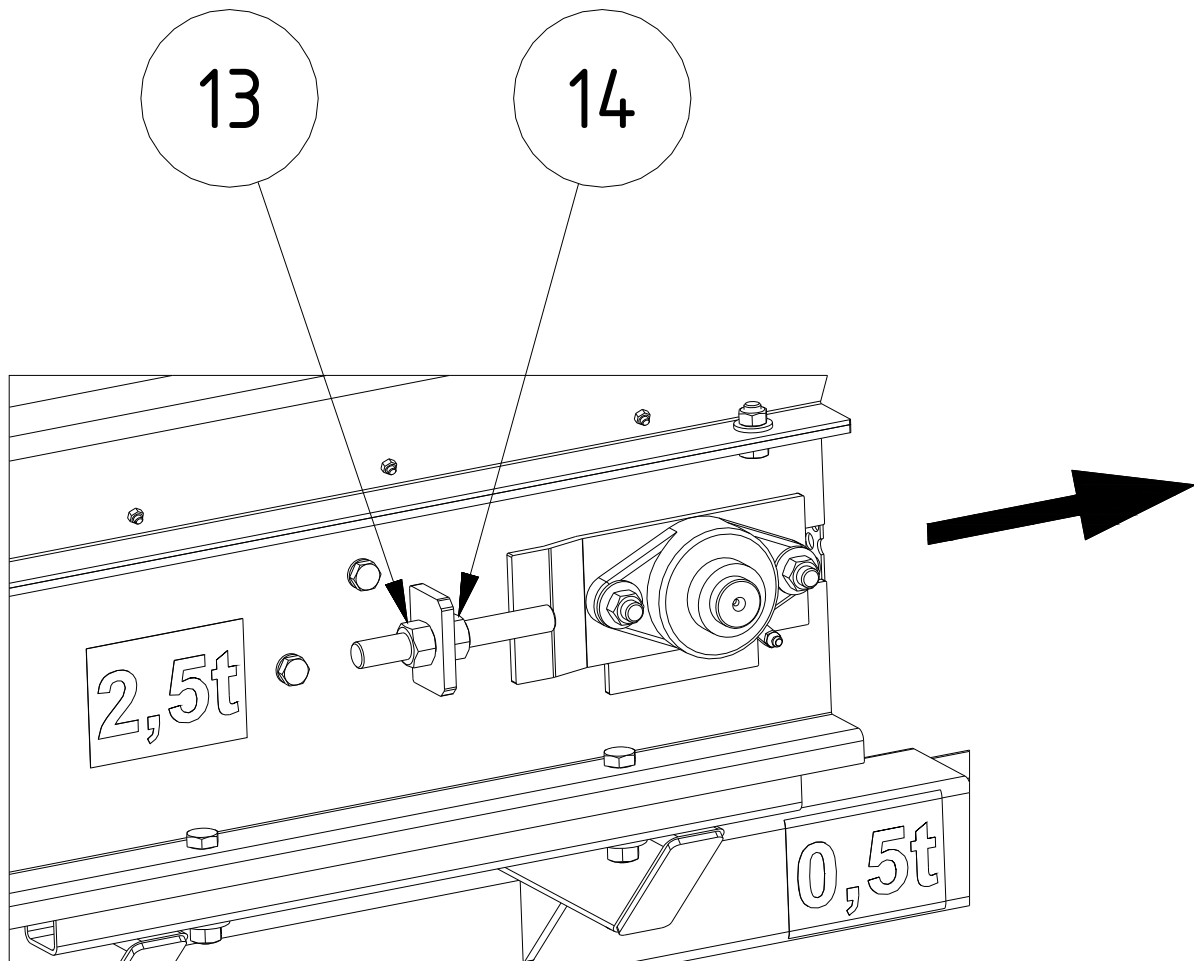


Fig.7: Tensioning the conveyor belt

## Removing and installing conveyor belt

- Disconnect hydraulic connectors and remove spreader by loosening screws (2).
- Disconnect the suspension and coupling by loosening screws (1).
- Relax the conveyor belt on both sides by loosening the nuts (3).
- Remove connecting screws (10) to the hopper (11).
- Loosen and remove the tension rings of the bearing (4) (in the direction of movement to the right).
- Release screws on side panel (5) and remove completely, including bearing (6).
- Remove conveyor belt.

**For installation, do the process in reverse.**

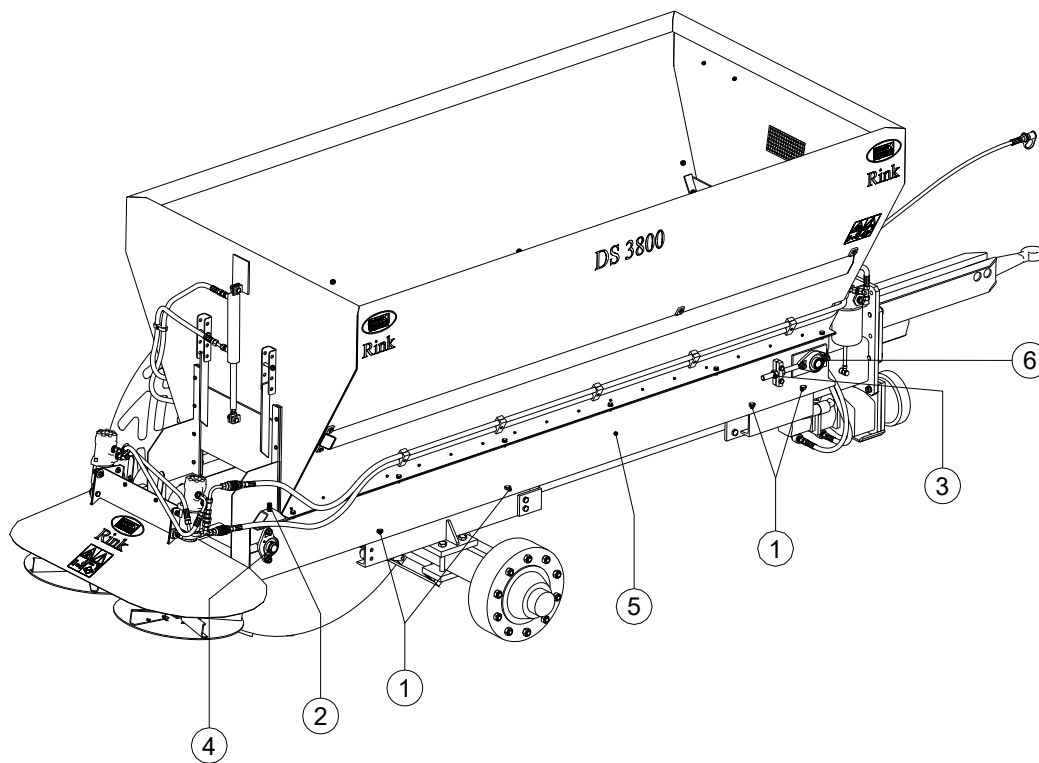


Fig.8: Removing and installing conveyor belt

## Tensioning the conveyor belt after installation

- When the conveyor belt is relaxed, mark a length of 1000 mm on both sides of the conveyor belt.
- Tighten the conveyor belt evenly on both sides using the two tension screws (see page 14) until the marked length is stretched to a maximum of 1003 mm.
- Run in the conveyor belt for approx. 30 minutes until it runs in the middle between the side guides and readjust if necessary.



**The conveyor belt must not touch the sides, otherwise it will be damaged. When readjusting the conveyor belt on the side, retighten gradually, where the belt touches.**

**Too much tension will shorten the service life of the conveyor belt!**

## External oil supply #

### Change hydraulic tank oil (as required)

- Unscrew filler plug (1A).
- Release suction hose (2A), drain oil and refit suction hose.
- Unscrew oil filter (4A) and replace with new oil filter.
- Fill **Plantosyn 3268 ECO** oil up to middle of sight glass (3A) (~ 70l).
- Screw in the filler plug using a new gasket.



**This is a closed hydraulic circuit. To prevent any contamination, the oil filter (4A) must be replaced every 100 operating hours.**

### Change filter after every 100 operating hours

- Unscrew oil filter (4A) and replace with new oil filter.



***Used oil poses a danger to the environment; please dispose in an environmentally friendly manner.***

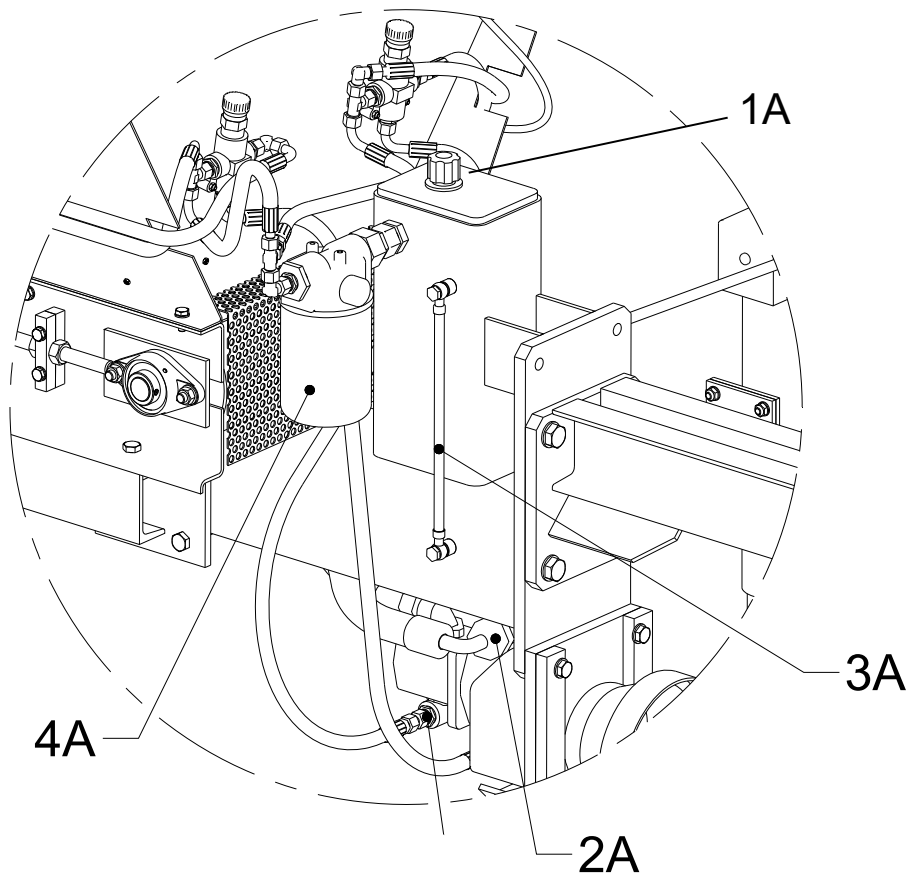
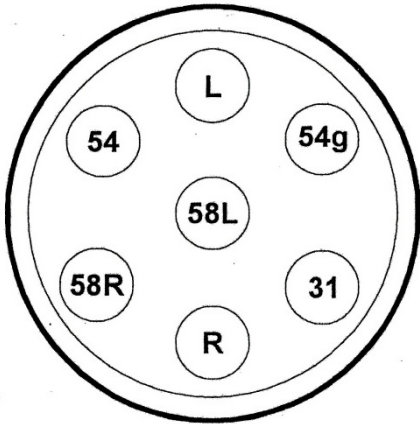


Fig.9: External oil supply

# Lighting system

The lighting system must be connected to the towing vehicle using the seven-pin plug.



Short description	Function	Cable colour
L	Flashing light on the left	yellow
54g	(Battery of towing vehicle +)	- - -
31	Mass	White
R	Flashing light on the right	Green
58R	Tail light on the right	Brown
54	Brake light	Red
58L	Tail light on the left	black

Fig.10: Connection diagram of the 7-point plug



## Troubleshooting

<b><i>Problem</i></b>	<b><i>Cause</i></b>	<b><i>Solution</i></b>
Gate does not open	Throttle valve set too weak	Adjust throttle valve (9) until gate opens (see page 13)
Spreading width is too narrow	Spreading discs turn too slowly	Increase spreading speed using a controller (2) (see page 9 and 10)
Spreading thickness to thin	Too little material is transported	Increase gate opening (See page 9 and 10)
	Spreader speed set too high	Reduce spreader speed using a controller (2) (See page 9 and 10)
	Conveyor belt speed too slow	Increase conveyor belt speed using the controller (1) (See page 9 and 10)
Spreading thickness too thick	Too much material is transported	Reduce the gate opening (See page 9 and 10)
	Spreader speed set too slow	Increase spreading speed using a controller (2) (see page 9 and 10)
	Conveyor belt speed too high	Reduce conveyor belt speed using the controller (1) (See page 9 and 10)
Uneven spreading pattern	Spreading disks are set incorrectly	Set the spreading discs (8) correctly (See page 11)
Uneven flow rate	Conveyor belt speed too slow	Increase conveyor belt speed using the controller (1) (See page 9 and 10)
Conveyor belt does not start	Conveyor belt slips	Retensioning the conveyor belt (See page 14)
	Driving pulley at the back and conveyor belt does not turn	Increase pressure in the relief valve (10) by turning a quarter turn clockwise (See page 13).
Hydraulics are not working	Check if hoses are connected properly	If necessary, replace pressure (4) and return lines (3) (see page 9)

Fig.11: Troubleshooting

# REPLACEMENT PARTS

To ensure that your spare parts order is processed quickly, always specify the following data with each order:

- VIN or ID number
- Year of manufacture (if available)
- Part number from the respective spare parts list
- Designation
- Order number

