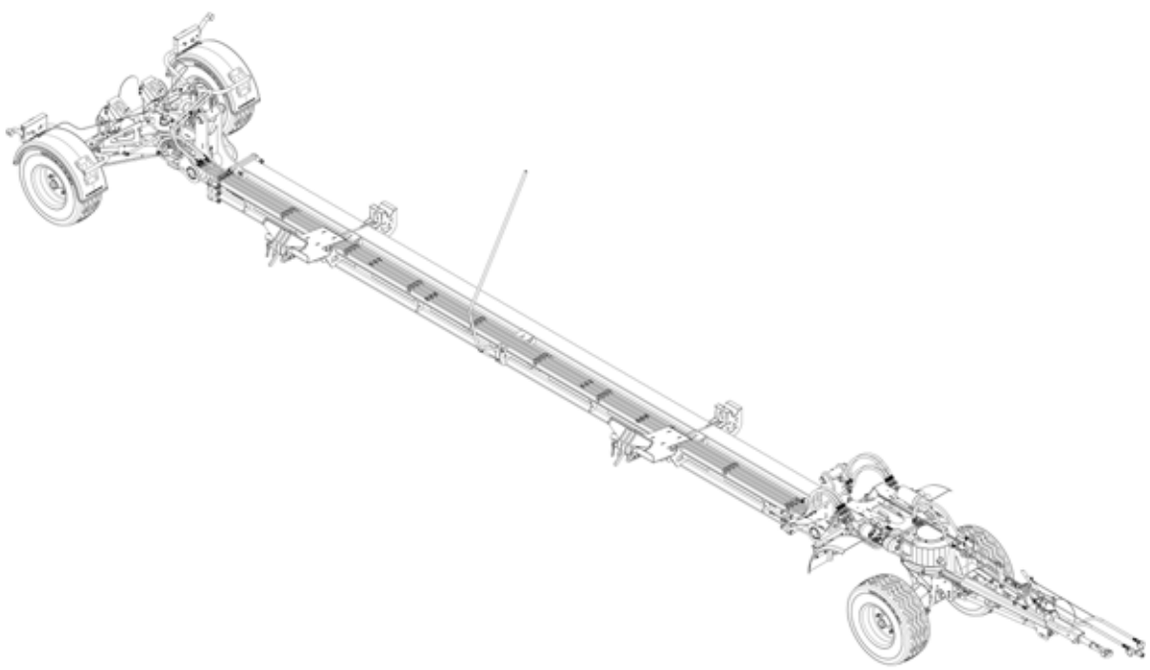
ZÜRN
HARVESTING

OPERATING MANUAL

SWW 660



Header Transporter
for Profi Cut 530 / 700

26789 Version B

Masthead

Title:	Operating Manual Header Transporter for ProfiCut 530 / 700
Manufacturer:	Zürn Harversting GmbH & Co. KG Schöntal
Applicable to:	SWW660-530; SWW660-620; SWW660-700
Print number:	26789

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Printed on paper made from chlorine-free and acid-free bleached pulp.

Foreword

This machine is designed only for the usual application in agricultural work or similar activities. Any other use beyond this is deemed improper use of the machine. The manufacturer accepts no liability whatsoever for damage resulting from improper use; the risk will be borne solely by the user. Proper use also includes complying with the operation, maintenance and service conditions specified by the manufacturer.

Read this operating manual thoroughly to familiarise yourself with the correct operation and maintenance of the machine and to prevent injuries or damage to the machine. Not doing so can result in injuries or machine damage. This operating manual and the safety labels on the machine may also be available in other languages: please enquire at your dealership.

This operating manual is part of the machine and should be handed over to the purchaser if the machine is re-sold.

Dimensions specified in this operating manual are metric. Use only appropriate parts and bolts. Different spanners are required for metric bolts and bolts with imperial (inch) dimensions.

The designations "left" and "right" are with reference to the forward direction of the machine.

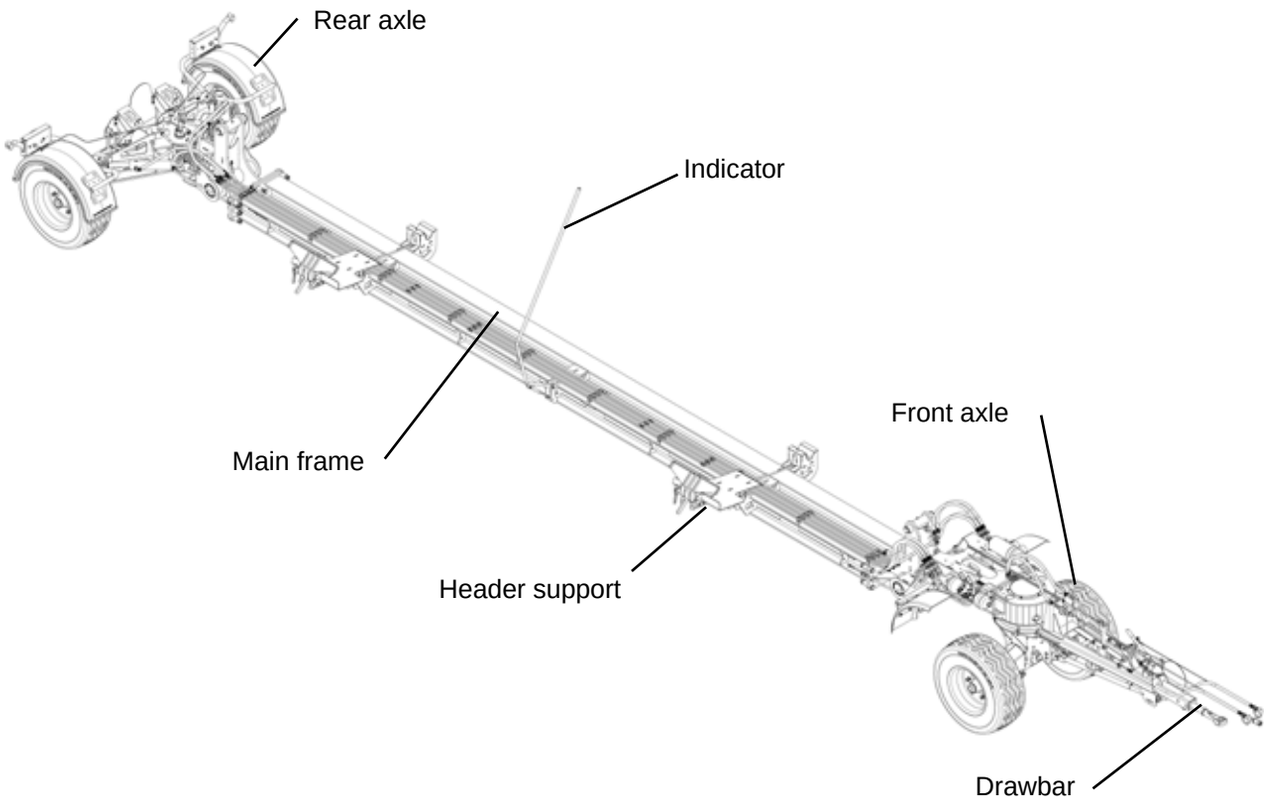
Enter the serial number in the first section of the operating manual. Please record all numbers accurately. In case of theft, these numbers can be important for tracing the machine. Your dealer also needs these numbers when you order spare parts. It is a good idea to keep a second record of these numbers in another location.

Your dealer has carried out an inspection of the machine prior to delivery. A further inspection should be carried out by your dealer after the first 20 to 50 hours of operation in order to ensure the best possible performance for the machine.

This machine must only be used, serviced and repaired by persons who are familiar with it and who have been briefed about its hazards. The relevant accident prevention regulations and other generally recognized rules and laws for safety, occupational health and road traffic must also be observed. Unauthorized changes to this cutter bar release the manufacturer from liability for any resulting damage.

Contents

Transporter description



Type Plates

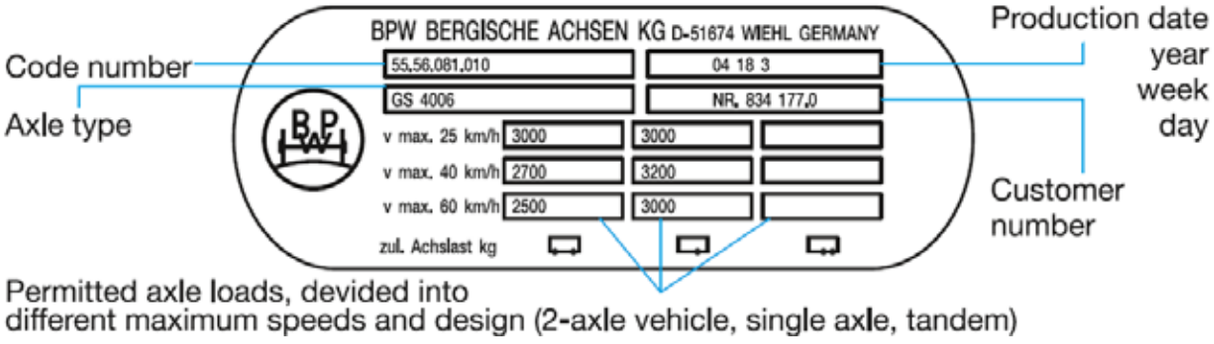
Please make a note of the type designation and serial number of your machine here. This information must be given to the authorised dealer when ordering spare parts or making guarantee enquiries.

Type: _____

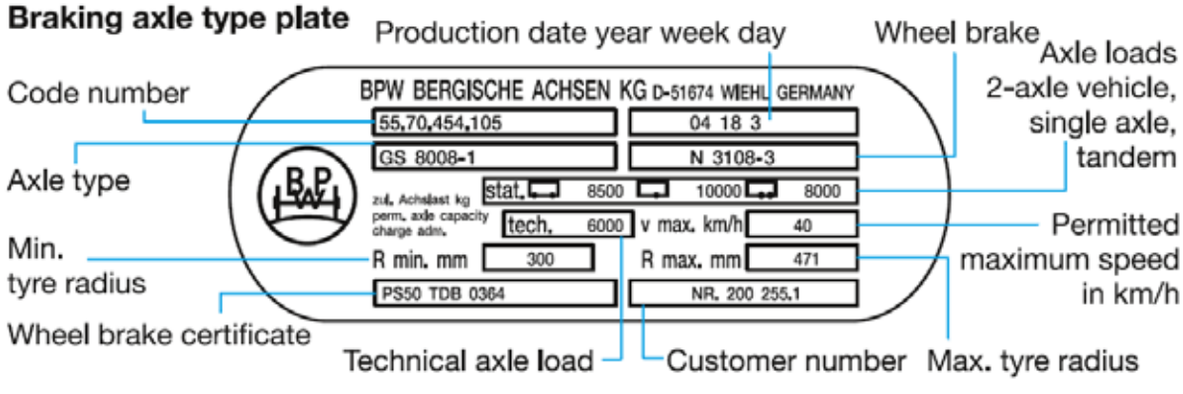
Serial number: _____

Chassis number: (VIN) _____

Trailer axle type plate



Braking axle type plate



Safety Instructions

Explaining the symbols used in this document

This symbol indicates a potentially hazardous situation which, if not avoided, may lead to personal injury.

This symbol indicates special rules or procedures that need to be observed to avoid machine damage.

This symbol indicates special technical instructions.

The illustrations in this manual are used as examples and may differ from the product. All information and data are subject to change by the manufacturer alone without prior notice.

Safety Instructions

Safety instructions for technical staff and operators

Before using the machine, carefully read and observe all safety rules listed in this manual and observe all decals on the machine.

Before starting work, make sure that you are familiar with all mechanisms and controls and their functions. During operation is too late!

Never leave the machine to anyone who has not been trained in using and operating it properly.

Contact your Zürn sales partner if you have problems understanding certain parts of this manual.

Always apply the handbrake on the header transporter and shut off the engine of the towing vehicle before you work on the transporter. Remove the ignition key and wait until all moving parts have come to a complete stop.

Wear close-fitting clothes! Loose clothing can easily get caught in moving machine parts.

Wear protective gear that suits the work at hand (gloves, footwear, goggles, helmet, ear protectors, etc.).

Any ropes, cables, linkages, etc. of remote-controlled mechanisms must be routed and installed in such a way that they do not cause unintentional machine action leading to accidents and damage. This applies to all transport and working positions.

Before each use verify that nuts and bolts are tight - especially those that attach tools such as blades. Retighten if necessary.

Before you use the machine make sure all safety features and guards are in place, in protective position and operable. Immediately replace any inoperable safety features.

Hydraulic system

Attention! The hydraulic system is under high pressure. Maximum operating pressure: 200 bar (2900 psi).

Before connecting hydraulic hoses to the hydraulic system of the forage harvester, make certain that it is not pressurised. Before disconnecting hydraulic hoses, depressurise the hydraulic system.

In order to prevent connecting the hydraulic hoses to the wrong connections, colour code the hoses and their respective connections on the tractor without fail. Risk of injury through reverse function because of reversed connections (e.g. raising instead of lowering).

Inspect the hydraulic hoses at regular intervals. Hydraulic hoses must always be replaced after 5 years at the latest. If hydraulic hoses are found to be damaged or worn, they must be replaced immediately. The replacement hydraulic hoses must comply with the technical requirements specified by the manufacturer.

Only use the appropriate resources when looking for leakages. Protect body and hands against pressurised fluids.

Oil escaping under pressure can puncture the skin and cause severe injuries. In the event of injury, seek medical attention immediately. There is a risk of infection.

Before carrying out any work on the hydraulic system, lower the machine to the ground, depressurise the hydraulic system, switch the forage harvester motor OFF, remove the ignition key and wait until all moving parts have come to a complete standstill.

Universal drive shafts

Only use universal drive shafts that have been provided by or prescribed by the manufacturer.

The protective tube and protective cone on the PTO shaft and all PTO shaft protective devices on the header must be in place and in good condition.

Worn or damaged protective parts must be renewed immediately. Defective protective parts or an unprotected universal drive shaft can cause severe or even fatal injuries.

Always wear close-fitting clothing to prevent being caught up in a rotating universal drive shaft.

Before connecting or disconnecting a universal drive shaft and before any intervention in the header, uncouple the main drive, switch the forage harvester motor OFF, remove the ignition key and wait until all moving parts have come to a complete standstill.

When using universal drive shafts with and overload or free-wheel clutch, always connect the overload or free-wheel clutch to the machine.

Always make certain that the universal drive shaft is connected and latched in position correctly.

Before switching the PTO shaft ON, make certain that the speed and direction of rotation of the attachment conform with the speed and direction of rotation of the machine specified by the manufacturer.

Before switching the PTO shaft ON, make certain that there are no persons or animals within the machine's danger zone. Never switch the PTO shaft ON or engage it if the forage harvester's motor is switched ON.

Ejection of stones and foreign objects

To increase the safety of the driver, only use the header with an enclosed driver's cab. The area to be mown must be free of foreign objects. Stony or rocky ground should not be mowed. If this is unavoidable, additional safety measures must be taken, e.g.:

- Fit Macrolon panels to the floor, sides and rear of the driver's cab or fit finely meshed grilles to the outside.
- Adjust the cutting height such that any contact with stones or rocks is excluded.

Never switch the header ON when persons are standing in the vicinity of the machine.

Foreign objects can be ejected from the machine, even if the machine is in proper use. Stones and other foreign objects that are caught up by rotating parts can be thrown over great distances. Exclude all persons from the danger zone.

The guard plates and protective aprons lessen the risk of stones and foreign objects being ejected. It must therefore be ascertained that all protective devices ate fitted and in perfect condition when the header is in use.

Check the state of the protective aprons at regular intervals. Worn, damaged or missing parts must be replaced immediately.

Safety Instructions

Precautions for use and shunting

Before changing over from transport to working position and vice versa, ensure that no persons are within the manoeuvering zone of the machine.

Precautions for maintenance and repair work

Before carrying out any work or intervention on the header transporter, shut off the engine on the towing vehicle, remove the ignition key, wait until all moving parts have come to a complete standstill and apply the parking brake. Depressurise the hydraulic system.

Prop up and secure any machine parts that are raised for maintenance or repair.

Disconnect all electric lines from the towing vehicle before working on the electric system or before welding on the transporter.

Repairs on parts under strain or pressure (springs, accumulators, etc.) must be carried out solely by specialist staff who have the necessary qualification and special tools.

Wear protective gear that suits the work at hand (gloves, footwear, goggles, helmet, ear protectors, etc.).

Do not weld, solder or use flame cutters near pressurised liquids or highly flammable products.

Only use original spare parts to ensure your personal safety and correct functioning of the header transporter.

We strongly recommend to have the machine and its parts and fastening elements checked by your authorised Zürn Harvesting sales partner after each season.

Precautions for travelling on public roads

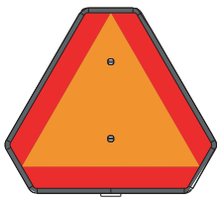
Dimensions

The combination must comply with local requirements relating to maximum dimensions for travel on public roads. In case of doubt, seek information beforehand from the relevant authorities.

If the combination exceeds the maximum dimensions and yet has to be transported on public roads, contact the local authorities to obtain a special permit before you travel on public roads.

Transport position

Before travelling on public roads, place and secure the machine on a suitable transporter, following the instructions in this manual.



Lights and warning devices

Before travelling on public roads, ensure that all required lights and warning panels are in place.

Check these devices for proper functioning and visibility. Replace any missing or damaged parts immediately.

Maximum speed

Always comply with the current regulations regarding speed limits on public roads.

When travelling on public roads, always comply with the relevant regulations.

Before travelling on public roads and before each use check the header transporter and the towing vehicle for road safety and operational safety!

Modifications to the header transporter

Any modifications to the transporter and its optional features must be approved in writing by the manufacturer. The warranty and product liability will be voided, if such modifications are carried out without the written approval of the manufacturer.

The manufacturer's liability refers to the original condition in which the vehicle is delivered to the country of destination as contractually agreed by the manufacturer.

Any unauthorised modifications to this transporter render any manufacturer liability for any consequential damage null and void.

Welding

Ensure that any type of welding is carried out by qualified and certified welders. Welding must not affect the warranted properties of the steel structure. This applies in particular to structural parts and to the components that support the load. For this reason, any type of welding on the chassis and axles must be approved in writing by the manufacturer. In case of non-compliance, the manufacturer shall consider the weldment as an unauthorised modification to the transporter.

Bolted assemblies

Observe the property class when fastening and replacing bolts and nuts (see the table in this manual and the parts list).

After assembling the transporter, tighten all bolts to the proper torque.

For special torques read the assembly instructions or ask the manufacturer.

For any torques of regular bolts refer to the table.

Self-clinching bolts and nuts must be replaced by new ones after they have been removed during a repair.

This is necessary as nuts with a self-clinching fastener loose their holding power with each reuse.

Safety Instructions

Using original parts

Only use original parts sourced from the manufacturer. This is mandatory. Using third-party parts voids the manufacturer warranty including for consequential damage resulting from this.

Waste prevention

Never pour environmentally hazardous products (oils, greases, filters, etc.) into a sink or empty them onto the ground or in other spaces. Never burn or throw away used tyres. Have waste disposed of by specialised disposal companies.

Safety decals

Safety decals are placed in various locations on the machine. Always follow these instructions! The decals alert operators to potential hazards and provide rules of practice to cut out any risk of an accident.

Keep the safety decals clean and legible and replace them immediately when damaged, worn or lost.

Operating instructions

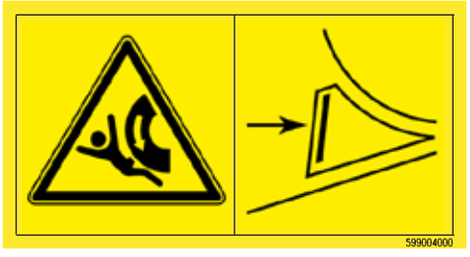
The operating instructions contain all the necessary information for the safe use of the machine. To avoid the risk of accidents, read the operating instructions carefully and follow all instructions.

Working on and intervening in the header

Before carrying out any type of work on or intervention in the header, disengage the clutch in the driveline, shut off the engine, remove the ignition key, wait until all moving parts have come to a complete standstill and apply the parking brake.

Parking the transporter

Secure the transporter with a wheel chock before removing it from the towing vehicle or parking it.



Safety Instructions

Placing the header on the transporter

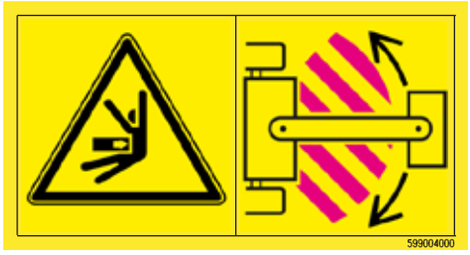
When placing the header on the transporter, keep clear of the danger zone between the header and the transporter.

The header is lifted

Keep clear of the header swing area when placing it on the transporter.

Risk of crushing

Keep clear of the drawbar unit and all steering elements (e.g. turntables, steering rods) while operating the machine. Risk of being crushed at a full lock turn.



Retighten the wheel bolts

Retighten the nuts after the first journey.

Sicherheitshinweise

Ejection and foreign objects

Stones and other foreign objects can be thrown out over long distances. The protective devices must always be in place and in a perfect state. Always keep a safe distance from the machine.

Do not open guards

Do not open or remove guards while the engine is running.

Do not open guards

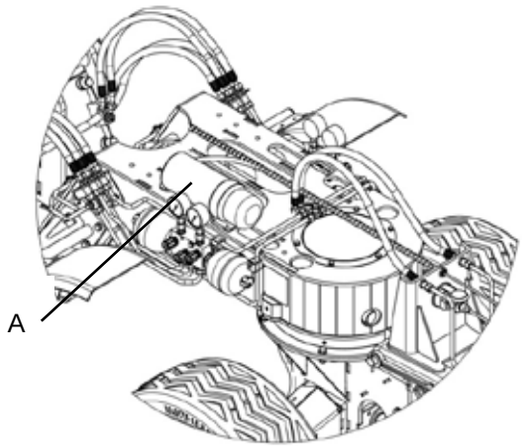
Do not open or remove protective devices during operation.

Rotating Auger

Never reach into the rotating auger.

Scope of delivery

An Operating Manual and a Spare Parts List are stowed in the document box (A) when the machine is delivered



Electrical installation

Pin allocation DIN/ISO 1724 (7-Pin Connector)

L/1	yellow
54g/2	blue
31/3	white
R/4	green
58R/5	brown
54/6	red
58L/7	black

Intended use

The following instructions must be observed. Improper use or failure to comply with the basic rules will invalidate the operating license.

Basic rules

- No improper overloading of the transporter by exceeding the permissible total weight.
- No exceeding of the permissible brake load.
- No one-side overload due to incorrect loading or driving on curbs, etc.
- No installation of unauthorized wheels or tires. Pay attention to the maximum lane
- No overloading by using wheels with side impact or impermissible insert depths.
- Not exceeding the permissible maximum speed.
- The correct setting of brakes and brake systems, and their proper function, must be ensured before every proper use.
- No warranty can be given for wear parts and impermissible modifications.
- The correct function of the lighting system must be ensured before each use.

All important information on the technical data of the transporter can be found in the registration documents.

The steering angle at the drawbar is 90° in both directions. The stops are only to avoid that the drawbar touches the hydraulic blocks. It cannot be absorbed by forces. Failure to observe this may cause massive damage to the slewing ring

This must be taken into account when driving the transporter backwards!

Lowering the transporter

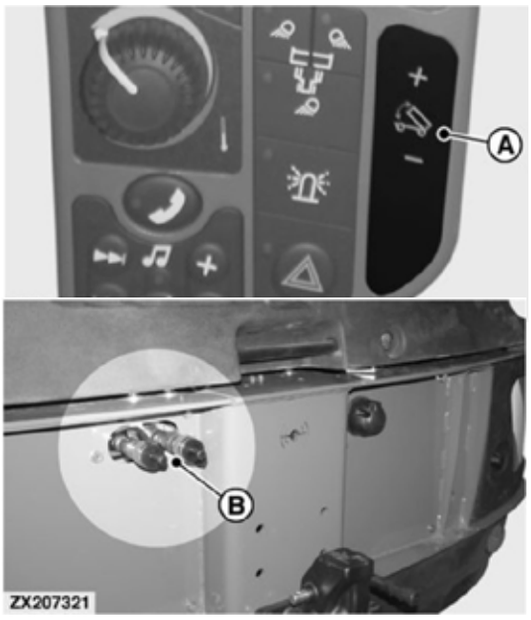
To lower the transporter, operate the control valve on the tractor or self-propelled forage harvester to which the hydraulic hoses are connected. To do this, move the control valve to the “lower” position. Make sure nobody is in the danger zone of the transporter.

For example, John Deere SPFH 8000 Forager

Transporter tilt function switch (A):

Operates the transporter override valve (low or optionally high flow9. The transporter override function valve can be activated in two different ways.

1. Press and hold the plus (+) symbol on the switch (A) to extend the transporter overtravel hydraulic cylinder and hold down the (-) symbol to retract the hydraulic cylinder.
2. Press the plus (+) symbol on the switch (A) twice to activate the extension timing, or press the minus symbol (-) twice to activate the cylinder retraction timing.

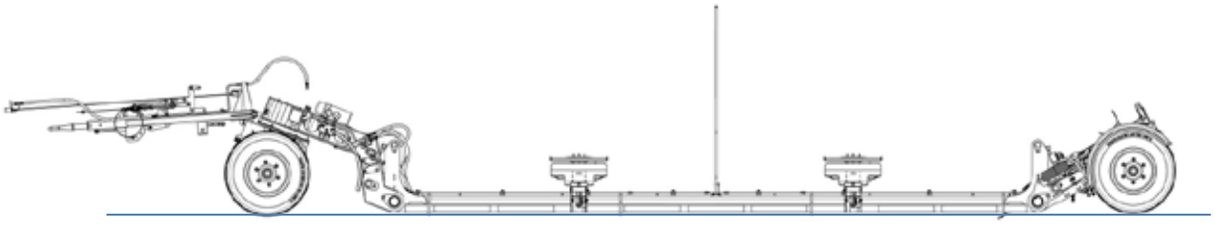


System requirements:

1. The engine is running.
2. Road safety mode switch is in field position.

A—Switch for transporter tilt function
B—connection couplings for transporter tilt function

The illustration shows the transporter in the lowered position

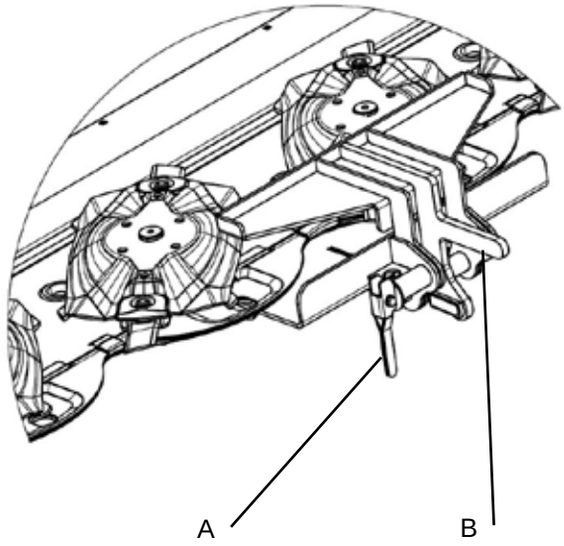


Loading the Header

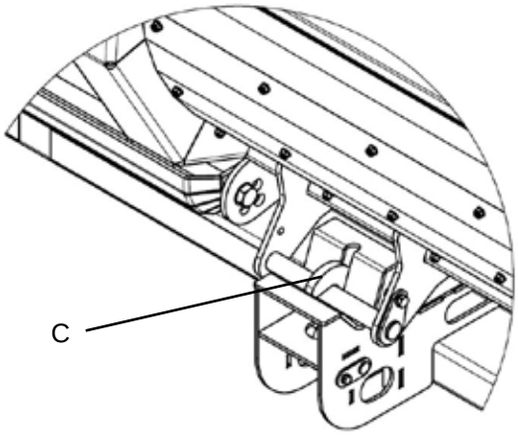
Before placing on the cutting unit carriage, the cutting unit must be brought into transport position. This includes lowering the adjustment bar and removing the side dividers, if installed. Then unlock the attachment on the pendulum frame, remove the drive PTO shaft (if no quick coupler is installed) and decouple the multi-coupler or hydraulic connections (see the manual for forage harvester).

In addition, it must be checked that the locking mechanism are in the open position.

The transporter type SWW 660 must be in the lowered position directly in front of the Profi Cut header (parallel).



The indicator stick of the transporter is aimed at the middle support arm of the adjustment bracket. Right and left of the cutting unit you can see the two locating bolts of the Profi Cut. Upon reaching the receptacles store the cutting unit in this. Make sure that both bolts are in the provided blocks. Now hang the cutting unit as described in the operating instructions.



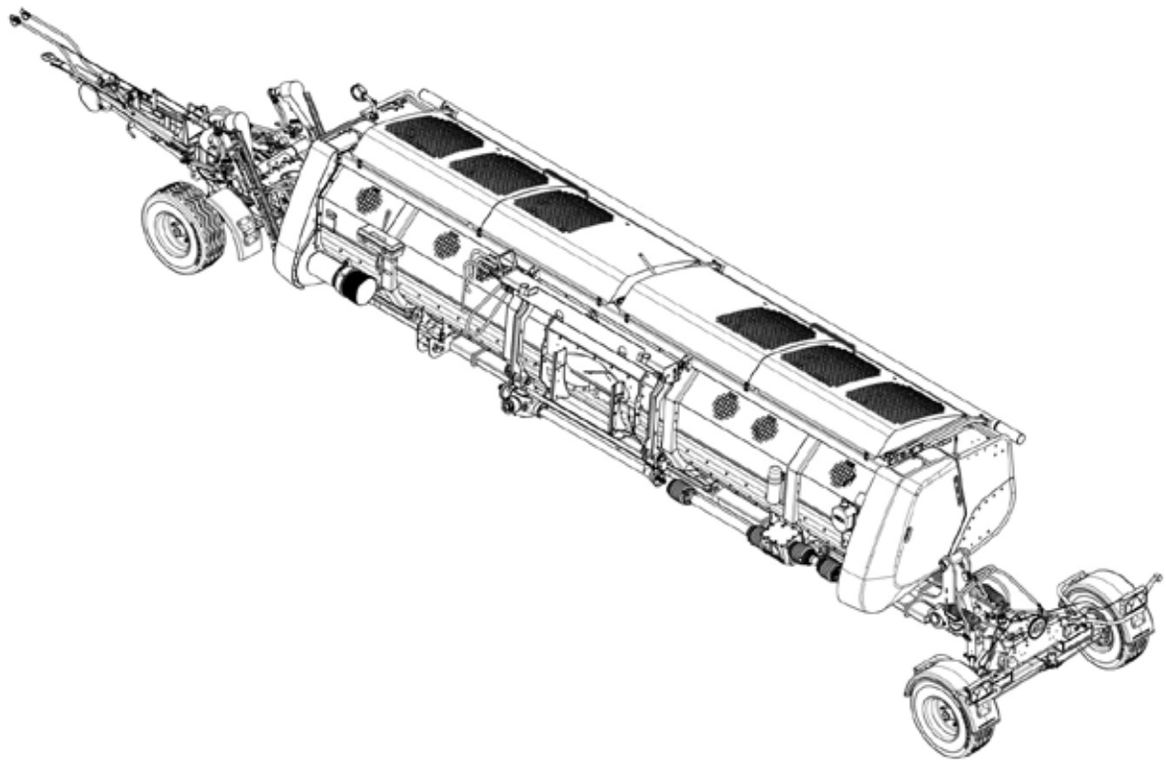
Lock the Profi Cut header by pressing the locking mechanism (A) in transport position. Get the locking pin in the closed position with the lever (B). Perform this operation on two locking points. After the locking mechanism is in the transport position directly on the cutter bar, check also the two hooks (C) on the back. Have look if both hooks enclose the pin.

Check the lock on the transporter to avoid transport damage.

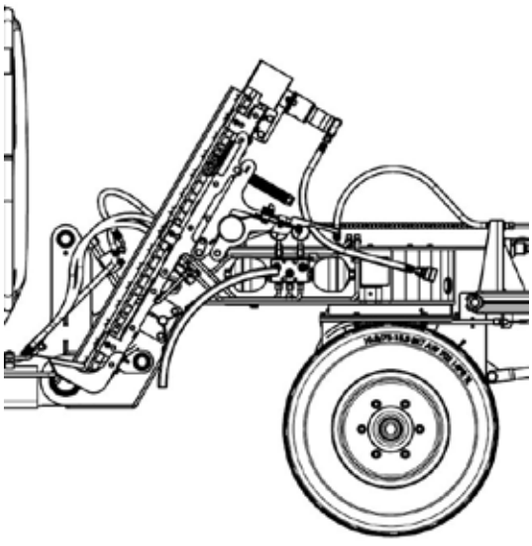
Lift the transporter back in the transport position.

Loading the Header

Figure shows transporter with a loaded Profi Cut header.



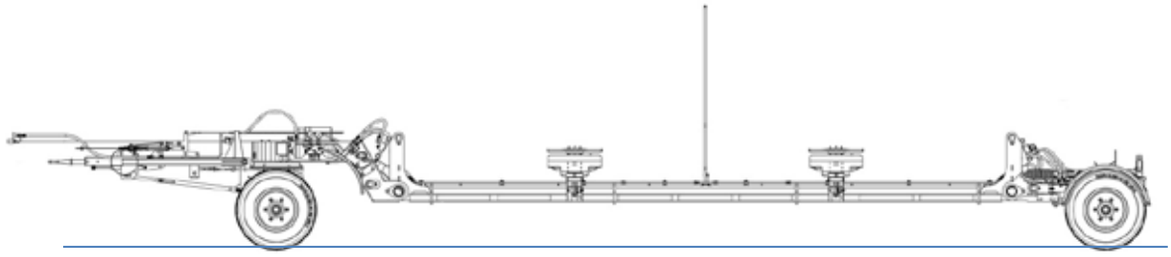
There is a transport support for the two Side knifes on the transporter. These are hooked and locked on eccentric clamp. Mounts for the hydraulic hoses and the adjustable bracket extensions are also available. For more information, see in the operating instructions for Profi Cut header.



Raising the transporter

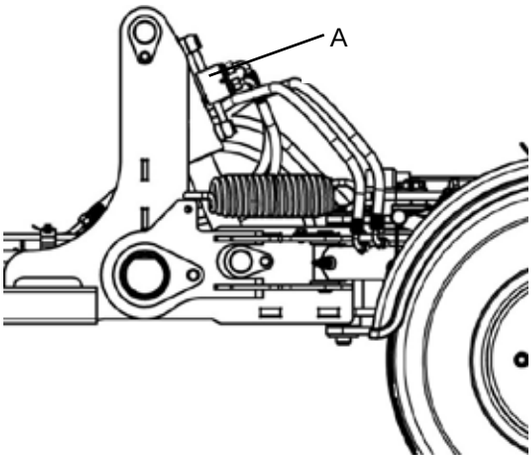
For driving on public roads, raise the transporter to the upper position. To do this move the connected control unit in the position "Lift". Be sure that no one is in the danger area of the transporter.

The figure shows the transporter in the raised position.



A lock block (A) at the respective excavation cylinder takes the backup of the raised central tube with the cargo.

Figure shows the cylinder with the locking block at the rear axle.



Hydraulic hose label

Each connection point of the hydraulic lines has a marking plate. The allocation can be read in the following table:

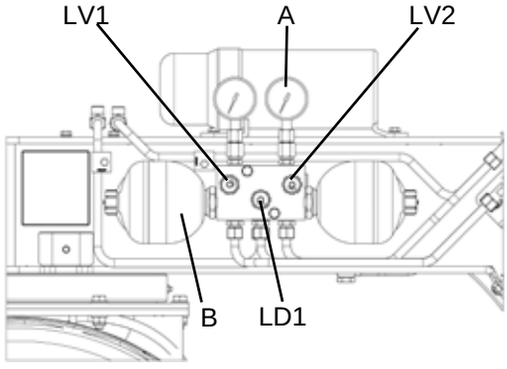
Front left		**Front Main frame**
1		

Components in the hydraulic steering system

The components that make up the hydraulic steering system are discussed on the following two pages of this manual. You will need this information when you fill the system with oil for the first time and when bleeding the system.

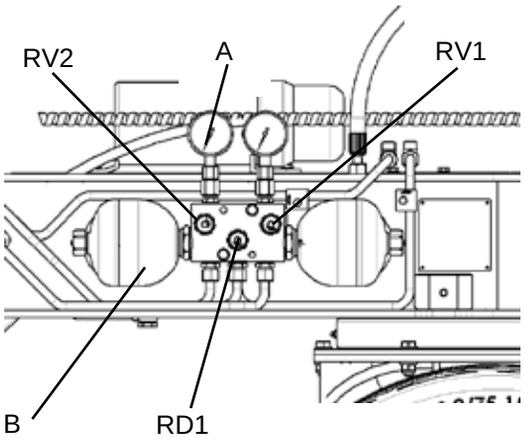
The hydraulic chest on the swan neck (LHS)

Restrictor valve for lift/drop rate control LD1
Steering system pressure control valves (front) LV1
Steering system pressure control valve (rear) LV2
Steering pressure gauges (four) A
Nitrogen damper (pressurises the steering system) B



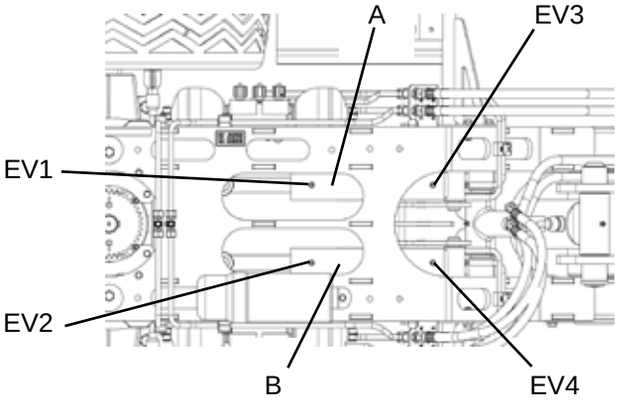
The hydraulic chest on the swan neck (RHS)

Restrictor valve for lift/drop rate control RD1
Steering system pressure control valves (front) RV1
Steering system pressure control valve (rear) RV2
Steering pressure gauges (four) A
Nitrogen damper (pressurises the steering system) B



The master cylinders inside the swan neck

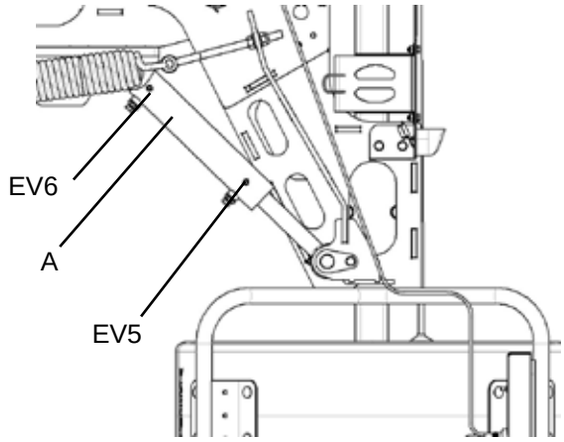
Master cylinder RHS (250mm lift) A
Master cylinder LHS (250mm lift) B
Bleeder valve front right EV1
Bleeder valve front left EV2
Bleeder valve RHS rear EV3
Bleeder valve LHS rear EV4



Components in the hydraulic steering system

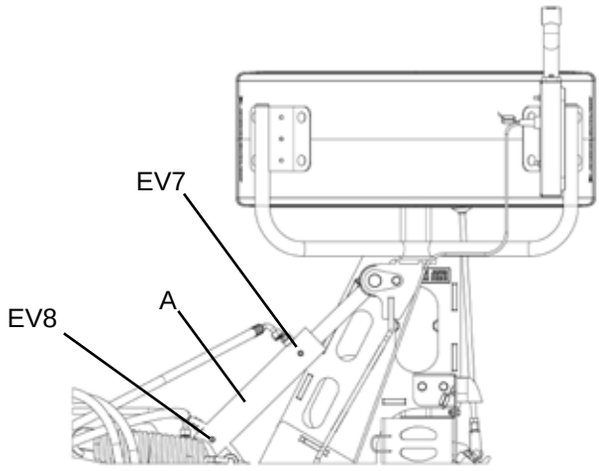
The LHS slave cylinder on the rear axle

Slave cylinder LHS (250mm lift)	A
Bleeder valve outside left	EV5
Bleeder valve inside left	EV6



The RHS slave cylinder on the rear axle

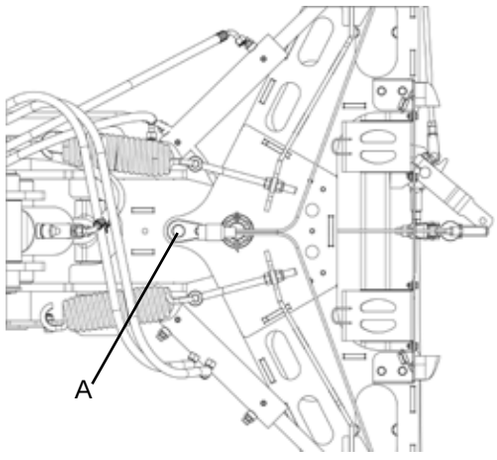
Slave cylinder LHS (250mm lift)	A
Bleeder valve outside left	EV7
Bleeder valve inside left	EV8



The locking pin

The locking pin ensures straight ahead position. A

This locking pin should be used for emergency operation only.



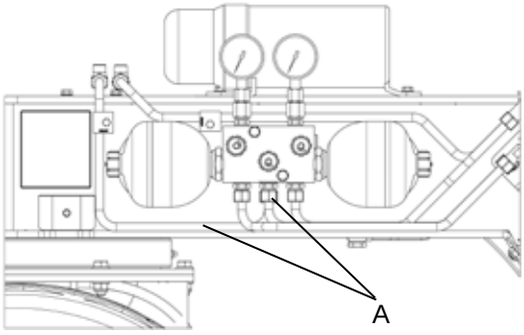
Filling the steering system with oil first time

Note:

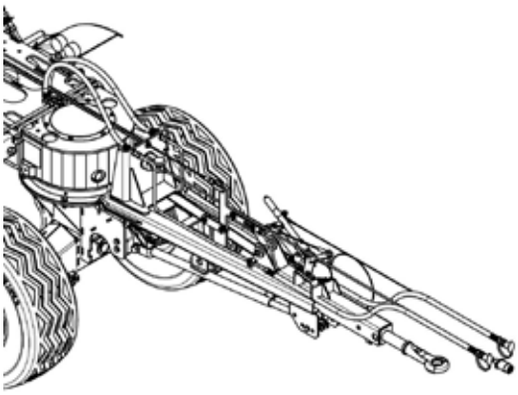
It is necessary to carry out the following steps as outlined in this chapter after a steering system was retrofitted to the transporter or when a large amount of air is found to be trapped in the hydraulic system.

Filling the steering system with oil first time

To bleed the oil line to the transporter, connect the hose to a spool. This can be one on the tractor or on the forager. A single-acting spool is fine for the purpose. This applies only to that hose which connects directly to both chests (A).



The spool can be on a tractor or the forager, but a hydraulic power unit is also fine for this purpose. Choose the correct coupler and connect it to the pressure source.



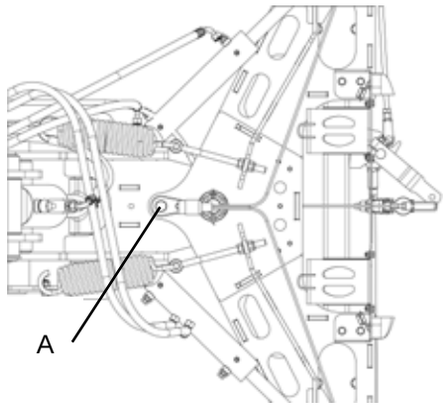
Before you couple the hose, make sure the pressure source is working properly. The hydraulic pump should not cause any air pockets in the system (bubbles).

Filling the steering system with oil first time

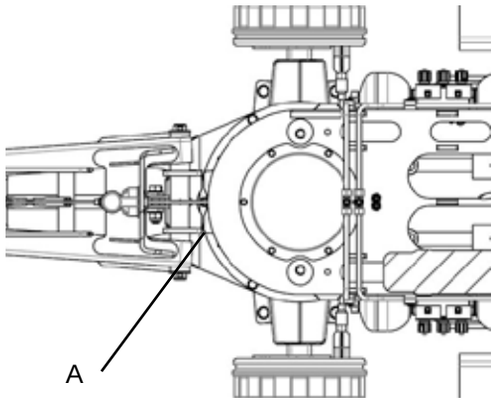
Note:

Before you fill oil into the system, it is necessary to make some preparations to ensure that the transporter is filled properly.

Move the rear axle into the straight-ahead position and secure the axle in this position by fitting the locking pin (A).



Move the drawbar into the straight-ahead position, aligning it with the mark on the turntable (A).

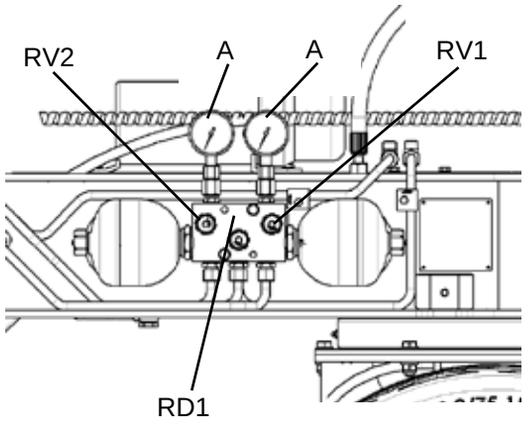


All steering pressure control valves have a sealing cap. Remove this cap.

Filling the steering system with oil first time

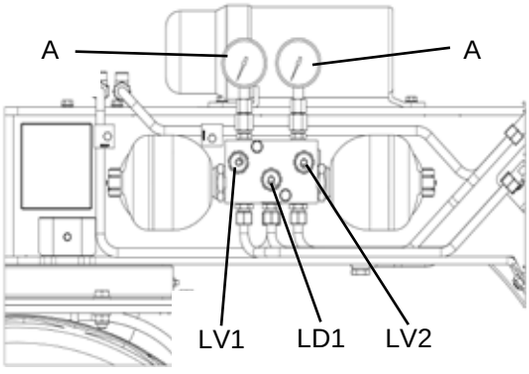
The hydraulic chest on the swan neck (RHS)

Close the lift/drop rate control valve (RD1) on the right hydraulic chest. Open all steering pressure control valves (RV1 and RV2). Open the hydraulic valve on the pressure source and wait until the two pressure gauges (A) indicate no pressure (0 bar). Close all steering control pressure valves (RV1 and RV2).



The hydraulic chest on the swan neck (LHS)

Close the lift/drop rate control valve (LD1) on the left hydraulic chest. Open all steering pressure control valves (LV1 and LV2). Open the hydraulic valve on the pressure source and wait until both pressure gauges (A) indicate no pressure (0 bar). Close all steering control pressure valves (LV1 and LV2).



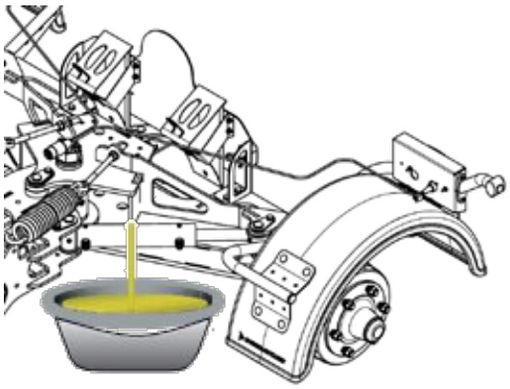
After the pressure is released, check all pressure gauges to make sure they indicate no pressure (0 bar).

Filling the steering system with oil first time

The hydraulic chest LHS

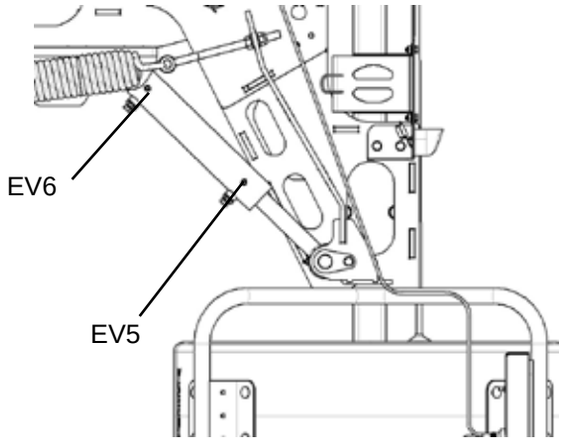
Step 1: Line 1 from the left hydraulic chest

Open the steering control pressure valve on the front right (RV1) [see section ‘Components in the hydraulic steering system’].



Start filling oil into the system. Start on the rear axle.

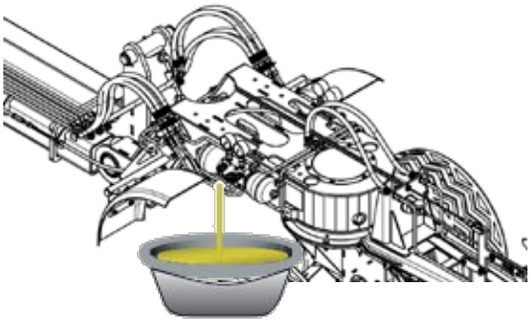
Place a container under the left cylinder on the rear axle to collect the oil. Remove the bleeder valve (EV6). Operate the spool on the pressure source to pressurise the system. Maintain the pressure until the hose has been completely flushed and there are no bubbles in the oil as it flows from the system. Refit the bleeder valve (EV6) and close it.

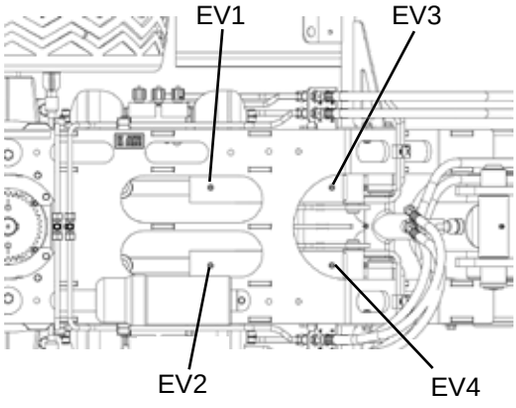


Filling the steering system with oil first time

The hydraulic chest RHS

Place a container under the right cylinder on the swan neck to collect the oil. Remove the bleeder valve (EV3). Operate the spool on the pressure source to pressurise the system. Maintain the pressure until the hose has been completely flushed and there are no bubbles in the oil as it flows from the system. Refit the bleeder valve (EV3) and close it.



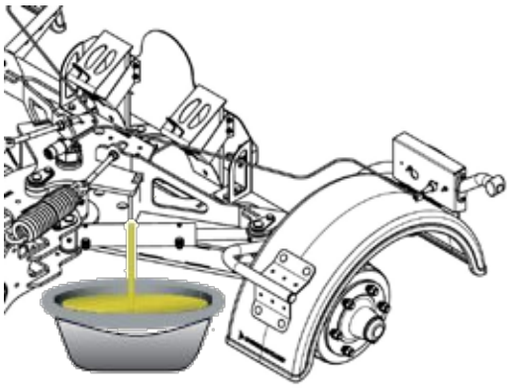


Close the steering pressure control valve on the front right (RV1).

Filling the steering system with oil first time

The hydraulic chest RHS

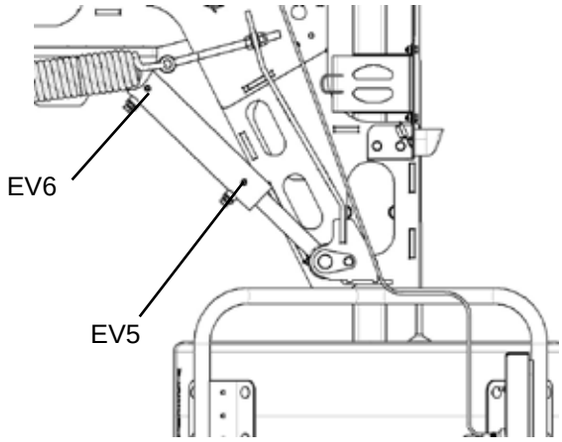
Step 2: Line 2 from the RHS hydraulic chest



Open the steering pressure control valve at the front right (RV2).

Start filling the oil into the system. Start at the rear axle.

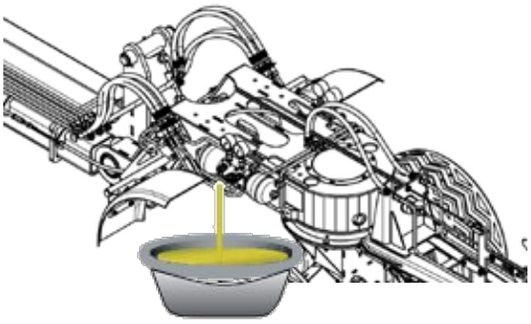
Place a container under the left cylinder on the rear axle to collect the oil. Remove the bleeder valve (EV5). Operate the spool on the pressure source to pressurise the system. Maintain the pressure until the hose has been completely flushed and there are no bubbles in the oil as it flows from the system. Refit the bleeder valve (EV5) and close it.



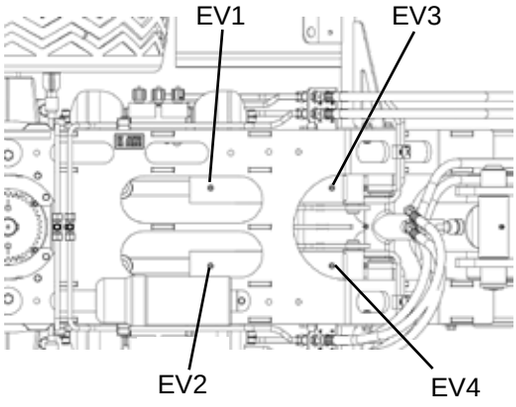
Filling the steering system with oil first time

The hydraulic chest RHS

Place a container under the right cylinder on the swan neck to collect the oil. Remove the bleeder valve (EV1). Operate the spool on the pressure source to pressurise the system. Maintain the pressure until the hose has been completely flushed and there are no bubbles in the oil as it flows from the system. Refit the bleeder valve (EV1) and close it.

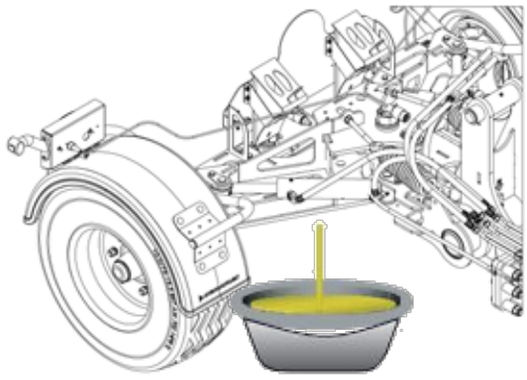


Close the steering pressure control valve on the front right (RV2).



Filling the steering system with oil first time

The hydraulic chest LHS

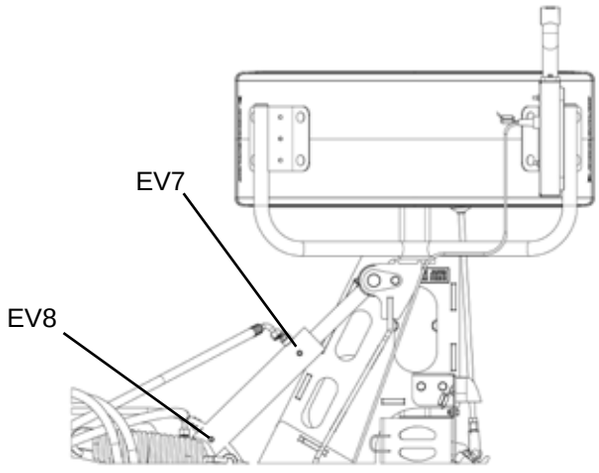


Step 3: Line 1 from the left hydraulic chest

Open the steering pressure control valve on the front left (LV1).

Start filling the system with oil for the first time. Start at the rear axle.

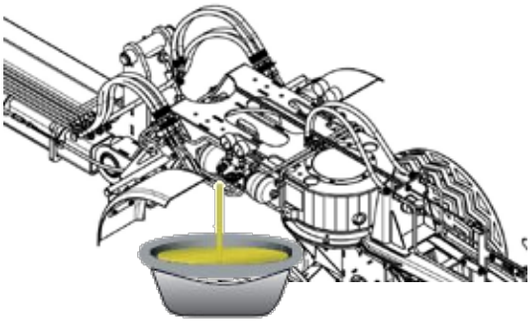
Place the oil sump under the right cylinder of the rear axle to collect the oil. Remove the bleeder valve (EV8). Operate the spool on the pressure source to pressurise the system. Maintain the pressure until the hose has been completely flushed and there are no bubbles in the oil as it flows from the system. Refit the bleeder valve (EV8) and close it.

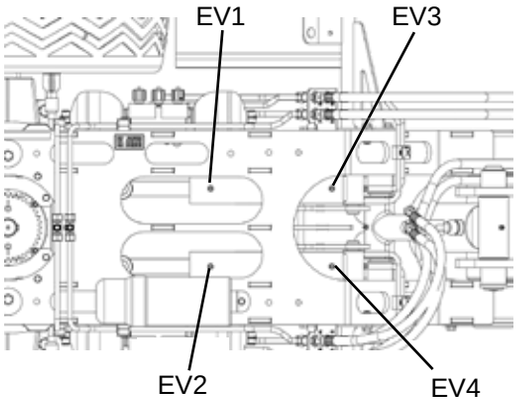


Filling the steering system with oil first time

The hydraulic chest LHS

Place a container under the left cylinder on the swan neck to collect the oil. Remove the bleeder valve (EV4). Operate the spool on the pressure source to pressurise the system. Maintain the pressure until the hose has been completely flushed and there are no bubbles in the oil as it flows from the system. Refit the bleeder valve (EV4) and close it.

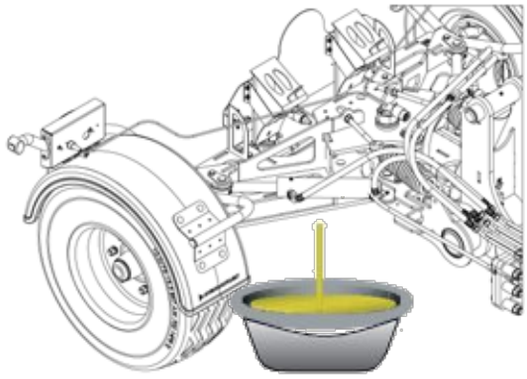




Close the steering pressure control valve on the front right (LV1).

Filling the steering system with oil first time

The hydraulic chest LHS

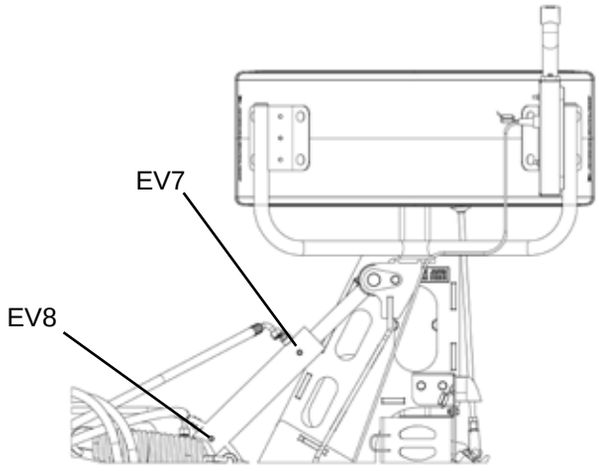


Step 4: Line 2 from the left hydraulic chest

Open the steering pressure control valve on the front left (LV2).

Start filling the hydraulic system. Start on the rear axle.

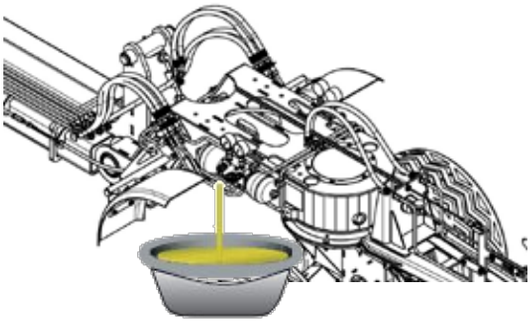
Place a container under the right cylinder on the rear axle to collect the oil. Remove the bleeder valve (EV7). Operate the spool on the pressure source to pressurise the system. Maintain the pressure until the hose has been completely flushed and there are no bubbles in the oil as it flows from the system. Refit the bleeder valve (EV7) and close it.

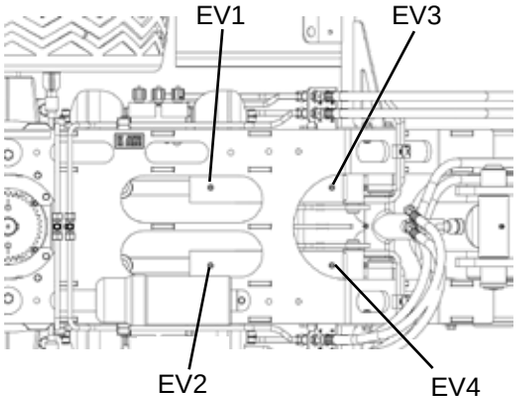


Filling the steering system with oil first time

The hydraulic chest LHS

Place a container under the left cylinder on the swan neck to collect the oil. Remove the bleeder valve (EV2). Operate the spool on the pressure source to pressurise the system. Maintain the pressure until the hose has been completely flushed and there are no bubbles in the oil as it flows from the system. Refit the bleeder valve (EV2) and close it.

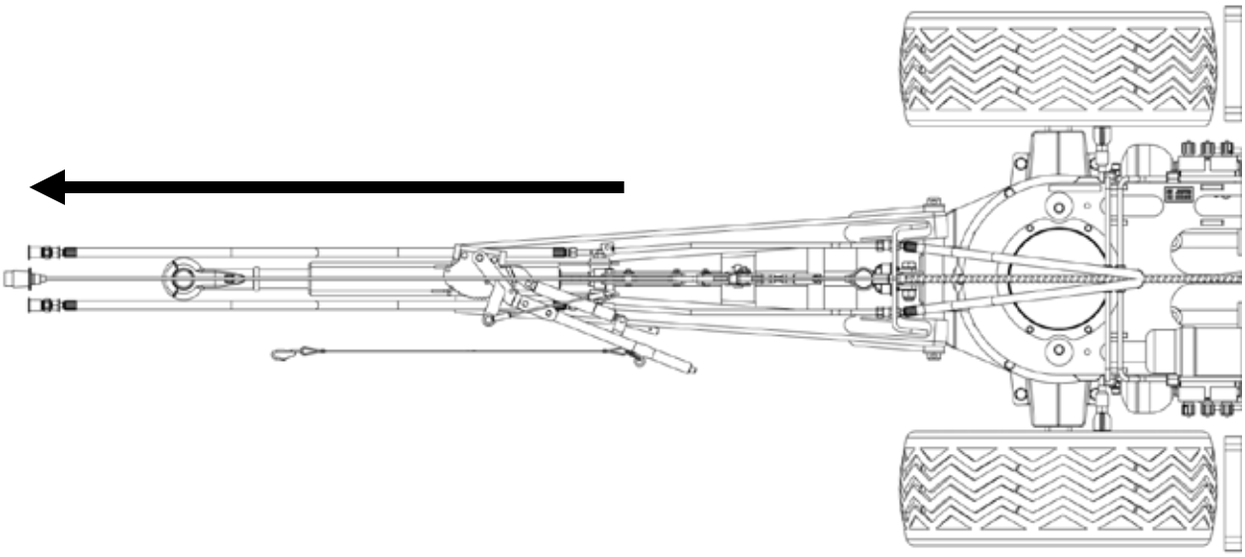




Close the steering pressure control valve on the front left (LV2).

Filling the steering system with oil first time

Open all steering pressure control valves (RV1, RV2, LV1, LV2). Bring the drawbar into the straight-ahead position by aligning the marks.

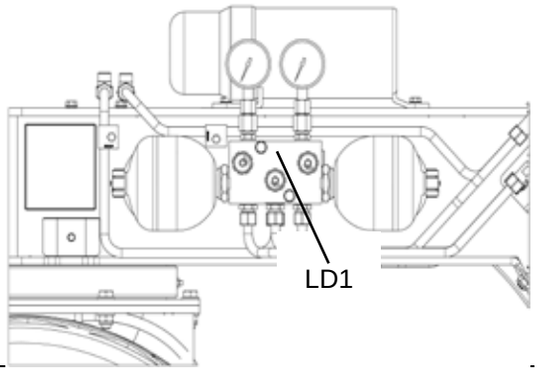


Pressurise the steering system to approx. 45 bar by operating the pressure source. Next, close all steering pressure control valves (RV1, RV2, LV1, LV2). The drawbar should turn only through a very small angle now, because the rear axle is still locked by the locking pin.

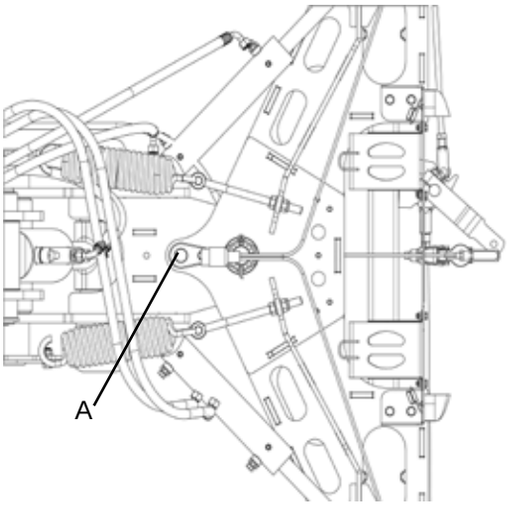
Check the system pressure again on the pressure gauges and, as necessary, adjust the pressure from the tractor spool (45 bar).

Filling the steering system with oil first time

Open both lift/drop control valves (RD1, LD1).



Next, remove the locking pin (A) on the rear axle. Check the steering system again and verify that the rear axle revolves and follows the movement of the drawbar.



All steering pressure control valves on the transporters have a sealing cap. Replacement caps can be ordered from our parts service. The part number is 26757.

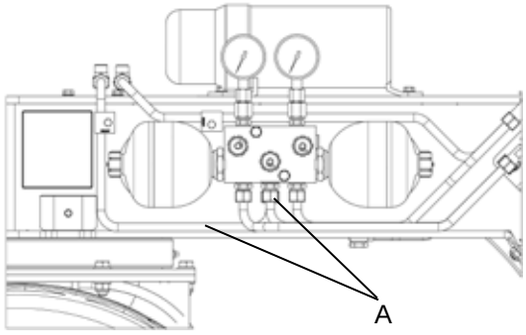
Adjusting the straight ahead travel position

Note:

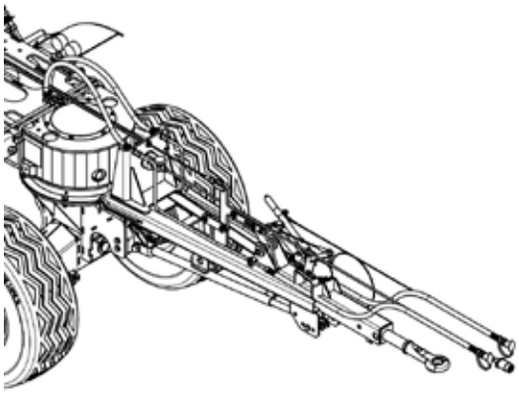
If the steering system is not working properly or if the transporter is not properly running straight ahead, it will be necessary to carry out the steps as outlined in this chapter. This applies as well when the pressure is not correct.

Bleeding the hydraulic steering system

To bleed the oil line to the transporter, connect the hose to a spool. This can be one on the tractor or on the forager. A single-acting spool is fine for the purpose. This applies only to that hose which connects directly to both chests (A).



The spool can be on a tractor or the forager, but a hydraulic power unit is also fine for this purpose. Choose the correct coupler and connect it to the pressure source.



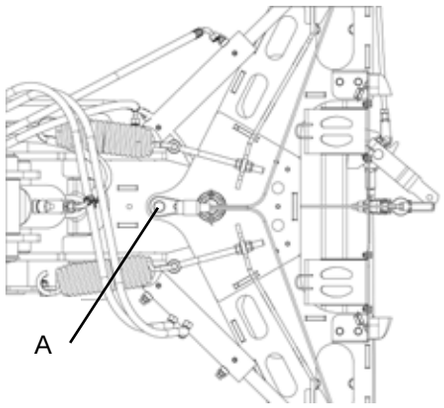
Before you couple the hose, make sure the pressure source is working properly. The hydraulic pump should not cause any air pockets in the system (bubbles).

Adjusting the straight ahead travel position

Note:

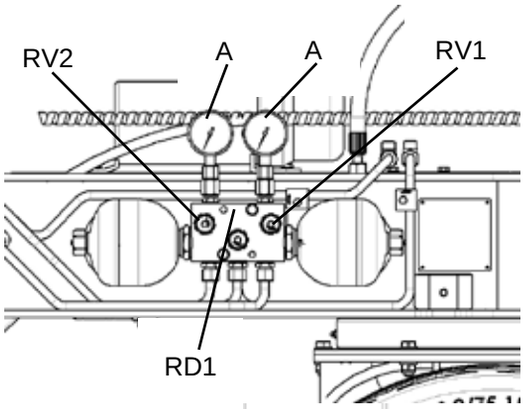
Before you fill oil into the system, it is necessary to make some preparations to ensure that the transporter is filled properly.

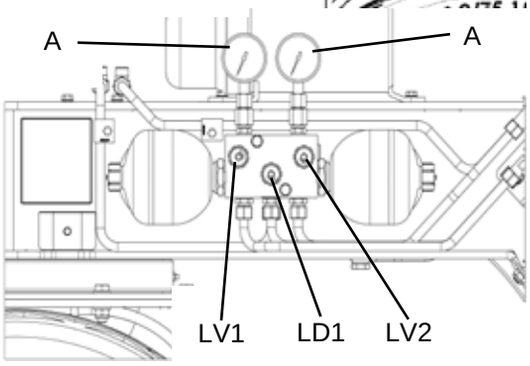
Straighten the rear axle and secure it in position with the locking pin (A).



All hydraulic chests on the swan neck (RHS, LHS)

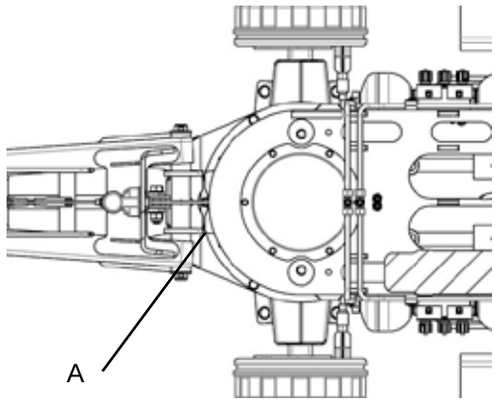
Close the lift/drop rate control valves (RD1, RD2) on the RHS and LHS chests. Open all steering pressure control valves (RV1, RV2, LV1, LV2).





Adjusting the straight ahead travel position

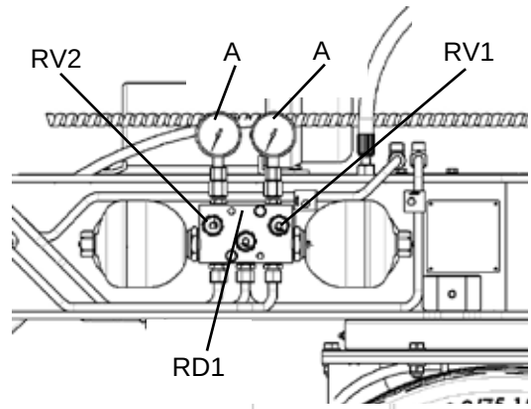
Bring the drawbar into the straight-ahead position, aligning it with the mark on the turntable (A).

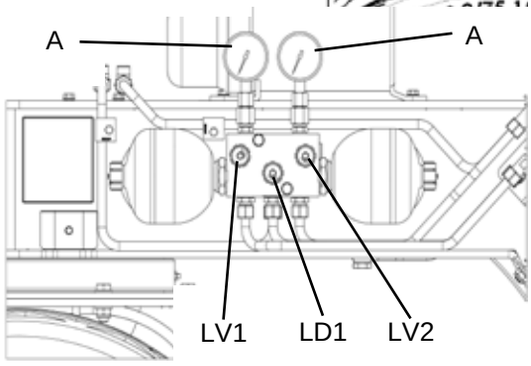


Pressurise the steering system to approx. 45 bar by operating the pressure source. Read all four pressure gauges relating to the hydraulic chests.

All hydraulic chests on the swan neck (RHS + LHS)

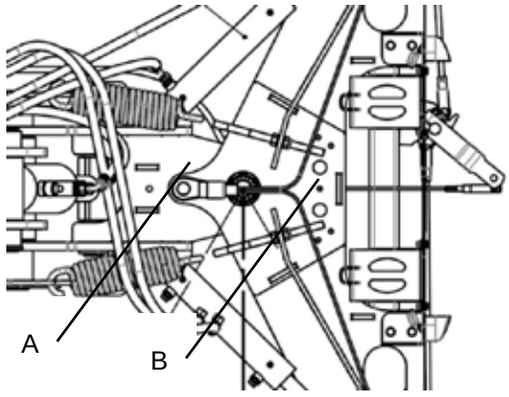
Close all steering pressure control valves (RV1, RV2, LV1, LV2). Open the restrictor valves for lift/drop rate control (RD1, RD2) on the RHS and LHS chests.





Adjusting the straight ahead travel position

Remove the locking pin (A) on the rear axle and insert it in the storage hole (B) securing it with the screw.



All steering pressure control valves on the transporters have a sealing cap. Replacement caps can be ordered from our parts service. The part number is 26757.

Bleeding the steering system

Note:

If the steering system is not working properly or if the transporter is not properly running straight ahead, it will be necessary to carry out the steps as outlined in this chapter. This applies as well when the pressure is not correct.

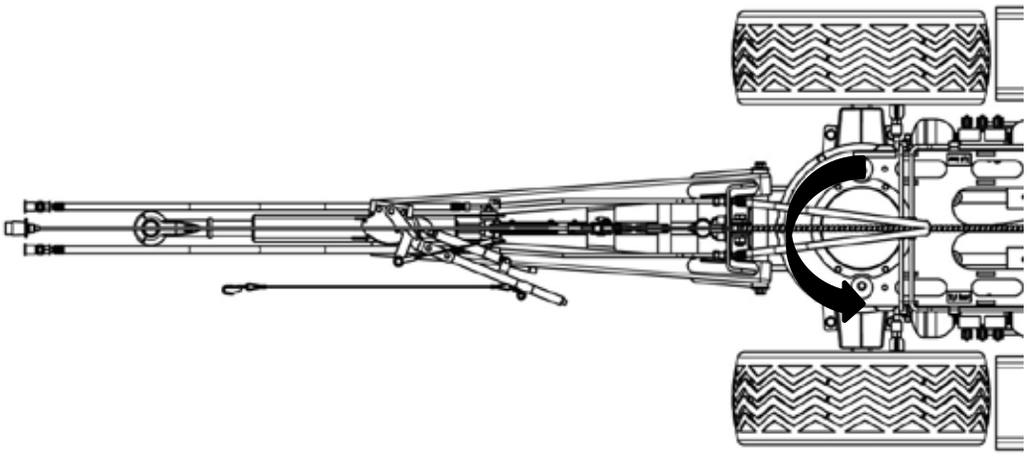
When bleeding the cylinders, make sure that the pressure in the steering system does not drop to zero. Adjust the pressure by operating the pressure source.

Observe the readings on all four pressure gauges!

When bleeding the system, always place a suitable container under the cylinder before you open the bleeder valves.

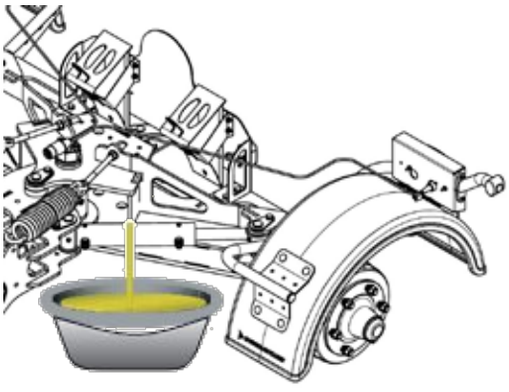
Bleeding the steering system

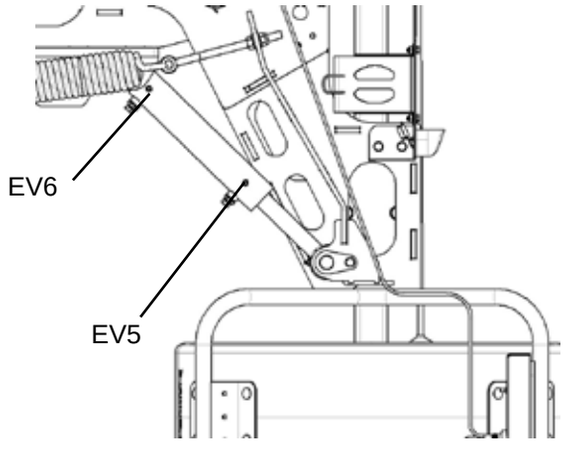
Turn the drawbar to a full left turn until it hits stop. The rear axle will turn automatically to the right until it hits stop.



Start bleeding the system on the rear axle.

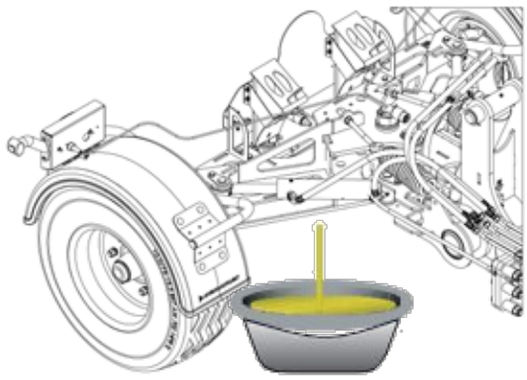
Place a container under the left cylinder on the rear axle to collect the oil. Open the bleeder valve (EV5). Wait until the oil flowing from the hose is free of bubbles. Close the bleeder valve (EV5).

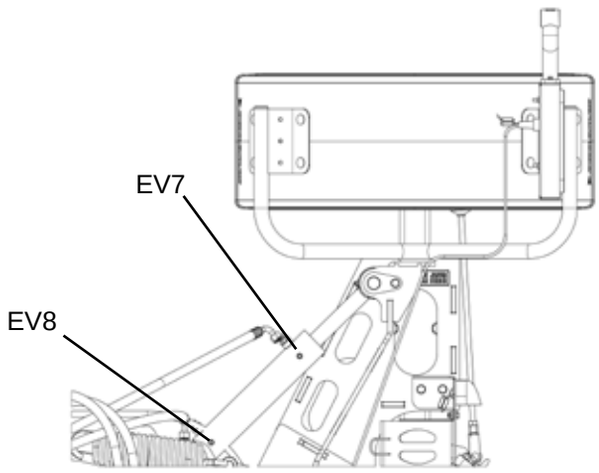




Bleeding the steering system

Place the container under the right cylinder of the rear axle to collect the oil. Open the bleeder valve (EV8). Wait until the oil flowing from the hose is free of bubbles. Close the bleeder valve (EV8).





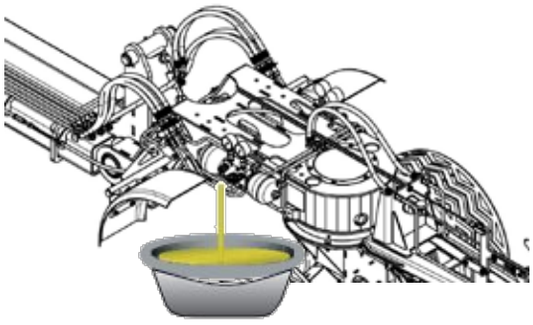
When bleeding the cylinders, make sure that the pressure in the steering system does not drop to zero. Adjust the pressure by operating the pressure source.

Observe the readings on all four pressure gauges!

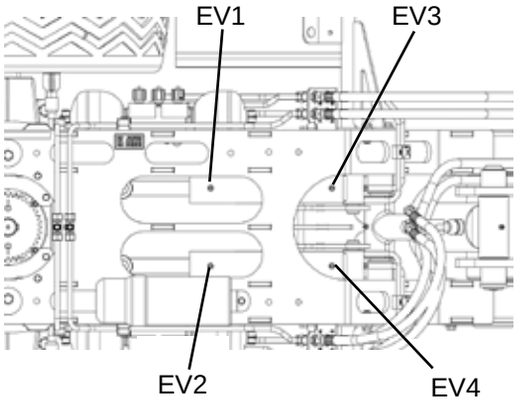
Bleeding the steering system

Continue bleeding the system from the swan neck.

Place a container under the right cylinder on the swan neck to collect the oil. Open the bleeder valve (EV1). Wait until the oil flowing from the hose is free of bubbles. Close the bleeder valve (EV1)



Place a container under the left cylinder on the swan neck to collect the oil. Open the bleeder valve (EV4). Wait until the oil flowing from the hose is free of bubbles. Close the bleeder valve (EV4).

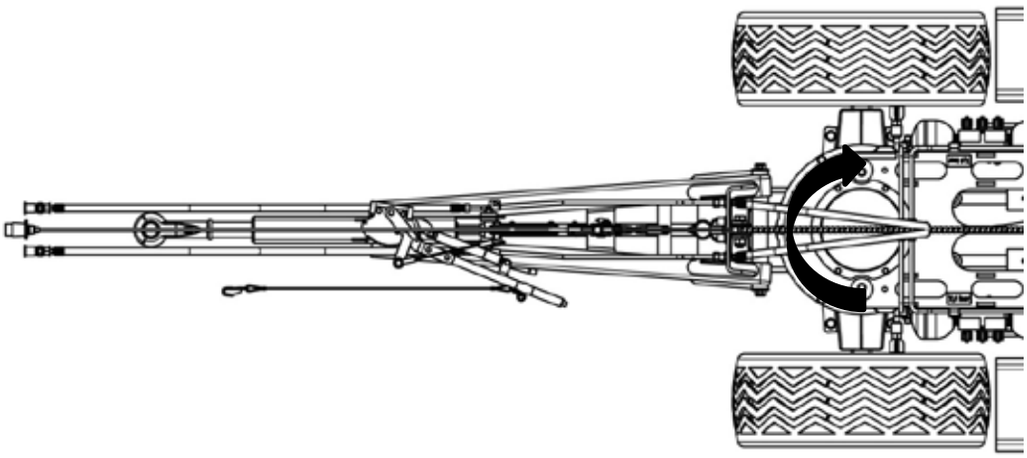


When bleeding the cylinders, make sure that the pressure of the steering system does not drop to zero. Adjust the pressure by operating the pressure source.

Observe the readings on all four pressure gauges!

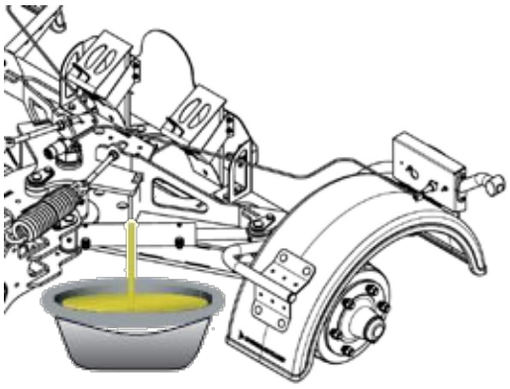
Bleeding the steering system

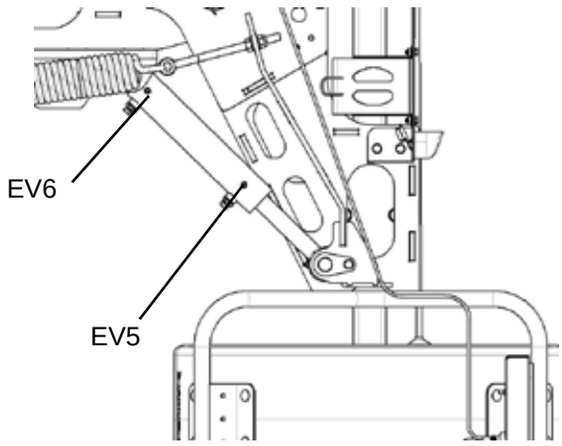
Turn the drawbar all the way to the right until it hits stop. The rear axle will turn automatically to the left until it hits stop.



Start bleeding the system on the rear axle.

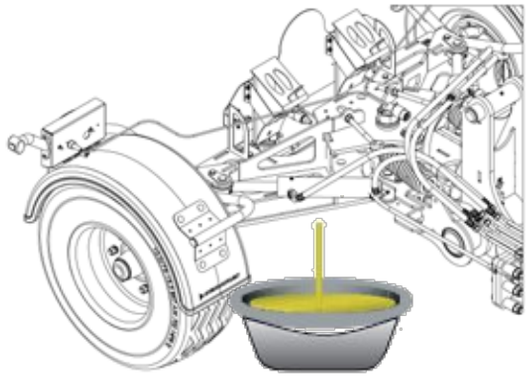
Place a container under the left cylinder on the rear axle to collect the oil. Open the bleeder valve (EV6). Wait until the oil flowing from the hose is free of bubbles. Close the bleeder valve (EV6).

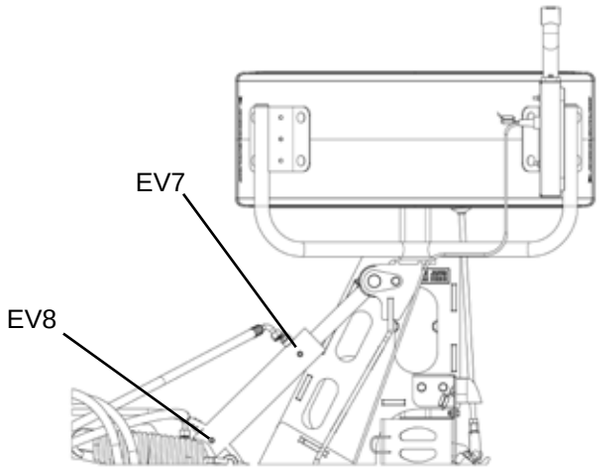




Bleeding the steering system

Place a container under the right cylinder on the rear axle to collect the oil. Open the bleeder valve (EV7). Wait until the oil flowing from the hose is free of bubbles. Close the bleeder valve (EV7).





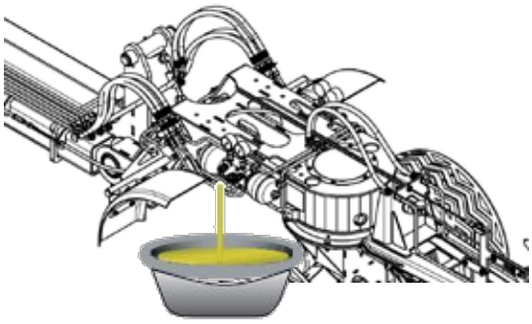
When bleeding the cylinders, make sure that the pressure of the steering system does not drop to zero. Adjust the pressure by operating the pressure source.

Observe the readings on all four pressure gauges!

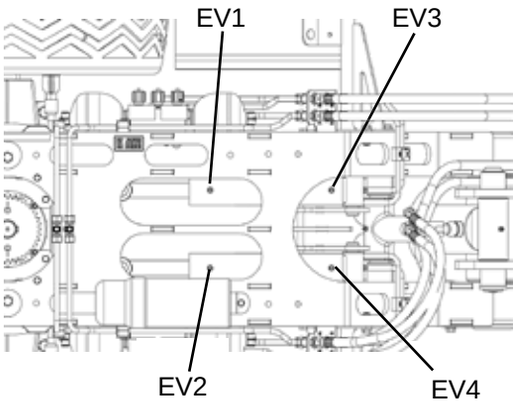
Bleeding the steering system

Continue bleeding the system from the swan neck.

Place a container under the right cylinder on the swan neck to collect the oil. Open the bleeder valve (EV3). Wait until the oil flowing from the hose is free of bubbles. Close the bleeder valve (EV3)



Place a container under the left cylinder on the swan neck to collect the oil. Open the bleeder valve (EV2). Wait until the oil flowing from the hose is free of bubbles. Close the bleeder valve (EV2).



Repeat these steps until the oil flowing from the bleeding valves is free of bubbles.

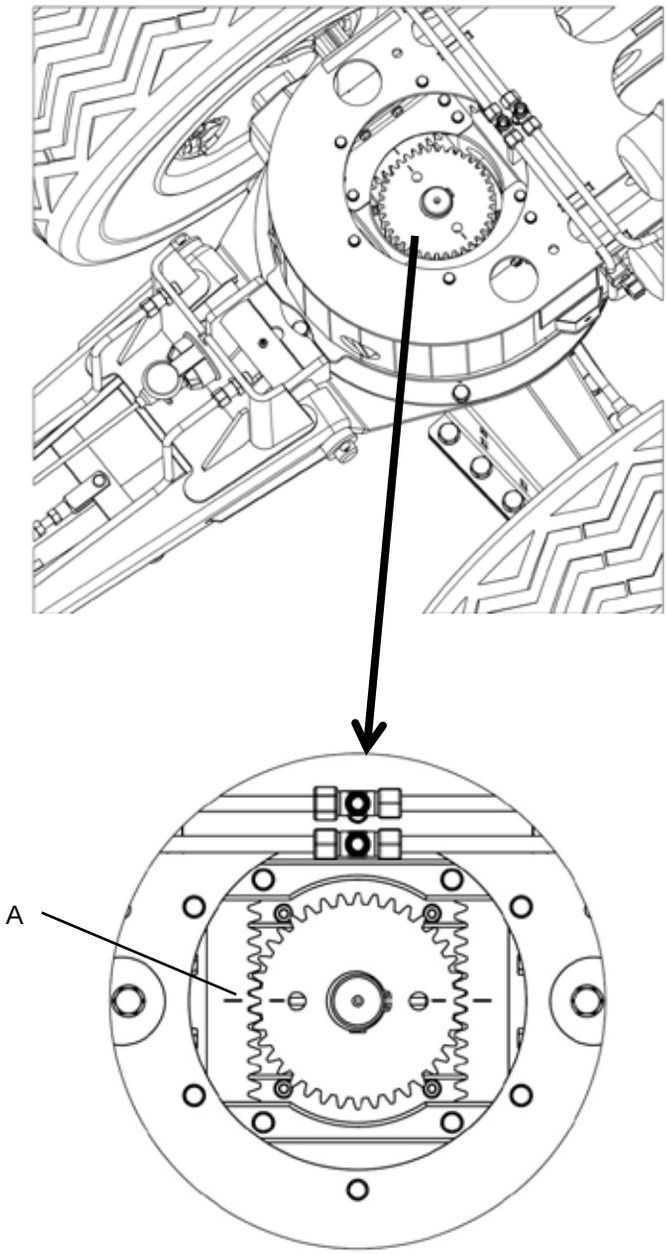
After bleeding the system, it is necessary to set the steering pressure to 45 bar. Also check the straight-ahead position of the transporter and adjust it as necessary.

Verifying mark alignment on the steering jack

In straight-ahead position, the marks on the steering jacks and on the gearwheel are in a line. These are located inside the swan neck under the lid.

If these markings (A) do not line up properly,

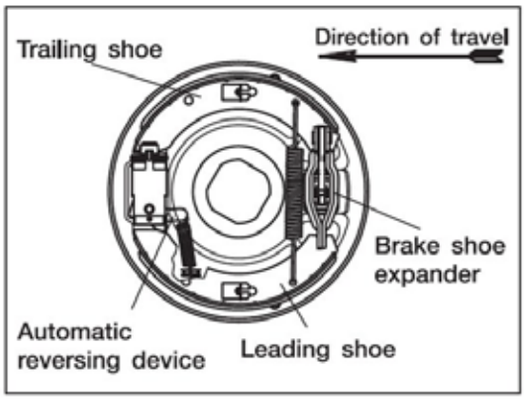
contact your service partner



Automatic Reversing Mechanism

Function of the reversing mechanism

A special brake shoe support arrangement in the wheel brake cancels the braking effect while reversing and thereby ensures the vehicle can be backed up effortlessly at any time, even uphill. This therefore renders unnecessary a reverse locking lever for mechanical locking operation. Normal brake operation is resumed immediately when driving forwards. The associated overrun device is equipped with a gas pressure-assisted hydraulic shock absorber maximizing control in both driving and braking conditions. The individual components namely the wheel brake, transmission and overrun mechanism are designed as a system to ensure effective performance.

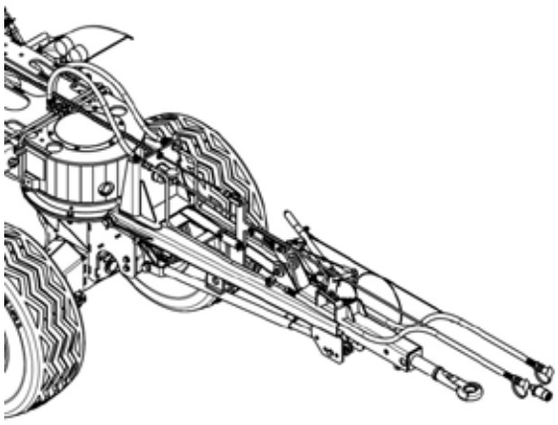


Parking brake lever

The brake system operates fully automatically and requires no specific handling procedures. Please comply with the following information when operating the parking brake lever:

Firmly pull the barking brake lever beyond the dead centre point (min. 3 teeth). The parking brake lever will be retensioned automatically by the gas spring if the transporter has a tendency to roll backwards. Compressing the drawbar with the towing vehicle makes operation of the parking brake lever easier. In this case, the wheel brake is normally pushed into the automatic reversing mechanism and the parking brake lever can be pulled up to the end position (12 teeth).

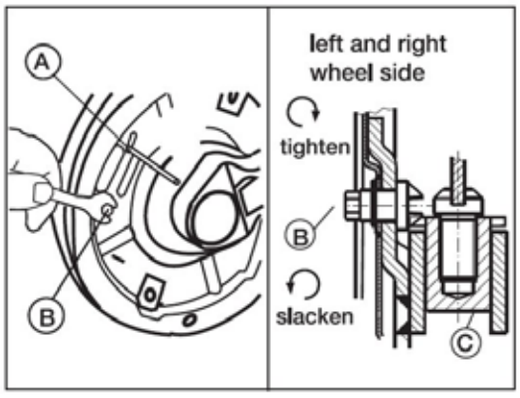
The towing vehicle must be connected to the parking brake lever by means of a breakaway cable. In the event of the transporter breaking away from the towing vehicle, the transporter is stopped by the parking brake lever in conjunction with the breakaway cable..



Automatic Reversing Mechanism

Adjusting the wheel brake S 3006-7 RAZG

Secure the transporter to prevent it moving and jack it up. Release the towing linkage to the overrun device and to the parking brake lever. Using the aid (< 4 mm Ø pin), lock the swivel cam of the wheel brake from the outside by inserting the pin through the locking hole (insert to a depth of min. 50 mm). With the aid of a spanner, tighten the adjusting nuts (item C) on the adjusting pin (item B) at the wheel brakes until the wheel can no longer turn in the driving direction. Turn back the adjusting pin until the braking effect can no longer be felt when turning the wheel forwards. Caution: The wheel brake should only be readjusted at the adjusting pin! Reconnect the towing linkage to the overrun mechanism and adjust so that it is free of play. For this purpose, the drawbar of the overrun mechanism must be completely extended and reversing must lever rest on the drawbar. As a check, lightly apply the parking brake and check that the braking torque (in the driving direction) is the same at the wheels on the left and right. Check that the individual brakes take effect at the same time.



Caution:
Remove the locking pin (< 4 mm Ø pin) from the swivel cam!

Automatic Reversing Mechanism

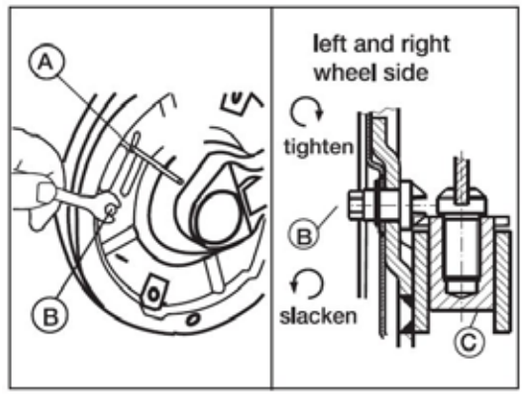
Basic setting of the wheel brake

The basic setting is carried out at the factory prior to delivery. The basic setting only requires readjustment after the drawbar or parts of the mount assembly have been replaced.

Proceed as follows:

Release the towing linkage to the overrun device and the parking brake lever.

Remove pin (Fig. 2, item D) by releasing the retaining clips. Using the aid (Fig. 1, item A, < 4 mm Ø pin), lock the swivel cam of the wheel brake from the outside by inserting the pin through the locking hole (insert to a depth of min. 50 mm). With the aid of a spanner, tighten the adjusting nuts (Fig. 1, item C) on the adjusting pin (Fig. 1 item B) at the wheel brakes until the wheels can no longer turn in the driving direction. When making the initial setting, make sure that the holes in the yoke ends (Fig. 2, item E) exactly line up with the holes in the steering lever and the towing linkages are connected without play. Now reinstall the pins (Fig. 2, item D) and secure with clips.



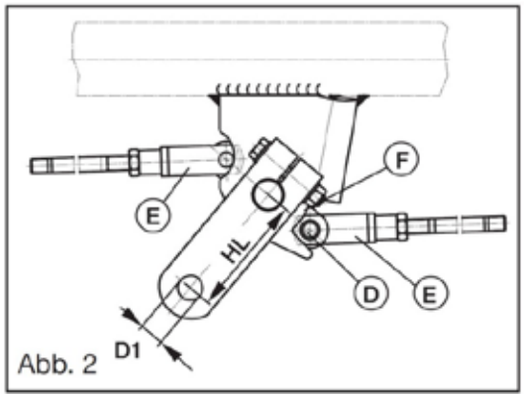


Abb. 2

Automatic Reversing Mechanism

Turn back the adjusting pin until the braking effect an no longer be felt when turning the wheel forwards.

Caution: The wheel brake should only be readjusted at the adjusting pin!

Reconnect the towing linkage to the overrun mechanism and adjust so that it is free of play. For this purpose, the drawbar of the overrun device must be completely extended and the reversing lever rest on the drawbar. With the parking brake lightly applied in the forwards direction, check the position of the brake lever of the mount assembly (angle position approx. 40°, Fig. 3).

Readjust the brake setting, if necessary. Check that the brakes respond uniformly when the parking brake is lightly applied. Readjust the brake setting, if necessary.

Caution: Remove locking pin (< 4 mm Ø pin) from the swivel cam!

With the parking brake lightly applied in the reverse direction, check the positon of the brake lever in relation to the mount assembly (brake lever parallel to the axle beam).

Readjust the brake setting, if necessary.

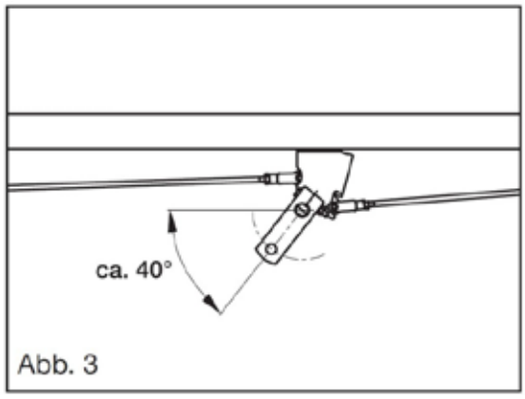


Abb. 3

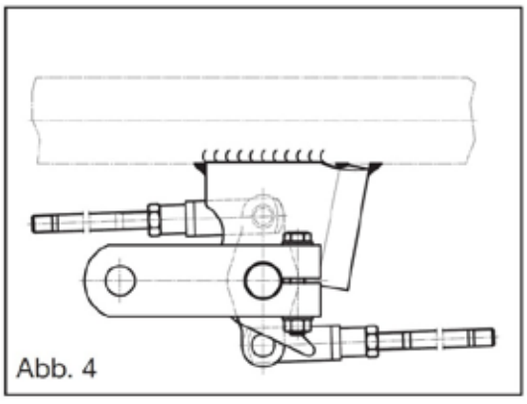
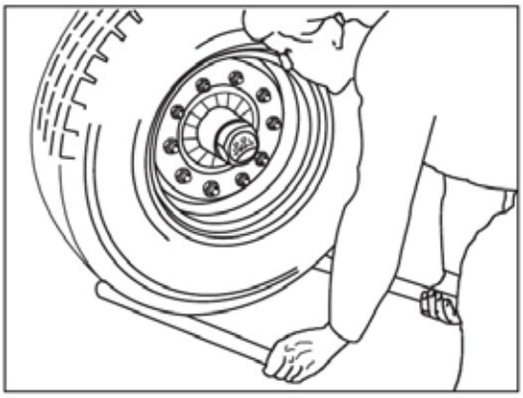


Abb. 4

Axle bearing

Checking the bearing play in the wheel hub

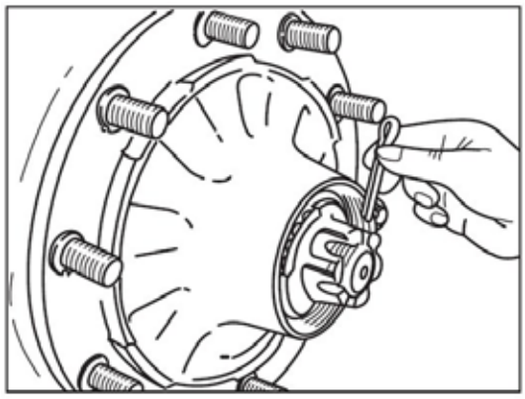
To check the bearing play in the wheel hub, raise the axle until the tyres are clear of the ground. Release the brake, place a lever between the tyre and the ground, and check for play.



If you can feel play in the bearing:

Adjusting the bearing play

1. Remove the bearing cap, or hub end-cap.
2. 2. Remove the split pin from the wheel nut.
3. 3. Tighten the wheel nut while turning the wheel, until the turning of the hub is slightly impeded.
4. 4. Turn back the axle nut to the nearest possible splint pin hole. If already in line, turn back to the next hole (maximum of 30°).
5. 5. Insert the split pin and gently bend it over.
6. 6. Refill the bearing cap with a little special long life grease (ECO-Li 91) and tap or screw it back into the wheel hub.

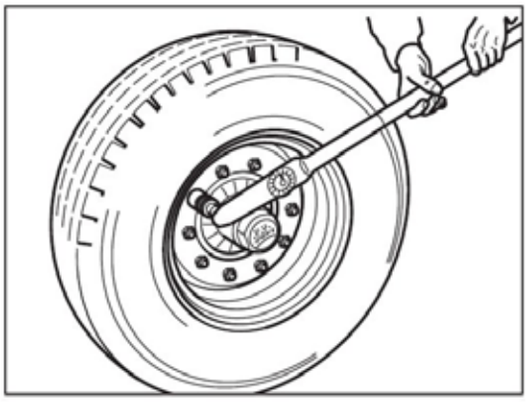


Caution!
To sharp focus will cause bearing damage.

Tyres

Retighten wheel nuts

Check that the wheel nuts are tight after the first laden journey, likewise after each wheel change and every 500 hours in operation or annually. Use a torque wrench to tighten the wheel nuts to the correct torque setting, as shown in the sticker.



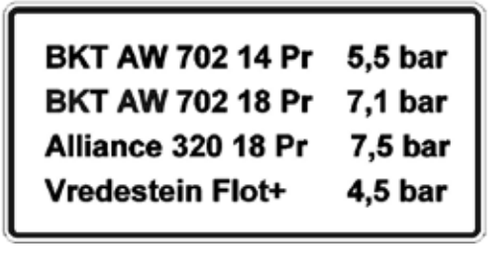
Tighten the wheel nuts in the proper sequence.

310Nm (228 ft.lb)

Tyre pressure

The air pressure in the tyres of the hader transporter are the following target values for the different tyres:

- BKT AW 702 14 PR 5,5 bar
- BKT AW 702 18 PR 7,1 bar
- Alliance 320 18 PR 7,1 bar
- Vredestein Flot+ 4,5 bar



After the first 10 operating hours

After an initial period of driving, the brake linings will have adapted to the brake drum and the components of the transmission device will have settled. The resulting play must be taken up by readjustment.

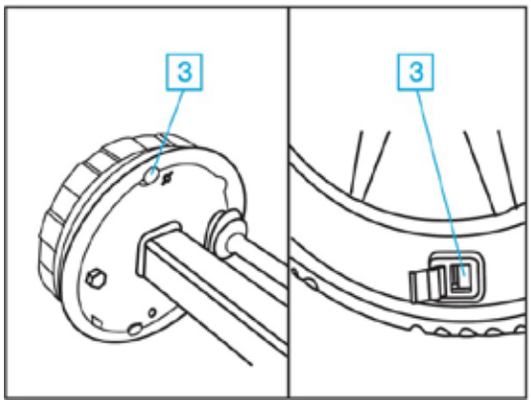
Proceed as follows:

1. Adjust the wheel brake as described on page 55 and 56.
2. Then check the amount of overrun travel used by braking the vehicle to a stop. It should not exceed 50-60% of the maximum overrun range. If this is the case, repeat the wheel brake adjustment procedure.
3. Now check whether the towing vehicle can easily push back the transporter. If the transporter is braked too much, the setting at the wheel brake should be released a little.
4. On completion of adjustment, ensure all lock nuts are firmly tightened.

Every 200 operating hours

Check the function of the brake system. Carry out the wheel brake adjustment procedure as described under “adjusting the wheel brake” on page 55 and 56.

Now proceed from point 2 as described under “after 10 operating hours”.



Check the brake lining thickness. For this purpose, remove the plastic plug from the inspection hole in the brake anchor plate and carry out a visual inspection. New brake shoes must be fitted if the brake linings are damaged or less than 2 mm thick. Also replace any worn or damaged parts (springs, brake shoe expander, etc.).

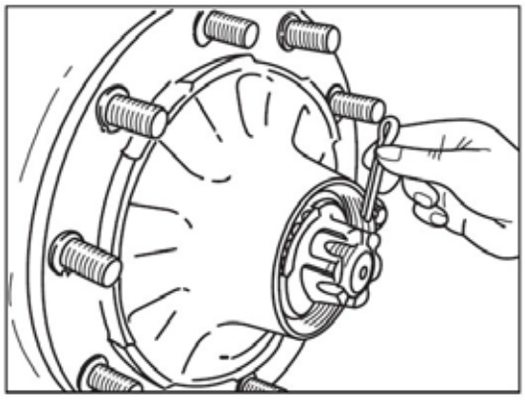
Quarterly

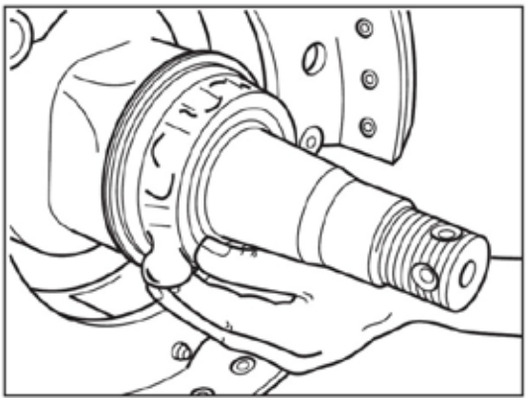
Lubricate all bearing points at least every three months.

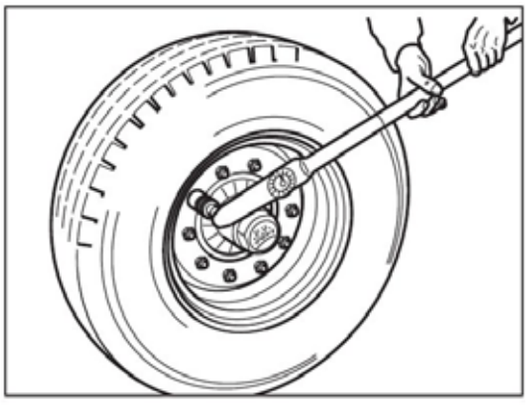
Every 1000 hours in operation (latest annually)

Changing the grease in the wheel hub bearing.

Jack up and secure the transporter and release the brakes. Remove the wheels and bearing caps. Remove the split pin and unscrew the axle nut. Using a suitable retractor, withdraw the wheel hub with the brake drum, the roller bearings and the sealing elements from the axle stub. Label or mark the wheel hubs and bearing cages so that they do not become mixed up during re-assembly. Clean the brake, check for wear, make sure that it is intact and operates correctly, and replace any worn parts. The inside of the brake must be kept free of grease and dirt. Clean the wheel hubs thoroughly on the inside and the outside, removing every trace of old grease. Clean the bearings and seals thoroughly (diesel oil) and check to ensure that they are suitable for re-use. Lightly grease the bearing seats before fitting the bearings, and then assemble all the parts in the reverse order. Carefully drive the parts into place on the bearing shells, without tilting or damaging them. Coat the bearings, the wheel hub cavity between the bearings and the bearing cap with grease before re-assembly. The quantity of grease should fill approximately a quarter to a third of the space in the assembled hub. Fit the axle nut and adjust the bearings and the brake. Finally, check that everything is in working order and carry out a suitable test drive, correcting any faults that you may discover. The wheel hubs must only be lubricated with special long life grease (ECO Li 91) with a drop point above 190°C. using the wrong grease or excessive quantities may lead to damage. Damage can be caused by the mixing of lithium-based grease with sodium-based grease, because of incompatibility.

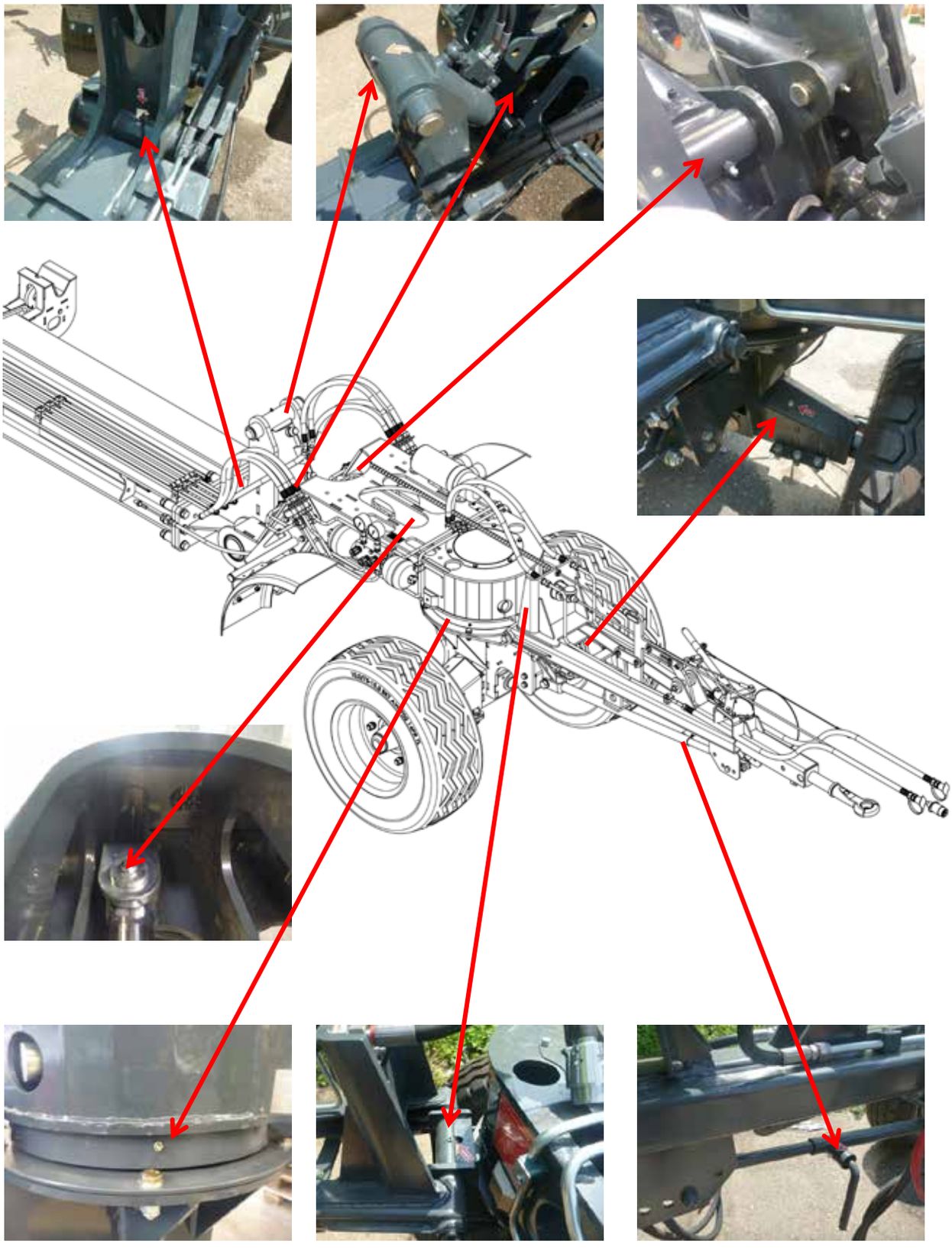






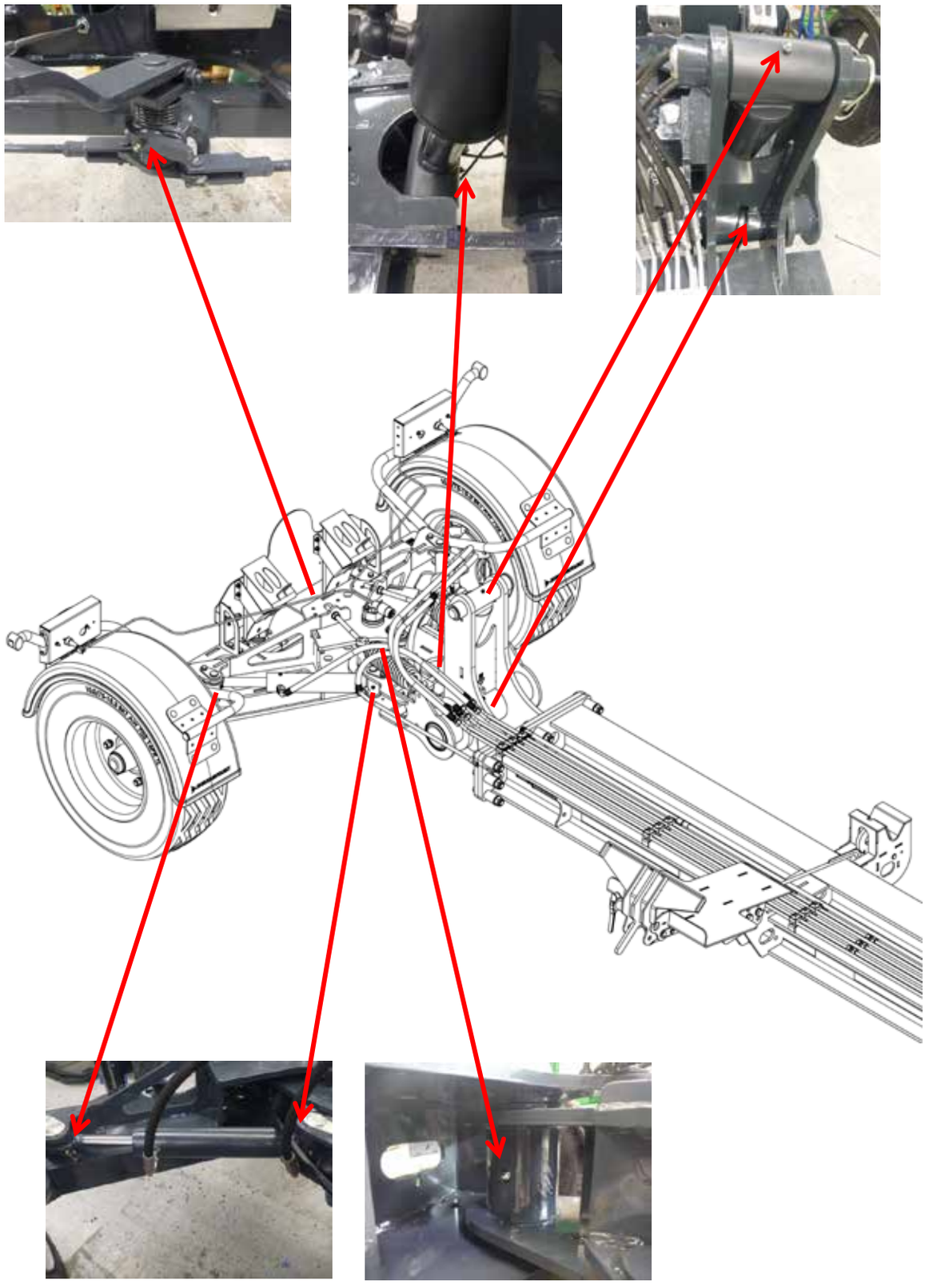
Position of the lubrication points

Vorderachse



Position of the lubrication points

Hinterachse



Lubrication and oils

Grease

Select grease according to NLGI consistency and the outdoor temperatures expected until the next servicing.

The following grease is recommended:

Shell Alvania Grease RL 2, Gadus S2 V100 2

Other greases can be used if they meet the specifications.

Important:

Replace missing grease nipples immediately. Clean grease nipples thoroughly before lubricating.

Faults and troubleshooting

Fault	Cause	Remedial action
Braking effect too weak	Lining not bedded in	Improvement after several braking operations
	Drawbar slides in completely	Readjust
	Great friction loss	Check and, if necessary, oil transmission device
Sluggish reversing	Brake system too rigid	Set too stiffly
Parking brake effect too weak	Lining not bedded In	Improvement after several braking operations
	Friction loss too great	Check and, if necessary, oil transmission device
	Incorrect setting	Readjust
Vehicle runs out of track	Air in the hydraulic system	Vent the hydraulic system
	Inspect the settings on the rack	Check the marking of racks
Vehicle not lowering	Closed valves for lifting and lowering speed	Open the valves
	Hydraulic tube damaged	Change hydraulic tube

Technical data

	SWW 660/530	SWW 660/620	SWW 660/700
Overall width	10357 mm	11270 mm	11995 mm
Overall depth	2430 mm	2430 mm	2430 mm
Overall height (without Indicator Stick)	1120 mm	1120 mm	1120 mm
Overall height (with Indicator Stick)	1410 mm	1410 mm	1410 mm
Wheelbase	7800 mm	8730 mm	9450 mm
Weight	1800 kg	1950 kg	2100 kg
Permissible total weight	6800 kg	6800 kg	6800 kg
Permissible axle load Front	3120 kg	3120 kg	3120 kg
Permissible axle load Rear	3680 kg	3680 kg	3680 kg
Front track width	1000 mm	1000 mm	1000 mm
Track width	1800 mm	1800 mm	1800 mm
Tyres	10.0/75-15.3 14Ply	10.0/75-15.3 14Ply	10.0/75-15.3 14Ply
Rim	9.00x 15.3 ET -5	9.00x 15.3 ET -5	9.00x 15.3 ET -5

General terms of guarantee

Zürn Harvesting GmbH & Co. KG, Kapellenstraße 1, D-74214 Schöntal-Westernhausen (hereinafter "**Zürn Harvesting**") hereby certifies for each customer who has purchased a new Zürn Harvesting machine from an authorised dealer that the materials and workmanship of this machine are guaranteed under the conditions specified below, providing that the machine is put into operation and maintained in accordance with the specifications in the operating instructions.

I. Duration of the guarantee

The guarantee period is one year from delivery of the machine by Zürn Harvesting and is valid for up to 500 operating hours within this period. The replacement of individual parts or repair will not prolong the above guarantee period for the machine.

II. Scope of the guarantee

The guarantee embraces only the reimbursement or repair of the parts and reimbursement of work time required in order to effect the repair, based on the repair times allowed by Zürn Harvesting, under the prerequisite that the fault was determined by our technical customer service department and was acknowledged by Zürn Harvesting to be attributable to faulty materials or workmanship. Replaced parts will become the property of Zürn Harvesting. The customer must allow services received from the vendor/dealer under warranty to be credited to the guarantee.

The guarantee does not cover any further claims against Zürn Harvesting. This means in particular that travel and transport costs will not be reimbursed, nor will Zürn Harvesting be liable for consequential damage, such as loss of harvest or losses of income.

III. Limitations of the guarantee

The guarantee does not apply to defects or faults that are attributable to:

- usual wear and tear;
- failure to heed operating, storage or transport instructions contained in the operating manual;
- use other than as intended, inadequate maintenance, inexpert operation or excessive use;
- damage caused to the machine or its equipment caused during transportation or loading; machines, equipment and parts are shipped at the risk of the recipient;
- external influences on the machine, e.g. third-party damage, weathering or other natural occurrences;
- circumstances that were known to the buyer at the time of purchase.

The guarantee will be rendered null and void if technical modifications are made to the machine without the written consent of Zürn Harvesting or if spare parts other than original Zürn Harvesting spare parts are installed and/or if repairs were not carried out by an authorised dealer. The guarantee is likewise voided if the machine was not put into service for the first time by the dealer in accordance with the instructions of Zürn Harvesting.

General terms of guarantee

IV. Assertion of the guarantee

The terms of the guarantee are dependent upon precise observance of the following regulations by both the dealer and the purchaser:

- The guarantee card (machine card) completed by the dealer and customer must be returned to Zürn Harvesting by post or e-mail as soon as the machine has been delivered to the customer.
- Applications for guarantee claims must be formulated on the corresponding Zürn Harvesting form and presented to Zürn Harvesting by the dealer within one calendar month of discovery of the defect/fault.
- The application must be completed legibly and must contain the following information:
  - Name, address and dealer customer number
  - Name and address of the purchaser
  - Exact machine type and designation
  - Complete serial number of the machine
  - Date of delivery to the dealer and to the purchaser
  - Date of the claim
  - Number of operating hours or acreage harvested by the machine
  - Exact description of the damage and information regarding the probable cause
  - Quantity, item numbers and description of damaged parts

The parts reported as damaged must be returned to Zürn Harvesting free of charge for appraisal, complete with a copy of the guarantee claim application. Any costs incurred for returning the parts replaced or repaired will be borne by the sender.

If the guarantee claim application is refused, the dealer or the customer has a period of 15 days, starting from the day the Zürn Harvesting decision was received, to demand return of the damaged parts. Once this period has elapsed, the parts will be disposed of.

V. Additional clauses

Claims under the guarantee may not be transferred to third parties without the prior, written consent of Zürn Harvesting.

The dealer has neither the right nor the authority to make declarations or to enter into a commitment etc., whether express or implied, in the name of Zürn Harvesting.

The technical support for repair of the machine given by Zürn Harvesting or their representatives excludes any further liability whatsoever by Zürn Harvesting and has no influence whatsoever on the existing terms of guarantee.

Zürn Harvesting reserves the right to modify the design of the machine without prior notice. It is not obliged to transfer such modifications to machines which have already been sold or are in use.

Furthermore, due to the rapid development of the state of the art, no guarantee can be given for the machine descriptions contained in these operating instructions or other technical leaflets and data sheets.

Torques for metric bolts

Bolts	Grade 4.8				Grade 8.8 or 9.8				Grade 10.9				Grade 12.9			
	Oiled[a]		Dry[b]		Oiled		Dry[b]		Oiled		Dry[b]		Oiled		Dry[b]	
Size	**N•m**	**lb-in**	**N•m**	**lb-in**	**N•m**	**lb-in**	**N•m**	**lb-in**	**N•m**	**lb-in**	**N•m**	**lb-in**	**N•m**	**lb-in**	**N•m**	**lb-in**
M6	4.7	42	6	53	8.9	79	11.3	100	13	115	16.5	146	15.5	137	19.5	172
									N•m	lb-ft	N•m	lb-ft	N•m	lb-ft	N•m	lb-ft
M8	11.5	102	14.5	128	22	194	27.5	243	32	23.5	40	29.5	37	27.5	47	35
			N•m	lb-ft	N•m	lb-ft	N•m	lb-ft								
M10	23	204	29	21	43	32	55	40	63	46	80	59	75	55	95	70
	N•m	lb-ft														
M12	40	29.5	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	46	80	59	120	88	150	110	175	130	220	165	205	150	260	190
M16	100	74	125	92	190	140	240	175	275	200	350	255	320	235	400	300
M18	135	100	170	125	265	195	330	245	375	275	475	350	440	325	560	410
M20	190	140	245	180	375	275	475	350	530	390	675	500	625	460	790	580
M22	265	195	330	245	510	375	650	480	725	535	920	680	850	625	1080	800
M24	330	245	425	315	650	80	820	600	920	680	1150	850	1080	800	1350	1000
M27	490	360	625	460	950	700	1200	885	1350	1000	1700	1250	1580	1160	2000	1475
M30	660	490	850	625	1290	950	1630	1200	1850	1350	2300	1700	2140	1580	2700	2000
M33	900	665	1150	850	1750	1300	2200	1625	2500	1850	3150	2325	2900	2150	3700	2730
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2770	4750	3500

The tightening torques given are guideline values. Do NOT use these values if a different torque or another securing method is specified for a specific application. For stainless steel bolts and nuts for stirrup bolts, see specific instructions. Tighten locking nuts with plastic insert or edge-raised steel locking nuts to the corresponding torque for dry bolts and nuts given in the table unless otherwise instructed.

Shear pins are designed to break at a certain load. When replacing shear pins, use only pins of the same grade. When replacing bolts and nuts, make sure that equivalent parts of the same or a higher grade are used. Tighten higher-grade nuts and bolts to the same torque as the originally used parts. Make sure that the thread is clean and the bolts correctly fitted. If possible, oil normal and galvanised nuts and bolts (except for locking nuts and wheel studs or nuts) unless specified otherwise for the specific application.

“Oiled” means that a lubricant, such as engine oil, is applied to the bolts or that phosphatized or oiled bolts with a size from M20 are used.

“Dry” means the use of normal or galvanised bolts without lubrication or bolts with a size between M6 and M18 that are zinc-coated.

Certificate of Conformity

EG- Konformitätserklärung nach Maschinenrichtlinie 2006/42/EG

Bitte sorgfältig aufbewahren, jedoch nicht im Fahrzeug

EU CERTIFICATE OF CONFORMITY According to Machinery Directive 2006/42/EG

Please keep safely, not inside the vehicle

Hiermit bestätigt die Hereby declares	**Zürn Harvesting GmbH & Co. KG**	
in alleiniger Verantwortung dass das landwirtschaftliche Anbaugerät the full responsibility for the agricultural implement	Fabrikmarke Brand	**Zürn Harvesting GmbH**
	Typ Type	**SWW 660**
genehmigt in approved in	**Schoental**	
am on	**19.01.2017**	
durch den by the	**Hersteller / manufacturer**	
den grundlegenden Sicherheits- und Gesundheitsanforderungen der Richtlinie 2006/42/EG entspricht. to full fill the complete safety- and health requirements according to machinery directive 2006/42/EG.		
Zur sachgerechten Umsetzung der in den EU-Richtlinien genannten Sicherheits- und Gesundheitsanforderungen wurden folgende Normen herangezogen: For proper implementation according to the EU-Directives for health and safety requirements, the following standards were used:	**DIN EN ISO 4254-1 (06/06)** **DIN EN 745 (08/99)**	
Geschehen zu Done at	**Schoental**	
am on	**05/03/17**	
CE	 Rolf Zürn Harvesting Harvesting, Geschäftsführer, CEO	

Contact

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