

Operating instructions

Front loader **ClassicLine**



Original operating instructions

In accordance with Directive 2006/42/EC

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1 About this manual

1.1 Documentation Overview

There are various instruction manuals and technical documentation for the front loader, installation kit and accessories. Most documents are available in multiple languages.

If you are missing an instruction manual or you need an instruction manual in another language, you can order these from your dealer. Many instruction manuals can be downloaded for free on the Internet at <http://www.stoll-germany.com>.

Installation instructions

The installation instructions describe how to install the front loader installation kit and the hydraulic and electrical equipment up to the first start-up of the front loader. They are intended for the workshop.

The installation instructions have been specially compiled for this tractor model.

They do not contain any information that is already included in the operating instructions.

The installation instructions contain information on spare parts for the tractor-specific attachment components and equipment.

Operating instructions of the front loader (this document)

These operating instructions describe the safe use of the front loader from the initial start-up to its disposal. They are intended for the operator and the user of the front loader.

The operating instructions are compiled specifically for the front loader series, they can therefore only take tractor-specific equipment into account to a limited extent.

Spare parts list

The spare parts list of the front loader lists all the information required for ordering spare parts, the front loader series and their options. Specific adjustments for the tractor are not taken into account.

In addition, spare parts lists are available for front loader implements.

Operating instructions for front loader implements

The operating instructions describe the implements available for the front loader. Various operating instructions are available for various implements:

- Operating instructions for implements for heavy duty work,
- operating instructions for global implements for light tasks,
- operating instructions for special implements.

Other documents

In addition to the above instruction manuals, there may be installation and operating instructions as well as other *Technical Information* that deal with special additional equipment and extensions, which are not included in the other documentation.



When you pass on the front loader or the tractor with a front loader attached, please also hand over all the relevant documents! The next owner needs the information!

1.2 What to do with these operating instructions

These operating instructions are designed to help you to learn how to use a front loader safely. We recommend that you carefully “feel your way” around the functions of the front loader step by step using the operating instructions until you can handle it safely.

- You must first of all read the safety chapter, for your own protection and for the protection of those around you!
- Familiarize yourself next with the features and operation of the front loader.

Information about the layout of this manual:

To help you find the information you need in this manual quickly, we have used the following “tools”:

Contents at the beginning of the manual

Differently styled texts:

The plain text without special labeling explains situations and contexts.

- Text with a dot: Here you can or have to do something.
- ➔ This symbol indicates the conditions that must be fulfilled before you start the following operations.
- ✂ This symbol indicates the tools you need.

(1) Text with a number: As the point, but there are several steps.



Text with an information note (“i”): Here you will find information that is particularly important!

1 **Caption:** Specifies the names of the position numbers in the images.

Bold numbers in brackets (**1**) also refer to the item numbers in the pictures.

Warnings are marked off with a line underneath, above which there is a signal word on a coloured background:

DANGER

These notes warn against hazards that result in serious injury or death.

- ▶ The dot indicates the necessary safety measures.
-

WARNING

These notes warn against hazards that may cause serious injury or death.

- ▶ The point here too identifies the necessary safety measures.
-

CAUTION

These notes warn against hazards that could result in minor and moderate injury.

- ▶ The point here too identifies the necessary safety measures.
-

2 Safety

2.1 Proper use

The front loader is an attachment for agricultural or forestry tractors. It is intended to be used solely for loading work.

It may only be attached onto a tractor with the attachment components approved by STOLL for that tractor.

It may only be used with the work tools supplied by STOLL. It may only be used with tools that are suitable for the respective loading work. For more information, see Section 4.5 and the operating instructions of the tool.

The front loader must **not** be used in work processes and with tools that require the presence of people close to the load when the front loader is in the raised position! This kind of work is only permitted if the front loader is equipped with an anti-lowering guard, see Chapter 4.6.

It may only be operated within the limits defined in the Technical Specifications.

The front loader and its tools must not be operated simultaneously with other hydraulic equipment.

The front loader should only be controlled from the driver's seat of the tractor.

The front loader should only be used by people who meet the requirements specified in Section 2.2 of these operating instructions.

2.2 Requirements of all people working with the front loader

If the front loader is not used properly, people can be seriously injured or killed. To avoid accidents, each person who is working with the front loader must fulfill the following minimum requirements:

- You are physically able to control the front loader and the tractor.
- You are able to safely carry out the work with the front loader in the context of the information in these operating instructions.
- You understand how the tractor and the front loader operate in the context of your work and can recognize and avoid the hazards of the work.
- You have understood the operating instructions and can convert the information into action in accordance with the operating instructions.
- You are familiar with driving tractors safely.
- For road trips, you know the relevant driving regulations and have the required driver's license.

2.3 Danger zone and work area

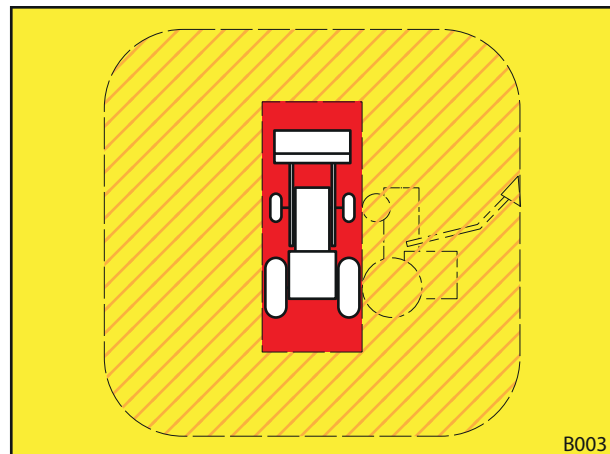
Work area

(the entire image, yellow)

The work area (yellow) is the entire area in which the tractor and front loader move or can move during the loading work.

As the tractor moves, any place in the work area can quickly become a danger zone.

Only people who are needed for carrying out the work are allowed to be in this area.



Danger zone (image hatched in orange)

The danger zone (hatched in orange) is the area that is hazardous due to the movement of the front loader or tractor. This also includes the area where the front loader or tractor can tilt in the event of an accident.

People may only be in this area as a matter of exception, i.e. if their presence is imperative to carry out the work and this cannot be done from outside the danger zone. This can, for example, be the case if a guide or a fireguard is needed for the work.

If people are in this area, the driver has to work with much more caution. It must be possible for all the people in this area to communicate at all times, for example, by using clear hand signals that have been agreed on beforehand. Everybody involved must be trained for their work and know the risks and protective measures involved.

Internal danger zone (red in the image)

The inner, immediate danger zone (red) covers the area where the front loader is moving or can move, and the area in the direct vicinity of the tractor, in particular between the wheels and directly in front of and behind the tractor. Please also refer to the operating instructions of the tractor!

People are not allowed to stay in this area!

When people enter this area, the front loader must be completely lowered and the tractor turned off and secured!

2.4 Dangers arising from the front loader

This section explains the most common hazards, their causes and what you can do to prevent them. The warning signs depicted can be found on the safety labels on the front loader and the tractor.

Danger to life!

It is forbidden to lift or transport people with the front loader!

The front loader is not equipped with the necessary safety equipment to be used as a work cages!



Danger to people in the work area of the front loader!

The front loader can move unexpectedly due to incorrect operation, technical failure or an unexpected technical state in the hydraulics. It is possible for the front loader to suddenly lower or drop the load.

People in the danger zone of the front loader may sustain an injury if this happens. This may lead to serious injuries or death.

- People are not allowed to be inside the immediate danger zone of the front loader.
- Monitor the work area at all times! Make sure that nobody who is not involved does not enter the work area!
- The front loader must only be operated by one person!
- Only operate the front loader from the driver's seat of the tractor. Control elements outside of the tractor must not affect the front loader! In particular, the control elements of the front linkage must not affect the front loader!
- Do not stay near the raised front loader or unsecured load.



Danger! Falling load

Raised loads can fall and drop on the driver's seat. This will result in severe injuries or death.

There is a particularly high risk when lifting pallets or bales above the cab and when working on a slope.

The standard protection systems (roll-over protection structure ROPS, falling objects protective structures FOPS) do not provide fully adequate protection!

- Take extra caution when working on slopes. Reduce the contents of the implement and lower the load!
- Check the tilt of the implement, do not scoop the implement too far.
- Use suitable work implements, which are designed to prevent loads falling on the driver's seat.
- Use the appropriate implements when loading the bulk/goods: Bale grab for bales, pallet forks for pallets, etc.
- Lift pallets or bales one at a time! Never stack multiple loads (bales, pallets) one on top of the other. The loads at the top can fall on you.
- Compensate for the increased angle on loaders without parallel linkage (ProfiLine FS) when lifting by "dumping" with the implement!
- On tractors without a cab or 4-post roll-over protection structure, do not lift large bulks, in particular bales, any higher than the pivot point of the beam!
- Watch the load as you are lifting! That is why you do not lift the load when reversing!



Danger! High voltage!

When a front loader is in the raised position, there is a risk of it colliding with power lines.

This will result in severe injuries or death.

- Do not lift the front loader any higher than 4 m when driving on roads!
- When working, keep a safe distance from electrical lines!
- If you do not know the rated voltage stay at least 4 metres away from electrical lines!



You can contact your local statutory accident insurance office for information about the required minimum distances, e.g. in Germany the "Accident Prevention Regulation Electrical Systems and Operating Materials VSG 1.4" of the Social Insurance for Agriculture, Forestry and Horticulture.

What to do in the event of a voltage flashover from overhead lines

Flashovers cause high electrical voltages on the outside of the tractor. They produce large voltage differences on the ground around the machine. Large steps, lying down on the ground or supports with your hands on the ground can cause life-threatening electric currents (step voltage).

- Do not leave the cab!
- Do not touch any metal parts!
- There must be no conductive connection to the earth!
- Warn people: Do not go near the tractor! Electrical currents on the ground can cause severe electric shocks.
- Wait for help from professional emergency services! The overhead power line must be shut down.

If people have to leave the cab despite the flashover, for example, because of immediate risk of death by fire:

- Jump away from the tractor. Jump in a secure position! Do not touch the tractor from the outside!
- Take small steps to move away from the tractor!

Warning! Hydraulic oil under high pressure!

The tractor and front loader work with hydraulic oil that is under high pressure when the system is running. The maximum permissible pressure in the hydraulic system is 205 bar.

Incorrect maintenance or damage to the hydraulics can lead to oil spurting out at high pressure.

This can result in serious injury or death.

- Check all the hydraulic components regularly! Please refer to the instructions for maintenance in Chapter 5!
- Make sure that no hydraulic components, particularly the tubes, can be damaged by moving parts!
- Replace worn, outdated or leaking hydraulic lines!
- On tractors without a closed driver's cab, mount tubes with splash guards!
(Tubes with splash guards are available from your local dealer.)

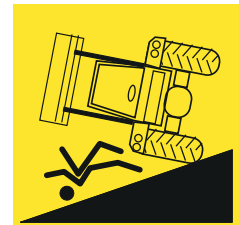


Caution! Tractor loses its stability

There is the risk of tipping when working on slopes, when going around bends, when driving into something, when the load on the rear axle is too low and when driving into the bulk to be lifted at a skewed angle.

There is a particularly high risk when the front loaders are raised up high because of the higher centre of gravity.

- Proceed with extra caution when working on slopes! Do not travel with a raised load across a slope!
- Reduce your speed when going around a corner and lower the load!
- Do not drive the tractor with sudden movements when the front loader is in the raised position and is fully loaded!
- For front loader work always use a counterweight on the rear of the tractor! Follow the instructions for ballasting—see Section 4.3.2!
- Drive straight into the load. Do not move the steering when you do it!
- On tractors with adjustable track width: Make the track as wide as possible!
- Use the safety belt!
- Connect the brake pedals!
- Switch the front axle off!



Risk of breakage!

If you exceed the maximum permissible load of the front loader or use the front loader incorrectly, the front loader can be damaged in such a way that puts people at risk, either directly or as a result of breaking components.

This can result in serious injury or death.

- Observe the loading limits listed in the Technical Specifications!
- When levelling or pushing snow, do not drive faster than 10 km/h!
- Work only when the implement is mounted and locked in place! (see 4.5)
- Observe the load capacity of the tires and the front axle of the tractor!

2.5 Safety routines

This section gives you an overview of the standard safe working practices for the front loader. More detailed information can be found in the relevant chapters of these operating instructions.

Loading work with the front loader

When the front loader moves, people are potentially at risk (see Section 2.4). This means that you can only work safely if there is nobody in the immediate vicinity of the front loader.

- Keep people away from the work area. Pay particular attention to children!
- Assign a helper! Only lift the front loader up when all the other workers are at a sufficient distance from the danger zone.
- Check the locking mechanism of the implement every time before you use the front loader, see Chapter 4.5.1.
- Do not drive faster than 10 km/h!

Installing and removing the front loader and the implements

Helpers can be seriously injured or killed if the front loader or tractor accidentally moves.

Mount and dismantle the front loader on your own without assistance:

- (1) Before leaving the cab: Lower the front loader completely onto the ground!
- (2) Turn the tractor off and pull up the parking brake!
- (3) Depressurize the hydraulic system: Move the operating lever in all end positions.
For electrically actuated valves, the ignition must be turned on to do this, turn the ignition off again afterwards!
- (4) Only then should you operate latches or hydraulic couplings on the front loader or implement.

A detailed description of the installation and removal of the front loader can be found in Section 4.4, and the installation and removal of the implements in Section 4.5.

Parking the front loader without the tractor

The length of the parking supports of the front loader is limited by the front axle of the tractor. Therefore, a front loader without implements is not stable on its parking supports.

- Only set the front loader down with an attached implement weighing at least 70 kg on a horizontal, solid surface!

Stopping the tractor with a front loader

When the tractor is turned off, the front loader is lowered over time by the drop in pressure in the hydraulic system.

- (1) Always lower the front loader completely, even if you are just leaving the tractor briefly.
- (2) Turn the tractor off and pull up the parking brake!
- (3) Depressurize the hydraulic system: Move the operating lever in all end positions.
For electrically actuated valves, the ignition must be turned on to do this, turn the ignition off again afterwards!
- (4) Secure the tractor against unauthorized use: Take the ignition key out!

When shutting down the tractor with the front loader, also note the operating instructions for the tractor!

Driving on roads

When driving on public roads with a mounted front loader, you must follow different driving regulations of the different countries!

- Observe the applicable regulations of the respective country!
- Follow the instructions for driving on roads in Section 4.7!

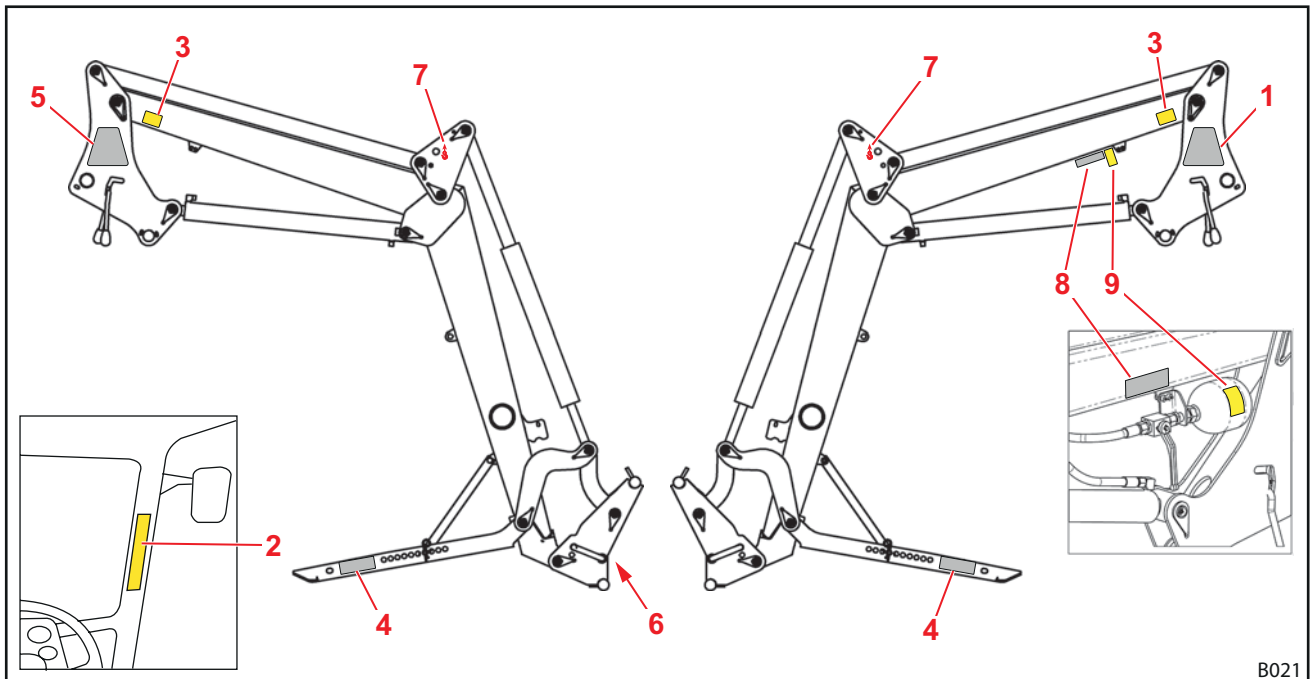
2.6 Adhesive safety label

Make sure safety labels are legible at all times!

Safety labels warn of hazards at dangerous points and are an important part of the safety equipment of the front loader. Missing safety labels increase the risk of serious and fatal injuries.

- Clean dirty safety labels!
- Replace damaged or illegible safety labels immediately!
- Also stick the safety labels supplied on spare parts immediately!

Illustrations and explanations of these labels can be found on the following pages. The following figure shows the position of the adhesive label.



- 1 Safety instructions, label on the left pillar
- 2 Safety instructions, label within the driver's field of vision
- 3 Safety instructions, label left and right on the lifting arm
- 4 Labels on the support legs
- 5 Instructions for installing and removing the front loader, label on the right pillar
- 6 Label implement locking mechanism
- 7 Label "hooks": above, below or next to the hole for crane transport (on front loader CL-P on the deviation triangle, on front loader CL-H on the frame).
- 8 Label on the control lever of the Comfort Drive (option)
- 9 Warning notice for the accumulator (option Comfort Drive)



The diagram illustrates safety hazards for a telehandler, organized into four main sections:

- Section 1:** Shows the telehandler with a wrench and a clock indicating a 5-hour maintenance interval. A large warning sign is placed over the machine.
- Section 1a:** Shows a wrench being used on the machine.
- Section 1b:** Shows the telehandler with electrical sparks, indicating a risk of electrocution.
- Section 1c:** Shows four scenarios of unsafe operation:
 - 1c1: A person is prohibited from standing near the machine.
 - 1c2: A person is shown falling from the machine.
 - 1c3: A person is prohibited from standing near the machine.
 - 1c4: A person is shown being struck by the machine's arm.
- Section 1d:** Shows a person being struck by the machine's arm.
- Section 1e:** Shows a person being struck by the machine's arm.
- Section 1f:** Shows a person being prohibited from standing near the machine.
- Section 1g:** Shows a person being prohibited from standing near the machine.
- Section 2:** A vertical strip of warning signs:
 - 2a: General warning sign (exclamation mark).
 - 2b: Prohibition sign for driving on uneven ground.
 - 2c: Prohibition sign for driving on slopes.
 - 2d: Prohibition sign for driving with a load.
 - 2e: Prohibition sign for driving with a load.
 - 2f: Prohibition sign for driving on uneven ground.
 - 2g: Prohibition sign for driving on uneven ground.
 - 2h: Prohibition sign for driving on uneven ground.
 - 2i: Prohibition sign for driving on uneven ground.
- Section 3:** Two warning signs:
 - 3a: General warning sign (exclamation mark).
 - 3b: Warning sign for falling objects.
- Section 4:** Two diagrams showing the correct and incorrect way to lower the telehandler's arm:
 - Top diagram: Shows the arm being lowered correctly (indicated by a red arrow) and incorrectly (indicated by a red 'X' and a warning sign).
 - Bottom diagram: Shows the arm being lowered incorrectly (indicated by a red 'X' and a warning sign) and correctly (indicated by a red arrow).

Reference numbers 1, 1a, 1b, 1c, 1d, 1e, 1f, 1g, 2, 2a, 2b, 2c, 2d, 2e, 2f, 2g, 2h, 2i, 3, 3a, 3b, and 4 are used to identify specific elements in the diagram.

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1 Safety instructions, label on the left pillar

- 1a Tighten all the fixing screws on the mounting kit after the first 5 hours of operation!
- 1b Danger! High voltage! When working, keep a safe distance from electrical lines!
- 1c Danger! Falling load! Never stack multiple loads one on top of the other!
- 1d Danger! Falling load! Use implements that are suitable for the job!
- 1e Caution! Increased risk of tilting when the front loader is raised!
- 1f It is prohibited to remain under the raised front loader!
- 1g It is forbidden to lift or transport people with the front loader!

More detailed information on the risks and symbols can be found in section 2.4 "Dangers arising from the front loader".

2 Safety instructions, label within the driver's field of vision

- 2a Observe the operating instructions
- 2b Danger! Falling load! Use implements that are suitable for the job!
- 2c Danger! Falling load!
Never stack multiple loads one on top of the other!
Check the tilt of the implement, do not scoop the implement too far.
- 2d It is forbidden to lift or transport people with the front loader!
- 2e Danger to people in the work area of the front loader!
- 2f Danger! High voltage! When working, keep a safe distance from electrical lines!
- 2g It is prohibited to remain under the raised front loader!
- 2h Caution! Increased risk of tilting when the front loader is raised!
- 2i Warning! Hydraulic oil under high pressure!

More detailed information on the risks and symbols can be found in section 2.4 "Dangers arising from the front loader".

3 Safety instructions, adhesive label left and right on the lifting arm.

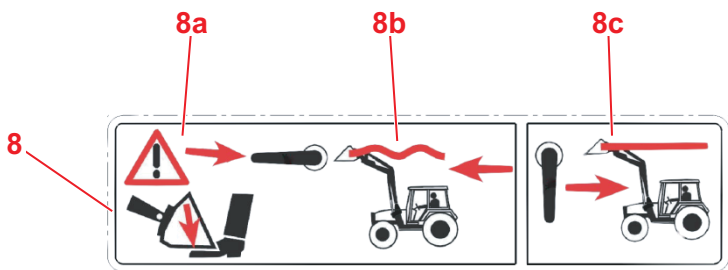
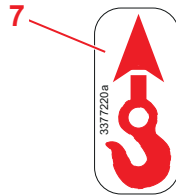
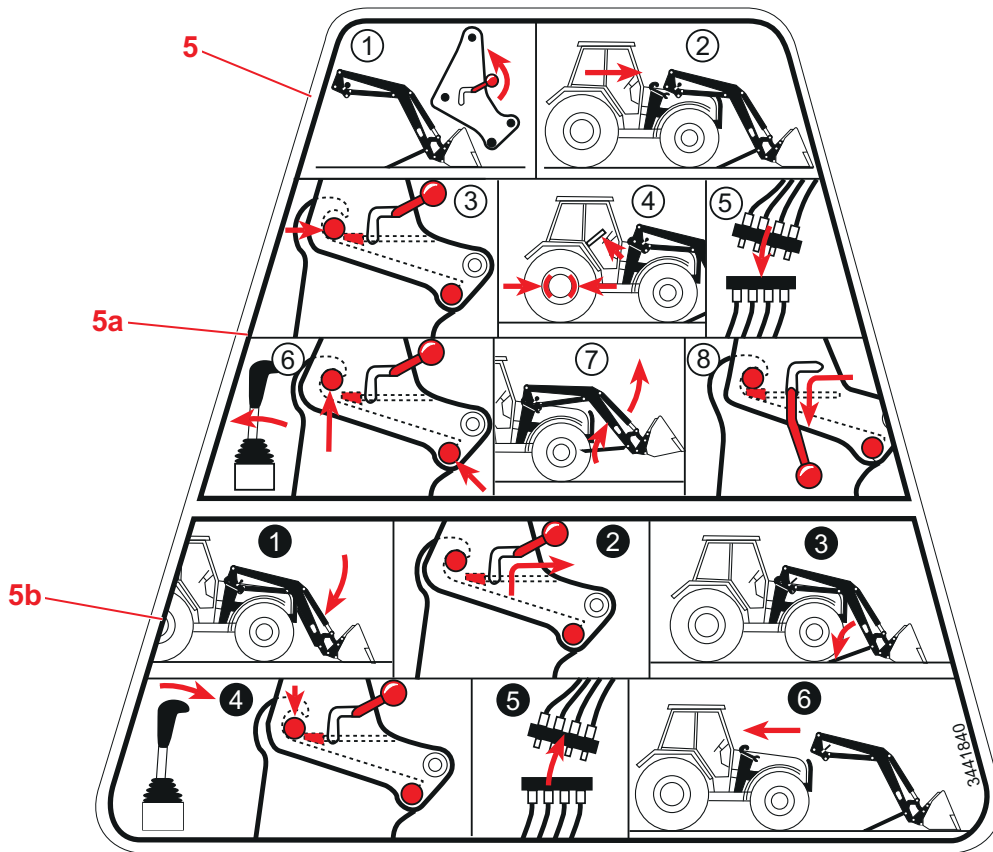
- 3a Observe the operating instructions!
- 3b Danger! Falling load! Danger to people in the work area of the front loader!

More detailed information on the risks and symbols can be found in section 2.4 "Dangers arising from the front loader".

4 Labels on the support legs

Only set the front loader down with an attached implement weighing at least 70 kg!

Detailed instructions on how to install and remove the front loader are described in section 4.4 "Installing and removing the front loader".



5 **Instructions for installing and removing the front loader, label on the right pillar**

5a Mounting of the front loader

5b Removing the front loader

Detailed instructions on how to install and remove the front loader are described in section 4.4 "Installing and removing the front loader".

6 **Label implement locking mechanism** This label is on the locking connector of the implement locking mechanism and marks out the locked position.

Detailed instructions for installing and removing the implements are described in section 4.5 "Mounting and removing the implements".

7 **"Hook" label**

These labels show the crane attachment points for transporting a dismantled front loader.

8 **Label on the control lever of the Comfort Drive**

This label is used if the front loader is equipped with a Comfort Drive. For detailed information on the Comfort Drive, see page 28.

8a Risk of crushing! The front loader lowers when the Comfort Drive is switched on.

8b Lever setting: Comfort Drive turned on.

8c Lever setting: Comfort Drive turned off.

9 **Label accumulator** (with Comfort Drive)

The pressure reservoir (accumulator) is under pressure from the gas and oil! Removal and repair according to the instructions in the technical manual!

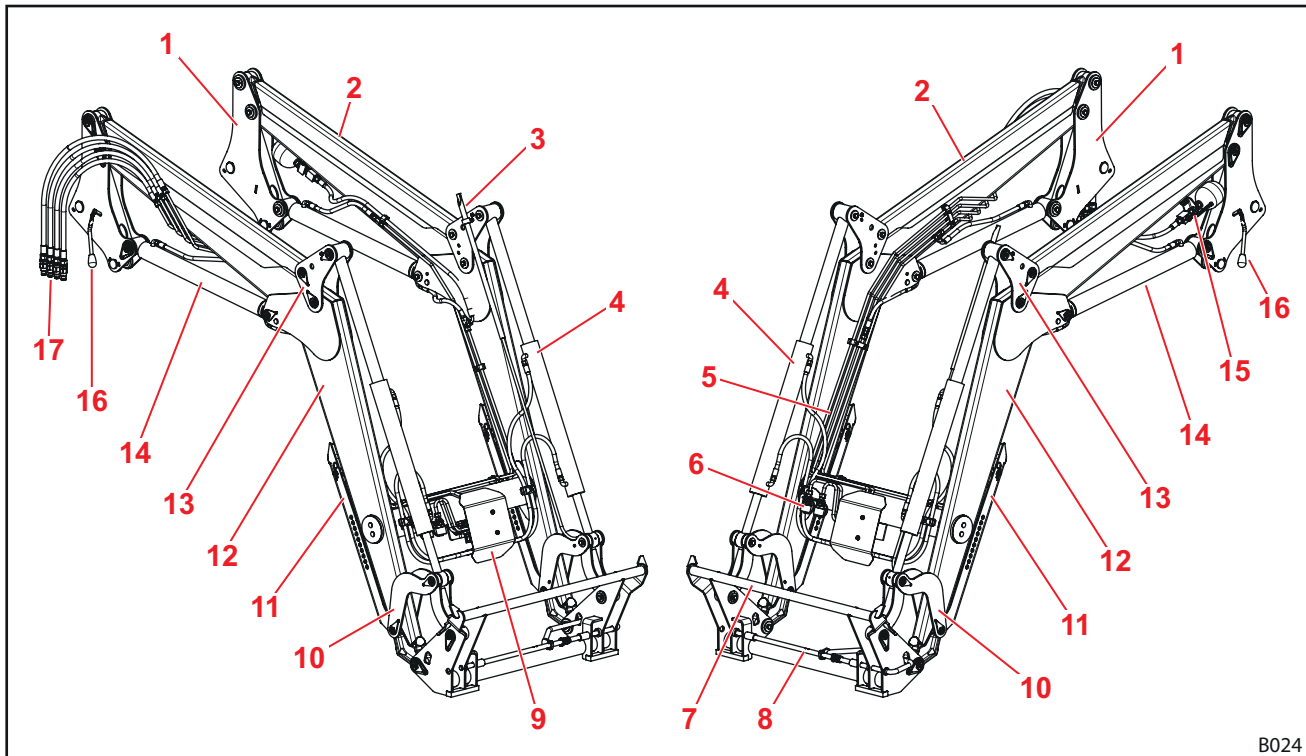
Ordering information for Safety Labels

Order no.	Name	Labels included
3462690	Set of adhesive labels "Technology"	1 label each at pos. no. 1, 5 1 label each at pos. no. 4 (left, right), 2 labels at pos. no. 7
3431550	Label sheet "Technology yellow"	2 labels at pos. no. 3 1 label at pos. no. 6
3449070	Label "cabin"	1 label at pos. no. 2
1432670	Label "accumulator"	1 label at pos. no. 9
3533120	"Comfort Drive" label	1 label at pos. no. 8

3 Description of functions

3.1 Structure of the front loader

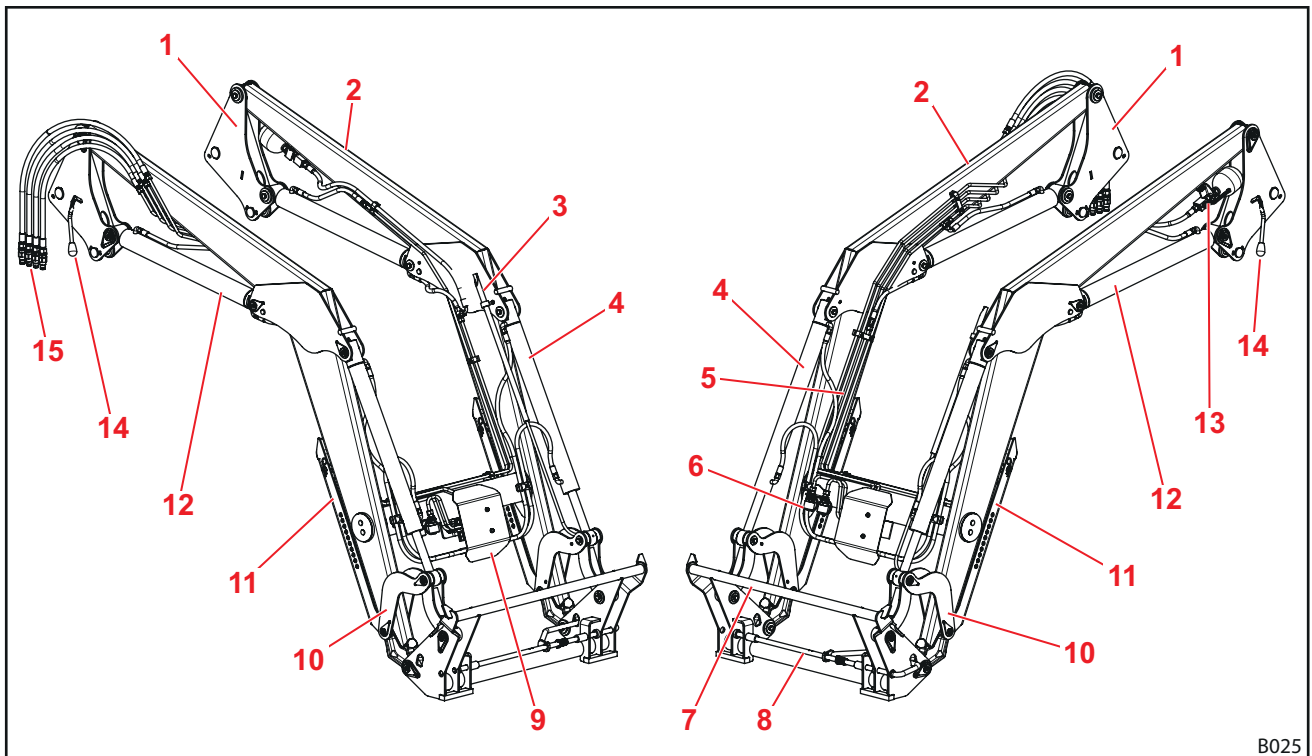
3.1.1 Overview of the front loader CL with parallel linkage (CL-P)



Front loaders CL-P are constructed from the following major components:

- 1 Pillars (drive-in system)
- 2 Control rod of the parallel guide
- 3 Display for implement position
- 4 Implement cylinder: Hydraulic cylinders for dumping and scooping (synchronous cylinders)
- 5 Hydraulic tubes
- 6 Hydraulic couplings for the 3rd control circuit (optional)
- 7 Euro change frame (implement support)
- 8 Implement locking mechanism
- 9 Cap for hydraulic distribution and valves for additional equipment
- 10 Lever mechanism dumping/scooping
- 11 Support legs
- 12 Lifting arm (base frame)
- 13 Deviation triangle of the parallel guide
- 14 Lifting cylinder: Hydraulic cylinders for lifting and lowering
- 15 Comfort Drive (hydraulic vibration damping, optional)
- 16 Front loader locking mechanism
- 17 Hydraulic hoses to the tractor (interface on the attachment component)

3.1.2 Front loaders CL without parallel linkage (CL-H)



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Front loaders CL-H are constructed from the following major components:

- 1 Pillars (drive-in system)
- 2 Lifting arm (base frame)
- 3 Display for implement position
- 4 Implement cylinder: Hydraulic cylinders for dumping and scooping (differential cylinders)
- 5 Hydraulic tubes
- 6 Hydraulic couplings for the 3rd control circuit (optional)
- 7 Euro change frame (implement support)
- 8 Implement locking mechanism
- 9 Cap for hydraulic distribution and valves for additional equipment
- 10 Lever mechanism dumping/scooping
- 11 Support legs
- 12 Lifting cylinder: Hydraulic cylinders for lifting and lowering
- 13 Comfort Drive (hydraulic vibration damping, optional)
- 14 Front loader locking mechanism
- 15 Hydraulic hoses to the tractor (interface on the attachment component)

3.1.3 Front loader designs

The table shows the different design variants and possibilities of the front loaders

Equipment	Front loader	
	CL-P	CL-H
Parallel linkage (mechanical)	●	—
Change frame Euro	●	●
Change frame SMS	○	○
Combi change frame Euro-MX	○	○
Combi change frame Euro-SMS	○	○
Implement locking mechanism (mechanical)	●	●
Hydraulic lines with 4 plug-in couplings	●	●
Hydro-Fix multiple hydraulic coupling	○	○
Hydro-Fix multiple coupling for hydraulic and electric	○	○
Tractor-specific multi-coupler	(○)	(○)
Comfort Drive	○	○
3rd control circuit ¹	○	○
Camera system	○	○

● = Series, ○ = Optional, — = not available, () = not for all tractors

¹ alternatively with screw couplings or plug couplings

3.1.4 Front loader sizes

Front loaders are available in various sizes. You can find the full list in the Technical Data, Section 7.1



To find out which front loader frame sizes are approved for your tractor, please refer to the installation instructions.

3.2 Attaching it to the tractor

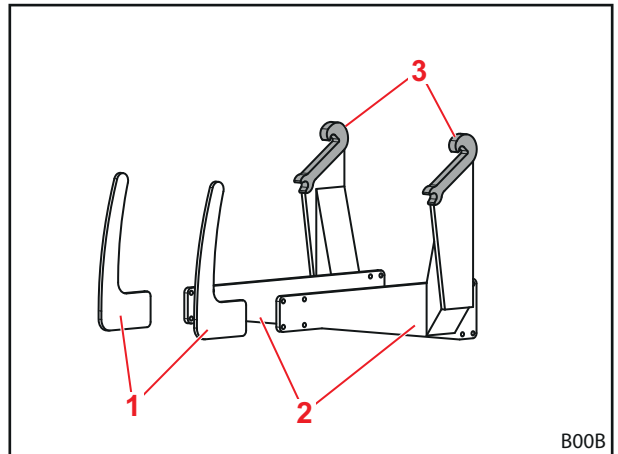
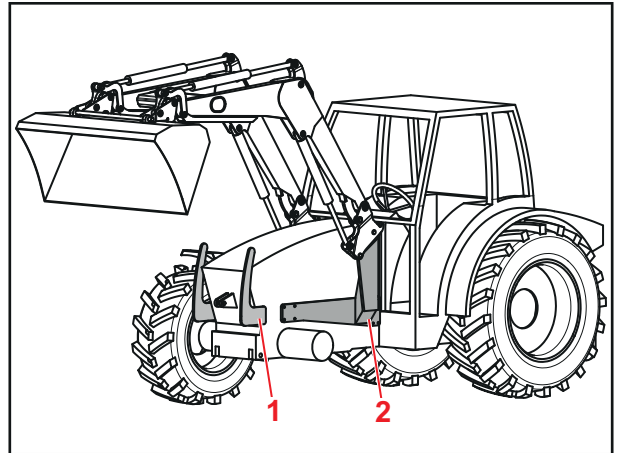
The front loader is attached to the tractor with an installation kit. The installation kit usually consists of

- 1 Front guard left and right
- 2 Attachment components left and right

These components remain permanently mounted on the tractor. The front guard and attachment components can look very different depending on the tractor model. For detailed information on the installation kit, please refer to the installation instructions.

The front guard protects the front of the tractor from damage, e.g. if it collides with a tailboard when loading a trailer.

The front loader is hinged in the supports **(3)** on the attachment components with its pillars and secured with a locking mechanism.



B00B



Observe the local regulations when registering it in the vehicle documents of the tractor! The altered empty weight of the tractor with the installation kit, without the front loader, in particular, must be recorded in many countries.

3.3 Change frame and tool locking mechanism

3.3.1 Euro change frame

In the above figure, the change frame (blue) is shown with the tool locking mechanism without a tool.

The change frame is swiveled around its pivot point(8) with the tool cylinder (1).

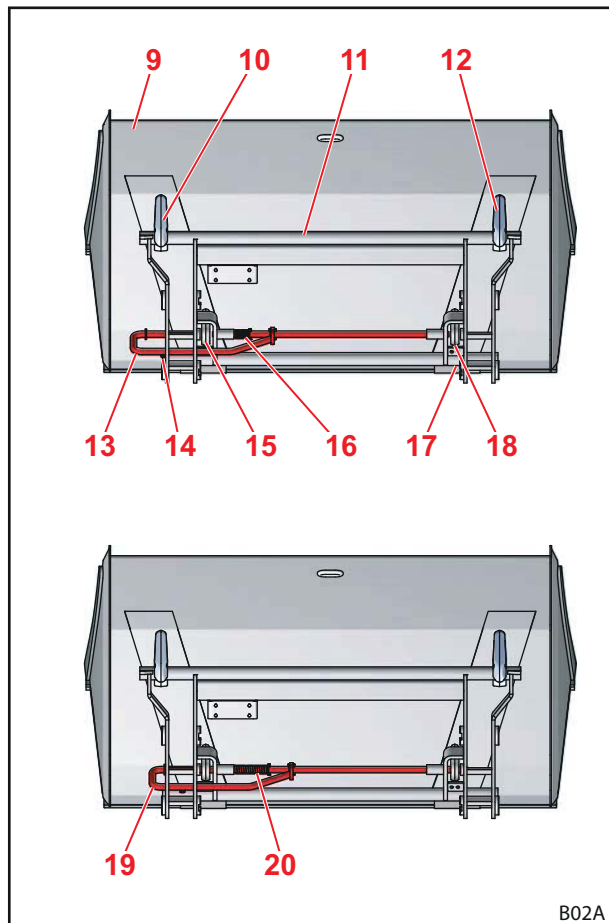
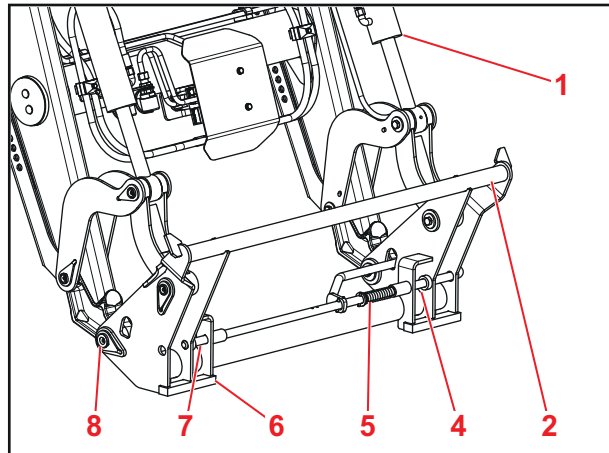
The second figure shows the change frame with a mounted bucket (9) with an open locking mechanism at the top (13), and a closed locking mechanism at the bottom (19). The locking mechanism is shown in red.

The tool (9) is hinged with its hooks (10, 12) on the top cross bar (2, 11).

Below, the tool is on the bottom cross bar (6, 17). Both eyelets (15, 18) of the tool project into the supports (4, 7) of the change frame.

The locking mechanism is held open by the stop (14). If the handle of the locking mechanism (13, 19) is raised, locking mechanism is closed by the spring (5, 16, 20), i.e. the bolts are pushed through the eyelets of the tool.

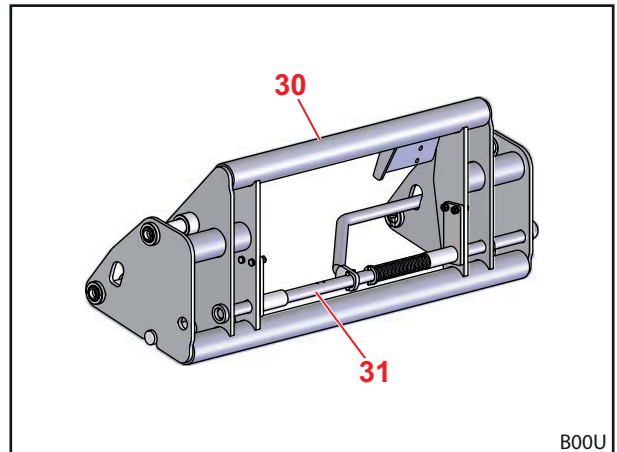
When *scooping* the handle is lifted by a guide piece on the beam, and the locking mechanism closes automatically.



B02A

3.3.2 Change frame SMS

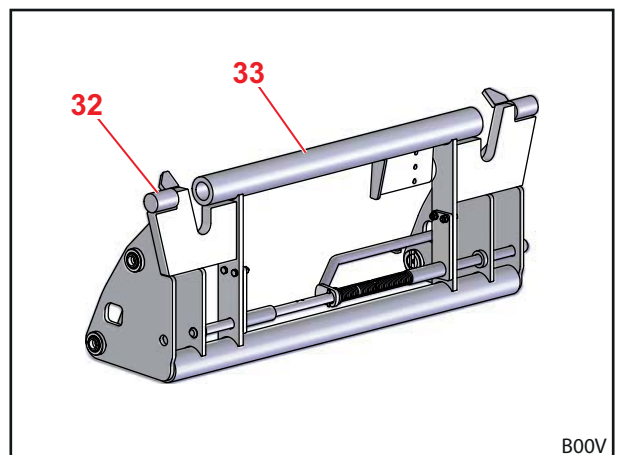
The change frame and the locking work on the same principle as the Euro change frame: The tool is mounted on the upper cross bar (30) and secured by the locking mechanism (31).



B00U

3.3.3 Combi change frame Euro-SMS

Both tools according to the Euro standard and tools according to the SMS standard can be mounted to these change frames. Euro-tools are hinged on the outer bolts (32), SMS tools on the cross bar (33). The remaining functions correspond to the Euro and SMS change frames.



B00V

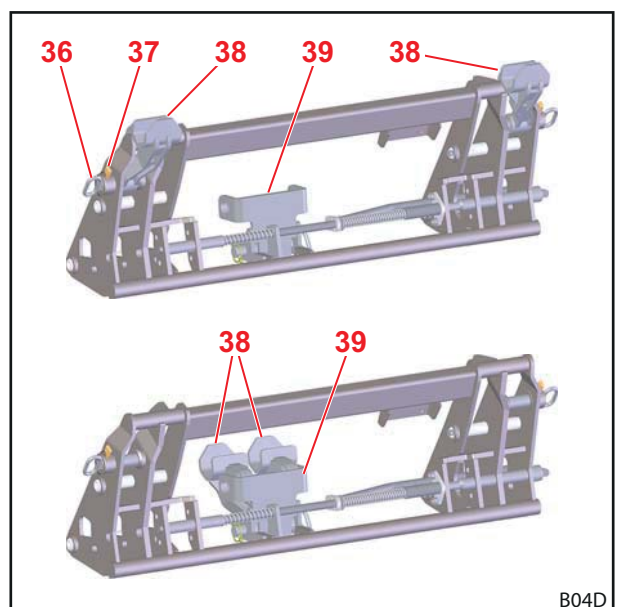
3.3.4 Combi change frame Euro-MX

Both implements according to the Euro standard and implements according to the MX standard can be mounted to these change frames.

If the change frame is used with MX implements, the two supports (38) must be mounted and secured with the bolt (36) and lynch pins (37).

If the change frame is used with Euro implements, you can secure the supports (38) on the holder (39).

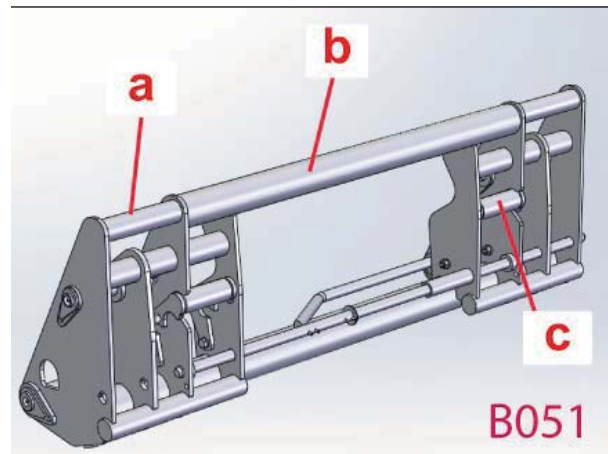
The remaining features correspond to the Euro change frame.



B04D

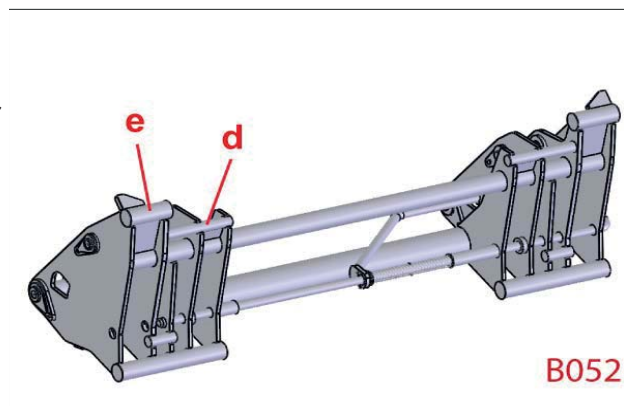
3.3.5 Combi change frame Euro-SMS

Both implements according to the Euro standard and implements according to the SMS standard can be mounted to these change frames. Euro implements are hinged on the outer bolt (a), SMS implements on the cross bar (b). Swing out the additional equipment (c) before mounting a Euro implement. The remaining features correspond to the Euro change frame.



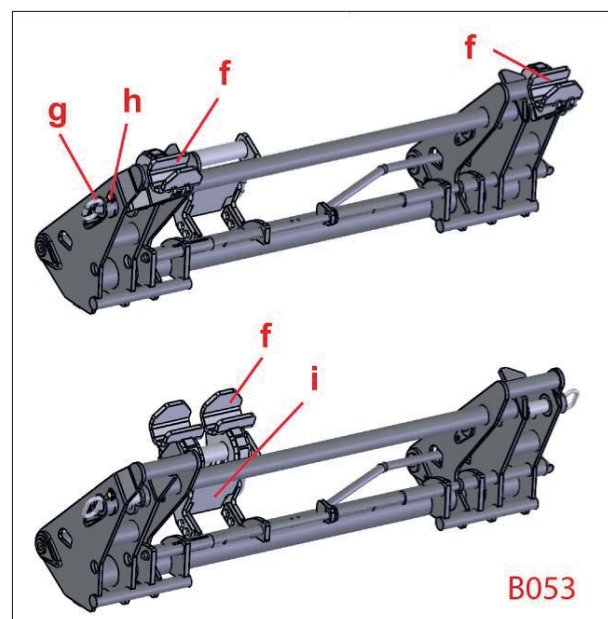
3.3.6 Combi-change frame Euro-Alö³

Both implements according to the Euro standard and implements according to the Alö-Type3 standard can be mounted to these change frames. Euro implements are hinged on the outer bolt (d), Type3 implements on the inner bolts (e). The remaining features correspond to the Euro change frame.



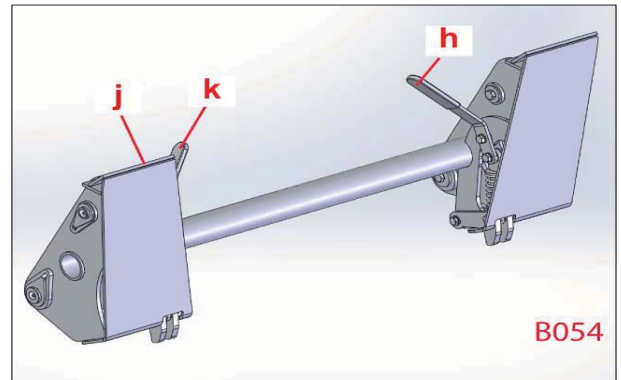
3.3.7 Combi change frame Euro-MX

Both implements according to the Euro standard and implements according to the MX standard can be mounted to these change frames. If the change frame is used with MX implements, the two supports (f) must be mounted and secured with the bolt (g) and linch pins (h). If the change frame is used with Euro implements, you can secure the supports (f) on the holder (i). The remaining features correspond to the Euro change frame.



3.3.8 Skid-steer change frame

This change frame is suitable for use with Skid-Steer implements. The edge of the support surfaces (j) is pushed into the support on the implement. When the implement rests on the change frame, the locking mechanism is closed by both levers (k) being swivelled upwards. The locking hooks (l) then grip into the strap-joints on the implement.



This implement locking mechanism does not close automatically! Lock the implement by hand after each implement change!

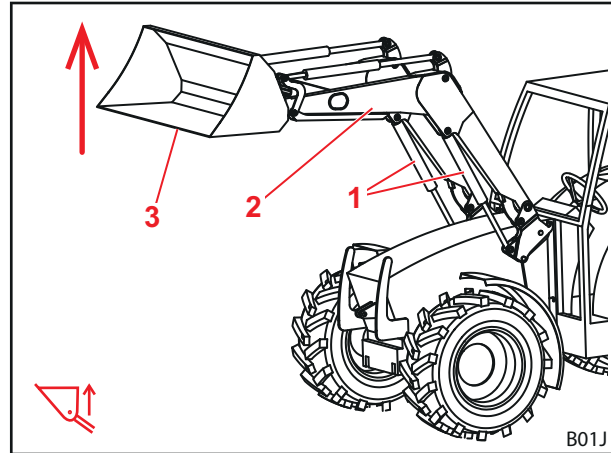
3.4 Functions of the front loader

3.4.1 Basic functions

The front loader has 4 basic functions: Lifting, lowering, dumping and scooping.

Lifting

Both lifting cylinders (1) are extended. In the process, the beam (2) swivels upwards on its pivot point and lifts the tool (3).

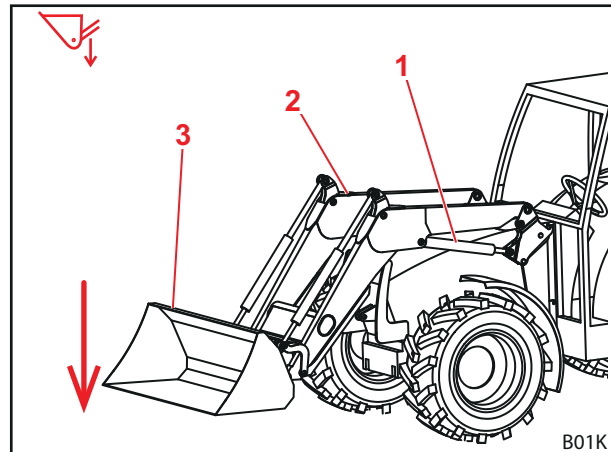


Lowering

Both lifting cylinders (1) are retracted. In the process, the beam (2) swivels downwards on its pivot point and lowers the tool (3).

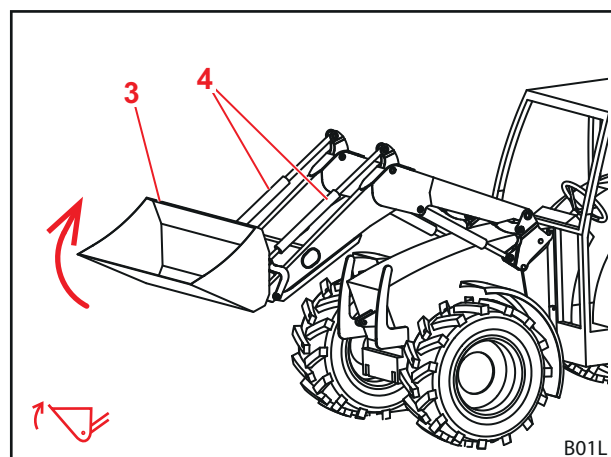
On front loaders with parallel linkage, the tool remains in the same position as it is raised and lowered. The angle of the tool to the beam changes.

On front loaders without parallel linkage, the tool swivels with the beam and the angle between the tool and beam remains constant.



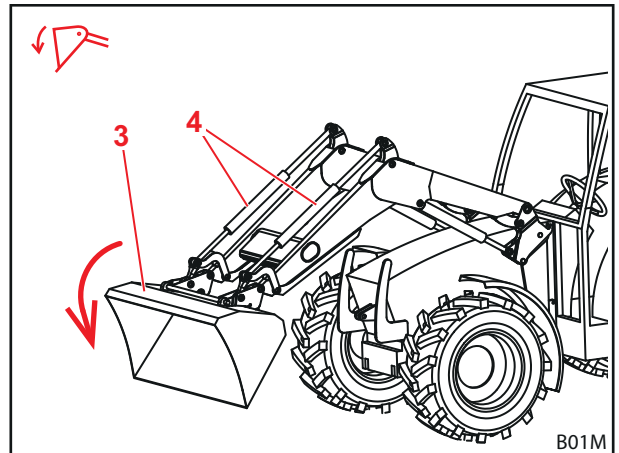
Scooping

Both tool cylinders (4) are retracted, making the tool (3) swivel upwards, then it scoops.



Dumping

Both tool cylinders (4) are extended, making the tool (3) swivel downwards, then it dumps the load out.



3.4.2 Float position

WARNING

Float position: Unexpected movement!

If the float position is switched on when the front loader with parallel linkage (CL-P) is not completely lowered, a vacuum may form in the lifting cylinder. As a result, during a subsequent dumping action, the front loader will unintentionally lower.

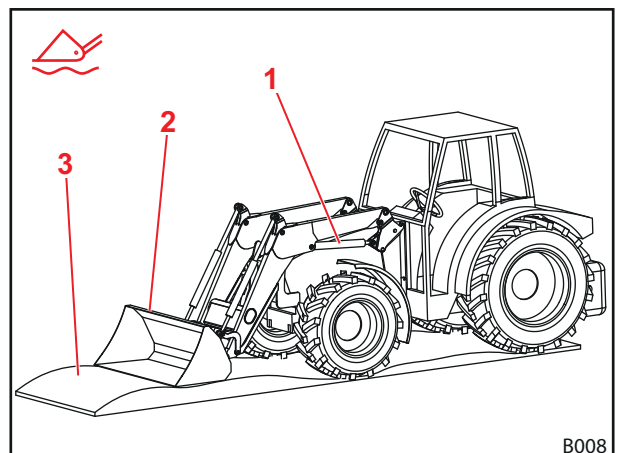
If people stay in the work area, this may result in serious injury or death.

- ▶ Only use the float position when the front loader is completely lowered!
- ▶ Do not use the float position with implements that require people to be present!
- ▶ Only use the float position if nobody is in the danger zone!
- ▶ If necessary, increase the idle speed to increase the supply of oil.

In the float position, the hydraulic lines of the hydraulic cylinder (1) are stuck together and opened up to the tank for lifting and lowering. The front loader lies on the ground through the pressure of its own weight (3). The implement (2) follows the contour of the ground, it floats on it, so to speak.



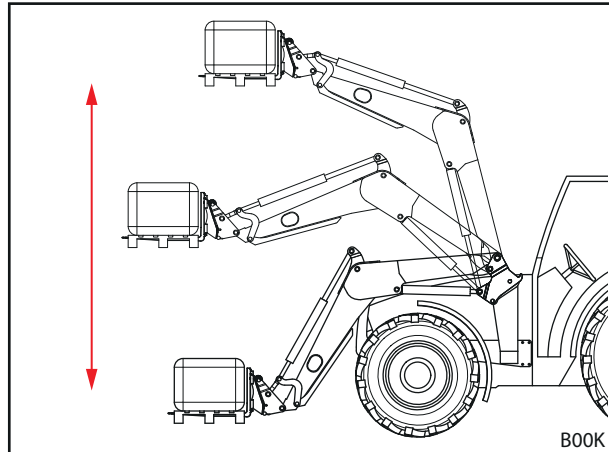
This function is only available when the tractor has a corresponding control unit or is equipped with a Stoll single lever control unit.



3.4.3 Parallel linkage on front loaders CL-P

When lifting and lowering the front loader, the implement is guided parallel through the guide linkage. The tilt of the implement remains constant.

This feature is particularly advantageous when loading pallets and stacking bales. The parallel movement works when the implement is horizontal/level or scooped. It does not work at when the implement is tipped.



3.4.4 Display for tool position

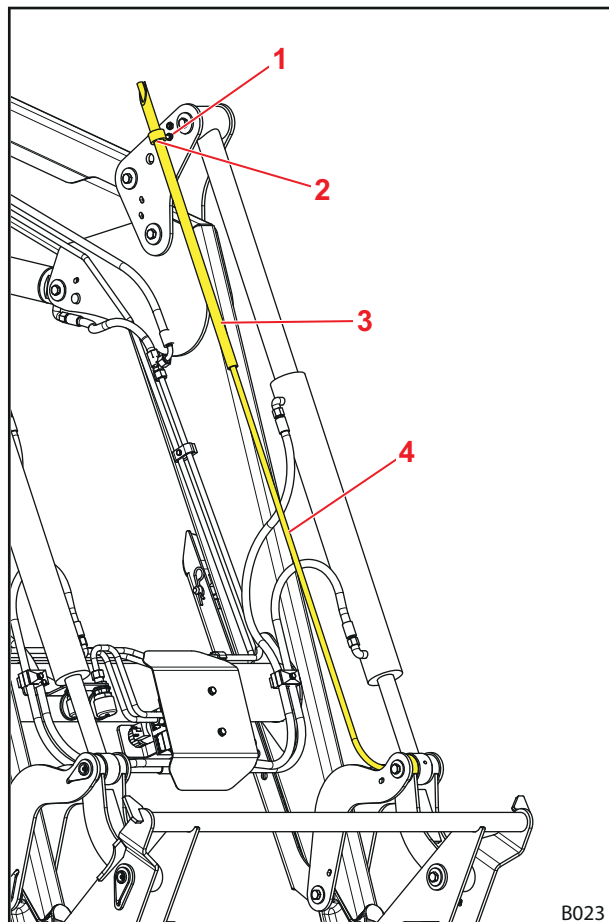
The rod (4) is attached to the lower bearing bolt of the left tool cylinder.

The tube (3) is attached with the bracket (2).

When the tool is dumped or scooped, the rod moves in the tube. So you can "see" from the driver's seat the horizontal position of the tool at the upper end of the tube.

Setting:

- Position the tool horizontally.
- Lower the front loader onto the ground.
- Pull up the parking brake, turn the engine off.
- Loosen the clamping screw (1).
- Push the tube (3) into the holder (2) in such a way that the top end of the tube is flush with rod (4).
- Tighten the clamping screw (1).



3.4.5 Additional functions

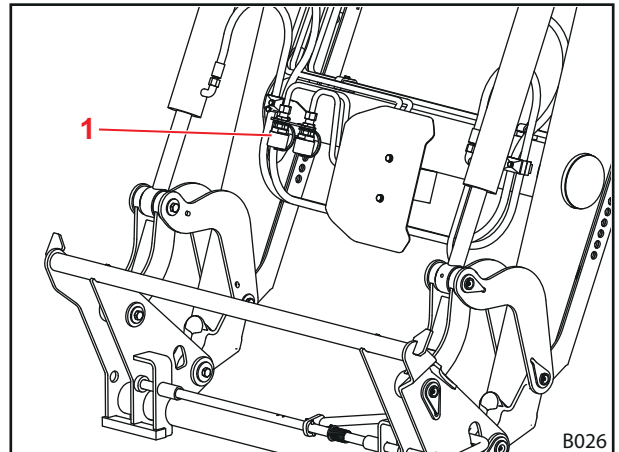
In addition to the basic functions, the front loader can be equipped with additional functions.


Control circuits for implements with hydraulic functions

If the front loader is equipped with a changeover valve for a 3rd control circuit, the “scooping / dumping” function can be switched to the implement and used for a hydraulic function.

The hydraulic couplings **(1)** for the tool's hydraulics are on the cross tube.

They can be designed as plug-in couplings or screw couplings.



 Mark the hydraulic couplings on your front loader and your implements appropriately to avoid confusion!

Comfort Drive

WARNING

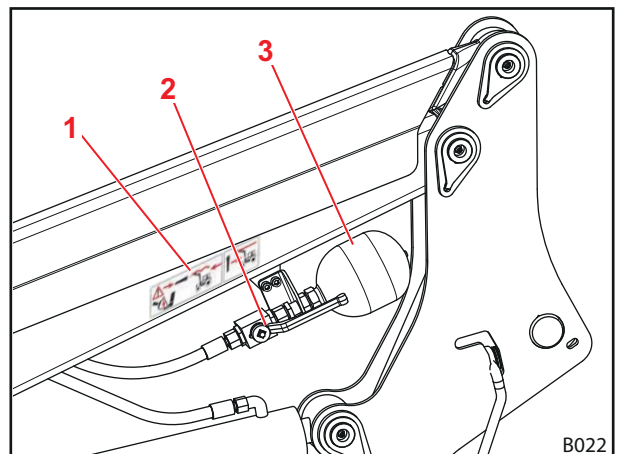
Risk of crushing!


The front loader lowers when the Comfort Drive is switched on.


- ▶ Lower the front loader completely to the ground, before switching on the Comfort-Drive!

A gas-hydraulic accumulator on the *liftline* is turned on with a valve. This dampens the shock loads suffered when driving.

- 1 Label with operating and warning notice
- 2 Operating lever on the valve:
Lever vertical: Comfort-Drive off
Lever horizontal: Comfort-Drive on
- 3 Accumulator



 After lifting, lower the front loader again a little for the optimum performance of the Comfort Drive.

 Protection against overloading:
Switch the Comfort-Drive off for heavy load work (e.g. excavation work) and when working with the pallet fork!

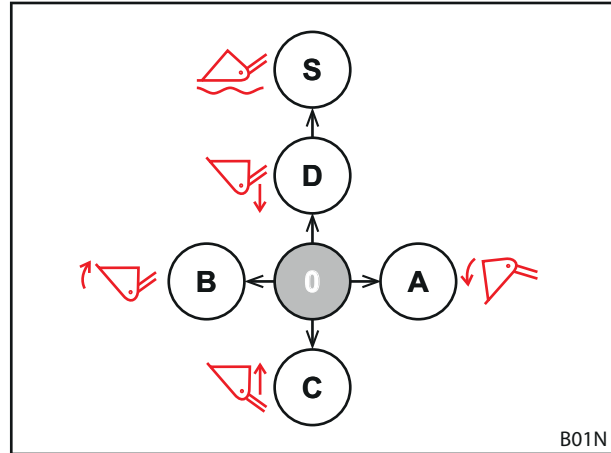
3.5 Operating elements

Basic functions

Depending on the configuration of the tractor, the operating lever for the front loader can look different.

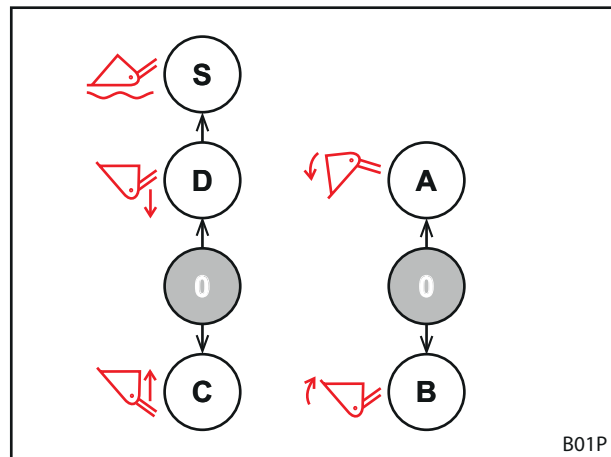
In most cases, the front loader is operated by an operating lever, cross lever or joystick.

The sketch on the right and the table below show the assignment of the basic functions for the positions of this operating lever.



With some tractors, the front loader is operated by two operating levers on two control units of the tractor.

The sketch on the right and the table below show the assignment of the basic functions for the positions of this operating lever.



i The symbols in red are also on the operating levers.
 If these symbols are missing, you must affix such symbols (according to EN 12525) to clearly mark each function!

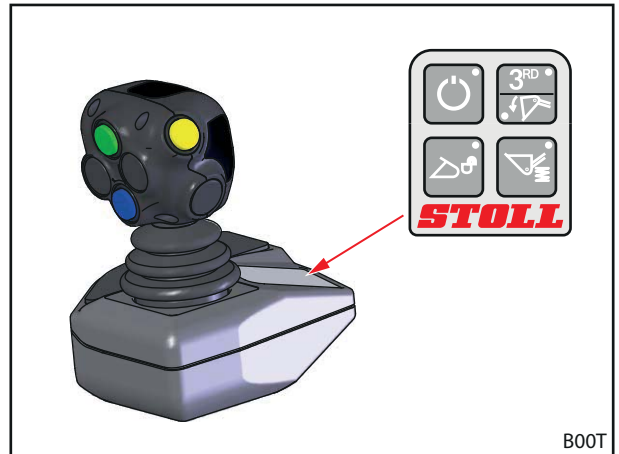
0	Zero setting, centre	The lever must return to zero setting when released!
A	Dumping	Move the lever away from the body (to the right).
B	Scooping	Move the lever towards the body (to the left).
C	Lifting	Move the lever towards the body backwards.
D	Lowering	Move the lever away from the body forward.
S	Float position (optional)	After completely lowering the implement move the lever all the way forward away from the body <i>This is the only position in which the lever should click into place!</i>

Different operation with Stoll “Pro Control”

If the tractor is equipped with the single-lever control unit “Pro Control”, the front loader is operated with a joystick with integrated buttons and switches.

**Important!**

The function of the buttons and switches on the joystick and the operation of the float position differ from those described in these operating instructions. Observe the “Installation and Operating Instructions Pro Control”!



3.5.1 Operating the implements with the tractor's operating lever

⚠ DANGER

Unexpected movement as a result of an unwanted control command

The front loader can move unexpectedly as a result of unintentional actuation of the operating lever or by programmed sequences.

This will result in severe injuries or death.

- ▶ Lock the operating lever in the neutral position when you do not need the front loader!
- ▶ If the operating lever does not have a locking mechanism, close the stopcock in the "lift" hydraulic line when you do not need the front loader!
- ▶ The hydraulic control devices must not lock in place when in the actuated position (except the float position)! Shut the latching mechanism down!
- ▶ Do not use any programmed sequences!
- ▶ Before starting work, shut the front loader and any coupled devices down: Close the shut-off valves or disconnect the line couplings!

⚠ CAUTION

Risk of confusion on hose couplings!

If the front loader is connected directly to the remote valves of the tractor with hose lines, swapping the lines could lead to an incorrect assignment of the functions on the operating lever!

- ▶ Mark the couplings on the hose lines and connection points!
- ▶ Connect the hose lines so that the float position follows in the actuation direction of "lowering".
- ▶ After connecting the hose lines make sure it all works properly!

The operating lever can look different depending on the tractor model.

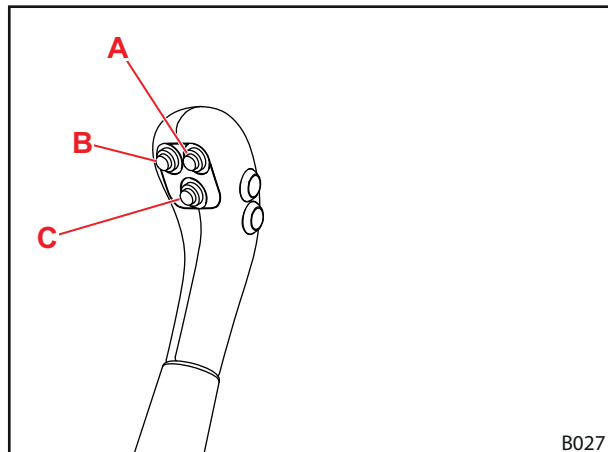
The operation of the basic functions always corresponds to the assignment specified on page 29.

Buttons for additional functions

The operating levers have up to 3 buttons (**A**, **B**, **C**) for additional functions. The arrangement of the buttons may differ.

The figure shows an example of a Stoll operating lever handle.

With the front loader ClassicLine only one button (**A**) is needed to operate the 3rd control circuit (optional) for implements with hydraulic functions.



B027



If your tractor has another operating lever or a different arrangement of buttons: Write down or sketch out the arrangement and the function of the buttons!

Comfort hydraulics

If the tractor is fitted with Comfort hydraulics, the function of the hydraulic valves is switched between the front loader and the original function (e.g. rear connections or front power lift).

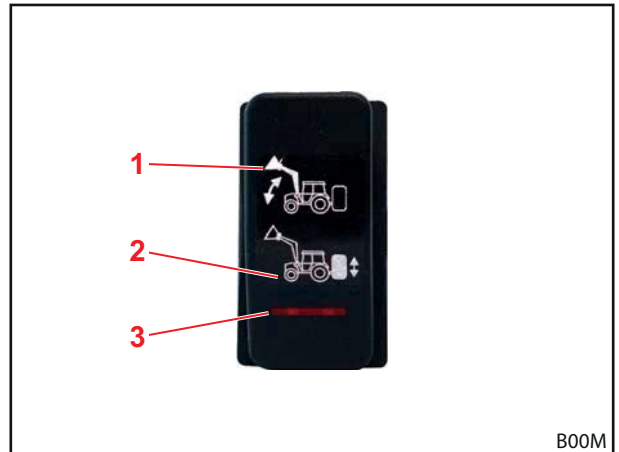
- 1 Front loader active, lamp **(3)** is on
- 2 Original function active, lamp **(3)** is off



The front loader does not usually have a stopcock if it is equipped with Comfort hydraulics.

Therefore use this switch to turn the front loader off when driving on roads.

Make sure that other than active devices pose no risk!



B00M

3.5.2 Operation with a Stoll single-lever control unit Base Control

⚠ DANGER

Unexpected movement as a result of an unwanted control command

If the operating lever is actuated unintentionally, the front loader can move unexpectedly. This will result in severe injuries or death.

- ▶ Lock the operating lever in the neutral position when you do not need the front loader!

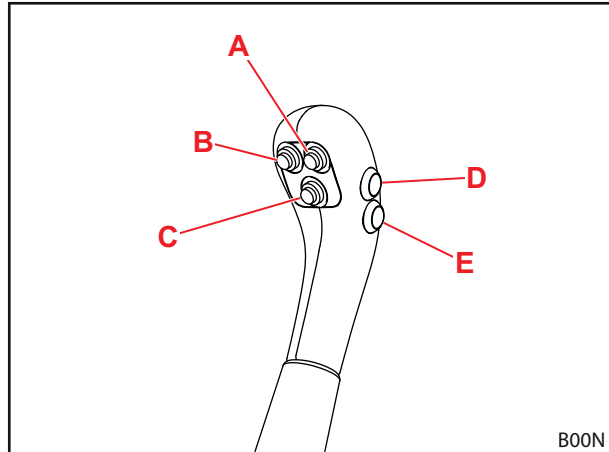
The operation of the basic functions always corresponds to the assignment specified on page 29.

Buttons for additional functions

The operating levers have up to 3 buttons (A, B, C) for additional functions.

With the front loader ClassicLine only one button (A) is needed to operate the 3rd control circuit (optional) for implements with hydraulic functions.

i 2 additional micro-buttons (D, E) can be fitted for tractor functions. (Stoll only offers buttons that are right for the operating lever, and assumes no responsibility for the function and the suitability for the tractor.)



B00N

Locking the operating lever

Lock the operating lever:

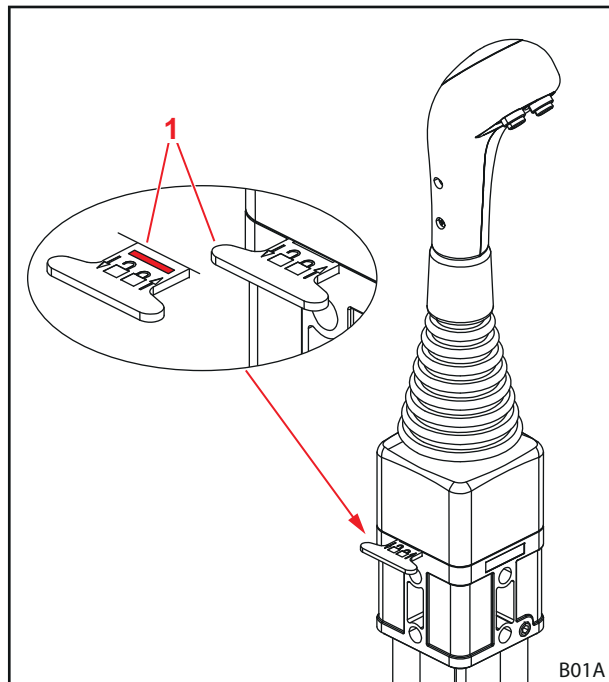
- Move the operating levers to the middle setting.
- Insert the bolt (1).

The red marking on the bar is no longer visible, the operating lever cannot be moved.

Unlock the operating lever:

- Pull the bolt (1) out.

The red marking on the bolt is visible, the operating lever can be moved.



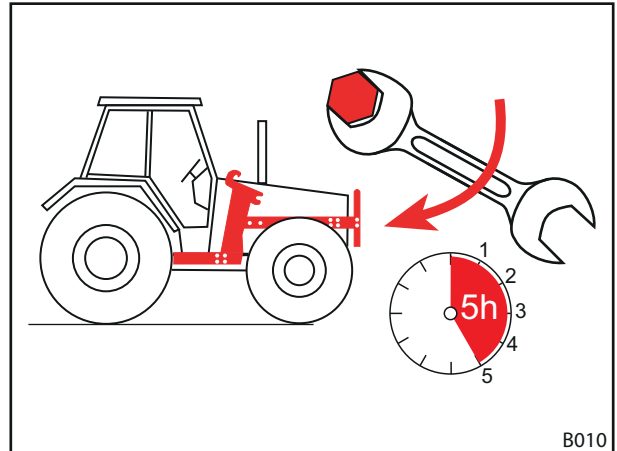
B01A

4 Start-up and operation

4.1 Advice for the first start-up

The specialist workshop can assemble the front loader on the tractor for the first time, commission it and check the functions.

- Let the specialist workshop instruct you.
- Ask the specialist workshop to tighten all the screws after the first 5 hours of operation.



4.2 Check that it is ready for use

⚠ WARNING

Unintended movement!

When the control unit has not been operated for a long period of time, the control slide can become jammed in the actuated position if there is a significant difference in temperature between the hydraulic oil and the control unit. The front loader will then move unintentionally!

This can lead to serious accidents especially when lowering while driving!

- ▶ After a long journey or downtime, always press the *scooping* function so that the control unit is heated by the flowing hydraulic oil.
- ▶ Only press the *lifting* and *lowering* functions when the scooping and dumping functions work reliably, meaning that the control unit is sufficiently warmed up.

⚠ WARNING

Unexpected “dumping” or “scooping”

If there is an error in the electrical systems or electronics (e.g. loose connection, broken cable, malfunction in the control) the button on the control lever may not work temporarily or permanently.

With the additional functions “3rd control circuit” and “4th control circuit” this results in the “dumping” or “scooping” functions being triggered instead of the hydraulic functions of the implement.

Consequently, the load may fall and injure the driver or persons in the vicinity.

- ▶ Whilst the front loader is empty, check **all** the functions before starting it up.
- ▶ If this error occurs during operation **release the operating lever** immediately. This stops the movement. Then, move the front loader and the implement to a safe position, before you try to rectify the error.

The following checklist summarizes all the necessary checks before and during the start-up of the front loader. You can find detailed explanations in the chapters and/or documents indicated.

Checklist

 Check **all** the points on the checklist before every use, even if the front loader is already mounted!

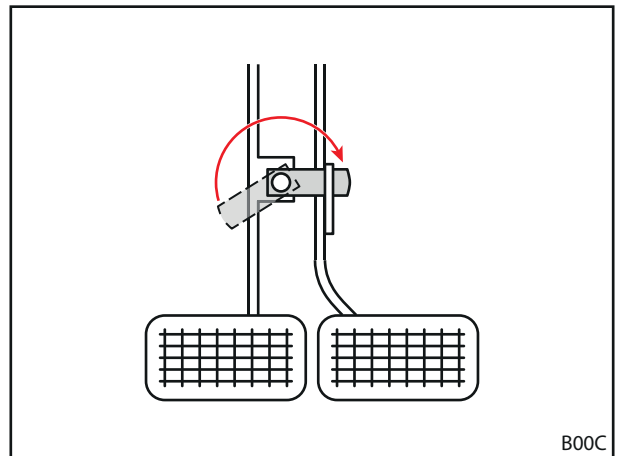
	Checks:	see also:	completed:
Before installing the front loader:			
	Are the safety labels on the tractor and on the front loader complete and in order?	2.6	
	Are the brake pedals connected?	4.3.1	
	Hydraulic oil: Is there enough oil?	Operating instructions of the tractor	
	Is the front axle turned off?		
	Is the shut-off valve of the front power lift closed?		
	Is the pressure of the tires sufficient for operating the front loader?		
	Is the correct counterweight mounted on the rear?	4.3.2	
	Are the fixing screws of the attachment components tightened?	4.1	
	Are the supports (bearings and sliding surfaces) for the attachment components clean, free from paint and grease?	5.2.1	
	Are the front loader locking mechanisms lubricated?	5.2.1	
During the installation:			
	Are the hydraulic lines connected correctly?	4.4.2	
	Is the electric cable of the front loader connected?		
	Are the locking mechanisms of the front loader positioned correctly?	4.4.5, 4.4.3	
After the installation:			
	Are the parking supports folded away and secured?	4.4.1	
	Is the locking mechanism for the front loader locked properly?	4.4.3	
	Is the locking mechanism for the implement locked properly?	4.5.1	
	Mudguards adjusted for front loader operation?		
	Functional test carried out? (Basic functions and additional functions)	3.4 "Functions of the front loader"	

4.3 Preparations on the tractor

4.3.1 Connect the brake pedals

On tractors with split brakes, the front loader can be severely damaged by single sided braking.

- Connect the brake pedals!



B00C

4.3.2 Ballasting

For front loader work, always use a counterweight at the rear of the tractor!

When calculating the required weight, consider the following conditions:

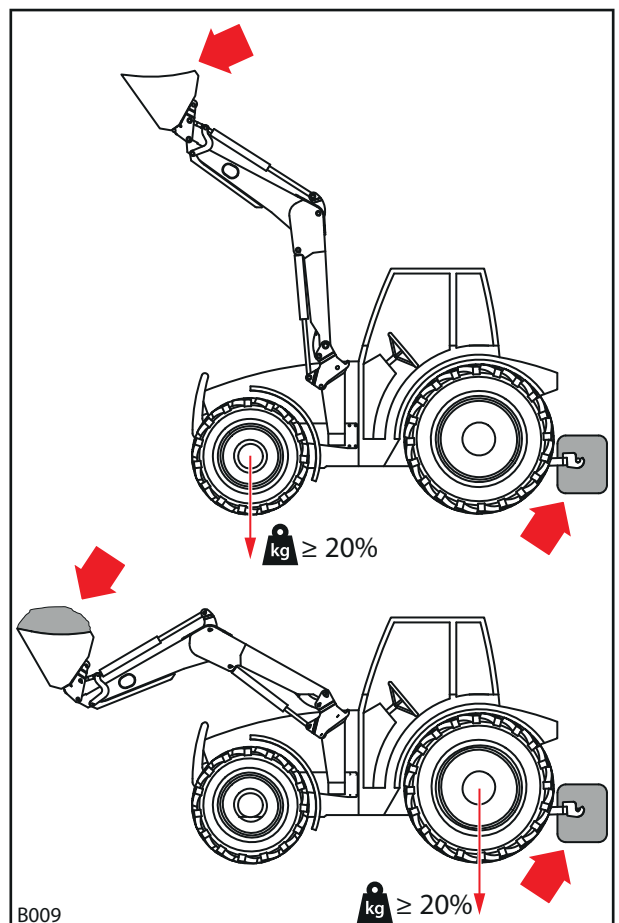
When the front loader is fully loaded, the rear axle must be loaded in the foremost position with at least 20% of the total weight in order to ensure the stability and the braking effect.

The front axle must not be released too much. When the front loader is raised without implements, it must be loaded with at least 20% of the total weight to be able to steer properly when driving on roads.

i Do not drive without implements if you have calculated the load of the front axle with an attached implement, you can almost use the implement as a counterweight!

The greater the total weight, the greater the load and also the wear of the front loader when driving into pick up the goods/load.

Also note the information on permitted weights and loads in the tractor's operating instructions!



B009

i **Practical tip:** In most cases, you can achieve a good distribution of the load when the rear weight is about 1/3 to 1/2 of the total weight of the maximum load and the implement.

4.4 Installing and removing the front loader

⚠ DANGER

Risk of tipping!

The front loader is unsafe if

- the support legs are not folded away or locked,
- no implement is attached or
- the ground is too soft or is not level.

People near the tractor can be seriously injured or killed if the front loader tips over.

- ▶ Only put the front loader down if an implement weighing at least 70 kg is attached!
- ▶ Only put the front loader down on a level stable surface!
- ▶ Make sure that the locking struts engage in the latching section of the support legs!

4.4.1 Handling the support legs

⚠ CAUTION

Risk of crushing when handling the support leg!

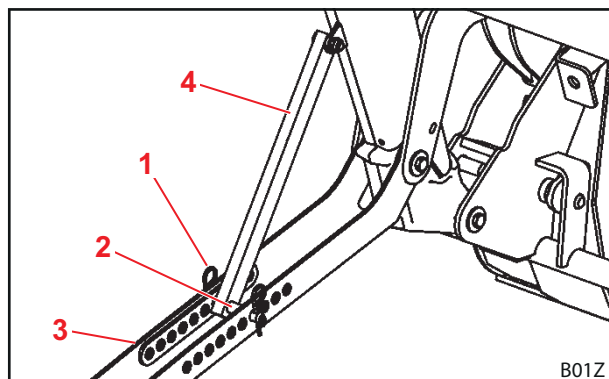
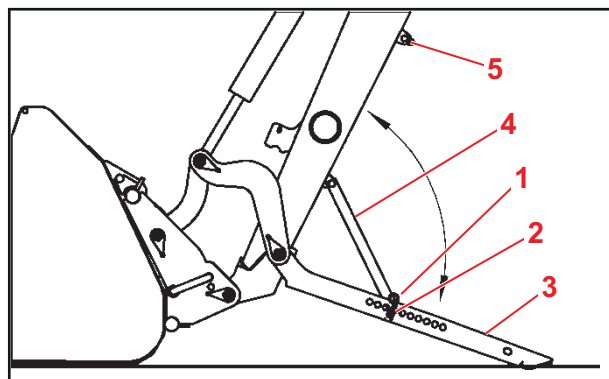
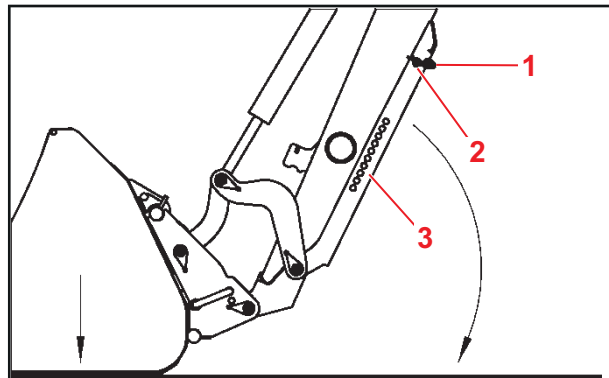
- ▶ When folding up the support legs, do not reach between them and the beam rail!

Unfolding

- (1) Pull the safety splint **(1)** out.
- (2) Pull the bolt **(2)** out.
- (3) Unfold the support leg **(3)** down to the ground.
- (4) Insert the bolts **(2)** through the support leg **(3)** and the locking strut **(4)**.
- (5) Insert the safety splint **(1)**.

Folding away

- (6) Pull the safety splint **(1)** out.
- (7) Pull the bolt **(2)** out.
- (8) Fold the support leg **(3)** and locking strut **(4)** upwards.
- (9) Insert the bolts **(2)** through the support leg **(3)** and the strap-joint **(5)**.
- (10) Insert the safety splint **(1)**.



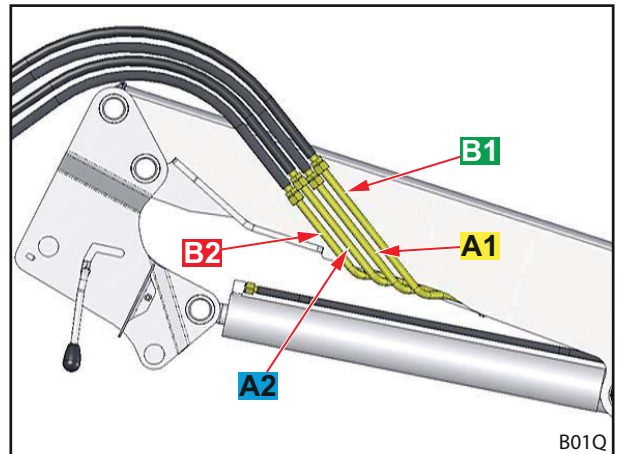
B01Z

4.4.2 Handling the hydraulic couplings

Four hydraulic lines go from the front loader to the tractor:

- A1 Lifting
- B1 Lowering
- A2 Scooping
- B2 Dumping

i Depressurize the hydraulic system for all coupling processes! Clean the couplings!



Plug-in couplings

The connectors are on the hydraulic lines of the front loader, the couplings are mounted on the right attachment component.

They are connected to the hydraulic valve either directly or with hose lines.

The couplings and connectors can be identified by their coloured caps.

- (1) Remove the caps.
- (2) Insert the connector in the couplings.
- (3) Stick the caps together so that they do not get dirty.





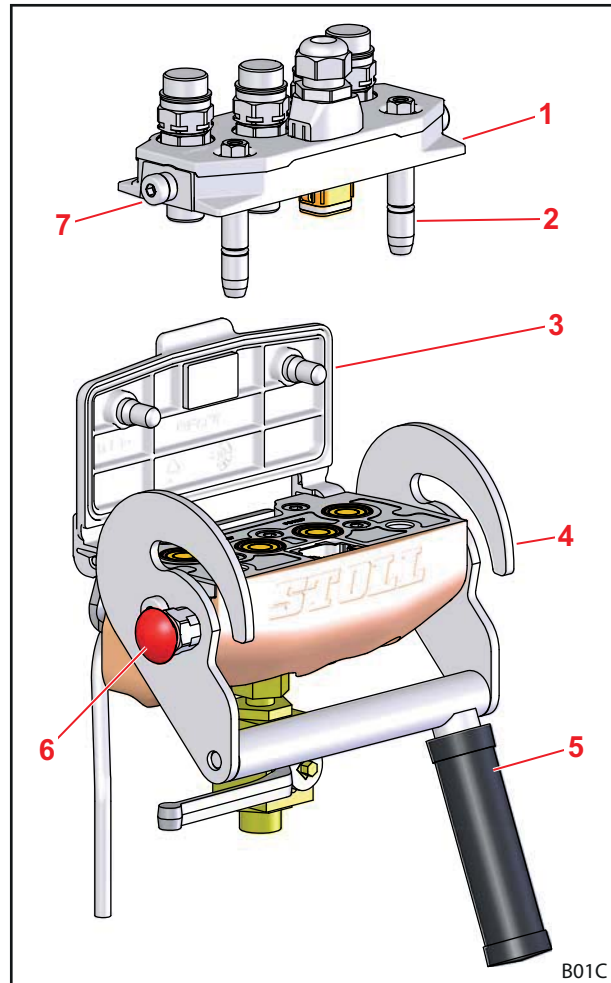
Multiple coupling Hydro-Fix

If the front loader is fitted with the Hydro-Fix coupling, all 4 hydraulic lines are connected in a single step.

The hydraulic lines of the front loader are connected on the Hydro-Fix upper part **(1)**, the lower part is secured to the right attachment component and connected to the hydraulic valve.

Coupling:

- (1) Open the cap **(3)** on the Hydro-Fix lower part.
 - (2) Check if the lower part is dirty, clean if necessary.
 - (3) Remove the protective cap on the Hydro-Fix upper part **(1)**.
 - (4) Check if the upper part is dirty, clean if necessary.
 - (5) Press the red knob **(6)** and swing the lever **(5)** upwards.
 - (6) Insert the upper part on the lower part using the guide pins 2.
 - (7) Press the red knob **(6)** and swing the lever **(5)** downwards.
- ✓ The upper part is pressed downwards from the guide 4 to the pins 7 and is locked in the process. The red knob 6 pops out.



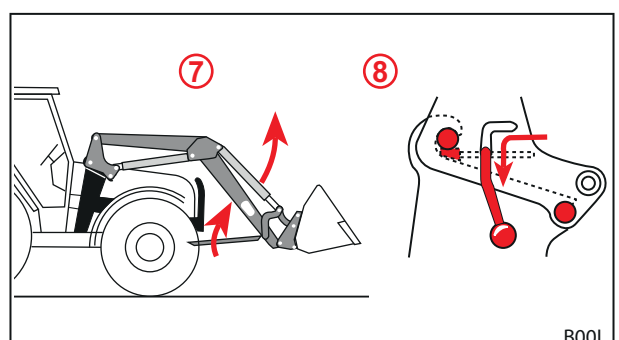
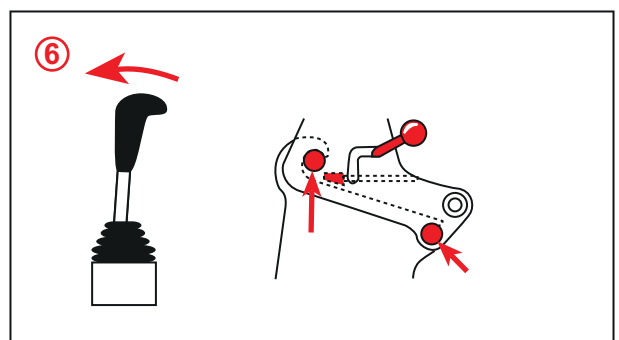
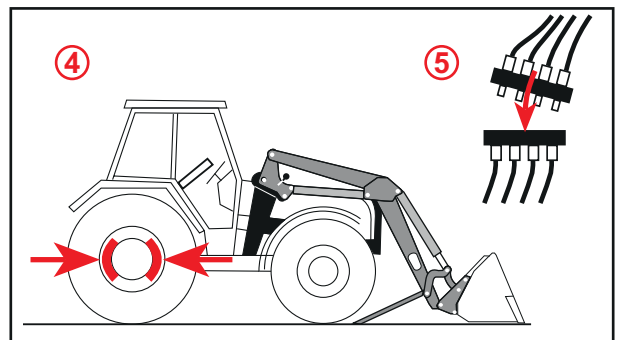
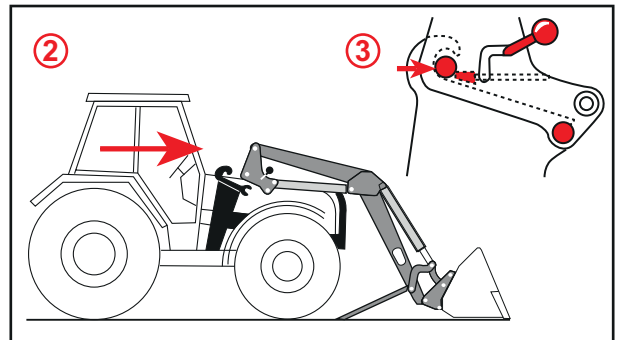
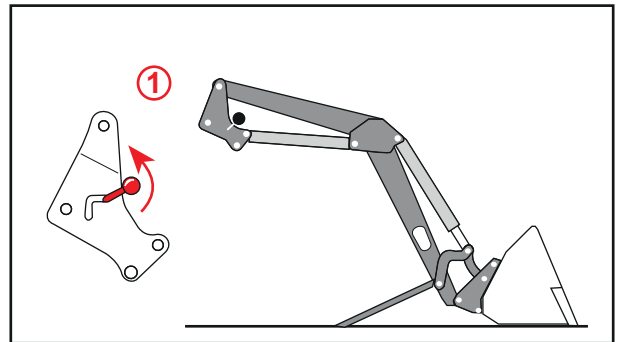
4.4.3 Mounting of the front loader

- (1) Loosen the clamping lever of the front loader locking mechanism.
- (2) Carefully drive the tractor centrally in the lifting arm.

i If it is not possible to drive it in because the pillars of the front loader are too high or too low, refer to the notes on the next page!

- (3) Continue to drive the tractor forwards until both locking pins contact the slide rail and the catch hooks.
- (4) Stop the tractor:
 - a) Pull up the parking brake.
 - b) Stop the engine.
 - c) Move control lever into all the end positions to depressurize the hydraulic system.
- (5) Connect the hydraulic lines and electric cables of the front loader.
- (6) The lifting cylinders pivot the bolts on the pillars in the catch hooks on the supports:
 - a) Start the tractor again.
 - b) Pull the control lever slightly backwards (*lifting function*) until the bolts are locked in the catch hooks.
- (7) Fold up the support legs:
 - a) Pull the control lever slightly backwards (*lifting function*) until the front loader is lifted slightly off the floor.
 - b) Pull up the parking brake.
 - c) Stop the engine.
 - d) Fold up both support legs.
- (8) Shift both locking levers downwards.

i Make sure the locking mechanism is set properly, see section 4.4.5 "Setting the front loader locking mechanism".



B00L



Problems when driving in

If the front loader was not parked properly or was previously mounted on another tractor, it may be that the pillars of the front loader are too high or too low.

Using the hydraulics of the front loader, you can correct the position of the pillars a little.



Use the operating lever with great care! The front loader or tractor can be damaged by any abrupt movement!

Proceed as follows:

- (1) Loosen the clamping lever of the front loader locking mechanism.
- (2) Carefully drive the tractor centrally in the lifting arm.
- (3) Drive the tractor forwards so that the supports on the tractor are as close as possible in front of the pillars of the front loader.
- (4) Stop the tractor:
 - a) Pull up the parking brake, turn the engine off.
 - b) Move control lever into all the end positions to depressurize the hydraulic system.
- (5) Connect the hydraulic lines and electric cables of the front loader.
- (6) Align the pillars using the hydraulic cylinder:
 - a) Start the tractor again.
 - b) *Lifting/Lowering*: Swivel the pillar
 - c) *Dumping/Scooping*: Lift/lower the front loader a little.
- (7) Continue to drive the tractor forwards until both locking pins contact the slide rail and the catch hooks.
- (8) Fold up the support legs:
 - a) Pull the control lever slightly backwards (*lifting function*) until the front loader is lifted slightly off the floor.
 - b) Pull up the parking brake.
 - c) Stop the engine.
 - d) Fold up both support legs.
- (9) Shift both locking levers downwards.

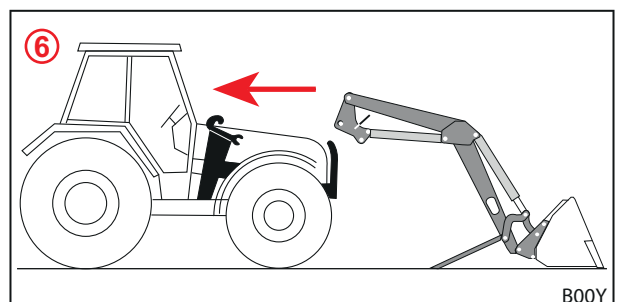
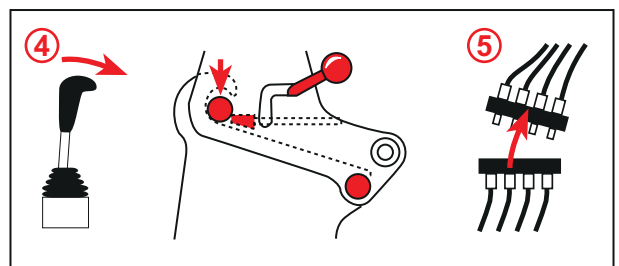
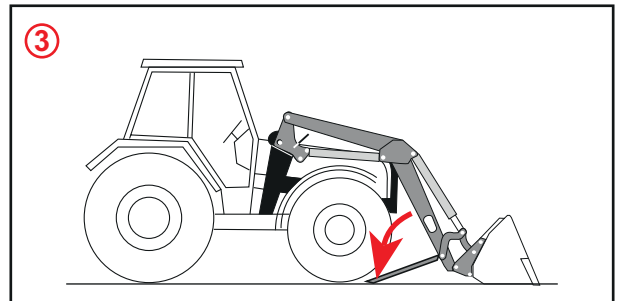
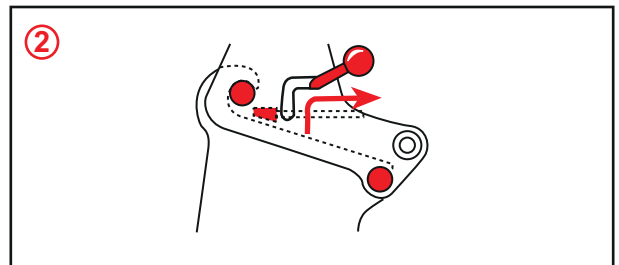
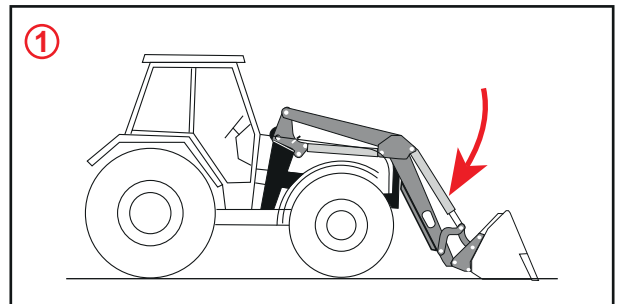
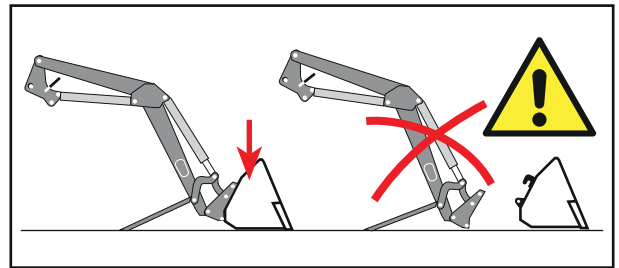


Make sure the locking mechanism is set properly, see section 4.4.5 "Setting the front loader locking mechanism".

4.4.4 Removing the front loader

Only put the front loader down if an implement weighing at least 70 kg is attached!

- (1) Stop the tractor:
 - a) Lower the front loader to the ground
 - b) Pull up the parking brake.
 - c) Stop the engine.
- (2) Release the locking mechanism on both sides.
- (3) Fold out the support legs (see 4.4.1).
- (4) Using the lifting cylinders, swivel the bolts on the pillars out of the catch hooks on the supports:
 - a) Start the tractor again.
 - b) Push the operating lever slightly forwards (*lowering function*) until the bolts are no longer locked in the catch hooks.
- (5) Disconnect the front loader hydraulics and electrics:
 - a) Pull up the parking brake.
 - b) Stop the engine.
 - c) Move control lever into all the end positions to depressurize the hydraulic system.
 - d) Disconnect the hydraulics couplings and electrical plugs of the front loader.
- (6) Reverse the tractor carefully out of the front loader.
- (7) Replace the protective caps on the hydraulic couplings and plugs.



B00Y

4.4.5 Setting the front loader locking mechanism

⚠ CAUTION

Risk of breakage!

If the locking mechanism is not set correctly, the front loader can rattle in the support. This can break the support. If the front loader falls, people in the danger zone can be injured!

- ▶ Check the setting of the locking mechanism during the installation and removal processes.
- ▶ Check and correct the locking mechanism from time to time when the front loader remains on the tractor for an extended period of time.

The locking mechanism must be set so that the clamping process starts from about the turning point (arrow) in the guide slot.

The lever must be able to move all the way down with clearly noticeable manual force.

When the locking mechanism is closed, the lever must not "rattle".

Check the settings

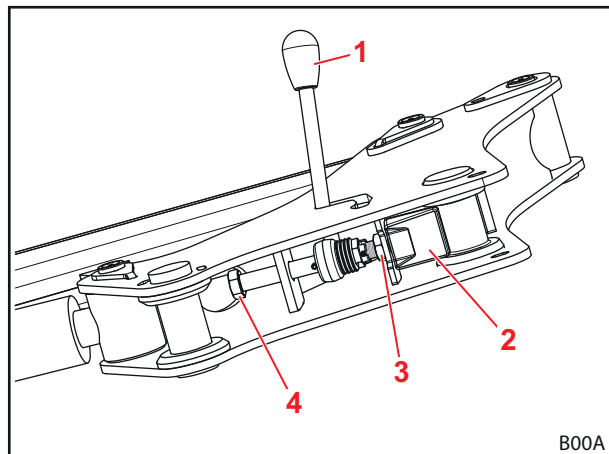
- (1) Open and close the locking mechanism, paying attention to the manual force required.
- (2) If necessary, adjust the locking mechanism.

Setting

Required tools:

- ✳ Open-ended spanner 24 mm
- ✳ Ratchet ½" with extension, joint and socket (nut) 24 mm

- (1) Fully open the locking mechanism: Lever **(1)** all the way up.
- (2) Guide the open-ended spanner through the guide slot of the lever and loosen the lock nut **(3)**.
- (3) Adjust the clamping wedge **(2)** with the screw **(4)**.
- (4) Tighten the lock nut.



B00A

4.5 Mounting and removing the implements

WARNING

Only use safe implements!

The use of unsuitable implements (too big, too heavy, too long ...) can lead to the overloading or malfunctioning of the front loader. The front loader can lower unexpectedly or the load may fall out!

If the centre of gravity is too far forward, the pressure relief valve of the front loader can open. The implement can inadvertently empty out during lifting.

The driver or people in the work area can be seriously injured or killed.

- ▶ Only use implements that are appropriate for the kind of work you are doing!
- ▶ Only use implements that are designed for the front loader and the change frame installed!
- ▶ Only use implements that are of an appropriate size!
- ▶ It is advisable that you only use implements that are approved for the front loader.
- ▶ Using non-approved implements (e.g. self-made): Check the suitability for the front loader and the activity.

You are responsible for the safety!

- ▶ Observe the operating instructions of the implement!

WARNING

If the locking mechanism of the implement is open or not locked properly, the implement may fall down.

People in the danger zone can be seriously injured or killed.

- ▶ Before each time you use the front loader, check that it is correctly locked.



For more information about the different change frames and implement locking mechanism, see section 3.3

4.5.1 Handling the implement locking mechanism

Implement locking mechanism on Euro, SMS or Combi change frames

⚠ WARNING

Falling implement

When the back of the implement does not rest on the change frame, the locking mechanism does not engage in the eyelets of the implement. The locking mechanism “looks closed”, but the implement can fall.

People in the danger zone can be seriously injured or killed.

- ▶ Do not rely solely on the visual display (label)!
- ▶ Make sure that the locking pins engage in the eyelets of the implement!

⚠ CAUTION

Spring tension on the handle of the implement locking mechanism!

Risk of crushing fingers and hands!

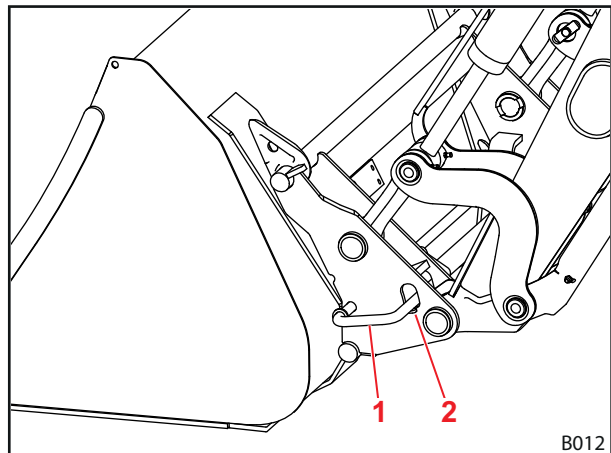
- ▶ Grasp the handle in the centre with one hand!

Open:

- Lift the handle **(1)**, pull it out against the spring tension and move it downwards, so that the “nose” **(2)** “hooks” onto the change frame.

Close:

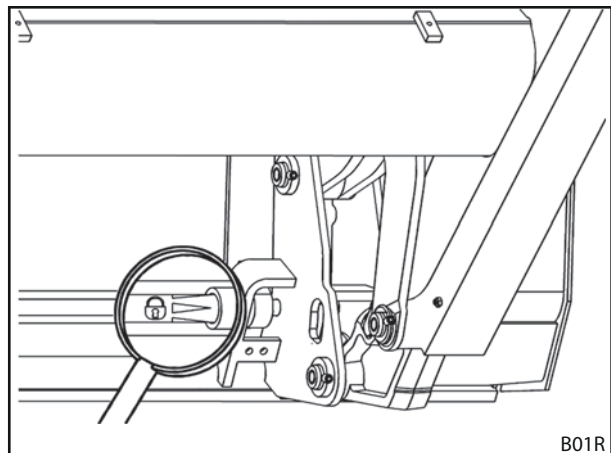
The implement locking mechanism closes automatically when the implement is scooped.



A label shows the position of the locking mechanism:

If the arrowheads are directly on the socket on the label, the locking mechanism is closed.

i Make sure that the locking pins engage correctly in the eyelets of the implement!



4.5.2 Attaching the implements

Mount the implement

- (1) Open the implement locking mechanism.
- (2) Swivel the change frame downwards (*dumping function*), so that the upper cross bar (or top edge) of the change frame is lower than the hook on the implement
- (3) Carefully drive forwards until the cross bar touches the implement.
- (4) Slowly swivel the change frame up (*scooping function*), and in doing so drive forwards a little so that the cross linkage enters the hooks of the implement.

i The automatic locking mechanism only works up to 1.5 m high!
Do not lift the front loader more than 1.5 m, until you are sure that the implement locking mechanism is properly locked!

- (5) Scoop the implement and lift the front loader until the locking mechanism engages.

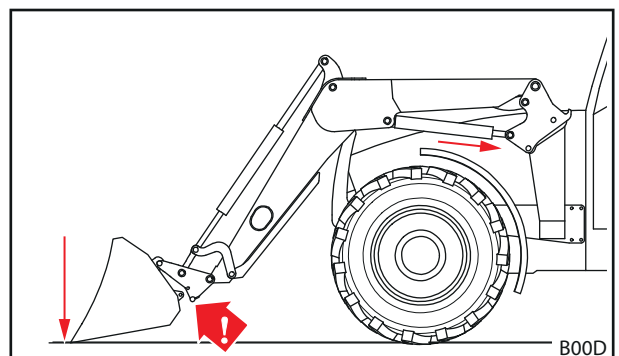
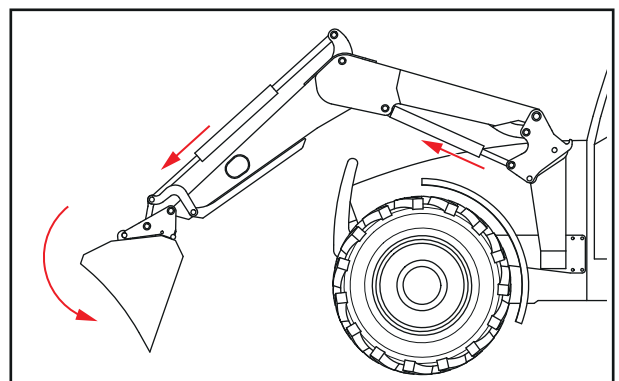
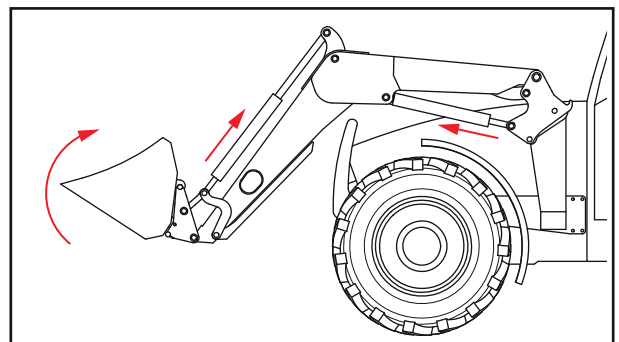
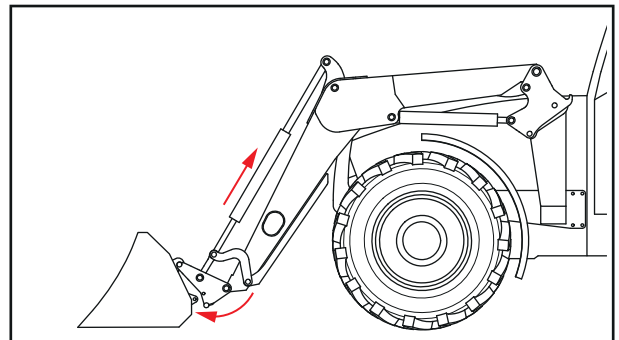
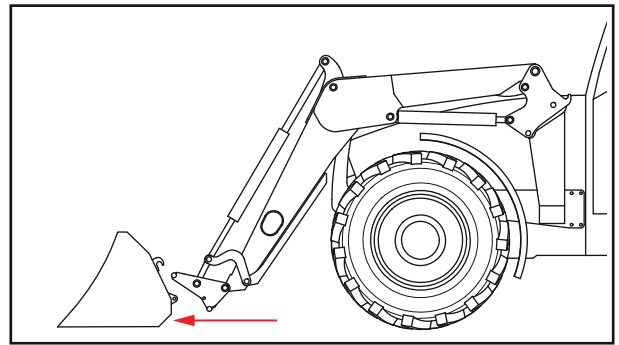
Check the locking

Only with implements without hydraulics:

- (1) Lower the front loader to ground level.
 - (2) Dump the implement.
or
 - (1) Press the implement with the tip on the ground.
- ✓ In both of these operations, the implement slides out of the eyelets when the lock is not securely engaged (arrow).

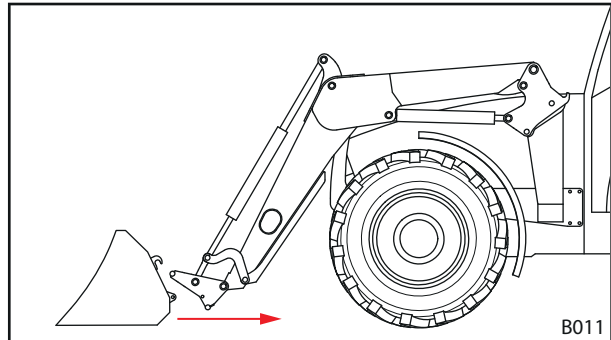
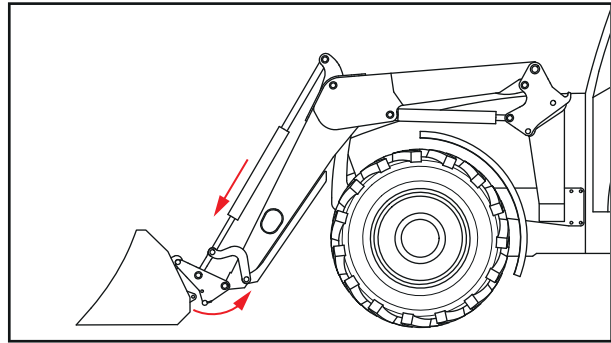
For implements with hydraulic functions:

- (1) Lower the front loader, so that the implement is level on the ground.
- (2) Turn the tractor off and lift up the parking brake.
- (3) Depressurize the hydraulic system by moving the operating lever in all end positions.
- (4) Check the implement locking mechanism: Are the bolts engaged in the eyelets of the implement on both sides?
- (5) Connect the hydraulic lines of the implement at the couplings on the change frame.



4.5.3 Dismounting the implements

- (1) Lower the front loader, so that the implement is level on the ground.
- (2) Stop the tractor:
 - e) Pull up the parking brake
 - f) Stop the engine.
 - g) Move control lever into all the end positions to depressurize the hydraulic system.
 - h) For implements with hydraulics: When the implement function is actuated, move the operating lever in the lateral end positions in order to depressurize the implement hydraulics.
- (3) Open the implement locking mechanism.
- (4) For implements with hydraulics: Disconnect the hydraulic lines of the implement from the couplings on the change frame.
- (5) Swivel the change frame out the hook of the implement:
 - a) Start the tractor again.
 - b) Swivel the change frame downwards (*dumping function*), so that the upper cross bar of the change frame is lower than the hook on the implement.
 - c) Drive the tractor away in reverse.



4.6 Anti-lowering guard

DANGER

The front loader must not be used for lifting operations that require a person to stand close to the raised load. There is a risk that people between the load and the ground or the components may be crushed if the hydraulics fail.

- ▶ The front loader must be equipped with an anti-lowering guard for work with these kinds of implements!
- ▶ Ask an authorized workshop to install the anti-lowering guard!
- ▶ Observe the instruction manual of the anti-lowering guard!

WARNING

Accidental dumping!

With dumping implements that are long or protrude quite a way forwards, the pressure relief valve of the front loader can open due to the center of gravity being too far forwards. The implement may inadvertently dump the load or the front loader may lower!

If people are in the work area, they can be seriously injured by the lowering load!

- ▶ Do not move the front loader and the implement, as long as people are standing in the immediate danger zone!
- ▶ Only start the lifting operation after everybody has left the danger zone!

Notwithstanding the information provided in the Safety chapter, implements that require the presence of a person close to the load may be used if there is an anti-lowering guard (example: Baglift).

The anti-lowering guard has to correspond to the European standard EN 12525/A1.

Stoll offers a corresponding anti-lowering guard.

The anti-lowering guard is expressly **not suitable** for work involving work cages!

The anti-lowering guard does not prevent the implement from accidentally tipping. Therefore, increased caution is required for work that requires the presence of a person close to the load, even with an anti-lowering guard!

4.7 Advice for driving on roads

⚠ WARNING

Falling load!

When driving on roads, falling items from the load can cause accidents! This can result in serious injury or death.

- ▶ Do not drive on public roads with a loaded implement.

⚠ WARNING

Unintentional actuation!

If the front loader is actuated when driving on roads, it can cause accidents! This can result in serious injury or death.

- ▶ Lock the hydraulics when driving on roads.

⚠ WARNING

Unintended movement!

When the control unit has not been operated for a long period of time, the control slide can become jammed in the actuated position if there is a significant difference in temperature between the hydraulic oil and the control unit. The front loader will then move unintentionally!

This can lead to serious accidents especially when lowering while driving!

The control unit can cool down quickly especially when driving on roads.

- ▶ After a long journey or downtime, always press the *scooping function* so that the control unit is heated by the flowing hydraulic oil.
- ▶ Only press the *lifting* and *lowering* functions when the scooping and dumping functions work reliably, meaning that the control unit is sufficiently warmed up.

The driving regulations differ depending on the location! The tractor with a front loader may only be driven on public roads by people who have the necessary license and knowledge of the applicable regulations!

If the driving regulations at the place of use differ from the recommendations provided by Stoll, please observe the driving regulations!

Preparing for driving on the road

To prevent the inadvertent actuation of the front loader when driving on roads, you must lock the hydraulics.

- If the horizontal distance between the steering wheel and front edge of the raised implement is more than 3.5 meters, remove the implement!
- Mount a sufficient rear weight.
- Fully raise the front loader, but not more than 4 meters of the height of the upper edge. The lower edge of the implement must be at least 2 meters above the road surface!
- Activate the road trip safety device, see below.
- If available, enable the Comfort Drive (see page 28).

Activating the road trip safety device

On front loaders that are controlled by the original operating levers of the tractor:

- Close the shut-off valve in the lift line!

On front loaders that are controlled by the original operating levers of the tractor and are equipped with Comfort hydraulics:

- Deactivate the front loader using the switch of the Comfort hydraulics, see 32.

On front loaders that are controlled by a Stoll single lever control unit Base Control:

- Lock the operating lever, see page 33.

On front loaders that are controlled with a Stoll single lever control unit Pro Control:

- Turn off the front loader, see the operating instructions *Pro Control*.

Driving on the road

The front loader changes the driving characteristics of the tractor. The risk of tipping in particular is increased by the front loader being raised.

- Bear in mind the extra length and weight!
- Drive at a moderate speed! (Stoll-recommendation: up to 25 km/h.)
- Take extra care on bends!
- You must take the longer braking distance into account!
- Look for the headroom, for example, bridges, power lines or trees.

If necessary, make a brief stop and lower the front loader:

- First press the *scooping function*.
- Only press the *lowering function* when the scooping and dumping functions work reliably, meaning that the control unit is sufficiently warmed up.

After passing through/under, lift the front loader again and activate the road transport safety device.

- Pay special attention at crossings, junctions and exits! The front loader extends forwards over the tractor!

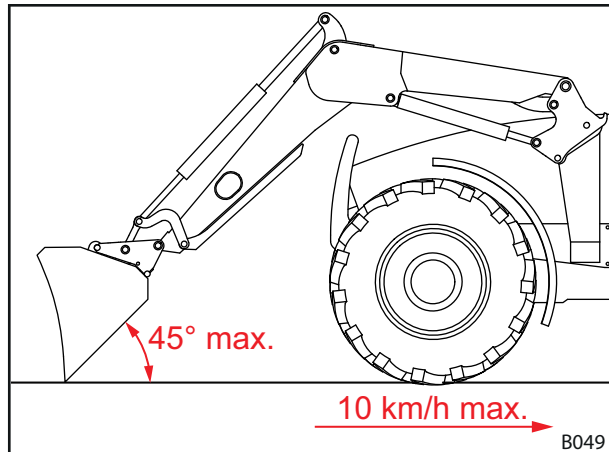
If necessary, let somebody else guide you at blind spots.

4.8 Notes on reverse-levelling

Light levelling work can also be carried out with a front loader bucket.

Observe the following instructions so that neither the front loader nor the bucket are overloaded or damaged:

- Level with the front edge of the bucket, not with the total bottom surface area!
- The angle between the ground and the blade must not be greater than 45°!
- Drive slowly, never faster than 10 km/h!
- Only drive backwards with the bucket in this position!



i Use the floating position in order to “push together” forward, see 3.4.2.

5 Servicing

DANGER

When it is being serviced, the front loader must not be raised. It may drop unexpectedly and crush the people in front of the tractor!

This will result in severe injuries or death.

- ▶ Never stand between the front of the tractor and the cross tube of the front loader!
- ▶ Lower the front loader down to the ground before carrying out any maintenance and repair work!
Never work on the front loader when it is raised!

WARNING

Risk of tipping!

When the front loader is set down on its parking supports, this is not sufficiently safe or stable for maintenance or repair work! The front loader can tip over when it is being worked on!

This can result in serious injury or death.

- ▶ Whenever possible, carry out maintenance and repair work when the front loader is attached.
- ▶ If this is not possible, take the front loader off using a crane. Note the lifting points marked.
- ▶ If this is also not possible, secure the front loader against overturning at the marked lifting points, e.g. by using load-bearing ropes or chains.

WARNING

Hydraulic oil under high pressure!

Even when a tractor is switched off or the front loader has been removed, the hydraulic system can still be under pressure!

If the maintenance work is not carried out properly, oil can spurt out at high pressure.

This may result in serious injuries.

- ▶ Depressurize the whole system before opening any couplings or disassembling components of the hydraulics!
- ▶ Never locate leaks with your fingers. Use the appropriate implements!

CAUTION

High temperature!

The hydraulic components and components of the tractor may become hot during use!

- ▶ Let the components cool down to below 55°C before carrying out any maintenance and repair work!

5.1 Regular maintenance

5.1.1 Maintenance plan

i The maintenance intervals specified are guidelines.
Adjust the intervals according to the conditions of use!

Maintenance position	Job	Interval [operating hours]
Check the screw connections	, tighten if necessary	100 h
Bearing positions	Lubrication (refer to the lubrication schedule)	20 h
Front loader supports (catch hooks)	Lubrication (refer to the lubrication schedule)	100 h
	Check for wear (see 5.2.4)	200 h
Front loader locking mechanism	Check the setting	20 h
	Lubrication (refer to the lubrication schedule)	100 h
Comfort Drive	Open and close the shut-off valve	100 h ¹
Hydraulic hose lines	Visual inspection, if necessary, have them replaced by an authorized workshop	100 h
	Replacement by authorized workshop	4 years ²

¹ at least once a month

² see notes under 5.2.2

5.1.2 Lubrication schedule

i Shorten the lubrication intervals if there is dirt contamination!

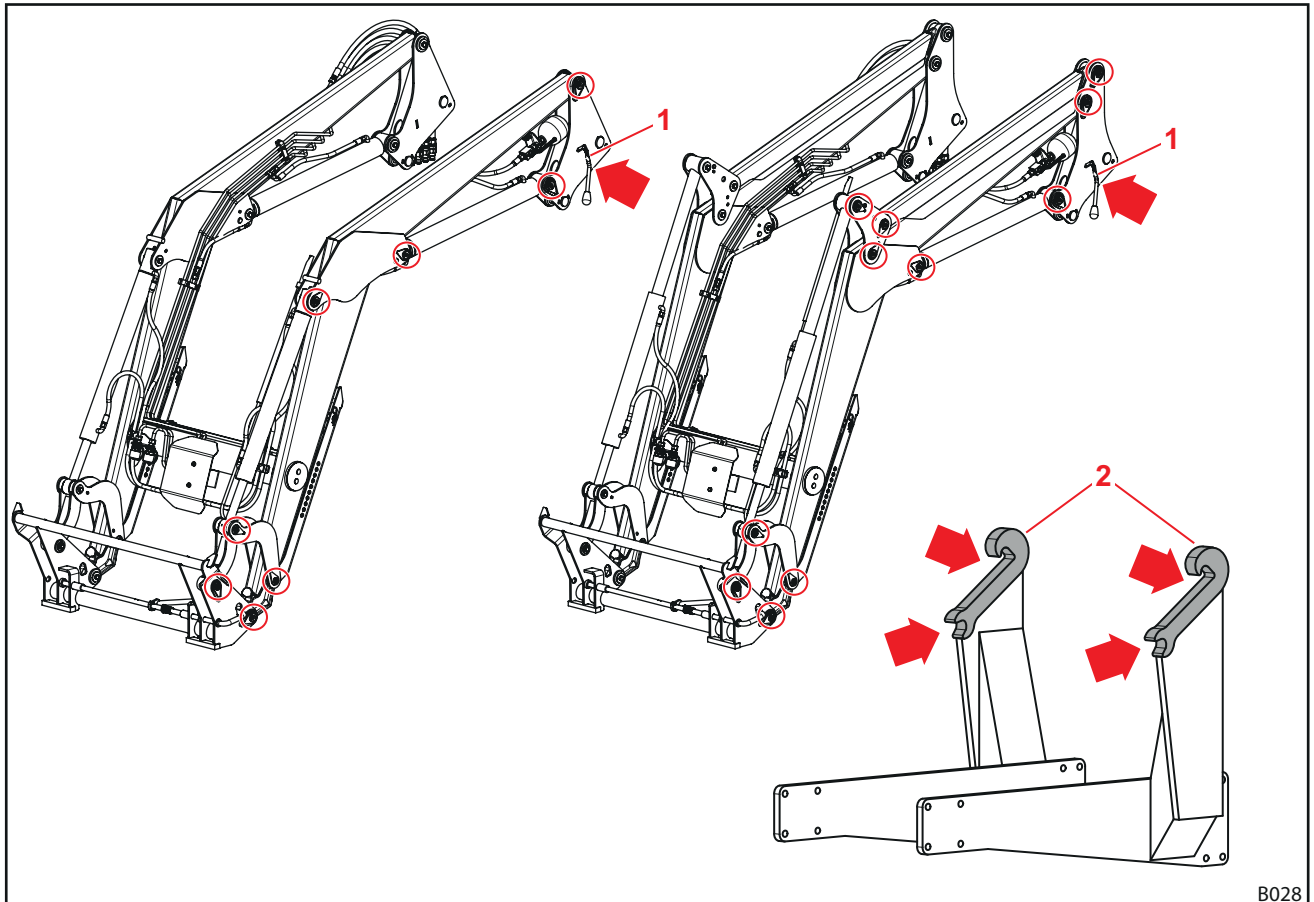
Lubrication point	Interval [operating hours]	Lubricant
Bearing positions	20 h	Multipurpose grease DIN 51502 K2K, ISO 6743 ISO-L-XCCEA2, or comparable product
Front loader supports (catch hooks)	100 h	
Front loader locking mechanism	100 h	Multipurpose grease or lubricating oil

Position of the lubrication points and notes: see 5.2.1

5.2 Maintenance and repair instructions

i Incorrect repairs can lead to safety risks. That is why the maintenance work must only be carried out by suitably qualified personnel!
 Stoll recommends that the repair work is done at a specialist/authorized workshop.

5.2.1 Lubrication



The figure shows a front loader CL-H on the left and a front loader CL-P on the right side. The red circles mark the grease nipple of the bearing positions, the red arrows indicate the position of the lubrication points on the front loader locking mechanism **(1)** and the front loader supports **(2)**

There are 8 grease nipples on each side of the front loaders CL-H.

There are 11 grease nipples on each side of the front loaders CL-P.

- Lubricate the bearing positions of the front loader on the grease nipples every 20 operating hours with a grease gun.
- Clean and lubricate the front loader locking mechanism at least every 100 hours of use and if it becomes sluggish.

The front loader locking mechanism can be quite easily lubricated with spray oil. Make sure that you do not spray the grease on the catch hook in the process!

- Grease the front loader supports on the support hooks and sliding surfaces at least every 100 hours of operation.

Greasing the supports when installing or removing the front loader requires the least amount of effort.

5.2.2 Hydraulic lines

In accordance with DIN 20066, hydraulic hose lines should be stored for a maximum of 2 years and used for a maximum of 6 years from the date of manufacture. This results in a service life of at least 4 years with normal loading.

Hydraulic hose lines are marked with 2 dates:

On the hose material, for example, "1Q15" meaning that the hose was produced the 1st quarter of 2015; on the valve, for example, "0415" or "04/15" to show that the hose line was produced in April 2015.

- Do not use hydraulic hose lines that are more than 6 years old!
- Do not use hydraulic hoses with tubing that is more than 10 years old!
- Shorten the replacement interval when hoses wear out prematurely!
- Have the hydraulic lines replaced if they are porous or cracked!

5.2.3 Comfort Drive

DANGER

The pressure reservoir (accumulator) is under pressure from the gas and oil!

If the accumulator is handled incorrectly, this could result in serious injury!

- ▶ Before commencing any work, reduce the oil pressure in the accumulator!
- ▶ Do not open **the accumulator!**
- ▶ Never **refill** the gas!
- ▶ Take a defective accumulator to an authorized workshop to be replaced!

Reduce the oil pressure in the accumulator

- (1) Fully lower the front loader onto the ground.
- (2) Pull up the parking brake, turn the engine off.
- (3) Turn the Comfort Drive on, using the lever or electric switch, see page 28



If there are electric valves, you must turn the ignition back on!



On tractors with the simply constructed open-centre hydraulic system, the operating levers for all downstream consumers must be in the neutral position!

- (4) Move control lever into all the end positions to depressurize the hydraulic system.
- (5) Hold the operating lever in the *lowering* position for a few seconds to reduce the pressure in the accumulator.

5.2.4 Control dimensions of the front loader support

⚠ WARNING

Outline of the front loader

In cases of heavy wear of the catch hook at the front loader support (dimensions **X** greater than 61 mm), the front loader can break off from the attachment component. This may result in serious accidents!

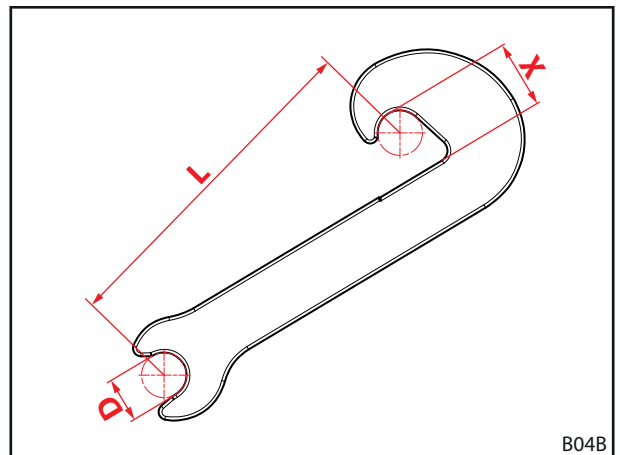
- ▶ Check for wear (dimensions **X**) on a regular basis!
- ▶ Never attach **the** beam on worn or damaged supports.
- ▶ In the case of worn catch hooks: Have the attachment components replaced or repaired by a specialist workshop!

Dimensions:

- L 300 mm or 475 mm
(depending on the overall size of the front loader)
- X Nominal size: $60 \pm 0,2$ mm
Wear limit: 61 mm
- D 40 mm



If the locking mechanism is not put in properly (see 4.4.3,4.4.5), the catch lock can wear prematurely. You should therefore check the setting of the locking mechanism regularly!



B04B



5.2.5 Torque moments for screws



Make sure that the thread is clean!

The tightening torques listed are valid for screws and threads that are clean, dry and free of grease!

Torque moments for screws				
Thread	Strength category			
	8.8		10.9	
	Nm	lb-ft	Nm	lb-ft
M8	23	17	33	24
M8x1	25	18	35	26
M10	46	34	65	48
M10x1.25	49	36	69	51
M12	80	59	110	81
M12x1.5	84	62	118	87
M12x1.25	88	65	123	91
M14	130	96	180	133
M14x1.5	138	102	190	140
M16	190	140	270	199
M16x1.5	210	155	290	214
M18	270	199	380	280
M18x2	280	206	400	295
M18x1.5	300	221	420	310
M20	380	280	530	391
M20x2	400	295	560	413
M20x1.5	420	310	590	435
M22	510	376	720	531
M22x2	540	398	750	553
M22x1,5	560	413	790	582
M24	630	464	890	656
M24x2	680	501	950	700
M27	930	686	1310	966
M27x2	995	733	1400	1032
M30	1260	929	1770	1305
M30x2	1370	1010	1930	1423
5/8" UNC (normal)	175	129	245	180
5/8" UNF (fine)	200	147	280	206
3/4" UNC (normal)	380	280	530	391
3/4" UNF (fine)	420	310	590	435

6 Troubleshooting

Disturbances on the front loader are frequently caused by factors that are not a result of a malfunction on the front loader.

If a problem occurs, please check the following points:

- Is there enough oil in the hydraulic tank of the tractor?
- Has the correct oil been used?
Only use oil according to the operating instructions of the tractor. The wrong oil can cause foam to build up and leaks.
- Is the hydraulic oil clean and free of moisture?
You may need to change the oil and filter.
- Are the hoses and connections mounted correctly?
The connections must be locked in place.
- Are the hoses and connectors undamaged, not clamped or twisted?
- Have the cylinders of the front loader been moved several times into their end positions to remove the air from the lines and the cylinders?
- Have you taken the low outside temperatures into consideration?
Is the oil at operating temperature already?

If these points do not help you resolve the problem, the following table will help you to localize and correct the fault.



Incorrect repairs can lead to safety risks. That is why the maintenance work must only be carried out by suitably qualified personnel!

Stoll recommends that the repair work is done at a specialist/authorized workshop.

Description of the fault	Cause	Rectifying the fault
Low lifting and tearing forces.	Oil pressure too low.	Check the tractor hydraulics.
It is difficult to move the operating lever (stiff).	Bowden cables are stiff.	Check the routing of the Bowden cables and if they are stuck anywhere. If necessary, oil or replace the Bowden cables.
The front loader and implement move too slowly or not at all.	Not enough oil in the hydraulic system.	Check oil level and refill if necessary.
	Hydraulic couplings are not connected correctly.	Check the connections.
	Hydraulic coupling defective.	Check couplings, replace if necessary.
Front loader and/or implements work in the wrong direction to the operating lever.	Insufficient oil flow.	Check the tractor hydraulics.
	Hydraulic connection is not connected properly.	Check the hydraulic connections, correct if necessary.
The front loader lifts slowly or unevenly.	Bowden cables are mounted incorrectly.	Check the connection of the Bowden cables and adjust if necessary.
	Not enough oil in the hydraulic system.	Check oil level and refill if necessary.
	Engine speed too low.	Increase engine speed.
	Hydraulic fluid too cold.	Warm up the hydraulic system to operating temperature.
	Too big load in the implement.	Reduce load.
	Hydraulic coupling defective.	Check couplings, replace if necessary.
	Internal leakage in the hydraulic cylinder.	Check the cylinders, repair or replace the defective cylinder.
Pressure relief valve is set incorrectly.	Check the setting of the pressure relief valve.	
Internal leakage in the control block.	Check the control block, replace if necessary.	



Description of the fault	Cause	Rectifying the fault
Insufficient lifting force.	Internal leakage in the hydraulic cylinder.	Check the cylinders, repair or replace the defective cylinder.
	Too big load in the implement.	Reduce load.
	Pressure relief valve is set incorrectly.	Check the setting of the pressure relief valve.
	Internal leakage in the control block.	Check the control block, replace if necessary.
Air in the hydraulic system. (Recognizable by the foamy hydraulic fluid.)	The hydraulic pump sucks in air.	Check the lines between the hydraulic pump and tank for loose or defective connections.
	The hydraulic filter is dirty.	Check the hydraulic filters and replace if necessary.
Leaks on the hydraulic couplings of the front loader or the 3rd or 4th control circuit.	Leaks caused by dirt that has infiltrated.	Clean the coupling, replace if necessary. When the front loader or the 3rd or 4th control circuit are not in use, cover the hydraulic couplings with the protective caps or close the cap of the Hydrofix.
Front loader blocked during the lifting and/or lowering movement.	Coupling not completely closed.	Check the hydraulic coupling.
	The coupling is defective.	Replace the defective coupling halves.
The front loader rocks when lowering the load.	Lowering speed too high.	Reduce the lowering speed.
The implement cylinder goes out, but not back in again.	Piston seal in the implement cylinder is defective so now the surface of the piston and the ring are stuck together.	Check each cylinder separately for leaks and if necessary replace any defective cylinders.
Leaks on the hydraulic block.	Loose screw	Tighten the screw again.
	Leak between the magnet and valve	Unscrew the knurled nut, remove the magnet, tighten the magnetic core again with an open-end wrench.
	Leak between the valve flanges	Tighten the screws again or renew the O-rings.

7 Appendix

7.1 Technical data

Front loader	Nominal width ¹ [mm]	Length of the lifting arm ² [mm]	Nominal lifting power down ³ [daN]	Nominal lifting power up ⁴ [daN]	Weight ⁵ [kg]
CL 655 H	916	2106	1480	1160	315
CL 655 P		2106	1480	1160	355
CL 755 H		2300	1720	1210	330
CL 755 P		2300	1720	1210	375
CL 855 H		2500	2170	1570	345
CL 855 P		2500	1860	1340	395
CL 955 H		2720	2300	1690	385
CL 955 P		2720	1990	1460	435
CL 755.1 H	1100	2300	1720	1210	345
CL 755.1 P		2300	1720	1210	390
CL 855.1 H		2500	2170	1570	360
CL 855.1 P		2500	1860	1340	410
CL 955.1 H		2720	2300	1690	400
CL 955.1 P		2720	1990	1460	450

¹ measured from the center of the pillar to the center of the pillar.

² measured from the pivot point of the lifting arm to the implement pivot point.

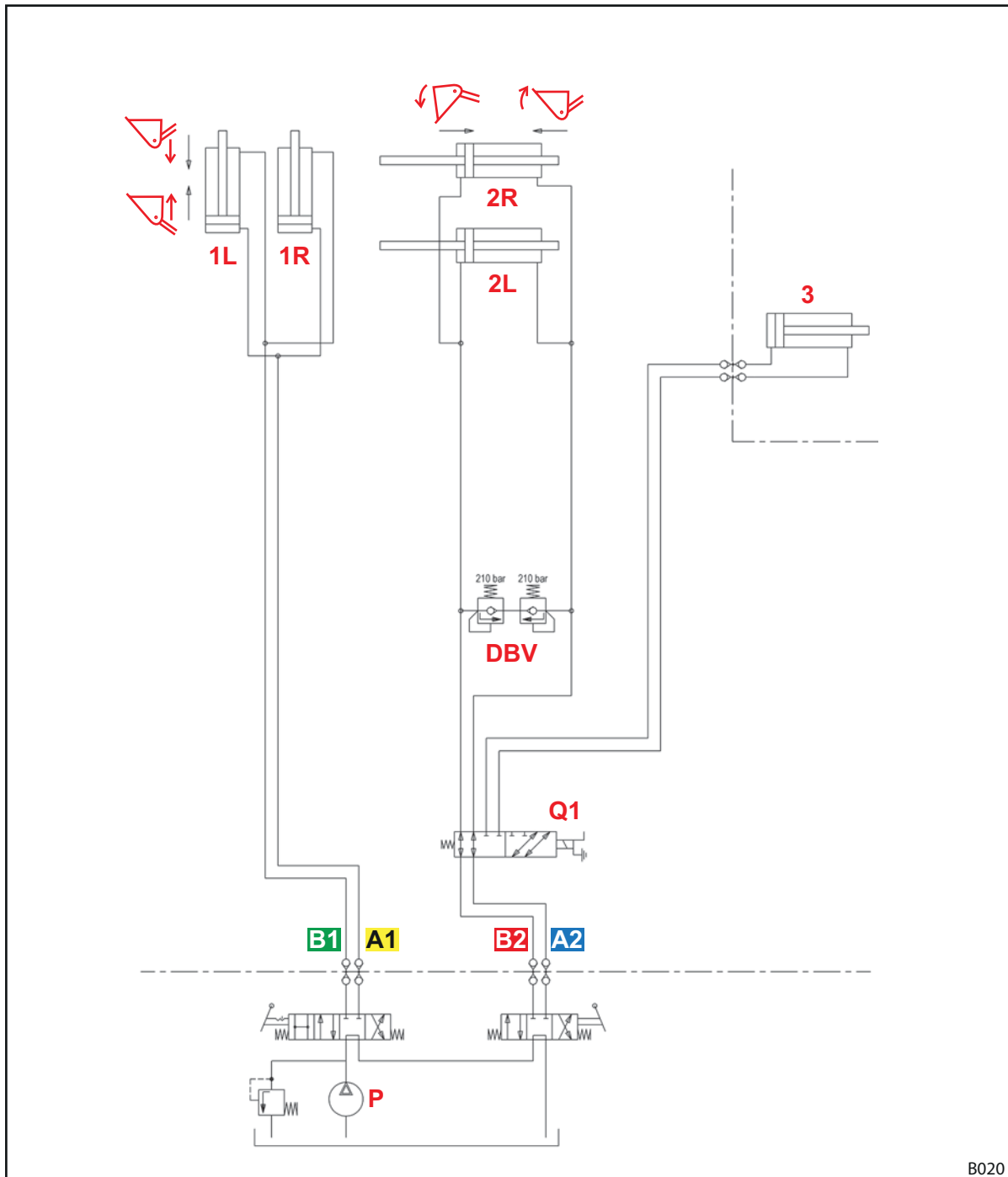
³ mathematically determined lifting force in the implement pivot point at 185 bar hydraulic pressure, fully lowered lifting arm and ideal typical mounting. Since the geometry of the actual attachment components must also take into account the specific geometry of different tractor equipment (tire sizes, axles, etc.), the actual values in individual cases may vary significantly.

⁴ same as 3, but with fully raised lifting arm

⁵ typical weight without implement, without special equipment. Deviations in individual cases are possible.



7.2 Hydraulic diagram



B020

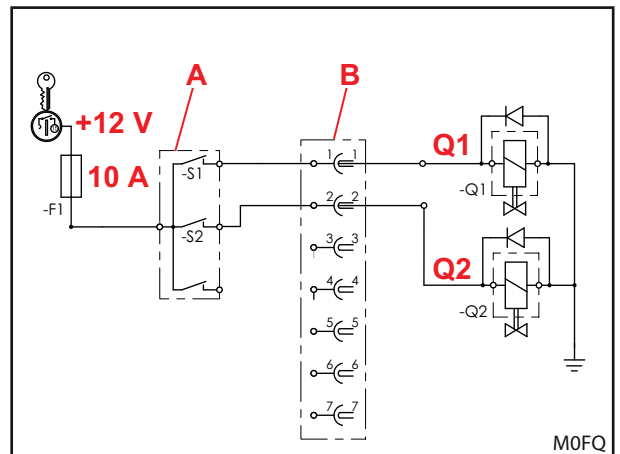
Key

A1	"Lifting" line	PRV	Pressure relief valve
B1	"Lowering" line	Q1	Valve for 3rd control circuit (optional)
A2	"Dumping" line	3	Hydraulic cylinder on the tool
B2	"Scooping" line	P	Tractor pressure (pump)
1L	Lifting cylinder left		
1R	Lifting cylinder right		
2L	Tool cylinder left		
2R	Tool cylinder right		

7.3 Electric circuit diagram

Key



- A Button on the operating lever
- B Plug, socket (usually 7 pin)
- Q2 Hydraulic valve for 3rd control circuit
- Q1 Circuit suggestion for further electrical / electro-hydraulic equipment on the front loader or the tool (e.g. 4th control circuit).

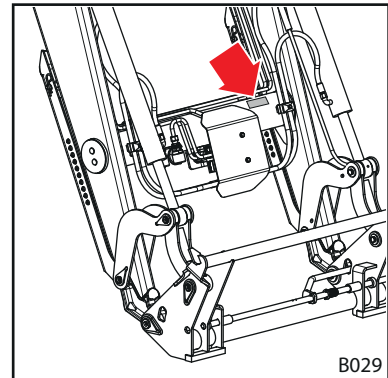


i This circuit diagram does not apply to tractors with a single-lever control unit *Pro Control!*
 In this case please note *the Pro Control installation and operating instructions!*

i The rated voltage of 12V must be connected via the ignition lock. The connection must be protected with a fuse.

7.4 Identification

Wilhelm STOLL Maschinenfabrik GmbH	
	Type xxxxx 1 xxxxxx
	Item-No. xx 2 xxx
	Weight xx 3 x kg Year x 4 x Hydr.Pres. 5 x bar Serial-No. xx 6 xxx
Made in xx 7 xxx	Bahnhofstraße 21 · 38268 Lengede · Germany
	



The front loader is identified with a rating plate. The rating plate is on the cross tube.

Information on the rating plate:

- 1 Type of front loader (e.g. lifting arm ClassicLine CL 955 P)
- 2 Identification number
- 3 Weight
- 4 Year of manufacture
- 5 Permitted hydraulic pressure (not on all devices)
- 6 Serial number
- 7 Country of manufacture, e.g.:
Germany: Federal Republic of Germany
ROK: Republic of Korea
IE: Ireland
PL: Poland

7.5 Disposal

The front loader consists essentially of components made of steel and hydraulic components, which may contain, among other things rubber and plastics.

Take for your old front loader or front loader components to an authorized dealer for disposal!

This applies in particular to hydraulic components that still contain oil residues and can therefore cause serious damage to the environment.

For the disposal of hydraulic oil, please note the operating instructions of the tractor and the locally applicable environmental regulations!

7.6 Declaration of Conformity

The content of the Declaration of Conformity complies with the EC Directive 2006/42/EC, Appendix I, paragraph 1.7.4.2 c):

Declaration of Conformity

in accordance with EC Directive 2006/42/EC, Appendix II A.

Wilhelm STOLL Maschinenfabrik GmbH
 Bahnhofstrasse. 21
 38268 Lengede, Germany

hereby declares that the STOLL front loader type ClassicLine CL
 (Serial number range 7015000 to 7099999)

complies with all the relevant provisions of the EC Directive.

EC Directives applied:

2006/42/EC	Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery, and amending Directive 95/16/EC (recast)
2004/108/EC	Directive 2004/108/EC of the European Parliament and of the Council dated 15 December 2004 to approximate the laws of the Member States relating to electromagnetic compatibility and repealing Directive 89/336/EEC

Applicable conforming standards:

DIN EN ISO 12100:2011-03	Safety of machinery — General principles for design — Risk assessment and risk reduction (ISO 12100:2010); German version EN ISO 12100:2010
DIN EN ISO 12100 Ber 1:2013-08	
DIN EN 12525:2011-02	Agricultural machinery - Front loader - Safety; German version EN 12525:2000 + A2:2010
DIN EN ISO 4254-1:2013-10	Agricultural machinery - Safety - Part 1: General requirements (ISO 4254-1:2013); German version EN ISO 4254-1:2013
DIN EN ISO 14982:2009-12	Agriculture and forestry machinery - Electromagnetic compatibility - Test methods and acceptance criteria (ISO 14982:1998); German version EN ISO 14982:2009
DIN EN ISO 4413:2011-04	Hydraulic fluid power - General rules and safety requirements for systems and their components (ISO 4413:2010); German version EN ISO 4413:2010

The person authorized for compiling the technical documentation is the Head of Development at STOLL GmbH, for address see above.

Lengede 22.11.2016

Guido Marenbach
 Management

p.p. Dr. Rainer Golloch
 Head of Development





Address of the dealer

Stick or write down the serial number here

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