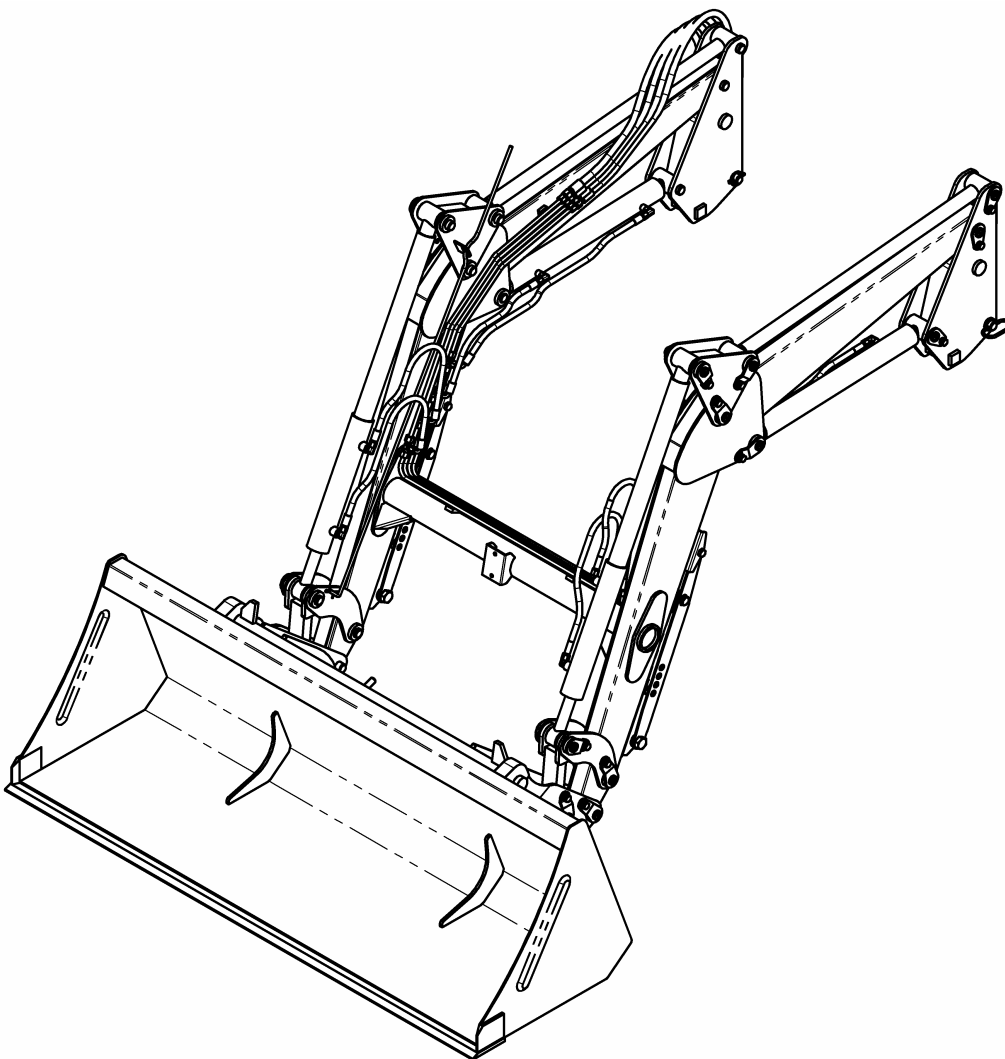


STOLL

Operating Manual

Frontloader

COMPACT FC



▲ Danger ▲

Read the entire operating manual before using the front loader.

Table of contents

1	Introduction	3
1.1	Using the operating manual	3
1.2	Warning symbols.....	4
1.3	Intended use of the front loader	4
1.4	Description of the front loader.....	5
1.5	Frontloader types	5
2	Safety instructions	6
2.1	General	6
2.2	Before work.....	7
2.3	Driving on roads.....	8
2.4	When working	9
2.5	After work.....	12
2.6	Maintenance.....	13
2.7	Safety stickers - meaning, order numbers, placement	14
3	Frontloader.....	16
3.1	Preparations for use.....	16
3.2	Ballasting the tractor	17
3.3	Operation of the front loader.....	18
3.3.1	Operating the single-lever control unit (EHS).....	19
3.4	Supplemental operating functions.....	20
3.4.1	3th Control circuit	20
3.5	Attachment and removal of the front loader.....	21
3.5.1	Attachment	21
3.5.2	Removal	23
3.6	Attachment and removal of the implements	25
3.7	Level display	27
3.8	Mechanical parallel motion (FC P).....	27
4	Supplemental equipment.....	28
4.1	3th Control circuit	28
5	Implements.....	29
5.1	Pallet fork	29
6	Maintenance.....	30
6.1	Hydraulic system.....	30
6.2	Bearing points	31
6.3	Threaded connections	31
6.4	Troubleshooting	32
7	Appendix	34
7.1	Circuit diagram - hydraulic system.....	34
7.2	Technical data.....	35
7.3	TÜV registration	36
7.4	Markings on the front loader	36
7.5	EC Declaration of Conformity	37

1 Introduction

Dear customer,

We thank you for purchasing a front loader from our company.

To ensure long-term satisfaction with this product please read this manual carefully and familiarize yourself with its contents.

Thank you.

The employees and management of Wilhelm Stoll Maschinenfabrik GmbH

1.1 Using the operating manual



▲ Danger ▲

Read the entire operating manual before using the front loader.

Operation and service of the front loader are described in this operating manual.

If you have questions concerning the operating manual, contact your dealer.

An operating manual is supplied with each machine. It is a component of the front loader and must be kept in the tractor so that the driver or service personnel have immediate access to it for review purposes, if necessary.

Obtain a new operating manual immediately if the old manual is damaged or lost.

This manual contains information concerning the state of the technology that was valid at the time of delivery.

We reserve the right to make changes in the design and specifications of the loader and its components in the course of further technical development.

Direction information:

The direction information **right** and **left** used in this operating manual is always based on the driver's perspective.

1.2 Warning symbols

Warnings are used in this manual to protect you from injury and to protect the machine from damage. Always read and comply with these warnings. Warnings are shown in **bold** font. Warnings are introduced with the words **▲ Danger ▲** or **▲ Caution ▲**.

The two warning levels have the following meaning:

▲ Danger ▲

If the warning is ignored, there is danger of death, severe injury or significant machine damage.

▲ Caution ▲

If the warning is ignored there is danger of injury or machine damage.

Supplemental comments begin with the word

Comment

These comments facilitate understanding or execution of a certain procedure.

1.3 Intended use of the front loader

The front loader has been built exclusively for agricultural and forestry loading tasks.

It should only be used with the implements provided by STOLL.

It should only be attached to those tractors for which STOLL designed it to be attached, and for which it is offered by STOLL.

▲ Danger ▲

Any use extending beyond intended use is non-intended use. The manufacturer, STOLL, assumes no liability for damage resulting from non-intended use. This risk is borne solely by the user.

Intended use also includes compliance with the operating and service instructions prescribed by the manufacturer.

The front loader should only be used and maintained by persons who are familiar with the contents of the operating manual through appropriate reading and instruction, and who have been particularly instructed concerning the dangers associated with operation of the front loader.

1.4 Description of the front loader

The Stoll front loader is a loading device that is mounted on a tractor. It is used for lifting and moving loads.

The front loader and the implements are activated via hydraulic cylinders.

The front loader is powered by the tractor's hydraulic system, and is controlled from the driver's seat.

The front loader is attached to the tractor and detached from the tractor quickly and effortlessly via the STOLL drive-in system.

The support legs ensure that the detached front loader is stable.

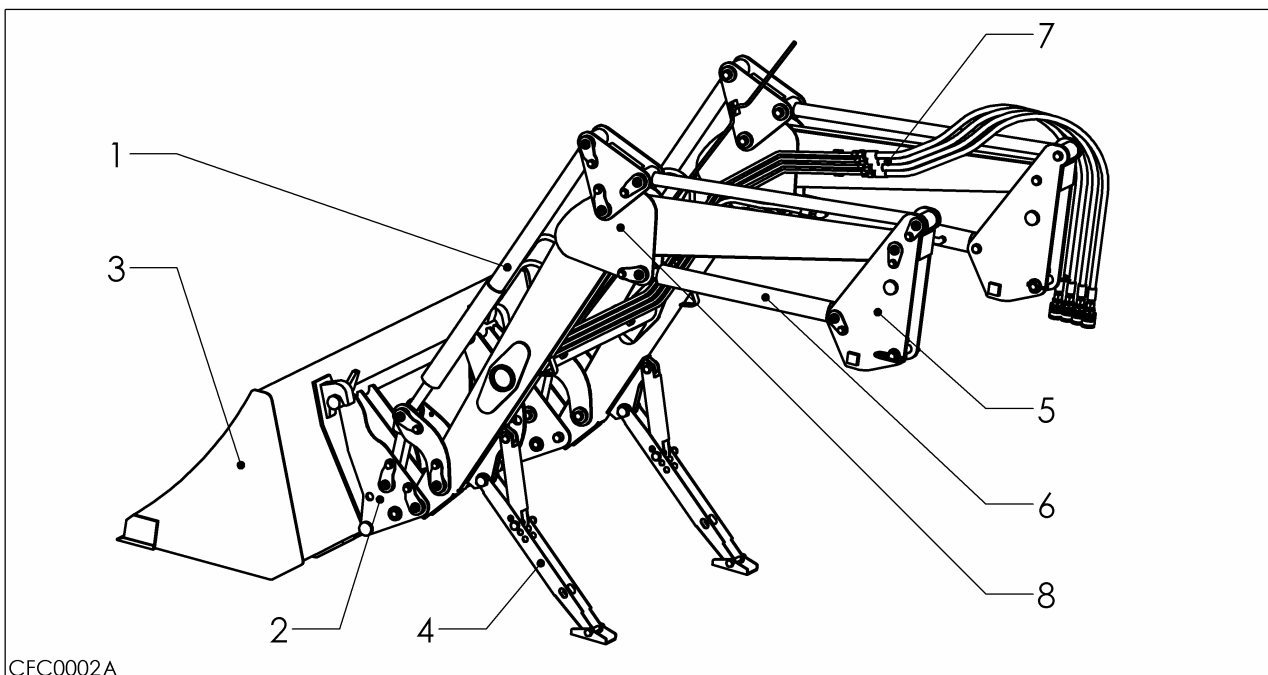
The implements are connected to the front loader via the change frame. The change frame enables fast and safe implement change.

The front loader consists of:

1. Implement cylinder
2. Change frame
3. Implement (e.g. bucket)
4. Support legs
5. Column (drive-in system)
6. Lifting cylinders
7. Hydraulic pipes
8. Lifting arm

Parts that are permanently mounted on the tractor

- Add-on parts
- Front protection
- Hydraulic pipes



1.5 Frontloader types

All front loader types are factory equipped with hydraulic implement activation and double-acting lifting cylinders.

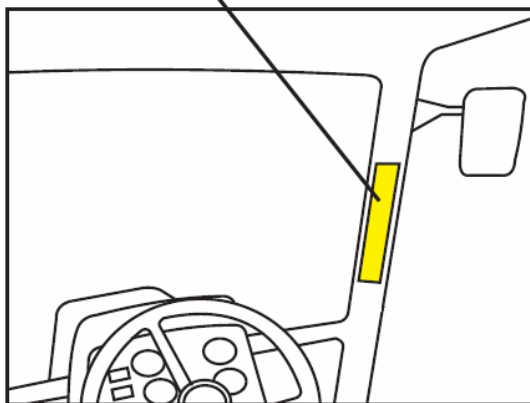
The p type front loader differs from the H front loader in that the P front loader has a mechanical parallel guide for the implement.

2 Safety instructions

2.1 General



3449070a



Read and comply with the following safety instructions before operating or servicing the front loader. By doing so you will prevent accidents.

If you have questions concerning the operating manual, contact your dealer.

Affix the safety stickers shown in the manual where they are easily visible to the driver.

▲ Danger ▲

Comply with the accident prevention regulations as well as the technical safety, occupational health, and road traffic regulations of the country where the front loader is used.

▲ Danger ▲

Unauthorized changes to the front loader and to the implements exclude liability on the part of the manufacturer for resulting damage.

2.2 Before work

⚠ Danger ⚠

Before work check the tractor and the front loader:

- Ensure that all components are firmly attached.
- Repair or replace damaged, excessively worn, or missing parts.
- Ensure that protective devices and covers are in good condition and properly mounted.
- Make all the required adjustments on the tractor and on the front loader.
- Regularly check the tightening torque of all bolts and nuts (section 6.3, p. 31).
- Ensure that all components are lubricated regularly (sec. 6.2, p. 31).

⚠ Caution ⚠

If equipment is installed on the tractor that could collide with the front loader or the implement, then remove this equipment before starting the load work.

⚠ Danger ⚠

Arrest the hydraulics when driving on the road, or parking the tractor.

Front loaders should only be attached to tractors that have lockable hydraulics, if this is not the case then a stop valve must be installed.

⚠ Danger ⚠

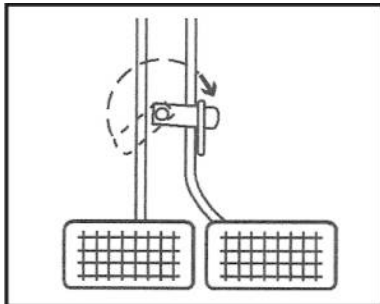
Tractor and front loader work with hydraulic oil that is under high pressure in operation.

Check all hydraulic components and keep them in good condition.

Ensure that hydraulic components - particularly hoses - cannot be damaged by moving parts.

⚠ Caution ⚠

If you use the front loader at low outdoor temperatures, bring the hydraulic system up to working temperature beforehand. To do this, completely extend and retract all hydraulic cylinders several times.



⚠ Danger ⚠

Connect the brake pedals of the tractor together. Never use separated brakes if a front loader is mounted.

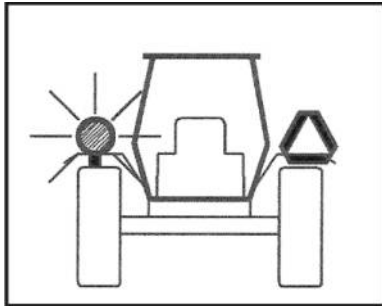
⚠ Danger ⚠

Ensure that the front tyres are inflated to the prescribed pressure for load operation as specified in the operating manual of the tractor.

⚠ Danger ⚠

If the tractor has a seat belt, fasten the seat belt when driving.

2.3 Driving on roads



⚠ Danger ⚠

Ensure that the lights and reflectors of the tractor are not covered by the front loader when driving on public roads.

⚠ Danger ⚠

When driving on roads, lock the tractor hydraulics so that the front loader cannot lower.

To do this, for a single-lever control unit, switch the catch lever to lock position.

If using a front loader with built-in shut-off valve, close the shut-off valve.

⚠ Danger ⚠

Do not drive on public roads with loaded implement.

⚠ Danger ⚠

The implement must be at least 2 metres above the road surface.

Comply with country-specific guidelines for positioning the front loader when driving on roads.

The horizontal distance between the front end of the front loader and the middle of the steering wheel should not be more than 3.5 m. It may be necessary to remove the implement.

⚠ Danger ⚠

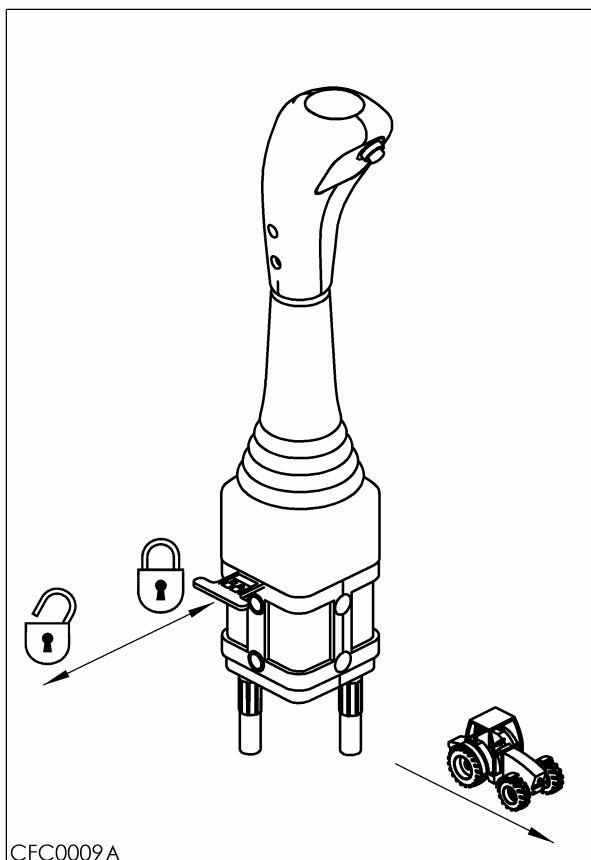
If necessary, reduce the lift height when driving under bridges or overhead lines.

⚠ Danger ⚠

Consider the greater length and higher weight of the tractor when driving on curves and for braking manoeuvres.

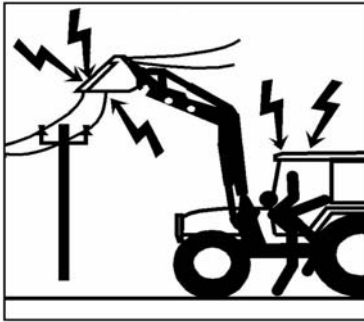
⚠ Danger ⚠

The maximum speed with front loader and attached implement is 25 km/h for road driving and 10 km/h for load work.



CFC0009A

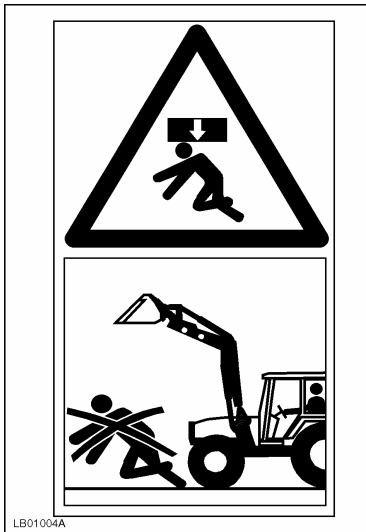
2.4 When working



⚠ Danger ⚠

Familiarise yourself with the work area and the terrain. Keep a safe distance away from electrical lines.

Only execute front loader work if the visibility conditions are adequate. Ensure that the work area is adequately illuminated. Keep the cab windshield clean.



⚠ Danger ⚠

Do not position yourself in the vicinity of raised front loaders or in the vicinity of an unsecured load.

Ensure that no one is positioned in the danger zone of the front loader.



⚠ Danger ⚠

Constantly observe your work area. Ensure that people or animals do not obstruct the work area.

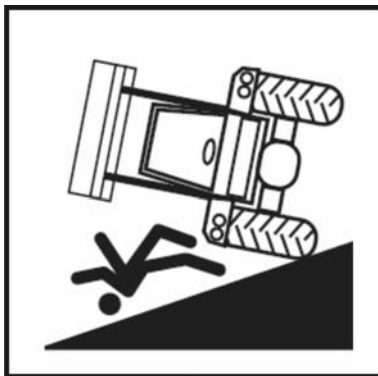


⚠ Danger ⚠

Only control the machine from the driver's seat.



⚠ Danger ⚠
Do not lift or carry persons.



⚠ Danger ⚠
Use extreme caution when working on a slope.
Do not drive transverse to the slope with a raised load.
The danger exists that you and the tractor will tip over.
Push the load material together downhill. Scoop up the material in the depression at the bottom of the incline.

Extend the wheel track of the tractor.
Even with an adjustable axle do not work under the normal track width.

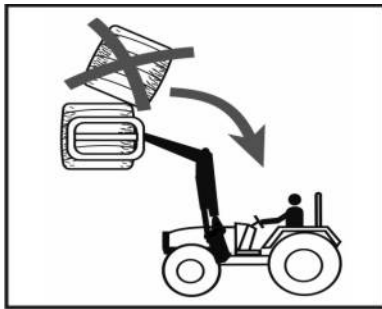
⚠ Danger ⚠
When driving on curves reduce the speed and lower the load.

⚠ Danger ⚠
Do not drive the tractor in a jerky manner if the front loader is in the highest load position and fully loaded.



⚠ Danger ⚠
Check the implement tilt when lifting the front loader.
Raised loads can fall on you if you scoop the implement too far.

When lifting H front loaders you must compensate the angular increase of the implement by dumping it.



⚠ Danger ⚠

Never stack multiple loads (bales, pallets) on top of each other. The upper loads can fall on you.

Special implements, such as baling implements or pallet forks are designed in such a manner that they prevent loads from falling onto the tractor.

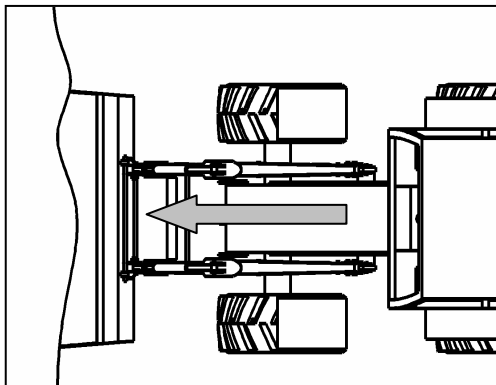


⚠ Danger ⚠

Check the implement tilt when lifting the front loader.

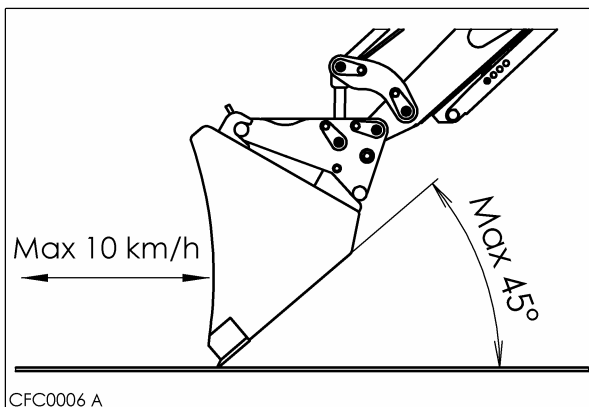
Raised loads can fall on you if you scoop the implement too far.

When lifting H front loaders you must compensate the angular increase of the implement by dumping it.



⚠ Caution ⚠

Drive straight into the load material. Do not execute any steering movement in this process.



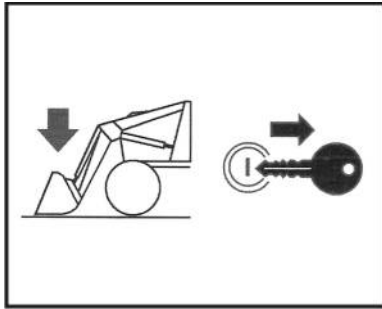
⚠ Danger ⚠

When levelling do not drive faster than 10 km/h. In this process tilt the implement a maximum of 45°.

⚠ Caution ⚠

Switch off the front axle suspension of the tractor.

2.5 After work



⚠ Danger ⚠

The following applies when you leave the driver seat:

- Lower the front loader onto the ground
- Arrest the tractor hydraulics
- Engage the parking brake
- Move the gear shift into park position
- Turn off the engine
- Remove the key

⚠ Danger ⚠

Comply with the following when removing the front loader:

Only park the front loader on a stable substrate and with attached implement.

Ensure that the support legs are securely positioned.

Only the operator should attach and remove the front loader and the implements.

2.6 Maintenance



⚠ Danger ⚠

Before starting maintenance work, put on your protective equipment (protective coveralls, gloves, protective goggles, safety footwear).

⚠ Danger ⚠

Lower the front loader onto the ground. Depressurize the hydraulics and the hydraulic connections.

Leave the front loader coupled to the tractor. Let the machine temperature cool to below 55°C. Ensure good lighting.

⚠ Danger ⚠

NEVER stand between the front of the tractor and the transverse pipe of the front loader.

Never repair the front loader with raised front loader.

Lower the front loader onto the ground.



⚠ Danger ⚠

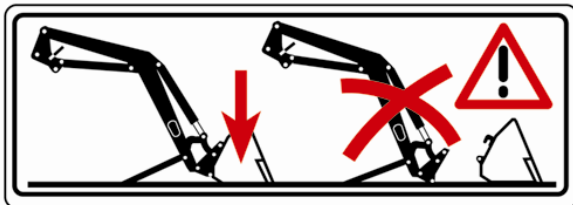
Never search for leaks with your fingers. Use suitable aids (a piece of wood or cardboard). Hydraulic oil escaping under high pressure can penetrate the skin and cause severe injury. If injured, consult a physician immediately.

2.7 Safety stickers - meaning, order numbers, placement

If a sticker should get damaged or lost, obtain a replacement without delay.

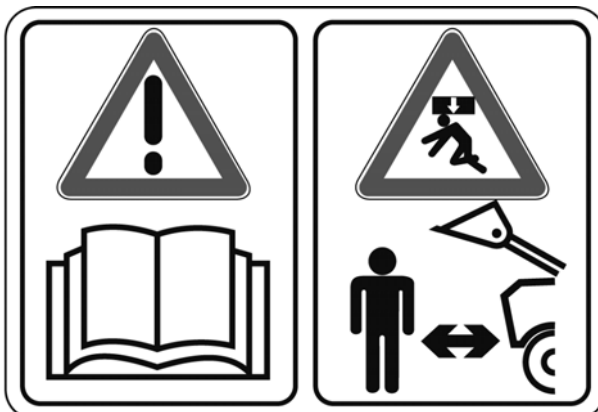


Order no.: 3480600a



▲ Danger ▲
Only park the front loader with attached implement.

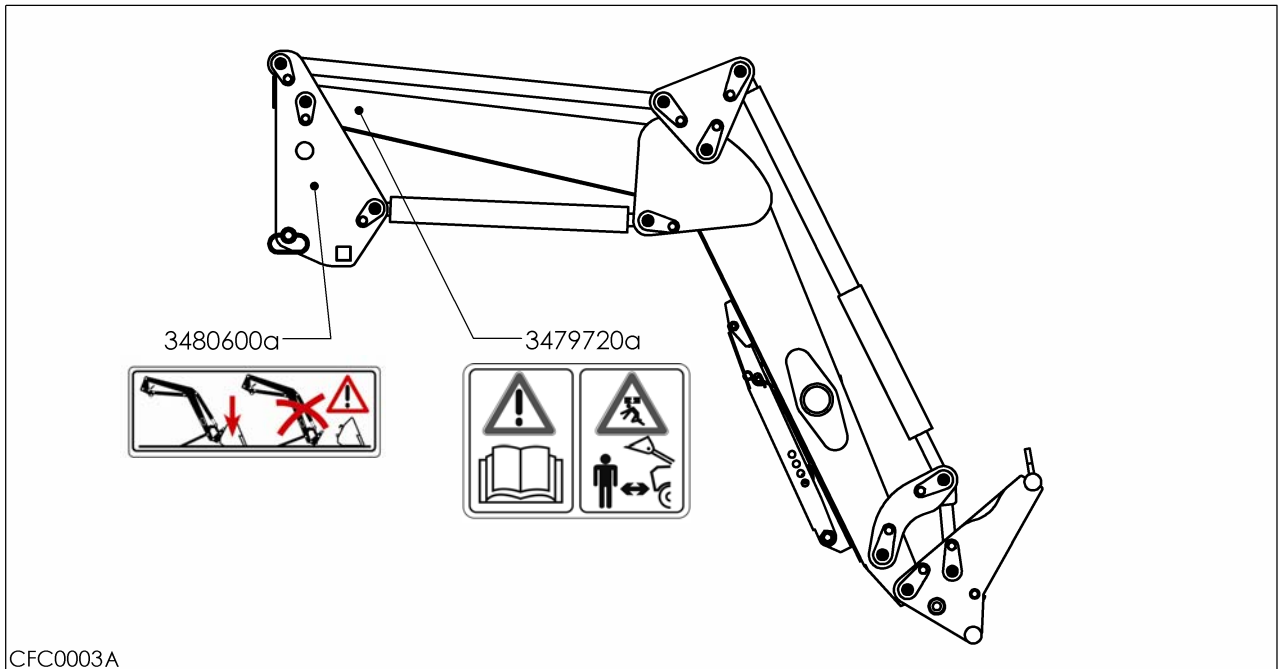
Order no.: 3480600a



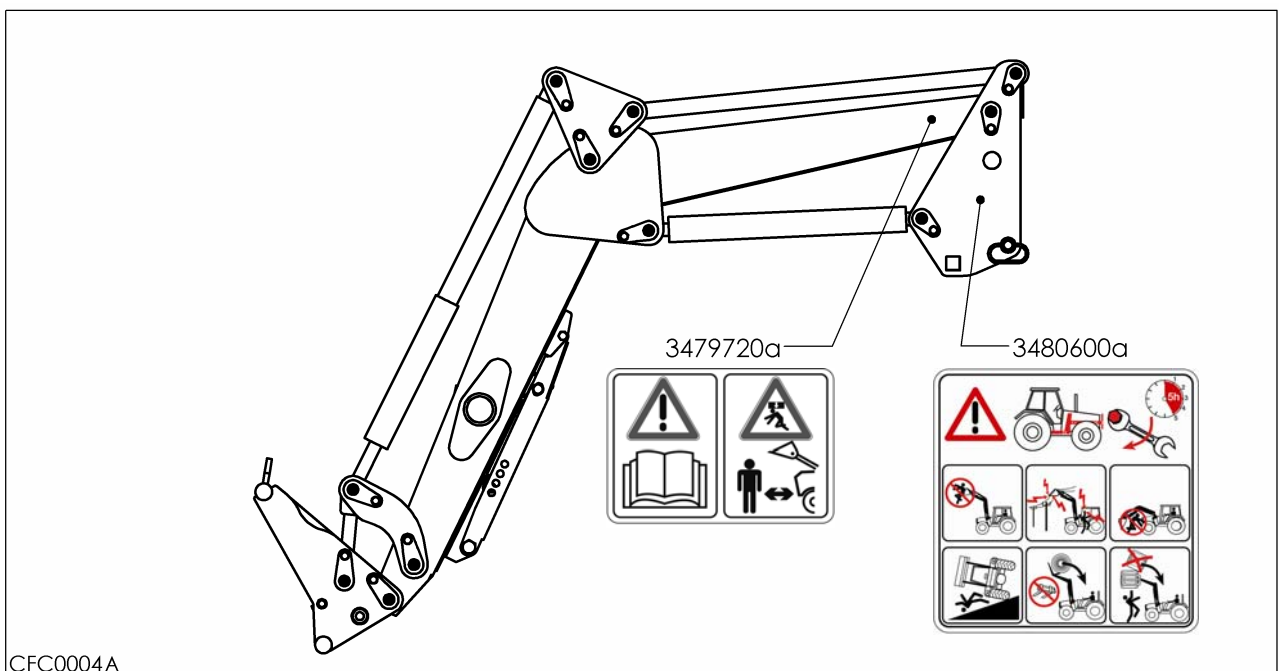
▲ Danger ▲
Ensure that no one is positioned in the work area of the front loader.

Order no.: 3479720a

Right side of the front loader



Left side of the front loader



3 Frontloader

Comply with the safety instructions in section 2 for all activities with the front loader.

3.1 Preparations for use

The front loader is delivered completely assembled and ready for connection.

▲ Danger ▲

Hydraulic lines and threaded connections that hydraulically connect the front loader and tractor, are loosely pre-mounted in the factory.

After final routing of the lines firmly tighten all threaded connections. After 5 operating hours re-tighten all threaded unions.

The required tightening torques are specified in section 6.3 on page 31.

▲ Caution ▲

If equipment is installed on the tractor that could collide with the front loader or the implement, then remove this equipment.

▲ Caution ▲

After attaching the front loader check the fender position and the left/right steering lock. There must be clearance of at least 20 mm between the add-on part + front loader and front tyres + fenders.

You can enlarge the clearance with the following measures:

- Changing the fender position.
- Reducing the left/right steering lock.
- Installing a oscillation restriction mechanism for the front axle.

3.2 Ballasting the tractor

▲ Danger ▲

Always use a counterweight in the rear of the tractor for front loader work.

This is necessary for operational safety reasons and road safety reasons.

Ensure that steerability remains intact and that the minimum braking distance is also ensured for front loader work (as specified in the German road traffic regulations (StVZO)).

Remove the front weights for front loader work.

However, to exclude the possibility of tractor overload, the rear weight should not be selected too heavy. Comply with the values specified in the table.

Tractor power		Frontloader Size	Maximum ballast weight / kg (0.8m behind the rear axle)
kW	HP		
7 - 18	10 - 25	250	100 - 200
11 - 22	15 - 30	350	200 - 300
18 - 37	25 - 50	450	300 - 400

▲ Danger ▲

At least 20% of the total weight (tractor, front loader, implement, load, and counterweight) must be on the rear axle, to ensure stability.

Use the equation below to calculate stability. If the equation is satisfied, stability is achieved.

$$\frac{G \cdot L2 + M(L1 + L2) - N \cdot b}{L2} \geq \frac{P + N + M}{5} \quad (20\%)$$

P...mass of tractor and front loader without counterweight and without implement

G...rear axle load of the tractor with front loader without counterweight and without implement

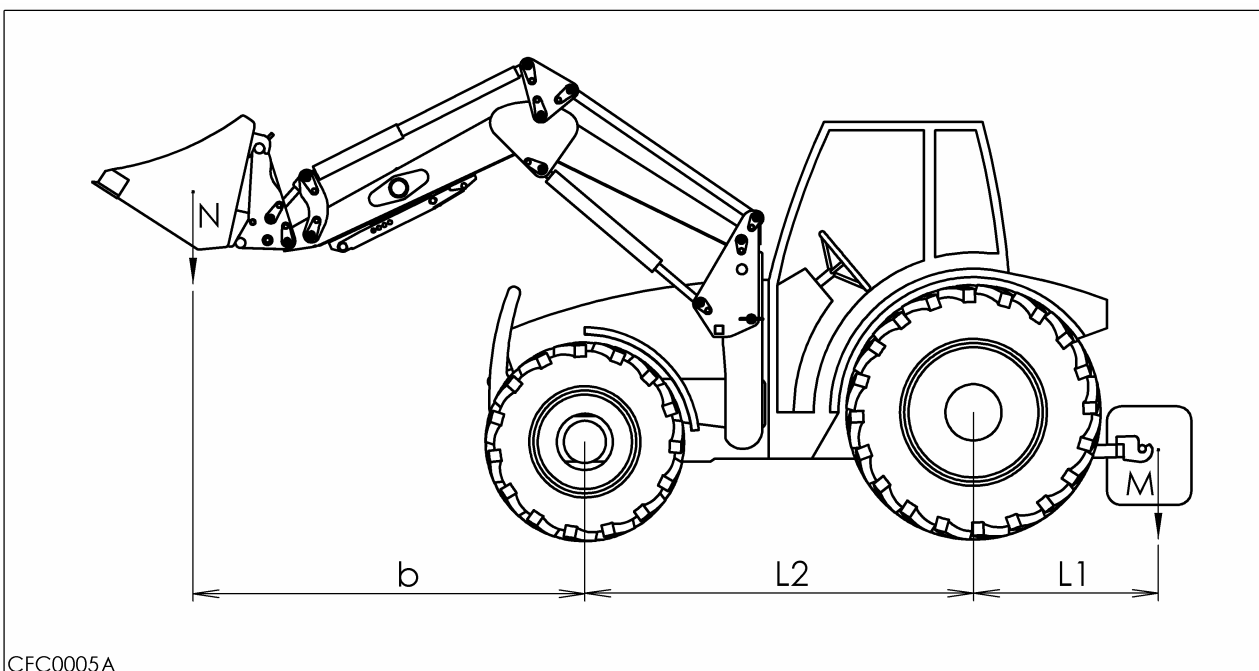
M...mass of the counterweight

N...mass of the maximum permissible load including the implement

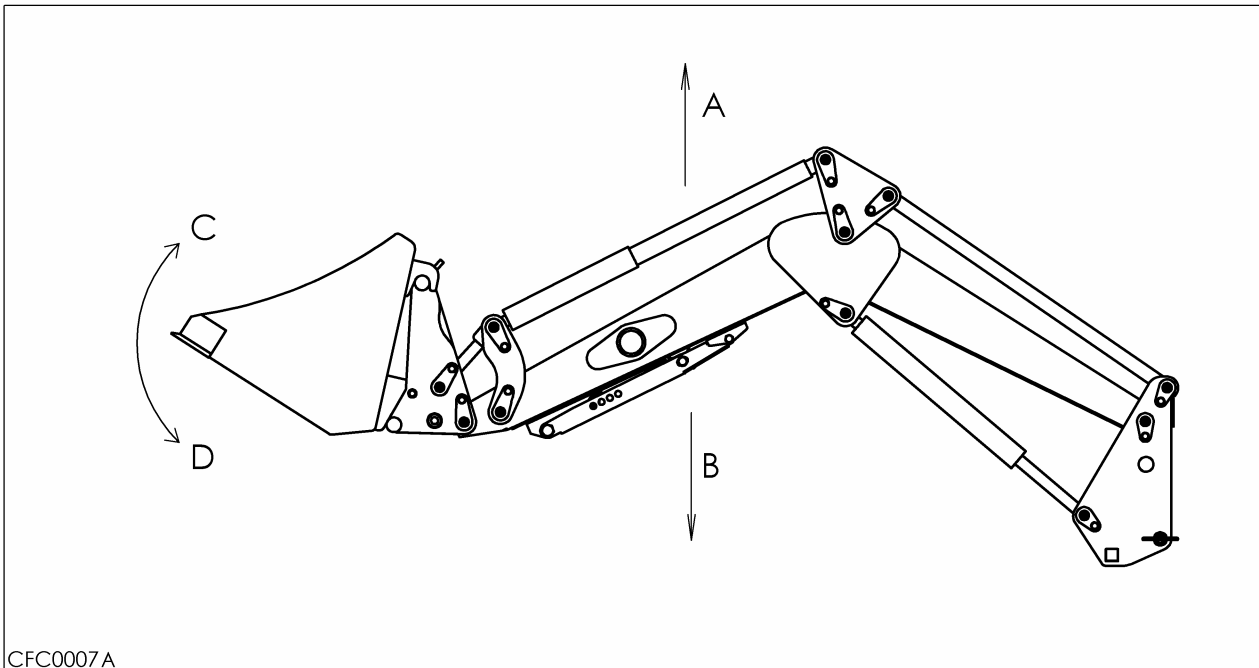
b...horizontal distance between front axle and centre of gravity of the load

L1...horizontal distance between rear axle and centre of gravity of the counterweight

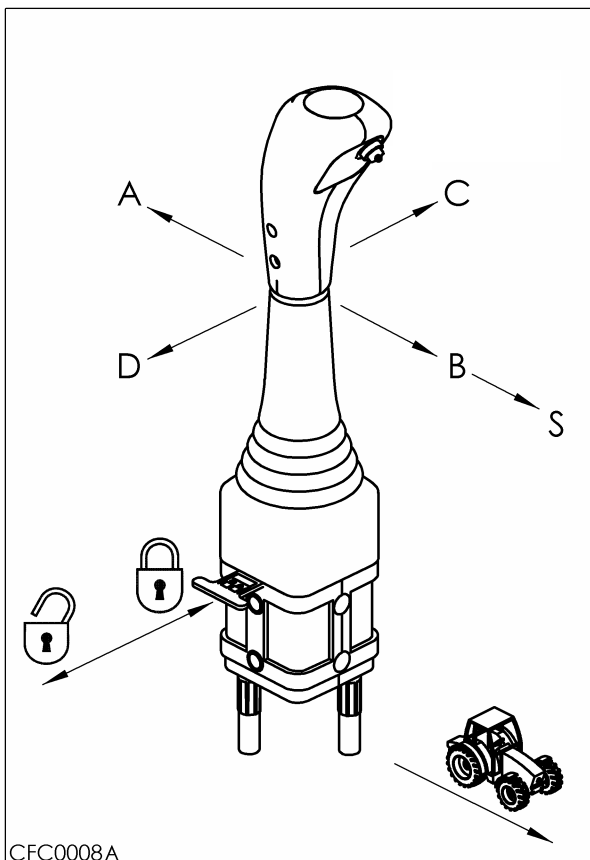
L2...wheelbase of the tractor



3.3 Operation of the front loader



CFC0007A



CFC0008A

- A...front loader - lifting
- B...Front loader - lowering
- C...Implement - scooping
- D...Implement - dumping
- S...Front loader - float position

Lifting A:

Pull the operating lever back to lift the front loader.

Lowering B:

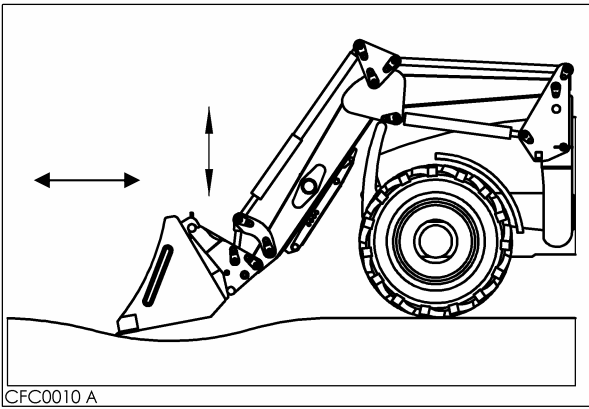
Move the operating lever forward to lower the front loader.

Scooping C:

Move the operating lever to the left to scoop the implement.

Dumping D:

Move the operating lever to the right to dump the implement.



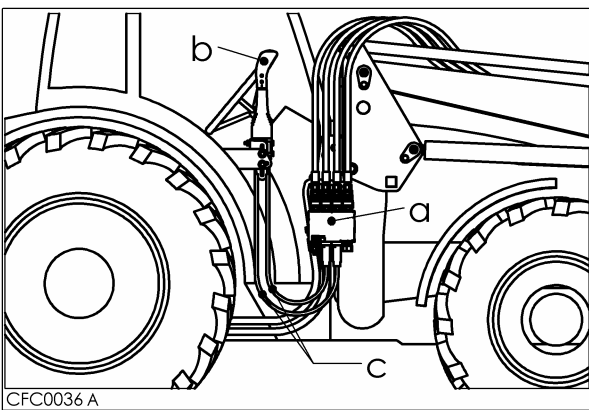
Floating position S:

If you push the operating lever all the way forward, the operating lever will lock in float position

In float position the front loader lowers to ground level. When driving with float position the front loader adjusts to ground level.

Deactivate float position by pulling the operating lever back into neutral position.

3.3.1 Operating the single-lever control unit (EHS)



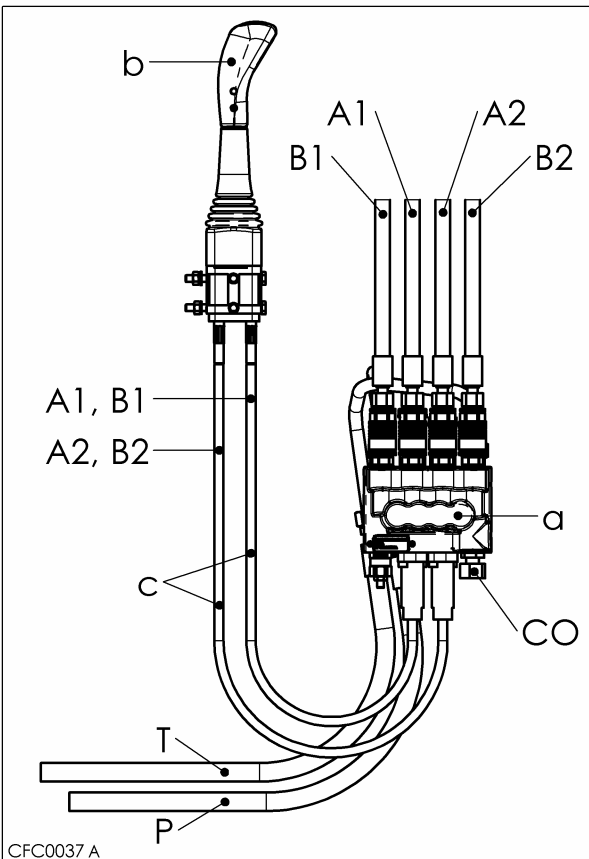
The tractor is equipped with a mechanical control block (a) on the add-on part.

The operating lever (b) is installed in the tractor cab.

The operating lever is connected to the control block via two Bowden cables (c).

The EHS enables easy, precise, and safe loader guidance.

Installation of the EHS is described in the installation instructions A 874 (order no.:2360630).

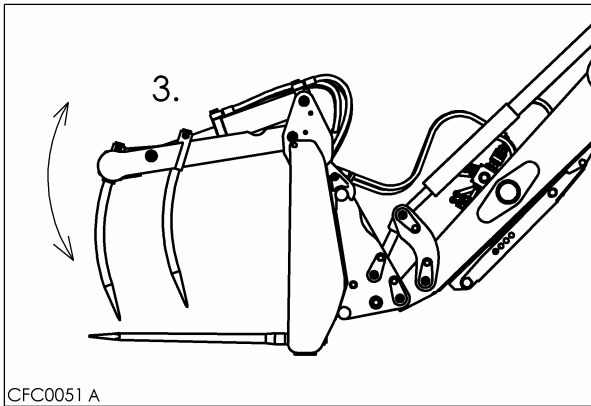


The following table assigns the hydraulic wires.

Function	Marking	
	Mark	Plug-in connector
Lifting	A1	yellow
Lowering	B1	black
Scooping	A2	blue
Dumping	B2	red
pump	P	
tank	T	
Unload pressure point	CO	

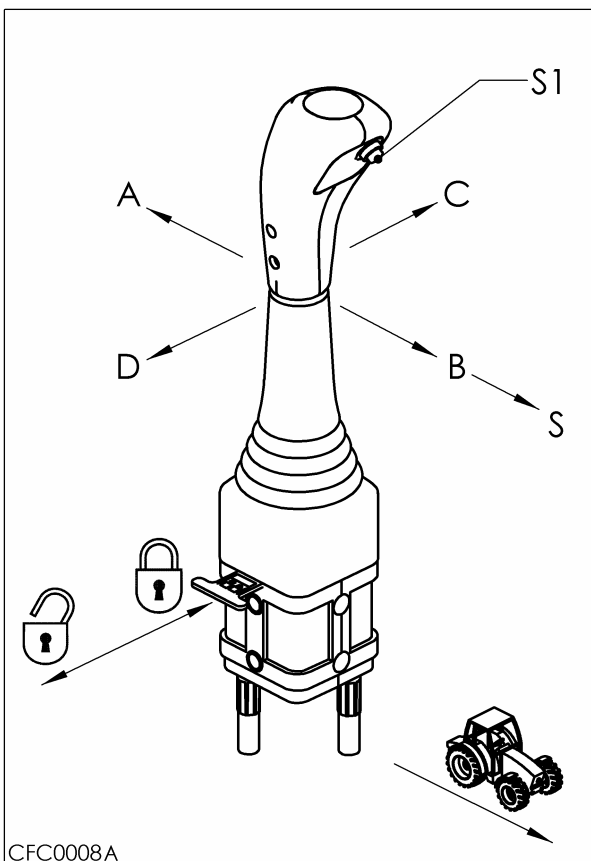
3.4 Supplemental operating functions

3.4.1 3th Control circuit



The 3rd control circuit is additional double action oil circuit on the front loader. With this circuit you control the additional hydraulic function of the implement.

Implements with additional hydraulic functions are silage grippers, bale grippers.



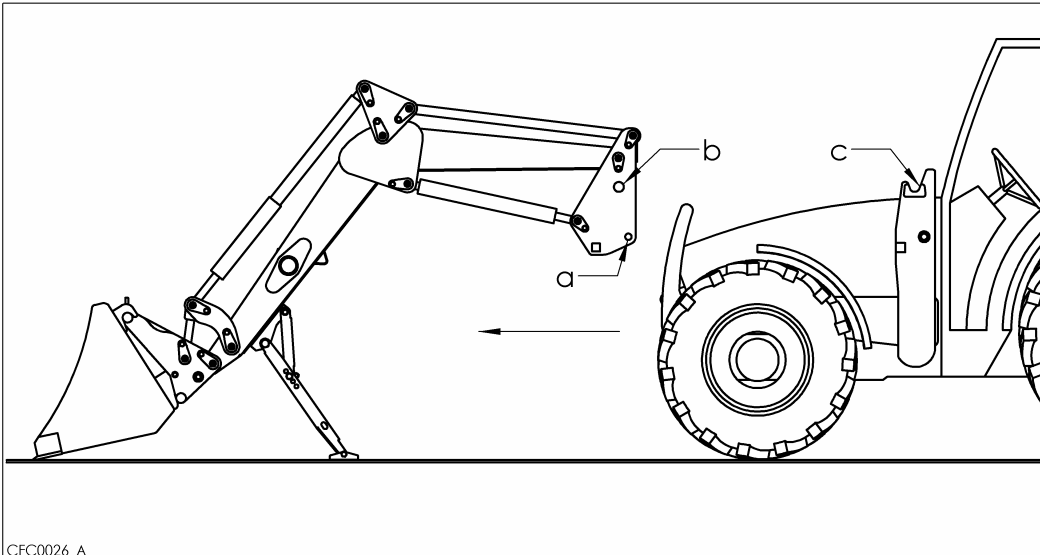
The supplemental function is activated via the implement activation (scooping, dumping) On the operating lever press button S1 and simultaneously move the control lever to the right or left.

This de-activates implement activation. Release the button to operate the implement again.

3.5 Attachment and removal of the front loader

Only the operator should attach and detach the front loader.

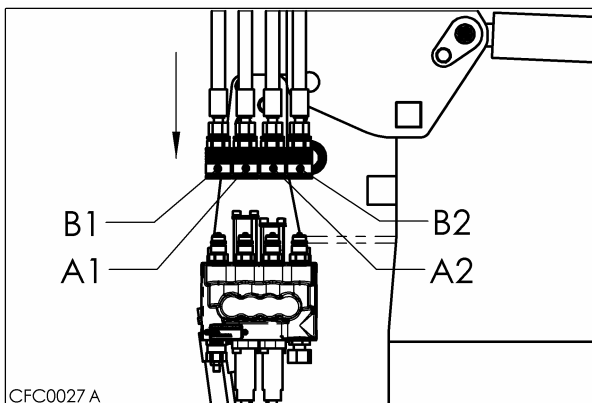
3.5.1 Attachment



CFC0026 A

Remove the locking axle (a).

Drive tractor forward in the front loader until the axle (b) contacts the adaptation (c).



CFC0027 A

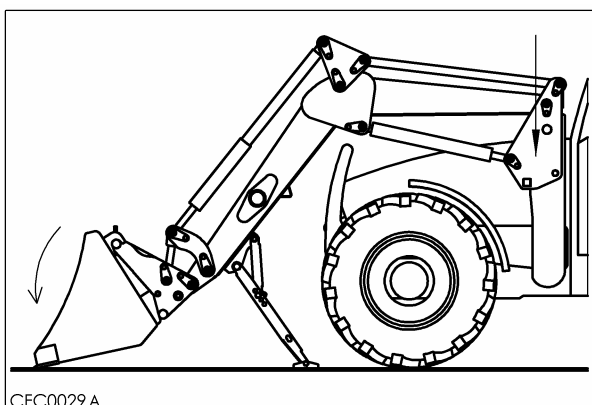
Engage the parking brake and turn the engine off.
Depressurize the hydraulic system.
Remove the plastic cap of the hydraulic block.
Clean connections.

Connect hydraulic lines and electrical cables.

Function	Marking	
	Mark	Plug-in connector
Lifting	A1	yellow
Lowering	B1	black
Scooping	A2	blue
Dumping	B2	red

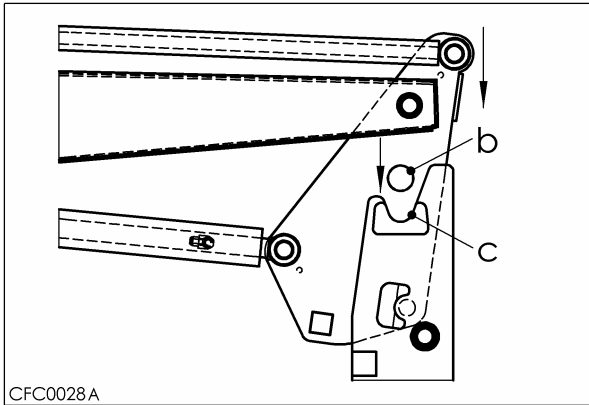
⚠ Caution ⚠

For all coupling processes depressurize the hydraulic system. Otherwise seals can be damaged. Prior to coupling clean the coupling connectors and muffs.

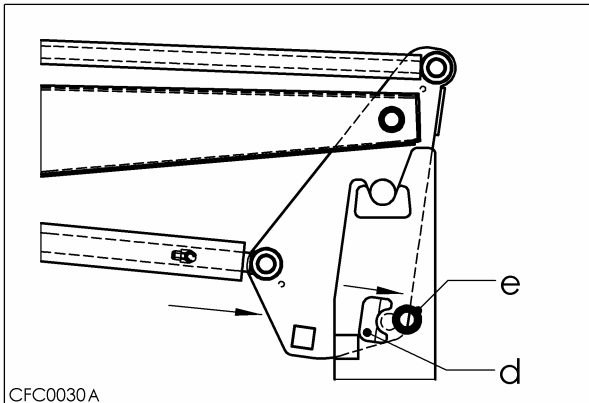


CFC0029 A

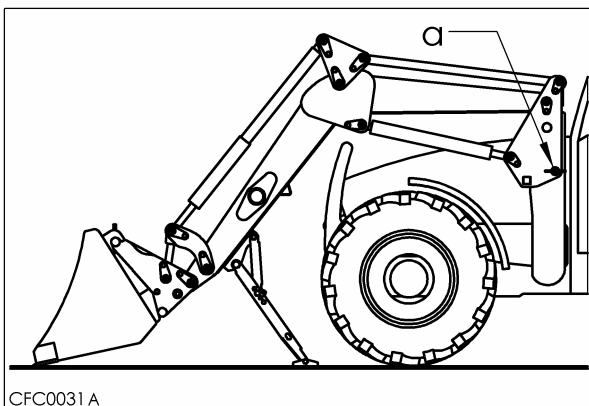
The connection parts moves down when you dump the tool.



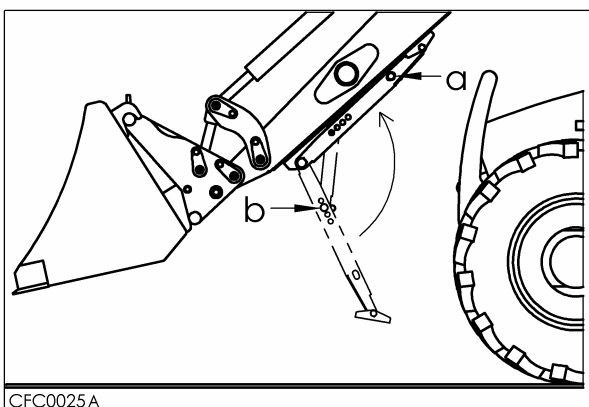
Dump the tool until the axle (b) moves completely into the place (c).



Lift the loader until the part (d) contacts the axle (e).



Plug the locking bolts in the hole (a).



Lift the loader from the ground.

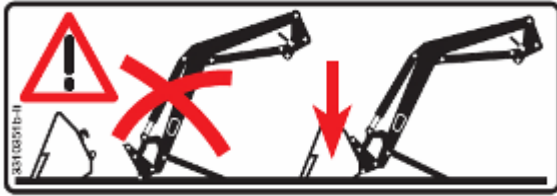
Remove the bolt (b).
Fold up the support legs.
Lock it with the bolt in (a)

After attaching the hydraulic cylinder, vent the hydraulics by lifting and lowering the front loader several times.



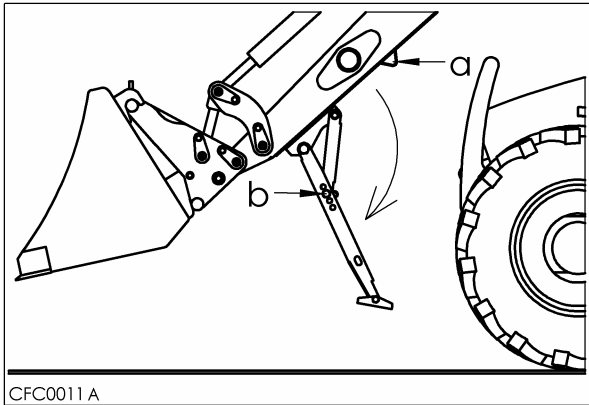
▲ Danger ▲
Danger of crushing injury when swinging in the support leg.
Do not grasp between support leg and swing bar.

3.5.2 Removal

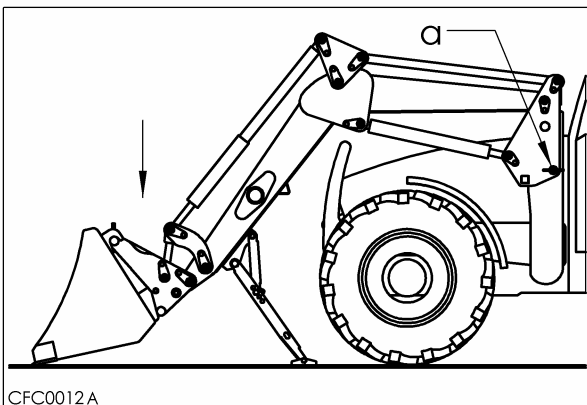


▲ Danger ▲

Only park the front loader with implement attached and on a stable substrate. Otherwise the front loader could tip over. Ensure that you park on a stable substrate.

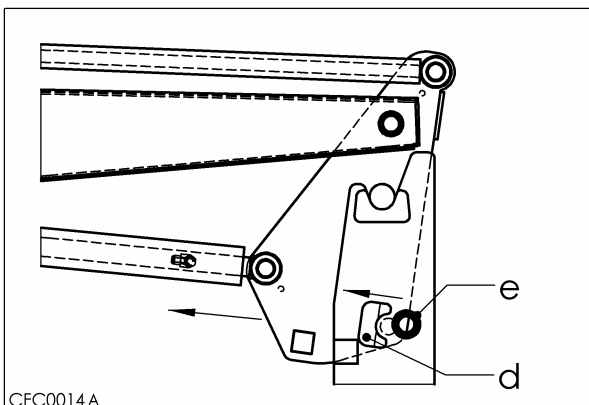


Remove the bolt (a).
Fold up the support legs.
Lock it with the bolt in (b)

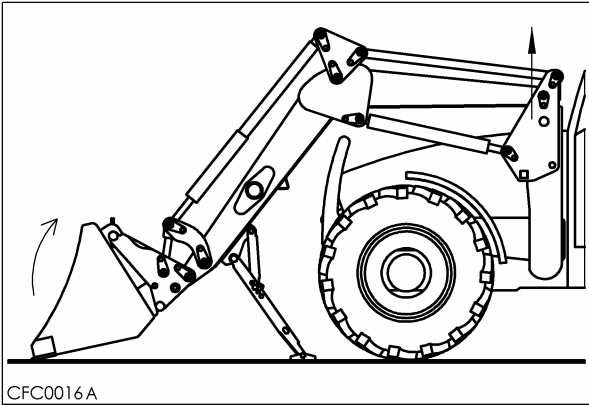


Engage the parking brake and lower the loader on the ground.
Adjust the tool's position in order that support legs and the tool's blade touch the ground.

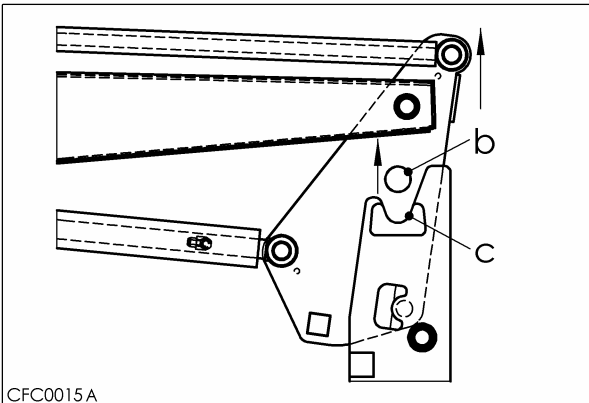
Remove the locking bolts (a).



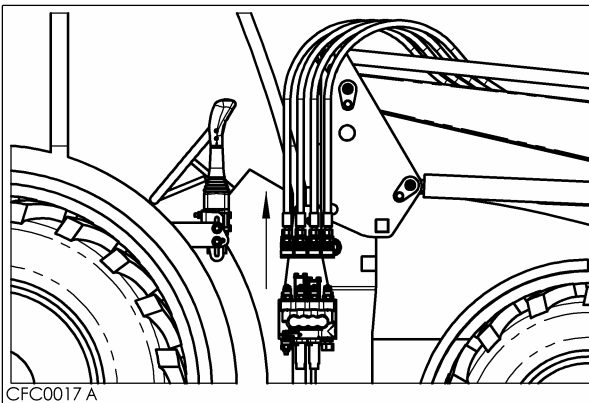
Lower the loader until the part (d) moves away from the axle (e).



The connection parts moves up when you scoop the tool.

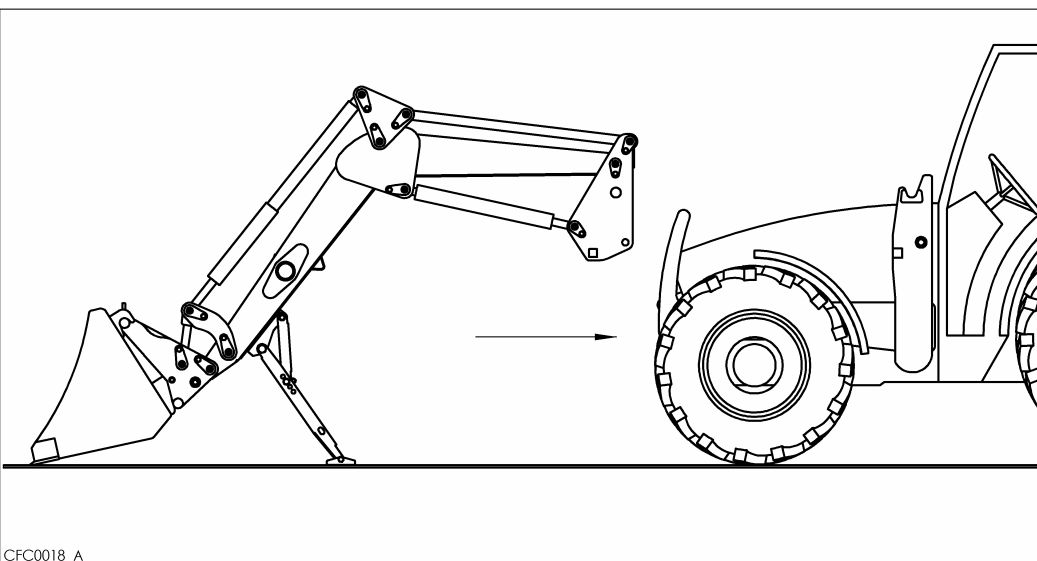


Scoop the tool until the axle (b) moves away from the place (c).



Depressurize the tractor hydraulic system. Remove the hydraulic lines and electrical cables. Fit the plastic cap on connections.

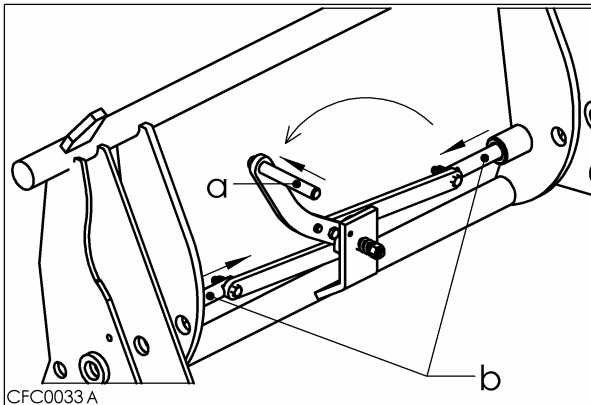
▲ Caution ▲
For all coupling processes depressurize the hydraulic system. Otherwise seals can be damaged. Prior to coupling clean the coupling connectors and muffs.



Drive the tractor in reverse out of the front loader. Fit the locking bolts in the adaptation.

3.6 Attachment and removal of the implements

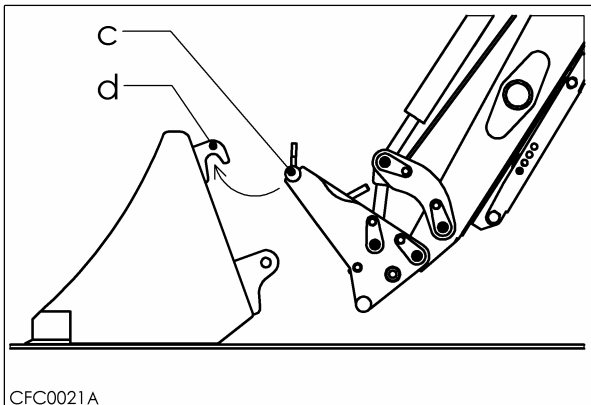
Only the operator should attach and remove the implements.



Attachment

Push front the level (a) and turn it to the left.

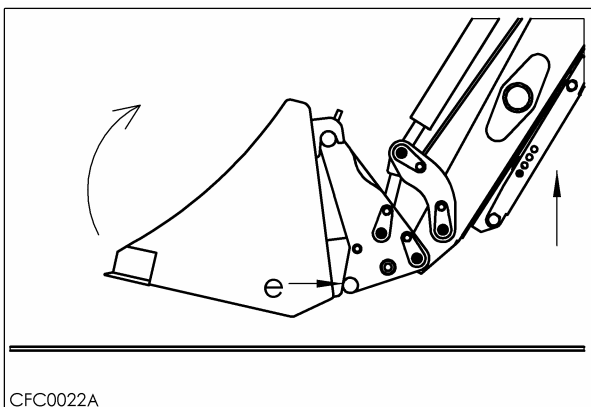
This opens the implement (b) locking mechanism.



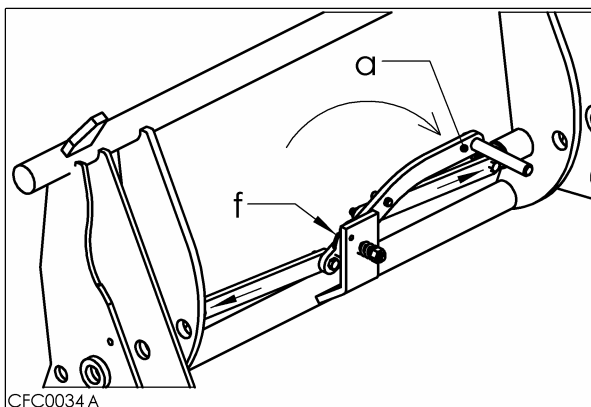
Tilt the change frame approximately 30 degrees to the front.

With the front loader attached drive straight onto the implement.

Drive with the upper shaft of the change frame (c) under the hooks of the implement (d).

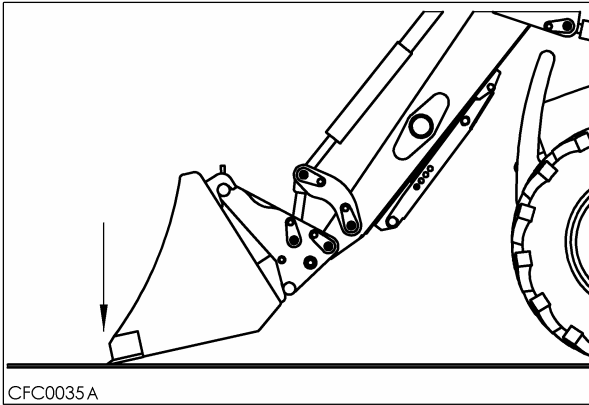


Lift and scoop the implement until it rests on the change frame (e).



Turn the lever to the right until the part (f) blocks it. Now, the tool's locking system is locked.

The implement is now firmly connected with the front loader.

**⚠ Danger ⚠**

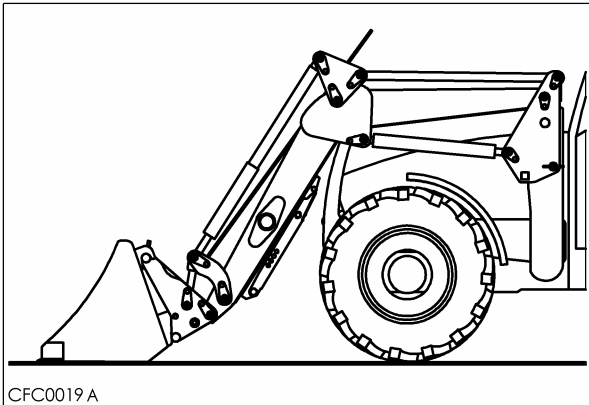
Before using the loader, always check the locking system.

Press the tip of the implement onto the ground. This checks the safe fastening of the implement on the front loader.

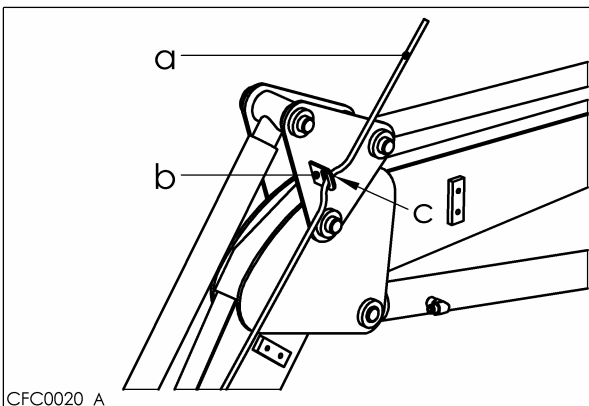
Removal

Implements are removed in the reverse sequence.

3.7 Level display

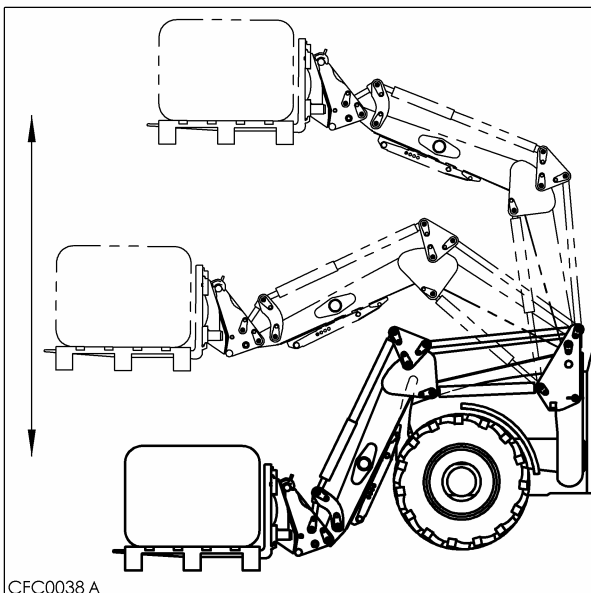


Check the horizontal implement position via the level indicator.



The tool is at the horizontal position when the elbow (c) of the rod (a) is in the hole (b).

3.8 Mechanical parallel motion (FC P)



When lifting and lowering the front loader the implement is guided parallel through the guide linkage. This keeps the incline of the implement constant when lifting and lowering.

The mechanical parallel guide is helpful for all load tasks. This function is particularly important when loading pallets and for stacking bales.

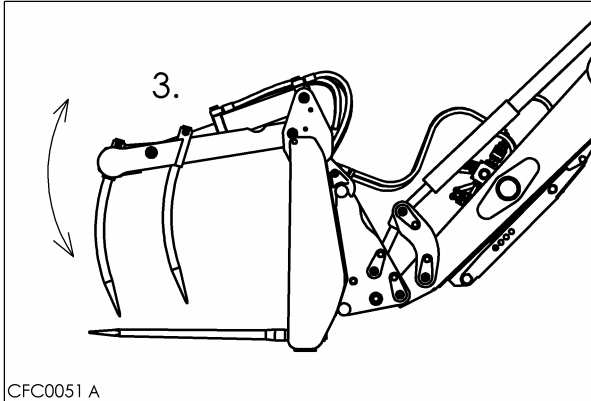
Comment

The parallel guidance is particularly effective with an implement that is horizontal or scooped. It does not function with an implement that is tilted out.

Check the horizontal implement position via the level indicator (Section 3.7).

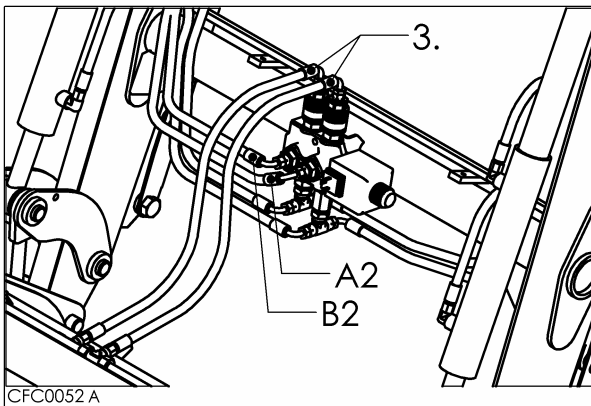
4 Supplemental equipment

4.1 3th Control circuit



The 3rd control circuit is additional double action oil circuit on the front loader. With this circuit you control the additional hydraulic function of the implement.

Implements with additional hydraulic functions, are silage grippers, bale grippers and bale lifters.



The hydraulic couplings for the 3rd control circuit are on the cross tube.

Engage the parking brake and turn the engine off.
Depressurize the hydraulic system.
Remove the plastic cap of the hydraulic block.
Clean connections.

Connect the hydraulic lines.

▲ Caution ▲

For all coupling processes depressurize the hydraulic system. Otherwise seals can be damaged. Prior to coupling clean the coupling connectors and muffs.

Operation of the 3rd control circuit is described in section 3.4.1.

5 Implements

The operating manual for the different implements is not a component of this operating manual.

⚠ Danger ⚠

Only use implements specified by STOLL.

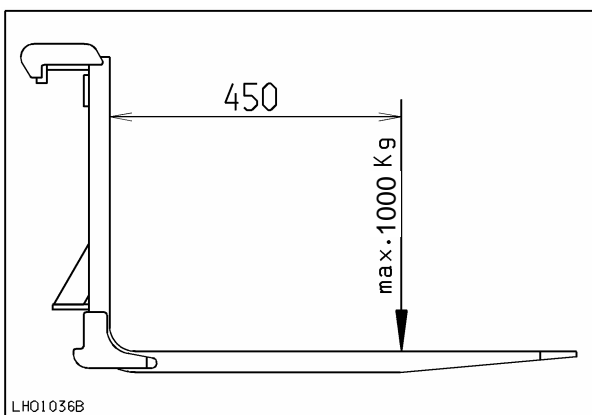
Incorrectly designed implements from other manufacturers can damage the front loader.

⚠ Danger ⚠

Only use implement sizes that are approved for the size of your front loader. Otherwise tractor, front loader, or implement can be damaged.

Ask your dealer about the suitable implement size.

5.1 Pallet fork



⚠ Danger ⚠

You may not cross the maximum load of 1000 kg per pallet fork tine in the distance of 450 mm.

6 Maintenance

For maintenance work follow the instructions provided in the safety information in section 2.6 on page 13.

The owner or the user of the front loader is responsible for regular maintenance.

Clean the front loader before performing maintenance tasks. This applies particularly when maintaining the hydraulic system.

▲ Danger ▲

Only use spare parts that are approved by the manufacturer.

The maintenance intervals are specified in effective operating hours of the tractor with front loader. The maintenance intervals apply for normal work conditions. Shorten the maintenance intervals if there are difficult work conditions.

6.1 Hydraulic system

The instructions and guidelines provided for the tractor hydraulics apply for maintenance of the hydraulic system.

▲ Danger ▲

Ensure cleanliness when working on the hydraulic system. Clean hydraulic oil is required for trouble-free function.

▲ Danger ▲

Check the hydraulic oil level of the tractor on level ground and with lowered implement. Only use oil as specified by the operating manual of the tractor.

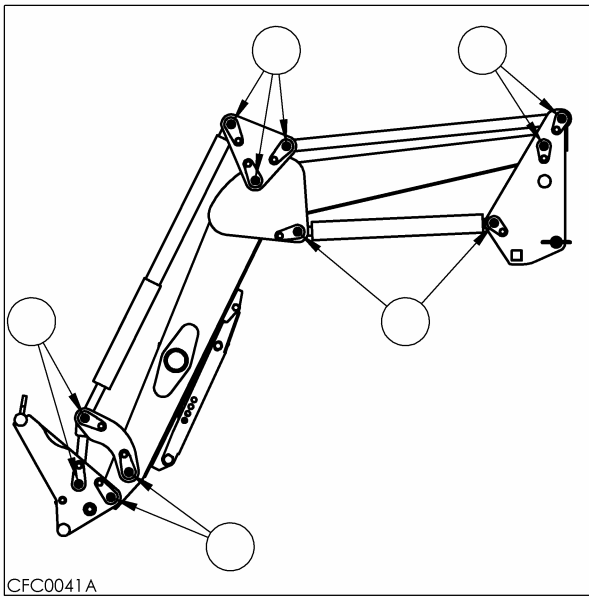
▲ Danger ▲

Check hydraulic lines and connections for wear and leaks. Replace worn or leaky hydraulic lines.

▲ Danger ▲

Repair or replace leaky hydraulic cylinders. You will need special tools to repair the hydraulic cylinders. Have defective cylinders repaired by your authorized dealer.

6.2 Bearing points



▲ Caution ▲

Lubricate all bearing points after every 20 operating hours.
Also lubricate the bearing points on the implements.

Prior to lubricating, offload the bearing points by lowering the implement to the ground.

6.3 Threaded connections

▲ Danger ▲

Re-tighten all threaded connections after 5 operating hours.

▲ Danger ▲

Check the threaded connections for firm seat every additional 100 operating hours. Re-tighten threaded connections as needed.

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

6.4 Troubleshooting

Faults on the front loader are frequently caused by factors that are not due to a front loader malfunction. Many problems can be avoided through regular maintenance.

If there are faults, please check the following first:

- Is there sufficient oil in the tractor's hydraulic oil tank?
- Are you using the right oil? Only use oil as specified by the operating manual of the tractor. The wrong oil can cause foaming and leaks.
- Is the hydraulic oil clean and free of moisture? Replace oil and filter if necessary.
- Are hoses correctly mounted?. The connections must be locked in place.
- Are hoses and connections damaged, jammed, or twisted?
- Were the cylinders of the front loader moved into their end positions several times to get the air out of lines and cylinders?
- Have you taken low outside temperature into account? Has the oil reached operating temperature?

If the measures described above are unsuccessful, the following table may help you to localise and correct the fault.

If you require support, contact your dealer.

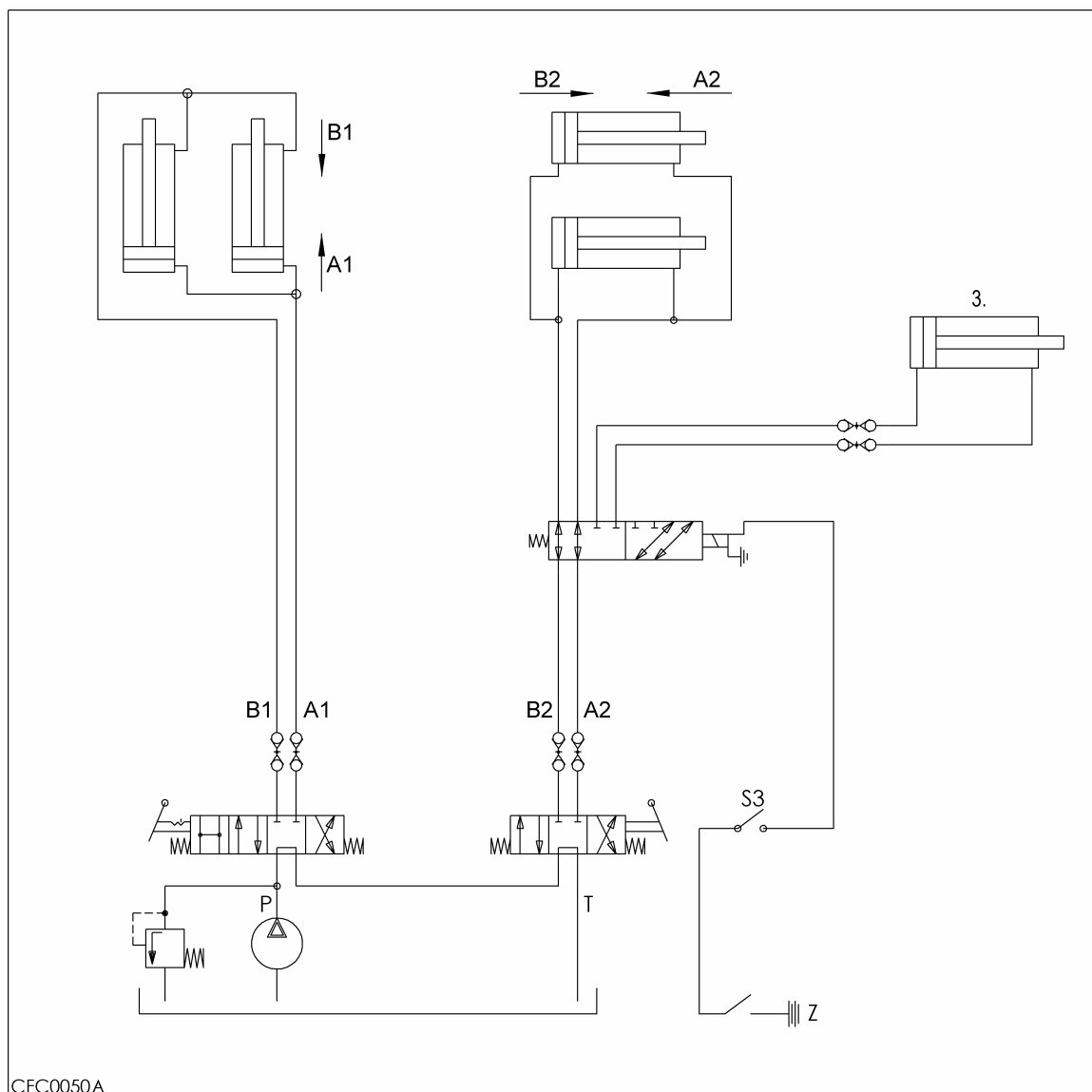
Fault description	Cause	Fault correction
a) Low lifting and tearing forces.	Insufficient oil pressure.	Check the tractor hydraulics.
b) Operating lever difficult to move.	Bowden cables are difficult to move.	Check the routing and ease of movement of the Bowden cables. Oil or replace the Bowden cables.
c) Front loader and implement move too slowly or do not move at all.	1) Insufficient oil in the hydraulic system. 2) Hydraulic couplings incorrectly connected. 3) Hydraulic coupling defective. 4) Oil flow too low. 5) Pressure control valve of the loader jams in open position.	Check oil level and top off if necessary. Check connections. Check couplings, replace if necessary. Check the tractor hydraulics. Check the pressure in the hydraulic system.
d) Front loader and/or implement work in the wrong direction relative to the operating lever.	1) Hydraulic connection incorrectly connected. 2) Bowden cables incorrectly mounted.	Check the hydraulic connections, correct if necessary. Check the Bowden cable connection, correct if necessary.
e) Slow or uneven lifting of the front loader.	1) Insufficient oil in the hydraulic system. 2) Insufficient engine rpm. 3) Hydraulic fluid too cold. 4) Excessive load in the vehicle. 5) Hydraulic coupling defective. 6) Internal leakage in the hydraulic cylinder. 7) Pressure control valve set incorrectly. 8) Interior leakage in the control block.	Check oil level and top off if necessary. Increase engine rpm. Warm hydraulic system to working temperature. Decrease load. Check couplings, replace if necessary. Check the cylinders, repair or replace defective cylinders. Check the setting of the pressure control valve. Check control block, replace if necessary.

Fault description	Cause	Fault correction
f) Insufficient lifting force.	1) Internal leakage in the hydraulic cylinder. 2) Excessive load in the vehicle. 3) Pressure control valve set incorrectly. 4) Interior leakage in the control block.	Check the cylinders, repair or replace defective cylinders. Decrease load. Check the setting of the pressure control valve. Check control block, replace if necessary.
g) Air in the hydraulic system. (Indicated by the foamy hydraulic fluid.)	1) Hydraulic pump takes in air. 2) Hydraulic filter fouled.	Check the lines between hydraulic pump and tank for loose or defective connections. Check or replace hydraulic filter as necessary.
h) Leakage on the hydraulic couplings of the front loader or the 3rd control circuit.	Leak due to penetrating grime.	Clean coupling, replace if necessary. If the front loader or the 3rd control circuits are not used, seal the hydraulic couplings with the protective caps.
i) Front loader blocked during the lift or lowering movement.	1) Coupling not completely closed. 2) Coupling defective.	Check the hydraulic coupling. Replace defective coupling halves.
j) Front loader shakes when lowering loads.	Lowering speed too high.	Throttle lowering speed.
l) Implement cylinders extend, however they do not retract.	1) Piston seal in the implement cylinder is defective so that the piston and ring surface are connected to each other. 2) Seat valve does not return to start position after rapid traverse is switched-on.	Check the cylinders separately from each other for leaks, replace defective cylinders. Remove the seat valve and examine for fouling, replace if necessary.
m) Leaks on the hydraulic block	1) Threaded connections loose 2) Leakage between magnet and valve 3) Leakage between the valve flanges	Re-tighten threaded connections. Unscrew the knurled nut, remove magnet, re-tighten the magnetic core with open-jaw spanner. Re-tighten bolts or replace sealing rings.

7 Appendix

7.1 Circuit diagram - hydraulic system

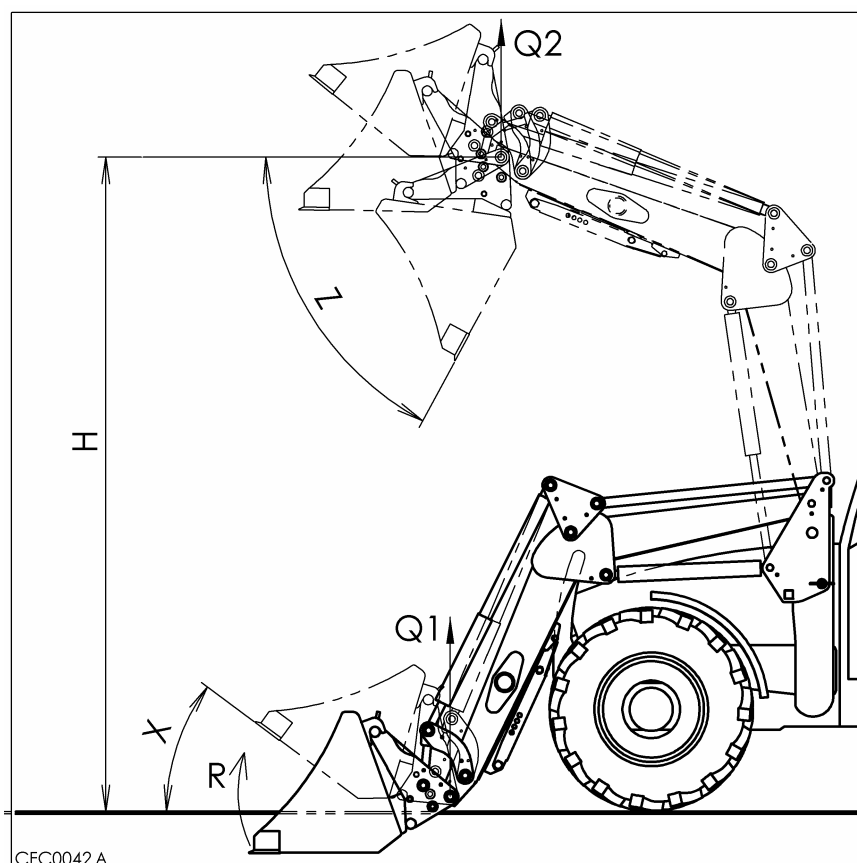
Function	Marking	
	Mark	Plug-in connector
Lifting	A1	yellow
Lowering	B1	black
Scooping	A2	blue
Dumping	B2	red
pump	P	
tank	T	
Unload pressure point	CO	
3th Control circuit	3.	
Button 3th Control circuit	S3	
ignition	ZZ	



7.2 Technical data

The technical data depends on the tractor type used and thus can vary from the specified values. The forces are specified for an operating pressure of 170 bar.

The payload is calculated as the lifting force minus implement weight.



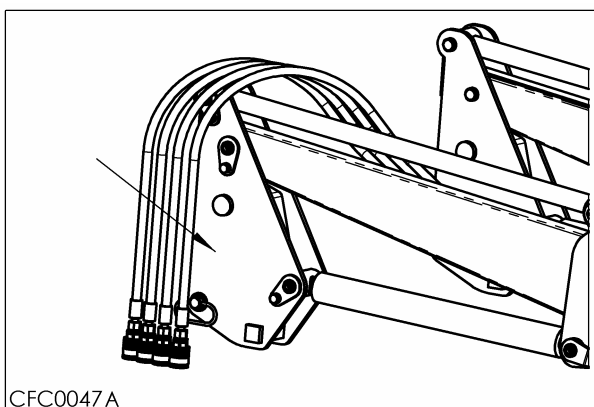
Compact FC	Size		250	350	450		
	Type		H	H	H	P	
Suitable for tractors with a power rating of			kW	7-18	11-22	18-37	
			HP	10-25	15-30	25-50	
Lifting force in the implement fulcrum	down	Q1	daN	500	600	970	
	up	Q2	daN	400	500	930	
Break-open force 750 mm forward of pivot point		R	daN	500	600	810	
Max. lift height in the implement fulcrum		H	mm	1700	2200	2590	
Tilt angle	down	X	°degrees	20	20	37	
Dump angle	up	Z	°degrees	35	35	66	
Weight of the front loader without implement			kg	160	200	260	300

7.3 TÜV registration

Permanent mounting of the front loader add-on parts on the tractor changes the empty weight of the tractor. As stipulated in the German road traffic regulations (StVZO), this change requires registration.

Have the changed tractor dead weight registered by TÜV.

7.4 Markings on the front loader

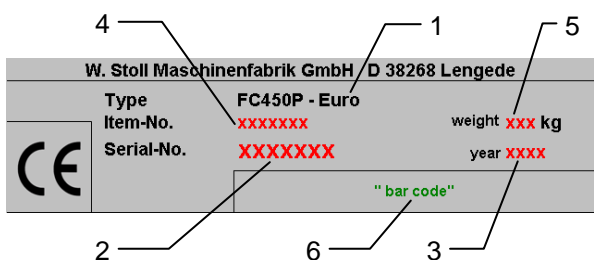


Each front loader has a type plate for unique identification. The plate is on the right pillar.

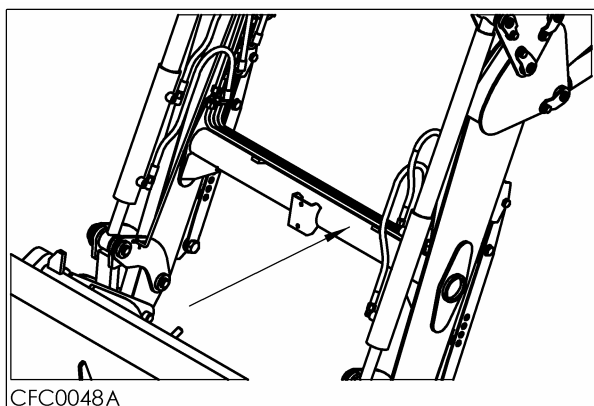
Data on the plate:

1. Front loader type
2. Serial number
3. Year of manufacture
4. Ident-no.
5. Weight of the front loader without implement
6. bar code

Note this information on the next to last page of the operating manual.



Data for items 1-3 must be specified when ordering spare parts and additional implements.



In addition, the production number has been stamped on the transverse pipe.

7.5 EC Declaration of Conformity

In accordance with the EC Machinery Directive 2006/42/EC, Annex II A

The company,

Wilhelm Stoll Maschinenfabrik GmbH
Bahnhofstrasse.21
38268 Lengede, Deutschland

hereby declares that the STOLL front loader, type Compact FC satisfies the basic safety and health requirements set forth in the EC directive.

Applied directives:

2006/42/EC (formerly 98/37/EC)
2004/108/EC (formerly 89/336/EEC)

Machinery directive
Electromagnetic compatibility

Applied standards:

EN 12525:2000, EN 12525/A1:2006
EN ISO 12100-1,-2:2003
design
EN 982:1996
ISO 23206:2005
EN ISO 14982:1998

Front loaders - Safety
Safety of machinery - Basic concepts, general principles for
design
Safety of machinery - hydraulic systems
Carriers for attachments
Electromagnetic compatibility

Uwe Ockert

i.V. 07/17

Lengede, 1 April, 2009 i.A. Uwe Ockert
Design

Lengede, 1 April, 2007 i.V. Mathias Türp
Plant manager



Notice

Note the front loader data here.

In section 7.4 on page 36 there is a description of where the type plate of the front loader is located.

Frontloader	
Frontloader model	
Serial number	
Year of manufacture	
Delivery list number	
Purchase date	

Note the data here for the tractor to which the front loader has been attached.

Tractor	
Tractor model	
Production number	
Year of manufacture	

Wilhelm STOLL Maschinenfabrik GmbH

Postfach 3 D-38266 Lengede
Bahnhofstr. 21 D-38268 Lengede

Telephone: +49 / (0) 53 44 / 20 0
Fax: +49 / (0) 53 44 / 20 182
E-mail: info@stoll-jf.de
Internet: www.stoll-jf.de

Dealer address

P1511_EN_09RE01.PDF

STOLL