

# Service Training

**Fendt CARGO 3X front loader (Standard),  
Fendt CARGO 4X/5X front loader (Standard and Profi),  
Fendt CARGO R rear loader**



# TABLE OF CONTENTS

|  |   |
|--|---|
| General information - Fendt CARGO 3X, 4X and 5X front loader ..... | 1 |
| FENDT 300/500/700 Vario SCR Tier 3b.....                           | 2 |
| CARGO Profi front loader.....                                      | 3 |
| Electrical system.....   | 4 |

|          |                         |  |
|----------|-------------------------|--|
| <b>A</b> | General                 |  |
| <b>B</b> | Faults                  | Fendt CARGO 3X, 4X and 5X front loader |
| <b>C</b> | Documents and Diagrams  |  |
| <b>D</b> | Component location      |  |
| <b>E</b> | Testing                 |  |
| <b>F</b> | Setting and Calibration |  |
| <b>G</b> | Repair                  |  |
| <b>H</b> | Service – Info          |  |

**<https://www.ebooklibonline.com>**

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

**<https://www.ebooklibonline.com>**

## 1 Serial number

The serial number is shown on the factory label (arrow).



Fig. 1.

I023647

## 2 Maintenance instructions



**DANGER:**

**Only carry out maintenance work (e.g. lubrication) on a jib mounted on the tractor when lowered to the ground. Hand brake applied and engine switched off.**



**CAUTION:**

**Never search for leaks in the hydraulic system with your fingers. Use appropriate tools (piece of wood or cardboard). Hydraulic oil escaping under high pressure can penetrate the skin and cause severe injuries. In the event of injuries, seek medical attention immediately.**

- After 50 tractor operating hours, have all bolts on the front loader console tightened in a specialist workshop!
- After 50 operating hours, have all remaining bolted connections on the front loader checked in a specialist workshop and tighten if necessary!
- Every 500 tractor operating hours, check bolted connections on the front loader console and all remaining bolted connections on the front loader and tighten if necessary.
- If necessary, grease the threaded spindles and sliding contact areas on supports.
- Lubricate the front loader every 10 operating hours.
- Check the hydraulic hoses for damage and abrasions, and if there are any, contact a FENDT workshop as soon as possible.
- Check hydraulic lines, hydraulic cylinders and connections regularly for wear and leaks. Have worn or leaking hydraulic lines, hydraulic cylinders and connections replaced as soon as possible in a FENDT workshop.

**NOTE:** When retrofitting or removing and remounting the front loader console, the inspection intervals at 50 operating hours and then every 500 subsequent operating hours must be observed.

### 3 Bolt tightening torques

#### *FENDT 200 Vario*

|                      |            |    |     |
|----------------------|------------|----|-----|
| Front loader console | M16 — 8.8  | Nm | 210 |
| Front loader console | M16 — 10.9 | Nm | 295 |
| Front loader (nuts)  | M 27       | Nm | 450 |

#### *FENDT 300 Vario*

|   |            |    |     |
|---|------------|----|-----|
| Front loader console                      | M16 — 8.8  | Nm | 210 |
| Front loader console                      | M20 — 8.8  | Nm | 410 |
| Front loader console                      | M20 — 10.9 | Nm | 580 |
| Console bolted connection — support plate | M20 — 10.9 | Nm | 540 |
| Front loader (nuts)                       | M 27       | Nm | 450 |

#### *FENDT 300 SCR Vario*

|   |            |    |     |
|---|------------|----|-----|
| Front loader console                      | M16 — 8.8  | Nm | 210 |
| Front loader console                      | M20 — 8.8  | Nm | 410 |
| Front loader console                      | M20 — 10.9 | Nm | 580 |
| Console bolted connection — support plate | M20 — 10.9 | Nm | 540 |
| Front loader (nuts)                       | M 27       | Nm | 450 |

#### *FENDT 400 Vario*

|                      |            |    |     |
|----------------------|------------|----|-----|
| Front loader console | M16 — 8.8  | Nm | 210 |
| Front loader console | M20 — 10.9 | Nm | 580 |
| Front loader (nuts)  | M 27       | Nm | 450 |

#### *FENDT 500 SCR Vario*

|                      |            |    |     |
|----------------------|------------|----|-----|
| Front loader console | M16 — 8.8  | Nm | 210 |
| Front loader console | M20 — 10.9 | Nm | 580 |
| Front loader (nuts)  | M 27       | Nm | 450 |

#### *FENDT 700 Vario*

|                      |            |    |     |
|----------------------|------------|----|-----|
| Front loader console | M16 — 8.8  | Nm | 210 |
| Front loader console | M20 — 10.9 | Nm | 580 |
| Front loader (nuts)  | M 27       | Nm | 450 |

#### *FENDT 700 SCR Vario*

|                      |            |    |     |
|----------------------|------------|----|-----|
| Front loader console | M16 — 8.8  | Nm | 210 |
| Front loader console | M20 — 10.9 | Nm | 580 |
| Front loader (nuts)  | M 27       | Nm | 450 |

#### *FENDT 800 Vario*

|                      |            |    |     |
|----------------------|------------|----|-----|
| Front loader console | M16 — 8.8  | Nm | 210 |
| Front loader console | M20 — 10.9 | Nm | 580 |
| Front loader (nuts)  | M 27       | Nm | 450 |

## 4 Lubrication points

### Lubricate after 10 front loader operating hours

At the top of the external front loader frame.

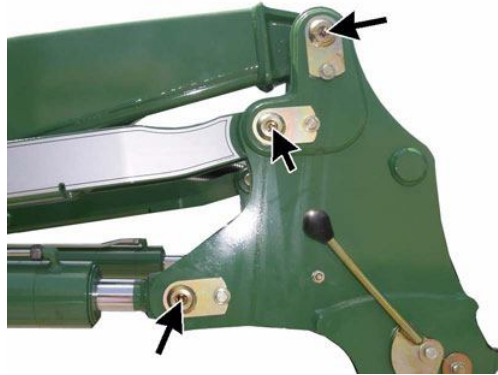


Fig. 2.

I023841

At the top of the internal front loader frame.



Fig. 3.

I023842

At the top of the front loader rocker.

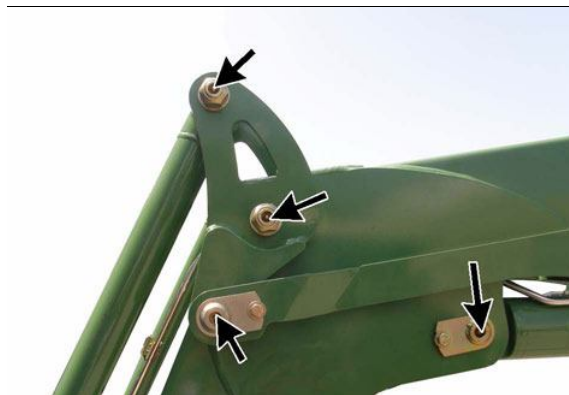


Fig. 4.

I023843

At the bottom on the implement mounting.

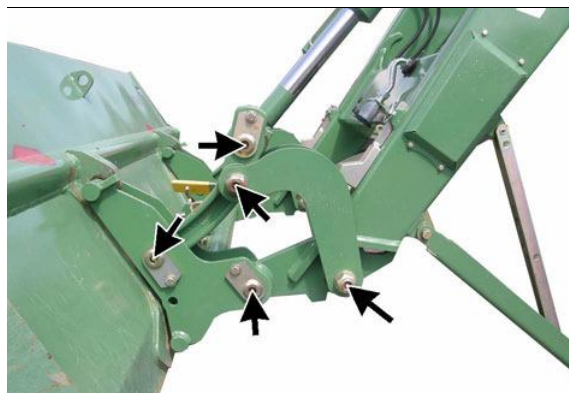


Fig. 5.

I023844

**NOTE:** The number of lubrication points varies with the loader model version.

### **Clean the front loader**

- Never leave the engine running when hosing down the front loader.
- Maintain a sufficient distance from seals and paintwork when using a high-pressure cleaner (minimum 10 cm). Maximum water temperature 50° C. Do not use a spray booster (dirt cutter). Follow the manufacturer's instructions!
- After cleaning the tractor, lubricate all lubrication points, joints and bearings. We recommend waxing painted surfaces after cleaning.
- Do not use cleaning agents containing a high percentage of alcohol—such as spirit or acetone—or scouring agents!

### **Winter service operation**

When operating the front loader in winter or similar circumstances, wax it with a washable protective wax, Custos 80-16-5 A.

**NOTE:** You can purchase this product from the Fendt spare parts division.

## 5 Implement range



**DANGER:**

*Only use implements for their intended purpose.*



**DANGER:**

*Do not use implements for transporting people.*



**DANGER:**

*Use only special implements for transporting big bags. Currently not part of the FENDT implement range.*



**CAUTION:**

*Risk of injury from sharp-edged, protruding components (e.g. tines)*

**NOTE:** Safe attachment and operation is only ensured with original FENDT implements.

Keep an eye out for changes to the implement range.

You can obtain details of the current implement range from the price list.

Operating with big bags is only permitted for front loaders with a pipe rupture safety feature.

| Sign plate on implement |                                 |
|-------------------------|---------------------------------|
| <b>UNI</b>              | Universal bucket                |
| <b>SG</b>               | Heavy-duty bucket               |
| <b>LG</b>               | Light-duty bucket               |
| Example:                |                                 |
| <b>2400</b>             | Interior bucket dimension in mm |



Fig. 6.

1024136

### Universal bucket (UNI)

| Width (interior dimension) | Volume (flush volume filled) |
|----------------------------|------------------------------|
| <b>1600 mm</b>             | 0,538 m <sup>3</sup>         |
| <b>1850 mm</b>             | 0,622 m <sup>3</sup>         |
| <b>2100 mm</b>             | 0,706 m <sup>3</sup>         |
| <b>2400 mm</b>             | 0,807 m <sup>3</sup>         |

### Light-duty bucket (LG)

| Width (interior dimension) | Volume (flush volume filled) |
|----------------------------|------------------------------|
| <b>1850 mm</b>             | 0,976 m <sup>3</sup>         |
| <b>2400 mm</b>             | 1,265 m <sup>3</sup>         |

### Heavy-duty bucket (SG)

| Width (interior dimension) | Volume (flush volume filled) |
|----------------------------|------------------------------|
| <b>1600 mm</b>             | 0,512 m <sup>3</sup>         |
| <b>2100 mm</b>             | 0,672 m <sup>3</sup>         |

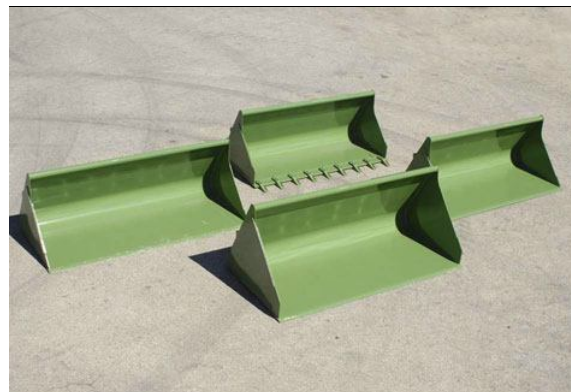


Fig. 7.

1024146

**Silage fork**

| Width (interior dimension) | Weight |
|----------------------------|--------|
| 1500 mm                    | 135 kg |
| 2100 mm                    | 180 kg |



Fig. 8.

I024149

**Silage gathering bucket**

| Width (interior dimension) | Weight | Contents            |
|----------------------------|--------|---------------------|
| 1500 mm                    | 310 kg | 0,75 m <sup>3</sup> |
| 1900 mm                    | 410 kg | 0,95 m <sup>3</sup> |



Fig. 9.

I024142

**Pallet fork**

|                    |         |
|--------------------|---------|
| Permissible weight | 1500 kg |
|--------------------|---------|



Fig. 10.

I024147

**Pallet fork**

|                    |         |
|--------------------|---------|
| Permissible weight | 2000 kg |
|--------------------|---------|

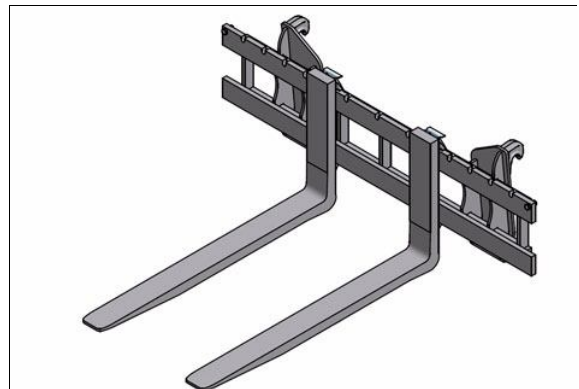


Fig. 11.

I025068

**Bale fork (3 tines)**

| Width   | Weight |
|---------|--------|
| 1500 mm | 125 kg |



Fig. 12.

I024141

**Round bale grab**

| Width   | Weight |
|---------|--------|
| 1300 mm | 240 kg |



Fig. 13.

I024140

## 6 Operation with pallet fork

The following points should be noted for safe operation with the pallet fork:

- The further forward the load is attached, the lower the permissible load.
- If transporting heavy or protruding loads, do not use the fast tilt setting.

**NOTE:** Deactivate fast tilt (if available) for operation with a pallet fork.

### Version I



Fig. 14. I024147

- Maximum permissible load of 1500 kg, maximum load per tine of 750 kg with the centre of gravity at a distance of:
  - 500 mm for a FENDT pallet fork (see dimension B)
  - 800 mm for all other pallet forks (see dimension A)

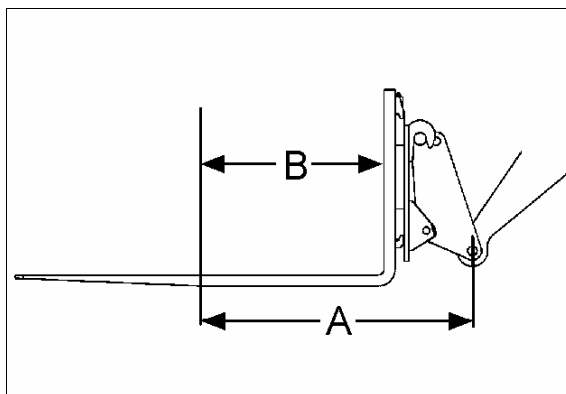


Fig. 15. I023467

### Version II

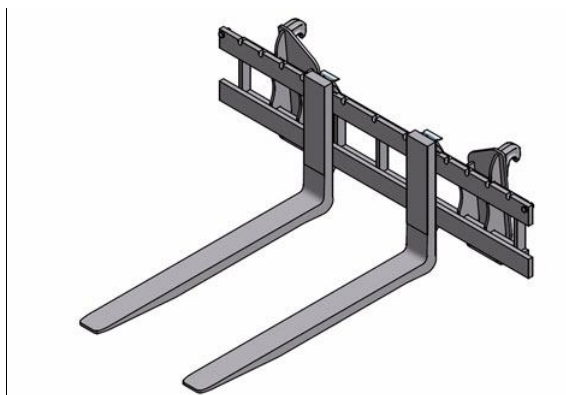


Fig. 16. I025068

- Maximum permissible load of 2000 kg with a centre of gravity at a distance of 500 mm (see dimension A).

**NOTE:** Tine length (see dimension B) 1100 mm.

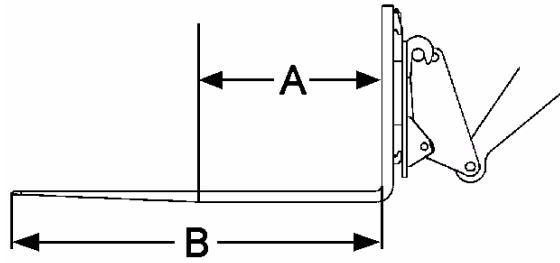


Fig. 17.

I025130

## 7 Tractor ballasting



**CAUTION:**

*When working with the front loader, always use a counterweight at the rear of the tractor. This is required for operating safety and safety on the road. Make sure that you can still steer and that minimum braking distance is ensured even when working with the front loader (vehicle licensing regulations).*

**NOTE:** An additional weight at the rear also reduces the load on the front axle.

| Series                        |    | 200 Vario | 300 Vario<br>300 SCR<br>Vario | 400 Vario<br>500 SCR<br>Vario | 700 Vario<br>700 SCR<br>Vario | 800 Vario |
|-------------------------------|----|-----------|-------------------------------|-------------------------------|-------------------------------|-----------|
| <b>Front loader</b>           |    |           |                               |                               |                               |           |
| <b>3X/65</b>                  | kg | 870       | 870                           |                               |                               |           |
| <b>3X/70</b>                  | kg | -         | 870                           |                               |                               |           |
| <b>4X / 75</b>                | kg |           | 870                           | 1250                          | -                             | -         |
| <b>4X / 80</b>                | kg |           | -                             | 1250                          | -                             | -         |
| <b>4X / 85 <sup>(1)</sup></b> | kg |           | -                             | -                             | 1800                          | -         |
| <b>5X / 85</b>                | kg |           | -                             | -                             | 1800                          | 1800      |
| <b>5X / 90</b>                | kg |           | -                             | -                             | 1800                          | 1800      |

1. only with 28" front tyres



|          |                         |  |
|----------|-------------------------|--|
| <b>A</b> | General                 | Fendt CARGO 3X front loader (Standard) |
| <b>B</b> | Faults                  |  |
| <b>C</b> | Documents and Diagrams  |  |
| <b>D</b> | Component location      |  |
| <b>E</b> | Testing                 |  |
| <b>F</b> | Setting and Calibration |  |
| <b>G</b> | Repair                  |  |
| <b>H</b> | Service – Info          |  |

# 1 Remove and attach the CARGO front loader (3X)

## Removing the front loader



**WARNING:**

*Only remove the front loader together with an implement attached (e.g. bucket or fork), on firm and level ground.*

***Danger from unintended lowering of the front loader. Risk of injury!***

***The front loader must be parked and secured in such a way as to prevent unauthorised persons or children playing from causing it to tip over.***

**FENDT 200/300 Vario**

- Use the crossgate lever (arrowed) to put the hydraulic valve (yellow and blue) into floating position.  
 The lift and tilt cylinders are de-pressurised.

**NOTE:** Apply the hand brake.  
 Remove the lower links of the front hydraulics.  
 Close windscreen.

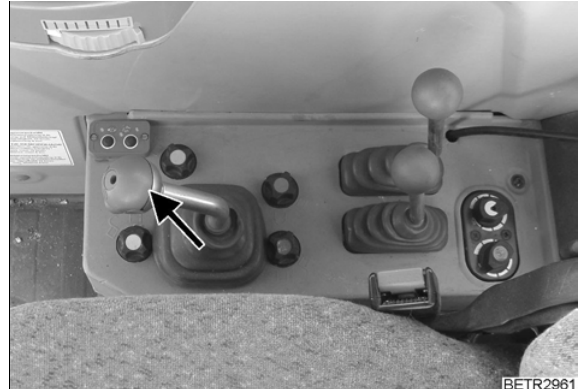


Fig. 1.

BETR2961  
1007166

- Place the bucket horizontally.

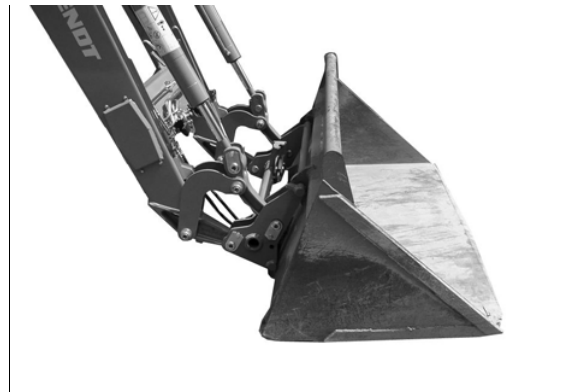


Fig. 2.

1005159

Loosen the locking system

- Pull lever (A) on both sides in the direction of the cab until it engages.



Fig. 3.

BETR2780  
1005160

Lower foldaway supports

- Press catch (A) on both sides.  
Lower the foldaway supports (B) on both sides until they snap into place.

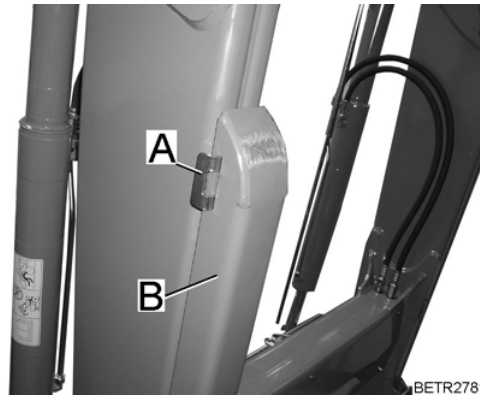


Fig. 4.

BETR2781  
I005161

- Set bucket at top position (inclined by about 10-20 cm).

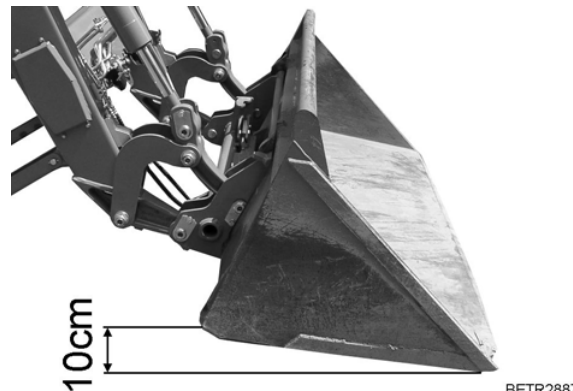


Fig. 5.

BETR2887  
I005162

- Press the transmission neutral button (transmission neutral).
- Release hand brake.
- **Retract the lift cylinder. This moves the attachment plate out of the mounting console (Item A)**
- **Tilt mounted implement (horizontal position). This lifts the attachment plate out of the mounting console (Item B)**
- Slowly drive the tractor backwards until the front loader moves out of the mounting socket.

**NOTE:** Do not damage the hydraulic lines when driving out!

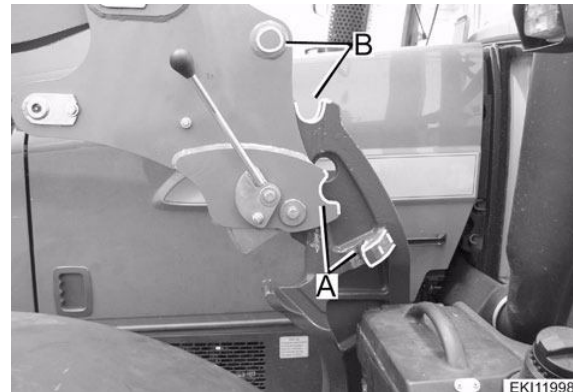


Fig. 6.

EK111998  
I024148

- Press catch (A).
- Swivel bracket up.
- Remove multi-coupler from guide pins by pulling upwards.

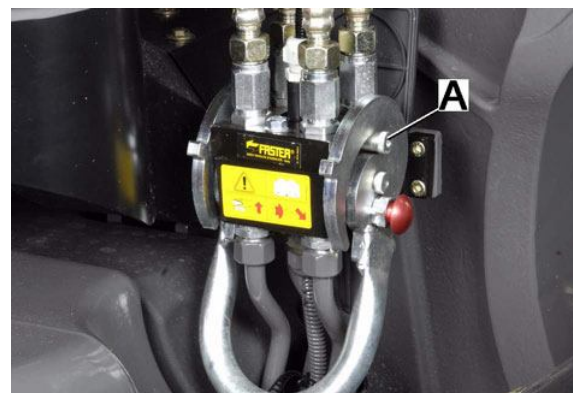


Fig. 7.

I005164



**Suggest:**

**For more complete manuals. Please go to the home page.**

**<https://www.ebooklibonline.com>**

**If the above button click is invalid. Please download this document first, and then click the above link to download the complete manual.**

**Thank you so much for reading**

- Attach the multi-coupler to the retaining bracket on the front loader jib.
- Drive the tractor out of the front loader.



Fig. 8.

1023678

**Attach the front loader**

**⚠ WARNING:**  
**Before attaching the multi-coupler, unplug or unload the rear hydraulic connections.**

Preliminary work:

- Apply the hand brake.
- Raise and fold up the lower links of the front hydraulic power lift (FENDT 400/700/800 Vario)
- Check front air pressure and track adjustment.
- Drive the tractor slowly into the front-loader console.
- Clean the mating faces of the multi-coupler.
- Insert the multi-coupler with integrated electric lines.
- Swivel the bracket downwards until catch (A) snaps into place.



Fig. 9.

1005164

**NOTE:** Do not load the foldaway supports by using the DA function to lift the front loader out of the mounting console. Doing this may damage the fold-away supports.

- Position the front-loader jib above the **bucket tilt cylinder** until the front loader moves into the support fork.
- **Raise** the front-loader jib using the **lift cylinder** until the foldaway supports disengage and lever (A) automatically locks.

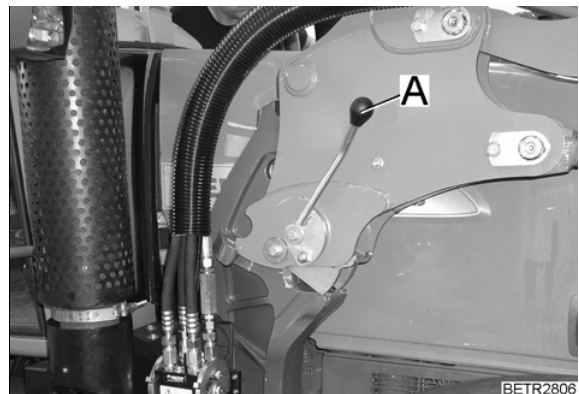


Fig. 10.

BETR2806  
 1005171

### Locking indicator (CARGO Lock)

The locking indicator must be located in the green range (arrow).

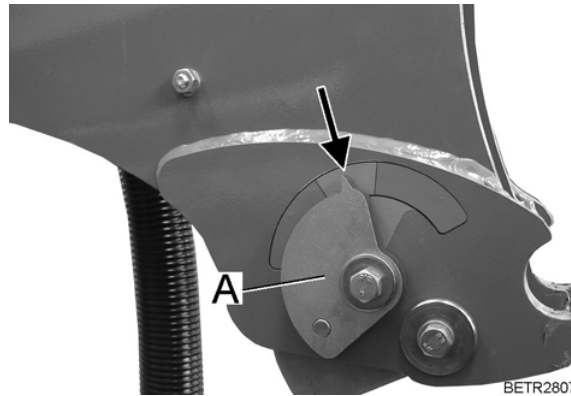


Fig. 11.

BETR2807  
I005186

- Fold in foldaway supports (B). Catch (A) must snap into place.

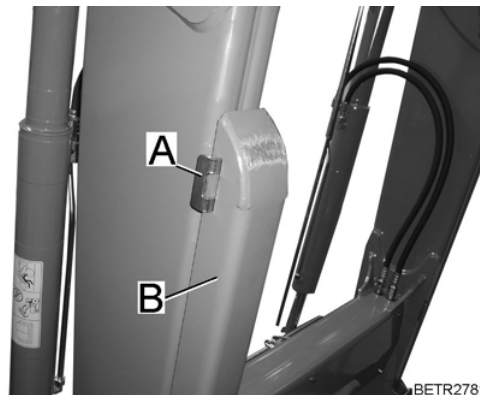


Fig. 12.

BETR2781  
I005161

### Raise locking device on the crossgate lever

#### FENDT 200 (S) Vario

**WARNING:**  
For safety reasons (risk of accident), lever (A) must be moved into the inner position before operating the front loader.

**NOTE:** Also see decal

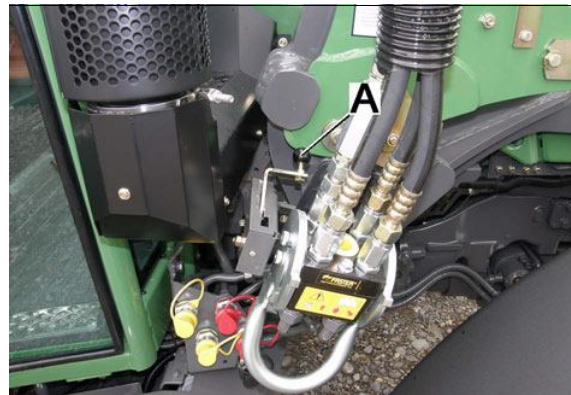


Fig. 13.

I023551

#### FENDT 300 Vario

**WARNING:**  
For safety reasons (risk of accident), lever (A) must be moved into the front position before operating the front loader.

**NOTE:** Also see decal

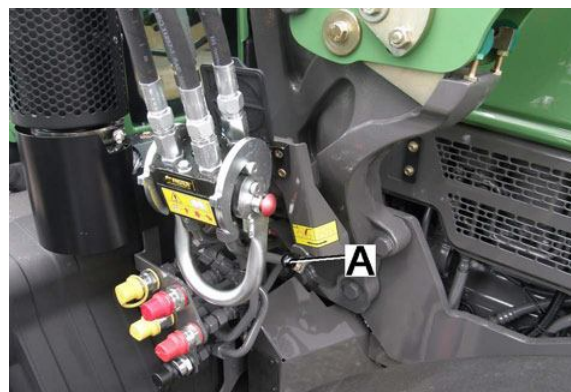


Fig. 14.

I007164

**<https://www.ebooklibonline.com>**

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

**<https://www.ebooklibonline.com>**