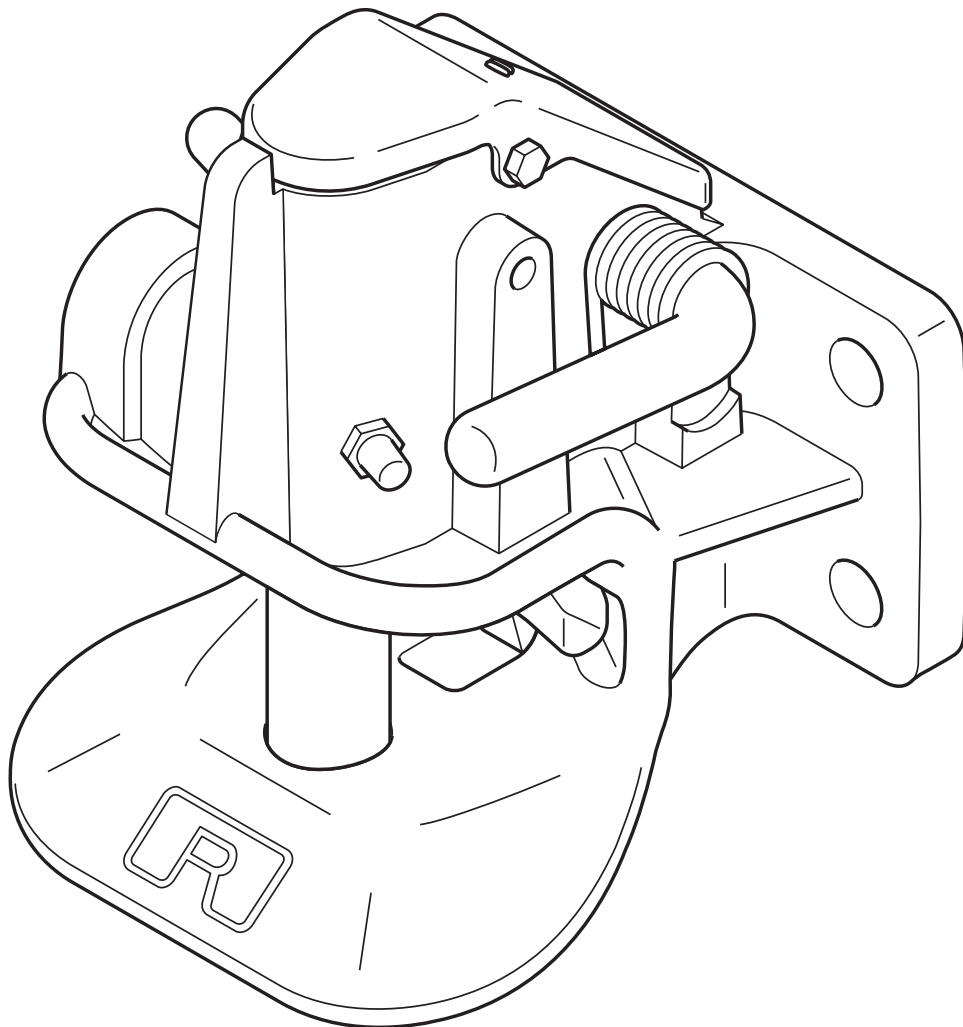


Automatic trailer coupling

Repair instructions

RO★244-2



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Validity and application

Contents of these instructions

These repair instructions refer exclusively to the trailer coupling RO*244-2. The instructions serve as an aid for the correct execution of all the main repair work.

- Execute all repair work in accordance with the information contained in these instructions.
- When replacing individual parts or assemblies, only use original spare parts from ROCKINGER.

If a spare part is supplied with lubricants:

- Use only the supplied lubricant in accordance with the information in these instructions.
- If you lose the original lubricant, only use lubricant from the same manufacturer and of the same type.

If a spare part is supplied with fastening elements, e.g. bolts:

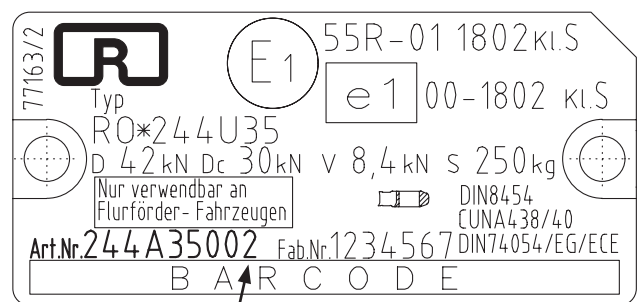
- Dispose of removed fastening elements.
- Use the supplied fastening elements for installation.

Technical status

The information contained in these instructions is valid as of technical status 2. For the technical status of the trailer coupling, please refer to the type plate [1]: The ninth digit of the article number represents the technical status.

ROCKINGER reserves the right:

- to make design and component changes and, instead of the stated parts, to use other, equivalent components in the interests of technical progress
- to change information in these instructions. There is no obligation to extend these alterations to trailer couplings supplied at an earlier date.



[1] Type plate for a trailer coupling RO*244-2

Liability

ROCKINGER assumes no guarantee for the completeness and correctness of the information. The contents of the instructions cannot be used to substantiate any claims. In particular, no liability is assumed for damages which are the result of incorrect repair or maintenance work.

Copyright

All the rights to these instructions and their annexes remain with ROCKINGER.

Emphasis in the text**Explanation of symbols**

For ease of readability and to provide a clear overview, different types of information are marked in different ways.

Sentences introduced with an arrow contain instructions to perform certain actions:

- Carry out instructions one after the other in the sequence described.

The following information is introduced by a dash:

- Lists
- Preconditions for actions to be executed subsequently
- Descriptions of previous work steps
- Descriptions of statuses

Warnings of hazards and risks

Important passages which must be observed, are especially emphasised:

**DANGER!**

Warns against immediate dangers which could lead to serious injury or death.

- Provides instructions for defence against or avoidance of dangers.

**WARNING!**

Warns against risks which could lead to serious injury or death.

- Demands safety measures to protect the persons concerned.

**CAUTION!**

Warns against risks which could lead to damage to property or personal injury (light injury).

- Provides information for prevention of damage.

Illustrations

As necessary, texts are illustrated by pictures. The reference to a figure is made with a number in [square brackets]. Capital letters after a figure number, e.g. [12A] refer to the corresponding position in the picture.

Binding information**LUBRICANTS:**

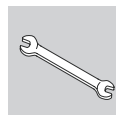
- Lubricant for the previously described activity

**TIGHTENING TORQUES:**

- Tightening torques for the listed bolted connections.

**Supplementary information**

The information symbol refers to instructions and recommendations as well as additional information.

**TOOLS:**

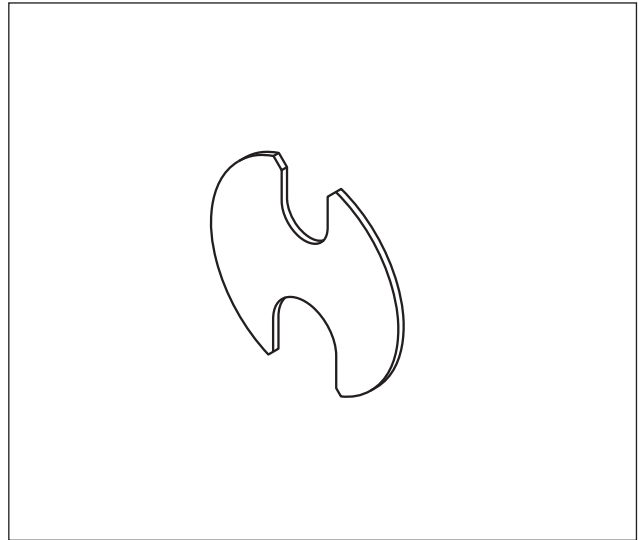
- List of the tools necessary for the subsequently described activities.



Tools

For the work described in these instructions the following tools are required:

- mechanical pliers, angled
- combination pliers or pipe wrench
- 2x open-end, ring or fork spanner, 8 mm
- torque wrench
- flat-tip screwdriver, medium
- locking plate for control pin [2], parts no. ROE65632
- plastic hammer



[2] Locking plate for control pin, part no. ROE65632

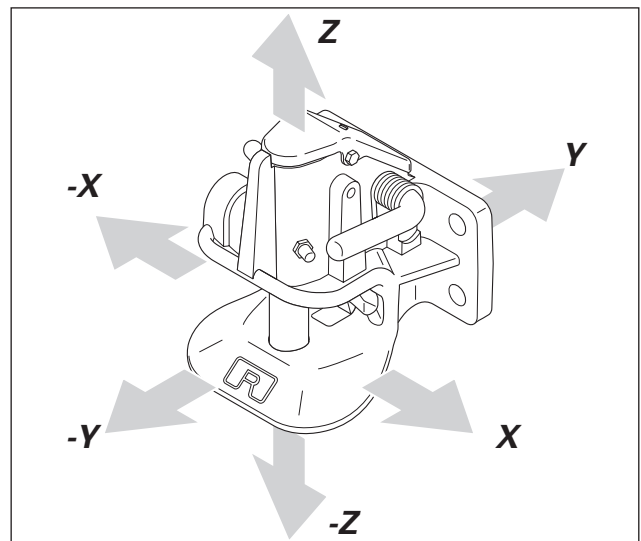
Direction information

Direction information is standardised throughout the text. To establish the directions, see figure [3].

Function test

After every repair, before starting-up the trailer coupling:

- Carry out a function test.
See also Section 3.7.



[3] Direction information

- X** to the right
- Y** to the back
- Z** upwards
- X** to the left
- Y** to the front
- Z** downwards

Safety instructions



WARNING!

Incorrect repairs can lead to serious accidents!

- Safe operation of the trailer coupling is only possible if all repairs are carried out exclusively by qualified personnel.
- Repairs to the trailer coupling must be carried out in accordance with the information in these instructions.
- All screwed connections must be tightened with the specified tightening torque. Where stated, lock washers must be used.
- Use only ROCKINGER original spare parts.
- Only use the trailer coupling in perfect technical condition.
- Observe other documentation: installation instructions for the trailer coupling and the accessories, operating instructions for the traction vehicle and the trailer.



WARNING!

Risk of accident due to incorrect conversions. Trailer couplings are vehicle parts which are subject to the highest safety requirements.

- ROCKINGER cannot assume any guarantee for the trailer coupling if the customer has allowed unauthorised conversions or modifications.
- In the case of unauthorised conversions or modifications, the type approval will lapse.
- Use only original ROCKINGER accessories suitable for the respective trailer coupling.
- Never make any other conversion or modifications to the trailer coupling.



WARNING!

Careless behaviour can lead to work accidents or occupational health disorders.

- Where appropriate, protective clothing should be worn, e.g. work gloves where the work requires a lot of physical strength or when handling articles with sharp edges.
- When handling flammable materials, make sure to avoid naked flame and sparks, do not smoke.
- Observe all of the relevant guidelines and regulations.
E.g. *Regulations for Health and Safety in Vehicle Repair, GUV 17.1* (in Germany).
- Operating materials such as cleaning or lubricating agents can be a health hazard.
- The instructions and the work and safety regulations of the manufacturer must be observed

Environmental protection

- Store operating materials and cleaning agents only in suitable containers.
- When disposing of old cleaning agents, operating materials and parts which have come into contact with them (e.g. rags), the legal stipulations must be observed.
- Bring old cleaning agents and operating materials to a collection point. Do not dispose of in rivers, lakes, the public sewage system or the soil.
- Dispose of replaced parts and packaging of spare parts in an environmentally friendly manner.

Problems with the coupling

For wear dimensions, see Annex, Section 4.3 Wear limits

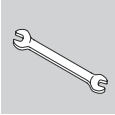
Fault	Possible causes	Remedy	See section
Coupling pin fails to engage	– Cap spring defective	→ Replace cap	3.2 Locking lever
	– Cap spring not correctly fitted	→ Remove cap spring and fit correctly	3.2 Locking lever
	– Locking lever worn on the contour	→ Replace locking lever	3.2 Locking lever
Coupling does not release	– Release spring defective	→ Replace release spring	3.5 Release lever
	– Release lever worn	→ Replace release lever	3.5 Release lever
Coupling will not close	– Incorrect drawbar eye	→ Check drawbar eye	–
	– Locking spring defective	→ Replace locking spring	3.1 Hand lever
Excessive longitudinal play in the connection	– Coupling pin worn	→ Replace coupling pin	3.4 Coupling pin
	– Drawbar eye worn	→ Replace drawbar eye	–
Excessive vertical play at the coupling pin	– Hand lever incorrectly fitted	→ Remove hand lever and fit correctly	3.1 Hand lever
	– Locking bolt worn	→ Replace locking bolt	3.6 Locking device
Excessive vertical play in the drawbar eye	– Drawbar eye worn	→ Replace drawbar eye	–

3.1 Hand lever

Hand lever

Requirements

- Coupling closed



TOOLS:

- mechanical pliers, angled
- combination pliers or pipe wrench
- flat-tip screwdriver, medium

Removal

- Remove washer and split pin [4A]
- Remove washer and split pin [4B]



CAUTION

- **RISK OF INJURY!** The tension on the locking spring [4A] is released when the hand lever [4D] is pulled out. Wear gloves!
- Release the tension on the locking spring [4C] by levering it out with a flat-tip screwdriver
- Pull out hand lever [4D]

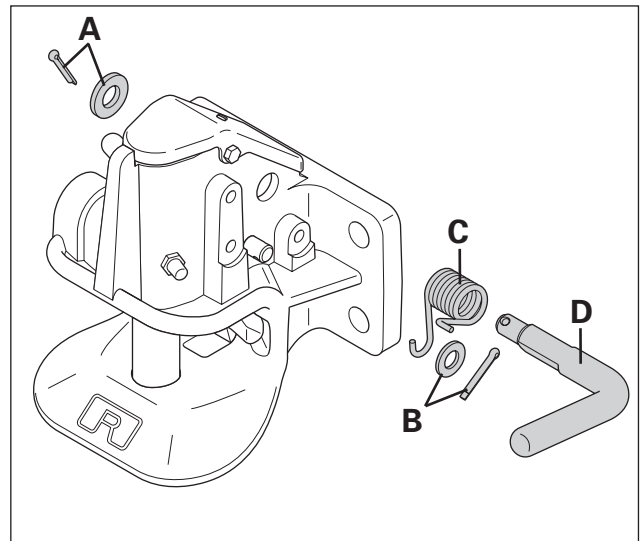
Installation

- Press the closing lever [5A] all the way down and hold it there
- Slide in the hand lever with spring
- Check that the hand lever is fitted correctly
- When the coupling is closed, the lever is pointing to the front
- Tension the spring with the pipe wrench and hang it onto the closing lever
- Fit washers and two new split pins [5B]
- Secure the split pins against falling out: bend the end of the pin
- Check the coupling for correct functioning; Section 3.7

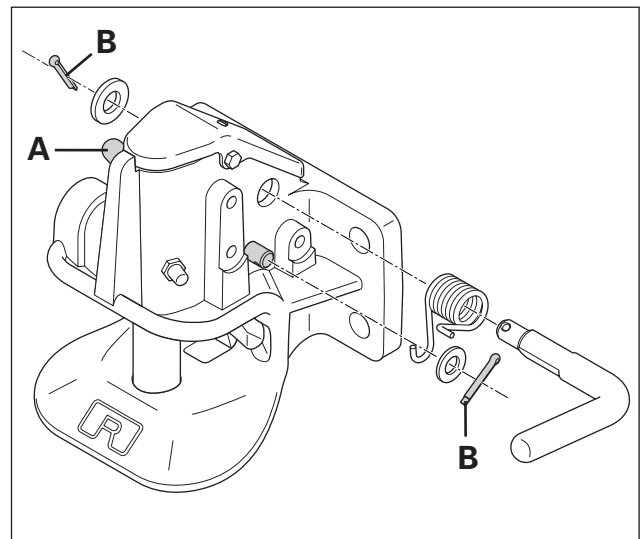


LUBRICANTS

- Multi-purpose grease



- [4] **A** Split pin and washer, hand lever
B Split pin and washer, closing lever
C Locking spring
D Hand lever



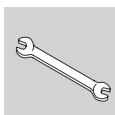
- [5] **A** Closing lever
B Split pins

3.2 Locking lever

Locking lever

Requirements

- Coupling closed
- Hand lever removed; Section 3.1



TOOLS:

- 2x open-end, ring or fork spanner, 8 mm

Removal

- Release and remove the bolt [6A]
- Remove cap [6B]
- Press the closing lever [6C] all the way down and hold it there
- Remove the locking lever [6D]

Installation

The installation takes place in the reverse sequence. Please take note of the following points:

- Before installation, thoroughly clean and grease the inside of the housing
- When fitting the cap, make sure that the cap spring [7A] is correctly fitted
- Replace locking nut [6E] M5 DIN 98N
- Install hand lever; Section 3.1
- Check the coupling for correct functioning; Section 3.7



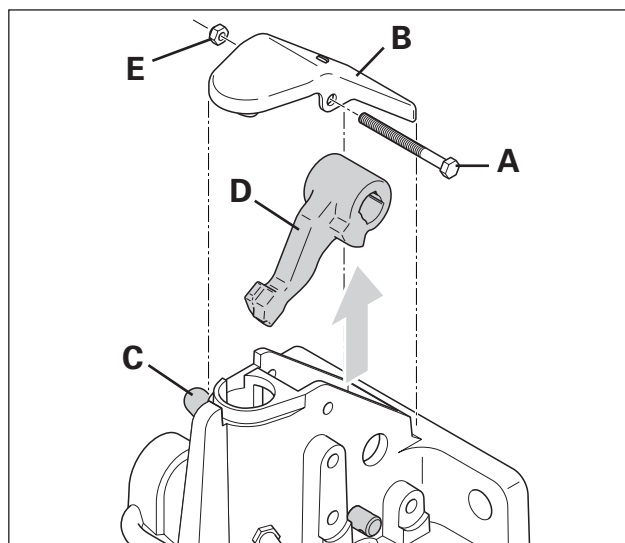
LUBRICANTS

- Multi-purpose grease

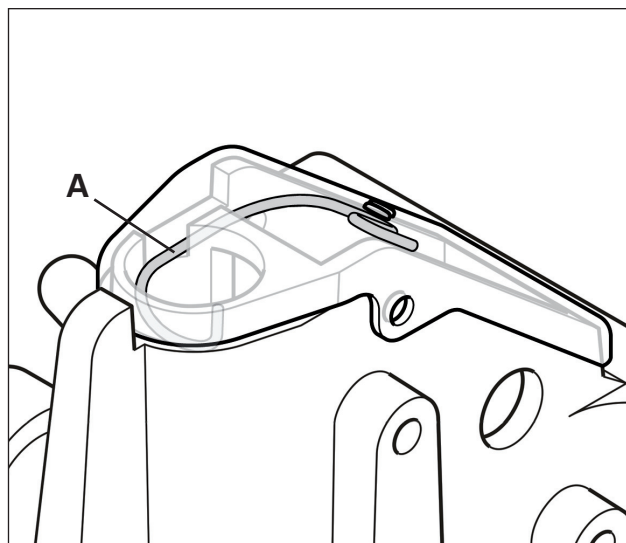


TIGHTENING TORQUES:

- Bolt and nut [6A/E]
on cap 6 + 2 Nm



- [6] A Bolt
B Cap
C Closing lever
D Locking lever
E Locking nut



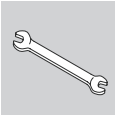
- [7] A Cap spring

3.3 Closing lever

Closing lever

Requirements

- Coupling closed
- Hand lever removed; Section 3.1
- Locking lever removed; Section 3.2



TOOLS:

- flat-tip screwdriver, medium

Removal

- Press the release lever [8B] slightly back and hold it there
- Pull out the closing lever [8A]

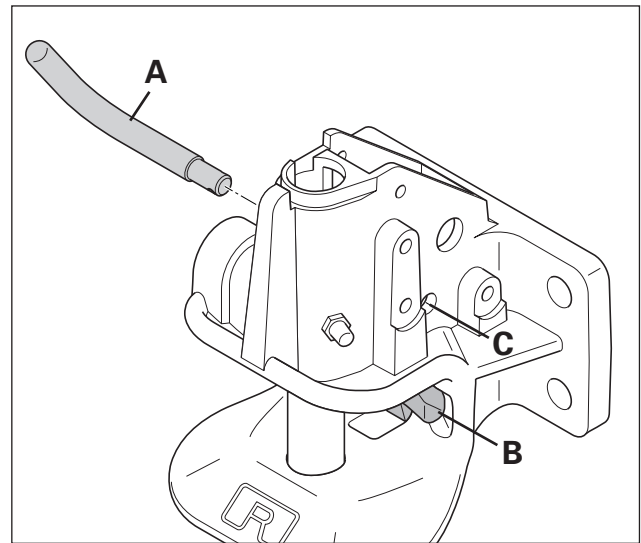
Installation

- Press the release lever [8B] slightly back (y-direction) and hold it there
- Slide in the closing lever [8A]
- Check the release lever [8B] for correct function and smooth running
- Install the locking lever; Section 3.2
- Install the hand lever; Section 3.1
- Check the coupling for correct functioning; Section 3.7



NOTE!

If the release lever slips, it can be centred through the housing boring [8C] using the flat-tip screwdriver.



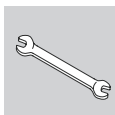
- [8] **A** Closing lever
B Release lever
C Housing boring

3.4 Coupling pin

Coupling pin

Requirements

- Coupling closed
- Hand lever removed; Section 3.1
- Locking lever removed; Section 3.2
- Closing lever removed; Section 3.3



TOOLS:

- flat-tip screwdriver, medium
- Locking plate for control pin, part no. ROE65632

Removal

- Use the screwdriver to press the control pin [9A] outwards and arrest it using the locking plate [9B]
- Remove the coupling pin [9C] from the top

Installation

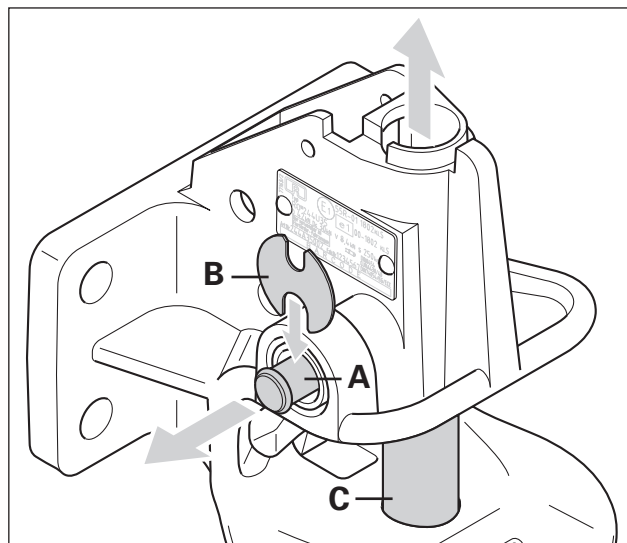
The installation takes place in the reverse sequence. Please take note of the following points:

- Clean and grease the guide boring for the coupling pin thoroughly
- Install closing lever; Section 3.3
- Install locking lever; Section 3.2
- Install hand lever; Section 3.1
- Check the coupling for correct functioning; Section 3.7



LUBRICANTS

- Multi-purpose grease



- [9] **A** Control pin
B Locking plate, part no. ROE65632
C Coupling pin

3.5 Release lever

Release lever

Requirements

- Coupling closed
- Hand lever removed; Section 3.1
- Locking lever removed; Section 3.2
- Closing lever removed; Section 3.3
- Coupling pin removed; Section 3.4

Removal

- Remove the release lever [10A]
- Remove the release spring [10B]

Installation

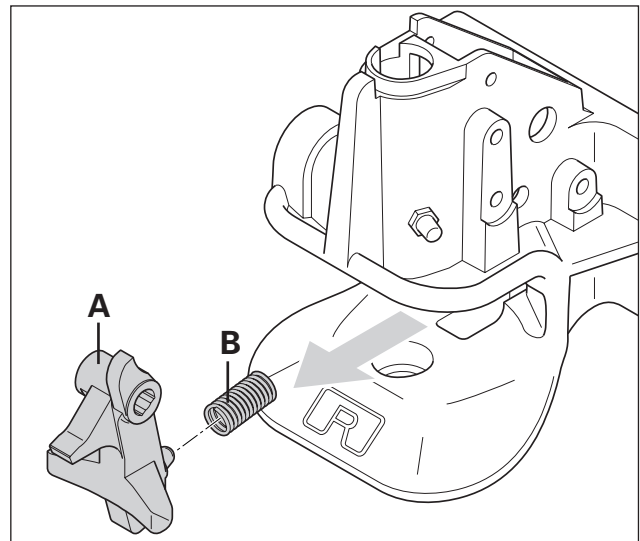
The installation takes place in the reverse sequence. Please take note of the following points:

- Make sure that the release lever is fitted in the correct position:

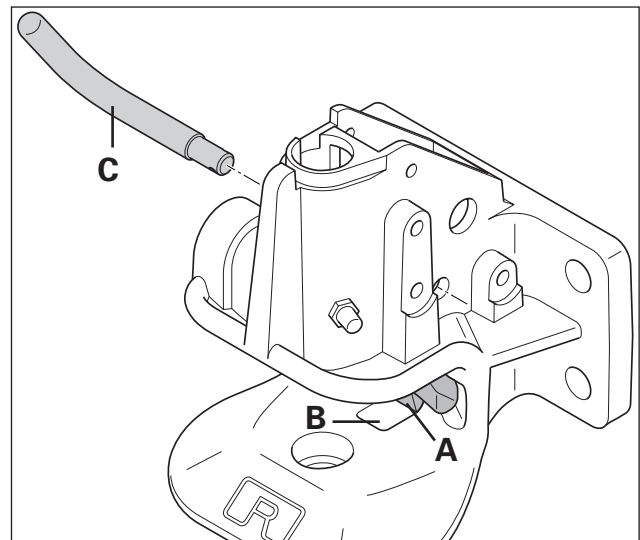
NOTE!

The lower edge of the release lever [11A] must protrude into the housing recess [11B] of the coupling.

- Secure the release lever from falling out by inserting the closing lever [11C]; Section 3.3
- Check that the release lever is operating smoothly
- Install the coupling pin; Section 3.4
- Install the locking lever; Section 3.2
- Install the hand lever; Section 3.1
- Check the coupling for correct functioning; Section 3.7



[10] A Release lever
B Release spring



[11] A Lower edge of the release lever
B Housing recess
C Closing lever



3.6 Locking device

Locking device

Requirements

- Coupling closed



TOOLS:

- Vice-grip wrench
- Screwdriver
- Plastic hammer
- Assembly plug, part no. ROE84001

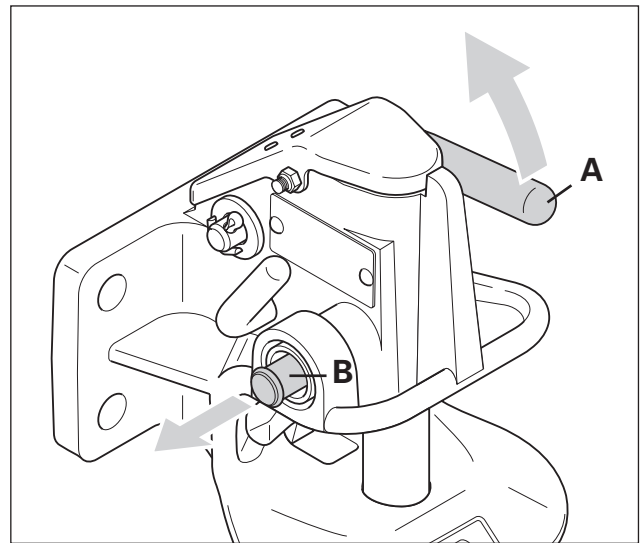
Removal

- Press the hand lever [12A] slightly upwards and hold it there so that the control pin [12B] is protruding slightly
- Grip the control pin with the vice grips and lever out the locking device [13A]

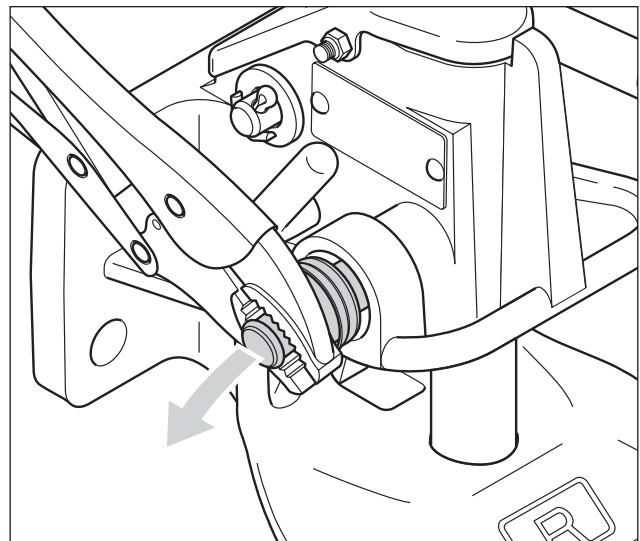
NOTE:

This will necessarily destroy both the control pin and the plastic sleeve [14A]. See Section 4.1, Spare Parts

- Use the screwdriver to lever out the locking bolt [14B]



[12] **A** Hand lever
B Control pin



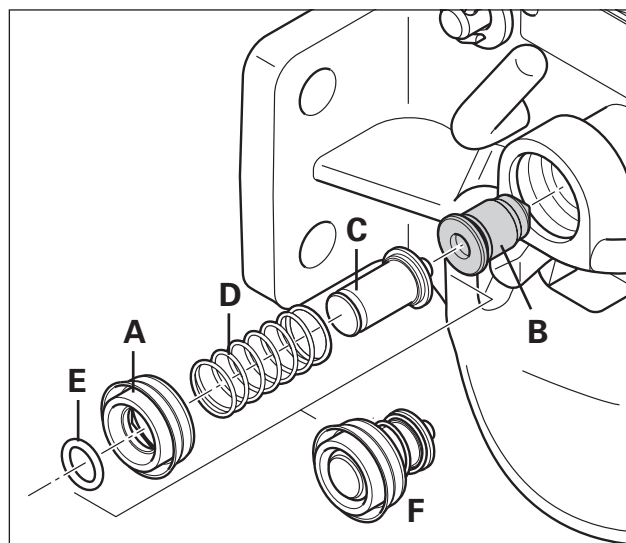
[13] **A** Lever out locking device with vice grips.

3.6 Locking device

Locking device

Installation

- Thoroughly clean and grease the exposed parts of the housing boring
- The installation takes place with a complete new locking device set, see Section 4.1
- Stick the control pin [14C] through the spring [14D] and the plastic sleeve [14A] and use the O-ring [14E] to secure against falling out
- Grease the locking bolt [14B] and slide it into the boring
- Grease the assembled locking device [14F] around the area of the spring and slide it into the slide to the end, making sure that it is correctly centred
- Place the assembly pin [15A] in position and bang the locking device [15B] in until it is flush with the edge of the housing [16]
- Check the coupling for correct functioning; Section 3.7

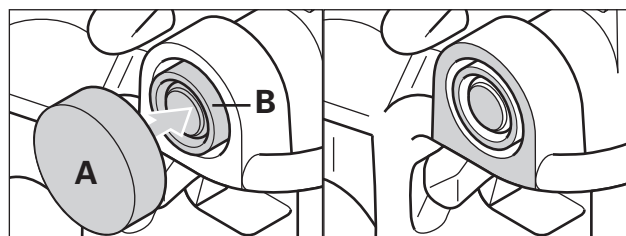


- [14] **A** Plastic sleeve
B Locking bolt
C Control pin
D Spring
E O-ring
F Assembled locking device



LUBRICANTS:

- Special grease ROE96040



[15] **A** Assembly pin,
part no. ROE84001

[16] Locking device flush with
the edge of the housing

3.7 Function check

Function check

Procedure

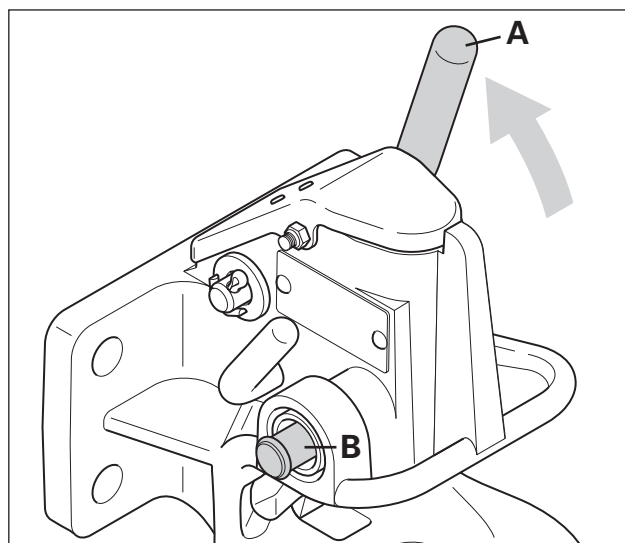
- Press the hand lever [17E] upwards until it engages
- The control pin [17B] must now be clearly projecting (12 mm)
- Press the closing lever [18A] down all the way.
- The control pin [18B] should now be no longer projecting



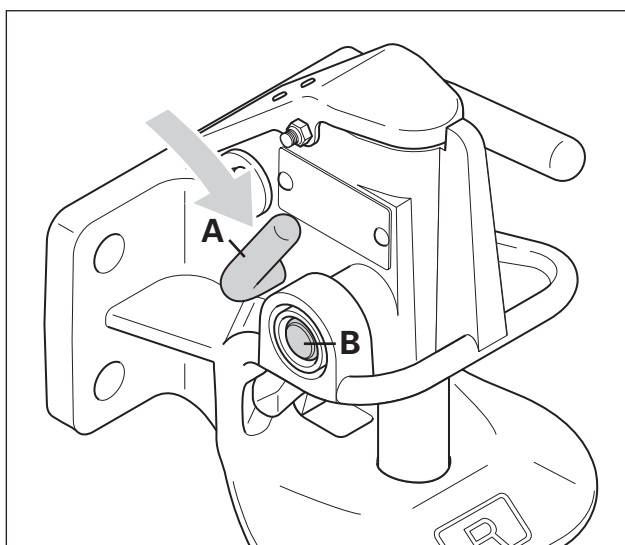
NOTE!

If the control pin is still projecting when the coupling is closed [19A]

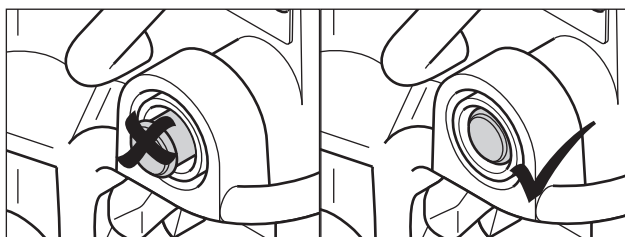
- Replace the locking device, Section 3.6
- Replace the locking lever; Section 3.2



[17] **A** Hand lever
B Control pin



[18] **A** Closing lever
B Control pin

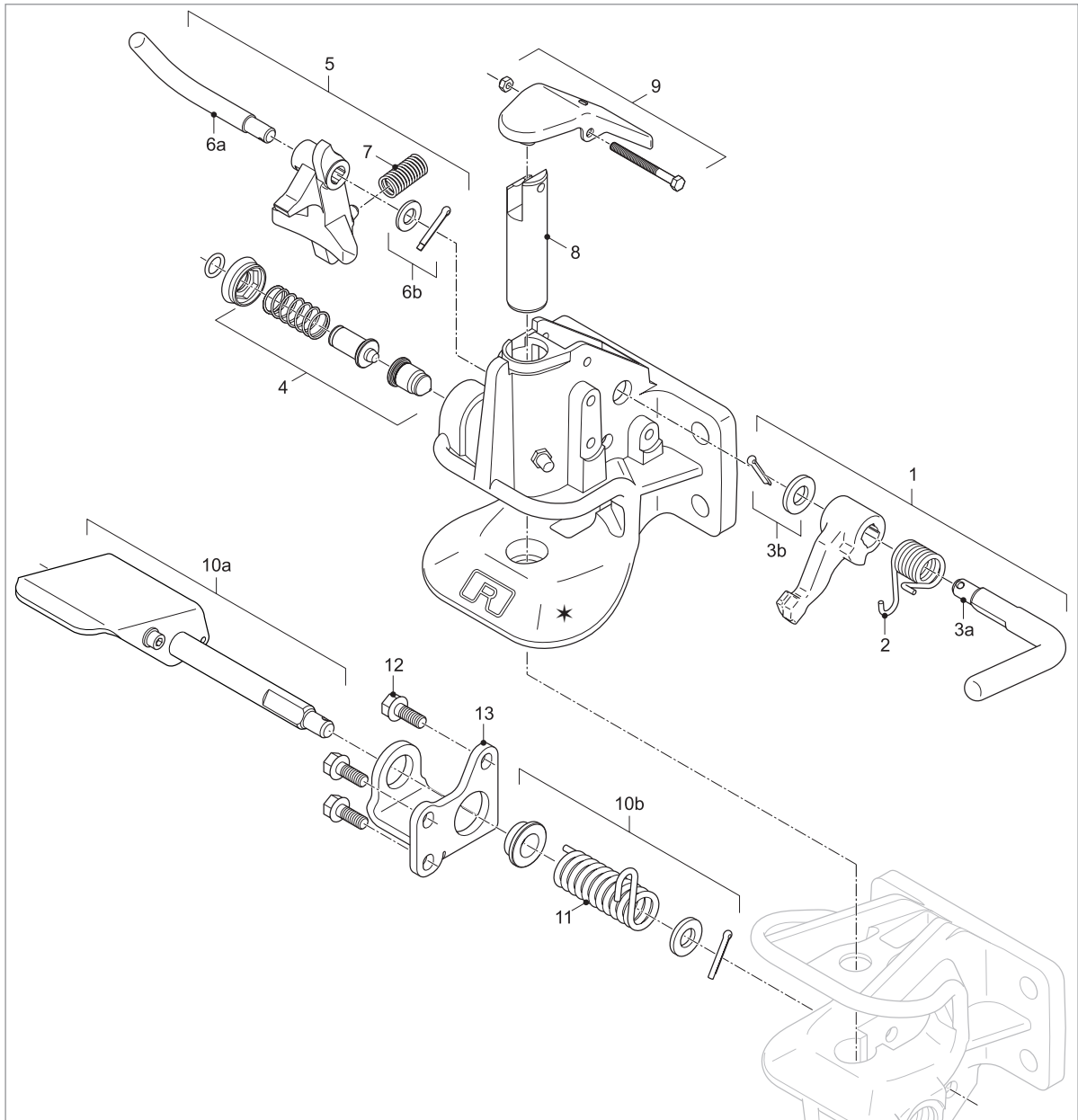


[19] **A** Wrong

[19] **B** Correct

4.1 Spare parts

Trailer coupling RO*244-2



[20] * not a spare part

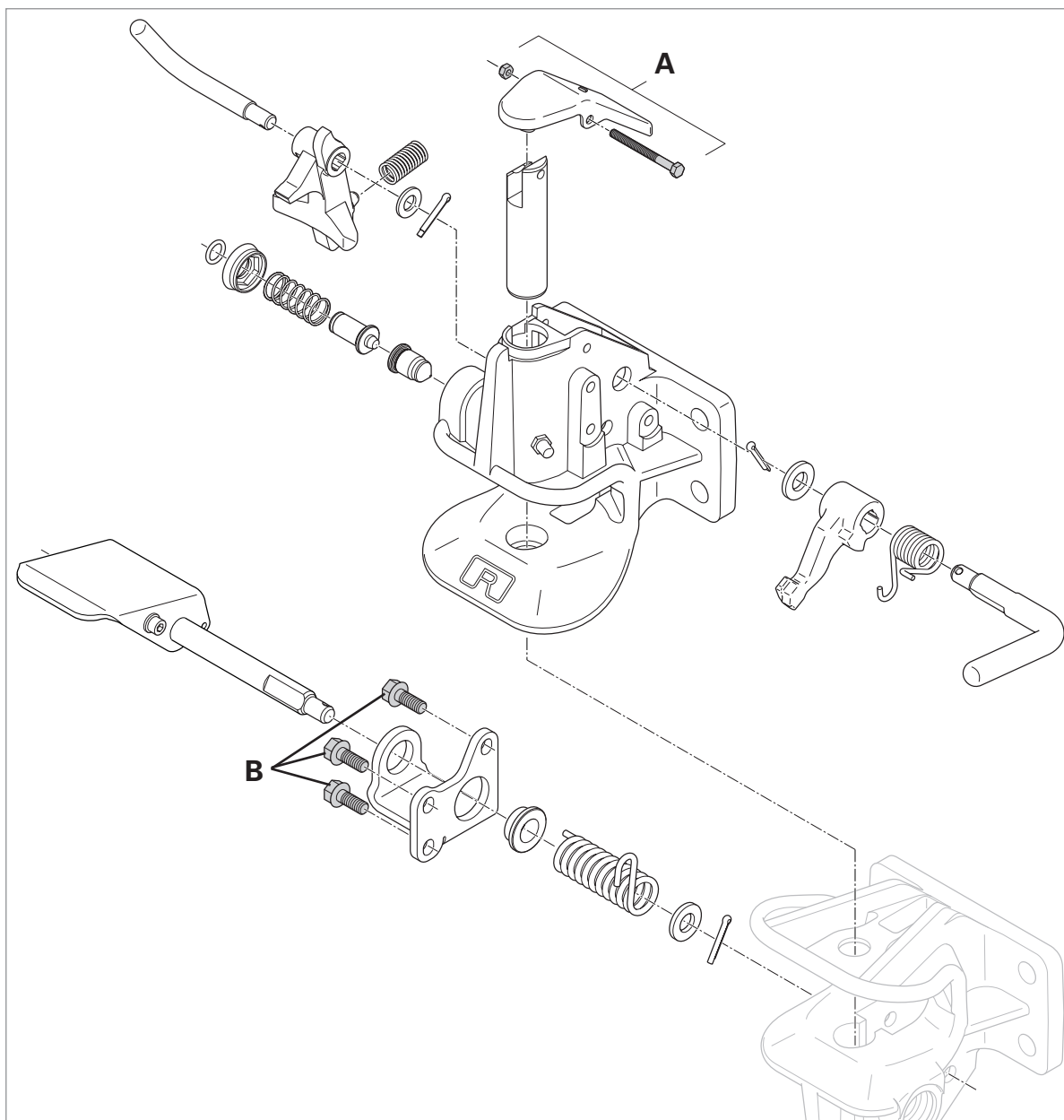
Item	Designation	Article no.
1	Locking lever repair kit	71785
2	Locking spring + 3b	55205
3	Hand lever 3a + 3b	50209
4	Complete locking device	71752
5	Release lever repair kit + 6a, b + 7	71786
6	Complete closing lever 6a + 6b	71788
7	Release spring	55252
8	Coupling pin 244T2	47137
9	Complete sealing cap	71787

Version L with pedal operation

Item.	Designation	Article no.
10	Complete pedal lever	71789
11	Pedal lever locking spring	55289
12	Set of bolts	71790
13	Holder for pedal lever	65777

4.2 Tightening torques

Trailer coupling RO*244-2

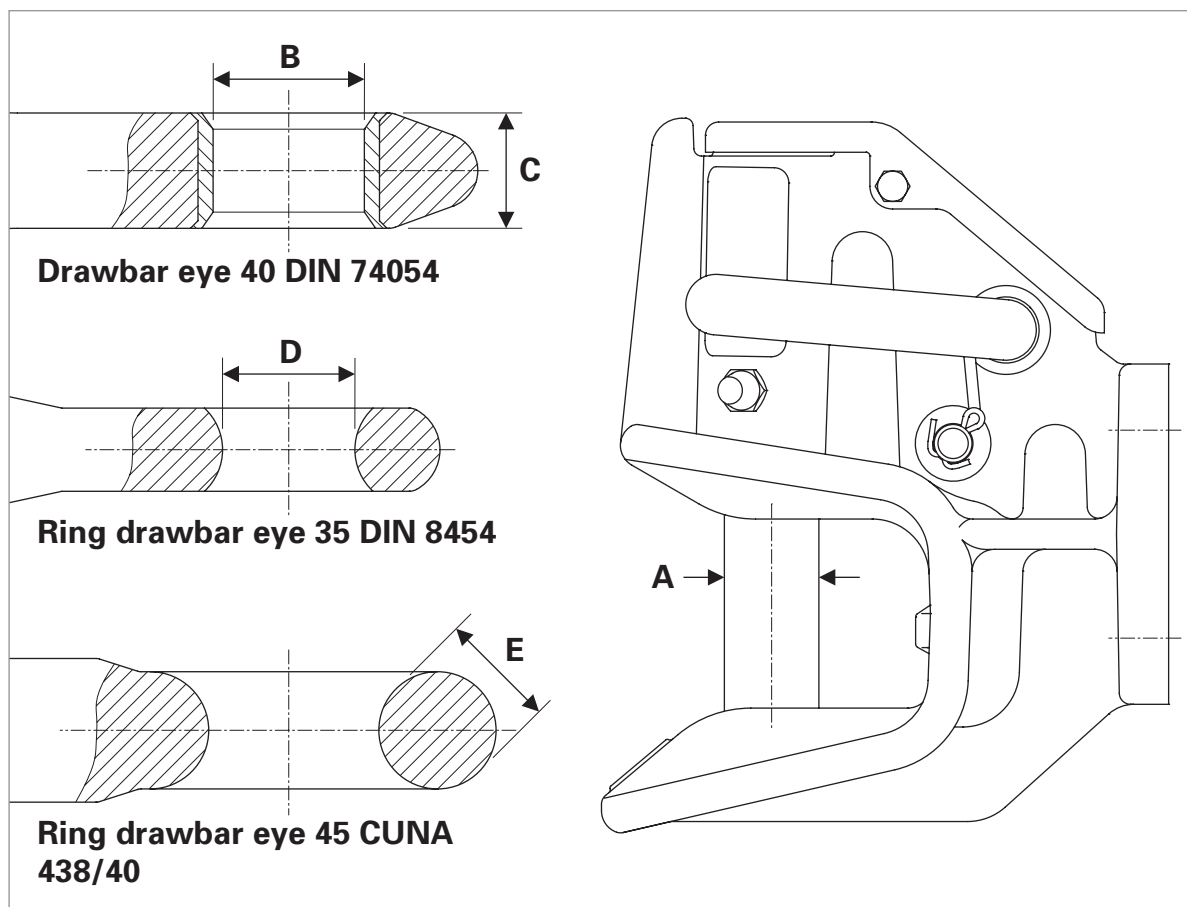


[21] Bolts must be tightened with the specified tightening torque

Item	Screwed connection	Tightening torque (Nm)	Tolerance	Special features
A	Cap connection	6	+2	-
B	Screwed connection for foot lever holder	30	+2	-

4.3 Wear limits

Coupling pin and drawbar eye



[22] Wear dimensions in the area of the coupling pin and the drawbar eye

Dimension	Gauge Part no.	Designation	Wear limit (mm)
A	–	Coupling pin	Ø 22
B	ROE57026	Drawbar eye 40 DIN 74054	Ø 41,5
C	–	Drawbar eye 40 DIN 74054	Ø 28
D	–	Ring drawbar eye 35 DIN 8454	Ø 37
E	–	Ring drawbar eye CUNA 438/40	Ø 32