Modellreihe
Series
Modellserie
Modellserie
Модельный ряд

RO*57

Selbsttätige Anhängekupplung
Automatic Trailer Coupling
Automatisk koppling
Automatisk tilhengerfeste
Автоматическое тягово-сцепное устройство
Series RO®57
Automatic Trailer Coupling
ECE E1 R 55-011361
Suitable for:
- rigid-drawbar trailers
- turntable drawbar trailers
- dollies
- drawbar eyes with a diameter of 57.5 mm
- ISO 3584 cat. 3 cross-members

Official note
When fitting the trailer coupling the regulations for fitting mechanical fastening systems in accordance with Appendix 7 of Directive ECE R 55-01 and the national regulations for commercial vehicles must be observed.

Subject to technical changes without prior notice

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The safety instructions are summarised in a single chapter. In any situation where the user of the trailer coupling is at risk, the safety instructions are repeated in the individual sections and marked with the warning symbol shown here.

When handling hitches, prime movers and trailers the relevant safety regulations in the respective country must be observed (e.g. Berufsgenossenschaft in Germany). Any safety instructions in the operating manual of the tractor vehicle and the trailer remain valid and must be observed.

For operation, maintenance and assembly the safety instructions listed below must be observed. Further safety instructions are then given in the individual case which relate directly to the respective activity.

**Safety instructions for operation**

- The hitch may only be operated by authorised persons.
- The installation and operating instructions of the respective hitch retain their validity and must be observed.
- Only use the hitch and the towing eye of the trailer if they are in perfect technical condition.
- Only carry out hitching / unhitching operations on firm, level ground.
- During hitching, nobody may stand between the tractor vehicle and the trailer.
- After every hitching operation the correct locked status of the trailer coupling must be checked by means of the control pin or the remote indicator. Only drive the rig in the correctly locked status.
- The remote indicator does not exempt the driver from the obligation to check before driving off subject to StVZO (Regulations Authorising the Use of Vehicles for Road Traffic). Before driving off, among other things, the coupling status of the mechanical connection device for the tractor vehicle and the trailer must be checked.

**Safety instructions for maintenance**

- For maintenance work, only use the prescribed lubricants.
- Maintenance work may only be carried out by qualified personnel.

**Safety instructions for installation**

- Installation may only be carried out by authorised workshops.
- Installation must be carried out in compliance with the relevant accident prevention regulations and the technical regulations for mechanical equipment.
- Only original components may be used.
- Instructions and installation guidelines of the vehicle manufacturer must be observed, e.g. type of fastening, clearances etc.
- All screwed connections must be tightened with the prescribed tightening torque.
- Work may only be carried out on the trailer coupling when it is closed. **Risk of injuries!**

The installation of the hitch on the prime mover must be carried out in accordance with Annex 7 of Directive ECE R 55-01 and must be checked accordingly. As applicable, the relevant licensing regulations in the respective country must be observed.

§§ 19, 20 and 21 StVZO apply in Germany. The mechanical remote control and the mechanical remote indicator are equipment with safety components. This is why the installation must be documented.

The hitch, the remote control and the remote indicator are connection devices which require model approval and are subject to the highest safety requirements.

Alterations of any kind shall cause the warranty to lapse and invalidate the type approval, which in turn invalidates the vehicle operation permit.
1. Installation

Fig. 1

1 Sealing cap
2 Circlip
3 Turnbuckle
4 Circlip
5 Retaining ring
6 Ring fastener
7 Segments (3x)
8 Thrust washer
9 Rubber buffer
10 Mounting plate
11 Side stop (optional)
A, B, C Separators (optional)
12 Spacers (optional)
   (3x4 mm, 1x10 mm)
13 Protective buffer cap
14 Rubber buffer
15 Jaw with drawbar
1.1 Before installation

Note: When fitting the coupling observe:
- applicable national regulations
- vehicle manufacturer's mounting specifications
- clearance for axial turning of coupling head min. ± 25°

Fig. 1
- Remove circlips (2) and (4) using circlip pliers A 31 to DIN 5254.
- Remove retaining ring (5).
- Tighten turnbuckle (3) using 70 mm twelve-sided socket until
  3 segments (7) can be removed.
- Unscrew turnbuckle (3).
- Remove ring fastener (6), thrust washer (8) and rubber buffer (9).
- Withdraw mounting plate (10), side stop (11 optional), and
  protective buffer cap (13) from drawbar (15).
- Rubber buffer (14) remains on drawbar.
  Note: Sealing cap (1) in accompanying pack.

1.2 Installation

- Determine crossbar thickness (only for execution with side stopp).
- Insert mounting plate (10) from inside into end cross-member
  or coupling bracket.
- Fasten with
  - 4 off M 20 x 1.5 grade 10.9 flanged hexagon bolts
  - 4 off grade 10 flanged hexagon nuts
  Screw set 71122; Tightening torque 590 Nm
  Note: Vehicle manufacturers may specify nut and bolt grades
  which differ from the above recommendations!

Caution: Bolt heads must face coupling head side (outside of end
cross-member) to avoid impairing movability of coupling.
Bolt head and nut faces must be flat, clean and free of dirt.

Only for execution with side stopp:
- Slide 1 x 10 mm and 3 x 4 mm spacers (depending on crossbar
  thickness up to max. 28 mm) onto bracket (10) with protective
  buffer cap (13) (see figure and table).
  There must be a clearance of a max. 1 mm between
  the spacers and the protective buffer cap!

Only for execution with side stopp:
- Proceed with separators A/B as follows
  (see figure and table).
  T = 13 mm - 17 mm: retain A/B
  T = 18 mm - 23 mm: remove A (5 mm)
  T = above 23 mm: remove A and B (10 mm)
1. Installation

- Grease drawbar (15) well (NLGI 3).
- Slide side stop (11) onto drawbar (15).
- Locate jaw with drawbar (15) and rubber buffer (14) carefully on bracket (10).
- Locate rear rubber buffer (9), thrust washer (8), inner crown facing (9) and ring fastener (6) on drawbar (15).
- Screw turnbuckle (3) until slots in ring fastener (6) are aligned with notches in drawbar.
- Grease 3 segments (7) with NLGI 3 and fit (note position, see Fig. 1).
- Slide retaining ring (5) carefully over segments (7) and secure with circlip (4, circlip pliers A31).
- Fit circlip (2) onto drawbar (15) using circlip pliers A31.
- Unscrew turnbuckle (3) as far as stop on circlip (2).
- Fit sealing cap (1) to protect against weather.

Note: Before painting, close coupling and cover or grease coupling pin.
2. Operation

2.1 Hitching

Note: The relevant national regulations (i.e. safety-at-work) must be observed when hitching and unhitching.

No one must stand between the vehicles!

- To engage, press hand lever upwards until it engages
- Position drawbar eye in centre of funnel
- Disengage brake on front axle of turntable drawbar trailer
- Set drawbar eye to height of coupling point (centre of funnel).
- Slowly reverse prime mover

When hitching to a central-axle trailer (see fig. 3):

- Reverse prime mover very slowly
- The drawbar eye must be inserted into the middle of the funnel.
  Otherwise the funnel, the drawbar eye or the drawbar landing legs might be damaged.

Check: After each hitching procedure, it is essential to check that the hitch is correctly closed and locked. The lock-control pin must not protrude out of its guide after hitching (see fig. 4)

If the lock-control pin protrudes from its guide (in the dark detectable by touching it), the hitching procedure has been carried out incorrectly and there is the risk of an accident!
2. Operation

**Note:** Should the drawbar eye not activate the coupling pin during hitching, this can be because the necessary standby gap (gap between the drawbar eye and the coupling pin) is insufficient (see Fig. 5).

**Remedy:** Check the drawbar eye and coupling pin.

**Standby gap:**
- Gap between lower edge of coupling pin and support must be min. 14 mm and max. 19.5 mm (see Fig. 5).
- Always grease support well to reduce wear!

### 2.2 Unhitching

Observe the regulations laid down by professional trade associations when hitching and unhitching!
- Secure trailer to prevent it from rolling away.
- Disconnect supply lines to trailer.
- Open coupling.

In the event of bracing between the tractor unit and trailer assist the unhitching process by **moving the vehicle backwards and forwards** or by using the **air suspension system**.
- Advance prime mover.

### 2.3 Closing hitch manually

(Only for execution **without** pneumatic remote control) (e.g. for tow-rope):

Lift coupling pin using suitable tool.

![Fig. 5](image-url)
3. Servicing

3.1 Closing tow hitch

Before starting maintenance work on the coupling:
- Ensure that coupling is closed. Accident risk (see 2.2)
- Towing hitches with remote control-disconnecting unit. Disconnect quick coupling (S, see Fig. 10) from control unit.

3.2 Maintenance

- Before first use and after extended period of use lubricate coupling pin, support and drawbar eye with viscous grease (EP3). With maximum water repellence. We recommend JOST High Performance Lubricant (Item number SKE 005.670.000) – (See mounting instruction RO*PC 57).
- Low-maintenance automatic unit has a grease reservoir (regular greasing unnecessary). Bearing requires no further lubrication.

**Note:** For some extreme service conditions the hitch can be additionally oiled with a special ROCKINGER oil (art. no. ROE 96047), due to the bore of the hexagon bolt (S1). For this unscrew the hexagon bolt. After oiling screw the bolt in (Torque 10Nm). Alternatively can the towing hitch also automatically be greased (Article no. LubeTronic AK2 ROE71624-2) (See fig. 7). The bearing is lifetime greased.

- Close coupling before cleaning with high-pressure washers (see item 2.2).
- After cleaning, regrease coupling pin, support and automatic unit if necessary.

Please note following when carrying out repairs on coupling (e.g. changing coupling pin):
- Remove as much of old grease as possible.
- Please use the enclosed grease.
### 3. Servicing

#### 3.3 Testing

**Bearing:**
- **Longitudinal play**

  - Move coupling head (not funnel) vigorously in direction of travel when unhitched (see Fig. 8):
  - *No longitudinal play may* be present.

**Coupling pin:**
- Diameter of crowned part may not be less than **55 mm**

  - Otherwise new coupling pin must be used (see Fig. 9).
  - Gauge set (ROE 71354)

**Service note for towing hitches with remote control:**

In the event of having not enough pressure on the system caused by the sinter filter **F** (ROE90379) you have to clean or change it.

  - Unscrew the screw connection **B** and either clean or change the filter.
  - Mount it in reverse.
3. Servicing

- Maximum vertical play on coupling pin (see Fig. 11) is **1.8 mm**.
  
  **Upper bush:**
  - Internal diameter of upper bush may not exceed **59.5 mm**

  **Lower bush:**
  - Internal diameter of lower bush may not exceed **45.7 mm**
  - There must be free passage downwards.

**Remote control** (optional)

- Check the operation of limit switch in connection with coupling check pin **at regular intervals**
- In case of malfunction of the safety-locked coupling it is required to carry out the **visual check** and examination of the coupling’s operating conditions before considering the possibility of repair.

**Support ring**

The support ring for the drawbar eye must be replaced when due to wear, the drawbar eye can contact the the lower bush or when the wear limit is reached (see marks in fig.12). The lower bush must not be damaged under any circumstances at this will impair closure of towing hitch! Take care to prevent risk of accident.

Always slightly grease the support ring to reduce wear.
Technical Data

RO*57

ECE E1 R 55-011361

Technical Data

RO*57

Hitch open
Handlever upwards

Hitch closed

Handlever downwards

T max = 28 mm
min = 13 mm

<table>
<thead>
<tr>
<th>a (mm)</th>
<th>b (mm)</th>
<th>c (mm)</th>
<th>d (mm)</th>
<th>e (mm)</th>
<th>f (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>160</td>
<td>100</td>
<td>200</td>
<td>140</td>
<td>21</td>
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</tbody>
</table>

ROCKINGER
Member of JOST-World
**Technical Data**

**RO*57**

<table>
<thead>
<tr>
<th>C</th>
<th>D</th>
<th>A</th>
<th>B</th>
</tr>
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<tbody>
<tr>
<td><strong>Drawbar eye to fit</strong></td>
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Recommendation: with central-axle trailers the static vertical load should be at least 4% of the towed load to avoid a negative vertical load which can cause damage.

**Upgrade kits**

**Upgrade kit pneumatic remote operation**

Order no.

Comfort RO*PC57 C power actuating to open and close.

Contents: part-turn actuator, control unit, pneumatic connection kit 71167

**Upgrade kit in-cab status indicator**

70936

**Upgrade kit funnel extension**

Funnel extension 71162

Side stopp (optional) 71157

For spare parts see catalogue