Montage- und Betriebsanleitung

Installation and operating instructions

Instructions de montage et d'utilisation

Modellreihe / Series / Type

RO*59339 / RO*59343
RO*59344 / RO*59346
RO*59347 / RO*57L013

Zugkugelkupplungen 80 mm
Coupling heads 80 mm
Aneaux à platine pour boullons de 80 mm
Official note

When installing the trailer coupling, the EC Directive 89/173 and the relevant national regulations must be observed. The installation must correspond to these installation and operating instructions.

If the installation of the trailer coupling changes the load values (e.g. permissible axle load, total weight, permissible vertical load) of the vehicle, the vehicle documents must be altered accordingly.

Subject to technical changes without prior notice!
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 trailer couplings, tractor vehicles 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 trailer coupling may only be operated by authorised persons.
- The installation and operating instructions of the respective trailer coupling retain their validity and must be observed.
- Only use the trailer coupling 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 trailer coupling on the tractor vehicle must be carried out in accordance with Annex VII of EC Directive 94/20 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 trailer coupling, 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 model approval, which in turn invalidates the vehicle operation permit. In order to avoid unauthorised opening of the lock, a padlock should be used on the master cylinder.
1. Installation

1.1 Before installation

The coupling head 80 mm

- is used mainly for heavy agricultural and forestry rigid-drawbar trailers
- can be screwed onto suitable trailer drawbars (see Fig. 1)
- the connection must be dimensioned accordingly
- may only be used in conjunction with approved coupling balls 80 mm in accordance with ISO 24347 with the corresponding latch (see Fig. 2).

- The necessary swivel angle must be observed (see Fig. 3).

The coupling head is supplied in a ready-to-use condition.

Screw-on plates and fastening bolts are not supplied.

Screw-on surfaces of mounting plate and flange must be smooth and free of paint and grease.

Installation may only be carried out by qualified personnel with suitable tools. The correct tightening torque must be observed.

The coupling head 59344 has the same connection dimensions as the flange drawbar eye RO 57233 (6-hole fastening) and can also be mounted on 8-hole plates.
1. Installation

1.2 Installation

- Observe the relevant regulations (accident prevention regulations for agricultural and forestry vehicles).
- Fastening with bolts of quality 10.9 (see table)
- Tighten bolts crosswise:

<table>
<thead>
<tr>
<th>Article number</th>
<th>Bolts Quantity</th>
<th>Size</th>
<th>Tightening torque (Nm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>59344</td>
<td>6</td>
<td>M 16</td>
<td>320 ( \mu = 0.16 )</td>
</tr>
<tr>
<td>59347</td>
<td>8</td>
<td>M 16</td>
<td>320 ( \mu = 0.16 )</td>
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<tr>
<td>59339</td>
<td>8</td>
<td>M 20</td>
<td>610 ( \mu = 0.16 )</td>
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<td>M 20</td>
<td>610 ( \mu = 0.16 )</td>
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<tr>
<td>57L013</td>
<td>8</td>
<td>M 20</td>
<td>610 ( \mu = 0.16 )</td>
</tr>
</tbody>
</table>

1.3 Swivel angle

- The coupling heads must achieve the following swivel angles
  - horizontal min. \( \pm 60^\circ \)
  - vertical min. \( \pm 20^\circ \)
  - axial min. \( \pm 20^\circ \)
- The coupling heads can achieve 2 swivel angles simultaneously, for example:
  - horizontal 60° / vertical 20°
  - horizontal 60° / axial 20°
- In the case of horizontal swivel angles up to \( \pm 30^\circ \), vertical angles up to \( \pm 30^\circ \) are possible, for example in conjunction with coupling ball RO*KS 80 (Type 825A.01) e1–89/173/IV-0231, ABG M 9674
2. Operation

On hitching and unhitching the legal stipulations must be observed.

The installation and operating instructions for the balls 80 must be observed.

3. Maintenance

To reduce the wear and tear on the coupling ball and the coupling head, lubricate the contact surfaces with multipurpose grease at regular intervals depending on the deployment conditions and after cleaning with high-pressure washers.

Lubricate the contact surfaces at the lubrication point on the coupling head or via the central lubrication system.

Welding of the coupling head is not permitted!

Check:

The fastening bolts should be checked in the course of vehicle maintenance with the corresponding torque wrench.

If they are loose, they must not be tightened under any circumstances, but replaced by new ones.

Repairs may only be carried out by a qualified workshop!

- The vertical play of the coupled coupling head may not exceed 7 mm. When they reach the wear limit, the parts concerned (ball, latch or coupling head) must be replaced.

- Wear on the contact surfaces (inner surface/latch contact surface) must not exceed 1,5 mm.
## Technical data

RO**59343/59344**

### 59344 6-hole flange

### 59347 8-hole flange

### 59339 8-hole flange

### 59343 8-hole flange

### 59346 8-hole flange

### 57L013 8-hole flange

(long-hole central boring)

<table>
<thead>
<tr>
<th></th>
<th>a (mm)</th>
<th>b (mm)</th>
<th>c (mm)</th>
<th>d (mm)</th>
<th>e (mm)</th>
<th>f (mm)</th>
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</table>

³ Long hole for central boring
**Technical data**

- Type 59343 versions A, B, C and D, Type 59344 versions A and B
- Coupling heads
- For connection with coupling ball ø 80 mm in accordance with ISO 24347
- Weight ca. 13 kg / ca. 19 kg

<table>
<thead>
<tr>
<th>Article no. ROE</th>
<th>Type / Version</th>
<th>Hole pattern (mm)</th>
<th>Dc (kN)</th>
<th>C (t)</th>
<th>S (t)</th>
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<td>59344 B</td>
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<td>22</td>
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¹ Long hole for central boring 145/160 mm