



Montage- und Betriebsanleitung

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Installation and operating instructions

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Instructions de montage et d'utilisation

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Istruzioni per il montaggio e la manutenzione

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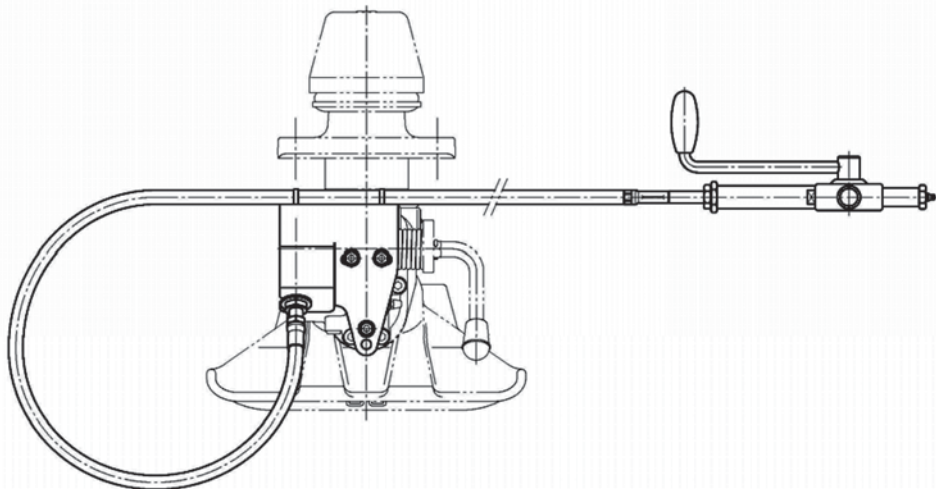
ROE 71676

**Aufrüstsatz mechanische
Fernbedienung**

**Upgrade kit mechanical
remote control**

**Kit d'équipement commande
à distance mécanique**

**Kit complementare meccanico
per l'apertura del gancio
a distanza**



ROE 71676

Mechanical remote control

Bowden cable system for model series

RO*400 from T1; RO*430 from T2;

RO*50 from T0; RO*50 E from T0



The mechanical remote control must be installed by authorised personnel!

Read these instructions carefully before fitting!

Official note

When installing the upgrade kit, the EC Directive 94/20, in particular Annex VII, ECE R 55-01, Annex 7 and the relevant national regulations must be observed.

The installation and operating instructions must be carried in the vehicle.

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 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 installation, 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.

1.1 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 display does not exempt the driver from checking before driving off as prescribed by StVZO (German Regulations authorising the use of vehicles for road traffic). Before starting to drive, among other things, the coupling status of the mechanical connection of tractor vehicle and trailer must be checked.

1.2 Safety instructions for maintenance

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

1.3 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 ROCKINGER 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 accident!

The trailer coupling must be connected to the tractor vehicle in accordance with the requirements of Annex VII of Directive 94/20/EC and Annex 7 of Directive R 55-01 ECE and must be inspected. As applicable, the approval regulations of the respective country must be observed.

For Germany §§ 19, 20 and 21 of StVZO apply. The mechanical remote control and the mechanical remote display are devices with safety components. For this reason the installation must be documented.



The trailer coupling, the mechanical remote control and the remote displays are connection devices and parts 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.

2.1 Upgrade kit mechanical remote control

The upgrade kit mechanical remote control is for opening the trailer coupling.

The mechanical remote control is used particularly in tractor vehicles whose clearances in accordance with EC/94/20 and ECE R 55-01 are not sufficient to open the trailer coupling with the hand lever.

The mechanical remote control may only be installed in the following trailer couplings:

RO*400 from technical **status 1**

RO*430 from technical **status 2**

RO*50 from technical **status 0**

RO*50E from technical **status 0**

For information on the technical status, see Section 2.3.

2.2 Upgrade kit remote display (optional)

The installation of a remote display is prescribed by the EC Directive and ECE Directive.

Depending on the degree of convenience required

the electric remote display **ROE 71654**

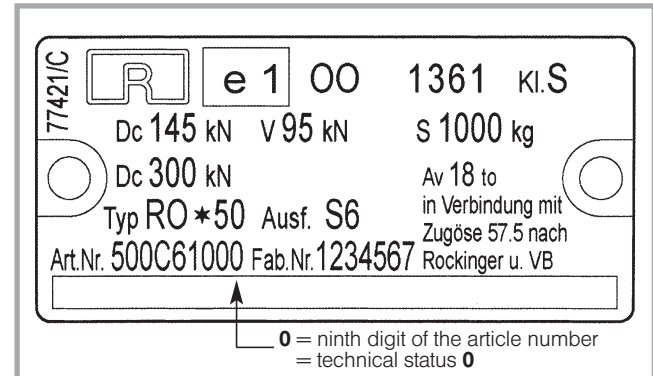
or the electronic remote display **ROE 71546**

can be installed.

2.3 Technical status

For the technical status, please refer to the type plate on the trailer coupling.

The last digit of the article number designates the technical status (see illustration below).



Before installation

Note: On installation of the towing hitch/remote operation, the relevant regulations must be observed

(accident prevention regulations for vehicles, VBG 12). The upgrade may only be carried out by **an authorised workshop**.

The clearance must be large enough that the coupling head can be turned axially by $\pm 25^\circ$.

Lay the Bowden cable in such a way that it is not damaged in the case of axial rotation of the trailer coupling up to $\pm 30^\circ$ while maintaining a minimum radius of 150 mm (see Fig. 1). Avoid abrasion points!

For the installation of the Bowden cable, an opening in any partition walls of at least 50 mm is necessary (any work on the frame **must** first be cleared with the manufacturer).

The actuation lever (**HH**) must be accessible from the outside and installed in such a way that in every position, hand clearance of at least 100 mm from other components is ensured.

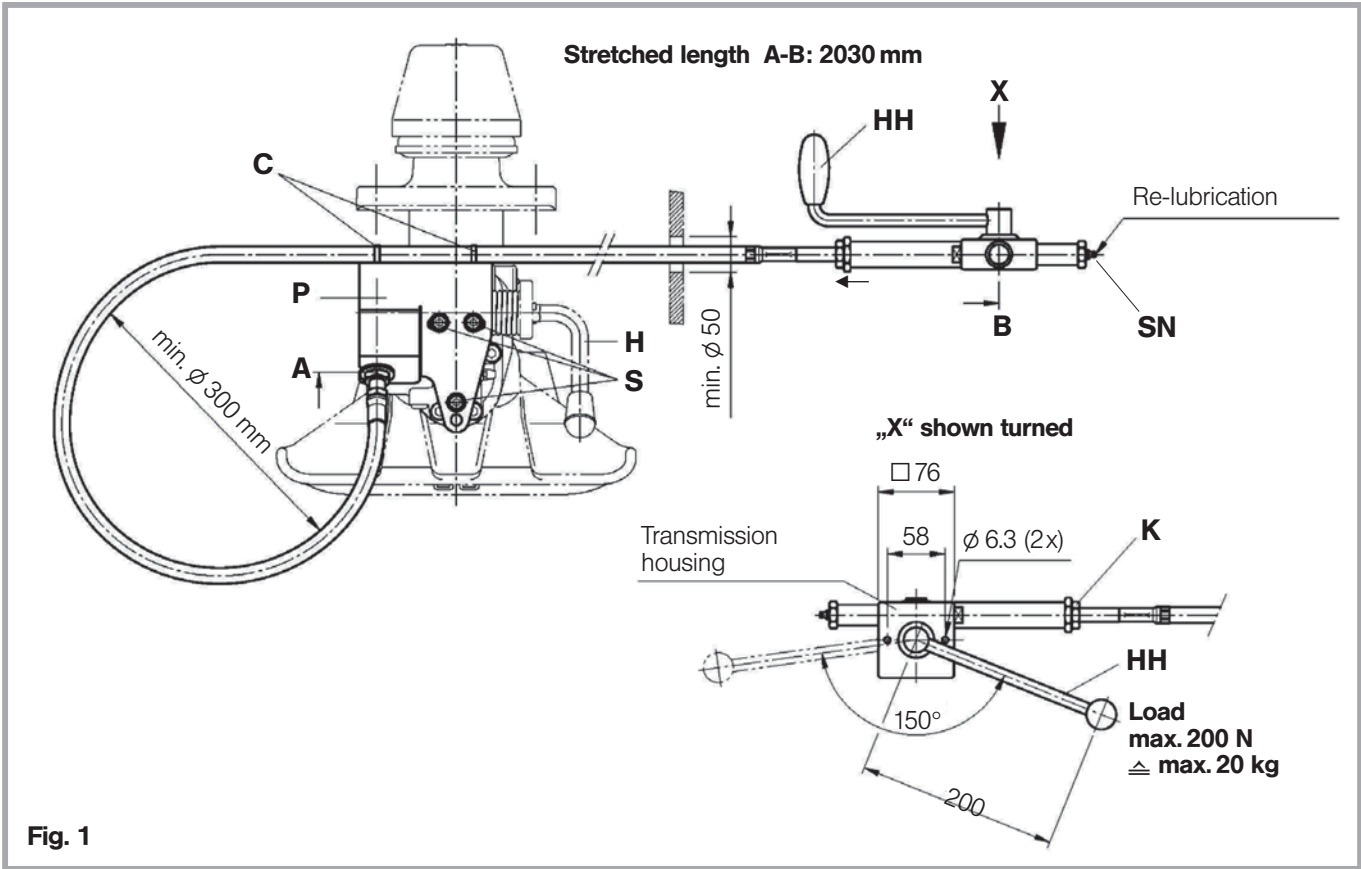
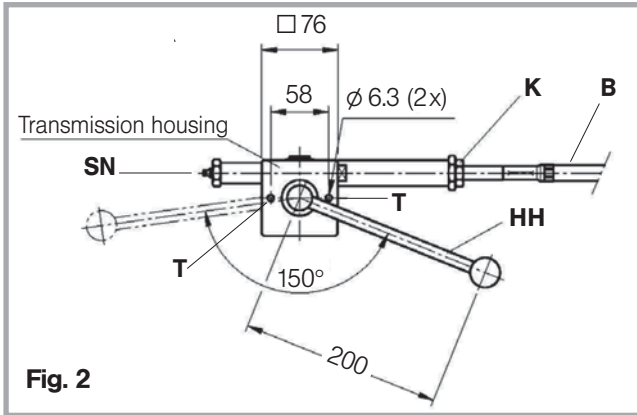
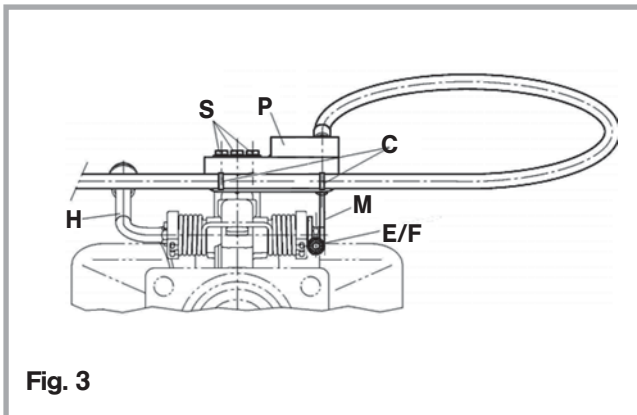


Fig. 1



- Insert the Bowden cable through the boring in the frame as applicable.
- Fasten the actuation unit using two bolts M 6 and self-locking nuts at the borings (T) provided (see hole pattern) on the vehicle (ensure the necessary clearance, see above) (see Fig. 2).
- The bracket P for the Bowden cable is fastened with 3 bolts S and 3 distance washers R between the bracket and the housing of the automatic mechanism; tightening torque **85 Nm** (Fig. 3 and 4).
- Coupling closed; fit the catch (M) (angle ca. 90°, see Fig. 4). Slide the catch M far enough along the hex shaft that the flange hex bolt E and the locking nut F can be fitted; **tightening torque 27 Nm**.
- Lay the Bowden cable B as shown in Fig. 1. Turn back the hex nut A with the washer on the threaded piece on the end of the Bowden cable, then slide the Bowden cable from the side into the bracket P as shown in Fig. 4 and tighten to **130 Nm** with the hex nut A.
- Fix the Bowden cable B with the cable binder C to the bracket P.



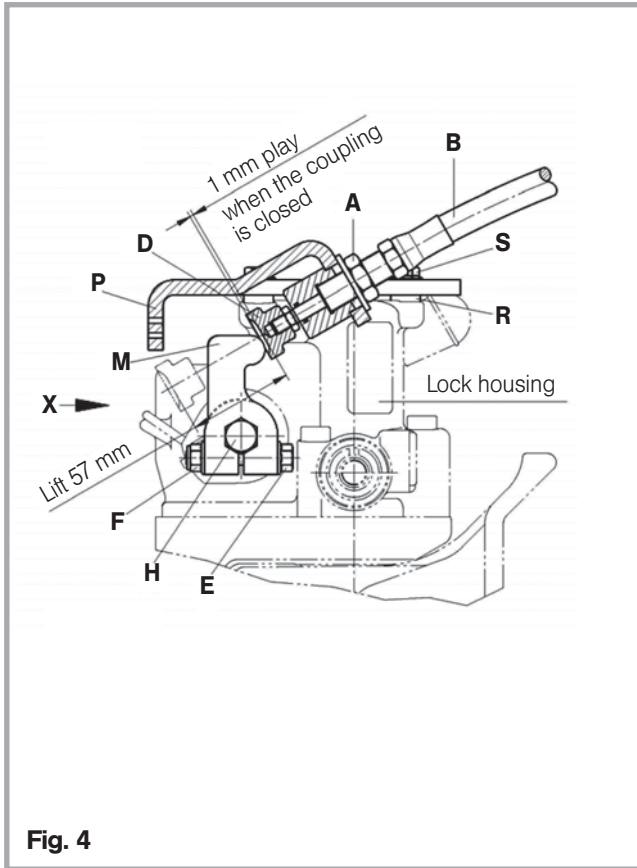


Fig. 4

- Check that the Bowden cable is moving smoothly. Any stiffness can be eliminated by axial turning of the Bowden cable.

Check: Distance between catch (M) and pressure piece (D) on the Bowden cable ca. 1 mm, in the case of wear **readjust:**

- Release the lock nut (K) (Fig. 2)
- Hold the Bowden cable tube and turn the transmission housing in such a way that the permitted play of 1 mm is achieved when the coupling is closed.
- Tighten the lock nut (K)

4. Operation

- To open the coupling, pull the hand lever (H) of the remote control towards you until the coupling is open.



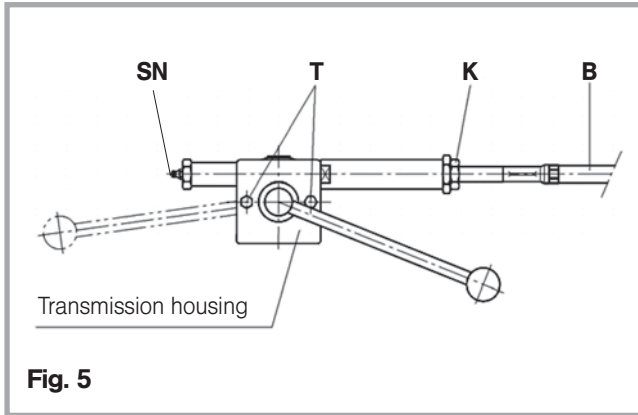
Attention:

In the case of tension between the coupling and the drawbar eye, never overload the actuation lever (max 20 kg) and never force the opening with mechanical aids.

Move the vehicle backwards and forwards to release the tension between the coupling pin and the drawbar eye.

If necessary, use the hand lever to open the coupling.





5. Maintenance

- Re-lubricate the Bowden cable **at least every six months** at lubrication point **(SN)** (see Fig. 5) and check the play between **M** and **D** (see Fig. 4)

For connection of the remote display, please see separate instructions according to the version.



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