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The safety information is compiled in one section. Where the user of the fifth wheel coupling is in danger, the safety information is repeated in the various sections and marked with the danger symbol shown adjacent here.

The relevant safety regulations in your country (for example Health & Safety at Work) apply for working with fifth wheel couplings, tractor units and semi-trailers. The appropriate safety information in the owner's handbook for the tractor unit and the semi-trailer are valid and must be followed. The following safety information applies to the operating, servicing and installation work. Safety information directly linked to the activity is listed again individually.

1.1 Safety information for operation

- ▶ The fifth wheel coupling may only be used by authorised persons.
- ▶ Only use the fifth wheel coupling and skid plate on the semi-trailer if they are in perfect technical condition.
- ▶ The front of the skid plate must not be sharp, otherwise it may damage the fifth wheel coupling or the liner.
- ▶ Comply with the relevant safety regulations when connecting a semi-trailer, for example the Health and Safety at Work Regulations.
Only connect a semi-trailer on firm, flat ground.
- ▶ The skid plate must be at the same height or preferably lower – no more than 50 mm lower – than the coupling plate on the fifth wheel coupling. Pressure losses in the air suspension may change the height of the semi-trailer.
- ▶ Check the locking mechanism before starting your journey to ensure that it is properly locked.
Only drive the vehicle with the locking mechanism locked and secured, even when driving without a semi-trailer (solo driving).

1.2 Safety information for servicing

- ▶ Only use the specified lubricants for servicing work.
- ▶ The servicing work should only be completed by trained personnel.

1.3 Safety information for installation

- ▶ Do not change the installation area defined by the tractor unit's manufacturer.
- ▶ The installation work may only be completed by authorised specialists.
- ▶ Refer to the instructions issued by the vehicle manufacturer, for example the type of fastening, fifth wheel position, fifth wheel height, axle load, cavity, mounting plate, slider, etc.
- ▶ Follow the installation instructions supplied by the mounting plate and slider manufacturers.
- ▶ On vehicles that are used to transport hazardous goods, a ground connection must be put in place between the fifth wheel coupling and the vehicle chassis.

It is a basic principle that screw connections must be tightened to the specified tightening torque as the setting for the torque wrench acc. to DIN ISO 6789 in classes A or B.

The fifth wheel coupling must be installed on the vehicle in accordance with the requirements of Annex VII of Directive 94/20/EC or Appendix VII of Directive ECE R55-01. It may also be necessary to comply with the licensing regulations of the appropriate country.

§§ 19, 20 and 21 of the Road Traffic Act apply in Germany. In addition, your attention is drawn to the requirements of § 13 of the Vehicle Registration Ordinance in Germany relating to the data in the vehicle documents in terms of the maximum trailer load.

2.1 Usage

JOST fifth wheel couplings are mechanical connecting devices and establish a connection between the tractor and the semi-trailer. They are designed for mounting on a tractor unit.

Fifth wheel couplings, mounting plates and kingpins are vehicle-connecting parts that must comply with very high safety requirements and must also undergo design approval tests.

Modifications of any kind will render both the warranty and the design approval void and therefore also cancel the vehicle's operating licence.

JOST fifth wheel couplings are specified to comply with Directives 94/20 EC and Regulation ECE R55-01 in class 50 and are to be used only in conjunction with kingpins of class H50 and class J mounting plates or comparable licensed equipment.

JOST fifth wheel couplings are suitable for use in power steering systems.



Technical modifications reserved. The latest information can be found at: www.jost-world.com.

2.2 Design

The fifth wheel coupling is specified with the vehicle by the vehicle manufacturer (the design must comply with Directive 94/20 EC, Appendix VII or Regulation ECE R55-01 Appendix 7).

In addition to the fifth wheel load the D value is a criterion for the load capacity of fifth wheel couplings and mounting plates.

It is calculated using the following formula:

- D = Drawing bar value [kN]
- g = 9.81 m/s²
- R = Permissible total weight of the semi-trailer [t]
- T = Permissible total weight of the towing vehicle, including U [t]
- U = Permissible fifth wheel load [t]

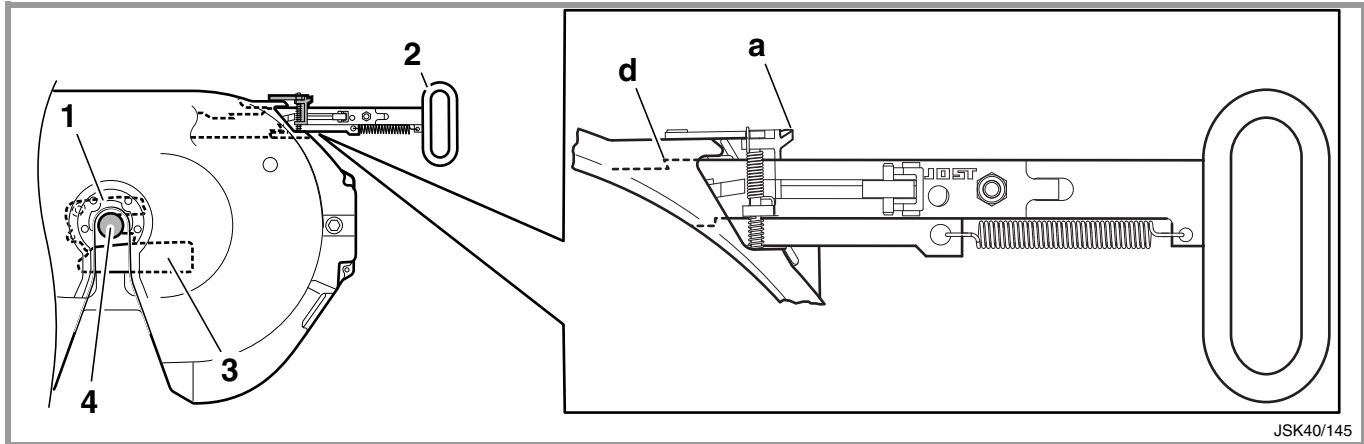
$$D = g \times \frac{0,6 \times T \times R}{T + R - U} \text{ [kN]}$$

Sample calculation:

- T = 17 t
- R = 33 t
- U = 10.5 t

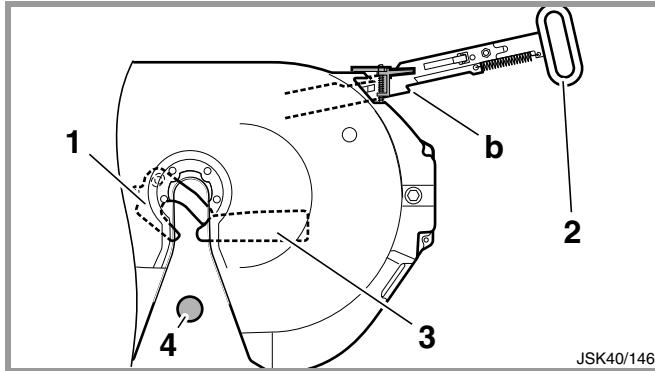
$$D = 9,81 \times \frac{0,6 \times 17 \times 33}{17 + 33 - 10,5} = 83,6 \text{ kN}$$

3.1 Fifth wheel coupling closed and locked



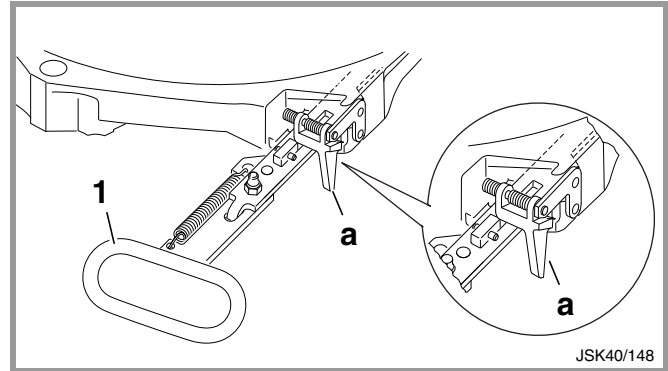
- 1 Lock jaw
- 2 Handle
- 3 Locking bar
- 4 King pin
- a Latch
- d Locking edge

3.2 Fifth wheel coupling ready for engagement

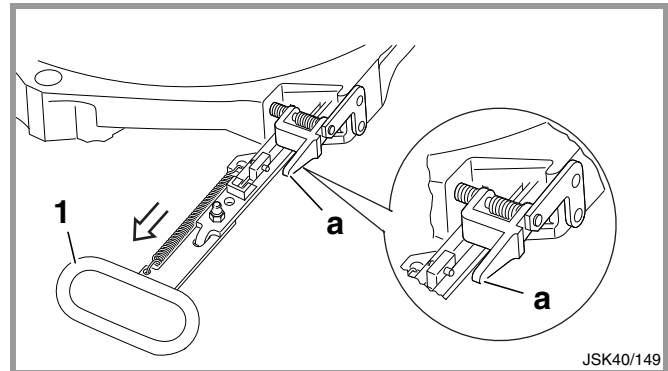


- 1 Lock jaw
- 2 Handle
- 3 Locking bar
- 4 King pin
- b Lock (1st guard)

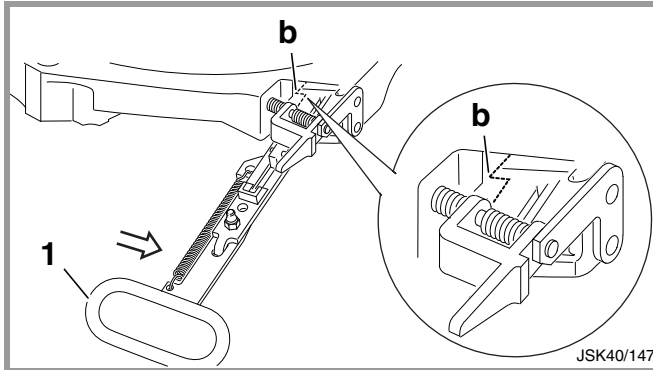
3.3 Opening the fifth wheel coupling



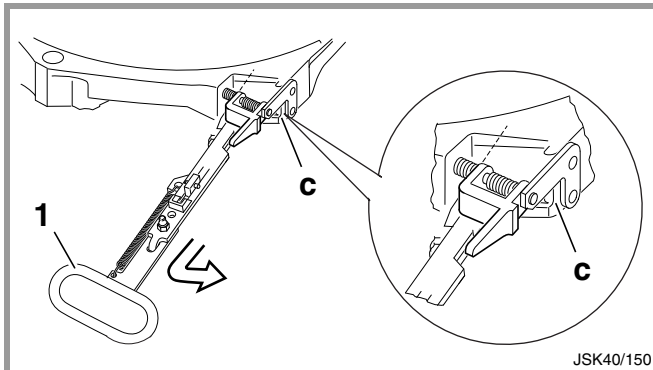
- ▶ Handle (1) locked in position. The latch a must point downwards.



- ▶ Pull the handle (1) until the 2nd guard is opened and the latch a points outwards.



- ▶ Swivel the handle (1) towards the front of the vehicle in order to release the lock b (1st guard).



- ▶ Pull the handle (1) out to the end position and hook onto the edge of the plate (c).

3.4 Uncoupling a trailer

- ▶ Park the vehicle on flat, firm ground.
- ▶ Secure the semi-trailer to prevent it from rolling away.
- ▶ Extend the landing gear as described in the operating manual until the fifth wheel coupling has almost no strain on it.
- ▶ Disconnect the supply lines.
- ▶ Open the fifth wheel coupling (see section 3.3)
- ▶ Drive the tractor unit out from under the semi-trailer.
- ▶ The fifth wheel coupling is automatically ready for engagement again

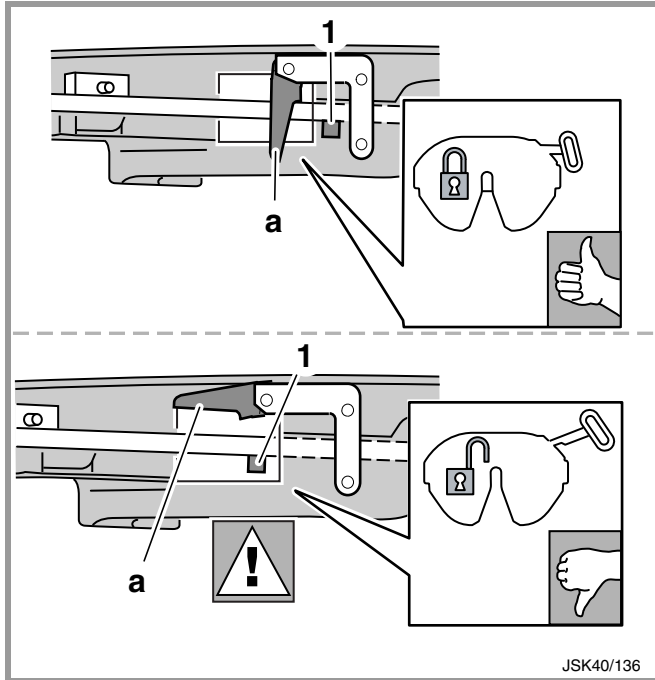
3.5 Coupling up a trailer

- ▶ Secure the semi-trailer to prevent it from rolling away.
- ▶ The fifth wheel coupling must be ready to engage (see section 3.2). Otherwise open the fifth wheel coupling (see section 3.3)
- ▶ Check the height of the semi-trailer. When coupling up, the skid plate must be at the same height, ideally lower (maximum 50 mm) than the fifth wheel coupling plate.
- ▶ Drive the tractor unit under the semi-trailer.
- ▶ The locking mechanism will close automatically.
- ▶ Check the locking mechanism (see section 3.6).
- ▶ Connect the supply lines.
- ▶ Retract the landing gear as described in the operating manual.
- ▶ Release the parking brake and remove the chocks.

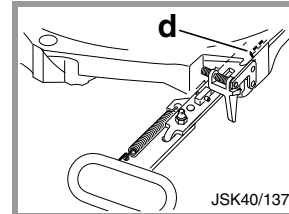


Check the locking mechanism status before starting any journey (see section 3.6).

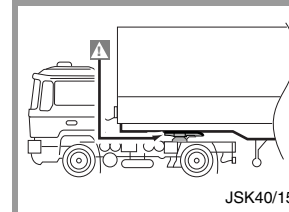
3.6 Checking the locking mechanism



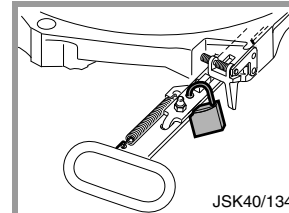
- ▶ The latch a must point downwards.
- ▶ The indicator pin (1) on the locking edge must be inside the coupling plate.



- ▶ The locking edge d must be inserted into the coupling plate, as shown.



The skid plate must rest on the fifth wheel coupling without a gap.



Note

To prevent the fifth wheel coupling being opened without authorisation, a security device (for example a padlock) can be inserted into the hole in the handle as shown.

4.1 Servicing instructions

The skid plate on the semi-trailer that engages with the fifth wheel coupling must meet the following conditions to provide a long service life and trouble-free function:

- ▶ Max. 2 mm unevenness
- ▶ Smooth and as groove-free a surface as possible, without weld bumps (smooth existing groove burr)
- ▶ Rounded or chamfered front and side edges
- ▶ Complete coverage of the fifth wheel coupling support area with adequate reinforcement appropriate to the situation.



Effective lubrication of the top of the fifth wheel coupling (except JSK with top plate liners), the lock jaw and the king pin - before commissioning and after every clean - is crucial for ensuring a long service life. In the W version, we recommend applying a thin coat of grease to the skid plate.

Note

When you clean the fifth wheel coupling you may produce waste that contains pollutant substances. We would like to point out that you must comply with the various national waste regulations for the disposal of this waste.

4.1.1 Fifth wheel coupling with manual lubrication

At short intervals, at the latest every 5,000 km:

- ▶ Uncouple the semi-trailer
- ▶ Clean the fifth wheel coupling and the skid plate
- ▶ Grease the fifth wheel plate, locking parts and king pin
- ▶ Grease specification: high-pressure grease (EP), e.g. JOST high performance lubricant (art. no. SKE 005 670 000)

The pivot bearings on the pedestals require no maintenance. The grease nipple on the edge of the coupling plate is only designed for additional greasing of the locking mechanism between service intervals.

4.1.2 Fifth wheel coupling with central lubrication connection

Depending on the conditions in which it is used, the grease specification and metering used, at the latest every 50,000 km or every six months:

- ▶ Uncouple the semi-trailer
- ▶ Clean the fifth wheel coupling and the skid plate
- ▶ Check the function of the central lubrication system as described in the manufacturer's instructions
- ▶ Grease the fifth wheel coupling plate, the locking mechanism parts and the king pin
- ▶ Grease specification: according to the instructions issued by the manufacturer of the central lubrication system

4.1.3 Low maintenance fifth wheel coupling with top plate liners (W version)

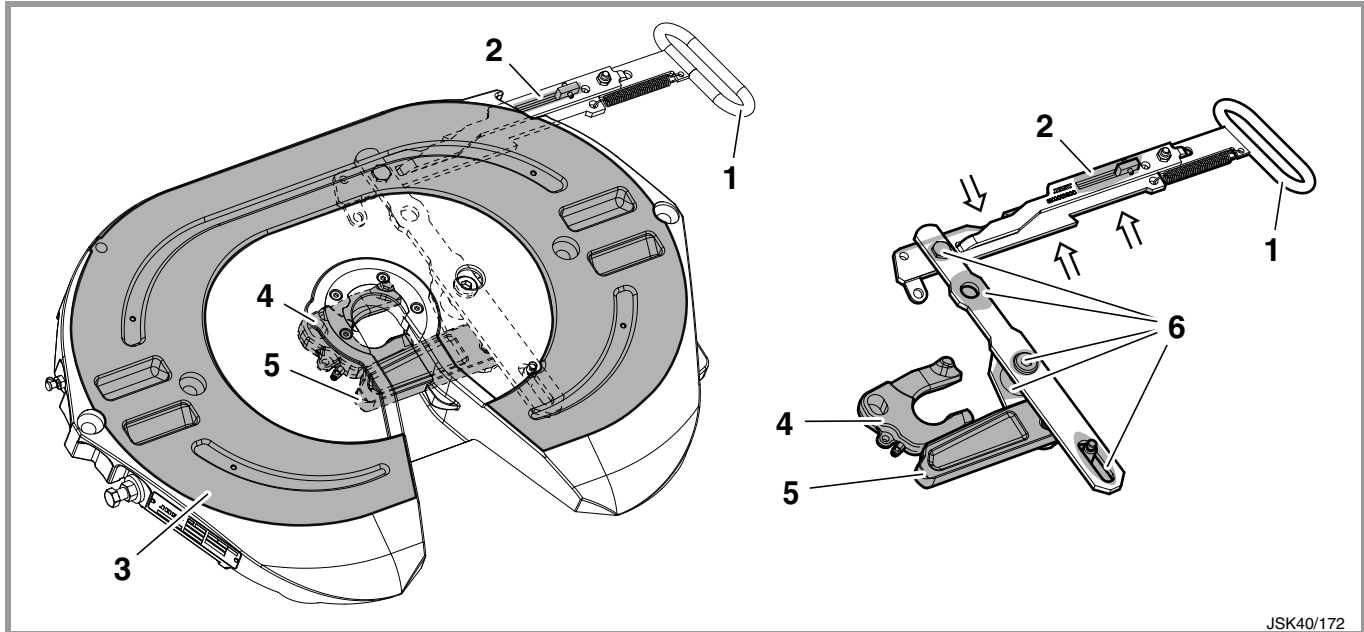
At the latest every 50,000 km or every six months, in harsh conditions every 25,000 km:

- ▶ Uncouple the semi-trailer
- ▶ Clean the skid plate and the king pin
- ▶ Grease the king pin and lock jaw
- ▶ Check the top plate liners for signs of wear and damage (see section 4.6).
- ▶ Grease specification: high-pressure grease (EP), e.g. JOST high performance lubricant (art. no. SKE 005 670 000)

Also, every 10,000 km, use the greasing nipple on the edge of the coupling plate to lubricate the lock - **with the semi-trailer coupled up.**

You can also install automatic lubricant dispensers. To prevent corrosion on the skid plate, we recommend that the skid plate is greased lightly during the above service intervals.

4.2 Lubrication instructions



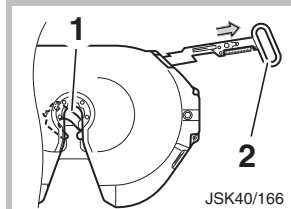
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- | | | | | | |
|---|--------|---|----------------|---|--|
| 1 | Handle | 3 | Coupling plate | 5 | Locking bar |
| 2 | Guide | 4 | Lock jaw | 6 | Articulated connection and lever guide |

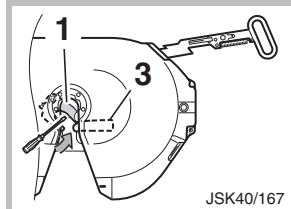
- ▶ Lubricate the handle (1) on the side (see arrow) and the guide (2).
- ▶ Generously lubricate the area marked in grey (except W version - the top plate liners must not be greased).
- ▶ Lubricate the lock jaw (4) and locking bar (5). The fifth wheel coupling must be closed when you do this (see the instructions on the next page regarding closing the fifth wheel coupling).



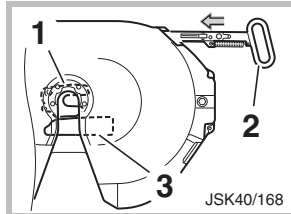
A second person is required to help close the lock. A large screwdriver can be used, for example, to pivot the lock jaw (1).
Under no circumstances should the lock jaw (1) be pivoted by hand. There is a risk of crushing.



- ▶ Get the second person to pull the handle (2) until the lock jaw (1) is free.
- ▶ Hold the handle (2) in this position.



- ▶ Using a large screwdriver, pivot the lock jaw (1) forwards until the locking bar (3) is free.



- ▶ Slowly move the handle (2) to the locked position.
- ▶ Lubricate the lock jaw (1) and locking bar (3) on all sides.



Before the next coupling up, the fifth wheel coupling must be opened (see section 3.3).

4.3 Test instructions

Depending on the conditions of use, but no later than every 50,000 km or every six months, the fifth wheel coupling, the mounting plate, the slider and the king pins should be checked:

- ▶ To ensure correct functioning
- ▶ For wear
- ▶ To ensure the correct position of the fastening elements (check prescribed torque values)
- ▶ For damage or distortion
- ▶ For cracks
- ▶ For corrosion
- ▶ To ensure adequate lubrication
- ▶ To ensure the smooth running of the mechanisms

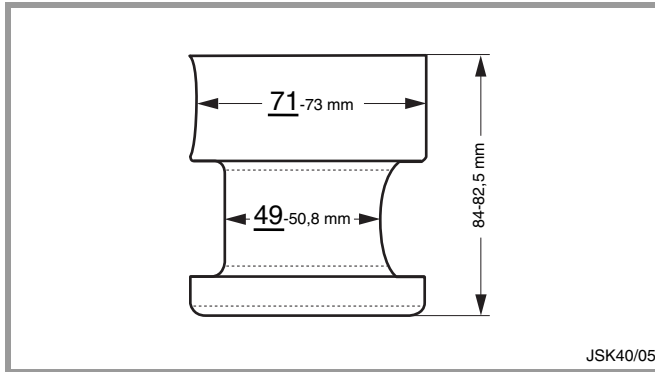
and repaired where necessary (see the appropriate JOST repair instructions at www.jost-world.com).

4.4 Checking for wear

Fifth wheel couplings and king pins are subject to more or less wear depending on the conditions in which they are used, and this wear is noticeable by play towards the front of the vehicle. Excessive play causes shocks and may lead to instability on the road and damage to the fifth wheel coupling and vehicle chassis. JOST fifth wheel couplings have a manual infinite adjustment facility for the locking mechanism to extend their service lives.

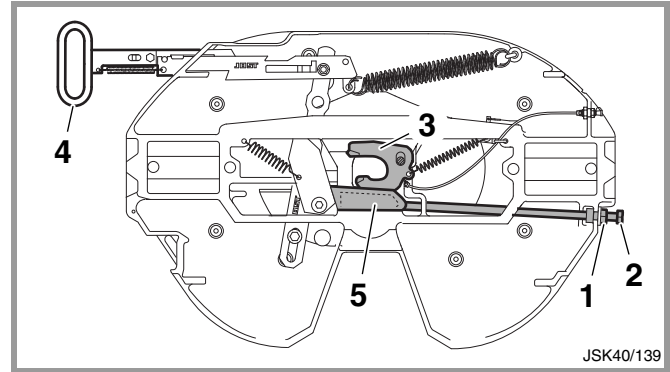


The wear on the king pin must not be compensated by the adjustment facility.



When the wear limit on the king pin has been reached, it must be replaced.
 After the king pin has been replaced, the locking mechanism must be adjusted again.
 Play caused by wear on the king pin should either be accepted if within the permitted wear limit for the king pin (see figure JSK 40/05) or should be rectified by fitting a new king pin.

4.5 Adjusting the locking mechanism



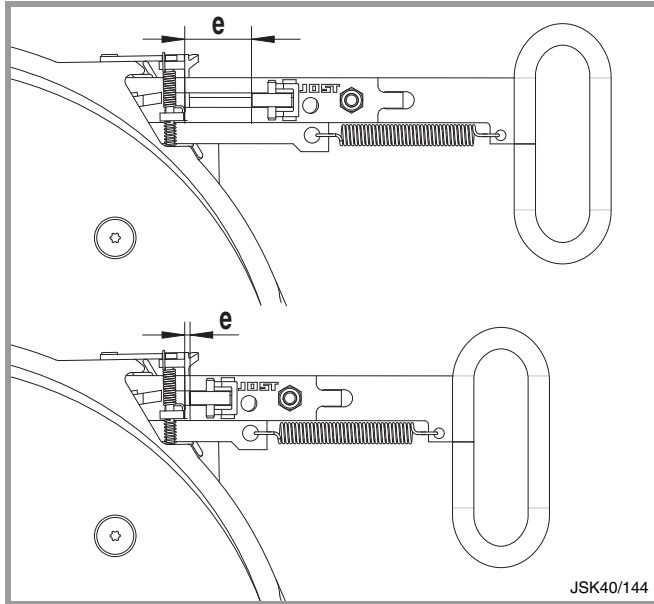
- 1 Lock nut
- 2 Adjusting screw
- 3 Lock jaw
- 4 Handle
- 5 Locking bar

The locking mechanism must be adjusted as follows using a semi-trailer without forced steering with a new king pin:

- ▶ Park the vehicle on flat, firm ground and uncouple the trailer.
- ▶ Undo the lock nut (1).
- ▶ Unscrew the adjusting screw (2) by approx. 15 turns.
- ▶ Couple the tractor unit up again.
- ▶ Swivel handle (4) in direction of travel and have an assistant hold it.
- ▶ Tighten the adjusting screw (2) again until the handle (4) starts to move (have an assistant check this).
- ▶ To adjust the recommended basic play of 0.3 mm, tighten the adjusting screw (2) by a further 1½ turns and secure it with the lock nut (1).

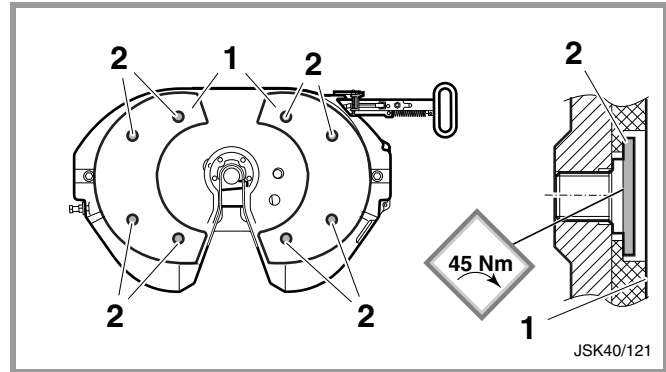
If there is still excessive play, the wearing ring and the lock jaw must be replaced as described in the repair manual.

4.6 Wear limit – locking mechanism



When new, the space e between the wear indicator and catch is around 50 mm and must be greater than 0 mm after each adjustment. When the wear limit is reached, i.e. when $e = 0$ mm, no more lock adjustments are possible. In this case, the wearing ring and lock jaw must be replaced as described in the repair instructions.

4.7 Wear limit – top plate liners



The top plate liners (1) must be checked for signs of wear and damage at regular intervals that depend on usage, but at least every 50,000 km or every six months. The top plate liners (1) must be replaced when they have worn to the top of the securing bolts (2).

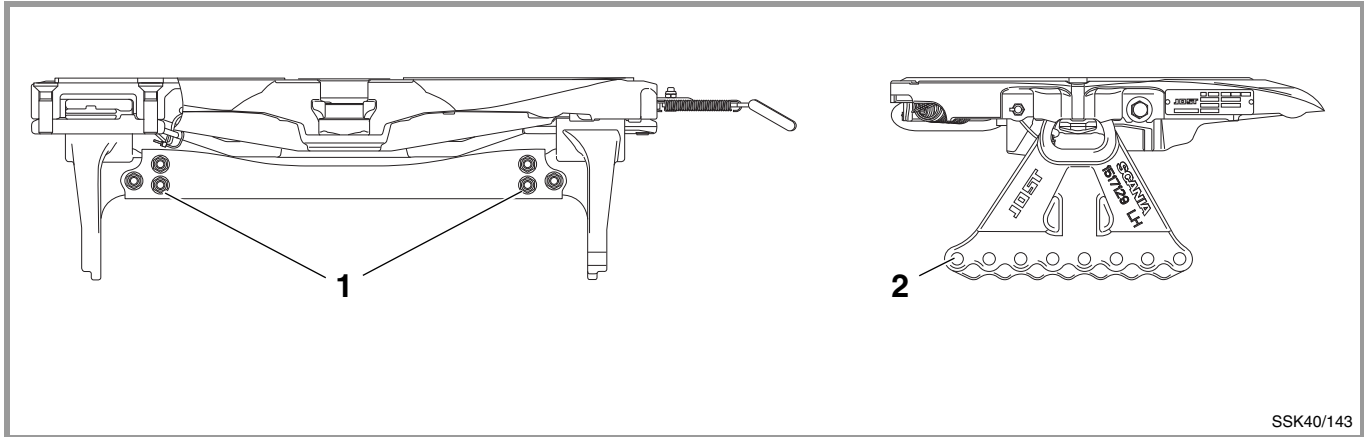
5.1 General installation instructions

To secure the JOST fifth wheel coupling of the JSK 42 K7xxxx series straight onto the Scania frame of the R + P series, 16 M20 bolts of strength class 10.9 (Scania part no. 1526002) should be used. These bolts must initially be tightened to a tightening torque of 360 ± 50 Nm. Each bolt must then be tightened another $90^\circ \pm 10$. To connect the traverses with the pedestals, tighten 6 M16 x 80 mm bolts of strength class 10.9 (Scania part no. 1523992) with 12 washers 17 x 30 x 6 mm (Scania part no. 807329) and 6 M16 locking nuts of strength class 10 (Scania part no. 1387576) to a tightening torque of 270 ± 40 Nm.



The fifth wheel coupling must be able to move freely and must not be in contact with any parts of the frame or flitch when the vehicle is being driven.

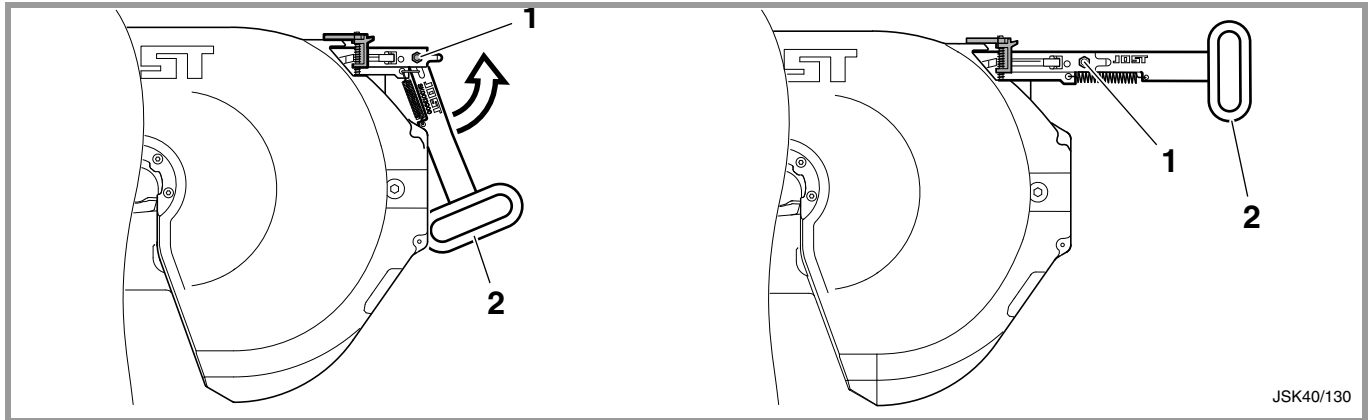
5.2 Installation of the fifth wheel coupling on Scania R + P series chassis



The tightening instructions specified here must be followed without fail.

- 1 Six M16 x 80 mm bolts, strength class 10.9, (Scania part no. 1523992), twelve 17 x 30 x 6 mm washers (Scania part no. 807329), six M16 lock nuts, strength class 10 (Scania part no. 1387576), see section 5.1 for tightening torque.
- 2 Sixteen M20 bolts, strength class 10.9 (Scania part no. 1526002), see section 5.1 for tightening torque.

5.3 Moving the handle to the operating position



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- ▶ Undo the screw connection (1).
- ▶ Swivel the handle (2) out.
- ▶ Tighten the screw connection (1) again, tightening torque 46 Nm.

