Repair manual for

JSK 36 fifth-wheel coupling
Foreword

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

This repair manual is designed to act as a guide to completing repair work on our fifth wheel couplings. It is essential that you use JOST spare parts. Modifications of any kind will render both the warranty and the type approval void.

Operation and assembly, together with the permitted.

Load data for the fifth wheel couplings are described in separate documents.

Table of contents

1 Safety instructions 4
2 Troubleshooting 5
3 Standard and special tools and auxiliary materials 6
  3.1 Standard tools 6
  3.2 Special tools 6
  3.3 Auxiliary materials 6
4 Repair work 7
  4.1 To remove and attach the pedestal 7
  4.2 To remove and install the bearing 7
  4.3 Overview of locking mechanism 8
  4.4 Removing and installing the locking mechanism 8
  4.5 Removing and installing the safety latch 10
  4.6 Removing and installing the bearing on the vehicle 10
  4.7 Wear test/ wear limits 11
  4.8 Function test 13
  4.9 To adjust the locking mechanism 14
5 Spare parts for version JSK36D/DV 15
6 Disposal instructions 16
1 Safety instructions

The relevant safety regulations in your country (for example Health & Safety at Work) apply for working with fifth wheel couplings and vehicles.

The relevant safety instructions included in the vehicle and semi-trailer's operating instructions must also be complied with.
## Troubleshooting

<table>
<thead>
<tr>
<th>Fault</th>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
</table>
| Fifth wheel coupling will not close. | 1. The king pin is too high.  
2. The skid plate is uneven, thus causing the king pin to be in the wrong position.  
3. Lock jaw deformed.  
4. Poor servicing.  
5. Double spring defective.  
6. Lever and/or handle buckled. | to 1. The skid plate should be at the same height or around 50 mm lower than the fifth wheel coupling.  
to 2. Replace the skid plate. Permissible flatness deviation 2 mm.  
to 3. Replace lock jaw SK 1489.  
to 4. Ease the mechanism and grease it.  
to 5. Replace double spring SK 2105-11.  
to 6. Replace/align lever SK 2107-25 and/or handle SK 2905-111 or SK 2905-106. |
| The fifth wheel coupling cannot be opened. | 1. Tractor unit not level or pulling.  
2. Poor servicing, damage to the lock jaw or locking bar, or incorrect locking mechanism adjustment. | to 1. Release the fifth wheel coupling's locking mechanism.  
to 2. The fifth wheel coupling can be opened by force as follows: Open the lock. Swivel the handle forwards and hold it extended as far as possible. With the aid of a second person, use a rod to hit the lever, e.g. SK 2107-25, in the area of the bent section on the opposite side of the fifth wheel coupling to release the bar. The clamp can also be released by screwing in the adjusting screw, e.g. SK 2905-51. Then rectify the poor servicing, check the locking mechanism parts for signs of damage and repair or reset the locking mechanism as necessary (see section 4.9). |
| Fifth wheel coupling does not stay in the ready position. | 1. Lock jaw deformed.  
2. Spring defective.  
3. Poor servicing | to 1. Replace lock jaw SK 1489.  
to 2. Replace spring SK 847.  
to 3. Clean and regrease the area of the locking mechanism. |
| Movement between the fifth wheel coupling and the semi-trailer (knocking). | 1. Bearing has excessive play.  
2. Locking mechanism has excessive play. | to 1. Replace rubber sleeve SK 2905-94 if it is worn (see section 4.2)  
to 2. Check king pin, replace if it is worn. If the king pin is in good condition, but there is still play, adjust the locking mechanism (see section 4.9). If this does not resolve the problem, replace lock jaw SK 1489 or wearing ring SK 2105-19 (only in the case of DV version). |
3 Standard and special tools and auxiliary materials

3.1 Standard tools

3.2 Special tools

3.3 Auxiliary materials

High-pressure grease (EP) with MoS2 or graphite additive, for example:
BP L21 M
BP HTEP 1
Esso multi-purpose grease M
Shell Retinax AM
Turmogear grease B2 from Lubcon (www.lubcon.com)
4 Repair work

Worn, damaged and cracked parts must always be replaced. Repair welds must not be used. After completing the repair work, the entire coupling locking mechanism must be greased and its function tested.

The item numbers in the illustrations refer to the spare parts lists in section 5.

With the diagrams the work steps should be carried out in alphabetical order (e.g. a, b, c). Assembly is carried out correspondingly in reverse order. Instructions for assembly are identified in the diagram number of the diagram itself with a diamond ◇. The torque values shown in the illustrations are required for the subsequent assembly process. The prescribed tightening torques must be adhered to!

4.1 To remove and attach the pedestal

4.2 To remove and install the bearing
4 Repair work

4.3 Overview of the locking mechanism

4.4 To remove and install the locking mechanism

⚠ The installation and removal of the lock jaw and wearing ring must only be carried out with the double spring (9) released. Risk of injury!
First tighten the crown nut (8) and then loosen it again by one 1/2 turn. Secure the crown nut (8) with a splint.
4 Repair work

4.5 To remove and install the safety latch

4.6 To remove and install the bearing on the vehicle
4 Repair work

4.7 To check for wear/wear limits

- When the wear limit is reached, the relevant component must be replaced (see section 4.4) and/or the pin system reworked.

- When the wear limit is reached, the king pin must be replaced.

- If the pin system is worn, repair the system surface at a radius of 37 mm with surface application welding and appropriate finishing.

- The distance from the tip of the bar to the side edge of the pin system must be no more than 24 mm for a repaired coupling with the correct king pins.

- The bearing should exhibit a play of no more than 5 mm. To check, lift the coupling plate with a lifting lever.
Locking mechanism when new
If the fifth wheel coupling has been closed correctly, the distance of the locking edge to the inner edge of the plate must be at least 10 mm. If the distance is less than 10 mm, the handle (7) and the lever (6) must be checked for warping.

Locking mechanism wear limit
The locking mechanism is worn if the distance between the bearing eyelet of the lever and the abutment rib is 0 mm. The locking mechanism cannot be adjusted any further at this point.

The material thickness on the top of the coupling plate is 8 mm. The fifth wheel coupling must be replaced if the material thickness is < 4 mm at any point. In the external area (50 mm wide), however, a minimum thickness of 2 mm is permitted.

Service instructions for JOST sliders of type JSK SL

If the fifth wheel coupling is worn on one slider, this must be replaced once per slider if the wall thickness of the pedestal (12) is at least 10 mm on each side before the coupling plate is replaced.

The upper surfaces of the pedestals must be greased before assembly with high-pressure grease (EP).
4.8 Function test

During the uncoupling process, the engaging edge must be raised by at least 6 mm. The test is made when the king pin (A) (new condition) presses on the bar tip (B) and the handle is held in the direction indicated by the arrow. If the gap is less than 6 mm, the lever (6), the handle (7) or the locking bar (4) must be checked for signs of deformation and wear.
4.9 To adjust the locking mechanism

- Undo the hexagonal lock nut (14).
- Unscrew the adjusting screw (14) until it is no longer in contact with the stop of the locking bar (4).
- Apply a few gentle knocks on the handle (7) to ensure that the locking bar (4) is in its terminal position or re-couple the semi-trailer.
- With the handle (7) swivelled forwards, turn the adjusting screw (14) back to the right until it contacts with the tip of the bar and the handle (7) starts to move in the direction of opening.
- To set the basic play of 0.3 mm, turn the adjusting screw (14) a further 1 1/2 turns to the right and secure against turning with the hexagonal lock nut (14).
# 5 Spare parts for version JSK36D/DV

<table>
<thead>
<tr>
<th>Item</th>
<th>Designation</th>
<th>Serial No./Note</th>
<th>Order No.</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lock jaw</td>
<td>SK 1489</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Spring</td>
<td>SK 847</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Bolt D version</td>
<td>SK 2921-01</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Locking bar</td>
<td>SK 2905-06</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Locking bolt</td>
<td>Complete</td>
<td>SK 2921-02</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Lever</td>
<td>SK 2107-25</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Handle</td>
<td>Up to serial No. xx38xxxxxx</td>
<td>SK 2905-01</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>From serial No. xx89xxxxxx</td>
<td>SK 2905-11</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Hexagonal screw</td>
<td>Complete</td>
<td>SK 1513</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Double spring</td>
<td>SK 2106-11</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Wearing ring</td>
<td>DV version</td>
<td>SK 2105-19</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>Cylinder screw</td>
<td>DV version</td>
<td>SK 2121-07</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>Splint</td>
<td>Up to serial No. xx38xxxxxx</td>
<td>SK 1790</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>Spring hook</td>
<td>Up to serial No. xx38xxxxxx</td>
<td>SK 1436</td>
<td>1</td>
</tr>
<tr>
<td>14</td>
<td>Adjusting screw</td>
<td>Up to serial No. 988000xxxxxx</td>
<td>SK 2905-04</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>From serial No. 988004xxxxxx</td>
<td>SK 2905-11</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>Pedestal (1)</td>
<td>BH 172 mm</td>
<td>SK 2904-41</td>
<td>2</td>
</tr>
<tr>
<td>15a</td>
<td>Pedestal (4-hole version)</td>
<td>(spare part only)</td>
<td>SK 1525</td>
<td>2</td>
</tr>
<tr>
<td>16</td>
<td>Rubber sleeve</td>
<td>Complete</td>
<td>SK 2905-94</td>
<td>2</td>
</tr>
<tr>
<td>17</td>
<td>Locating pin</td>
<td>With item 18 + 21 up to serial No. xx38xxxxxx</td>
<td>SK 2921-24</td>
<td>2</td>
</tr>
<tr>
<td>18</td>
<td>Splint</td>
<td>Up to serial No. xx38xxxxxx</td>
<td>SK 2921-04</td>
<td>2</td>
</tr>
<tr>
<td>19</td>
<td>Locating pin</td>
<td>With item 21 from serial No. xox9xxxxxx</td>
<td>SK 2904-99</td>
<td>2</td>
</tr>
<tr>
<td>20</td>
<td>Hexagonal screw</td>
<td>Complete from serial No. xox9xxxxxx</td>
<td>SK 2921-29</td>
<td>4</td>
</tr>
<tr>
<td>21</td>
<td>Plug</td>
<td>JS 1101-012</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Hexagonal screw</td>
<td>Complete from serial No. xox9xxxxxx</td>
<td>SK 3521-03</td>
<td>1</td>
</tr>
<tr>
<td>23</td>
<td>Spring loop complete</td>
<td>from serial No. xox9xxxxxx</td>
<td>SK 2921-30</td>
<td>1</td>
</tr>
<tr>
<td>24</td>
<td>Latch</td>
<td>Complete from serial No. xox9xxxxxx</td>
<td>SK 3121-52</td>
<td>1</td>
</tr>
<tr>
<td>25</td>
<td>Handle</td>
<td>SK 3105-113</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Safety lever</td>
<td>SK 2905-106</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Cable</td>
<td>Complete</td>
<td>SK 3521-02</td>
<td>1</td>
</tr>
<tr>
<td>29</td>
<td>Hexagonal screw</td>
<td>Complete</td>
<td>SK 2421-50</td>
<td>1</td>
</tr>
<tr>
<td>30</td>
<td>Clamping pin</td>
<td>000.003.027</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Retrofit kits</th>
<th>Serial No./Note</th>
<th>Order No.</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>Handle extension</td>
<td>with item 28 + 29</td>
<td>SK 2921-031</td>
<td>1</td>
</tr>
</tbody>
</table>

- **Spare parts for D/DV version**
- **Spare parts only for DV version**
The mounted parts are valuable raw materials that can be recycled. They can be split into plastics, rubber and metallic materials. The plastics and rubber materials are identified pursuant to VDA Recommendation 260. All oil and grease is to be cleaned off the parts before their disposal.