

Bogsering/Towing

|     |   |         |        |
|-----|---|---------|--------|
| VBG | 07-0401   | 160x100 | 120x55 |
| Max |  | 28 T    | 10 T   |
| Max |  | 6 T     | 3 T    |

VBG GROUP TRUCK EQUIPMENT AB

# 20 23

Guidelines for inspection and servicing  
**Manual couplings**



# General information

## General

The components used to connect a vehicle and trailer are exposed, even during normal use, to very high tensions. Regular service and maintenance is a prerequisite if the coupling is to function well during its entire service-life. Clean and lubricate the coupling every week.

The length of the service intervals depend on the type of trailers, the loads, roads and climatic conditions etc. The service should ideally be carried out in conjunction with other inspection of the vehicle, e.g. every 60,000 or 90,000 km.

***If daily inspection or safety checks show that any of the wear limits have been exceeded, or that the function of the product has been impaired, servicing must be carried out immediately.***

***If any of the product's wear limits have been exceeded, this is an indication that other parts also require servicing.***

Check that all type plates and warning/information labels are legible and have not been painted over, washed off or otherwise damaged. Illegible labels must be replaced and can be ordered from VBG Truck Equipment.

If the coupling is damaged due to e.g. jackknifing, off-road driving, reversing or collision, the coupling must be replaced.

Always follow VBGs instructions and the vehicle manufacturer's bodybuilding instructions.

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## Guidelines for inspection and servicing Manual couplings 2023





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Version d, 12/04/2023

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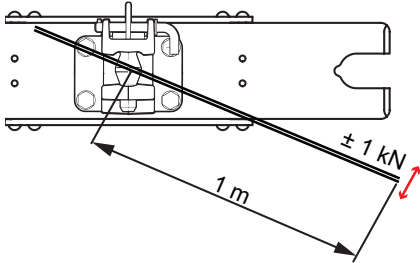
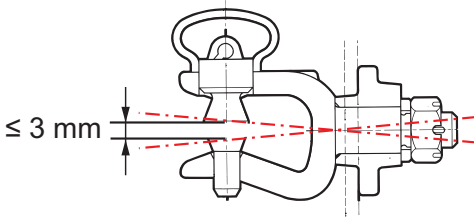
## Explanation of symbols



|   |   |
|---|---|
|  | <b>Severity</b>   |
|  | 3 = STOP to ensure future use.  |
|  | 2 = Rectify as soon as possible, within four weeks.                         |
|  | 1 = Rectify when able or during next service. Within no more than one year. |


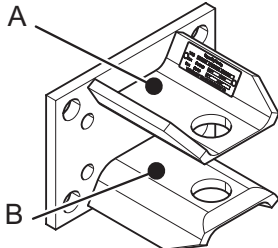

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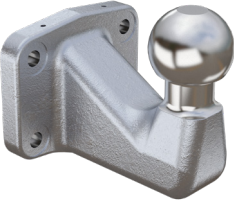
| Checkpoint   | Symptom   | Fault   |
|--|---|---|
| <p>Beam sleeve/coupling jaw.</p>  | <p>The coupling jaw does not rotate.</p>                  | <p>The coupling cannot rotate due to a rusty horizontal bolt.</p>       |
| <p>Beam sleeve/coupling jaw.</p>   | <p>The coupling rotates when no trailer is connected.</p> | <p>The locking ball is stuck.</p>                                       |
| <p>Beam sleeve/coupling jaw.</p>   | <p>The coupling is loose and rattles.</p>                 | <p>Significant vertical play due to wear in the attachment package.</p> |
| <p>Bolt/coupling jaw.</p>  | <p>Significant play, rattles.</p>                         | <p>Wear bolt and coupling jaw.</p>                                      |

| Inspection method   | Requirements, wear limits, etc.   |  <b>Instructions for rectification</b><br>①②③   |
|---|---|--|
| <p>Visually check function, attachment, damage, wear.<br/>Try to rotate the coupling by inserting a rod through the coupling mouth.</p>  | <p>The coupling should rotate at 1,000 Nm.</p>  | <p>② Replace coupling if it cannot be rotated.</p>   |
| <p>Check whether the coupling has a distinctive position when it is rotated.</p>  | <p>The coupling should be fitted upright in the driving position.</p>   | <p>① Remove the spring-loaded ball from the top of the drawbeam sleeve. Lubricate the unit and refit. Alternatively, remove the coupling jaw and lubricate the ball from the inside.</p> |
| <p>Check the coupling's vertical play by lifting the coupling jaw.</p>  | <p>Vertical play max. <math>\pm 1.5</math> mm, see picture (measured in the centre of the coupling jaw hole).</p>   | <p>③ Replace the coupling if there is play greater than 3 mm.</p>  |
| <p>Measure the diameters of the coupling jaw's upper and lower holes using a caliper gauge.<br/>Measure the coupling bolt's three diameters: upper, lower and in the centre.</p>  | <p>Coupling jaw: upper hole max. <math>\varnothing 62</math> mm, lower hole max. <math>\varnothing 32</math> mm.<br/>Bolt: top dimension min diameter <math>\varnothing 28</math> mm, top section min. <math>\varnothing 58</math> mm.<br/>Centre: <math>\varnothing 40</math> min <math>\varnothing 35</math> mm, <math>\varnothing 50</math> min <math>\varnothing 45</math> mm, <math>\varnothing 57</math> min <math>\varnothing 52</math> mm</p> | <p>② Replace depending on the measurement results.</p>   |


| Checkpoint   | Symptom  | Fault   |
|--|--|---|
| <p>Coupling bolt and coupling jaw.</p>  | <p>Significant play.</p>   | <p>Wear bolt/coupling jaw.</p>                          |
|  | <p>Coupling bolt difficult to fit.</p>   | <p>Deformations.</p>                                    |
|  | <p>The locking pin is missing.</p>   | <p>The coupling bolt cannot be locked.</p>              |
| <p>Welded joints</p>   | <p>Visible cracks, any rust stains around cracks</p>  | <p>Cracks due to severe deformation after overload.</p> |

| Inspection method   | Requirements, wear limits, etc.  |  <b>Instructions for rectification</b><br>①②③ |
|---|--|--|
| Measure the diameters of the coupling jaw's upper and lower holes using a caliper gauge. Measure the coupling bolt's minimum diameter: upper, lower and in the middle.  | The coupling jaw's upper and lower holes, max. Ø38 mm.<br>The bolt's minimum diameter, min. Ø31 mm.  | ② In the event of excessive wear, replace the coupling jaw and/or coupling bolt.   |
| Visually check the upper and lower parts of coupling jaw and the coupling's contact against the beam. Measure the distance between plane A and B respectively, both inside next to the attachment plate and as far out/back as possible | The tow jaw's upper and lower sections A and B respectively must be plane-parallel within 5 mm and the coupling jaw must be fitted tightly against the drawbeam.  | ③ In the event of deformations, the tow jaw must be replaced.  |
| Visual inspection.  | The locking pin must be fitted.  | ② Replace the locking pin.   |
| Visual inspection<br>  | No cracks or welds are permitted   | ① In the event of cracks or welds, the tow jaw must be replaced  |

## Tow hook 401, Ball coupling

| Checkpoint   | Symptom   | Fault   |
|--|---|---|
| <p><b>Tow hook 401</b><br/>The eye's contact surfaces against the tow coupling</p>  | Significant play  | Wear U-clamp  |
| Locking flap/cotter and U-clamp.   | The locking flap does not move into the locked position, difficult to fit the locking pin and vice versa. | Deformations.   |
| Welded joints.   | Visible cracks, any rust marks around the crack.  | Cracks.   |
|  |   |   |
| <p><b>Ball coupling</b><br/>Attachment plane against beam.</p>                    | Obvious distortion in the ball neck and gap between the drawbeam and attachment plate.                    | Deformations, gap between the drawbeam and the ball coupling's attachment plate and the drawbeam. |
|  | Visible cracks, any rust stains around cracks   | Cracks  |



| Inspection method                                   | Requirements, wear limits, etc.  |  <b>Instructions for rectification</b><br>①②③ |
|---|--|--|
| Measure the smallest diameter using a caliper gauge | Min. Ø31 mm in the most worn area  | ② Replace the tow hook when the minimum diameter is less than Ø31 mm   |
| Check that the locking flap is working as intended. | The locking flap and cotter must be easy to close and open.                        | ② If any part is deformed, the tow hook must be replaced.  |
| Visual inspection.                                  | No cracks or welds are permitted.  | ③ Replace the tow hook if cracks are found.  |
|   |  |  |
| Visual inspection.                                  | The attachment plate must lie flush with the drawbeam, with no obvious distortion. | ② If the ball coupling is overloaded with deformation as a result, the ball coupling must be replaced.                           |
| Visual inspection.                                  | No cracks or welds are permitted   | ③ If there are cracks, replace the ball coupling.  |







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