

## Proposed amendment to GCU Appendix 9

### Amendment history

Amendment made by	Date	Paragraph	Amendment
Jean-Marc Blondé	30/1/2018		Drafted following TTI WG meeting of Oct 2017
Jean-Marc Blondé	18/5/2018		Corrections from risk analysis
Approved by TTI WG	21/3/2018		As per minutes of TI WG meeting of March 2018
WU SG decision	29/5/2018		See minutes of WU SG meeting of May 2018

<b>Title</b>	Codes 5.2.3.2, 5.2.4 and 5.3.3 relating to buffer heads and plungers
<b>Proposed amendment concerns RU/keeper/other:</b>	SBB Cargo AG
<b>Proposed amendment concerns:</b>	<input checked="" type="checkbox"/> Appendix 9 <span style="margin-left: 150px;"><input type="checkbox"/> Appendix 11</span>
<b>Proposer:</b>	Jean-Marc Blondé
<b>Location, date:</b>	Olten, 30/1/2018
<b>Concise description:</b>	Irregularities on buffer heads, including plastic inserts

## 1. Starting point (current situation):

### 1.1. Introduction

An analysis conducted within a small working group has shown that 212 freight wagons of various types were removed from service over the course of 2016 due to grooves.

### 1.2. Mode of operation

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### 1.3. Anomaly/description of problem

The analysis shows that the criteria for codes 5.2.3.2 and 5.3.3 relating to buffer heads and plungers must be reviewed in detail. The wear limits need to be redefined for both codes, and further deviations must be codified.

### 1.4. Does this concern a recognised code of practice\* (e.g. DIN, EN)?

No  Yes (state which):

\* "a written set of rules that, when correctly applied, can be used to control one or more specific hazards." (Source: Regulation (source: Regulation EC 352/2009, Article 3)

"Technical provisions laid down in writing or conveyed verbally and pertaining to procedures, equipment and modes of operation which are generally agreed by the populations concerned (specialists, users, consumer and public authorities) to be suitable for achieving the objective prescribed by law, and which have either proven their worth in practice or, it is generally agreed, are likely to within a reasonable period of time". (Source: BMJ Handbuch der Rechtsförmlichkeit – guide published by German Ministry of Justice)

## 2. Target situation

### 2.1. Elimination of anomaly/problem (goal)

### 3. Additional text and/or modifications (relates to proposed amendments to GCU Appendix 9):

Amendment colour code:

Black: Current text, for info and remains unchanged

Red: new text

Blue: (if crossed out): text to be deleted

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Buffer head	5.2			
	5.2.1	Missing, broken, distorted such that it is no longer functional, rectangular plate twisted	Detach wagon	5
	5.2.2	Fastening on plunger		
	5.2.2.1	- one third or more of rivets or bolts loose	Detach wagon	4
	5.2.2.2	- fewer than one third of rivets or bolts loose	K	3
	5.2.3	Contact surfaces		
	5.2.3.1	- not lubricated	Lubricate. If not possible, detach wagon	5
	5.2.3.2	<del>several sharp-edged grooves measuring &gt; 1 mm in depth and &gt; 50 mm in length</del> - more than 2 sharp-edged grooves measuring > 3 mm in depth and > 50 mm in length	Detach wagon	5
	5.2.4	Buffer head insert or plastic plate		
	5.2.4.1	- broken, cracked right through, missing	Detach wagon	5
	5.2.4.2	- Crumbling/melding > 3 mm in depth and > 25 mm in length	K	4
5.2.4.3	- Fastening: 2 or more loose/missing bolts	Detach wagon	5	
Plunger	5.3			
	5.3.1	Missing, broken	Detach wagon	5
	5.3.2	Cracked at the transition to buffer head	Detach wagon	5
	5.3.3	Function jeopardised <ul style="list-style-type: none"> <li><del>several sharp-edged grooves measuring &gt; 1 mm in depth and &gt; 15 mm in length</del></li> <li>• more than 2 sharp-edged grooves distributed over the circumference, each &gt; 2 mm in depth and &gt; 60 mm in length</li> </ul>	Detach wagon	5

**4. Reason:**

**5. Assess potential positive/negative impacts**

*Assess the possible positive and negative effects (operations, costs, administration, interoperability, safety, competition, etc.) on a scale of 1 (very low) to 5 (very high):*

*Justify observations*

Impacts:

Operations, Interoperability, Competitiveness, Costs, Administration: value 3

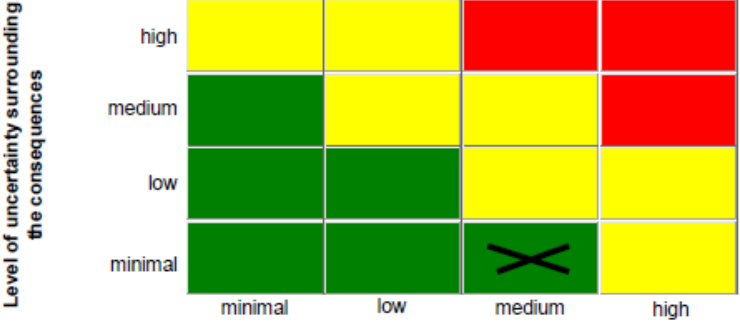
Safety: value 4

## 6. Safety appraisal of proposed amendment

Description of actual/target system, and scope of change to be made (see points 1 and 2).

Performance of risk analysis is unnecessary where only recognised standards are implemented.

Risk analysis conducted by:

<b>6.1 Does the change have impact on safety?</b>	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
<p>Explanation:</p> <p>The relevance of the amendment in terms of safety relates to the need to ensure optimal safety levels (Appendix 9 to the GCU, part of the damage catalogue (5.3.2.2) with weighting (5), DIN 27202-2).</p> <p>Safety was considered based on an assessment report with a general appraisal of the buffer head and plunger.</p>	
<b>6.2 Is the change significant?</b>	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
<p>Reason:</p> <p><b>Results of preselected criteria:</b>                  Degree of innovation: low                  Level of complexity: low                  Consequences of failure: critical                  Traceability: high                  Reversibility: yes</p>  <p style="text-align: center;">Assessment of the consequences of a failure</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin-left: auto; margin-right: auto;"> <p><i>To delete selected criteria please click here</i></p> </div>	

<b>6.3 Determining and classifying risk</b>	<input type="checkbox"/> N/A
<p><b>6.3.1 Effect of change in normal operation:</b> Grooves are formed from foreign matter coming into contact with the buffer head. If the buffer head is not lubricated sufficiently, grooves may also occur due to contact with steel under application of force.</p> <p>The experts' view is that in order for the buffer to work properly, it is crucial that the buffer is sufficiently lubricated and that vehicles are coupled properly. The amendment will ensure that there is no increased hazard under normal operation, as determined in the assessment report</p> <p><b>6.3.2 Effect of change in the event of disruption/deviation from normal operation:</b> There are mechanisms for action in Appendices 9 and 10 to the GCU for risk control in cases of insufficient lubrication of the buffer head or attainment of tolerance values.</p> <p><b>6.3.3 Potential misuse of system:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (describe possible misuse):</p>	
<b>6.4 Have safety measures been applied?</b>	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
<p><i>For each type of risk, one of the following risk acceptance criteria is to be selected:</i></p> <ul style="list-style-type: none"> <li>• <i>Code of practice</i></li> <li>• <i>Use of reference system</i></li> <li>• <i>Explicit risk assessment</i></li> </ul>	
<b>6.5 Has a risk analysis been submitted to the assessment body?</b>	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
<p>Assessment body:</p> <p>Attach the verdict reached by the assessment body</p>	[Appendix]