

Amendment proposal Appendix 10 to the GCU

Record of amendments

Amended by	Date	Paragraph	Amendment
Thomas Thümmler	02/01/2023	3.8.1 Annex 4 pict. 5 Appendix 10	New amendment proposal
WG Maintenance	31/01/2023	3.8.1 Annex 4 pict. 5 Appendix 10	Adaptation of the first proposal (see minutes of the Maintenance WG meeting)
WG MNT decision	18/04/2023	3.8.1 Annex 4 pict. 5 Appendix 10	Approval (see minutes of the Maintenance WG meeting)
WU SG decision	23/05/2023	3.8.1 Annex 4 pict. 5 Appendix 10	WU SG approval
GCU JC decision	07/06/2023	3.8.1 Annex 4 pict. 5 Appendix 10	GCU JC approval

Title	New limit values for the dimensions of composite brake blocks
Proposed amendment made by: RU/keeper/other:	DB Cargo AG
Proposed amendment of:	<input checked="" type="checkbox"/> Appendix 10
Proposer:	Thomas Thümmler
Location, date:	Mainz, 02/01/2023
Concise description:	Implementing a limit value for the dimensions of the brake block

1. Starting point (current situation):

1.1. Introduction
Sections 3.7 and 3.8 of Appendix 10 describe the requirements for brake blocks. For cast iron brake blocks, a minimum thickness of 10mm at the thinnest point is given. For composite brake blocks, the limit value is related to “one-sided wear”.
1.2. Mode of operation
-
1.3. Anomaly/description of problem
The limit value given should not only refer to “one-sided wear” but should apply generally to the thinnest point of the brake block.
1.4. Does this concern a recognised code of practice* (e.g. DIN, EN)?
<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (state which): Similar adaptation as for cast-iron pads. Reference system "cast iron brake block".
<small>* “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)</small>
<small>"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)</small>

2. Target situation

2.1. Elimination of anomaly/problem (solution sought)
The text on the minimum brake block thickness for composite brake blocks should be adapted to match that of the cast iron brake blocks. The reference to “one-sided wear” (number 3.8.1, last indent) should be deleted. Where appropriate, one-sided wear should be included as an independent criterion in 3.8.1.

3. Amendments/additional text (relates only to proposed amendments to GCU Appendix 10):

Amendment colour code:

Black: text in force remains unchanged, for information.

Red: new text

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

3.8.1 Composite brake blocks **are to be replaced** when the following defects/damage are observed:

- blocks are missing;
- blocks are broken radially from the friction surface to the plate/edge of the plate (Annex 4, picture 7);
- friction material shows visible signs of crumbling over more than ¼ of the length of the block;
- blocks display metal inclusions in the friction surface (Annex 4, picture 1);
- friction material has become detached from plate over a length of > 25 mm (Annex 4, picture 2);
- friction material has cracked parallel to the wheel circumference over a length of > 25 mm (Annex 4, picture 4);
- ~~blocks are less than 10 mm thick, measured at the thinnest point seen from the outside (Annex 4, picture 5).~~
- **the minimum thickness of the brake blocks, measured at the thinnest point as seen from the outside, is less than 10 mm.**

Appendix 10 Annex 4

Picture 5:

~~Significant difference in the block's thickness at the top and bottom ends (one-sided wear).~~

The thickness at the thinnest point is below 10 mm.

4. Reason:

The current regulations do not define minimum dimensions in the case of homogeneous wear.

5. Evaluation of the possible positive and negative impacts

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

Reasoning behind amendment:

Positive effects:

Removing ambiguity in brake safety (Value +3).

Effects on costs, administration (Value +1).

Adapting the text according to the UIC 543-1 brake test protocol (Value +3).

6. Risk analysis 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:

6.1. Does the change have an impact on safety?	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Reason: Yes, it has a positive impact as danger can be avoided.	
6.2. Is the change significant?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
Reason:	
6.3. Determining and classifying risk	<input checked="" type="checkbox"/> N/A
6.3.1. Effect of change in normal operation: 6.3.2. Effect of change in the event of disruption/deviation from normal operation: 6.3.3. Potential misuse of system: <input type="checkbox"/> No <input type="checkbox"/> Yes (describe possible misuse):	
6.4. Have safety measures been applied?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
For each type of risk, one of the following risk acceptance criteria is to be selected: <ul style="list-style-type: none"> • Code of practice • Use of reference system • Explicit risk assessment 	
6.5. Has a risk analysis been submitted to the assessment body?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
Assessment body: Attach the verdict reached by the assessment body	[Appendix]