

## Amendment proposal to GCU Appendix 10

### History

Amended by	Date	Paragraph	Amendment
ALAVOINE Charles Antoine, WG UIC maintenance	2019/2/13	App10, 3.7/3.8	First proposal draft
WG UIC Maintenance	2019/4/4	App10, 3.7/3.8	Final version
Wagon User UIC Study Group	2019/5/22	App10, 3.7/3.8	Approval
GCU CC	2019/6/18	App10, 3.7/3.8	Approval

<b>Title</b>	Updating of Appendix 10, 3.7 and 3.8
<b>Proposed amendment made by (RU / keeper / other body):</b>	SNCF / WG Maintenance (GCU Appendix 10)
<b>Proposed amendment made by</b>	App10, 3.7/3.8
<b>Proposer:</b>	Charles Antoine ALAVOINE
<b>Location, date:</b>	Reims, 13 and 14. February 2019
<b>Concise description:</b>	No instructions for replacing brake blocks on double brake block holders are provided in Appendix 10, Part B, Chapter 3.

**1. Starting point (current situation):**

<b>1.1. Introduction</b>
If a brake block is being replaced in a double brake block holder, it is mandatory that the second block must be replaced at the same time (even if in good condition) in order to ensure homogenous contact pressure on the wheel.
<b>1.2. Mode of operation</b>
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<b>1.3. Anomaly / description of problem</b>
The GCU is at the centre of the relationship between RUs and keepers. It must be written in a way that is clear, easy to apply and unambiguous for all parties. It must be made clear that both brake blocks must always be replaced on double brake block holders.

<b>1.4. Does this concern a recognised code of practice* (e.g. DIN, EN)?</b>
<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (state which):
<p>* "Code of practice: a written set of rules that, when correctly applied, can be used to control one or more specific hazards." (source: (Source: Regulation EC 352/2009, Article 3)</p> <p>"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: (Source: BMJ Handbuch der Rechtsförmlichkeit – German Ministry of Justice)</p>

## 2. Target situation

### 2.1. Resolution of the error/issue (envisaged solution)

*(Editorial note: Please note the amendment proposals for A2019-06 and A2019-07 – starred points)*

#### 3.7\* Cast-iron brake blocks

##### 3.7.1 Cast-iron brake blocks that are worn, broken or missing must be replaced.

The minimum thickness of brake blocks, measured at the thinnest point as seen from the outside, must be 10 mm.

Brake blocks

- with an incipient crack shall not be considered as broken,
- shall be considered broken if they are only held in place by their metal reinforcement layer.

##### 3.7.2 On double brake block holders (Bgu), when one of the cast-iron blocks is replaced, the other block must also be replaced in all cases.

#### 3.8\* Composite brake blocks

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 Figure 7);
- friction material shows visible signs of crumbling over more than  $\frac{1}{4}$  of the length of the block;
- blocks display metal inclusions in the friction surface (Annex 4, Figure 1);
- friction material has become detached from plate over a length of > 25 mm (Annex 4, Figure 2);
- friction material has cracked parallel to the wheel circumference over a length of > 25 mm (Annex 4, Figure 4);
- blocks are less than 10 mm thick, measured at the thinnest point seen from the outside (Annex 4, Figure 5).

3.8.2 Composite brake blocks are **not to be replaced if**:

- they are partially cracked or cracked straight across at the designated breaking-point (Annex 4 Figure 3);
- there is incipient radial cracking in the block material (Annex 4, Figure 6);
- there are indications of heavy thermal stress such as “white film” on the surface of the contact area and down to a depth of around 10 mm (Annex 4, Figure 8);
- there is a branched thermal crack pattern, mainly axial, and a carbonised layer (Annex 4, Figure 9).

3.8.3 Where several types of brake block are approved and marked as suitable for use on a wagon, all the brake blocks around a single wheelset must be of the same type.

##### 3.8.4 On double brake block holders (Bgu), when one of the composite brake blocks is replaced, the other block must also be replaced in all cases.

**3. Additional text and/or changes relate only to proposed amendments to GCU Appendix 10**

We are asking for amendments of 3.7/3.8 App10 according the above changes proposal.

**4. Reason:**

Specific instructions.

**5. Assess potential positive/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). Justify observations*

Positive impacts (+5) on:

- costs, as blocks that are not replaced will, at a minimum, wear prematurely,
- safety, as such damage can result in an operating incident.

Impacts on costs, administration, interoperability, safety, competitiveness:

Costs: see below

Administration 1 (no impact)

Interoperability: 1 (no impact)

Safety: 1 (no impact/instructions)

Competitiveness: 1 (no impact)

## 6. Safety appraisal of proposed amendment

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

The risk assessment is rendered invalid inasmuch as only recognised regulations are implemented.

Risk assessment conducted by:

<b>6.1. Does the change made impact on safety?</b>	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
Reason: No change to the intended status; clearer instructions for the workshop.	
<b>6.2. Is the change significant?</b>	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
Reason: Clearer description of procedure. No change to the instructions provided	
<b>6.3. Determining and classifying risk:</b>	<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):	
<b>6.4. Have safety measures been applied?</b>	<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"> <li>• Code of practice</li> <li>• Use of reference system</li> <li>• Explicit risk estimate</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
Assessment body: Attach the verdict reached by the assessment body:	[Appendix]