

Amendment Proposal Appendix 10 to the GCU

Record of amendments

Amended by	Date	Paragraph	Amendment
Burkhard Lerche	27/2/2017	Chap. B	
Maintenance WG (Appendix 10)	18/4/2018		Final version

Title	Updating Chapter B (dealing with wagons after specific incidents)
Proposed amendment made by: RU/keeper/other:	DB Cargo AG
Proposed amendment to:	<input checked="" type="checkbox"/> Appendix 10
Proposer:	Burkhard Lerche
Location, date:	Frankfurt am Main, 27/2/2017
Concise description:	Updating Chapter B (dealing with wagons after specific incidents) with integration of standard EN 15313:2016

1. Starting point (current situation)

1.1. Introduction

1.2. Mode of operation

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1.3. Anomaly/description of problem

Standard EN 15313:2016 not fully taken into account in Chapter B.

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

No Yes (state which): EN 15313:2016

* "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 (solution sought)

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

Amendment colour code:

Black: Current text, for info and remains unchanged

Blue: new text

Blue if crossed out: text to be deleted

B – HANDLING OF WAGONS AFTER SPECIFIC INCIDENTS

0 Principle

After specific incidents, the user RU must ensure that any damage or presumed damage that the wagon has suffered will not give rise to consequential damage. To this end, this chapter sets out a number of ~~additional~~ provisions to be complied with when returning the wagon to running order.

~~The decision on whether the wagon is fit for use rests with the keeper.~~

~~These additional tests are designed~~ The user RU shall perform additional tests to ensure that no wagon damage ~~such as deformation of the bogie and/or underframe or cracking~~, which ~~can~~ ~~jeopardise~~ may affect the wagon's fitness for use, has not occurred.

If workshops are unable to restore the wagon to the minimum condition specified, the ~~vehicle~~ wagon shall be referred to the keeper for a decision on what action to take (in accordance with Appendix 9)

The specific incident and the wagon associated with the number(s) of the wheelset(s) concerned must be indicated to the keeper.

1 Derailment

~~When a wagon has derailed, the distance between the inner faces of the tyres (or rims for monobloc wheels) must be measured on the wheelsets that derailed, as specified in Chapter A, point 1.17. If the difference in the dimensions is greater than 2 mm, the wheelset must be replaced.~~

~~The inspection must be adapted according to the information available.~~

If a wagon derails, the following checks must be performed at a minimum:

- wheelsets, in accordance with Chapter A, 1.1.2, 1.1.3, 1.6, 1.8, 1.10 to 1.17, 1.20 and 1.21
- springs, in accordance with Chapter A, points 2.1 to 2.8
- underframe, running gear and bogies in accordance with Chapter A, points 4.1 to 4.6, 4.8 to 4.12, 4.14 to 4.18, 4.20, 4.21, 4.24, 4.25, 4.26
- traction and buffing gear: Chapter A, points 5.1 to 5.6.1, 5.7, 5.9, 5.10, 5.13, 5.14.2, 5.15, 5.17, 5.18, 5.20
- for tank wagons, inspection of the tank in accordance with the keeper's instructions
- ~~— inspection of impermissible longitudinal or circumferential clearance~~
- inspection of damages at grounding cables

In the case of wagons derailed at a speed of >10 km/h, or if the speed cannot be established, the wheelsets concerned must be removed without prior inspection.

~~Before being sent back, the dismantled wheelset must be marked~~ Before being sent, the wheelsets that have derailed must be marked so that the keeper or the workshop can identify them as having derailed (Model H^R).

2 Exceptional impacts

When a wagon has suffered an exceptional impact, it is assumed that the speed of impact was greater than 12 km/h. In this case, the following tests shall be carried out:

- ~~— measure buffer height and check for visible damage to the buffers,~~
- ~~— ensure buffer longitudinal clearance is less than 15mm,~~
- ~~— ensure twist clearance is less than 5 mm (only for non-rotating buffers),~~
- ~~— visual inspection of headstock compression in the buffer area and the underframe members immediately behind it.~~

- wheelsets in accordance with Chapter A, 1.1.2, 1.1.3, 1.6, 1.8, 1.10 to 1.17, 1.20 and 1.21
- springs in accordance with Chapter A, points 2.1 to 2.8
- underframe, running gear and bogies in accordance with Chapter A, points 4.1 to 4.6, 4.8 to 4.12, 4.14 to 4.18, 4.20, 4.21, 4.24, 4.25, 4.26
- traction and buffing gear: Chapter A, points 5.1 to 5.6.1, 5.7, 5.9, 5.10, 5.13, 5.14.2, 5.15, 5.17, 5.18, 5.20
- tank wagons: inspection of the tank in accordance with the keeper's instructions

If the speed of impact is found to have exceeded 25 km/h, the wheelsets must be removed.

Before being sent back, the dismantled wheelsets must be marked so that the keeper or the workshop can identify them as having been subject to an exceptional impact (Model H^R).

3 Overloading ~~(recommendation only)~~

When a wagon is brought in because it has been overloaded (whole wagon, bogie or wheelset), ~~the vehicle should first be unloaded~~, the following inspections and measurements should be carried out according to the overload percentage in relation to the maximum load for the wheelset concerned:

~~— visual inspection of suspension springs for ruptures, cracks and deformation~~

~~— visual check for traces of contact on the springs and parts of the underframe or bogie~~

~~— Inspection of the wheelset(s) for excessive thermal stressing or other damage.~~

	Overload %	Maintenance operations
1	0% to 2% (inclusive)	<ul style="list-style-type: none"> - No operation
2	2% to 10% (inclusive)	<ul style="list-style-type: none"> - inspection of axle and wheels in accordance with Chapter A, 1.1.2, 1.1.3, 1.6, 1.8, 1.10 to 1.18, 1.20 and 1.21. - visual inspection of suspension springs for ruptures, cracks and deformation - visual check for traces of contact on the springs and parts of the underframe or bogie - inspection of the underframe, running gear and bogies in accordance with Chapter A, points 4.1 to 4.6, 4.8 to 4.12, 4.14 to 4.18, 4.20, 4.21, 4.24, 4.25 - transmission of information on overloading and inspection results to the keeper.

3	> 10%	<ul style="list-style-type: none"> - removal of the wheelset and transmission of information on overloading to the keeper by means of Model H^R - visual inspection of suspension springs for ruptures, cracks and deformation - visual check for traces of contact on the springs and parts of the underframe or bogie - inspection of the underframe, running gear and bogies in accordance with Chapter A, points 4.1 to 4.6, 4.8 to 4.12, 4.14 to 4.18, 4.20, 4.21, 4.24, 4.25 - transmission of inspection results to the keeper
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All of the information provided to the keeper must relate to the maximum permissible load per wheelset. If this value is not indicated on the wheelset, the maximum permissible line classification marked on the wagon must be taken into account.

In case of doubt, the wheelset(s) should be replaced **without prior inspection** and marked as having been subject to overloading (Model H^R) before being sent back to the wagon keeper.

4 Flooding ~~(recommendation only)~~

The following inspections and measures shall be performed on wagons that have stood with all or part of their underframe under water in order to return them to running order, where appropriate after cleaning:

- replacement of all wheelsets,
- before they are sent back, all the wheelsets that have been subject to flooding must be clearly marked so they are recognisable to the wagon keeper or his workshop as having suffered potential damage from water (Model H^R),
- visual inspection of suspension springs to check for corrosion that could lead to a rupture of the spring,
- replacement of any buffers that were below the waterline,
- draining of water from the main brake pipe. The wagon should be handled with the brake isolated in accordance with Appendix 9.

5 Contact with energised catenary

When parts of the wagon body have come into contact with energised catenary wires, the axle-boxes are likely to have sustained damage from the passage of electric current.

In cases such as these, the following measures shall be taken:

- replacement of all wheelsets on the wagon,
- before they are sent back, all the wheelsets that have been affected by the electric current must be clearly marked so they are recognisable to the wagon keeper or his workshop as having suffered potential damage from electric current (Model H^R),
- inspection of the vehicle body to check for other **instances of** damage with potential consequences for the wagon's fitness to run.
- **also check for burn marks or evidence of fusion, particularly on grounding cables, springs, suspension and other spring connectors.**
- **for tank wagons, inspect the tank in accordance with the keeper's instructions**

4. Reason:

The provisions of standard EN 15313:2016 will thus be applied and wagons will be handled in a more accurate manner following specific incidents.

5. Assess potential positive/negative impacts

Impact on costs/administration/interoperability/safety/competitiveness:

Costs: 2 (more detailed inspections by means of specific checks, new limit values for overloading)

Administration 1

Interoperability 1

Safety: 3 (improved safety thanks to more comprehensive inspections following specific incidents)

Competitiveness: 1

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:

6.1. Does the change made impact on safety?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
Reason: The provisions of standard EN 15313:2016 will thus be applied and wagons will be handled in a more accurate manner following specific incidents.	
6.2. Is the change significant?	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?	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?	No <input type="checkbox"/> Yes
Assessment body: Attach the verdict reached by the assessment body	[Appendix]