Amendment proposal to GCU Appendix 10

Record of amendments

Amended by	Date	Paragraph	Amendment
Frank Petutschnig	15/3/2018	Chapter A Anlage 10	
WG Maintenance Appendix 10	18/4/2018		Final version of the WG Maintenance
		-	

Title:	Deletion of * in points 6.28 to 6.38 of Chapter A of Appendix 10
Proposed amendment made by: RU / keeper / other:	UIP
Proposed amendment concerns:	☒ Appendix 10
Proposer:	Frank Petutschnig
Location, date:	Vienna, 15/03/2018
Concise description:	Deletion of * in points 6.28 to 6.38 of Chapter A of Appendix 10

1. Starting point (current situation):

1.1. Introduction

In 2011, the GCU introduced additional measures for tank wagon inspections during workshop visits in accordance with Appendix 10. All of the workshops mandated by the RUs on the basis of the GCU are obliged to perform visual inspections as set out in points 6.28 to 6.38 of Appendix 10 to the GCU and marked with an asterisk (*) for all tank wagons, whatever their reason for entering the workshop.

The initial objective of these measures was to improve safety by identifying visible defects.

UIP has observed that, in practice, the majority of small workshops have little or no expertise in the area of tank wagons and that the visual inspections are thus reduced to an “obligatory exercise” that is insignificant to an extent in qualitative terms.

Visual inspections are already performed outside of the planned inspection dates for tank wagons. They are performed during loading and unloading and during transport itself. These inspections take place significantly more often than is set out in Appendix 10 because they are essentially performed each time freight is transported. Furthermore, these elements marked with an asterisk (*) are also checked during the inspections provided for in Appendix 9.

Hence, the visual inspection provided for in Appendix 10 is just one part of multiple inspections and makes only a minor contribution to improving safety both in qualitative and quantitative terms. On the other hand, it uses resources and reduces the efficiency of rail freight transport in real terms.

1.2. Mode of operation

The visual inspection positions marked with a (*) are currently mandatory each time a wagon enters the workshop - including, for example, a simple brake block replacement.

1.3. Anomaly/description of problem

The visual checks defined in points 6.28 to 6.38 are already performed during transport or loading and unloading of tank wagons for dangerous goods:

- The RID clearly regulates distribution of responsibilities in dangerous goods transport. By means of written agreements with wagon keepers, lessees/users of tank wagons for dangerous goods are thus generally bound by contract to perform visual inspections, particularly during filling, in order to determine and document the wagons' (external) conformity with the RID (RID 1.4.3.3.3 a). In this context, OTIF, as well as professional associations (such as CEFIC), recommend using checklists which also contain the positions marked with a (*) in Appendix 10.
- Specific visual inspections are also performed at the express request of the keeper as part of wagons' day-to-day maintenance (e.g. cleaning, change of lessee, etc. See also VPI Maintenance Guide, Module 01, Appendix 19).

With the introduction of EU Regulation 445/2011 ("ECM Regulation"), maintenance of tank wagons for dangerous goods was also taken to a higher level in comparison with the situation that applied before the introduction of the visual inspection in accordance with Appendix 10, particularly by means of:

- The introduction of processes to systematically monitor and analyse problems that arise, along with systematic elimination of errors resulting from such problems, within the framework of a continuous improvement process ("return on experience"),
- Structured recording, transmission and exchange of information,
- The introduction of an obligation for full, transparent documentation of processes and maintenance measures.

In this context, the inspection tasks of the ECM and of its contractual partners (EF, lessees, industrial partners, etc.) have been both reinforced and formalised.

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

☒No ☐ Yes (state which):

* "Code of practice: a written set of rules that, when correctly applied, can be used to control one or more specific hazards." (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" (translation/source: BMJ Handbuch der Rechtsförmlichkeit – German Ministry of Justice)

2. Target situation

2.1. Elimination of anomaly/problem (goal)

Deletion of * in points 6.28 to 6.38 of Chapter A of Appendix 10

3. Additional text and/or modifications relating 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

Additional provisions[1)] ~~for~~ tank wagons[2)1]:

6.28* Tanks must not have sharp-edged deformations (even if there is no loss of the goods carried).

6.29* Cracks in tank cradles are not accepted. If the tank is fastened to the underframe using bolts or rivets, none of these must be missing.

6.30* The welded joints on the tank and the underframe must not becracked.

6.31* Ladders, platforms and guard rails must be safe to use and must not be loose.

6.32* Tank cladding, sun-roofs and insulation must not have comeloose.

6.33 The tanks and their filling and emptying devices must not leak. It must be possible to seal them hermetically, with the exception of the automatic ventilation devices (Appendix 11, point 6.3).

6.34* Screw caps must not be missing.

6.35* The blind flanges must not be missing or loose. All the fastening screws must be in place.

6.36 The emergency control screw for the emptying valve must be unscrewed.

6.37* The indicator on the emptying valve must be in good condition and legible.

6.38 The dome hatch must be present. It must be possible to close it hermetically.

~~1) The points indicated by a * are mandatory only for RID tank wagons (visual inspections)~~

~~2)~~ 1) Tank wagons are wagons used for transporting liquids, gases, powdered or granular goods (visual inspections)

4. Reason:

5. Assess potential positive/negative impacts

E.g. on operations, costs, administration, interoperability, safety, competitiveness, etc., using a scale of 1 (very low) to 5 (very high). Justify observations

Positive impacts:
Operations: 1
Interoperability: 1
Safety: 1
Costs: 4
Competitiveness: 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.

Safety appraisal performed by:

6.1. Does the change made impact on safety?	☐No ☒ Yes
Reason:	
6.2. Is the change significant?	☒No ☐ Yes
Reason: see template. Attach the "significant change?" test template	
6.3. Determining and classifying risk:	☒ deleted
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:** ☐ No ☐ Yes (describe possible misuse):	
6.4. Have safety measures been applied?	☐No ☒ Yes
For each type of risk, one of the following risk acceptance criteria is to be selected: • *Code of practice* • *Use of reference system* • *Explicit risk estimate*	
6.5. Has a risk analysis been submitted to the assessment body?	☒No ☐ Yes
Assessment body: Attach the verdict reached by the assessment body:	[Appendix]

Enclosure: Significance test template

1. Step 1: Assessment of degree of innovation and complexity introduced by the modification

Level of innovation introduced by the modification (explanation)		Decision
low	The degree of innovation is considered to be low if, for example: • The expected outcome of the modification broadly meets requirements in force. • Implementation of the modification can be achieved using tried and tested processes already in place. • Those responsible for implementing the modification already have some experience with the elements thereof.	● small innovation
high	The degree of innovation is considered to be high if, for example: • The modification introduces new functions, tasks, etc. which are totally new, and cannot be compared because they are unlike anything else that exists or existed previously. • There are currently no procedures in place to implement the modification. • Those in charge of implementation have no prior experience of similar modifications.	○ major innovation

Reason:

No new procedures of any kind are brought about for the organisation/persons affected by the removal of the points concerned

Enclosure: Significance test template

Complexity of the modification (explanation)		Decision
low	Complexity is considered to be low if, for example: • Does the project/ modification affect sub-systems/components or any particular reference text? • The modification can be implemented with very few people. • During implementation, the low number of interfaces with other subsystems or processes should be taken into account.	● low complexity
high	Complexity is considered to be high if, for example: • The planned modification includes several interconnected functions. • During implementation, the high number of interfaces with other subsystems or processes should be taken into account. • The modification affects many different fields, entities or people.	○ high complexity

Reason:

The proposed action eliminates specific test steps, with no replacements, and thus reduces complexity.

Enclosure: Significance test template

2. Step 2: Assessment of possible consequences of a failure

Criterion	**Description of the consequences of a failure**	Assessment
minimal	The modification could cause slight disruption or damage to the system and/or cause direct or indirect physical injury to people.	☐ true
low	The modification can cause major disruption or damage to the system and/or cause direct or indirect physical injury and/or damage to the environment.	☐ true
medium	The modification can cause loss of the system and/or lead to a fatality and/or serious injury and/or serious damage to the environment.	● true
high	The modification can cause loss of the system and/or lead directly or indirectly to several fatalities and/or serious injuries and/or widespread serious damage to the environment.	☐ true

Reason:

In the event of failure of all the regular checks specified and/or visual inspections and failure to detect damage that otherwise would possibly have been detected on the basis of points 6.28 - 6.38, the consequences specified may result up to a maximum level, depending on the dangerous goods transported.

Enclosure: Significance test template

3. Step 3: Assessment of traceability and reversibility of the modification

Traceability of the modification (explanation)		Decision
high	• Use of tried-and-tested tools to enable monitoring of the impact of the modification during and after implementation.	● High traceability
low	• Monitoring of the impact of the modification during and after implementation will be unsatisfactory.	○ Low traceability

Reason:

Overcompensation is provided for the impact of the modifications in comparison to the introduction of such modifications. This is because of the existing visual inspections as per Appendix 9, as well as the stricter assignment of responsibilities to the respective parties involved which cover the entire transport chain (see proposal text). Together with the relevant RID obligations and the resulting tasks, a continuous monitoring chain is established.

Modification reversibility (explanation)		Decision
Reversible	• Gradual entry of the modification into force, there is no specifically defined transition phase. • After implementation of the modification or completion of the various implementation phases, it is perfectly possible to revert to the previous situation.	● reversible
Non reversible	After the modification has been introduced, there is no way to return to the previous situation.	○ non reversible

Reason:

A retroactive reinstatement of those points that are intended for removal is possible at any time by means of reimplementation.

Enclosure: Significance test template

4. Evaluation summary – Decision about the significance of the modification

The decisions taken in each of the preceding steps produce the outcome shown in the assessment matrix below, whereby the assessment of the consequences of any failures is shown in relation to the reliability of the assessment.

The innovation and complexity created by the modification are assessed as factors in uncertainty and/or considered to be indicators for the need or not to conduct a more detailed risk analysis as part of a formalised risk management procedure (see Table below)

The traceability and reversibility of the modification are considered to be indicators of the degree to which risk can be controlled and therefore determine whether the modification falls into the 'green zone' (non-significant modification) or the 'red zone' (significant modification).

Results of preselected criteria:

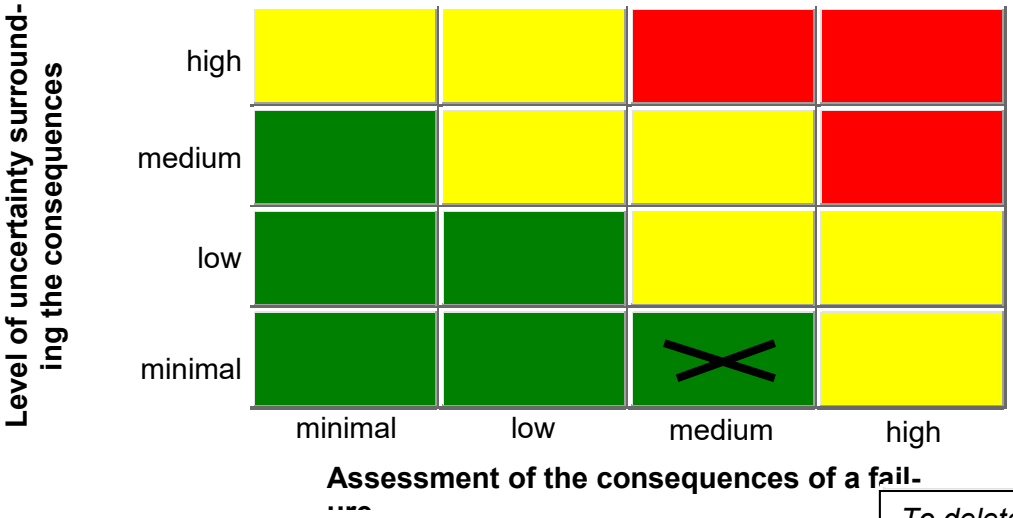
Degree of innovation: low

Level of complexity: low

Consequences of failure: critical

Traceability: high

Reversibility: yes



To delete selected criteria please click here

Comment: The way in which the criteria to determine significance are presented here is just a recommendation. The final decision regarding the significance of the modification's impact on safety shall be the responsibility of the proposer. The final decision, however, must be reasoned.

Will this modification have a significant impact on safety? ☐ yes / ☒ no

Summary of reasoning:
Add complete justification for the decision on significance here

Enclosure: Significance test template

Table: Explanation of how to decide on the relevant rating (high, medium, low or minimal) to determine the degree of uncertainty in the assessment of the consequences, based on the different combinations of innovation/complexity.

Criterion	Description of possible complexity/innovation combinations
high	The modification introduces a high degree of both innovation and complexity: • There is no useful or suitable knowledge available to assess its consequences. • It is very likely that a detailed analysis will produce a different conclusion as to the consequences of failures. • Expert views are personal and varied.
medium	The modification introduces a high degree of innovation and a low level of complexity: • There is little data available to assess the consequences of a failure. • It is expected that a detailed analysis will reach a different outcome. • Experts have differing opinions on how to interpret the available data.
low	The modification introduces a low level of innovation and a high degree of complexity: • The assessment is the result of elements provided by a standard system which is managed with equally standard constraints. • It is unlikely that a more detailed assessment would produce a different outcome. • There a general consensus among experts.
minimal	The modification introduces a low level of both innovation and complexity. • Numerous/good benchmarking criteria exist, which are the product of detailed knowledge acquired from cases with identical constraints. • A more detailed assessment is not expected to produce a different outcome. • Experts are unanimous in their opinion.

Enclosure: App. 9/App. 10 Visual inspection comparison and interpretation

Appendix 10, A – Corrective maintenance, 6 Vehicle body		Appendix 9, Annex 1		Comment
Pt.	Text	Pt.	Text	
6.28*	Tanks must not have sharp-edged deformations (even if there is no loss of the goods carried).	6.5.2.2	Distorted with sharp edges but no risk of loss of load	Hence already covered
6.29*	Cracks in tank cradles are not accepted. If the tank is fastened to the underframe using bolts or rivets, none of these must be missing.	6.5.1.1 6.5.1.2 6.5.1.3 6.5.1.4	Crack extending > 1/4 across the cross-section Crack in the weld seams Up to 10% of the bolts or rivets securing tank body to cradle missing More than 10% of the bolts or rivets securing tank body to cradle missing	Hence already covered
6.30*	The welded joints on the tank and the underframe must not be cracked.			This point is obsolete since the connection of the tank to the underframe is the tank. Hence, covered by 6.29.
6.31*	Ladders, platforms and guard rails must be safe to use and must not be loose.	6.1.7.1 6.1.7.2 6.1.7.3	Ladders, gangways, guard rails in poor condition, unusable Steps: missing Steps: damage representing a safety hazard for staff, torn off or deformed beyond tolerated (limit: a > 80 mm)	Hence already covered
6.32*	Tank cladding, sun-roofs and insulation must not have come loose	6.5.3 6.5.3.1 6.5.3.2 6.5.3.3	Tank cladding, sun-roof, insulation damaged loose reserved	Hence already covered
6.33	The tanks and their filling and emptying devices must not leak. It must be possible to seal them hermetically, with the exception of the automatic ventilation devices (Appendix 11, point 6.3).	6.5.2 6.5.5		Point not indicated by an asterisk but covered in full by 6.5.2 and 6.5.5.
6.34*	Screw caps must not be missing.	6.5.5.3	Valves or spouts defective Screw cap must be tightly sealed and must not be missing (except for outside gas pipes)	Hence already covered
6.35*	The blind flanges must not be missing or loose. All the fastening screws must be in place.	6.5.5.6 6.5.5.7 6.5.5.8 6.5.5.9	Blind flange missing Securing bolt of the blind flange: RID load, one or more securing bolts missing or loose non-RID load, one securing bolt missing or loose non-RID load, several securing bolts missing or loose	Hence already covered
6.36	The emergency control screw for the emptying valve must be unscrewed.	6.5.5.12	Bottom valve emergency control device screwed in (tank-mounted valve open)	Point not indicated by an asterisk. Hence already covered