# GENERAL CONTRACT OF USE FOR WAGONS

GCU

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### PREAMBLE

The use of wagons by railway undertakings (RU)\* as a means of transport necessitates the adoption of contractual provisions setting out the rights and obligations of each party.

In order to ensure the safety and to improve the efficiency and competitiveness of railway freight traffic, the wagon keepers and RUs listed in Appendix 1 hereby agree to apply the provisions of this

GENERAL CONTRACT OF USE (GCU).

Terms marked with an asterisk (\*) are explained in Appendix 2 (Definitions).

# CHAPTER I OBJECT, SCOPE OF APPLICATION, TERMINATION, FURTHER DEVELOPMENT OF THE CONTRACT, DICONTINUANCE OF BEING A SIGNATORY

### Article 1: Object

- 1.1 This contract, including its appendices, sets out the conditions for the provision of wagons for use as a means of transport by RUs in national and international traffic within the scope of application of the COTIF in force.
  - Commercial conditions for the use of wagons are outside the scope of this contract.
- 1.2 The provisions of this contract shall apply to wagon keepers and RUs\* as users of wagons.
- 1.3 Use of a wagon includes the loaded run and the empty run, as well as cases in which the wagon is in the custody of a signatory RU.
- 1.4 Use and custody begin when the wagon is accepted by the RU and end with the handover of the wagon to the keeper or to some other authorised party, for example another signatory RU, the contractual consignee of the goods carried or the operator of private sidings authorised to take delivery of the wagon.

### Article 2: Scope of application

- 2.1 This contract shall take precedence in international rail traffic over the CUV Uniform Rules (Annex D to the 1999 COTIF) and in domestic rail traffic over any national regulations that may be applicable, to the extent that this is admissible.
- 2.2 Admission shall be effective from the first day of the following month, provided that the application has been received by the GCU Bureau at least fifteen days before.
- 2.3 The provisions of this multilateral contract shall apply between the signatories to the extent that they have not concluded other provisions between themselves.
- 2.4 The GCU Bureau shall publish an updated list of signatories (Appendix 1, available on the website at <a href="www.gcubureau.org">www.gcubureau.org</a>) every month, on the first day of the calendar month in question.

### **Article 3: Termination**

- 3.1 Any signatory may withdraw from this contract at the end of each calendar year subject to notice of at least six months in a written declaration to be sent to the GCU Bureau. Termination and the date from which it becomes effective shall be published monthly by the GCU Bureau together with the list referred to in article 2.4.
- 3.2 In addition, any signatory having voted against a proposed modification of the contract may withdraw from the contract as of the entering into force of such modification by a written declaration to be sent to the GCU Bureau within six weeks after adoption of the modification by the majority of the signatories.

### Article 4: Further development of the contract

The parties to the GCU shall adopt an Internal Regulation (Appendix 8) for the further development of the contract. The GCU Bureau shall be responsible for editing and coordinating any such modifications of the GCU.

### Article 5: Discontinuance of being a signatory

If due amounts of more than 100 EUR owed by a signatory according to section I point 12 of Appendix 8 have been outstanding for more than six months and after an additional request for payment are not paid by the signatory within two months after the request has been sent, the discontinuance of its being a signatory shall be published in the monthly list according to article 2.4. From then on it shall be considered to be a third party according to articles 16 and 17.

### Article 6: in abeyance

### CHAPTER II OBLIGATIONS AND RIGHTS OF THE WAGON KEEPER

### Article 7: Technical admission and maintenance of wagons

- 7.1 The keeper shall ensure that his wagons are technically admitted\* in accordance with the national and international laws and regulations in force at the time of admission and that they remain technically admitted throughout the period of their use.
- 7.2 The keeper shall ensure that his wagons are maintained in accordance with the laws, regulations and mandatory standards in force. In particular, he shall appoint a certified Entity in Charge of Maintenance (ECM) and ensure that the latter performs all of its assigned tasks.
  - Upon request, the keeper shall make available to any user RU without delay reliable information about maintenance (including Maintenance File and Maintenance Record File) and restrictions affecting operations, necessary and sufficient to support safe operations.
  - For the purposes of this contract and vis-à-vis the other signatories, the keeper is considered to be, and have the responsibilities of, the ECM for his wagons.
- 7.3 The keeper must allow the RUs to conduct any inspections on wagons that may be necessary, in particular those referred to in Appendix 9.
- 7.4 The keeper must provide the impacted user RUs with the information required for safe railway operations in electronic format <u>as soon as possible</u> before the use of new or retrofitted wagons / wagon components. This information shall include the technical data of the wagon and a brief description of any instructions destined for technical inspectors and operational staff. Information is always required if the wagons / components do not comply with Appendix 9 to the GCU.

### Article 8: Inscriptions and signs on the wagon. Identification of the wagon

Without prejudice to the regulations in force, wagons shall carry the following inscriptions:

- indication of the keeper
- inscriptions and signs on the wagons as shown in Appendix 11
- where appropriate, the home station or region\*.

### Article 9: Keeper's right of deployment

- 9.1 The keeper shall have control over his wagons. The keeper may act under this contract through third parties authorized by him. In case of doubt, the instructions of the keeper shall overrule any instruction of a third party claiming to be authorized by the keeper.
- 9.2 Except when justified for reasons of safety, only the keeper shall be authorised to issue instructions to RUs regarding the use of his wagons.
- 9.3 The keeper shall provide the RUs with the instructions necessary for the carriage of empty wagons in good time.
- 9.4 Any request from a keeper for his wagons not to be handed over to certain RUs, whether signatory or third party, shall be met.

### CHAPTER III OBLIGATIONS AND RIGHTS OF RUS

### Article 10: Acceptance of wagons

Subject to compliance by the keeper with the obligations incumbent on him under the provisions of Chapter II, RUs shall accept wagons within the scope of their commercial services\* offered.

### Article 11: Refusal of wagons

An RU may refuse wagons if

- their acceptance is prohibited by a competent authority;
- it is temporarily impossible to accept them for operating reasons specific to the RU concerned:
- there are exceptional circumstances beyond the control of the RU (cases of force majeure in particular) that temporarily prevent the wagons being accepted;
- the condition of the wagon does not meet technical and maintenance regulations or conform to current loading guidelines;
- there are other substantial reasons which might affect the safe operation of the wagon; such reasons must be notified to the keeper.

An RU may not refuse its own wagons when they are empty and in running order.

### Article 12: Handling of wagons

Each RU shall handle wagons with care and due diligence and shall carry out the inspections laid down in Appendix 9. Similarly, it shall carry out in particular all the safety-related inspections needed on wagons, irrespective of their keeper. The costs relating to these routine inspections shall not be separately invoiced to the keeper.

### Article 13: Wagon periods for carriage and liability

- 13.1 The periods for carriage for loaded wagons shall depend on the transit period for the goods being conveyed. Periods for carriage for empty wagons shall be determined by agreement. In the absence of such an agreement, the periods set out in Article 16 of the CIM for wagon-load consignment shall apply.
- 13.2 The user RU shall not be held liable for exceeding the periods for carriage when this is caused by:
  - the fault of the keeper,
  - an order placed by the keeper not resulting from a fault of the user RU,
  - a defect on the wagon or its load,
  - circumstances that the user RU could not avoid and the consequences of which it could not prevent,
  - justified refusal of the wagon or shipment as covered by Article 11.
- 13.3 If these periods are exceeded for a reason ascribable to an RU, the keeper may claim compensation for loss of use of the wagons. Unless otherwise agreed, the amount of compensation for loss of use shall be calculated from Appendix 6. This amount, added to the compensation for damage specified in Article 23.2, may not exceed the amount payable for loss of the wagon. It shall be charged in addition to the compensation for loss granted under Articles 20.3 or 23.1.

### Article 14: Deployment of empty wagons

- 14.1 The RU shall execute the instructions given by the keeper for the carriage of empty wagons within the scope of their commercial services offered.
- 14.2 The documents listed below, included in Appendix 3, shall be used when forwarding empty wagons:
  - wagon note,
  - charges note,
  - subsequent orders,
  - notification of circumstances preventing carriage,
  - notification of circumstances preventing delivery.

These documents may be issued in paper format or recorded electronically.

The procedure agreed on among parties to the contract of use for issuing these documents in electronic format must ensure the integrity and reliability of the information they contain as of the moment they are issued. The procedure agreed on among parties to the contract of use for completing or amending the electronic wagon note must ensure amendments are identifiable. It must also ensure that the original information contained in the electronic wagon note is preserved. The electronic wagon note must be authenticated. Authentication may take the form of an electronic signature or other suitable procedure.

The arrangements for handling these documents in paper or electronic format are set out in the Wagon Note Guide of the CUV (GLW-CUV), published by the International Railway Transport Committee (CIT).

14.3 If the keeper has failed to issue instructions by the time the RU takes the wagon back after unloading at the latest, the RU shall be obliged to send the wagon back to its home station or region or to any other previously agreed station.

### Article 15: Information to be supplied to the keeper

User RUs shall supply the keeper with information on the use of his wagons in a timely manner, in accordance with the national and international laws and regulations in force.

### Article 16: Handover of a wagon to third parties

An RU that hands over a wagon to a third party without the authorization of the keeper shall be liable to the latter in particular for any damage that may result. The liability of the third party remains unaffected.

### Article 17: Acceptance of wagons from third party keepers

The present contract shall apply to wagons whose keepers are not GCU signatories from the moment they are accepted by a signatory RU as part of a handover or exchange.

In such cases, the RU which accepts the wagon is considered as its keeper vis-à-vis the other parties to the GCU for this run and for the empty return run following it. This is to be indicated in the CUV wagon note.

# CHAPTER IV ASCERTAINMENT AND HANDLING OF DAMAGE TO WAGONS IN THE CUSTODY OF AN RU

### Article 18: Ascertainment of damage

- 18.1 When damage to a wagon or the loss or damage of the removable accessories mentioned on the wagon are discovered or presumed by an RU or the keeper claims they exist, the RU shall without delay and, if possible, in the keeper's presence, draw up a wagon damage report (as per Appendix 4) documenting the nature of the damage or loss and, insofar as possible, the cause and the time it took place.
- 18.2 When the damage or loss of parts does not prevent use of the wagon in traffic, the keeper does not need to be invited when the damage or loss is recorded.
- 18.3 A copy of the wagon damage report shall be sent to the keeper without delay.
- 18.4 If the keeper does not accept the contents of the wagon damage report, he may ask for the nature, cause and extent of damage to be recorded by an expert appointed by the parties to the contract or by judicial means. This procedure shall be subject to the law of the country in which it takes place.
- 18.5 When a wagon sustains damage or loss of a part and is unable to run or be used as a result, the RU shall also inform the keeper immediately, providing the following information as a minimum:
  - the wagon number
  - the status of the wagon (loaded or empty)
  - the date and place it was withdrawn from service
  - reason for withdrawal from service
  - details of the department to contact
  - probable duration of wagon unavailability (up to 6 working days; more than 6 working days).

### Article 19: Handling of damage

- 19.1 The RU shall arrange for the wagon to be put back to running order in accordance with the provisions of Appendix 10. If the cost of repairs is more than 850 EUR, the agreement of the keeper must first be sought, except in the case of brake block replacements or if Appendix 13 is applied by the RU. If the keeper does not respond after 2 working days (not including Saturdays) the repair work shall go ahead.
- 19.2 If the cost of repairing the damaged wagon is greater than the compensation calculated according to Appendix 5, the wagon shall be considered beyond repair from an economic point of view.
- 19.3 When the damage does not affect the wagon's suitability to run, but makes its use difficult, the RU may carry out work to make the wagon fit for use again without the keeper's agreement, up to an amount of 850 EUR. By agreement with the keeper, the RU may be authorised to carry out additional work.
- 19.4 On completion of the repairs and failing any specific instructions from the keeper, the RU shall forward the wagon to the destination station for which it was initially bound.

- 19.5 In all cases where the RU carries out or arranges to have carried out repair work in application of the provisions of Appendix 10 or Appendix 13, it shall do so with all due care, making use of approved workshops and/or staff and approved materials. Approved workshops and/or staff mean that an RU has requested repair work in accordance with Appendix 10 from workshops and/or staff covered by the "safety management system" of the RU. The RU or its auxiliary performing the work shall provide detailed information of the work carried out, using the codes supplied in Appendix 10, Annexe 6.
- 19.6 Management of spare parts is covered in Appendix 7.
- 19.7 Coverage of the cost of repair work is dealt with in Chapter V.

### Article 20: Handling of lost wagons and removable accessories

- 20.1 A wagon shall be considered lost if it is not placed at the keeper's disposal within three months following the day of receipt of his search request by the RU to which he provided the wagon, or if the keeper has received no indication on the whereabouts of the wagon. To this period shall be added the time during which the wagon is immobilised for any reason not ascribable to the RU or because of damage.
- 20.2 A piece of removable accessory mentioned on the wagon shall be considered lost if it is not returned with the vehicle.
- 20.3 If an RU is liable, it shall pay the keeper:
  - for a lost wagon, compensation calculated in accordance with Appendix 5
  - for lost accessory, compensation amounting to the value of the part in question.
- 20.4 The keeper, on receiving the compensation, may request in writing to be notified when the wagon (or removable accessory) is found. In this case, the keeper may require that within six months of receiving the notification, the wagon (or removable tackle) be returned to him against repayment of the compensation received. The period between payment of compensation for loss of the wagon and repayment thereof by the keeper shall not qualify him for any compensation for loss of use.

### Article 21: Handling of bogies

The provisions of this chapter shall apply in the same way to the handling of bogies.

### CHAPTER V LIABILITY IN THE EVENT OF LOSS OF OR DAMAGE TO A WAGON

### Article 22: Liability of the user RU

- 22.1 The RU which has custody of a wagon shall be liable to the keeper for any loss of or damage to the wagon or accessories unless it proves that the damage was not caused by fault on its parts.
- 22.2 The RU shall not be liable if it brings proof of one of the following:
  - circumstances that the RU was not able to avoid and the consequences of which it could not prevent;
  - fault of a third party;
  - insufficient maintenance by the keeper when the RU can prove that the wagon was properly used and inspected;
  - fault of the keeper.

If the RU is found to be partly responsible, the damage shall be borne by the responsible parties in proportion to their respective share of responsibility.

The keeper cannot cite the existence of a hidden defect on his wagon as proof that there was no fault of his part.

- 22.3 The RU shall not be liable for:
  - loss of or damage to removable accessories that is not listed on both sides of the wagon;
  - loss of and damage to removable tackles (filling hoses, tools, etc.),

provided that it cannot be shown to be at fault.

- 22.4 To facilitate the handling of damage and take account of the normal wear and tear of the wagon, the quality of its maintenance and its use by third parties, the damage catalogue in Appendix 12 shall be applied as follows:
  - damage assigned to the keeper shall be borne by the keeper; independently of this, the keeper may, for damage in excess of 850 EUR, seek recourse against an RU, if he can bring proof that the RU in question was at fault,
  - damage assigned to the RU shall be borne by the user RU up to a maximum of 850 EUR.
  - damage assigned to the RU in excess of 850 EUR shall be handled in accordance with the provisions of Article 22.1.

### Article 23: Amount of compensation

- 23.1 In case of loss of the wagon or its accessories, the amount of compensation shall be calculated in accordance with Appendix 5.
- 23.2 In case of damage to the wagon or its accessories, compensation shall be limited to the cost of repairs. Compensation for loss of use shall be granted in accordance with Article 13.3 and compensation for the change in operational value for damaged wheelsets in accordance with Appendix 6, Part II. When a request is sent to the keeper for spare parts to carry out repair work, the period of loss of use shall be suspended between the date of the request and the date on which the parts are received. The total amount of compensation (for loss of use and for reprofiling wheelsets) may not exceed the amount that would be payable for loss of the wagon.

### Article 24: Liability of previous users

- 24.1 When the RU which has custody of a wagon is not liable, each previous user in the current chain of use (loaded or empty run) shall be liable to the keeper for any damage to the wagon and for the loss of or damage to its accessories in accordance with Article 22, if the subsequent RUs in the chain of use could exonerate themselves under the terms of Article 22.
- 24.2 Outside of the current chain of use, previous user shall only be liable to the keeper if the keeper can prove that this user caused the damage and if this user cannot exonerate himself under Article 22.

### Article 25: Obligation to mitigate losses

When payment is made for damage caused to wagons, the parties to the contract shall abide by the general principles associated with the obligation to limit the resulting losses.

### Article 26: Settlement of damages

The user RU or workshop acting as its auxiliary shall invoice the cost of repairing the wagon to the keeper, with the exception of costs for which the user RU is liable under the terms of Article 22. When the previous user is liable for the damage, the keeper shall send that user an invoice for the cost of the repairs for which he was himself invoiced by the user RU or workshop. The keeper may claim compensation for loss of use, in accordance with Article 13.

### CHAPTER VI LIABILITY IN THE EVENT OF DAMAGE CAUSED BY A WAGON

### Article 27: Principle of liability

- 27.1 The keeper or a previous user subject to this contract shall be liable for damage caused by the wagon when they can be shown to be at fault. The keeper shall be presumed to be at fault if he has not correctly fulfilled his duties as these arise from Article 7, unless this breach of duty did not cause or contribute to the damage.
- 27.2 The liable party shall indemnify the user RU against any third party claims if the user RU is not at fault.
- 27.3 Where the user RU is partly responsible, the compensation shall be borne by each party in proportion to its respective share of responsibility.
- 27.4 When a third party is responsible or partly responsible for the damage, the parties to the contract shall claim compensation for the damage primarily from this third party. In particular the signatory which has a contract with the third party shall pursue the claim vis-à-vis the third party as a matter of priority.
- 27.5 Upon request, the keeper shall be required to provide proof of his civil liability insurance in accordance with applicable laws.

### CHAPTER VII LIABILITY FOR STAFF AND OTHER PERSONS

### Article 28: Principle of liability

The contracting parties shall be liable for their servants and other persons whose services they make use of for the performance of the contract, when these servants and other persons are acting within the scope of their functions.

### CHAPTER VIII OTHER PROVISIONS

### Article 29: Loading guidelines

The RUs shall ensure that shippers comply with the UIC loading guidelines in force.

### Article 30: Accountancy and payment

The EURO (ISO code: EUR) shall be used as the sole monetary unit for all accounts and payments.

### Article 31: Obligation to pay damages

When a signatory fails by its own fault to meet an obligation which is due under this contract, he shall compensate the affected signatory for the direct damages suffered.

### **Article 32: Competent jurisdiction**

Unless otherwise agreed between the parties, the competent jurisdiction shall be that in which the defendent is established.

### Article 33: Limitation

- 33.1 The period of limitation for actions based on chapter III shall be one year. The period of limitation for actions based on chapter III shall be one year. The period of limitation for actions based on chapters V and VI shall be three years.
- 33.2 The period of limitation shall run as follows:
  - a) for claims brought under chapter III, from the day when the agreed period or the periods specified in the CIM expire;
  - for claims brought under chapter V, from the day when the loss of or damage to the wagon was recorded or the day when the keeper could consider the wagon or the accessories lost in accordance with Article 20;
  - c) for claims brought under chapter VI, from the day on which the damage occurred.

### **Article 34: Languages**

The present contract exists in English, German and French; each language version has the same contractual value.

Two GCU members with different national languages must carry out their correspondence in one of the official GCU languages. The fields in the form in Appendix 4 must thus be written in at least one of those three languages. Invoices may be issued in the national language of the place of issue. The provisions of Annex 6 of Appendix 10 (coding of interventions) remain unaffected.

### Article 35: Entry into force

This contract shall enter into force on 1.7.2006

## APPENDIX 1 TO THE GENERAL CONTRACT OF USE

### LIST OF SIGNATORY KEEPERS AND RUS

The updated list of signatories and their data as provided for by article 2.4 of the GCU can be consulted via a database available on the GCU Bureau website at the following address:

### www.gcubureau.org/signatories

Using the form defined below, each GCU member shall supply and update its own data on the aforementioned website directly, in accordance with its own organizational arrangements.

*Version: 1-jan-2018* 

# APPENDIX 2 TO THE GENERAL CONTRACT OF USE FOR WAGONS

### **DEFINITIONS**

#### **COMMERCIAL SERVICE**

Denotes the services and commercial conditions offered by an RU to keepers and other RUs. These services comprise, in particular, the routes served, the products or goods accepted in the trains, the different ways of carriage and the prices of the services provided.

### COMPETENT NATIONAL AUTHORITY

The national authority responsible for technical admission in accordance with the laws and regulations in force in each country.

#### HOME STATION; GEOGRAPHICAL AREA

Home station: designated station marked on the wagon and to which an empty wagon

must be sent if no other instruction is received from the keeper.

Geographical area: geographical area covering a number of stations in a given region to which an

empty wagon must be returned if no other instruction is received from the

keeper.

#### INFRASTRUCTURE MANAGER

Any entity or undertaking responsible in particular for the establishment and maintenance of railway infrastructure. This may also include the management of infrastructure control and safety systems. The functions of infrastructure manager across all or part of a network may be entrusted to several different entities or companies.

### **PREVIOUS USER**

An RU that used a wagon of which it was not the keeper, having subsequently handed it over to another RU for use.

### RAILWAY UNDERTAKING

Any public or private undertaking, licensed according to applicable Community legislation, the principal business of which is to provide services for the transport of goods and/or passengers by rail with a requirement that the undertaking must ensure traction; this also includes undertakings which provide traction only.

### TECHNICAL ADMISSION

Procedure by the competent national authority to approve a railway vehicle for running.

Version: 1-jan-2018

### TSI

Technical Specification for Interoperability for the trans-European conventional rail system.

### WAGON KEEPER or KEEPER

means the person or entity that, being the owner of a wagon or having the right to use it, exploits the wagon as a means of transport and is registered as keeper of the wagon in the competent official vehicle register, or, if the wagon is not registered in the competent official vehicle register or such a register is not existing, the person or entity that has declared to the GCU Bureau to be keeper of the wagon.

### WAGON IN RUNNING ORDER (operating term)

Wagon that is in running order on its own wheels in freight trains under normal operating conditions, where appropriate at the end of a train, without representing a hazard for operations.

### **WAGON NOTE**

Forwarding and deployment document accompanying a wagon making an empty run (see specimen in Appendix 3).

#### **WAGON TARE**

Total mass of the unloaded wagon, expressed in kilograms and marked on each side of the wagon (for marking rules, see Appendix 11). The marked tare must not differ from the actual observed mass of the wagon by more than 100 kilograms (heavier/lighter) per wheelset on the wagon.

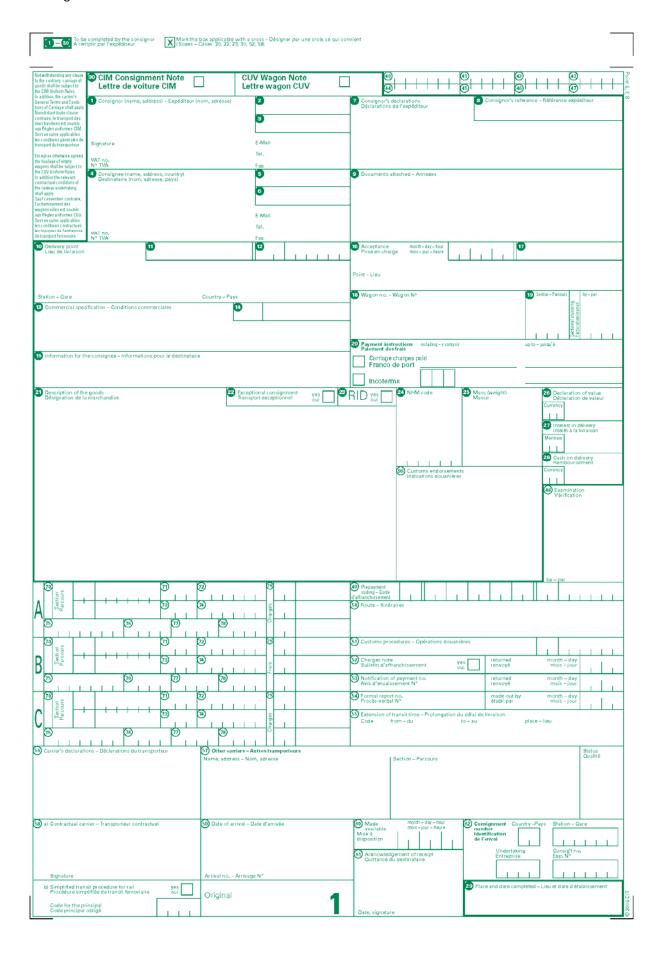
Version: 1-jan-2018

## APPENDIX 3 TO THE GENERAL CONTRACT OF USE

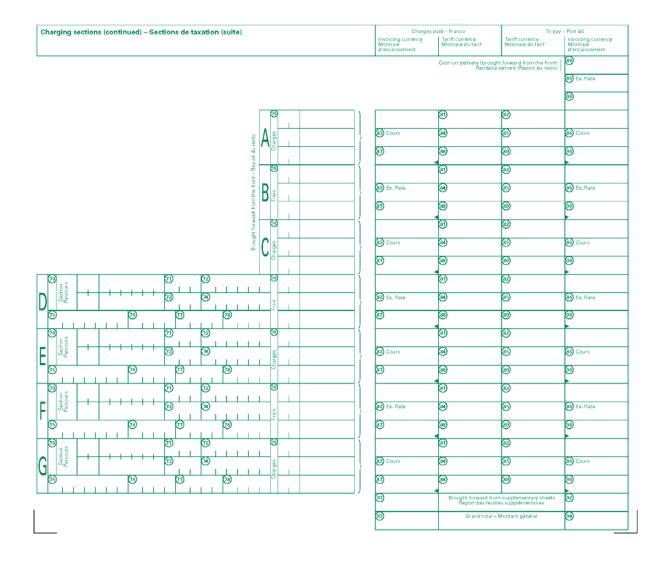
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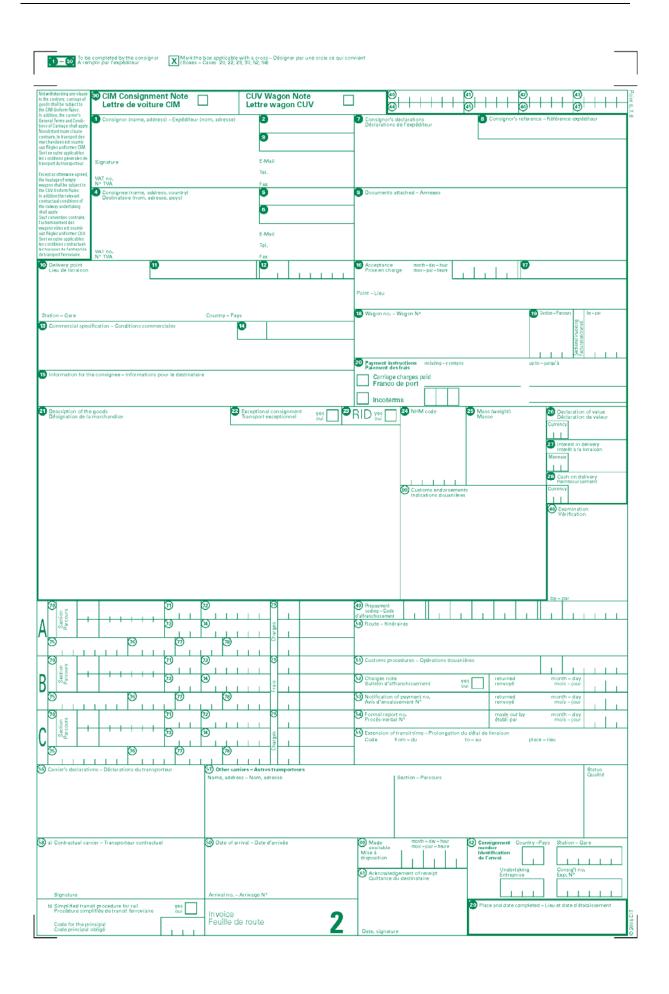
- 3.1 Wagon note
- 3.2 Wagon note for Combined Transport
- 3.3 Charges note
- 3.4 Subsequent orders
- 3.5 Notification of prevention of conveyance
- 3.6 Notification of prevention of handover

### 3.1 Wagon note



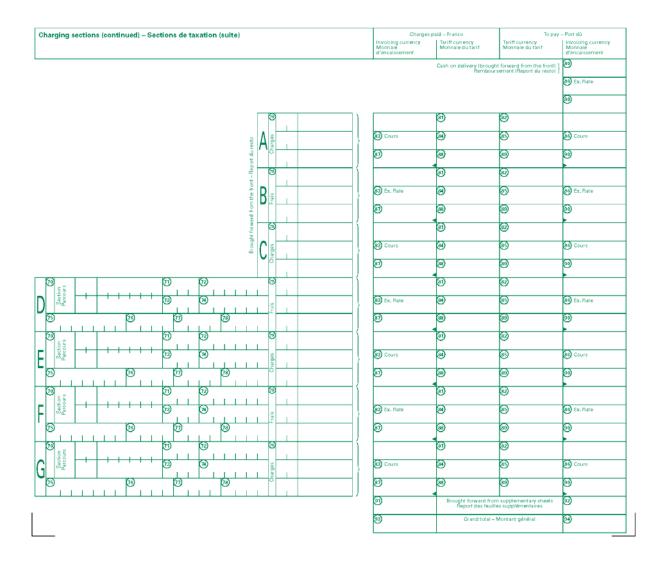


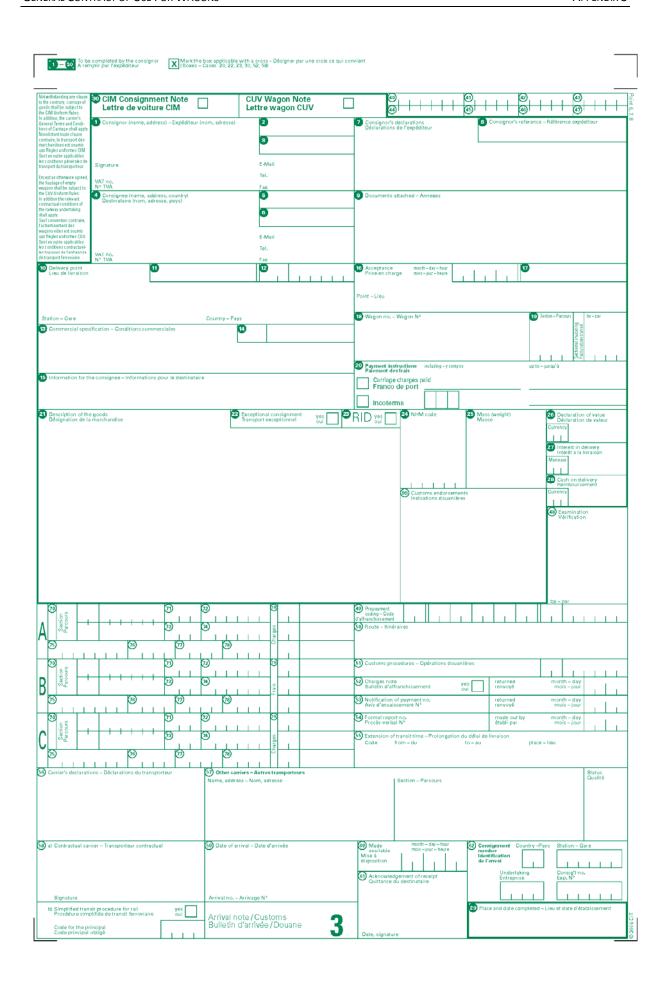




Invoice Feuille de route

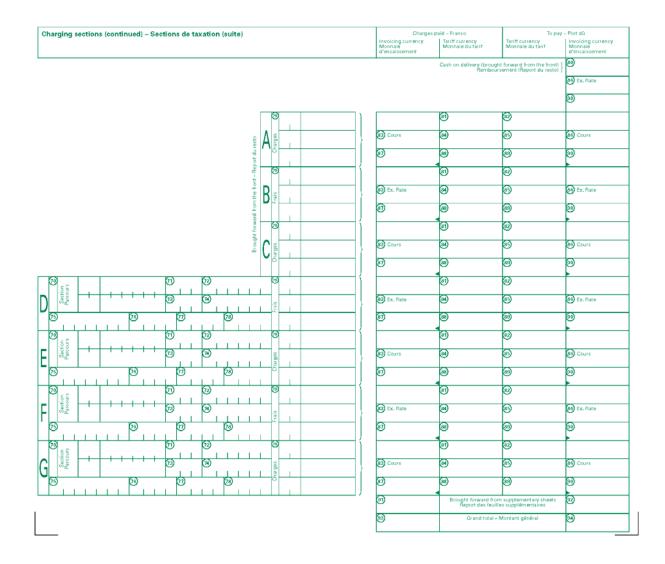
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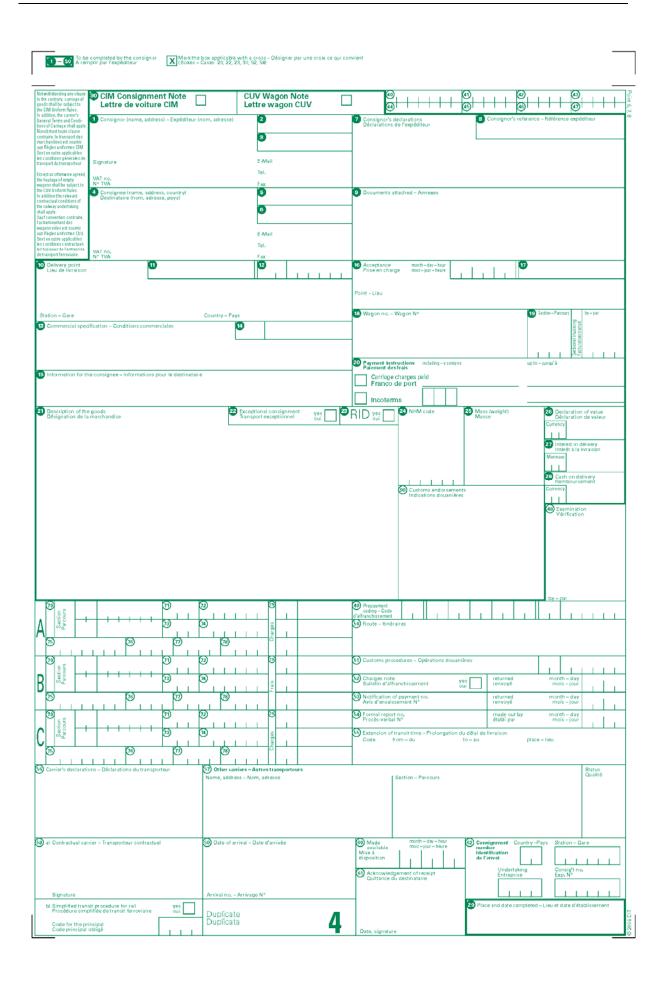




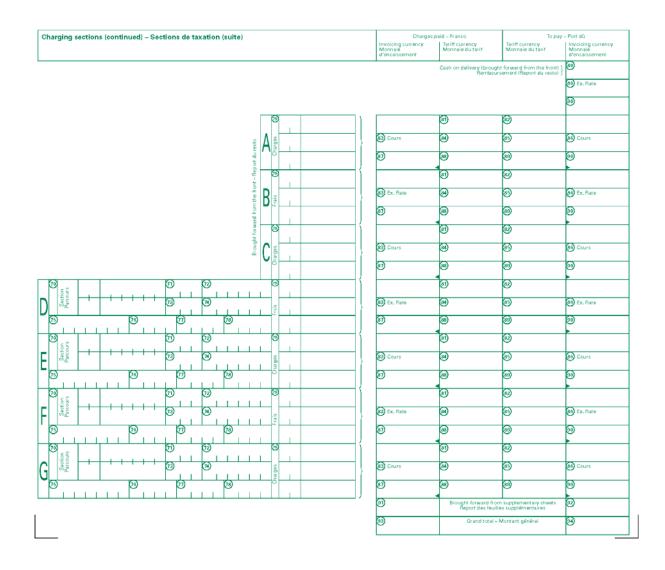
Arrival note/Customs Bulletin d'arrivée/Douane

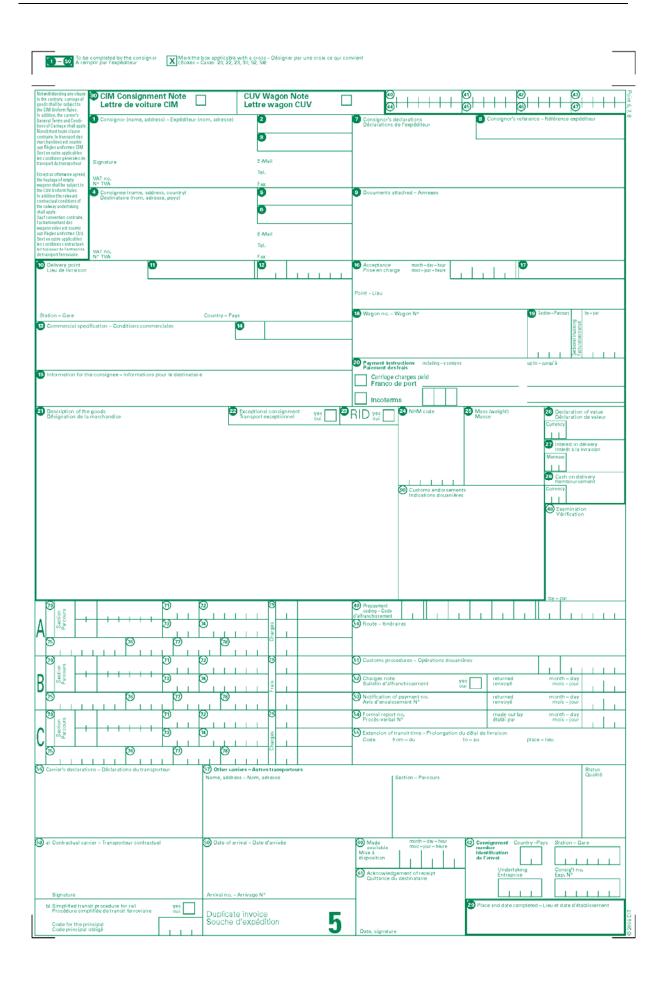
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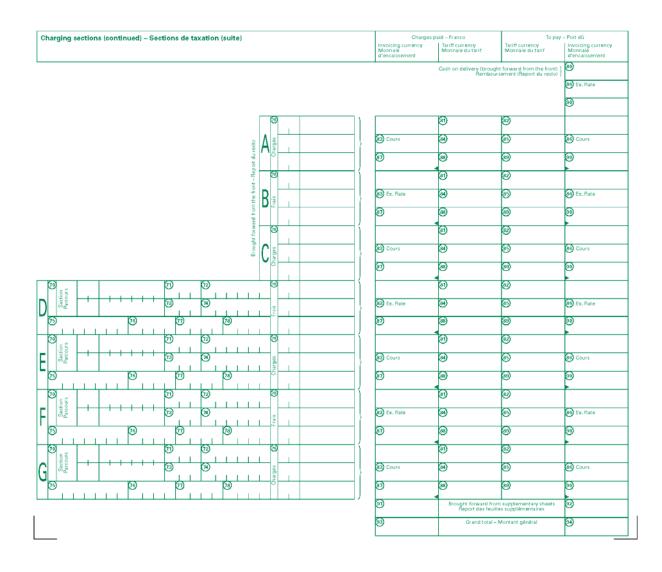
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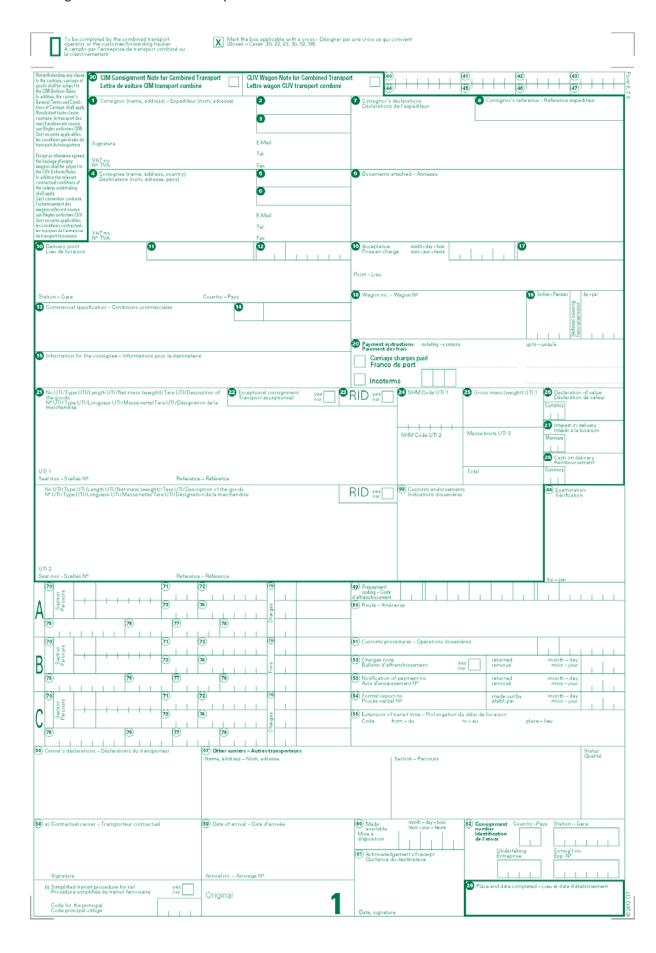


Duplicate invoice Souche d'expédition

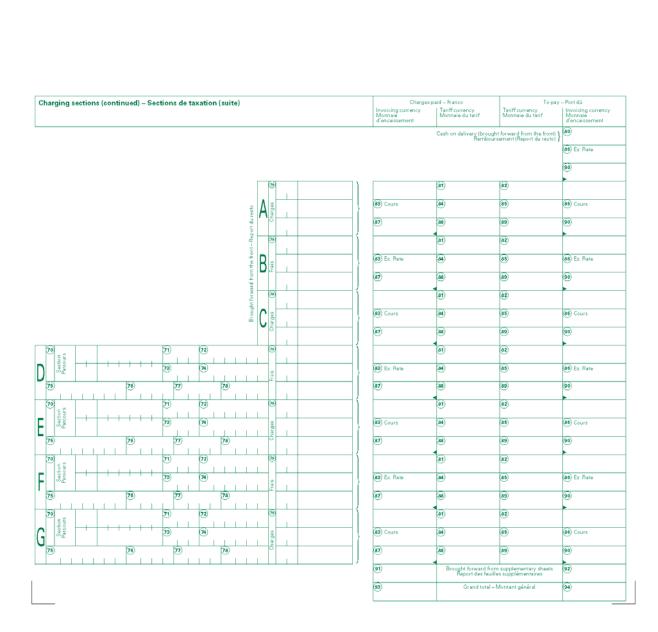
5

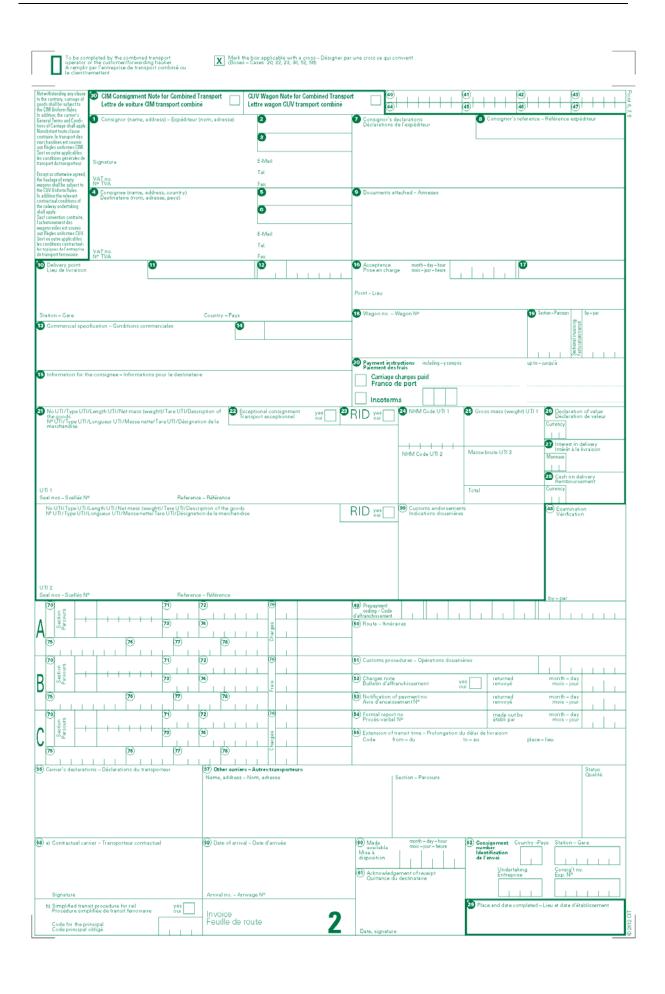


### 3.2 Wagon note for Combined Transport



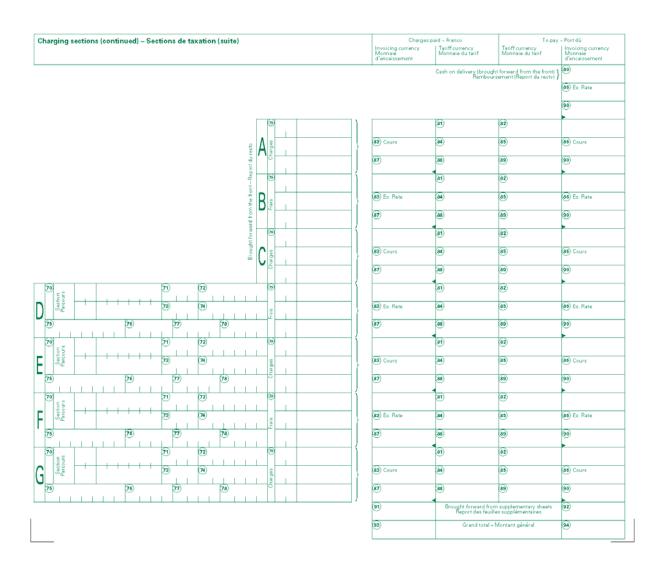
Original

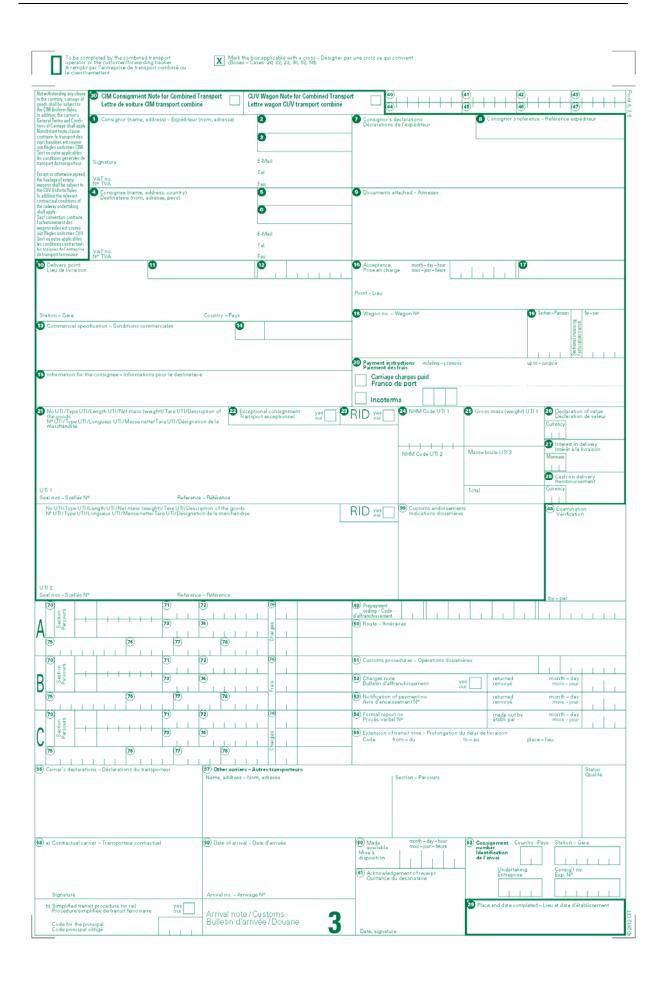




Invoice Feuille de route

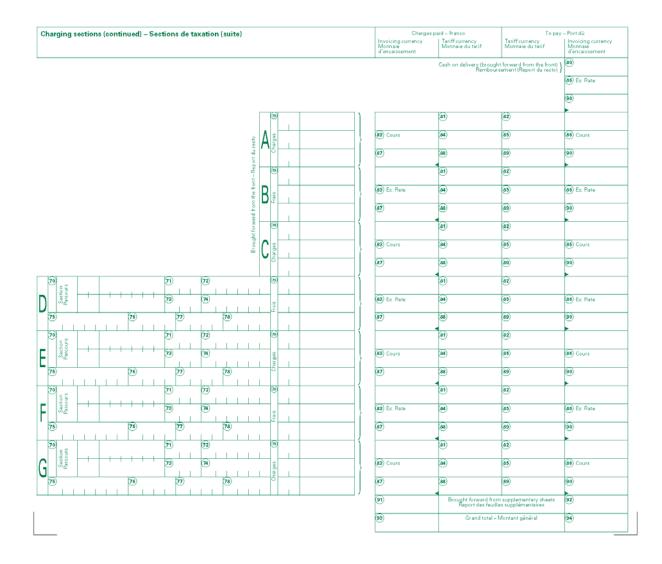
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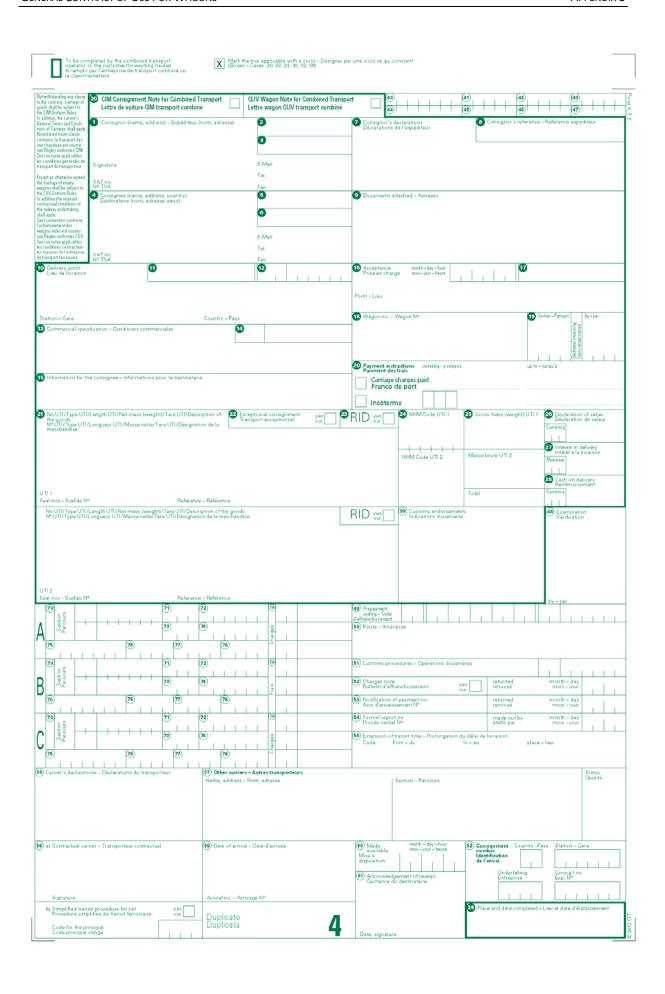




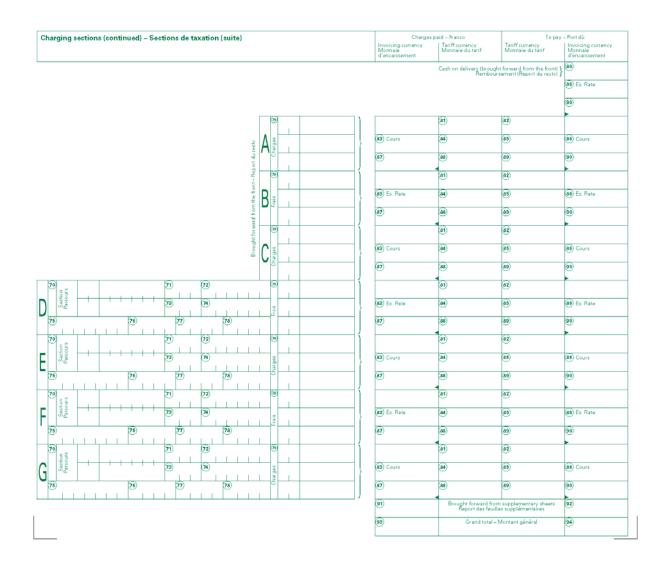
Arrival note/Customs Bulletin d'arrivée/Douane

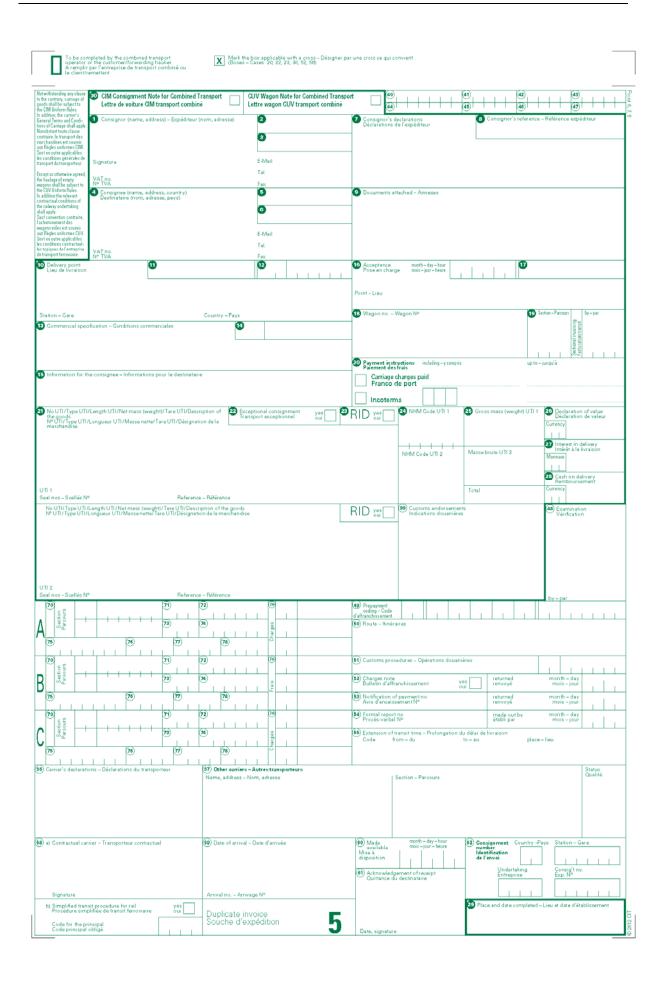
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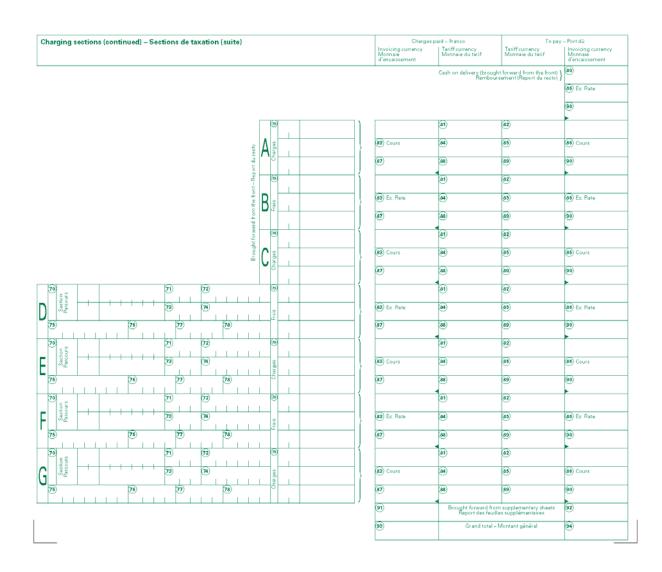


Duplicate Duplicata

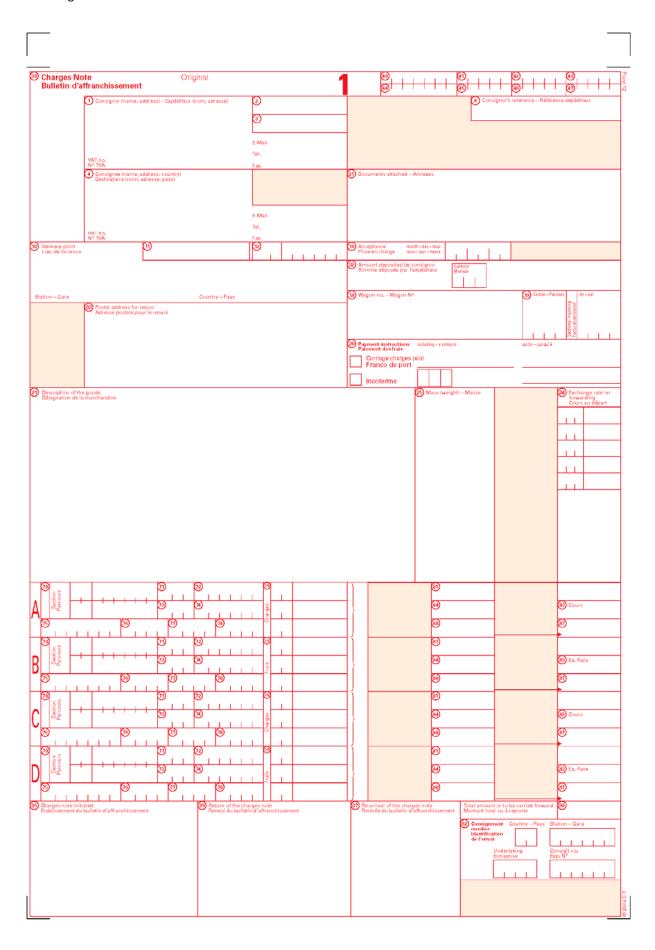




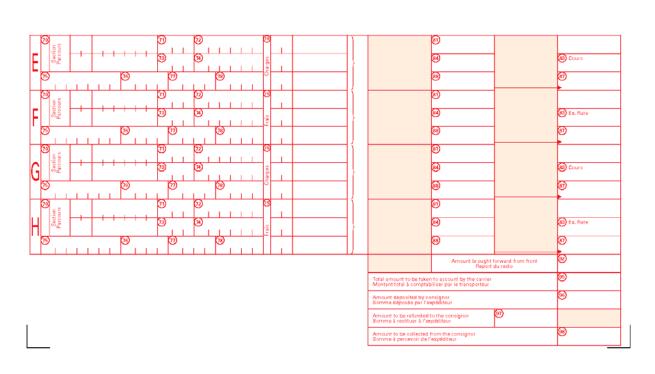
Duplicate invoice Souche d'expédition 5

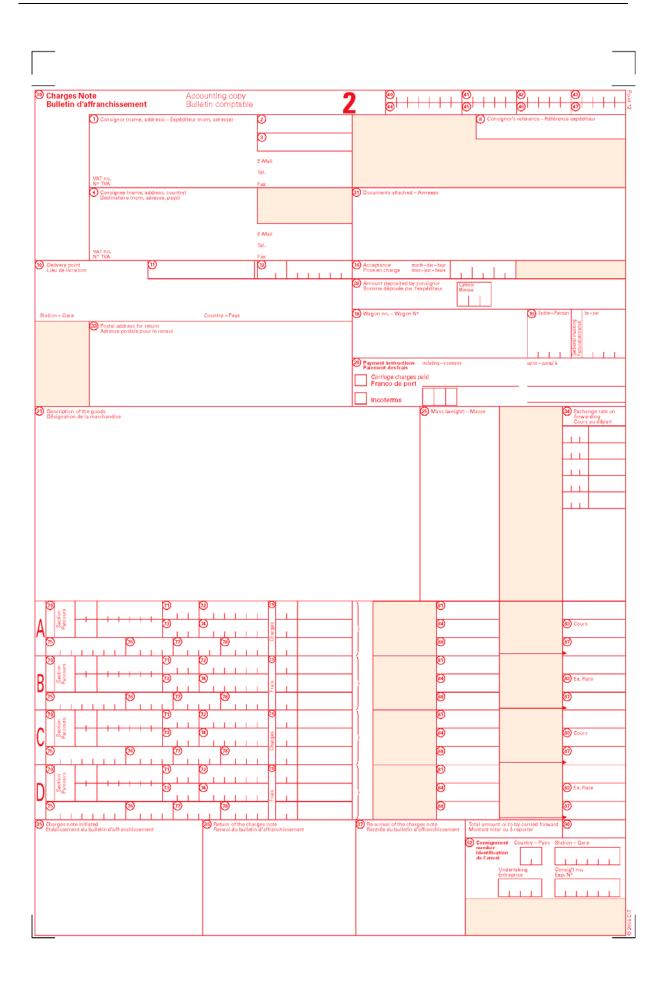


### 3.3 Charges note



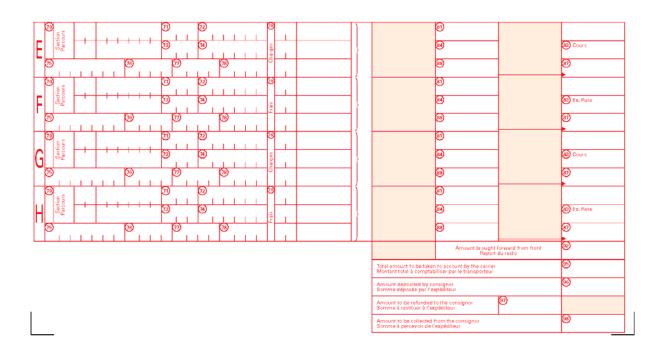
Original of the charges note Original du bulletin d'affranchissement

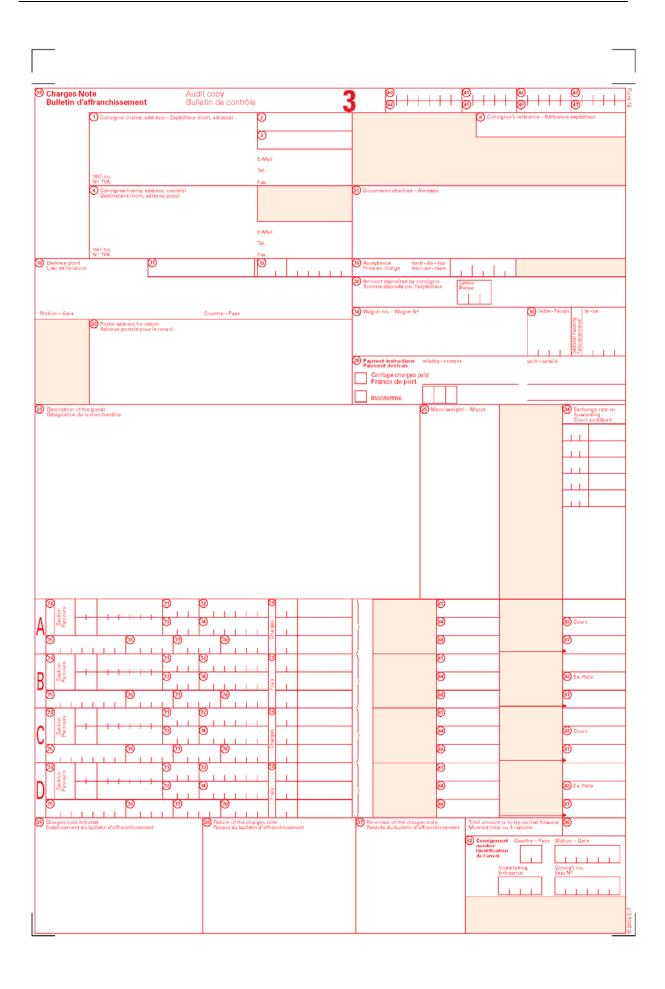




Accounting copy Bulletin comptable

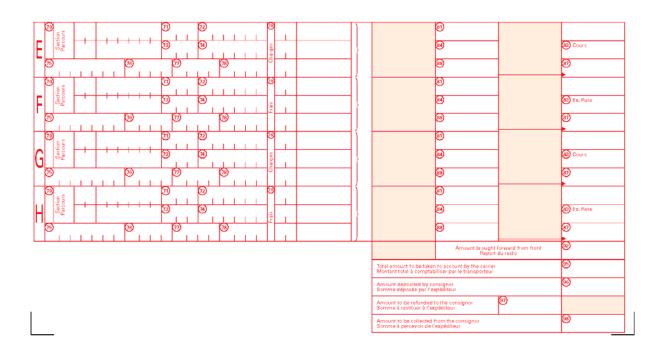
2





Audit copy Bulletin de contrôle

3



2013-01-01

### 3.4 Subsequent orders

onsignor (name, adresse) – Expéditeu	(nom, adresse)	Consignment number -		
		CIM Consignment Note Lettre de voiture CIM	Country – Pays	Station – Gare
		CUV Wagon Note	Undertaking	Consig't no.
		Lettre wagon CUV	Entreprise	Exp. Ѱ
Consignee (name, address, country) – D	estinataire (nom. adresse, pays)	Acceptance, point, date	- Prise en charge, lieu, date	
			• • •	
				m onth — day — hour m ois — jour — heure
Delivery point – Lieu de livraison		Wagon no./No. UTI – W	agon N°/N° de l'UTI	
	try – Pays			
ostal address of the carrier – Adresse p	ostale du transporteur		carry out the instructions chargé de l'exécution des or	dres
Instructions - Ordre - Mark the box applicable with a cross		Please carry out these su CIM Article 19 §§ 3-5.	ubsequent orders in compliar	ce with
<ul> <li>Attach the duplicate of the consignn</li> <li>Mettre une ⊠ dans la case en regard</li> </ul>	l de la modification demandée	Nous vous prions d'exéc prévues à l'article 19 § §	cuter les présents ordres ultér 3 à 5 CIM.	ieurs dans les conditions
- Joindre le duplicata de la lettre de v  Code Amendment - Modification	oiture	Agreement of cust	oms office of departure given	
Hold en route to await subse			le bureau de douane de dépa	
Postpone delivery to await s			oms office of departure not n reau de douane de départ nor	
Ajournement de la livraison	en attendant des ordres ultérieurs e-mail address or telephone or fax no.)	Remarks – Remarques:		
at the delivery point	on à (nom, adresse, adresse e-mail ou élécopieur)			
or telephone or fax no.) via				
Expédition à (lieu de livrai e-mail ou numéro de télépho	son) à (nom, adresse, pays, adresse ne ou de télécopieur) via (itinéraire)			
Accomplissement des forma	r administrative authorities' formalities lités exigées par les douanes			
ou par d'autres autorités adr in my presence – en ma p				
☐ in the presence of my repr ☐ I shall complete them – p	esentative – en présence de mon mandatai ar mes soins	re		
my agent will complete t				
avec palement des droit	de douane et autres frais			
6 Other instructions Autre modification				
Additional information for codes 3 to Indications complémentaires relatives				
	consignor/consignee péditeur/du destinataire		Signature of the carrier Signature du transporteur	
			C	

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2

This order may only be given if the consignee is authorised to do so in accordance with CIM Article 15 § 4b) – Cet ordre ne peut être donné que lorsque le destinataire y est autorisé en vertu de l'article 15 § 4b) CIM
This order may only be given if the consignee is authorised to do so in accordance with CIM Article 15 § 4c) — Cet ordre ne peut être donné que lorsque le destinataire y est autorisé en vertu de l'article 15 § 4c) CIM

### 3.5 Notification of prevention of conveyance

Consignor (name, a	ddress) – Expéditeur (nom, adresse)	Consignment number – Identification de l'envoi	
		COUNTry – Pays  CIM Consignment Note Lettre de voiture CIM	Station - Gare
		CUV Wagon Note Undertaking	Consig't no.
		Lettre wagon CUV Entreprise	Exp. №
Consignee (name, a	address, country) – Destinataire (nom, adresse, pays)	Acceptance, point, date - Prise en charge, lieu, date	
			month – day – hour mois – jour – heure
Delivery point – Lieu	u de livraison	Wagon no./No. UTI – Wagon N°/N° de l'UTI	
Station – Gare	Country – Pays		
ostal address of th	ie carrier – Adresse postale du transporteur	Address of the carrier to carry out the instructions Adresse du transporteur chargé de l'exécution des in	structions
	preventing carriage – Empêchement au trans	oort	
	gnment detailed above has had to be stopped in	because of	
The consi	usmentionné a dû être arrêté à ignment cannot be sent by another route e peut pas être acheminé par un autre itinéraire	par suite de	
The consing The consing The consing Terror of the consing L'envoi per l'envoi et l'envoi	usmentionné a dû être arrêté à ignment cannot be sent by another route	par suite de svia consignment note if you ask to change the consignee or de circumstances preventing carriage are resolved before the I see CIM Article 22 §§ 2 – 6. olicata de la lettre de voiture si vous demandez une modific tructions, si l'empêchement au transport vient à cesser avan	instructions arrive. cation du destinataire ou du lie
The consi L'envoi ne Rerouting L'envoi pe dease supply your i viil be forwarded to ee CIM Article 22 8 ous êtes prié de fai e livraison. L'envoi 'agissant des frais,	usmentionné a dû être arrêté à grament cannot be sent by another route e peut pas être acheminé par un autre itinéraire , subject to extra charges, is possible via eut être acheminé contre paiement des frais supplémentaire instructions without delay. Please attach the duplicate of the ist delivery point without waiting for your instructions if the it for charges. For consignments which cannot be forwarde ire connaître vos instructions sans retard et d'y joindre le du sera acheminé sur son lieu de livraison, sans attendre vos instructions lieu de livraison, sans attendre vos instructions cannot be formarde.	par suite de svia consignment note if you ask to change the consignee or de circumstances preventing carriage are resolved before the I see CIM Article 22 §§ 2 – 6. olicata de la lettre de voiture si vous demandez une modific tructions, si l'empêchement au transport vient à cesser avan	instructions arrive. cation du destinataire ou du lie
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### 3.6 Notification of prevention of handover

Consignment number – Identification de l'envoi
Country – Pays Station – Gare
Lettre de voiture CIM  CUV Wagon Note  Undertaking  Consig't no.
Lettre wagon CUV Entreprise Exp. №
Acceptance, point, date - Prise en charge, lieu, date
month - day - hour most - jour - heure
Wagon no./No. UTI – Wagon N°/N° de l'UTI
livraison
susmentionné n'a pas pu être livré pour les raisons suivantes:
C Consignee hasn't come forward despite being notified Le destinataire ne se présente pas, malgré l'avis qui lui a été adressé
D Consignee cannot be contacted Le destinataire ne peut pas être atteint
Cther reasons:
Autres motifs:
of the consignment note except where the consignee has refused the consignment. our instructions if the circumstances preventing delivery are resolved before the instructions arrivarded see CIM Article 22 5§ 2 - 6.
duplicata de la lettre de voiture, sauf si le destinataire à refusé l'envoi. L'envoi sera livré au destinata s. S'agissant des frais, voir art. 22 § 1 CIM. Pour les envois en souffrance, voir art. 22 §§ 2 – 6 CIM.
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# APPENDIX 4 TO THE GENERAL CONTRACT OF USE

### **WAGON DAMAGE REPORT**

To be valid, the Wagon Damage Report (WDR), as defined in Article 18 of the GCU, must be established by the user RU using a form compliant with the model provided in and with this Appendix. The WDR shall be completed electronically, only if not possible manually – in the latter case solely capital letters shall be used.

The contents of the WDR (mandatory, optional and conditional data<sup>1</sup>)) are described in the WDR guide.

The WDR must be sent to the keeper without delay, preferably by email otherwise by fax. A copy of the WDR should be kept by the user Railway Undertaking which has provided it during the period defined in Article 33 GCU.

According Article 34 GCU the WDR shall be established in one of the three GCU languages. Additional remarks may be made in the language used at the place of issuing.

Where necessary, the user RU can attach additional documents and information to the WDR.

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<sup>&</sup>lt;sup>1</sup> Conditional: including information is mandatory when the relevant incident has occurred.

### "Wagon Damage Report" (WDR)

Wagon Damage Report (WDR)
1. General Information
Name of user  RU
Consignment no Train no
Place at which damage detected Damage dedected on
Forwarding station Destination station
Date of despatch Loaded state
Wagon no.
Keeper's name/VKM
Keeper's address or e-mail address
2. Description of damage
Damage code as per GCU Appendix 9  Description of defect New damage Old damage
Description of defect New damage Old damage
Description of defect New damage Old damage
Additional remarks
An exact description of the damage will be produced during repairs and will be sent to the keeper.
Labels found on wagon
Sample
RU that created labels found on wagon
4. Sample of labeling
Sample
Despatch to workshop
Damage detected upon acceptance
GCU signatory RU Non-GCU signatory RU Connecting railway  Name
6. Details of perpetrator of damage
☐ Wear and tear
Impact damage in course of railway operations
Name and address of third party
**************************************
Third party's signatory
Perpetrator not ascertainable
Place/Date Contact
☐ Attachments

### Wagon Damage Report (WDR) WDR guide

Heading	Status	Definition
RU's logo	Optional	-
Name of user RU	Obligatory	-
Company Code	Optional	4 digit Company Code, UIC Code or RICS if allocated.
Damage report no.	Obligatory	Issuing RUs sequential number of damage report.
Station at which damage was detected	Obligatory	Name of station / location where the damage was detected.
Consignment no.	Obligatory	-
Date of dispatch	Obligatory	Dispatch date of the consignment (as per consignment/wagon note).
Forwarding station	Obligatory	Full name of forwarding station (as per consignment/wagon note).
Destination station	Obligatory	Full name of destination station (as per consignment/wagon note).
Damage detected on	Obligatory	Date and time at which damage was detected (not the date the report was established).
Train no.	Obligatory	Number of the train in which the wagon was operated when the damage was detected.
Loaded state	Obligatory	Loaded state of the wagon when the damage was detected (empty or loaded).
Wagon no.	Obligatory	12-digit wagon number marked on wagon, including check digit.
Keeper (Name and his VKM format)	Obligatory	Vehicle Keeper Marking (VKM) according inscription on wagon and full name of wagon keeper.
Keeper's address or e-mail address	Optional	Useful for proving to whom the WDR was sent by the RU.
Damage code as per GCU Appendix 9	Obligatory	Complete damage code as per GCU Appendix 9, Annex 1(*). Only damage codes which are allocated to a damage class may be used. In case of more than 3 damage codes use an appropriate way to inform about all codes when sending the WDR.
Description of defect	Obligatory	Description as per GCU Appendix 9, Annex 1.
Old / new damage	Optional	-
Remarks	Optional	Additional description / details of damage. cause of damage if identifiable; amount or scope of damage (e.g. 2 floorboards broken).
Labels found on wagon	Obligatory	Type of GCU labelling found on wagon. The relevant form is to be ticked.
RU that affixed labels found on wagon	Obligatory	Details of the previous using RU that affixed labels and, where applicable, the date on this labelling.
Sample of new labelling	Obligatory	Type of GCU labelling that was affixed. The relevant form or the field "wagon detached" is to be ticked.
Dispatched to workshop before/after unloading	Obligatory	Tick field if RU organized the transport of the wagon to a workshop (Article 19, GCU).
Details of perpetrator of damage	Obligatory	Regardless of the damage category all indicators available and contributing to clarification of the cause must be written down.
Wear and tear	Conditional	-
Impact damage in course of railway operations	Conditional	This category is to be used for damage patterns which are attributable to the improper handling of wagons (e.g. shunting accidents, sideswipes or other sudden events) or to a culpable breach of duty of care by the user RU.

Name and address of third party – signature of third party	Conditional	This category is to be used for damage which are attributable to the improper handling of wagons during loading or unloading or to a culpable breach of duty of care by a third party. The line "Address of the third party responsible" shall be used for details of the perpetrator of the damage, specifically the name of the company, the address and the relevant company contact.  The damage must be reported to and discussed with the perpetrator. The perpetrator should confirm his acceptance of liability on the WDR or on another appropriate document in order to enable the RU to proof not being liable according Article 22, GCU.
Perpetrator not ascertainable	Conditional	This category may only be chosen if there are no indicators in evidence that suggest a perpetrator and/or an old damage exists.
Damage detected upon acceptance from	Conditional	This category is only used if the damage is detected at the handover location.
GCU signatory RU (name)	Conditional	This category must be chosen if the wagon was accepted from a RU being a signatory to the GCU. The list of GCU- RUs can be found on the GCU home page (http://www.gcubureau.org). Insofar as it is known, the name of the RU must be entered in the appropriate field.
(Name of) connecting railway	Conditional	This category must be chosen if the wagon was accepted from e.g. a works railway, which is not a RU as per definition in the GCU. Insofar as it is known, the name of the connecting railway must be entered in the appropriate field.
From a non-GCU signatory RU (name)	Conditional	This category must be chosen if the wagon was accepted from an RU, which is not a signatory to the GCU. Insofar as it is known, the name of the RU must be entered in the appropriate field.
Department where report was established	Optional	The station or location where the damage report was established should be entered here.
Location, date	Obligatory	Complete with where (place) and when (date) the damage report was established.
Contact point	Obligatory	Contact point for any questions concerning the damage report (Name, Phone number, E-Mail Address).
Attachments	Optional	Photos, documents, etc.

<sup>(\*)</sup> For a transitional period of two years the information with a three-digit damage code is allowed, if no other alternative exists. However, the lone last figure of the damage code in this case, may be avoided.

# APPENDIX 5 TO THE GENERAL CONTRACT OF USE

### CALCULATING COMPENSATION FOR A WAGON OR BOGIE IN THE EVENT OF LOSS OR DAMAGE

### I. Compensation

Compensation for loss or damage to a wagon is paid in line with the residual value of the wagon. The keeper decides which of the two following principles shall be applied for calculating compensation:

- A. specific residual value, justified by documentary proof of the actual damage sustained, or
- B. flat-rate residual value.

### A. Calculation of specific residual value

The keeper shall indicate the specific residual value and provide documentary proof of that value.

#### B. Calculation of flat-rate residual value

1. Calculation of replacement value

The replacement value is the average value of a new, similar or comparable wagon at the time the loss or damage occurred. The keeper shall provide documentary proof of the replacement value.

- 2. Calculation of compensation
- 2.1 The amount to be paid as compensation as per articles 19.2 or 20.3 of the GCU is calculated in accordance with points 2.2 or 2.3 hereafter. In addition, a flat-rate sum shall be paid as per point 2.4.
- 2.2 First of all 4% per year of service (linear rate) shall be deducted from the replacement value determined in accordance with point B1, up to a maximum rate of 80% of the replacement value (compensation option 1).

  When calculating the number of years of service, the year of construction and the year when the wagon was damaged or lost are counted as a single year.
- 2.3 Should the keeper decide to keep the wagon, 10% shall be deducted from the amount to be paid as compensation calculated in accordance with point 2.2 (compensation option 2). When the wagon is sent back to the keeper, the keeper may invoice the liable RU for the actual transport costs thus incurred, providing documentary proof of these costs. The amount to be invoiced as transport costs may not exceed 10% of the compensation payable as per point 2.3 (option 2).
- 2.4 A flat-rate sum of € 2000 shall be added to the compensation payable as per points 2.2 or 2.3 (amount payable for calculation by the keeper of compensation for loss or damage).

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### II. Compensation procedure

### 1. Loss

The keeper shall send to the RU an invoice complying with the principles laid out in point I, along with documentary proof that the wagon has been struck off the national vehicle register.

### 2. Damage

The keeper shall send to the RU an invoice complying with the principles laid out in point I.

On the invoice the keeper shall expressly state whether it wishes to transfer the wagon to the RU for scrapping or whether it wishes to keep the wagon. The RU must comply with that decision.

When the keeper has decided to transfer the wagon to the RU for scrapping, alongside the invoice it shall provide the RU with a document empowering the RU to scrap the wagon and collect any revenue arising thereby.

The RU is obliged to provide suitable documentary proof that wagon has been scrapped at the earliest possible date in order to allow the keeper to call for the wagon to be struck off the national vehicle register.

### 3. Persons acting for the parties

In this procedure the RU and keeper are represented by the individuals named in Appendix 1 to the GCU.

#### 4. Customs formalities

The RU is obliged to handle any necessary customs formalities.

### III. General rules

- 1. The aforementioned rules also apply to bogies.
- 2. All other rights and duties remain unaffected.

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### **APPENDIX 6**

### TO THE GENERAL CONTRACT OF USE FOR WAGONS

### I. COMPENSATION FOR LOSS OF USE

The compensation payable on the basis of Articles 13.3 (loss of use due to delay) and 23.2 (loss of sue due to damage) of the GCU is calculated either based on the actual damage sustained or as a flat rate, whichever the keeper decides.

### 1. Compensation based on actual damage sustained

The keeper shall claim compensation for loss of use from the responsible RU by means of supporting documents on the basis of the damage sustained.

### 2. Flat-rate compensation

### 2.1 Daily rate per wagon in euros

To calculate the daily rate (in euros):

Multiply the coefficient for the relevant wagon type by the wagon's length over buffers (in metres, unrounded).

Code letters of various wagon types	Coefficient
E – Open Wagon	1.1
F – Open Wagon	1.5
G – Covered Wagon	1.1
H – Covered Wagon	1.5
I – Temperature-controlled wagon	1.4
K – Two-axle flat wagon	1.1
L – Flat wagon	1.5
O – Mixed flat open wagon	1.4
R – Bogie flat wagon	1.1
S – Bogie flat wagon	1.5
T – Wagon with opening roof	1.5
U – Special wagon	1.8
Z – Tank wagon	1.8

### 2.2 Flat-rate compensation to be paid for loss of use arising from the period for carriage being exceeded for empty or loaded wagons

The RU responsible for a loaded or empty wagon exceeding the carriage period shall pay the keeper a flat rate of compensation in accordance with 2.1 for each indivisible day of delay (Sundays and public holidays\* not included), upon presentation by the keeper of an invoice.

For loaded wagons, this payment shall be independent of any compensation payable as a result of the loaded goods exceeding the transit period.

<sup>\*</sup> according to the country in which the vehicle is located

### 2.3 Flat-rate compensation to be paid for loss of use arising from repair work on the wagon

The RU responsible for damaging a wagon or its accessories as per GCU Article 22 shall pay the keeper a flat rate of compensation upon presentation of an invoice in accordance with 2.1 for each indivisible (calendar) day on which the wagon is unavailable for use.

This compensation shall be calculated starting from the day following that on which the damage was first recorded (in accordance with GCU Appendix 4, Wagon damage report, "Damage detected on...") and shall end on the day on which the wagon's fitness for service is restored.

The loss-of-use period shall be suspended in the following cases:

- if the wagon is given a K label in the sense of GCU Appendix 9 and then takes more than two days to be taken to the workshop (a flat rate then applies for the time taken to reach the workshop);
- from the day the damage was recorded up to the day the goods are unloaded if the wagon has been given a K label before being forwarded;
- for the time elapsing between the request of spare parts as per Forms H and H<sup>R</sup> and the delivery of these parts (GCU Article 23.2);
- if the wagon is taken for further maintenance work at the keeper's behest;
- if the wagon is given a K label (GCU Appendix 9) and transferred between two workshops and this takes more than two days (a flat rate then applies for the time taken to reach the other workshop).

#### 2.4 Miscellaneous

The compensation payments referred to under points 2.2 and 2.3 may not be aggregated.

### II. COMPENSATION FOR REPROFILING OF WHEELSETS

The RU responsible for damaging the wheelsets to be reprofiled shall pay the keeper upon presentation of an invoice with supporting documents a flat rate of 350 EUR for the loss of value arising as a result of reprofiling (reduction in the running-circle diameter).

# APPENDIX 7 TO THE GENERAL CONTRACT OF USE

### **SPARE PARTS**

### 1. General principles

1.1 The management of spare parts must be organised in a cost-effective and rational manner to cut down on the time damaged wagons spend out of service and keep transport of the parts themselves to a minimum. The request for spare parts is to be made by means of Form H/H<sup>R</sup> and should include the related damage report reference number.

Restrictions on transport conditions (e.g. opening hours, means of transport) are to be stated in advance on Form H/H<sup>R</sup>.

- 1.2 The keeper must ensure that the requested spare parts are delivered to the workshop carrying out the repairs as rapidly as possible, or within 20 calendar days at the latest after forwarding the spare part request to the keeper. If this deadline is exceeded, the corresponding track occupation costs due to this delay can be invoiced to the keeper. Any track occupation costs must be indicated on the request for spare parts (Form H/H<sup>R</sup>).
- 1.3 The user RU and the keeper shall designate a logistics centre to coordinate and steer all aspects of the provision of spare parts. The addresses shall be indicated in the list of addresses in Appendix 1 to the GCU.
- 1.4 Conditions for returning parts removed from vehicles are to be indicated by the keeper on Form  $H/H^R$ .
- 1.5 Modern means of communication (e.g. fax or e-mail) shall be used to exchange information.
- 1.6 When transporting spare parts, the most cost-effective means of transport and service shall be selected in terms of price, service, quality and transport time, taking account of specific delivery conditions.
- 1.7 Transport and customs related costs, regarding article 19 aren't included in the repair costs. These costs are to be charged to the responsible for the damage.
- 1.8 Spare parts shall be delivered ready for fitting and be compatible with the wagon to be repaired.
- 1.9 When sending spare parts, care must be paid to ensuring they can be clearly assigned to a given wagon on arrival. The consignee must use those parts on the designated wagons.
- 1.10 For transport beyond the borders of a customs area, the keeper must ensure customs clearance. This requirement is also applicable to the recovery (scrapping) or abandonment of parts outside of their own customs area.

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### Part A

### Wheelsets

### 2. Principles

- 2.1 If wheelsets need to be repaired, the user RU must inform the wagon keeper without delay and at the latest within two working days (Saturdays excluded) of the damage being reported in the workshop, using Form H<sup>R</sup>.
- 2.2 The user RU must offer the wagon keeper the procedure set out in point 3.1 and, where possible, the procedure set out in point 3.2.
- 2.3 The wagon keeper must accept one of both procedures on offer and send written agreement within two working days (Saturdays excluded). If the keeper does not answer within the period specified, the procedure in point 3.1 shall be applied.

### 3. Handling of wheelsets

- 3.1 Wheelsets replaced with wheelsets provided by the keeper
- 3.1.1 The user RU shall use Form H<sup>R</sup> to notify the wagon keeper of the details of the wheelset (e.g. wheelset and housing type, diameter, wheelset position, wheelset number) and the delivery address for the wheelset to be supplied.
- 3.1.2 The keeper is to send the requested wheelset as swiftly as possible to the delivery address. It must provide the user RU with a delivery address for the damaged wheelset.
- 3.1.3 The wagon number must be indelibly marked on the damaged wheelset (inside of the wheel centre) once it has been removed.
- 3.1.4 The damaged wheelset must reach the keeper at the address provided as per 3.1.2 in Form H<sup>R</sup> within 6 weeks of being removed from the wagon. If the wheelset does not reach the keeper by this time, he shall send out a reminder to the user RU, extending the deadline by a further 2 weeks at least. If the wheelset still does not arrive by this extended deadline, the user RU shall pay the keeper the replacement value of the wheelset.
- 3.2 Repair of wheelsets with keeper's approval
- 3.2.1 The damaged wheelset shall be removed and sent to an approved workshop for repair in accordance with the provisions of the keeper. Once repaired, the wheelset shall be fitted back on the wagon.
- 3.2.2 If during the repair operation on the damaged wheelset a technical defect is observed that requires the replacement of the wheel centre, axle or axle-box, the wagon keeper shall be informed immediately. The procedure in point 3.1 shall be applied from point 3.1.2 onwards.

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### Part B

### Other standard spare parts

### 4. Usage of standard spare parts

4.1 When wagon parts have been damaged, the user RU shall preferably replace them using standard spare parts from its own stock. In principle, the spare parts should be of the same type as the removed parts or, if this is no longer available, as the other parts of the wagon. Mixing different designs is not permitted (unless stated otherwise in Appendix 10, e.g. brake blocks in accordance with 3.8.3).

The following are considered as standard spare parts:

- Safety straps
- Cast iron brake blocks, as well as K and LL brake blocks, if marked on the wagon
- Brake couplings
- Spark arrestor plates
- Earthing braids. The earthing braids must comply with UIC Leaflet 533
- Screw couplers, factoring in breaking strength. The screw coupler must comply with EN 15566 and UIC Leaflet 520 respectively
- Screw coupler suspension hooks
- Guiding and locking elements
- Steps and handles. The newly built steps must be of the exact same model to ensure that they
  remain within the loading gauge. The step surface must comply with UIC Leaflet 535-2 and/or EN
  16116-2.
- Label holders, inscription plate
- Ventilation flaps, control gear, shutter retaining bracket
- Stanchions in accordance with UIC Leaflet 578
- End boards, crossing gangways
- 4.2 The value of any such standard spare parts shall be included in the cost of the repair operation.
- 4.3 When the user RU makes a cost estimation to the keeper, the keeper must indicate whether he wishes the damaged parts to be returned to him at his own expense. If the keeper does not specify the return of these parts, they shall remain with the user RU, together with the other spare parts removed from the wagon. There shall be no form of compensation for the value of these parts.

### 5. Order for standard spare parts

- 5.1 Due to the lack of standard spare parts of the same type in the workshop and if these parts cannot be obtained quickly, standard spare parts may be ordered from the keeper using an equivalent procedure to that in Part C (Form H).
- 5.2 This operation is coordinated exclusively through the logistics centres.

### Part C

### Other non-standard spare parts

### 6. Request for non-standard spare parts

6.1 Non-standard spare parts that are needed to repair a wagon and are not stocked by the user RU shall be ordered from the keeper's logistics centre using Form H.

6.2 For each request for spare parts using Form H, confirmation of receipt shall be sent without delay to the logistics centre making the request. When confirming receipt, the estimated delivery time of the spare parts shall be indicated. If the damaged parts are to be returned, this should also be specified. If the spare parts cannot be dispatched immediately, the requesting logistics centre shall be informed without delay.

### 7. Return of damaged non-standard spare parts

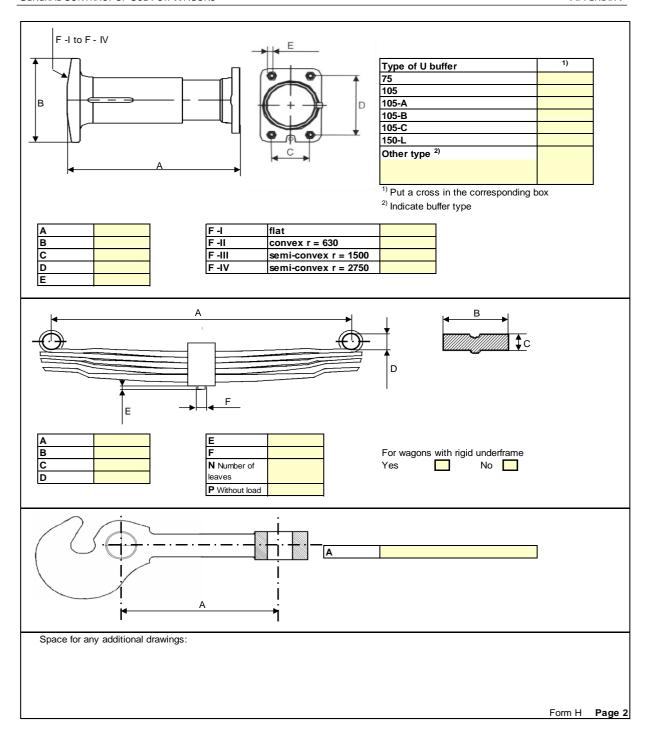
- 7.1 Damaged parts with a low value (e.g. suspension rods and links, etc.) are not returned once removed. No compensation for their value shall takeplace.
- 7.2 Other damaged parts, once removed, shall only be returned at the keeper's request.
- 7.3 If the spare part does not arrive at its destination, the amount of compensation payable shall be subject to the provisions of the associated contract of carriage.

### Part D

### Fitting of spare parts from vehicles belonging to the same keeper

- 8.1 To avoid delaying the forwarding of a wagon, spare parts may be taken from another wagon of the same keeper, subject to his approval.
- 8.2 If the keeper has given his agreement, the spare parts must then be ordered for the wagon from which they have been taken.

Issuing RU (LOGO)		Form H
Wagon number:		
Damage report reference number:		
Keeper:		Fax no.: E-mail:
December of wants	Pos Quantity Description	*
Description of parts:	2 3	
	4 5	
Other: Addresses:	* Parts missing from the wagon Track occupation costs as per App. 7, point 1.2 Contact address:	€
		Delivery conditions, where appropriate
	Tel: Fax: E-mail:	
Date		Signature
To be filled in by the keeper		
Answer:	Return of damaged parts?  Yes	No Pos.
Address:	Delivery address:	Delivery restrictions, where appropriate:
Date: Please use block letters thr		Signature: ompany stamp: Form H Page 1



Issuin	_	Form H <sup>R</sup>										
		•							Drawn			
Wagon num	ber:								Diawii	up on		
Damage rep	ort											
Keeper:							Fax no.:					
Remarks:							Citiani					
Condition of	all the who	eelsets of the	e wagon - fo	r unda	maged v	wheelset(s)	complete	only	the field	ds "POS" and	d "B"	
Pos	T/M	В	c c		nobloc		wheelset			t number(s)		aged
103	17.00	measured		ye	s/no	туро от				wheelset(	s)	
		<u> </u>										
Pos: position If no marking				n.								
Number of d	•		J									
wheelsets:	amagea											
		1				service T/N				osite the axle	number	
	3		1.2.2 Therma 1.3.2 Wheel						box leaki of lubrica	•		
		_	1.3.3 Wheel	-					xle box			
<b>è</b> − −	<u> </u>	В В	<b>1.3.4</b> Metal i				l l		-	placed or mis	ssing	
Îc	M		1.3.5 Cavities 1.5.1 Damag				1	Overlo Derai		ide details)		
10000			1.6.1 Damag			e	0.1.1	Derai	IIIIeiii			
		+	1.7.2 Out-of-				Other:					
	<u></u>											
Addresses:		Contact add	ress:				Delivery a Station of		ss:		1	
							Station	oue.	Ш			
							Deliver		diana if	nnliaahla		
							Delivery	restric	tions, it a	applicable		
		Tel.:										
		Fax:										
		Email:										
Quotes:		see page 2					O!	.4				
Date:						С	Signa company st					
Please comple	ete in block l	etters					- •	•		Form H <sup>F</sup>	₹	Page 1

Issuing RU (LOGO)	Form H <sup>R</sup>
Wagon number: Damage report reference number:	
Keeper:	Fax no.: Email:
Quotes:	3.1 Request for replacement wheelset(s) using form H <sup>R</sup>
	3.2 Repair one or more wheelset(s)  Repair to be done by approved depot
Remarks:	Track occupancy costs as per Appendix 7 point 1.2.
	To be completed by the keeper
Reply:	We hereby accept your quote no and will send you the requested wheelsets by (point 3.1 only
Addresses:	The damaged wheelsets should be returned to the address indicated below:  (point 3.1 only Delivery address:  Station code:  Delivery rectrictions if applicables
	Delivery restrictions, if applicable
	Billing address:
Date:	Signature: Company stamp:
Please complete in blo	ck letters Form H <sup>R</sup> Page

### APPENDIX 8 TO THE GENERAL CONTRACT OF USE FOR WAGONS

### INTERNAL REGULATION FOR THE APPLICATION AND FURTHER DEVELOPMENT OF THE GCU

#### **Preamble**

Part I of this Appendix contains provisions regarding the GCU Bureau.

Part II describes the organisational arrangements adopted by the associations involved in the establishment of the GCU for monitoring the application of the GCU and facilitating its further development.

### I. The GCU Bureau

1. The tasks of the GCU Bureau as set out in Articles 2 to 4 of the GCU shall be transferred to a trustee (the "Trustee"). The Trustee may be a physical person or a legal entity. The GCU Bureau shall be located in Brussels.

The Trustee shall take equal account of the interests of wagon keepers and RUs and assume a neutral position in potential conflicts of interest between wagon keepers and RUs.

2. The Trustee shall be proposed by the Joint Committee (see Part II below) for a term of three years at least three months before the end of the term of the Trustee in office. The appointment of the proposed Trustee shall be considered confirmed unless it is opposed by more than half the signatories within one month after the proposal has been notified to the signatories. The term of the Trustee in office may be renewed.

If the Joint Committee fails to make a proposal at the latest three months before the end of the term of the Trustee in office, other proposals may be submitted by the signatories, providing they have the written support of at least 50 signatories. Proposals made in this way shall be accepted unless opposed by more than half the signatories within three months after the proposal has been sent out to the signatories. If several such proposals are submitted by signatories, the proposal that meets with the least number of objections shall be accepted. For this voting on the proposal the procedure set out in points 8 and 9 below shall be applied accordingly, except for the shorter voting period.

3. The Joint Committee or a group of more than half of the signatories may propose an early termination of the Trustee's term, if there are significant reasons to do so. This termination shall be effective unless it is opposed by more than half the signatories within one month after the proposal has been sent out to the signatories. The procedure shall be as set out in point 2, with the Co-chairmen of the Joint Committee acting in place of the Trustee whose term is provisionally terminated.

"Significant reasons" shall mean in particular a failure on the part of the Trustee to meet its duty of neutrality or a continuous failure to perform his administrative duties in accordance with the GCU and this Appendix.

**4.** The Trustee shall be responsible for setting up office and running the GCU Bureau. He shall set up, maintain and further develop a designated website (the "GCU Website") for the exchange of information and the communication between the GCU Bureau and the signatories.

**5.** The GCU Bureau shall provide for translating the GCU (and its appendices) into the three languages, together with any proposed amendments.

It shall publish the GCU and any amendments thereto on the GCU Website.

It shall also publish the list of signatories on the GCU Website.

The list of signatories shall be structured as follows, based on the information provided by the signatories:

- Group 1: Signatories that are RUs, with the number of tonne-kilometres they recorded in the last published business year;
- Group 2: Signatories that are not RUs, with the number of wagons which they are the keeper of and that can be used by other signatories and are registered in the GCU Wagon Data Base (see point 6. below); this group also includes wagon keepers that are legally independent majority participations of RUs, if their main business objective is the marketing (e.g. by leasing) of the wagons to third parties;
- Group 3: Signatories that are RUs, with the number of wagons which they are the keeper of and that can be used by other signatories and are registered in the GCU Wagon Data Base; this group also includes wagon keepers that are not RUs themselves but are legally independent majority participations of RUs, if their main business objective is the provision of wagons for these RUs.

The signatories shall submit to the GCU Bureau all information required for the administration of the contract and for the communication among signatories and between signatories and the GCU Bureau, including, but not limited to contact data such as postal addresses, phone and fax numbers, e-mail addresses and contact persons. These contact data shall be displayed on the GCU Website.

6. The signatories shall further submit to the GCU Bureau the registration numbers of all wagons of which they are the keeper and that can be used by other signatories. The GCU Bureau on the GCU Website shall store the registration numbers in an electronic data base (the "GCU Wagon Data Base") and provide a public access to it on the GCU Website. The GCU Wagon Data Base shall allow to identify via the registration number of a wagon who is the keeper of the wagon, provided that the keeper of the wagon is a signatory of the GCU.

Each signatory via the GCU Website shall have direct access to his own data for the purpose of uploading and changing contact data or wagon numbers. The GCU Bureau must ensure that proper right of access protection is in place and that the data are securely stored and protected against any unauthorized use.

It is the sole responsibility of each signatory to ensure the correctness of his contact data and wagon numbers supplied to the GCU Bureau and to provide for any necessary updating thereafter.

7. Signatories may submit proposals for amendment to the GCU Bureau. Also the associations represented in the Joint Committee may make recommendations for amendments or additions to the GCU to the Joint Committee. These recommendations can then be adopted as proposals by unanimous consent of the Joint Committee and submitted to the GCU Bureau.

Any proposal requires either the support of at least 25 signatories or the unanimous consent of the Joint Committee. Proposals must be submitted in one of the three languages of the contract and must include the reasons for the proposed change, with an indication of the article or appendix concerned. The GCU Bureau shall check that proposals have all the required elements; incomplete proposals shall be rejected.

- **8.** The GCU Bureau shall publish amendment proposals on the GCU Website and notify all signatories by e-mail in the three languages of the contract of the fact of the publication.
- 9. Signatories who do not agree with the proposed amendments must declare this by letter, fax or e-mail to the GCU Bureau within three months after the notification of the proposed amendments has been sent out by e-mail. Any signatory that has not declared disagreement by the end of this period shall be considered to have agreed to the proposal.
- 10. Proposals shall be adopted if none of the signatories have opposed them within the prescribed time period or if, in each of the groups referred to in point 5 paragraph 4, they obtain the support of at least three-quarters of the signatories in the corresponding group representing at the same time at least three-quarters of the total tonne-kilometres or wagons in the group in question.
- 11. Adopted amendments to the GCU shall be published on the website referred to in point 5 above and the fact of the adoption shall be notified by e-mail to all signatories by the GCU Bureau within 1 week after adoption.

Amendments that are adopted unanimously shall enter into force on the date specified in the corresponding proposal; if no date is mentioned, they shall enter into force three months after adoption.

Amendments of the GCU adopted without unanimity shall enter into force the first day of the month following a period of six months after adoption.

Amendments and additions shall also be binding on signatories that did not agree with them, unless the signatories in question decide to withdraw from the contract in accordance with Article 3 of the GCU.

When proposals are not carried, the GCU Bureau shall also announce the result on the website and notify the signatories by e-mail.

**12.** The running costs of the GCU Bureau shall be covered by the signatories.

The GCU Bureau shall draw up an annual budget at least four months before the end of each year and have it approved by the Auditors referred to in point 13 below. In the beginning of each calendar year the GCU Bureau shall be entitled to call in advance contributions from the signatories in order to cover the cost of the GCU Bureau for the current year in accordance with the approved budget. The Auditors may approve supplementary budgets during the year if the advance contributions do not cover the actual costs or if additional funds are required for extraordinary expenses which are in the interest of the GCU and the signatories and are previously approved by the Joint Committee.

Advance contributions that have not been used up shall be taken into account in the budget for the next year.

75 per cent of the costs referred to in paragraph 1 shall be divided equally among the signatories and 25 per cent shared out on a variable basis according to the number of wagons registered in the GCU Wagon Data Base.

**13.** The annual accounts of the GCU Bureau shall be checked by two auditors (the "Auditors") within three months after the end of each calendar year. The result of the audit shall be published on the GCU Website.

The Joint Committee shall propose the auditors for a period of up to three years parallel to the term of the Trustee. The appointment of the proposed Auditors shall be considered confirmed unless more than half the signatories opposes this proposal under the procedure set out in point 2, paragraph 1. The term of the Auditors in office may be renewed.

Point 2 paragraph 2 and point 3 above shall be applied accordingly.

### **II. The Joint Committee**

- 1. UIP, UIC and ERFA shall together take on the task of applying, promoting and further developing the GCU. To this end, they shall form a Joint Committee made up of representatives from the three associations. UIP and UIC shall each appoint five members to the Joint Committee and ERFA two members.
- 2. Two Co-Chairmen of the Joint Committee shall be chosen from among its members for a three-year term of office. One Co-Chairman shall be a representative of UIP, the other one a representative of UIC/ERFA.

The Joint Committee shall meet as and when required, though at least once a year.

3. The Joint Committee shall keep in touch with the GCU Bureau. Its decisions shall be taken unanimously. Members of the Joint Committee not being able to participate in a meeting shall cast their vote in writing or e-mail or may give proxy to another member of the Joint Committee.

The Joint Committee shall:

- propose the Trustee to take on the tasks of the GCU Bureau and where necessary propose to terminate its term with immediate effect. The same shall apply to the Auditors:
- make proposals for amendments and additions to the GCU;
- review all questions of common interest in connection with the GCU and set up ad hoc working groups where necessary;
- decide whether or not to accept the petitions of other associations representing RUs or wagon keepers to be admitted to the Joint Committee, as well as on changes of points 1 and 2 related thereto. Of such decisions the signatories shall be informed via the GCU Bureau.
- **4.** The associations represented on the Joint Committee shall seek to ensure that when GCU signatories who are members of their associations make proposals for amendments, these are channelled first via their association to the Joint Committee, which can then discuss, finalise and decide on them and thereby encourage the achievement of a majority.

The associations shall also channel their own proposed amendments to the GCU via the Joint Committee.

# APPENDIX 9 to the General Contract of Use (GCU)

# Technical conditions for wagon transfers between railway undertakings

Applicable with effect from 1 July 2006 (Former Appendix XII to RIV 2000, applicable with effect from 1 November 2002)

Version: 1/1/2018

- 2 -

-reserved-

Version: 1/1/2018

## Introduction

Former Appendix XII to the RIV, which entered force on 1 November 2002, was transposed into the GCU, brought up to date and re-published as Appendix 9 to the GCU.

A vertical line in the margin denotes amended provisions taking effect on the date shown at the foot of the page, for the benefit of users of the two previous editions (supplements). Pages that have been altered or added in the new edition are dated 1/1/2017.

This Appendix 9 enters force with the GCU (see date on title page). Appendix XII to the RIV is withdrawn on the same date.

Amendments			
Supple	ement	Supple	ement
No	Date	No	Date
Supplement 1	31/1/2008		
Supplement 2	1/1/2012		
Supplement 3	1/1/2013		
Supplement 4	1/1/2014		
Supplement 5	1/1/2015		
Supplement 6	1/1/2016		
Supplement 7	1/1/2017		
Supplement 8	1/1/2018		

modif. 1/1/2018

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- 2 Technical transfer inspection
- 2.1 Definition
- 2.2 Procedure
- 2.3 Skills of staff performing technical transfer inspections
- 3. Catalogue of irregularities (Annex 1)
- 3.1 Presentation
- 3.2 Comments on the catalogue of irregularities
- 4 Quality Management System (QMS)
- 4.1 General definitions
- 4.2 Planning of quality
- 4.3 Irregularities and catalogue of irregularities
- 4.4 Planning of tests
- 4.5 Quality control
- 4.6 Inspection methods
- 4.7 Assessment of irregularities
- 4.8 Analysis of results
- 4.9 Action to be taken
- 5. Inclusion of a train in an agreement
- 5.1 General
- 5.2 Principles, planning, execution
- 5.3 Exclusion of trains from an agreement
- Annex 1 Catalogue of irregularities including classification into categories for use in the Quality Management System
- Annex 2 Irregularity classes
- Annex 3 Size of samples as per ISO 2859 Part 1

  Excerpt from Table II-A with acceptance values for classes 4 and 5

  Overview I: Procedure for the inclusion of a train in an agreement

  Overview II: Procedure for the exclusion of trains from an agreement

  Record of the inclusion of trains in an agreement
- Annex 4 Verification of qR
- Annex 5 Catalogue of inspections in accordance with Annex 1
- Annex 6 Technical transfer inspection List of irregularities noted on wagons and their loads

modif. 1/1/2013

Annex 7 - Technical transfer inspection - Record and analysis of irregularities noted on wagon and loads

Annex 8 - Handling of wagons

Annex 9 - Checklist

Annex 10 - Positions of the brake stop-cock handle for compressed air brakes

Annex 11 - I, K, M, R1 and U labels

Annex 12 - Traceability

modif. 1/1/2013

#### 1 General

- **1.1 Annex 1** of this appendix sets out binding provisions governing the technical condition of wagons exchanged between two or more railway undertakings (RUs), as established during a technical transfer inspection.
- 1.2 It describes (in point 4 and Annexes 5, 6 and 7) a quality assurance procedure to be applied by RUs that have signed agreements governing the technical conditions for the exchange of freight wagons.

## 2 Technical transfer inspection

#### 2.1 Definition

#### 2.1.1 Transfer inspection

The term "technical transfer inspection" shall refer to:

- a technical inspection upon handover conducted by the transferor RU.
- a technical inspection upon acceptance conducted by the transferee RU,
- a technical inspection conducted at a different location from the handover point (conducted by the transferor RU).

### 2.1.2 Date/time of handover and acceptance

The date/time of the handover/acceptance marks the transfer of custody of the vehicles in the sense of article 22.1. The location and date/time shall be agreed on. In the absence of an agreement, acceptance counts as the moment of transfer of custody.

#### 2.2 Procedure

The technical transfer inspection shall be carried out by qualified staff at a place agreed upon by the RUs involved.

The inspection shall involve assessing the operating safety and railworthiness of wagons, identifying any of the irregularities listed in **Annex 1** (Catalogue of irregularities) and taking appropriate steps. To identify any irregularities, the qualified staff shall walk the full length of the train on both sides and carefully examine each wagon.

#### 2.3 Skills of staff performing technical transfer inspections

All safety-related examinations from Appendix 9, Annex 1 must be performed by properly qualified technical staff.

This staff must have the following minimum qualifications:

- General knowledge of rail vehicle maintenance,
- General knowledge of rail vehicle design and operation,
- General knowledge of brake design and operation,
- Ability to appraise technical damage and irregularities occurring on wagons and loads and their impact on operations,
- Knowledge of the UIC Loading Guidelines,

modif. 1/1/2018

- Knowledge of regulatory documents concerning the exchange of vehicles between railway undertakings (RUs) and the related agreements in force.

The staff must receive training in order to acquire the above mentioned skills and must update said skills regularly.

The required skills include theoretical and practical knowledge.

## 3 Catalogue of irregularities (Annex 1)

#### 3.1 Presentation

Annex 1 contains five columns:

- (1) List of wagon components and aspects of the load to be examined,
- (2) Code number,
- (3) Irregularities, where appropriate with criteria and indications to facilitate detection. Possible means of recognising irregularities are marked "•" without this being a requirement to execute the measures,
- (4) Action to be taken,
- (5) Irregularity class.

## 3.2 Comments on the catalogue of irregularities

- 3.2.1 All the dimensions (values) quoted should be measured in cases of doubt.
- 3.2.2 The provisions of the Loading Guidelines (published separately) remain fully applicable.
  - In this connection, qualified staff shall particularly look out for the irregularities listed under section 7 of the catalogue (**Annex 1**), column 3 of which contains cross-references in brackets to the relevant points of Volume 1 of the Loading Guidelines. Qualified staff shall also watch out for other visible signs that the load or load securing equipment is compromising operating safety and shall take appropriate action.
- 3.2.3 To help locate irregularities and defects, qualified staff shall use stick-on labels (see specimens in **Annex 11**) and shall, in written correspondence, quote the code number specified in column 2 of **Annex 1**.
- 3.2.4 This appendix is not an exhaustive catalogue of all the irregularities which might occur. Where there are other irregularities not listed in this document but which might well compromise operating safety or the wagon's railworthiness, qualified staff shall take whatever action they deem necessary.
- 3.2.5 The expression "Detach wagon" means that the wagon may not continue its onward conveyance if it presents an irregularity that could impact on the safety of operations.
- 3.2.6 Once detached, the wagon remains in the custody of the user RU which recorded the irregularity whilst the irregularity is being rectified.

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## 4 Quality Management System (QMS)

#### 4.1 General definitions

Use of a quality management system (QMS) provides a guarantee of quality for wagon exchanges between RUs. The aim is to determine a set standard of technical quality by representative spot-checks in accordance with ISO standard 2859. This technical quality must be formally set out in writing and the RUs must take all necessary action to maintain or improve it.

## 4.2 Planning of quality

Quality requirements and characteristics are defined during the planning phase and are set out in detail in the catalogue of inspections. The quality target agreed between RUs is to obtain a cumulative defect value (CDV) of  $\leq$  1% for each class of irregularity.

## 4.3 Irregularities and catalogue of irregularities

4.3.1 An irregularity is defined as any deviation from the quality criteria defined in the catalogue if as a consequence of this deviation the equipment or train in question does not conform to the set requirements. Equipment on which irregularities have been noted must be dealt with in accordance with the catalogue of irregularities (Appendix 9 to the GCU, **Annex 1**).

#### 4.3.2 Description of irregularities

Irregularities are classified as minor, major or critical, according to their seriousness, and are defined in **Annex 2**.

4.3.3 In addition to listing the various kinds of damage / irregularity and the corresponding action to be taken, the catalogue of irregularities (**Annex 1**) also indicates the category to which each irregularity belongs.

#### 4.4 Planning of tests

The number of wagons to be inspected, referred to as the "inspection batch", shall be determined from the "overall batch", which includes all wagons handed over by one RU to other RUs (including via one or more transit RUs) in a given calendar year. The overall batch may be divided into partial batches, for example according to specific routes or handover points. From this overall batch (or corresponding partial batches) is determined an "inspection batch", as specified in ISO standard 2859 (Annex 3) which is then incorporated into the annual inspection schedule as a theoretical inspection batch. When dividing up into partial inspection batches defined on a monthly basis, account should be taken where possible of annual trends in the changing number of wagons.

When determining the inspection batch, inspection level II should be applied.

#### 4.5 Quality control

The conformity of the technical transfer inspections shall be measured by the transferee RU during the spot-checks. These checks shall be carried out at the latest

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at the first marshalling yard at which technical inspections are conducted or at the station where the train consist is disconnected or re-formed by the transferee RU. Quality checks shall be carried out before the train is disconnected or re-formed, in accordance with the procedure of qualified staff described in point 2.2.

## 4.6 Inspection methods

The inspection methods referred to in the catalogue (**Annex 5**) have the following meanings:

- VC = visual check inspection with naked eye

- M = measurement inspection based on measurement

- HT = hammer testinspection involving hammer blows

- OP = operate operating test

- PM = pull or move actuation of the part in question

## 4.7 Assessment of irregularities

Defects and irregularities already dealt with by the RU that carried out the transfer inspection by applying the measures indicated in the catalogue of irregularities (**Annex 1**) are not to be considered as irregularities. If a wagon has been labelled by the RU that carried out the technical transfer inspection, only the irregularities that are not mentioned on the label may be taken into account for calculating the CDV value. Identical irregularities that occur on several sub-components (such as stanchions) are considered in principle as one irregularity per wagon or per load unit. The same applies to load residues and/or load securing equipment that has not been removed. Where irregularities on a given component or load have been given different classifications, only the irregularity in the higher class should be recorded.

#### 4.8 Analysis of results

4.8.1 It is the type of irregularity rather than its frequency of occurrence which is the decisive factor in evaluating the number of irregularities within the context of the quality management system. Each type of irregularity has a serial number in the Catalogue of Irregularities (**Annex 1**).

#### 4.8.2 Cumulative defect value (CDV)

The CDV value, which is used as a means of measuring the defective nature of the inspection batches, is calculated as a percentage of irregularities per hundred control units. To this end, the irregularities are assigned to a class, depending on their impact on fitness for use in service and on operating safety, as follows:

Class 3 factor of 0.125/1Class 4 factor of 0.4/1

- Class 5 factor of 1/1

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The CDV value for each class of irregularity is then calculated using the following formula:

CDV Class 3 [%] =  $0.125 \times \Sigma$  Class 3 irregularities  $\times 100$  Number of units checked

CDV Class 4 [%] =  $0.4 \times \Sigma$  Class 4 irregularities  $\times$  100 Number of units checked

CDV Class 5 [%] =  $1.0 \times \Sigma$  Class 5 irregularities x 100 Number of units checked

4.8.3 The irregularities recorded shall be sent each month to the RU that carried out the technical transfer inspection using the lists given in **Annexes 6** and **7**, indicating the type of overall batch and the quantity of units inspected for each CDV. The information described in **Annexes 6** and **7** can be exchanged in a variety of ways and by electronic means in particular.

#### 4.9 Action to be taken

If the quality target specified in point 4.2 above is not achieved, the RU that carried out the technical transfer inspection, corrective action must be taken to improve the standard of quality. The transferee RU shall immediately inform the transit RU(s), where appropriate. The RU that carried out the technical transfer inspection shall notify the transferee RU and where appropriate the transit RU(s) of the action taken within one month.

With effect from the implementation of these measures, a representative sample must be selected each month, in order to show the resulting improvements.

If necessary, the transferee RU may, in agreement with the transit RU(s) as appropriate, exclude certain wagons (or wagons with a particular load) when forming the trains in question.

#### 5. Inclusion of a train in an agreement

#### 5.1 General

This procedure is recommended to RUs that are planning to conclude agreements. The procedure does not apply if all the trains exchanged between two RUs are covered by the agreement.

In order to include trains in an agreement, independently of a cumulative defect value, RUs shall apply a procedure based on DIN/ISO 2859 (Sampling procedures for inspection by attributes – Sampling schemes indexed by **A**cceptance **Q**uality **L**imit (AQL)).

However, trains may only be included in an agreement if acceptability is achieved over a defined period of time for a specific batch (in this case a train).

Table II-A (Simple sampling guidelines for standard inspections, see **Annex 3**) offers clear criteria for determining the acceptability of inspection batches (in this instance, trains).

modif. 31/1/2008

Once the acceptability of the train has been established, the RU inspecting the handover and quality shall send the participating RUs an inspection report in accordance with **Annex 3** for signature.

The participating RUs are to be informed of any irregularities noted during the control period.

Following their inclusion in the agreement, these trains must nonetheless meet the agreed quality target of a CDV ≤ 1% for each class of irregularity.

The procedures for the carriage of dangerous goods (RID) shall be dealt with separately.

#### 5.2 Principles, planning, execution

In this procedure, the following principles apply:

- Irregularity classes 5 and 4 shall be considered separately (class 3 shall not be considered initially).
- An AQL defined in accordance with DIN/ISO 2859 as the "Number of defects per 100 control units" shall be applied.

For a K defect (Class 5) which is evaluated on a 1:1 basis, an AQL of 1.0 is equivalent to one defect per 100 control units and for an H defect (Class 4) which is evaluated on a 0.4:1 basis, an AQL of 2.5 is equivalent to one defect per 100 control units.

- The inspection/control period for a given train should be at least three months.
- Each month at the interface between RUs, the quality of the transfer shall be determined by spot-checks with the required sample size and the results documented in a test protocol.
- The inclusion of a given train shall only be accepted if, over the inspection period/control period, the acceptance value specified in Table II-A (**Annex 3**) for classes 5 and 4 is not exceeded.

This procedure is shown in Overview I, **Annex 3**.

#### 5.2.1 Example

Train	12345
Days of operation	7
Average number of wagons	32
Wagons per year	11648
Wagons over the inspection period (3 months)	2912
Batch size as per <b>Annex 3</b> , Table I, Inspection level II	1201 – 3000
Code letter calculated	K
Sample size as per <b>Annex 3</b> , Table II-A	125
Inspections per month	42
Acceptance value for class 5 (AQL 1.0) as per <b>Annex 3</b> , Table II-A	3
Acceptance value for class 4 (AQL 2.5) as per <b>Annex 3</b> , Table II-A	7

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#### 5.2.2 Results of the inspection

a) After 125 inspections the following was observed:

1 defect in class 5, 9 defects in class 4.

Train 12345 cannot be included in an agreement, since the acceptance value for class 4 was exceeded during the inspection period.

The inspection period is extended by at least one more month.

b) After 125 inspections the following was observed:

4 defects in class 5, 3 defects in class 4.

Train 12345 cannot be included in an agreement, since the acceptance value for class 5 was exceeded during the inspection period.

The inspection period is extended by at least one more month.

If the acceptance values for classes 5 or 4 are exceeded by a substantial amount, a new 3-month inspection period is recommended.

## 5.3 Exclusion of trains from an agreement

The procedure is set out in overview II, Annex 3.

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Annex 1

# Catalogue of irregularities including classification into categories for use in the Quality Management System

#### Contents

- 1 Running gear
- 2 Suspension
- 3 Brake
- 4 Wagon underframe and bogie frame
- 5 Buffing and draw gear
- 6 Wagon body
- 6.1 Body in general
- 6.2 Covered wagons
- 6.3 Open wagons
- 6.4 Flat wagons
- 6.5 Tank wagons
- 6.6 Wagons with special fittings
- 6.7 Gear for securing load units (ILU) on container wagons
- 7 Loads and load units (ILU)
- 7.1 Load in general
- 7.2 Load securing equipment
- 7.3 Loading and load securing methods
- 7.4 Special types of consignment
- 7.5 Specific components of load units (ILU)
- 7.6 ILU Tank
- 7.7 Loading of load units (ILU)
- 7.8 Marking, coding
- 8 Miscellaneous
- 8.1 Irregularities in operations
- 8.2 Cases of force majeure

modif. 1/1/2015

- reserved -

Annex 1

modif. 1/1/2004

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Running gear	1			
Tyred wheel	1.1	Thickness less than:		
	1.1.1	- 35 mm on wagons suitable for running at 120 km/h (SS wagons or wagons marked "**") - 30 mm on other wagons 1)	Detach wagon	4
	1.1.2	Tyre - broken - cracked lengthways or crossways	Detach wagon	5
	1.1.3	Tyre loose - inspection marks inconsistent or - unclear ring or - tyre clip loose or - appearance of rust between the tyre and the rim over more than one third of the circumference	Detach wagon	5
	1.1.4	Inspection marks - missing - not clearly identifiable	Detach wagon	4
	1.1.5	Tyre shifted sideways - tyre clip loose or visibly distorted	Detach wagon	5
	1.1.6	Damage to tyre clip - cracked - broken - missing	Detach wagon	5

modif. 1/1/2006

 $<sup>^{1)}</sup>$  Including wagons that can only be operated at 120 km/h when empty

Component	Code	Irregularities/Criteria/Notes	Action to be taken	Category
Component	no.	mogalantios/ontona/notos	Action to be taken	Cutogory
Solid wheel	1.2			
	1.2.1	Groove marking the minimum thickness is no longer fully visible in cross-section <sup>2)</sup>	Detach wagon	4
	1.2.2	<ul> <li>Thermal overload due to braking</li> <li>recent paint burns of 50 mm or more at connection between rim and wheel plate</li> <li>traces of rust on rim (plate not painted)</li> <li>fusion of brake blocks</li> <li>deterioration of wheel tread with build-up of metal (see also no. 1.3.4)</li> </ul>	Proceed in accordance with Annex 8 point 3.	
	1.2.2.1	- without gauge widening of the inner faces	K + R1 (isolate brake)	4
	1.2.2.2	- with gauge widening of the inner faces	Detach wagon	5
Tyre or	1.3			
corresponding part of solid	1.3.1	Width		
wheel	1.3.1.1	Width B > 139 mm and ≤ 140 mm	М	3
	1.3.1.2	Width B > 140 mm < 133 mm	Detach wagon	4
		presence of a projection ( "S")  B		
	1.3.2	Tread crushed in places, uneven contact surfaces or irregular protrusions on the wheel rim.	Detach wagon	4

modif. 1/1/2015

 $<sup>^{2)}</sup>$  The outer groove indicates the minimum thickness (wear groove) should a wheel – as an exception – have two grooves.

Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
4004	Wheel flat	Database	4
1.3.3.1	- wheel Ø > 840 mm, wheel flat > 60 mm long	Detach wagon	4
1.3.3.2	- wheel Ø: 630 mm < d ≤ 840 mm,	Detach wagon	4
1333	<b>o</b>	Detach wagon	4
1.0.0.0	35 mm long	Dotaon Wagon	·
1.3.4	Build-up of metal		
1.3.4.1	- wheel Ø > 840 mm, metal build-up over	Detach wagon	4
1.3.4.2	a length of > 60 mm or ≥ 1 mm thick - wheel Ø > 840 mm and metal build-	M + R1 (isolate brake)	3
	up over a length of > 10 mm ≤ 60 mm	,	
1.3.4.3	- wheel Ø: 630 mm < d ≤ 840 mm and	Detach wagon	4
1.3.4.4	- wheel Ø: 630 mm < d ≤ 840 mm and	M + R1 (isolate brake)	3
	metal build-up over a length of > 10 mm ≤ 40 mm and < 1 mm thick		
1.3.4.5	- wheel Ø ≤ 630 mm and metal build-up	Detach wagon	4
1.3.4.6	over a length of >10 mm ≤ 35 mm and < 1 mm thick	M + R1 (isolate brake)	3
1.3.5	Cavity, shelling or flaking		
1.3.5.1	-wheel Ø > 840 mm, length > 60 mm	Detach wagon	4
1.3.5.2	-wheel Ø: 630 mm < d $\leq$ 840 mm,	Detach wagon	4
1.3.5.3	-wheel Ø ≤ 630 mm, length > 35 mm	Detach wagon	4
	_	-	
1.3.6	Cracks and notches		
1.3.6.1	Crack at the interface between the wheel	Detach wagon	5
1362	tread and the front edge	K	4
1.0.0.2	(rim or inner tyre rim) caused by tools,	IX.	
	track brakes or clamping equipment/ jaws		
	manufacturer		
	1.3.3.3 1.3.4 1.3.4.1 1.3.4.2 1.3.4.3 1.3.4.4 1.3.4.5 1.3.5.1 1.3.5.1 1.3.5.2 1.3.5.3	wheel flat > 40 mm long  wheel Ø $\leq$ 630 mm, wheel flat > 35 mm long  1.3.4.1	wheel flat > 40 mm long  wheel Ø ≤ 630 mm, wheel flat > 35 mm long  1.3.4. Build-up of metal  1.3.4.1 - wheel Ø > 840 mm, metal build-up over a length of > 60 mm or ≥ 1 mm thick  1.3.4.2 - wheel Ø > 840 mm and metal build-up over a length of > 10 mm ≤ 60 mm and < 1 mm thick  1.3.4.3 - wheel Ø: 630 mm < d ≤ 840 mm and metal build-up over a length of > 40 mm or ≥ 1 mm thick  1.3.4.4 - wheel Ø: 630 mm < d ≤ 840 mm and metal build-up over a length of > 10 mm ≤ 40 mm and < 1 mm thick  1.3.4.5 - wheel Ø ≤ 630 mm < d ≤ 840 mm and metal build-up over a length of > 10 mm ≤ 40 mm and < 1 mm thick  1.3.4.5 - wheel Ø ≤ 630 mm and metal build-up over a length of > 35 mm or ≥ 1 mm thick  1.3.4.6 - wheel Ø ≤ 630 mm and metal build-up over a length of > 10 mm ≤ 35 mm and < 1 mm thick  1.3.5.1 - wheel Ø ≤ 630 mm < d ≤ 840 mm, length > 60 mm - wheel Ø ≤ 630 mm < d ≤ 840 mm, length > 40 mm - wheel Ø ≤ 630 mm < d ≤ 840 mm, length > 40 mm - wheel Ø ≤ 630 mm, length > 35 mm  1.3.5.1 - wheel Ø > 840 mm, length > 35 mm  Detach wagon  Erack at the interface between the wheel tread and the front edge  Sharp-angled notches on the front face (rim or inner tyre rim) caused by tools, track brakes or clamping equipment/ jaws except for markings applied by the

modif. 1/1/2017

Component	Code	no.	Irregularities/Criteria/Notes	Action to be taken	Category
	1.3.7		Deposits of paint, oil or lubricants on wheel tread edge except for - control marks (4 paint marks positioned 90° apart) - Friction modifiers	Detach wagon	5
	1.3.8		Formation of grooves, hollows/furrows, false flanges (hollows) <sup>3)</sup> on the wheel tread		
	1.3.8. 1.3.8. 1.3.8.	1 2	Grooves (with sharp edges) < 1 mm deep Grooves (with sharp edges) ≥ 1 mm deep Furrows and false flanges > 2 mm deep	K+ R1 (isolate brake)  Detach wagon  Detach wagon	4 5 5

<sup>&</sup>lt;sup>3)</sup> **Grooves** appear on the entire circumference of the wheel and may affect the whole width of the wheel tread; they are characterised by transitions to sharp edges. **Hollows/furrows** appear on the entire circumference of the wheel and may affect the whole width of the wheel tread; they are characterised by a rounded contour, with no transition to sharp edges. **False flange**: there is a false flange when the outer part of the wheel tread is higher than the wheel tread at the level of the tread section

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Flange	1.4			
	1.4.1	Height of flange S <sub>h</sub> greater than 36 mm • hollow on wheel tread	Detach wagon	4
	1.4.2	Flange thickness $S_d$ - wheel Ø > 840 mm $S_d < 22$ mm - wheel Ø 630 (330) mm $\leq$ d $\leq$ 840 mm $S_d < 27.5$ mm • worn flange	Detach wagon	5
	1.4.3	Wear of guide faces - q <sub>R</sub> ≤ 6.5 mm (see <b>Annex 4</b> ) • sharp flange	Detach wagon	5
	1.4.4	Burrs or sharp edges on guide face at a distance h > 2 mm from maximum height of flange (see also <b>Annex 4</b> )	Detach wagon	5
Wheel centre	1.5			
	1.5.1	Solid wheel Damage to wheel centre or wheel hub -cracked -defect repaired by welding	Detach wagon	5
	1.5.2	Tyred wheel Damage to wheel centre, tyre clip, tyre -cracked -broken -defect repaired by welding	Detach wagon	5

modif. 1/1/2018

Annex 1

				nnex 1
Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Axle	1.6			
	1.6.1	Damage to axle - cracked - deformed (see also no. 1.7.1) - defect repaired by welding - sharp edge - worn to a depth of more than 1 mm	Detach wagon	5
	1.6.2	Worn to a depth of ≤ 1 mm, no sharp edges	K + R1 (isolate brake)	4
	1.6.3	Part rubbing against axle	Tie up + K, if necessary R1 (isolate brake). If not	4
		Also check nos. 1.6.1 and 1.6.2	possible, detach wagon	
Wheelset	1.7			
	1.7.1	Clearance E between internal faces non-compliant with the following limit values:  - Ø > 840 mm     1357 mm ≤ E ≤ 1363 mm  - Ø ≤ 840 mm     1359 mm ≤ E ≤ 1363 mm  If in all cases, E max - E min > 2 mm  • signs of derailment • signs of movement of wheel on axle • heating (solid wheel) in "L" fillet zone between web and rim/tyre	Detach wagon	5

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Signs of out- of-round	1.7.2	Brake triangle pin sheared off		
wheels		Brake safety stirrup broken (see also no. 3.1.2)		
		Shiny traces on the brake triangle end washer		
		Shiny traces on the inner spring (load spring) (see also no. 2.5) Lifting safety catch ("T") missing or loose (see also no. 2.5.5)	If at least two of these signs are noted on or near a wheel:	
		Y25 bogies: hard manganese wear plates on axle boxes or axle-box guides have fallen off or welded joints loose (see also no. 1.8.4 and 4.4.2)		
		Tread crushed in places, uneven contact surfaces or irregular protrusions on the wheel rim (see also no. 1.3.2)	K + add comment "Suspected out-of-round wheel"	4

modif. 1/1/2018

	T			Annex 1
Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Axle box	1.8 1.8.1	Housing		
	1.8.1.1	Housing not watertight Defect allowing water or dust to enter -cracked or broken housing -missing plug (NB: the loss of the protective cover of the centring cone is permissible)	Detach wagon	4
		Plug		
	1.8.1.2	Loss of lubricant  • grease or oil discharge on the wheel centre	Detach wagon	4
		Not permissible		
	1.8.1.3	trace of grease or oil on the housing at the level of the cover	К	4
	1.8.2	Axle-box guides no longer able to guide the axle	Detach wagon	5
		<ul><li>guide broken</li><li>axle-box in abnormal position</li></ul>		
	1.8.3	Hot box	Detach wagon	5
		- housing too hot to touch with back of hand		
		traces of rust		
Hard manganese wear plate on axle box of Y bogie or derivative designs	1.8.4	Displaced or missing	Detach wagon	4

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Defect
Suspension	2			
Leaf spring	2.1			
	2.1.1	Leaves displaced by more than 10 mm with respect to buckle	Detach wagon	4
		shiny marks near buckle		
	2.1.2	Main leaf fractured or with visible crack	Detach wagon	5
	2.1.3	Part of a fractured spring missing	Detach wagon	4
	2.1.4	Fracture (but without any part missing) of intermediate leaf at a distance from the centre of the spring of:		
	2.1.4.1	- < 1/4 of leaf length	Detach wagon	4
	2.1.4.2	- > 1/4 of leaf length	М	3
		a = b L/2		

modif. 1/1/2004

	1	1	<u>,                                      </u>	annex 1
Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
	2.1.5	Insufficient spring clearance:	Detach wagon	5
		Vertical distance between buckle and fixed parts of body, underframe or bogie frame less than 15 mm		
		signs of recent contact between buckle and fixed parts of the underframe or bogie frame		
		signs of recent contact between wheel and underframe or wagon floor/body		
	2.1.6	Buckle loose	Detach wagon	5
		<ul><li>fracture or crack in buckle</li><li>key missing or ineffective</li></ul>		
		signs of loosening of leaves		
Additional criteria for	2.2			
parabolic	2.2.1	Main or intermediate spring leaf		
spring	2.2.1.1	visible crack or break	Detach wagon	5
	2.2.1.2	buckle broken	Detach wagon	5
		<ul> <li>two leaves touching over 50% of their length</li> </ul>		
	2.2.2	Leaf displaced lengthways		
	2.2.2.1	- by more than 10 mm	Detach wagon	4
	2.2.2.2	- by 10 mm or less	К	3
		shiny marks near buckle		
		bright marks		

modif. 1/1/2012

Annex 1

Component	Code	Irregularities/Criteria/Notes	Action to be taken	Category
	no.			
	2.2.3	<ul> <li>Buckle damaged or loose</li> <li>buckle fractured, cracked</li> <li>lug of the lower key cracked</li> <li>weld seam of upper key fractured or cracked</li> </ul>	Detach wagon	5
		weld seam upper key		
		B		
Helical spring	2.3			
	2.3.1	Broken	Detach wagon	5
Connection between	2.4			
suspension and axle box or between	2.4.1	Boss of buckle out of position  abnormal position of axle box	Detach wagon	5
suspension and bogie frame	2.4.2	Shackle, links displaced, missing, broken, unhooked	Detach wagon	5
ii dille	2.4.3	Link pin displaced, missing, not secured	Rectify. If not possible, detach wagon	5
	2.4.4	Suspension links worn or too long  recent traces of contact on the solebar	К	4

Annex 1

	1		<i>_</i>	Annex 1
Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Suspension system of Y 25 bogies or derived systems	2.5			
		<ol> <li>tare spring</li> <li>load spring</li> <li>spring cap</li> </ol>		
	2.5.1	Main/tare spring cracked or broken	Detach wagon	5
	2.5.2	Auxiliary/load spring displaced or broken		
	2.5.2.1	- on empty wagon	К	3
	2.5.2.2	- on loaded wagon	Detach wagon	5
		axle box no longer horizontal		
	2.5.3	Damper ring(s) missing or broken  • contact marks		
	2.5.3.1	- one ring per bogie	K	3
	2.5.3.2	- more than one ring per bogie	Detach wagon	5
	2.5.4	Spring cap(s) in contact with bogie frame		
	2.5.4.1	- one spring cap in contact per bogie	К	3
	2.5.4.2	- more than one spring cap in contact per bogie	Detach wagon	5
	2.5.5	Lifting T (safety catch) loose or missing	М	3
	2.5.6	Fresh signs of bottoming between axlebox housing and bogie frame	Detach wagon	5
		Clearance < 8 mm		

Annex 1

	1	Annex 1		
Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Brake	3			
Mechanical part (rigging)	3.1			
pair (11991119)	3.1.1	Parts of brake rigging hanging down or broken	Temporary repair, K + R1 (isolate brake)	4
		Check also 1.6.1, 1.6.2, 1.6.3.		
	3.1.2	Safety strap ineffective	Temporary repair, K	4
	3.1.3	Brake isolating cock (see also <b>Annex 10</b> )		
	3.1.3.1	- unusable	Detach wagon	3
	3.1.3.2	- position unclear	K + R1 (isolate brake), detach wagon if necessary	3
	3.1.4	Empty/loaded or G/P changeover system unusable	K + R1(isolate brake)	3
	3.1.5	Brake release pull broken or missing	K + R1 (isolate brake)	3
Brake block	3.2			
	3.2.1	Cast-iron brake block  - missing - broken, cracked right through, even if still held together by its metal insert - worn so that thickness X near brake block holder is less than 10 mm	Replace. If not possible, K + R1 (isolate brake)	3

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
	3.2.2	Composite brake block  - missing  - radial crack from friction surface through to plate edge (except at the designated expansion joint)  Friction material:  - visible crumbling of the friction material over more than one quarter of the block length, or metal inclusions  - detached from back plate by more than 25 mm  - cracking of over 25 mm initiated in direction of wheel circumference  - lowest thickness X < 10 mm	Replace. If not possible, K + R1 (isolate brake)	3
		a coeptable  not acceptable  not acceptable  acceptable		
	3.2.3	a brake block is considered to be protruding once its outer surface reaches the outer edge of the wheel rim	K + R1 (isolate brake)	4

modif. 1/1/2012

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Disc brakes*	3.2.4			
*Observed during a spe- cial inspection outside the	3.2.4.1	The inspection groove on the brake discs is no longer completely visible (maximum wear)	K + R1 (isolate brake)	3
technical in- spection	3.2.4.2	Defective brake disc fixing on the axle pin	Detach wagon	5
	3.2.4.3	Brake disc : unacceptable cracks > I/2 as per diagram	K + R1 (isolate brake)	3
		Crack > I/2 unacceptable		
	3.2.4.4	Crack in cross-section	Detach wagon	5
	3.2.5	Brake linings - missing - cracked	K + R1 (isolate brake)	3
Brake indicator	3.2.6	Defective or brake indicator data not true to the status of the brake or display not synchronous with the indicator (other than indications relating to the handbrake)	K + R1 (isolate brake)	4

modif. 1/1/2015

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Pneumatic part	3.3			
;	3.3.1	Main brake pipe		
;	3.3.1.1	Main brake pipe inoperative	Detach wagon	4
;	3.3.1.2	- reserved -		
;	3.3.2	Brake coupling		
	3.3.2.1	Damaged or missing (brake couplers must be available at all existing coupler connections on either end of a wagon)	Replace	3
	3.3.2.2	Unused brake coupler hanging loose (where two couplers are available, only one may be plugged in)	Secure, rectify as appropriate	3
;	3.3.2.3	- reserved -		
;	3.3.3.	Brake coupler holder not fit for use	М	3
:	3.3.4	Air brakes unfit for use but not labelled as such	Check and, if damaged, K +R1 (isolate brake)	3
;	3.3.5	Stopcock		
:	3.3.5.1	Unusable, leaking, warped or handle missing	Detach wagon	5
:	3.3.5.2	Stopping device missing or visibly damaged	Rectify + K. If not possible, detach wagon	4
;	3.3.6	DET (derailment detector)		
	3.3.6.1	Derailment detector tripped	Rectify + M, proceed according to point 4 of Annex 8	3
	3.3.6.2	Detector not airtight	Isolate detector + M, proceed according to point 4 of Annex 8	3
	3.3.6.3	Detector's connection hose not airtight	Rectify + M, if not possible, remove	4

modif. 1/1/2018

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Spark arrestor plate	3.4			
piate	3.4.1	Plate missing or rusted through	K+R1 (isolate brake)	4
	3.4.2	Plate hanging loose	Remove plate, K+R1 (isolate brake), if not possible, detach wagon	4
	3.4.3	Consignments of dangerous goods for which spark arrestor plates are stipulated in the RID	R1 (isolate brake)	5
		Non-bogie wagon - non-standard spark arrestor plate		
		<ul> <li>non-bogie wagon not bearing the following marking</li> </ul>		
Hand brake	3.5			
	3.5.1	Clearly unfit for use	K + R1	3

modif. 1/1/2006

Component	Code	Irregularities/Criteria/Notes	Action to be taken	Category
Component	no.	in ogalaritios/ontona/Notos	Action to be taken	Juliagory
Wagon underframe and bogie frame Wagon underframe	4.1			
undername	4.1.1	Underframe warped vertically or horizontally  • buffer height out of tolerance range (see no. 5.1.2)  • visible distortion	Detach wagon	5
	4.1.2	Solebar, headstock stressed by coupler or intermediate crossbar exhibiting a fracture or crack - fracture - lateral crack starting from edge of flange and extending over more than half the width of flange - longitudinal crack > 100 mm near suspension brackets - longitudinal crack > 150 mm for other parts - cracking at visible welds of these component parts	Detach wagon	4
Axle guard	4.2			
	4.2.1	Distorted, safety hazard	Detach wagon	5
	4.2.2	Broken  abnormal position	Detach wagon	5
	4.2.3	Fastening		
	4.2.3.1	- loose	Detach wagon	5
	4.2.3.2	- some bolts or rivets loosened but axle guard still secure	М	3
	4.2.4	Crack		
	4.2.4.1	- running over more than ¼ of horizontal cross-section	Detach wagon	4
	4.2.4.2	<ul> <li>running over ≤ ¼ of horizontal cross-section</li> </ul>	K	3
	4.2.4.3	<ul> <li>close to or running towards a fastening point, regardless of length of crack</li> </ul>	Detach wagon	5

modif. 31/1/2008

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Axle guard tie bar	4.3			
	4.3.1	Missing, broken, visibly distorted, loose	Detach wagon	4
Axle guard check plate	4.4			
	4.4.1	Check plate missing		
	4.4.1.1	Bogie wagon - one check plate missing per axle	к	3
	4.4.1.2	- more than one check plate missing per axle	Detach wagon	4
	4.4.1.3	Axle wagon - one check plate missing	Detach wagon	5
Hard manganese wear plate on Y bogies or derivative designs	4.4.2	Plate displaced or missing	Detach wagon	4
Suspension	4.5			
bracket (axle wagon)	4.5.1	Loose, cracked, broken or distorted - space between bracket and solebar - half or more of the fastening elements missing or broken	Detach wagon	5
Connection	4.6			
between bogie and underframe	4.6.1	Defective, connecting and fastening elements broken, missing or ineffective	Detach wagon	5
		<ul> <li>bogie displaced</li> </ul>		

modif. 1/1/2018

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Earthing strap	4.6.2			
	4.6.2.1	One or more earthing straps ineffective (missing, damaged or loose)  • Fastening points indicate that straps should be present	К	3
	4.6.2.2	All earthing straps ineffective • Fastening points indicate that straps should be present	Rectify. If not possible, detach wagon	3
Bogie frame	4.7			
	4.7.1	Component cracked or visibly distorted	Detach wagon	4
	4.7.2	Component broken	Detach wagon	5
	4.7.3	Bogie frame assembly		
		Screw fastening on bogie frame		
	4.7.3.1	1 screw missing/broken on same axle	Replace. If not possible, K + R1 (isolate brake)	3
	4.7.3.2	2 screws missing/broken on same axle	Detach wagon	5
Side bearer and spring	4.8 4.8.1	Side bearer broken - with no parts missing		
	4.8.1.1	- with part(s) missing	К	4
	4.8.1.2	Side-bearer spring broken	Detach wagon	5
	4.8.2	Incomplete fastening	Detach wagon	4
	4.8.3	The stripted factoring	К	3
Friction surface(s) of	4.9			
damper system	4.9.1	Lubricated	Detach wagon	4

modif. 1/1/2017

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Buffing and draw gear	5			
Buffers	5.1			
Buffer types	5.1.1	Visibly different buffer types at any wagon end	К	4
Buffer height	5.1.2	<ul> <li>Exceeding tolerance range</li> <li>h &lt; 940 mm (980 mm in the case of coaches)</li> <li>h &gt; 1065 mm</li> <li>significant difference in buffer height at coupled wagon ends</li> </ul>	Detach wagon	5
		The state of the s		
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	- several sharp-edged grooves measuring > 1 mm in depth and > 50 mm in length	Detach wagon	5

modif. 1/1/2016

				Annex 1
Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
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  ◆ several sharp-edged grooves measuring > 1 mm in depth and > 15 mm in length	Detach wagon	5
Buffer casing	5.4			
	5.4.1	Missing, broken	Detach wagon	5
	5.4.2	Cracked at transition to buffer base	Detach wagon	5
	5.4.3	Cracked longitudinally and no longer capable of guiding plunger	Detach wagon	5
	5.4.4	Fastening of buffer casing defective:		
	5.4.4.1	<ul><li>2 or more bolts loose</li><li>play between buffer casing and headstock</li></ul>	Tighten bolts + M, if not possible, detach wagon	5
	5.4.4.2	- 1 bolt missing	Replace + M, if not possible, detach wagon	3
	5.4.4.3	- 1 bolt loose	Tighten + M, if not possible, K	3
Buffer spring and anti-crash	5.5			
components	5.5.1	Buffer so slack that it can be depressed by hand:	Detach wagon	4
		- one buffer, by more than 15 mm		
		- both buffers at the same end		
	5.5.2	<ul> <li>Anti-crash components triggered</li> <li>buffer length visibly reduced</li> <li>yellow marker arrow partly or completely absent <sup>4)</sup></li> <li>plunger destroyed or distorted <sup>4)</sup></li> <li>indicator missing or distorted <sup>4)</sup></li> </ul>	Detach wagon	5
	5.5.3	Anti-crash component warning mark missing or incomplete	Detach wagon	4

<sup>4)</sup> Depending on buffer

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Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Screw coupler	5.6			
	5.6.1	Part missing, damaged, or inoperative	Use a different screw coupling + K or rectify, if not possible, detach wagon.	3
	5.6.2	Hook for hanging coupler on damaged, inoperative or missing	М	3
	5.6.3	Coupler unhooked	Hook into position and tie up if necessary	3
Draw hook	5.7			
	5.7.1	Inoperative or in poor condition		
	5.7.1.1	- broken, cracked (including tip)	If possible, use the other coupling, K. If not possible, detach wagon	3
	5.7.1.2	- twisted	К	3
	5.7.2	- reserved -		

modif. 1/1/2016

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Other draw gear parts	5.8			
	5.8.1	Other draw gear parts damaged	Detach wagon	4
		<ul> <li>length of coupler such that the buffer heads cannot be brought into contact with each other</li> <li>drawbar broken, cracked or distorted</li> <li>muffs, bolts, or keys broken, cracked, missing</li> <li>spring inoperative</li> </ul>		
		<ul> <li>clearly abnormal projection of draw hook from draw hook guide</li> </ul>		
	5.8.2	Faulty coupling on the train	Adjust coupling	4
Long-stroke damper (e.g. on container wagons)	5.9			
	5.9.1	Sliding element not in mid-position with respect to wagon underframe  the two headstocks are at different distances from wagon body	Detach wagon	5
	5.9.2	No danger marking (diagonal black bands on yellow background) on wagons with front part liable to move with respect to underframe during impacts (impact absorption devices, etc.), on surfaces at risk and liable to over-ride	Detach wagon	4

modif. 1/1/2018

				Annex
Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Wagon body	6			
Wagon body in	6.1			
general	6.1.1	Missing, illegible or incomplete		
Markings on	6.1.1.1	- wagon number <sup>5)</sup>	Detach wagon	4
wagons	6.1.1.2	- "RIV" sign, "TEN-RIV", "TEN"+ "GE" or acceptance marking ("TEN"+"G1", country acronym in approval plate) 5) or	Detach wagon	4
	6.1.1.3	<ul> <li>agreement plate (if showing exchange codes 41, 43, 45, 81, 83 or 85)<sup>5)</sup> or an acceptance marking ("TEN"+"CW" + country acronym in approval plate)<sup>5)</sup></li> </ul>	Detach wagon	4
	6.1.1.4	- tare weight <sup>5)</sup>	Detach wagon	4
1	6.1.1.5	- braked weight of hand brake <sup>5)</sup>	Detach wagon	4
	6.1.1.6	- load limits <sup>5)</sup>	Detach wagon	4
	6.1.1.7	- capacity of tank wagons <sup>5)</sup>	Detach wagon	4
	6.1.1.8	<ul> <li>VKM <u>and</u> full address of wagon keeper<sup>5)</sup> *</li> </ul>	Detach wagon	4
	6.1.1.9	- length-over-buffers of wagon⁵	Detach wagon	4
	6.1.1.10	wagons with step or ladder access up to a height > 2 m above rail level	Detach wagen	4
Overhaul		<ul> <li>indication of compatibility with ILUs on carrying wagon<sup>5)</sup></li> <li>reserved -</li> <li>reserved -</li> <li>Overhaul marking Inscription on the maintenance plate</li> </ul>	Detach wagon  Detach wagon	4
		missing, incomplete or illegible <sup>5)</sup> Maintenance plate (Possible extension of validity if wagons marked "+ 3M")	C	
	6.1.2.2	Validity expires in 15 days or less	К	3
	6.1.2.3	Validity expired ≤ 6 months	Proceed in accordance with point 1 of Annex 8	4
	6.1.2.4	Validity expired > 6 months	Proceed in accordance with point 1 of Annex 8	4
Framework	6.1.3	Part of framework damaged		
	6.1.3.1	- without fouling the loading gauge	K	3
	6.1.3.2	- with fouling the loading gauge	Detach wagon	5

modif. 1/1/2017

 $<sup>^{5)}</sup>$  If this irregularity is only found on one side of the wagon: affix K  $^{\star}$  Official part of the GCU as of 01 April 2017 following the application of the voting and adoption procedures of the GCU

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# Annex 1

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Walls	6.1.4			
	6.1.4.1	Side plank missing, broken, split or coming undone; wall panel holed, broken	К	3
	6.1.4.2	Risk of damage to load due to humidity; risk of loss of load	Rectify if necessary + K. If not possible, detach wagon	4
Floors	6.1.5	Floor damaged		
	6.1.5.1	- with no risk of loss of load	К	3
	6.1.5.2	- with risk of loss of load	Rectify if necessary + K. If not possible, detach wagon	4

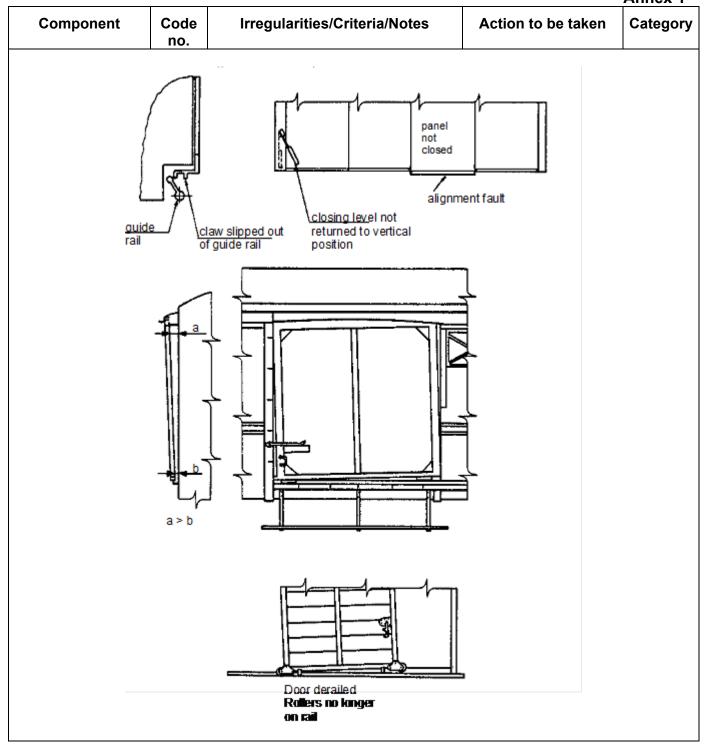
modif. 1/1/2015

Annex 1

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Doors and sliding walls	6.1.6 6.1.6.1	Not fully closed or not fastened	Close and/or secure. If not possible, fasten + K. If not possible, detach wagon	5
	6.1.6.2	Missing or derailed  abnormal position in relation to its frame	If possible to put back in position, fasten + K. If not possible, detach wagon	5
		Panel deralled  Lower part out of line		
		Out of parallel		

modif. 1/1/2004

Annex 1



modif. 1/1/2004

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
		Guiding or locking elements in poor condition		
	6.1.6.3	- door frame, hinges, locks, latch hooks, handles, missing, broken, dislocated, deformed	Temporary repair + K. If not possible,	3
	6.1.6.4	- safety hazard or risk of loss of load	detach wagon	5
		Doors broken or warped		
	6.1.6.5	- no risk of fouling the gauge or losing the load	Temporary repair + K. If not possible,	3
	6.1.6.6	- risk of gauge being fouled or loss of load	detach wagon	5

modif. 1/1/2017

Component	Code	Irrogularities/Criterie/Netes	Action to be taken	Catogory
Component	no.	Irregularities/Criteria/Notes	Action to be taken	Category
Various parts	6.1.7			
(steps, handles, ladders, gangways, guard rails,	6.1.7.1	Ladders, gangways, guard rails in poor condition, unusable	К	4
inscription plates and others)	6.1.7.2	Steps: missing	K	4
	6.1.7.3	Steps: damage representing a safety hazard for staff, torn off or deformed beyond tolerated (limit: a > 80 mm)	Detach wagon	4
	6.1.7.4	Handles: missing, damage representing a safety hazard for staff, torn off or deformed beyond tolerated (limit: b < 60 mm)	Temporary repair + M. If not possible, detach wagon	4
	6.1.7.5	Inadequate securing of - inscription plates - folding plates - label holders	Temporary repair + M. If not possible, detach wagon	4
	6.1.7.6	Missing: - inscription plates - folding plates - label holders	Temporary labels + K. If not possible, detach wagon	3
	6.1.7.7	Loose wagon accessories missing or incomplete	М	3
	6.1.7.8	Loose wagon accessories not secured	Fasten	4
	6.1.7.9	Signal brackets, rope eyes missing, unfit for use	М	3

modif. 1/1/2017

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Internal fittings <sup>6)</sup>	6.1.8			
	6.1.8.1	Defective internal fittings:		
		<ul> <li>holding arm</li> <li>guide rail</li> <li>loading cradle</li> <li>loops, hooks, eyelets</li> <li>dividing wall</li> </ul>	Temporary repair, rectify using additional fastenings +	3
	6.1.8.2	Wagon with fastening equipment (see also no. 6.6.7), car-carrying wagon, wheel scotches (see also no. 6.6.5.2)	If not possible, detach wagon	5
Covered wagons	6.2			
Ventilation flaps	6.2.1	Missing, damaged		
	6.2.1.1	- without any risk of damage due to humidity or fouling of the gauge	Rectify + K. If not possible, detach wagon	3
	6.2.1.2	<ul> <li>with risk of damage due to humidity or fouling of the gauge</li> </ul>	Detach wagon	5
Control gear, shutter retaining	6.2.2	Unhooked, distorted, loose		
bracket	6.2.2.1	- without any risk of fouling the gauge	Rectify + K. If not possible,	3
	6.2.2.2	- with risk of fouling the gauge	detach wagon	5
Roof and weatherboard	6.2.3	Roof cover or weatherboard loose, compromising safety or water-tight- ness	Detach wagon	4
	6.2.4	Opening roof		
	6.2.4.1	- not fully closed, not secured	Close and lock roof if necessary + K. If not possible, detach wagon	5
	6.2.4.2	- derailed	Set back in rails and secure; otherwise, detach wagon	5
	6.2.4.3	- control mechanism missing, distorted, ineffective	К	4

 $<sup>^{\</sup>rm 6)}$  Defective internal fittings: observation outside of TTI during specific inspection

Annex 1

Component	Codo	Investigation/Critoria/Notes		Cotogom
Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Open wagons	6.3			
Side walls or end flaps	6.3.1	Damaged		
apo	6.3.1.1	<ul> <li>with no risk of losing the load or fouling the gauge</li> </ul>	М	3
	6.3.1.2	- with risk of losing load	Rectify + K. If not possible, detach wagon	4
	6.3.1.3	- with risk of fouling the gauge	Rectify + K. If not possible, detach wagon	5
Closing and operating gear of end flaps	6.3.2	Pins, camshafts, retaining hooks, shaft supports, etc. missing, broken, cracked, inoperative	age	
	6.3.2.1	- without compromising safety	Repair temporarily + K.	3
	6.3.2.2	- compromising safety	If not possible, detach wagon	5
Cantrail	6.3.3	Broken or deformed	Rectify + K.	
	6.3.3.1	- with no risk of fouling the gauge	If not possible, detach wagon	3
	6.3.3.2	- with risk of fouling the gauge	actaon wagon	5
Flat wagons	6.4			
Drop sides	6.4.1			
	6.4.1.1	Folded down and not secured	Secure. If not possible, detach wagon	5
	6.4.1.2	Folded but not authorised in table 3 of the Loading Guidelines	Raise. If not possible, detach wagon	5
	6.4.1.3	Distorted with no risk of losing load or fouling the gauge	М	3
	6.4.1.4	Holed or distorted with risk of losing load	Rectify + K. If not possible, detach wagon	4
	6.4.1.5	Distorted with risk of fouling the gauge	Rectify + K. If not possible, detach wagon	5

modif. 31/1/2008

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Hinges, pins, securing bolts	6.4.2	Missing, inoperative, broken		
Securing Boils	6.4.2.1	- but not compromising safety or involving risk of loss of load	Repair temporarily +	3
	6.4.2.2	- compromising safety or involving risk of loss of load	K. If not possible, detach wagon	4
Stanchions	6.4.3			
- detachable - pivoting	6.4.3.1	Missing and necessary to secure load	If not possible to rectify:	5
- retractable	6.4.3.2	Deformed and fouling the gauge	Detach wagon	5
	6.4.3.3	Crack or break in stanchion or in its mounting or fixing device	If presence of stanchion is required: detach wagon; otherwise M	4
	6.4.3.4	Stanchion chains hanging loose	Rectify	4
	6.4.3.5	Stanchion fastening ineffective	Fasten, K or if not possible, detach wagon	4
Bolsters	6.4.4			
	6.4.4.1	Broken, timber bearing surface or joint unfit for use	M	3
	6.4.4.2	Loose bolsters not secured by side stanchions or load	Rectify; otherwise, detach wagon	4
Tank wagons	6.5			
Tank cradle	6.5.1			
	6.5.1.1	Crack extending > 1/4 across the cross-section	If empty: K. If loaded, detach wagon	4
	6.5.1.2	Crack in the weld seams		4
	6.5.1.3	Up to 10% of the bolts or rivets securing tank body to cradle missing	К	4
	6.5.1.4	More than 10% of the bolts or rivets securing tank body to cradle missing	Detach wagon	4

modif. 1/1/2004

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Tank	6.5.2			
	6.5.2.1	Not tight: leaks or risk of loss of load	Have sealed + K. If not possible, detach wagon	5
	6.5.2.2	Distorted with sharp edges but no risk of loss of load	К	4
		Tank test date expired for shipment of RID goods		
	6.5.2.3	- tank full, may be extended by 3 months if marked "L"	Detach wagon	5
	6.5.2.4	- tank empty, not cleaned, may be extended by 3 months if marked "L"	К	5
Tank equipment	6.5.3	Tank cladding, sun-roof, insulation		
	6.5.3.1	- damaged	К	4
	6.5.3.2	- loose	Detach wagon	5
	6.5.4	- reserved -		

modif. 1/1/2012

				nnex i
Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Reinforcement, filling and	6.5.5	I ago of load	Doctify If not	
emptying equipment, underneath	6.5.5.1 6.5.5.2	Loss of load -reserved-	Rectify. If not possible, detach wagon	5
	0.5.5.2	-ieseiveu-		
	6.5.5.3	Valves or spouts defective Screw cap must be tightly sealed and must not be missing (except for outside gas pipes)	Detach wagon	4
	6.5.5.4	- RID load <sup>7)</sup>	Detach wagon	4
	6.5.5.5	- non-RID load	Rectify. If not possible, M	3
	6.5.5.6	Blind flange missing	Detach wagon	4
		Securing bolt of the blind flange:		
	6.5.5.7	- RID load <sup>7)</sup> one or more securing bolts missing or loose	Detach wagon	4
	6.5.5.8	<ul> <li>non-RID load, one securing bolt missing or loose</li> </ul>	Rectify. If not possible, K	3
	6.5.5.9	<ul> <li>non-RID load, several securing bolts missing or loose bottom valve indicator device not in "closed" position on both sides</li> </ul>	Rectify. If not possible, detach wagon	4
	6.5.5.10	<ul> <li>loaded wagons, and empty wagons that have not been cleaned (RID load<sup>7)</sup>)</li> </ul>	Close bottom valve. If not possible, detach wagon	5
	6.5.5.11	- empty wagons (non-RID load)	Close bottom valve. If not possible, K	3
	6.5.5.12	Bottom valve emergency control device screwed in (tank-mounted valve open)	Detach wagon	5
	6.5.5.13	Filling and emptying equipment open	Rectify. If not possible, detach wagon	5
	6.5.5.14	Visible locking devices ineffective	Rectify. If not possible, detach wagon	4

 $<sup>^{7)}</sup>$  Clarification: pay attention to the hazard warning labels

modif. 1/1/2017 Version: 1/1/2018

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Reinforcement, filling equipment,	6.5.6			
above	6.5.6.1	Loss of load or of gas near the upper reinforcements (does not concern ventilation devices)  odour signs of recent or persistent leakage	Detach wagon	5
	6.5.6.2	Dome cover open or missing	Close or have closed. If not possible, detach wagon	5
	6.5.6.3	Other upper reinforcements not closed	Close or have closed. If not possible, detach wagon	4
	6.5.7	- reserved -		

modif. 1/1/2006

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Wagons with special fittings	6.6			
Wagons with mechanical sheeting (e.g. Rils, Tams)		Mechanical sheeting not properly closed and locked  indicator visible (side closing system open)  Side locking system  end hoops inclined (locking system not engaged)  Top locking system	Close. If not possible, detach wagon	5
	6.6.1.2	Tarpaulin - tarpaulin torn, holed ≤ 30 mm	Rectify	3
	6.6.1.3	Tarpaulin - tarpaulin torn, holed > 30 mm	Detach wagon	5

modif. 1/1/2015

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Wagons with telescopic hood	6.6.2			
(e.g. Shimms)	6.6.2.1	Hood not locked	Lock. If not possible, make secure + K; otherwise detach wagon	5
		hood		
	6.6.2.2	External hood derailed	Detach wagon	5
Flat bogie wagons for transport of	6.6.3			
road vehicles (e.g. Saad)	6.6.3.1	Moveable headstocks damaged	κ	4
Saauj	6.6.3.2	Moveable headstocks not locked into place on both sides	Lock. If not possible, detach wagon	5
	6.6.3.3	Ineffective seating plate, plate bolts, securing chains or chain link	Rectify. If not possible, detach wagon	4
	6.6.3.4	Wheel scotches damaged	М	3

modif. 1/1/2006

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
ACTS *) carrier wagons with swivel frame	6.6.4			
*) Roll on/off	6.6.4.1	Swivel frame damaged	κ	4
container transport system	6.6.4.2	Locking device preventing the frame from swivelling ineffective or unlocked <sup>8)</sup> - locking lever not secured or locked in position <sup>8)</sup> - stanchions not in position and not secured <sup>8)</sup> - snap lock (safety bolt) defective and	Secure and lock. If not possible, detach wagon	5
	6.6.4.3	handle in unlocked position <sup>8)</sup> Pneumatic monitoring system on the swivel lock not in service and not labelled	Put in service	4
	6.6.4.4	Pneumatic monitoring system on the swivel lock triggered	Check swivel lock. If no fault found, disconnect monitoring system + K	3
	6.6.4.5	Device to prevent container lifting ineffective  locking lever not secured or locked in position <sup>8)</sup>	Secure. If not possible, detach wagon	5
	6.6.4.6	Device to prevent containers moving ineffective <sup>8)</sup>	Detach wagon	5

modif. 1/1/2016

 $<sup>^{8)}</sup>$  Rules for the use of the swivel frame system to be complied with

Component	Code	Irregularities/Criteria/Notes	Action to be taken	Category
Car-carrying	<b>no.</b> 6.6.5			
wagons	6.6.5.1	Damage to lifting and lowering equipment, crossing gangways and footplates	К	4
	6.6.5.2	Damage to wheel scotch, wheel guides or crank handle	М	3
	6.6.5.3	End boards and crossing gangways – where required – not raised and secured	Rectify. If not possible, detach wagon	4
	6.6.5.4	Upper loading deck, indicator device not engaged	Secure	4
	6.6.5.5	Upper loading deck not secured	Secure. If not possible, detach wagon	5
	6.6.5.6	Upper loading deck not resting on supporting bracket (suspended by cables)	Rectify. If not possible, detach wagon	5
	6.6.5.7	Upper deck loaded but fouling the gauge	Detach wagon	5
	6.6.5.8	Gangways above central axles not fully manoeuvrable on loaded wagons  • distance: ≤ 100 mm between wheel of vehicle and gangway  Mechanical damage to support and fastening of crossover plates on central axles  • distorted, breakage, cracking,	Rectify. If not possible, detach wagon	5
		missing parts	К	
	6.6.5.9	- empty wagon	Detach wagon	4
	6.6.5.10	- loaded wagon	_ case in mage	5
Self-discharging wagons	6.6.6	Discharge valve not closed and locked	Close and lock. If not possible, K	3
	6.6.6.1	- empty wagon	, , , , , ,	
	6.6.6.2	- loaded wagon	Close and lock. If not possible, detach wagon	4
Wagons with	6.6.7			
securing equipment (e.g. Snps, Roos, Ealos)	6.6.7.1	Unused securing equipment not properly or adequately fixed, stowed or secured	Rectify. If not possible, make safe + K	4

modif. 1/1/2012

Component	Code	Irregularities/Criteria/Notes	Action to be taken	Category
Component	no.	inegularities/oriteria/Notes	Action to be taken	outegory
Gear for securing	6.7			
load units (ILU) on container wagons	6.7.1	Trestle or spigot distorted or defective		
	6.7.1.1	- trestle not in use	К	3
	6.7.1.2	- trestle in use	Rectify +K. If not possible, detach wagon	5
	6.7.1.3	- spigot not in use	К	3
	6.7.1.4	- spigot in use	Rectify +K. If not possible, detach wagon	5
	6.7.2	Coupling pin of trailer not locked into trestle	Lock. If not possible, detach wagon	5
	6.7.3	Trestle not in use and not locked	Place trestle in its end position and lock. If not possible, secure temporarily + K	3
	6.7.4	Trestle adjustment device unlocked and potentially fouling the gauge	Push in and secure trestle adjustment device. If not possible,	4
	6.7.5	Moving parts not properly secured (e.g. retractable spigots, handrails for shunters, etc.)	detach wagon	
	6.7.5.1	No risk of fouling the gauge	Rectify. If not possible, secure provisionally	3
	6.7.5.2	Risk of fouling the gauge	Rectify. If not possible, detach wagon	5
	6.7.6	Anti-crash system of trestle triggered, damaged elements	dotaon wagon	
	6.7.6.1	- in use	Dotach wagen	5
	6.7.6.2		Detach wagon	4
			K, close emergency stop cock	

modif. 1/1/2017

				inex i
Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Loads and load units (ILU) Load in general	7 7.1			
Distribution of the load (wagon)	7.1.1	Load visibly displaced  I lashing cords broken  load not positioned properly on blocks  not centrally positioned	Detach wagon	5
	7.1.2	Load unevenly distributed (3.3), body not horizontal  • different buffer heights (3.5)  • unequal suspension spring play (3.5)  • pronounced deflection of wagon underframe (3.4)	Detach wagon, proceed as per Annex 8, point 2	5
Packing, load fastening	7.1.3	Packages, bundles, bales, stacks, coming apart or not properly tied together (1.5)	Detach wagon	4
	7.1.4	Inadequate binding of narrow, cylindrical objects (1.5)	Detach wagon	4
Maximum	7.1.5			
permissible dimensions of load	7.1.5.1	Unauthorised fouling of the gauge (4.1)	Detach wagon	5
	7.1.5.2	<ul><li>Fouling of the gauge not indicated</li><li>U label missing</li></ul>	Detach wagon	5
Reserved spaces	7.1.6	<ul><li>Encroachment on reserved spaces</li><li>load projecting beyond the headstock (4.2)</li></ul>	Detach wagon	5
Load limits	7.1.7			
	7.1.7.1	Exceeding of load limits (3.2), visually detected:  • different buffer heights  • insufficient distance between spring buckle and solebar	Detach wagon. Proceed as per point 2 of Annex 8	5
	7.1.7.2	Exceeding of load limits (3.2), detection by: - discrepancy between consignment data and load limit marked on wagon - measuring or diagnostics devices	Detach wagon. Proceed as per point 2 of Annex 8	5
Buffer wagons	7.1.8	Vertical and horizontal clearances not respected between loads or between buffer wagon and load (4.3)	Detach wagon	5

modif. 1/1/2014

				nnex 1
Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Sheeting, nets	7.1.9	Inadequate, defective or secured with non-compliant fastening equipment (see Loading Guidelines 6.1, 6.2)	Rectify. If not possible, detach wagon	4
Load securing equipment	7.2			
Wagon walls or sides	7.2.1	Load projecting beyond the walls and sides and inadequately secured (5.4.1)	Detach wagon	5
	7.2.2	Load clearly pressing against walls, sides or doors and thus hindering their functioning, with risk of damage or operating hazard (2.3)	Detach wagon	4
Stanchions	7.2.3			
	7.2.3.1	Load inadequately secured by stanchions (2.5 and 5.4.1)	Detach wagon	5
	7.2.3.2	Fastenings between opposite stanchions missing (2.5)	Detach wagon	5
	7.2.3.3	Load pressing up against and bending stanchions (2.5)	Detach wagon	5
	7.2.3.4	Load which is heavy and/or which may damage side stanchions in the event of longitudinal displacement, pressing up against stanchions (2.5)	Detach wagon	4
Scotches fastened with nails	7.2.4	Non-compliant (5.4.3) - insufficient - ineffective - incorrectly fastened to the floor	Detach wagon	5
Direct or indirect fastenings (lashing)	7.2.5	Non-compliant (5.4.4, 5.5.4)		
iasteilings (iasiling)	7.2.5.1	- unsuitable or unauthorised material	Detach wagon	5
	7.2.5.2	- incorrectly or inadequately fastened	Rectify. If not possible, detach wagon	5
	7.2.5.3	- slack	Rectify. If not possible, detach wagon	4

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				nnex 1
Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Bolsters, timbers,	7.2.6			
stretchers, fastening gear	7.2.6.1	Non-compliant (5.5.5, 5.6.2, 5.8.1)	Detach wagon	5
		<ul> <li>damaged</li> <li>poorly chosen</li> <li>inadequate</li> <li>incorrectly arranged</li> <li>loose</li> </ul>		
	7.2.6.2	Auxiliary loading equipment or fastening gear not removed	Rectify	3
Load residues		Residues of loads which may compromise safety	Remove. If not possible, detach wagon	5
Loading and load- securing methods	7.3		-	
General	7.3.1	Load unstable and wrongly secured (5.1)	Detach wagon	5
Goods subject to lifting by airflow (e.g. light scrap and thin boards)	7.3.2	Covering missing or inadequate (5.2.1, 5.3.2)	Detach wagon	5
Goods which may	7.3.3			
fall off on account of vehicle vibrations and impacts (wire metal trelliswork, metal filings etc.)	7.3.3.1	Insufficient clearance between goods and top edge of walls of the wagon (5.2.2)  I load protruding beyond top edges of walls	Detach wagon	5
	7.3.3.2	Dome-shaped load too high (5.3.1)	Detach wagon	5
Stacked goods	7.3.4	Wrongly stacked (5.8)  - uneven distribution over floor  - too high  - poorly stacked  - inadequate bindings  - insufficient clearance between a load liable to sway and loading gauge  - cylindrical loads inadequately secured	Detach wagon	5

modif. 1/1/2015

Loading regulation	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Load with inadequate	7.3.5			
supporting area, liable to damage the wagon floor	7.3.5.1	Scotches missing or insufficient (2.2)  floor damaged	Κ	3
Concentrated load on flat wagon	7.3.5.2	Excessive concentration of load (3.4) - scotches in place, unsuitable material used - scotches in place, dimensions insufficient	Detach wagon	5
Load liable to tip	7.3.6	Not secured against overturning (5.7)	Detach wagon	5
Tilted load	7.3.7	Insufficiently supported (5.7)	Detach wagon	5
Load liable to roll	7.3.8	Inadequately secured against rolling (5.6.1, 5.6.2)	Detach wagon	5
Load liable to slide lengthways	7.3.9			
lenguiways	7.3.9.1	Laid on unsuitable (5.5.1) - timbers - guide blocks - skids	Detach wagon	4
	7.3.9.2	Lateral guide-pieces missing or insufficient with risk of fouling the gauge or exceeding load limit (5.5)	Detach wagon	5
	7.3.9.3	Necessary clearances missing (5.5.2)	Detach wagon	3
	7.3.9.4	Necessary scope for sliding not limited (5.5.3)	Detach wagon	4

modif. 1/1/2004

				nnex 1
Loading regulation	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Special types of consignment	7.4			
Vehicles and machinery on wheels or caterpillar tracks/chains	7.4.1	Unsuitable scotch blocks and/or fastenings (5.6.3)	Rectify. If not possible, detach wagon	5
Moving parts of	7.4.2	Not properly immobilised		
vehicles and machinery	7.4.2.1	- no risk of fouling the gauge	Rectify. If not possible, detach wagon	3
	7.4.2.2	- risk of fouling the gauge	Detach wagon	5
Load supported on several wagons	7.4.3	Not loaded/secured according to requirements (5.9)	Detach wagon	5
Specific components of ILU,	7.5			
in particular those used for horizontal or vertical	7.5.1	Device for locking the dollies inoperative, defective or missing	Bind using wire. If not possible, detach wagon	4
transhipment	7.5.2	End doors on load units not securely closed or locked		
	7.5.2.1	- door not closed	Close. If not possible, detach wagon	5
	7.5.2.2	<ul> <li>only one lock effective per load unit and door</li> </ul>	Rectify	3
	7.5.2.3	-reserved-		
	7.5.3	Lower corner casting damaged	Detach wagon	5
	7.5.4	Side wall, lining damaged, inadequately secured, unstable  • hinges, securing bolts damaged, broken, missing  • edge plank missing, broken, cracked or split; lining holed or broken	Detach wagon	5
	7.5.5 7.5.5.1 7.5.5.2	Tarpaulin  • tarpaulin torn, holed ≤ 30 mm  • tarpaulin torn, holed > 30 mm	Rectify Detach wagon	3 5
	7.5.5.3	Danger of damage from humidity to the load or loss of load	Rectify, if not possible, detach wagon	4
	7.5.6	Tarpaulin, walls • locking, lashings inadequate • sheet; lack of tension / lock damaged, inadequate	Detach wagon	5

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Loading regulation	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
ILU Tank	7.6			
Connecting elements	7.6.1			
Tank body/ underframe	7.6.1.1	Crack > 1/4 of the section transverse (across the cradle or the cross-stays)	Detach wagon	4
	7.6.1.2	Cracks in the weld seams	Detach wagon	4
Tank <sup>9)</sup>	7.6.2			
	7.6.2.1	Not tight: leaks or loss of load	Have sealed. If not possible, detach wagon	5
	7.6.2.2	Distorted with sharp edges but no risk of loss of load	Rectify	4
Tank equipment	7.6.3	Tank cladding, sun roof, insulation		
	7.6.3.1	damaged	Rectify	4
	7.6.3.2	• loose	Detach wagon	5
Reinforcement,	7.6.4			
filling and emptying equipment, underneath	7.6.4.1	Loss of load	Rectify, if not possible, detach wagon	5
	7.6.4.2	Valves or spouts defective	Detach wagon	4
		Screw cap must be tightly sealed and not missing		
	7.6.4.3	- RID load <sup>10)</sup>	Rectify. If not possible, detach wagon	4
	7.6.4.4	non-RID load	Rectify. If not possible, detach wagon	3
	7.6.4.5	Blind flange missing	Detach wagon	4
		Securing bolt of the blind flange:		
	7.6.4.6	- RID load <sup>10)</sup> , one or more securing bolts missing or loose	Detach wagon	4
	7.6.4.7	- non-RID load, one securing bolt missing or loose	Rectify. If not possible, detach wagon	3
	7.6.4.8	- non-RID load, several securing bolts missing or loose	Rectify. If not possible, detach wagon	4

<sup>9)</sup> Clarification: moreover, verify 7.8

modif. 1/1/2017

Clarification: pay attention to the hazard warning labels

	7.6.4.9	Bottom valve indicator device not in "closed" position on both sides  - loaded load units, and empty wagons that have not been cleaned (RID load 10)	Close bottom valve. If not possible, detach wagon Close bottom valve. If not	5
	7.6.4.10	- empty load unit (non-RID load)	possible, detach wagon Detach wagon	3
			Rectify. If not possible, detach wagon	5
	7.6.4.12	Filling and emptying equipment open	Rectify. If not possible, detach wagon	5
		Non-efficient visible locking devices	asiasii wageii	4
Reinforcement, fill- ing and emptying	7.6.5			
equipment, above		Loss of load or of gas near the upper reinforcements (does not concern ventilation devices)  odour signs of recent or persistent leakage	Detach wagon	5
	7.6.5.2	Dome cover open or missing	Close or have closed. If not possible, detach wagon	5
	7.6.5.3		Close or have closed. If not possible, detach wagon	4

modif. 1/1/2017

<sup>&</sup>lt;sup>10)</sup> Clarification: pay attention to the hazard warning labels

Loading regulation	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Loading of load	7.7			
units (ILU)	7.7.1	ILU too heavy for wagon	Detach wagon	5
	7.7.2	Corner castings not engaged on their respective spigots	Detach wagon	5
	7.7.3	Spigots of hinged support plates neither raised nor secured	Raise and secure. If not possible, detach wagon	5
	7.7.4	Air suspension system of semi-trailer not emptied	Empty. If not possible, detach wagon	5
	7.7.5	Underrun bumpers of semi-trailer, due to their design, not raised/pushed in, without contact with carrier wagon	Rectify (raise/push in and lock)	3
	7.7.6	Semi-trailer with P coding: contact between semi-trailer and wagon (other than wheels and trestle)	Rectify. If not possible, detach wagon	4
	7.7.7		Rectify. If not possible, detach wagon	4
	7.7.8	Incorrect scotching of wheels of semi-trailer	Rectify. If not possible, detach wagon	4
	7.7.9	Load displaced in the ILU  deformation of sheeting	Detach wagon	5
Marking, coding for	7.8			
intermodal transport	7.8.1	Valid coding missing or illegible	Detach wagon	5
	7.8.2	ILU incompatible with carrying wagon	Detach wagon	5
	7.8.3	Absence of CSC safety plate  • on ILUs with upper corner castings	Detach wagon	4
	7.8.4	Missing warning sign "danger: high voltage"  on ILUs with steps	Detach wagon	4

modif. 1/1/2016

Cases	Code no.	Irregularities/Criteria/Notes	Action to be taken	Category
Divers	8			
Irregularities and exploitation	8.1			
•	8.1.1	Derailment	Detach, proceed following annex 9, I + K	5
	8.1.2	Abnormal buffering shock	Detach, proceed following annex 9, I + K	5
Force Majeure	8.2			
	8.2.1	Flood and weather damage	Detach	5
	8.2.2	Damage by priming current for wagon in contact with catenaries under high voltage	Detach	5
	8.2.3	Fire	Detach	5

modif. 1/1/2014

# Irregularity classes

Class	Definition	Value
1	Insignificant irregularities having no effect on a wagon's fitness to run or on operating safety	0.002
	Not considered in the QMS system	
2	Irregularities having small effect on a wagon's fitness to run	0.05
	Not considered in the QMS system	
3	Minor irregularities	0.125
	Irregularities having a considerable effect on a wagon's fitness to run and irregularities having an impact on operations (missing or wrong markings)	
4	Major irregularities	0.4
	Irregularities which render a wagon unfit to run or which jeopardise operations and irregularities which might result in injuries (freight train crews)	
5	Critical irregularities	1.0
	Irregularities with serious consequences for operating safety and irregularities presenting an immediate risk to transport operations	

modif. 31/1/2008

- reserved -

modif. 1/1/2006

Annex 3

# Size of samples as per ISO 2859 - Part 1

Excerpt from Table 1: Code letters indicating size of samples

	Batch size		Gene	eral inspection	level
			I	II	III
2	to	8	Α	Α	В
9	to	15	Α	В	С
16	to	25	В	С	D
26	to	50	С	D	E
51	to	90	С	E	F
91	to	150	D	F	G
151	to	280	E	G	Н
281	to	500	F	Н	J
501	to	1200	G	J	K
1201	to	3200	Н	K	L
3201	to	10000	J	L	M
10001	to	35000	K	M	N
35001	to	150000	L	N	Р
150001	to	500000	M	Р	Q
500001	and	above	N	Q	R

Excerpt from Table 2-A: Simple sampling guidelines for standard inspections

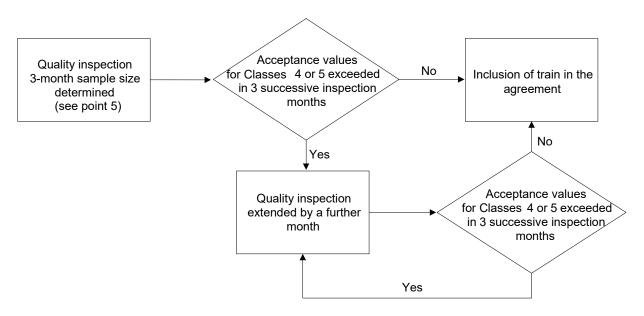
	AQL	1	2.5
Code letter for	On and a single	Acceptanc	e value for
the sample size	Sample size	Class 5	Class 4
Α	2	0	0
В	3	0	0
С	5	0	0
D	8	0	0
E	13	0	1
F	20	0	1
G	32	1	2
Н	50	1	3
J	80	2	5
K	125	3	7
L	200	5	10
M	315	7	14
N	500	-	-
Р	800	-	-
Q	1250	-	-
R	2000	-	-

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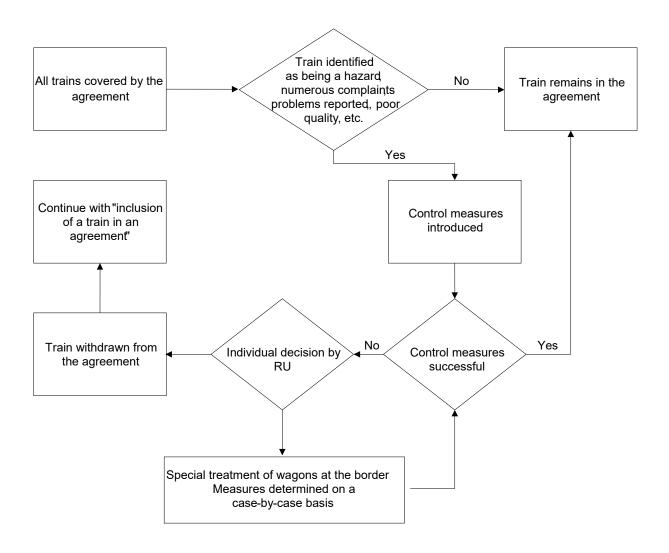
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#### Overview I Procedure for the inclusion of a train in an agreement

Annex 3



#### Overview-II Exclusion of trains from an agreement



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Record of the inclusion of trains in an agreement Route between RU 1 - RU 2 - RU 3 - RU 4 and back, 2007

		nths)	onth		8		November December						RU 4	Date, signature
wagons	er week	ctions (3 mo	ctions per m		ver 3 months	ver 3 months	Novembe							
Average number of wagons	Days of operation per week	Scheduled number of inspections (3 months)	Scheduled number of inspections per month		Max. acceptance value for Class 4 over 3 months	Max. acceptance value for Class 5 over 3 months	September October					oved by	RU 3	Date, signature
		Sched	Sched		ıx. acceptanc	ıx. acceptanc	August S					train in the agreement approved by		Dat
					Ma	Ma	July					greeme		
							June					າ the ac		ıture
ain run	_			] Г			May					•	RU 2	ate, signature
Trai							April					Inclusion of the		Dat
		LC					March					lusion		
		ical inspection			y inspection		February					Inc		4)
ain		ut the techn	technical carried out		ut the qualit		January						RU 1	Date, signature
Train		RU carrying out the technical inspection	Place where technical inspection is carried out		RU carrying out the quality inspection		Number	Actual number of wagons inspected	Class 4	Class 5	Comments		-	Date

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										Α	nne	<u>x 3</u>
lass of irregularity, number, short description	Short description											
egularity, numbe	Number											
e, class of irr	Class of irregularity											
Code, cl	Code in accordance with GCU Appendix											

modif. 31/1/2008

# Verification of q<sub>R</sub>

Measured at the wheel flange using a gauge,  $q_R$  must always be greater than 6.5 mm, with no sharp edges or burrs on the outer part of the flange over a distance of 2 mm from the top of the flange.

Fig. 1 - Permissible profile for outer part of flange

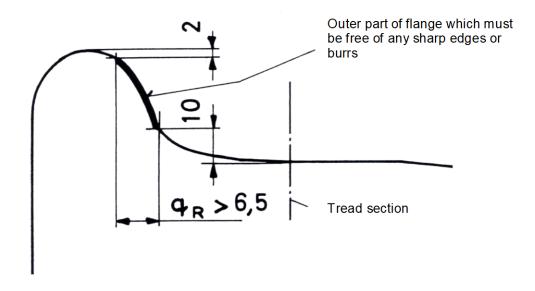
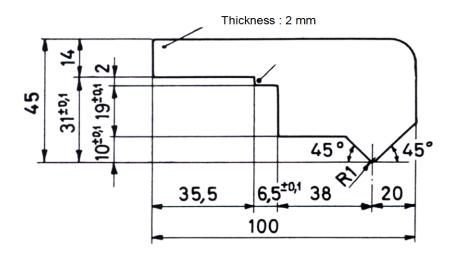


Fig. 2 - Gauge for verifying qr



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Annex 4

Fig. 3

Acceptable wheel flange

Unacceptable wheel flange

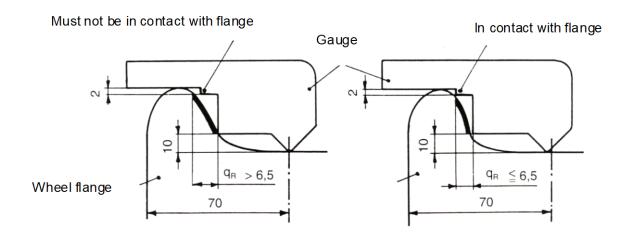
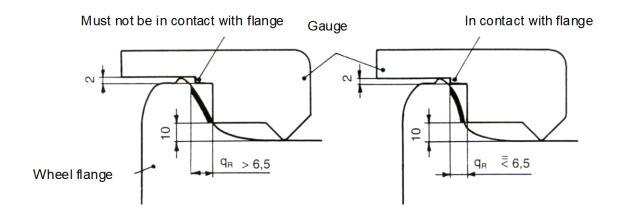


Fig. 4
Wheel flange with sharp edges or burr formation

Acceptable wheel flange

Unacceptable wheel flange



modif. 1/1/2004

# Catalogue of inspections in accordance with Annex 1

Irregularity category	4	5	5	4	5	5	4	4	5	3	4	4	4	4	4	4	3	4	3	4	3
Control criteria	VC, M	VC, HT	VC, HT	VC	VC, HT	VC	VC	VC, M	VC, M	VC, M	VC, M	VC	VC, M	VC, M	VC, M	VC, M	VC, M	VC, M	VC, M	VC, M	VC, M
Quality requirement	Compliance with dimensions set	Neither broken nor cracked	Tight, not turned, clear ring, rust ≤ 1/3 of circumference	Control marks present	Tight, not displaced laterally	Present, not cracked, not broken	Groove marking minimum thickness fully visible in cross-section	No thermal overload due to braking, tolerance range not exceeded	No thermal overload due to braking, tolerance range not exceeded	Compliance with stipulated tyre width	Compliance with stipulated tyre width	No crushing of wheel tread, no uneven contact surfaces or irregular burrs on the wheel rim	Wheel $\varnothing > 840$ mm, no wheel flat $> 60$ mm long	Wheel $\varnothing$ : 630 mm < d $\le$ 840 mm, no wheel flat > 40 mm long	Wheel $\varnothing \le 630$ mm, no wheel flat > 35 mm long	Wheel Ø > 840 mm, no build-up of metal > 60 mm long or > 1mm thick	Wheel $\varnothing$ > 840 mm, no build-up of metal > 10 mm $\le$ 60 mm long and < 1mm thick	Wheel $\varnothing$ : 630 mm $<$ d $\le$ 840 mm , no build-up of metal $>$ 40 mm long or $\ge$ 1mm thick	Wheel $\varnothing$ : 630 mm $<$ d $\leq$ 840 mm , no build-up of metal $>$ 10 mm long and $<$ 1mm thick	Wheel $\varnothing \le 630$ mm, no build-up of metal > 35 mm long or $\ge 1$ mm thick	Wheel $\varnothing \le 630$ mm, no build-up of metal > 10 mm $\le 35$ mm long and
Component	Thickness of tyre	Tyre	Tyre	Tyred wheel	Tyre	Tyre clip	Tyre (solid wheel)	Tyre (solid wheel), except wheels marked as able to withstand high thermal stresses	Tyre (solid wheel), except wheels marked as able to withstand high thermal stresses	Tyre: width B > 139 mm and ≤ 140 mm	Tyre: width B > 140 mm, < 133 mm • Presence of a protrusion S	Wheel tread	Wheel tread	Wheel tread	Wheel tread	Wheel tread	Wheel tread	Wheel tread	Wheel tread	Wheel tread	Wheel tread
Wagon	All wagons						All wagons			All wagons											
Code no.	1.1.1	1.1.2	1.1.3	1.1.4	1.1.5	1.1.6	1.2.1	1.2.2.1	1.2.2.2.	1.3.1.1	1.3.1.2	1.3.2	1.3.3.1	1.3.3.2	1.3.3.3	1.3.4.1	1.3.4.2	1.3.4.3	1.3.4.4	1.3.4.5	1.3.4.6

<sup>1)</sup> VC = visual check; M = measurement; HT = hammer test; OP = operate; PM = pull or move the components

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Code no.	Wagon	Component	Quality requirement	Control criteria <sup>1)</sup>	Irregularity category
1.3.5.1		Wheel tread	Wheel $\varnothing$ > 840 mm, no cavity, shelling or flaking > 60 mm long	VC, M	4
1.3.5.2		Wheel tread	Wheel $\varnothing$ : 630 mm < d $\le$ 840mm, no cavity, shelling or flaking > 40 mm long	VC, M	4
1.3.5.3		Wheel tread	Wheel $\varnothing$ : $\leq$ 630 mm, no cavity, shelling or flaking > 35 mm long	VC, M	4
1.3.6.1		Wheel tread	No cracks at the interface between the wheel tread and the front edge	VC	5
1.3.6.2		Wheelset front face, rim and inner tyre rim	No sharp-angled notches on the front face (rim or inner tyre rim) except for markings applied by the manufacturer	VC	4
1.3.7		Wheelset front faces	No lubricants or paint, except the 4 control marks	VC	5
1.3.8.1		Wheel tread	No damage	VC	4
1.3.8.2		Wheel tread	No damage, no grooves (with sharp edges) ≥ 1 mm deep	VC	5
1.3.8.3		Wheel tread	No damage, no furrows and false flanges > 2 mm deep	VC, M	5
1.4.1	All wagons	Flange	Compliance with height Sh	VC, M	4
1.4.2		Flange	Compliance with flange thickness, no worn flange	VC, M	5
1.4.3		Flange	Dimension qR adhered to, no sharp flange	VC, M	5
1.4.4		Flange	No burrs or sharp edges on guide face at a distance h > 2 mm from highest point of flange	VC, M	5
1.5.1	All wagons	Wheel centre	Not cracked, no defects repaired by welding	VC	5
1.5.2		Wheel centre	No break or crack in wheel centre, tyre clip, tyre, no defects repaired by welding	VC	5
1.6.1	All wagons	Axle	No damage; no grooving > 1 mm deep, no sharp edges	VC,	5
1.6.2	All wagons	Axle	No damage	VC	4
1.6.3	All wagons	Axle	No part rubbing against axle Check also 1.6.1 and 1.6.2	۸C	4
1.7.1	All wagons	Wheel	No lateral displacement on axle; compliant value of "E"	VC, M	5

<sup>1)</sup> VC = visual check; M = measurement; HT = hammer test; OP = operate; PM = pull or move the components

Code no.	Wagon	Component	Quality requirement	Control criteria <sup>1)</sup>	Irregularity category
1.7.2		Wheel or immediate vicinity	No more than one of the following criteria on or near a wheel:	VC	4
			<ul> <li>brake triangle pin sheared off</li> </ul>		
			- brake safety stirrup broken (see also 3.1.2)		
			- shiny traces on brake triangle end washer		
			- shiny traces on the inner spring (load spring) (see also 2.5)		
			- lifting safety catch (T) missing or loose (see also 2.5.5)		
			<ul> <li>Y25 bogies: hard manganese wear plate on axle boxes or guides missing or welded joints loose (see also 4.4.2)</li> </ul>		
			- see also 1.3.2		
1.8.1.1	All wagons	Axle box housing	Watertight housing	VC	4
1.8.1.2			No grease or all discharge on the wheel centre	VC	4
1.8.1.3			No trace of grease or all on the housing at the level of the cover	VC	4
1.8.2		Axle box housing	Not twisted, undamaged, guidance assured	VC	5
1.8.3		Axle box	No hot boxes	VC, check by hand	5
2.1.1	All wagons	Spring leaves	Displacement < 10 mm with respect to the buckle	VC, M	4
2.1.2		Spring leaves	Main leaf not broken nor visibly cracked	VC	5
2.1.3		Spring leaves	No missing part	VC	4
2.1.4.1		Spring leaves	No crack on any other leaf < 1/4 of length of leaf from buckle centre	VC, M	4
2.1.4.2		Spring leaves	Intact	VC, M	3
2.1.5		Leaf spring	Sufficient spring clearance $\geq$ 15 mm; no recent traces of contact	VC, M	5
2.1.6		Buckle (leaf spring)	Intact, tight; key present and effective	VC	5
2.2.1.1	All wagons	Parabolic spring	No visible fracture or crack	VC	5
2.2.1.2		Parabolic spring	No breakage in buckle (no leaves touching for over 50% of their length)	۸C	5

<sup>1)</sup>VC = visual check; M = measurement; HT = hammer test; OP = operate; PM = pull or move the components

2.2.2.1         American Perarbolic spring         No inorginalized sippage of leaves in screess of 10 mm         VC. M         A           2.2.2.2         American Parabolic spring         No inorginalized sippage of leaves         VC. M         5           2.3.1         All wagons         Helical spring         Intert joht, key effective         VC. M         5           2.4.1         All wagons         Buckleb boss         Unkpring         Unkpring         VC. M         5           2.4.2         All wagons         Buckleb boss         Unkpring         Present and not displaced, damaged or out of position         VC         5           2.4.2         All wagons         Helical spring, main spring, lane spring, and liefy spring, load         In position, in thoreton         VC         6         5           2.5.1         All wagons         Helical spring, auxiliary spring, load         In position, unbroken         VC         7         5           2.5.2.1         All wagons         Helical spring, auxiliary spring, load         In position, unbroken         VC         6         5           2.5.2.2         Coaded         Helical spring, auxiliary spring, load         In position, unbroken         VC         7         6         5           2.5.2.3.1         All wagons         Coaded         Hel	Code no.	Wagon	Component	Quality requirement	Control criteria <sup>1)</sup>	Irregularity category
2         All wagons         Voc progradofic spring         No longitudinal displacement of leavees         VC           All wagons         Helical spring         Intact, light, key effective         VC         VC           All wagons         Helical spring         Intact, light, key effective         VC         VC           All wagons         Helical spring, main spring, late spring         Present and secured, damaged or out of position         VC         VC           1         All wagons         Helical spring, main spring, late spring         No leither worn nor too long         VC         VC           2         Loaded         Helical spring; auxiliary spring, load         In position, unbroken         VC         VC           3         Loaded         Helical spring; auxiliary spring, load         In position, unbroken         VC         VC           4         All wagons         Damper rings per bogie         No ings missing, broken, damaged or until for use         VC         VC           2         Loaded         Helical spring; auxiliary spring, load         No ings missing, broken, damaged or until for use         VC         VC           3         All wagons         One spring cape togie         No cap exhibiting signs of contact or actually in cortact with bogie         VC         VC           4         All wago	2.2.2.1		Parabolic spring	No longitudinal slippage of leaves in excess of 10 mm	VC, M	4
All wagons         Buckle (parabolic spring)         Intact, tight, key effective         VC           All wagons         Helical spring         Unbroken         Unbroken           All wagons         Buckle boss         In position in Is housing         VC           I wagons         Link pm         Present and rod displaced, damaged or out of position         VC           1 wagons         Link pm         Present and rod displaced, damaged or out of position         VC           1 wagons         Helical spring; main spring, trae spring         Not throken         VC           2 Loaded         Helical spring; auxiliary spring, load         In position, unbroken         VC           2 Loaded         Helical spring; auxiliary spring, load         In position, unbroken         VC           2 Loaded         Helical spring; auxiliary spring, load         In position, unbroken         VC           2 Loaded         Helical spring; auxiliary spring, load         No into site missing, broken, damaged or unfit for use         VC           2 Loaded         Helical spring; auxiliary spring, load         No into site missing, broken, damaged or unfit for use         VC           3 Link         All wagons         One spring cape         No cape exhibiting signs of contact or actually in contact with bodie         VC           4 Link grows         Estate rigging </td <td>2.2.2.2</td> <td></td> <td>Parabolic spring</td> <td>No longitudinal displacement of leaves</td> <td>۸C</td> <td>3</td>	2.2.2.2		Parabolic spring	No longitudinal displacement of leaves	۸C	3
All wagons         Helical spring         Unbroken         Unbroken           All wagons         Buckde boss         In position in its housing         VC           Incompanies         Shackde, link         Present and ord displaced, damaged or out of position         VC           Incompanies         Lish kpin         Present and secured, not displaced         VC           All wagons         Suspension links         Not broken         VC           Incompanies         All wagons         Helical spring; auxiliary spring, load         In position, unbroken         VC           Incompanies         Spring         Present and secured         VC         VC           Incompanies         Spring         No more than one ring missing, broken, damaged or until for use         VC           Incompanies         Damper rings per bogie         No more than one ring missing, broken, damaged or until for use         VC           Incompanies         Spring         No more than one cap exhibiting signs of contact or actually in contact will be caped or until for use         VC           Incompanies         Spring cape bogie         No more than one cap exhibiting signs of contact or actually in contact or	2.2.3		Buckle (parabolic spring)	Intact, tight; key effective	۸C	5
All wagons         Eluckde bosss         In position in its housing         VC         Comment           1         Shackde, link         Present and secured, and displaced         VC         VC           2         Superasion links         No lither worn nor too long         VC         VC           3         All wagons         Helical spring: auxiliary spring, load         In position, unbroken         VC         VC           4         All wagons         Helical spring: auxiliary spring, load         In position, unbroken         VC         VC           2         Loaded         Helical spring: auxiliary spring, load         In position, unbroken         VC         VC           2         Loaded         Helical spring: auxiliary spring, load         In position, unbroken         VC         VC           2         Loaded         Helical spring: auxiliary spring, load         In position, unbroken         VC         VC           2         All wagons         Damper rings per bogie         No more than one ring missing, broken, damaged or unit for use         VC         VC           2         All wagons         Che spring cap per bogie         No more than one cap withbiting signs of contact with bogie         VC         VC           3         Spring cap per bogie         No more than one cap withbiting signs	2.3.1	All wagons	Helical spring	Unbroken	NC	5
4 All wagons         Shackle, link         Present and rot displaced, damaged or out of position         VC           4 All wagons         Link pin         Present and secured, not displaced         VC           4 All wagons         Helical spring; raunilary spring, load wagons         In position, unbroken         VC           2 Loaded         Helical spring; auxiliary spring, load wagons         In position, unbroken         VC           2 Loaded         Helical spring; auxiliary spring, load spring; auxiliary spring, load wagons         In position, unbroken         VC           2 Loaded         Helical spring; auxiliary spring, load spring; auxiliary spring, load wagons         In position, unbroken         VC           2 Loaded         Helical spring; auxiliary spring, load spring; auxiliary spring, load wagons         No more than one ing missing, broken, damaged or unfit for use         VC           2 All wagons         Cone spring cap be bogie         No more than one cap exhibiting signs of contact or actually in contact with bogie         VC           3 All wagons         Lifting T (safety catch)         Present and secured         VC           4 All wagons         Brake rigging         No recent signs of contact or actually in contact with bogie         VC           4 All wagons         Brake rigging cock         No per able         Operable           5 All wagons         Brake rigging cock	2.4.1	All wagons	Buckle boss	In position in its housing	۸C	5
In the pine         Present and secured, not displaced         VC           All wagons         Buspension links         Not broken         VC         CC           In magons         Helical spring: auxiliary spring, load         In position, unbroken         VC         CC         CC           In agons         Loaded         Helical spring: auxiliary spring, load         In position, unbroken         VC         CC         CC           In agons         Damper intigs per bogie         No more than one ring missing, broken, damaged or unfit for use         VC         CC         CC           In agons         Damper intigs per bogie         No more than one ring missing, broken, damaged or unfit for use         VC         CC         CC           In Magons         Damper intigs per bogie         No more than one ring missing, broken, damaged or unfit for use         VC         CC         CC           In Magons         Lifting T (safety catch)         Prosent and secured         VC         CC         CC         CC           In wagons         Brake ringiling cock         Desent along or contact or actually in contact with bogic frame         VC         CC         CC         CC           In wagons         Brake ringiling cock         Desent in proper condition         No part thanging loose or damaged or coll or coll or coll or coll or coll or coll or col	2.4.2		Shackle, link	Present and not displaced, damaged or out of position	۸C	5
All wagons         Helical spring: main spring, tare spring         Not broken         VC         C           1. Emptys wagons         Helical spring: auxiliary spring, load         In position, unbroken         VC         VC           1. Loaded         Helical spring: auxiliary spring, load         In position, unbroken         VC         VC           1. Loaded         Helical spring: auxiliary spring, load         In position, unbroken         VC         VC           2. Loaded         Helical spring: auxiliary spring, load         In position, unbroken         VC         VC           2. Loaded         Helical spring: auxiliary spring, load         No nings missing, broken, damaged or unfit for use         VC         VC           2. Loaded         Damper rings per bogie         No none than one ring missing, broken, damaged or unfit for use         VC         VC           2. All wagons         Damper rings per bogie         No more partibiling signs of contact or actually in contact with bogie         VC         VC           2. All wagons         Brake rigging         No part hanging loose or damaged         VC         VC           3. Safety stap         Brake siolating cock         Present, and secured or damaged         VC         OP           4. Il wagons         Brake siolating cock         Present and unbroken         Operable         Oper	2.4.3		Link pin	Present and secured, not displaced	NC	5
All wagons         Helical spring: main spring, tare spring         Not broken         Not b	2.4.4		Suspension links	Neither worn nor too long	VC	4
1.1         Empty spring. auxiliary spring, oad sugners.         In position, unbroken spring.         In position, unbroken spring.         VC         Percentage spring. <t< td=""><td>2.5.1</td><td>All wagons</td><td>Helical spring: main spring, tare spring</td><td>Not broken</td><td>۸C</td><td>5</td></t<>	2.5.1	All wagons	Helical spring: main spring, tare spring	Not broken	۸C	5
2. Loaded         Helical spring: auxiliary spring, load         In position, unbroken         VC         Procession of the position of the positio	2.5.2.1	Empty wagons	Helical spring: auxiliary spring, load spring	In position, unbroken	VC	3
.1 All wagons         Damper rings per bogie         No rings missing, broken, damaged or unfit for use         VC           .2 All wagons         Damper rings per bogie         No more than one ring missing, broken, damaged or unfit for use         VC           .1 All wagons         Chee spring cap be bogie         No cap exhibiting signs of contact or actually in contact with bogie         VC           .2 All wagons         Lifting T (safety catch)         No trone than one cap exhibiting signs of contact or actually in contact with bogie frame contact with bogie frame contact with bogie frame contact with bogie frame contact or actually in contact with bogie frame contact with contact with bogie frame contact with conta	2.5.2.2	Loaded wagons	Helical spring: auxiliary spring, load spring	In position, unbroken	۸C	5
2.2         All wagons         Damper rings per bogie         No none than one ring missing, broken, damaged or unfit for use         VC           2.1         All wagons         Spring cap per bogie         No cap exhibiting signs of contact or actually in contact with bogie frame         VC           2.2         All wagons         Lifting T (safety catch)         Present and secured         VC           3. Suspension         No recent signs of bottoming         VC         VC           4. Il wagons         Brake rigging         No part hanging loose or damaged         VC           4. Il wagons         Brake rigging cock         Present, in proper condition         VC           5. Il step isolating cock         Poerable         Poerable           6. Il step isolating cock         Position clear         Operable           7. Il step release pull         Present, unbroken; thickness above the required minimum         VC, OP           8. Il wagons         Cast-Iron brake block         Present, unbroken; thickness above the required minimum         VC, MD	2.5.3.1	All wagons	Damper rings per bogie	No rings missing, broken, damaged or unfit for use	VC	3
1.1         All wagons         One spring cap per bogie frame         No cap exhibiting signs of contact or actually in contact with bogie frame contact or actually in Contact or actually in Contact with bogie frame contact or actually in Contact or actually in Contact with bogie frame contact or actually in Contact or actually in Contact with bogie frame contact or actually in Contact with bodie or GIP changeover device or actual contact and unbroken contact minimum (VC, M)         No part bug contact or actually in Contact or actually in Contact or actually in Contact or actually in Contact or actual conta	2.5.3.2		Damper rings per bogie	No more than one ring missing, broken, damaged or unfit for use	۸C	5
2.2         Spring cap         Not more than one cap exhibiting signs of contact or actually in contact with bogie frame condition         VC         Contact with bogie frame contact with bogie frame condition         VC         Contact condition         VC         Contact condition         VC         Contact condition         Contact conditi	2.5.4.1	All wagons	One spring cap per bogie	No cap exhibiting signs of contact or actually in contact with bogie frame	VC	3
All wagons         Lifting T (safety catch)         Present and secured         VC           All wagons         Brake rigging         No part hanging loose or damaged         VC           1         Safety strap         Check also 1.6.1, 1.6.2 and 1.6.3         VC           1         Brake isolating cock         Present, in proper condition         VC           2         Brake isolating cock         Position clear         VC, OP           2         Empty/loaded or G/P changeover device         Operable         VC, OP           3         Brake release pull         Present and unbroken         VC           4         All wagons         Cast-iron brake block         Present, unbroken; thickness above the required minimum         VC, M	2.5.4.2		Spring cap	Not more than one cap exhibiting signs of contact or actually in contact with bogie frame	VC	5
All wagonsBrake riggingNo part hanging loose or damaged Check also 1.6.1, 1.6.2 and 1.6.3VC1Safety strapPresent, in proper conditionVC2Brake isolating cockPosition clearOP2Empty/loaded or G/P changeover devicePosition clearVC, OP3Brake release pullPresent and unbrokenVC4All wagonsCast-iron brake blockPresent, unbroken; thickness above the required minimumVC, M	2.5.5	All wagons	Lifting T (safety catch)	Present and secured	۸C	3
All wagonsBrake riggingNo part hanging loose or damaged Check also 1.6.1, 1.6.2 and 1.6.3VC.1Safety strapPresent, in proper conditionVC.2Brake isolating cockPosition clearVC, OP.2Empty/loaded or G/P changeover deviceOperableVC, OP.2Brake release pullPresent and unbrokenVCAll wagonsCast-iron brake blockPresent, unbroken; thickness above the required minimumVC, M	2.5.6		Suspension	No recent signs of bottoming	VC	5
1Safety strapPresent, in proper conditionVC1Brake isolating cockOperableOperable2Empty/loaded or G/P changeover deviceOperableVC, OP4Brake release pullPresent and unbrokenVCAll wagonsCast-iron brake blockPresent, unbroken; thickness above the required minimumVC, M	3.1.1	All wagons	Brake rigging	No part hanging loose or damaged Check also 1.6.1, 1.6.2 and 1.6.3	VC	4
1Brake isolating cockOperableDesition clearVC, OP2Empty/loaded or G/P changeover deviceOperableOperable4Brake release pullPresent and unbrokenVC5All wagonsCast-iron brake blockPresent, unbroken; thickness above the required minimumVC, M	3.1.2		Safety strap	Present, in proper condition	VC	4
2       Brake isolating cock       Position clear       Position clear         4       Empty/loaded or G/P changeover device       Operable       OP         5       Brake release pull       Present and unbroken       VC         6       All wagons       Cast-iron brake block       Present, unbroken; thickness above the required minimum       VC, M	3.1.3.1		Brake isolating cock	Operable	OP	3
Empty/loaded or G/P changeover device Operable OP Present and unbroken VC VC M All wagons Cast-iron brake block Present, unbroken; thickness above the required minimum VC, M	3.1.3.2		Brake isolating cock	Position clear	VC, OP	3
Brake release pull       Present and unbroken         All wagons       Cast-iron brake block       Present, unbroken; thickness above the required minimum       VC, M	3.1.4		Empty/loaded or G/P changeover device	Operable	OP	3
All wagons Cast-iron brake block Present, unbroken; thickness above the required minimum VC, M	3.1.5		Brake release pull	Present and unbroken	VC	3
	3.2.1	All wagons	Cast-iron brake block	Present, unbroken; thickness above the required minimum	VC, M	3

<sup>1)</sup>VC = visual check; M = measurement; HT = hammer test; OP = operate; PM = pull or move the components

Code no.	Wagon	Component	Quality requirement	Control criteria <sup>1)</sup>	Irregularity category
3.2.2		Composite brake block	Present, no radial crack from friction surface through to plate edge, no visible crumbling of more than one quarter of the block length. Thickness above the required minimum.  No detachment of friction material from the back plate in excess of 25 mm and no cracking in excess of 25 mm in the direction of the wheel circumference.	VC, M	3
3.2.3		Friction components	Not projecting laterally	۸C	4
3.2.4.1	All wagons	Inspection groove on the brake discs	Inspection groove completely visible	۸C	3
3.2.4.2		Brake disc fixing	Suitable brake disc fixing	۸C	5
3.2.4.3		Brake disc	No crack > 1/2 as per diagram	۸C	3
3.2.4.4		Brake disc	No crack in cross-section	۸C	5
3.2.5		Brake linings	Present, no cracked	NC	3
3.2.6		Brake indicator	Suitable indication	۸C	4
3.3.1.1	All wagons	Main brake pipe	Operable	VC	4
3.3.1.2	- Reserved -				
3.3.2.1	All wagons	Brake couplings	Present, intact	NC	3
3.3.2.2	All wagons	Brake couplings	Only one coupler plugged in, with the other secured in holder	VC	3
3.3.2.3	- Reserved -				
3.3.3	All wagons	Coupler holder	Present, operable	VC	3
3.3.4		Air brakes	Isolated brakes labelled accordingly	۸C	3
3.3.5.1		Stopcock	Operable, airtight, not forced, handle present	VC, OP	5
3.3.5.2		Stopcock, stopping device	Present and visibly in good condition	۸C	4
3.3.6.1		DET	On duty, switched on	۸C	3
3.3.6.2		DET	Airtight	VC	3
3.3.6.3		DET	Detector's connection hose airtight	VC	4
3.4.1	All wagons	Spark arrestor plate	Present and not holed by rust	VC	4
3.4.2		Spark arrestor plate	Properly attached	VC	4

<sup>1)</sup>VC = visual check; M = measurement; HT = hammer test; OP = operate; PM = pull or move the components

Wagon	Component	Quality requirement	Control criteria <sup>1)</sup>	Irregularity category
For the transport of dangerous goods in non-bogie wagons where RID regulations call for use of spark arrestor plates	Spark arrestor plate	Wagon must bear conventional symbol shown in Appendix 11 to the GCU, point 2.10 (spark arrestor plate authorised).	O/	ro.
All wagons fitted	Hand brake	Visibly operable	NC	3
All wagons	Underframe	No visible distortion; not buckled	NC	5
	Solebar, headstock and intermediate crossbar	Not broken, cracks < 1/2 width of flange, longitudinal cracks < 100 mm near the suspension brackets, elsewhere < 150 mm; no cracking at visible welds	VC, M	4
All wagons	Axle guard	No distortion constituting a safety hazard	NC	2
	Axle guard	Not broken	VC	5
	Axle guard	Fastening effective, not loose	VC	5
	Axle guard	No loose rivets or bolts on fastening	VC	3
	Axle guard	No crack extending more than 1/4 of horizontal section	VC, M	4
	Axle guard	No crack	VC	3
	Axle guard	No crack	VC	3
	Axle guard	No crack close to or running towards a fastening point	VC	5
All wagons	Axle guard tie bar	Present, neither broken nor visibly distorted	VC	4
All wagons	Check plate (bogie wagon)	No check plate missing per axle	VC	3
	Check plate (bogie wagon)	Not more than one check plate missing per axle	VC	4
	Check plate (non-bogie wagon)	Present	VC	5
All wagons with Y bogies	Hard manganese wear plates	Secured, present	۸C	4
All wagons fitted	Suspension bracket	In good condition, correctly secured	NC	5

4.2.4.2

4.2.4.1

4.2.4.2 4.2.4.3 4.4.1.2 4.4.1.3

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no.

3.4.3

<sup>1)</sup>VC = visual check; M = measurement; HT = hammer test; OP = operate; PM = pull or move the components

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Code no.	Wagon	Component	Quality requirement	Control criteria <sup>1)</sup>	Irregularity category
4.6.1	All wagons	Bogie/underframe connection	Intact, not displaced; connection and fastening components present and effective	VC	2
4.6.2.1		Earthing strap	All present, undamaged, tight	VC	3
4.6.2.2		Earthing strap	At least 1 present and effective	VC	3
4.7.1	All wagons	Bogie frame	Not cracked or visibly distorted	۸C	4
4.7.2		Bogie frame	No broken components	۸C	5
4.7.3.1	All wagons with Y bogies	Bogie/frame connection	No missing or broken screws on inner longitudinal beam fastenings	NC	3
4.7.3.2	All wagons with Y bogies	Bogie/frame connection	No more than one missing or broken screw on inner longitudinal beam fastenings on the same axle	VC	2
4.8.1.1	All wagons	Side bearer	Not broken (no missing part)	VC	4
4.8.1.2		Side bearer	Not broken (missing part)	۸C	5
4.8.2		Side bearer spring	No broken	۸C	4
4.8.3		Side bearer fastening	Complete	۸C	3
4.9.1	All wagons	Friction surface of damper system	Not lubricated	VC	4
5.1.1	All wagons	Buffer types	Buffer types on each end	VC	4
5.1.2		Buffer height	Within tolerance range	VC, M	5
5.2.1	All wagons	Buffer head	Present, not broken, distorted but functional; rectangular buffer heads not twisted	VC	5
5.2.2.1		Buffer head	Fewer than 1/3 of bolts or rivets loose	VC	4
5.2.2.2		Buffer head	No loose bolts or rivets	VC	3
5.2.3.1		Buffer head contact surface	Lubricated	VC	5
5.2.3.2		Buffer head contact surface	No grooving	VC	5
5.3.1	All wagons	Plunger	Present, not broken	۸C	5
5.3.2.		Plunger	Not cracked at the transition to buffer head	۸C	5
5.3.3		Plunger	Operation not jeopardised, absence of grooves	VC	5
5.4.1	All wagons	Buffer guide	Present, not broken	۸C	5
5.4.2		Buffer guide	Not cracked at transition to buffer base	VC	5

 $^{1)}$  VC = visual check; M = measurement; HT = hammer test; OP = operate; PM = pull or move the components

Code no.	Wagon	Component	Quality requirement	Control criteria <sup>1)</sup>	Irregularity category
5.4.3		Buffer guide	No serious longitudinal cracking; still capable of guiding plunger	VC, M	5
5.4.4.1		Buffer guide securing bolts	Tight (less than 2 bolts loose)	VC, PM	5
5.4.4.2		Buffer guide securing bolts	All bolts present	VC, PM	3
5.4.4.3		Buffer guide securing bolts	Tight (no bolts loose)	VC, PM	3
5.5.1	All wagons	Buffer spring	Functional, with compliant dimensions, unbroken. No buffers slack enough to be depressed by hand by more than 15 mm or neither of the two buffers able to be depressed.	VC, M	4
5.5.2	Marked wagons	Anti-crash components	Not triggered	VC	5
5.5.3	Marked wagons	Marking for anti-crash components	Present in its entirety, visible	VC	4
5.6.1	All wagons	Screw coupler	Present in its entirety and undamaged	VC	3
5.6.2		Hook for hanging coupler on when not in use	Present, fit for use, undamaged	VC	3
5.6.3		Looped coupling link	Hanging from hook	VC	3
5.7.1.1	All wagons	Draw hook	Serviceable, not broken or cracked	VC	3
5.7.1.2		Draw hook	Not twisted	VC	3
5.7.2	- Reserved -				
5.8.1	All wagons	Other draw gear parts	Present, not broken or cracked, no abnormal projection	VC	4
5.8.2		Coupling	Train correctly coupled	VC	4
5.9.1	All wagons	Long-stroke damper	Effective, sliding element in central position, undamaged	VC	4
5.9.2		Marking of danger points	Present	VC	4
6.1.1.1		- Wagon number	Present, legible, complete	VC	4
6.1.1.2	Wagons with exchange codes starting 0 to 3	- RIV sign, "TEN-RIV", "TEN GE' sign or an acceptance marking (TEN-G1, country code in approval plate)	Present, legible	۸C	4

<sup>1)</sup>VC = visual check; M = measurement; HT = hammer test; OP = operate; PM = pull or move the components

6.1.1.3         Wiggons with exchange codes acceptance marking CTEN-CW*.         Present, legible, complete complete acceptance marking (TEN-CW*.         Present, legible, complete complete complete conficients.           6.1.1.4         All wagons         - Tare dimits         Present, legible, complete           6.1.1.5         Tank wagons         - Capacity         Present, legible, complete           6.1.1.7         Tank wagons         - Capacity         Present, legible, complete           6.1.1.9         All wagons         - Load limits         Present, legible, complete           6.1.1.0         Langth-over-buffers         Present, legible, complete           6.1.1.1         All wagons with         - Length-over-buffers         Present, legible, complete           6.1.1.1         Container wagon         Specific marking         Present, visible           6.1.1.1         Container wagon         Specific marking         Present, visible           6.1.2.1         All wagons with         Inscription on the maintenance         Present, visible           6.1.2.1         All wagons         Inscription on the maintenance         Present, visible           6.1.2.2         All wagons         Overhaul period (with minered)         Overhaul period (with with with with with with with with	Quality requirement	Control criteria <sup>1)</sup>	Irregularity category
All wagons         - Tare           - Braked weight of handbrake         Pre-Load limits           - Load limits         - Load limits           All wagons         - VKM and full address of the Reeper*           All wagons with         - Length-over-buffers           Inscription on the maintenance         Preparation on the maintenance           All wagons with         - High-voltage warning sign           All wagons with         - High-voltage warning sign           All wagons with         - High-voltage warning sign           All wagons         Specific marking           All wagons         Overhaul period (when appropriate+"3 M" if marked)           All relevant wagons         Body framework           All relevant wagons         Walls           All relevant wagons         Floor           All relevant wagons         Floor           All relevant wagons         Doors and sliding walls         Full           All relevant wagons         Doors and sliding walls         Full		VC	4
- Braked weight of handbrake Pre - Load limits - Capacity Pre All wagons - Capacity Pre Magons with - High-voltage warning sign Pre ladders - High-voltage warning sign Pre Container wagon Specific marking Pre plate Overhaul period (when appropriate+ "3 M" if marked) Overhaul period > 6 months + "3 M" Not All relevant wagons Body framework No Body framework No All relevant wagons Floor All relevant wagons Floor All relevant wagons Floor All relevant wagons Floor Pre Sea		NC	4
- Load limits - Load limits - Capacity - Capacity - VKM and full address of the keeper* - VKM and full address of the keeper* - Length-over-buffers - Length-over-buffers - High-voltage warning sign Preplaters - Reserved - Inscription on the maintenance Preplate Overhaul period (when appropriate + "3 M" if marked) - Reserved - Inscription on the maintenance Preplate Overhaul period ≤ 6 months + "3 M" Not appropriate + "3 M" if marked) - All relevant wagons Body framework No B		VC	4
Tank wagons       - Capacity       Prekeper* keeper*         All wagons with ladders       - Length-over-buffers       Prehigh-voltage warning sign         Wagons with ladders       - High-voltage warning sign       Prehigh-voltage warning sign         Container wagon       - High-voltage warning sign       Prepared         All wagons with ladders       - High-voltage warning sign       Prepared         All wagons       Inscription on the maintenance plate       Prepared         All wagons       Overhaul period (when appropriate + "3 M" if marked)       No         All relevant wagons       Body framework       No         All relevant wagons       Walls       Set         All relevant wagons       Floor       Set         Proors and sliding walls       Full         Proors and sliding walls       Full		۸c	4
All wagons - VKM and full address of the keeper* All wagons with - Length-over-buffers Preladders Container wagon Specific marking Preplate - High-voltage warning sign Preplate - Noorerhaul period (when appropriate+"3 M" Notother Walls - Noorerhaul period ≤ 6 months + "3 M" Notother wagons Walls - Walls - Walls - Walls - Walls - High-voltage warning sign Noorerhaul period (when appropriate+"3 M" Notother wagons Floor Boors and sliding walls - High-voltage warning sign Preplate Prepl		۸C	4
All wagons with - Length-over-buffers Preladders - High-voltage warning sign   Preladders   Container wagon   Specific marking   Prepladders   Container wagon   Specific marking   Prepladders   Pre		VC	4
Wagons with ladders       - High-voltage warning sign ladders       Preladders         I       Container wagon       Specific marking       Preladers         2       - Reserved -       Inscription on the maintenance       Prepared         All wagons       Inscription on the maintenance       Prepared         All wagons       Overhaul period (when appropriate + "3 M" if marked)       Noterhaul period ≤ 6 months + "3 M"       Noterhaul period ≤ 6 months + "3 M" <td></td> <td>VC</td> <td>4</td>		VC	4
- Reserved - Inscription on the maintenance plate All wagons Inscription on the maintenance plate Overhaul period (when appropriate + "3 M" if marked) Overhaul period ≤ 6 months + "3 M" Not Overhaul period > 6 mo		۸C	4
All wagons Inscription on the maintenance Preplate  Overhaul period (when appropriate+ "3 M" if marked)  Overhaul period ≤ 6 months + "3 M" Noi  Overhaul period > 6 months + "3 M" Noi  All relevant wagons Body framework No  Body framework No  All relevant wagons Floor  All relevant wagons Floor  Floor  Doors and sliding walls Ful		VC	4
All wagons Inscription on the maintenance plate Overhaul period (when appropriate+"3 M" if marked) Overhaul period s 6 months +"3 M" Not Overhaul			
All relevant wagons       Floor         All relevant wagons       Floor         Foors and sliding walls       Full relevant wagons		VC	4
All relevant wagons   Coverhaul period ≤ 6 months + "3 M"   Noi   All relevant wagons   Body framework   No   All relevant wagons   Walls   Noi   All relevant wagons   Floor   Floor   All relevant wagons   Ploor   Set   All relevant wagons   Ploor   Set   All relevant wagons   Ploor   Pre   Doors and sliding walls   Ful		VC	3
All relevant wagons Body framework No All relevant wagons Walls Ser All relevant wagons Floor All relevant wagons Floor Body framework No Walls No All relevant wagons Floor Floor Ser Ser Ser All relevant wagons Doors and sliding walls Ful		NC	4
All relevant wagons Body framework No Body framework No All relevant wagons Walls No All relevant wagons Floor Floor Sed Floor Sed All relevant wagons Doors and sliding walls Ful		VC	4
All relevant wagons Walls Sed Sed Malls No All relevant wagons Floor Floor Bed Siding walls Ful Doors and sliding walls Pre		VC	3
All relevant wagons         Walls         No           All relevant wagons         Floor         Sec           All relevant wagons         Doors and sliding walls         Ful           Doors and sliding walls         Fred		VC, M	5
All relevant wagons Floor Set All relevant wagons Doors and sliding walls Ful Pre		VC	3
All relevant wagons Floor Floor All relevant wagons Doors and sliding walls Doors and sliding walls	damage which might cause goods to become damp or be lost	VC	4
All relevant wagons Doors and sliding walls Doors and sliding walls		VC	3
All relevant wagons Doors and sliding walls  Doors and sliding walls		VC	4
Doors and sliding walls		VC	5
		VC, M	5
6.1.6.3 Doors and sliding walls Guiding and locking elements in good condition		VC	3

 $^{1)}$  VC = visual check; M = measurement; HT = hammer test; OP = operate; PM = pull or move the components  $^{*}$  Official part of the GCU as of 01 April 2017 following the application of the voting and adoption procedures of the GCU

Code no.	Wagon	Component	Quality requirement	Control criteria <sup>1)</sup>	Irregularity category
6.1.6.4		Doors and sliding walls	Guiding and locking elements in good condition and not compromising safety or causing a loss of load	VC	5
6.1.6.5	E, Ea	Doors	Undamaged	NC	3
6.1.6.6		Doors	No damage compromising operating safety	NC	5
6.1.7.1	All wagons	Ladders, gangways, guard rails	Operational	NC	4
6.1.7.2		Steps	Present (where clearly necessary)	NC	4
6.1.7.3		Steps	No damage representing a safety hazard for staff, not torn off, deformation within tolerated limits	VC, M	4
6.1.7.4		Handles	Present, no damage representing a safety hazard for staff, not torn off, deformation within tolerated limits	VC,M	4
6.1.7.5		Inscription plates, folding plates and label holders	Secured	VC	4
6.1.7.6		Inscription plates, folding plates and label holders	Present	VC	3
6.1.7.7		Loose wagon components	Present as marked on wagon	VC	က
6.1.7.8		Loose wagon components	Secured	VC	4
6.1.7.9		Signal brackets, rope eyes	Present, operable	NC	3
6.1.8.1	Covered wagons	Interior fittings	Undamaged, operable	NC	8
6.1.8.2	Covered wagons	Interior fittings	Undamaged, operable. If damaged unable to be repaired	NC	2
6.2.1.1	Covered wagons	Ventilation flaps	Present, undamaged	NC	8
6.2.1.2		Ventilation flaps	No damage compromising safety / load integrity or causing the gauge to be fouled	VC, M	5
6.2.2.1		Control gear, shutter retaining bracket	Securely hooked, not distorted, not loose	VC	3
6.2.2.2		Control gear, shutter retaining bracket	Not fouling the gauge	VC, M	5
6.2.3		Roof	Undamaged, watertight	NC	4
		Weatherboard	Present, undamaged, not loose	VC	4
6.2.4.1		Convertible roof	Secured and closed	VC	5
6.2.4.2		Convertible roof	Not derailed	VC	5
6.2.4.3		Visible operating parts	Present, undamaged, effective	VC	4

<sup>1)</sup>VC = visual check; M = measurement; HT = hammer test; OP = operate; PM = pull or move the components

Code no.	Wagon	Component	Quality requirement	Control criteria <sup>1)</sup>	Irregularity category
6.3.1.1	Open wagons	Side walls and end flaps	Undamaged, closed, watertight	VC	3
6.3.1.2		Side walls and end flaps	Undamaged, watertight and closed. If damaged: no risk of loss of load	VC	4
6.3.1.3		Side walls and end flaps	Undamaged, watertight and closed. If damaged: no risk of fouling gauge	VC	5
6.3.2.1	All wagons	Closing and operating gear of end flaps (pin, camshaft, retaining hook and shaft support)	Present, no fractures or cracks, effective	VC	E
6.3.2.2		Closing and operating gear of end flaps (pin, camshaft, retaining hook and shaft support)	Present, no fractures or cracks, effective If damaged/missing: not compromising safety	VC	Ŋ
6.3.3.1		Cantrail	Not damaged or distorted	VC	3
6.3.3.2		Cantrail	Not damaged or distorted. If broken or distorted: no risk of fouling gauge	VC	5
6.4.1.1	Flat wagon	Side and end drop walls, folded down	Secured	VC	5
6.4.1.2		Side and end drop walls, folded down (not permitted under Table 3 of Loading Guidelines)	Raised	VC	5
6.4.1.3		Side and end drop walls	Not distorted	VC, M	3
6.4.1.4		Side and end drop walls	Not damaged or distorted. If damaged or distorted: no risk of loss of load	VC	4
6.4.1.5		Side and end drop walls	Not distorted. If distorted: no risk of fouling gauge	VC	5
6.4.2.1		Hinges, pins, securing bolts	Present, undamaged, operative	VC	3
6.4.2.2		Hinges, pins, securing bolts	Present, undamaged, operative. If missing or damaged: without compromising safety or risking any loss of load	VC	4
6.4.3.1		Stanchions (pivoting, retractable, detachable), stanchion sockets, holders and supports	Provided as necessary	VC	5

<sup>1)</sup>VC = visual check; M = measurement; HT = hammer test; OP = operate; PM = pull or move the components

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Code no.	Wagon	Component	Quality requirement	Control criteria <sup>1)</sup>	Irregularity category
6.4.3.2		Stanchion (pivoting, retractable, detachable), stanchion sockets, holders and supports	Not fouling the gauge	VC	വ
6.4.3.3		Stanchion (pivoting, retractable, detachable), stanchion sockets, holders and supports	Intact	۸c	4
6.4.3.4		Stanchion chain	Hooked up	۸C	4
6.4.3.5		Stanchion fasteners	Effective	٦٨	4
6.4.4.1		Bolsters	Intact	٦٨	3
6.4.4.2		Bolsters	Secured by stanchions or load	۸C	4
6.5.1.1	Tank wagons	Tank cradle	No crack extending > 1/4 across the cross-section	VC, M	4
6.5.1.2		Tank cradle	No cracks in weld seams	VC	4
6.5.1.3		Tank cradle	All bolts or rivets securing the tank body to cradle present	VC	4
6.5.1.4		Tank cradle	90% of bolts or rivets securing the tank body to cradle present	VC	4
6.5.2.1		Tank body	Intact, no leaks or loss of load	VC	5
6.5.2.2		Tank body	No sharp-edged distortion (without loss of load)	VC	4
6.5.2.3		Tank body full, tank carrying RID load	Tank test deadline not expired, extended by 3 months if marked "L" $$	٦٨	2
6.5.2.4		Tank body empty, not cleaned, tank carrying RID load	Tank test deadline not expired, extended by 3 months if marked "L" $$	۸C	5
6.5.3.1		Tank equipment	Tank cladding, sun roof and insulation undamaged	VC	4
6.5.3.2		Tank equipment	Tank cladding, sun roof and insulation securely fastened	VC	5
6.5.4	- Reserved -				
6.5.5.1	Tank wagons	Reinforcement, filling and emptying equipment (underside)	No leakage of load	VC	5
6.5.5.2		-reserved-			
6.5.5.3		Valves or spouts (underside)	Undamaged	VC	4

<sup>1)</sup>VC = visual check; M = measurement; HT = hammer test; OP = operate; PM = pull or move the components

Code no.	Wagon	Component	Quality requirement	Control criteria <sup>1)</sup>	Irregularity category
6.5.5.4		Lower screw cap (except outside gas pipes), RID load	Present and in use, tightly closed	VC	4
6.5.5.5		Lower screw cap (except outside gas pipes), non-RID load	Present and in use, tightly closed	VC	3
6.5.5.6		Lower blind flange	Present	VC	4
6.5.5.7		Lower blind flange, RID load	No securing bolt missing or loose	VC, PM	4
6.5.5.8		Lower blind flange, non-RID load	No securing bolt missing or loose	VC, PM	3
6.5.5.9		Lower blind flange	Not more than one securing bolt missing or loose	VC, PM	4
6.5.5.10		Bottom valve indicator device, loaded wagon, and empty wagons that have not been cleaned (RID load)	In closed position	VC	5
6.5.5.11		Bottom valve indicator device, empty wagon (non-RID load)	In closed position	VC	3
6.5.5.12		Emergency control bolt for the bottom valve	Not screwed in the valve body	VC	5
6.5.5.13		Lower filling and emptying equipment	In closed position	VC	5
6.5.5.14		Lower filling and emptying equipment	Visible locking devices effective	VC	4
6.5.6.1	Tank wagons	Reinforcement, filling and emptying equipment (topside)	No loss of load or gas leakage (except ventilation device)	VC	5
6.5.6.2		Dome cover	Present, closed, visibly locked	VC	5
6.5.6.3		Other upper closing devices	Properly locked	VC	4
6.5.7	- Reserved -				
6.6.1.1	e.g. Rils, Tams	Sheeting	Closed, locked	VC	5
6.6.1.2		torn, holed sheeting ≤ 30 m	Undamaged	VC, M	3
6.6.1.3		torn, holed sheeting > 30 mm	Undamaged	VC, M	5
6.6.2.1	e.g. S(a)hi	Hood	Closed, locked	VC	5
6.6.2.2	e.g. S(a)hi	Hood	Not derailed	VC, PM	5
6.6.3.1	e.g. Saad	End gangway	Undamaged	VC	4
6.6.3.2	e.g. Saad	End gangway	Locked at both ends	VC	5

<sup>1)</sup>VC = visual check; M = measurement; HT = hammer test; OP = operate; PM = pull or move the components

Code no.	Wagon	Component	Quality requirement	Control criteria <sup>1)</sup>	Irregularity category
6.6.3.3		Fastening devices	Effective	۸C	4
6.6.3.4		Wheel scotches	Undamaged	VC	3
6.6.4.1	ACTS wagons	Swivel frame	Undamaged	VC	4
6.6.4.2		Locking device to prevent frame from swivelling	Effective, locked	VC	5
6.6.4.3		Pneumatic monitoring system on the swivel lock	In service (unless labelled otherwise)	VC	4
6.6.4.4		Pneumatic monitoring system on the swivel lock has triggered	Swivel lock effective and locked	VC	3
6.6.4.5		Device to prevent container lifting	Effective and secured	VC	5
6.6.4.6		Device to prevent container displacement	Effective	VC	5
6.6.5.1	Car-carrying wagons	Lifting equipment, crossover gangways	Undamaged	VC	4
6.6.5.2		Wheel scotch, wheel guides, crank handle	Undamaged	VC	3
6.6.5.3		End boards, crossing gangways	Raised and secured – if necessary	VC	4
6.6.5.4		Upper loading deck	Indicating device folded away	VC	4
6.6.5.5		Upper loading deck	Secured	VC	5
6.6.5.6		Upper loading deck	Lying on supporting brackets	VC	5
6.6.5.7	Loaded car- carrying wagon	Upper loading deck	No fouling of the gauge	VC	5
6.6.5.8		Gangways above central axles	Fully manoeuvrable, distance between wheel and gangway > 100mm	VC, M	5
6.6.5.9	Empty car- carrying wagon	Crossover plates on central axles	Neither distorted, broken, nor cracked. No missing parts	VC	4
6.6.5.10	Loaded car- carrying wagon	Crossover plates on central axles	Neither distorted, broken, nor cracked. No missing parts	VC	5

<sup>1)</sup>VC = visual check; M = measurement; HT = hammer test; OP = operate; PM = pull or move the components

Code no.	Wagon	Component	Quality requirement	Control criteria <sup>1)</sup>	Irregularity category
6.6.6.1	Empty self- discharging wagon	Discharge valve	Closed and locked	۸C	3
6.6.6.2	Loaded self- discharging wagon	Discharge valve	Closed and locked	۸C	4
6.6.7.1	E.g. Snps, Roos, Ealos	Securing equipment not in use	Suitably and adequately fixed and secured	VC, OP	4
6.7.1.1	Container Wagons	Trestle not in use	Locked, intact	VC	3
6.7.1.2		Trestle in use	Locked, intact	VC	5
6.7.1.3		Spigot not in use	Intact	۸C	3
6.7.1.4		Spigot in use	Triggered, intact	VC	5
6.7.2		Pivot of trailer coupling in the trestle	Locked	VC	5
6.7.3		Trestle not used	Locked	۸C	3
6.7.4		Trestle wheel	Locked, with no risk of fouling the gauge	VC	4
6.7.5.1		Moving parts	Locked	VC	3
6.7.5.2		Moving parts	Fixed, with no risk of fouling the gauge	VC	5
6.7.6.1		Anti-crash system of trestle in use	Non deformed	۸C	5
6.7.6.2		Anti-crash system of trestle not in use	Non deformed	۸C	4

<sup>1)</sup>VC = visual check; M = measurement; HT = hammer test; OP = operate; PM = pull or move the components

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Code no.	Designation/elements	Quality requirement	Control criteria <sup>1)</sup>	Category
				of defect
7.1.1	Load	Not displaced	٦٨	5
7.1.2	Distribution of load (3.3)	Body horizontal, showing no signs of poor distribution	٦٨	5
7.1.3	Packages, bales, bundles, stacks (1.5)	Correctly stowed and tied together	VC	4
7.1.4	Narrow cylindrical objects (1.5)	Adequately tied	VC	4
7.1.5.1	Loading gauge (4.1)	Not fouled	VC, M	5
7.1.5.2	Loading gauge	Permissible fouling of gauge marked	VC	5
7.1.6	Load projecting beyond headstock (4.2)	No encroachment on reserved spaces	VC, M	5
7.1.7.1	Load limits (3.2), visual observation	Body showing no sign of overloading, buffers level, sufficient clearance between spring buckle and solebar	VC, M	5
7.1.7.2	Load limits (3.2), otherwise recorded	No discrepancy between consignment data and load limits. Measurement and diagnostics data are within tolerances	VC, M	5
7.1.8	Buffer wagon (4.3)	Sufficient clearances between loads or between buffer wagon and load	VC, M	5
7.1.9	Sheeting, net (6.1, 6.2)	Conditions of use adhered to	۸C	4
7.2.1	Load projecting beyond walls or sides of wagon (5.4.1)	Adequately retained	VC	5
7.2.2	Leaning load (2.3)	Not causing damage to structural elements of wagon, or obstructing their functioning	VC	4
7.2.3.1	Load secured by stanchions (2.5 and 5.4.1)	Adequately retained	VC, M	5
7.2.3.2	Transverse lashing ropes between stanchions (2.5)	Present where required	۸C	5
7.2.3.3	Load pressing against stanchions (2.5)	No distortion of stanchions	VC	5
7.2.3.4	Heavy load or one which may damage the side stanchions should it move lengthways (2.5)	Securely wedged, not touching stanchions	VC	4
7.2.4	Scotches fastened with nails (5.4.3)	Suitable, effective and correctly fixed to the floor	VC	5
7.2.5.1	Direct or indirect fastenings (5.4.4, 5.5.4)	Made from suitable and approved materials	VC	5
7.2.5.2		Sufficient and correctly fastened	VC	5
7.2.5.3		Not slack	VC	4
7.2.6.1	Bolsters, timbers, stretchers stowing material (5.5.5, 5.6.2, 5.8.1)	Adapted to load and visibly well positioned and secure	۸C	5
7.2.6.2	Loading tackle and stowing material	Tidied away	ΛC	3
7.2.7	Potentially hazardous residues	Residues removed	VC	5

<sup>1)</sup>VC = visual check; M = measurement; HT = hammer test; OP = operate; PM = pull or move the components

Code no.	Designation/elements	Quality requirement	Control criteria <sup>1)</sup>	Category
7.3.1	Load stability (5.1)	Ensured	O <sub>N</sub>	or derect 5
7.3.2	Goods which may be lifted by air flow, e.g. light scrap and light boards (5.2.1, 5.3.2)	Sufficiently well covered	VC	വ
7.3.3.1	Goods which may fall off (vibrations, impacts) (5.2.2)	Sufficient clearance between the goods and the top of the wagon sides	VC	Ω.
7.3.3.2	Height of dome-shaped load	Compliance with dimensions	VC	5
7.3.4	Stacked goods (5.8)	Correctly stacked, adequately bound and secured, not too high, well stacked, evenly distributed, clearances adhered to	VC	5
7.3.5.1	Load with small bearing surface (2.2)	Base provided in order to distribute weight over a greater area without damaging floor	VC	3
7.3.5.2	Concentrated loads	Suitable scotching materials of the correct dimensions	VC, M	5
7.3.6	Load liable to tip over (5.7)	Secured to avoid overturning	VC	5
7.3.7	Inclined load (5.7)	Adequately propped up	VC	5
7.3.8	Load liable to roll (5.6.1, 5.6.2)	Secured to prevent rolling	VC	5
7.3.9.1	Load able to slide lengthways (5.5.1)	Resting on suitable devices (skid, longitudinal slide arresters, lateral guide-pieces, etc.)	VC	4
7.3.9.2	Lateral guidance	In place, sufficient and with no risk of fouling the gauge or exceeding the load limit	VC, M	2
7.3.9.3	Necessary clearances	Provided	VC, M	3
7.3.9.4	Necessary room to slide	Limited in accordance with requirements	VC, M	4
7.4.1	Vehicle or machinery on wheels or caterpillar tracks (5.6.3)	Properly scotched and fastened	VC	2
7.4.2.1	Moving parts on load	Secured	VC	3
7.4.2.2	Moving parts on load	Secured. If not secured, no risk of the gauge being fouled	VC	5
7.4.3	Load supported on several wagons (5.9)	Loaded and secured in accordance with requirements	VC	5

<sup>1)</sup>VC = visual check; M = measurement; HT = hammer test; OP = operate; PM = pull or move the components

7.5.1       Locking device for d         7.5.2.1       ILU end doors         7.5.2.2       - reserved -         7.5.3       Inferior wedge parts         7.5.4       Side wall, damaged         7.5.4       Side wall, damaged         7.5.5.1       Cracked sheet, hole         7.5.5.2       Cracked sheet, hole         7.5.5.2       Load	ice for dollies  ors  ge parts  amaged cover  eet, holed > 30 mm	Auxiliary equipment present and effective Closed (unless load unit doors back to back)	ΛC	•
3 2 7 3 2 7	шш	losed (unless load unit doors back to back)		4
3 2 7 3 2 3	шш	fore than one factoner effective ner IIII and door	VC	5
3 2 1 3	шш	ole triail olle lasteriel effective per IEO alla door	VC	3
3 2 -	mm			
3 2 1	mm	Intact	VC	5
		Intact, locked	VC	5
		Intact	VC, M	3
	M	Intact	VC, M	5
	10	Without damage from humidity to the load or loss of load	VC	4
7.5.6 Lock for shee	Lock for sheets, side wall	Effective	VC	5
7.6.1.1 Tank cradle		No crack> Crack > 1/4 of the section	VC, M	4
7.6.1.2 Tank cradle		No crack in the weld seams	VC	4
7.6.2.1 Tank body		Tight: no leak or loss of load	VC	5
7.6.2.2 Tank body		No distortion with sharp edges and risk of loss of load	VC	4
7.6.3.1 Tank equipment		Tank cladding, sun roof, insulation not damaged	VC	4
7.6.3.2 Tank equipment		tank cladding, sun roof, insulation not loose	VC	5
7.6.4.1 Reinforceme	ent, filling and emptying equipment,	No loss of load	VC	5
7.6.4.2 Valves or sp	Valves or spouts, underneath	Not damaged	VC	4
7.6.4.3 Screw cap,	Screw cap, underneath, RID load	Tightly sealed	VC	4
7.6.4.4 Screw cap,	Screw cap, underneath, non-RID load	Tightly sealed	NC	3
7.6.4.5 Blind flange	Blind flange, underneath	No missing	VC	4
7.6.4.6 Blind flange	Blind flange, underneath, RID load	No securing bolt missing or loose	VC, PM	4
7.6.4.7 Blind flange	Blind flange, underneath, non-RID load	No securing bolt missing or loose	VC, PM	3
7.6.4.8 Blind flange	Blind flange, underneath, non-RID load	Not more than one securing bolt missing or loose	VC, PM	4

<sup>1)</sup>VC = visual check; M = measurement; HT = hammer test; OP = operate; PM = pull or move the components

7.6.4.9         Bettern valve indicator device. LU, and empty         In "closed" position         CV           7.6.4.10         Bottom valve indicator device. LU, empty (nor.)         In "closed" position         CV           7.6.4.11         Bottom valve indicator device. LU, empty (nor.)         In "closed" position         CV           7.6.4.12         Filling and emptying equipment, undermeath         « Closed" a body         CV           7.6.4.12         Filling and emptying equipment, undermeath         Efficient visible locking devices         CV           7.6.5.1         Filling and emptying equipment, undermeath         Efficient visible locking devices         CV           7.6.5.1         Filling and emptying equipment, filling and emptying equipment, filling and emptying equipment.         No is so fload or of gas (does not concern ventilation devices)         CV           7.6.5.1         Inout cupper reninforcements         Present, closed, visibly locked         CV           7.7.2         Dome cover         Within load requirements for wargon         VC           7.7.2         Load unit on carrier wagon         All corner castings engaged and locked         VC           7.7.2         Semi-trailer         All corner castings engaged and locked         VC           7.7.2         Semi-trailer         All contrailer wagon         All countrailer wagon	Code no.	Designation/elements	Quality requirement	Control criteria <sup>1)</sup>	Category of defect
10 Bottom valve indicator device, LU, empty (non RDD bottom valve indicator device, LU, empty (non RDD bottom valve indicator device, LU, empty (non RDD bottom valve emergency control device)  12 Filling and emptying equipment, underneath Efficient visible locking devices 13 Filling and emptying equipment, underneath Efficient visible booking devices 14 Realiforcement, filling and emptying equipment, underneath Efficient visible booking devices 15 Dome cover Present, closed, visibly locked above reinforcements Present, closed, visibly locked Bove reinforcements Present, closed, visibly locked Bove reinforcements Present, closed, visibly locked Bove reinforcements Present and restered Present closed, visibly locked Bove reinforcements Present and restered Present reinforcements Present and restered Bove reinforcements Present P	7.6.4.9	Bottom valve indicator device, LU, and empty wagons that have not been cleaned (RID load)	In "closed" position	C	2
11 Bottom valve emergency control device A Closed » body 12 Filling and emptying equipment, undermeath Efficient visible locking devices 13 Filling and emptying equipment, undermeath Efficient visible locking devices 14 Reinforcement, filling and emptying equipment, undermeath Efficient visible locking devices 15 Above 16 Dome cover 17 Conter upper reinforcements Properly locked Properly locked 18 Cother upper reinforcements Properly locked Properly locked 19 Cother upper reinforcements Properly locked Properly locked 19 Cother upper reinforcements Properly locked Properly locked 10 Cother upper reinforcements Properly locked Properly locked 10 Cother upper reinforcements Properly locked Properly locked 10 Cother upper reinforcements Properly locked International locked	7.6.4.10	Bottom valve indicator device, LU, empty (non-RID load)	In "closed" position	CV	က
Filling and emptying equipment, underneath Efficient visible locking devices  Reinforcement, filling and emptying equipment, underneath above  Reinforcement, filling and emptying equipment, underneath above  Dome cover.  Load unit on carrier wagon Within load requirements for wagon Load unit on carrier wagon All corner castings engaged on their respective spigots  Load unit on carrier wagon All corner castings engaged on their respective spigots  Lowerable pins All corner castings engaged on their respective spigots  Lowerable pins All corner castings engaged on their respective spigots  Lowerable pins All corner castings engaged on their respective spigots  Lowerable pins All corner castings engaged on their respective spigots  Lowerable pins All corner castings engaged on their respective spigots  All pins engaged and locked  Semi-trailer All pins engaged and locked  Semi-trailer Corner castings engaged on their respective spigots  All pins engaged and locked  All pins engaged and locked  All pins engaged and locked  Semi-trailer All pins engaged and locked  Semi-trailer Corner castings engaged on their respective spigots  Corner scotching of semi-trailer and wagon other than through wheels and treatle  Nagon coding for combined traffic At least one plate present and legible  Marking present and legible  Load unit (ILU) with upper corner castings  CSC safety plate present  The intended special present  Present	7.6.4.11	Bottom valve emergency control device	Not screwed in	CV	2
Filling and emptying equipment, underneath above  Reinforcement, filling and emptying equipment, above  Dome cover  Dome cover  Code unit on carrier wagon  Load unit on carrier wagon  Load unit on carrier wagon  Semi-trailer  Semi-trailer  Semi-trailer  Loading into load unit  Loading into load unit  Markings, coding for combined traffic  Markings, coding for combined traffic  Markings, coding for combined traffic  Are least on wagon  Load unit unit upper comer castings  Correct scotching  Markings, coding for combined traffic  Are least on wagon  Load unit unit upper comer castings  Coccession wagon  Correct scotching  Marking present and legible  Marking present on wagon  Load unit (LLI) with upper comer castings  Coccession  Coccession  Coccession  Coccession  Coccession  Coccession  Coccession  Coccession  Coccession  Are least one plate present and legible  Are least one plate present  Coccession  Are least one plate present  Coccession  Coccession  Are least one plate present  Coccession  Are least one plate present  Are least one plate present  Coccession  Are least one plate present  Are least one plate present  Coccession  Are least one plate present  Are least one plate presen	7.6.4.12	Filling and emptying equipment, underneath	« Closed » body	CV	5
Reinforcement, filling and emptying equipment, above  Donne cover  Donne cover  Cother upper reinforcements  Cother upper reinforcements  Donne carrier wagon  Load unit on carrier wagon  Semi-trailer  Semi-trailer  Semi-trailer  Cothering of semi-trailer  Markings, coding for combined traffic  Load unit (ILU) with upper corner castings  CSC safety plate present and legible  Markings warning sign on ILU with ladder  Don semi-trailer  No visible signs of distortion  Marking present and legible  Marking present and legible  CSC safety plate present  Don support trailer  No visible signs of distortion  Marking present on wagon  Load unit (ILU) with upper corner castings  CSC safety plate present  Present  CSC safety plate present  Present  CSC safety plate present  Present  Don semi-trailer  No visible signs of distortion  Marking present on wagon  Load unit (ILU) with upper corner castings  CSC safety plate present  Present	7.6.4.13	Filling and emptying equipment, underneath	Efficient visible locking devices	CV	4
2         Dome cover         Present, closed, visibly locked           3         Other upper reinforcements         Properly locked           4         Load unit on carrier wagon         Within load requirements for wagon           5         Load unit on carrier wagon         All corner castings engaged on their respective spigots           6         Load unit on carrier wagon         All pins engaged and locked           7         Semi-trailer         All pins engaged and locked           8         Semi-trailer         All pins engaged and locked           8         Semi-trailer         All pins engaged and locked           9         Semi-trailer         Rear underun bumpers, where possible on a given design, raised, purshed in, secured, without contact with the carrier wagon           9         Semi-trailer         On semi-trailers with P coding: no contact between semi-trailer and wagon other than through wheels, skds and longitudinal members in the the design of distortion           1         Loading into load unit         No visible signs of distortion           2         Markings, coding for combined traffic         At least one plate present and legible           3         Maskings, coding for combined traffic         At least one plate present           4         Load unit (ILU) with upper corner castings         CSC safety plate present           6         "high volt	7.6.5.1	Reinforcement, filling and emptying equipment, above	No loss of load or of gas (does not concern ventilation devices)	C	5
3         Other upper reinforcements         Propenty locked           Load unit on carrier wagon         Within load requirements for wagon           Load unit on carrier wagon         All corner castings engaged on their respective spigots           Lowerable pins         All pins engaged and locked           Semi-trailer         All pins engaged and locked           Semi-trailer         Rear underrun bumpers, where possible on a given design, raised, pushed in, secured, without contact with the carrier wagon           Semi-trailer         On semi-trailers with P coding: no contact between semi-trailer and wagon other than through wheels and trestle           Semi-trailer         On semi-trailers with N coding: no contact between semi-trailer and wagon other than through wheels, skids and longitudinal members in the intended support areas           Scotching of semi-trailer         Correct scotching           Markings, coding for combined traffic         At least one plate present and legible           Markings, coding for combined traffic         At least one plate present and legible           Load unit (ILU) with upper corner castings         CSC safety plate present           "high voltage" warning sign on ILU with ladder         Present	7.6.5.2	Dome cover	Present, closed, visibly locked	CV	2
Load unit on carrier wagon         Within load requirements for wagon           Load unit on carrier wagon         All conner castings engaged on their respective spigots           Lowerable pins         All pins engaged and locked           Semi-trailer         Air suspension emptied           Semi-trailer         Rear underrun bumpers, where possible on a given design, raised, pushed in, secured, without contact between semi-trailer and wagon other than through wheels and trestle           Semi-trailer         On semi-trailers with P coding; no contact between semi-trailer and wagon other than through wheels and trestle           Semi-trailer         On semi-trailers with N coding; no contact between semi-trailer and wagon other than through wheels and trestle           Coarier sociothing of semi-trailer         On semi-trailers with N coding; no contact between semi-trailer and wagon other than through wheels, skids and longitudinal members in the intended support areas           Markings, coding for combined traffic         At least one plate present and legible           Markings, coding for combined traffic         At least one plate present and legible           Wagon coding indicating permissible load units         At least one plate present and legible           Load unit (ILU) with upper corner castings         CSC safety plate present           Load unit (ILU) with upper corner castings         CSC safety plate present	7.6.5.3	Other upper reinforcements	Properly locked	cv	4
Load unit on carrier wagon         All corner castings engaged on their respective spigots           Lowerable pins         Lowerable pins           Semi-trailer         Air suspension emptied           Semi-trailer         Air suspension emptied           Semi-trailer         Rear underrun bumpers, where possible on a given design, raised, pushed in, secured, without contact between semi-trailer and wagon other than through wheels and treatle           Semi-trailer         On semi-trailers with N coding: no contact between semi-trailer and wagon other than through wheels, skids and longitudinal members in the intended support areas           Scotching of semi-trailer         Correct scotching           Markings, coding for combined traffic         At least one plate present and legible           Wagon coding indicating permissible load units         At least one plate present and legible           Load unit (ILU) with upper corner castings         CSC safety plate present           "high voltage" warning sign on ILU with ladder         Present	1.7.7	Load unit on carrier wagon	Within load requirements for wagon	۸C	2
Lowerable pins         All pins engaged and locked           Semi-trailer         Air suspension emptied           Semi-trailer         Rear underun bumpers, where possible on a given design, raised, pushed in, secured, without contact with the carrier wagon of the trailer swith P coding; no contact between semi-trailer and wagon other than through wheels and trestle           Semi-trailer         On semi-trailers with P coding; no contact between semi-trailer and wagon other than through wheels, skids and longitudinal members in the intended support areas           Scotching of semi-trailer         Correct scotching           Loading into load unit         No visible signs of distortion           Markings, coding for combined traffic         At least one plate present and legible           Marking permissible load unit         At least one plate present and legible           Load unit (ILU) with upper corner castings         CSC safety plate present           "high voltage" warning sign on ILU with ladder         Present           "high voltage" warning sign on ILU with ladder         Present	7.7.2	Load unit on carrier wagon	All corner castings engaged on their respective spigots	VC	5
Semi-trailer         Air suspension emptied           Semi-trailer         Rear underrun bumpers, where possible on a given design, raised, pushed in, secured, without contact with the carrier wagon.           Semi-trailer         On semi-trailers with P coding: no contact between semi-trailer and wagon other than through wheels and trestle           Semi-trailer         On semi-trailers with N coding: no contact between semi-trailer and wagon other than through wheels, skids and longitudinal members in the intended support areas           Scotching of semi-trailer         Correct scotching           Markings, coding for combined traffic         At least one plate present and legible           Wagon coding indicating permissible load units         Marking present on wagon           Load unit (ILU) with upper corner castings         CSC safety plate present           "high voltage" warning sign on ILU with ladder         Present           "high voltage" warning sign on ILU with ladder         Present	7.7.3	Lowerable pins	All pins engaged and locked	۸C	2
Semi-trailer         Rear underun bumpers, where possible on a given design, raised, pushed in, secured, without contact with the carrier wagon           Semi-trailer         On semi-trailers with P coding: no contact between semi-trailer and wagon other than through wheels and trestle           Semi-trailer         On semi-trailers with N coding: no contact between semi-trailer and wagon other than through wheels, skids and longitudinal members in the intended support areas           Scotching of semi-trailer         Correct scotching           Loading into load unit         No visible signs of distortion           Wagon coding for combined traffic         At least one plate present and legible           Wagon coding indicating permissible load units         Marking present on wagon           Load unit (ILU) with upper corner castings         CSC safety plate present           "high voltage" warning sign on ILU with ladder         Present	7.7.4	Semi-trailer	Air suspension emptied	۸C	2
Semi-trailer       On semi-trailers with P coding: no contact between semi-trailer and wagon other than through wheels and trestle         Semi-trailer       On semi-trailers with N coding: no contact between semi-trailer and wagon other than through wheels, skids and longitudinal members in the intended support areas         Scotching of semi-trailer       Correct scotching         Loading into load unit       No visible signs of distortion         Wagon coding for combined traffic       At least one plate present and legible         Wagon coding indicating permissible load units       Marking present on wagon         Load unit (ILU) with upper corner castings       CSC safety plate present         "high voltage" warning sign on ILU with ladder       Present	7.7.5	Semi-trailer	Rear underrun bumpers, where possible on a given design, raised, pushed in, secured, without contact with the carrier wagon	۸C	3
Semi-trailer Semi-trailer Scotching of semi-trailer  Correct scotching Markings, coding for combined traffic  Magon coding indicating permissible load unit (ILU) with upper corner castings  "high voltage" warning sign on ILU with ladder  Semi-trailer with N coding: no contact between semi-trailer and wagon other than through wheels, skids and longitudinal members in the intended support areas  Correct scotching  No visible signs of distortion  At least one plate present and legible  Marking present on wagon  CSC safety plate present  Present  Present	7.7.6	Semi-trailer	On semi-trailers with P coding: no contact between semi-trailer and wagon other than through wheels and trestle	۸C	4
Scotching of semi-trailer  Loading into load unit  Markings, coding for combined traffic  Wagon coding indicating permissible load units  Present  Present	7.7.7	Semi-trailer	On semi-trailers with N coding: no contact between semi-trailer and wagon other than through wheels, skids and longitudinal members in the intended support areas	VC	4
Loading into load unit       No visible signs of distortion         Markings, coding for combined traffic       At least one plate present and legible         Wagon coding indicating permissible load units       Marking present on wagon         Load unit (ILU) with upper corner castings       CSC safety plate present         "high voltage" warning sign on ILU with ladder access       Present	7.7.8	Scotching of semi-trailer	Correct scotching	۸C	4
Markings, coding for combined traffic       At least one plate present and legible         Wagon coding indicating permissible load units       Marking present on wagon         Load unit (ILU) with upper corner castings       CSC safety plate present         "high voltage" warning sign on ILU with ladder access       Present	7.7.9	Loading into load unit	No visible signs of distortion	۸C	5
Wagon coding indicating permissible load units       Marking present on wagon         Load unit (ILU) with upper corner castings       CSC safety plate present         "high voltage" warning sign on ILU with ladder access       Present	7.8.1	Markings, coding for combined traffic	At least one plate present and legible	VC	5
Load unit (ILU) with upper corner castings CSC safety plate present CSC sare plate present CSC safety plate present access	7.8.2	Wagon coding indicating permissible load units	Marking present on wagon	VC	5
"high voltage" warning sign on ILU with ladder access	7.8.3	Load unit (ILU) with upper corner castings	CSC safety plate present	VC	4
	7.8.4	"high voltage" warning sign on ILU with ladder access	Present	VC	4

<sup>1)</sup>VC = visual check; M = measurement; HT = hammer test; OP = operate; PM = pull or move the components

Code no.	Designation/elements	Quality requirement	Control criteria <sup>1)</sup>	Category of defect
8.1.1	All wagons	No trace following derailment	۸C	2
8.1.2	All wagons	No trace following abnormal shunting impact	۸C	2
8.2.1	All wagons	No trace following flooding or damage due to poor weather	۸C	2
8.2.2	All wagons	No trace of damage due to current start-up	۸C	5
8.2.3	All wagons	No trace left by fire	۸C	5

<sup>1)</sup>VC = visual check; M = measurement; HT = hammer test; OP = operate; PM = pull or move the components

# Technical transfer inspection List of irregularities noted on wagons and their loads

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- Station of transferee RU where the irregularity was detected

Transferor RU..... - Train number...... - Number of wagons inspected ...............

- Number of wagons damaged according to Annex 5 ......

Σ Irregularities of class 3
Σ Irregularities of class 4
Σ Irregularities of class 5

modif. 1/1/2006

- Reserved -

modif. 1/1/2006

**APPENDIX** 9

Annex 7

# Record and analysis of irregularities noted on wagon and loads Technical transfer inspection

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GENERAL CONTRACT OF USE FOR WAGONS

RU which carried out the technical transfer inspection :
RU which carried out the quality inspection

Transferor RU :.....

Comments 7 Aggregate value of column 10 X 100 column 3 irregularities in % 7  $\Sigma$  number of irregularities col 5 + 7 + 9 serions 9 Number of Class 3 to 5 irregularities and total number of serious Col 8 x 1.0 Class 5 irregularities M ∞ Col 6 x 0.40 Class 4 M 9 Col 4 x 0.125 Class 3 M 4 Number of wagons inspected **Border station** Month/ Year

modif. 1/1/2006

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modif. 1/1/2006

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Annex 8

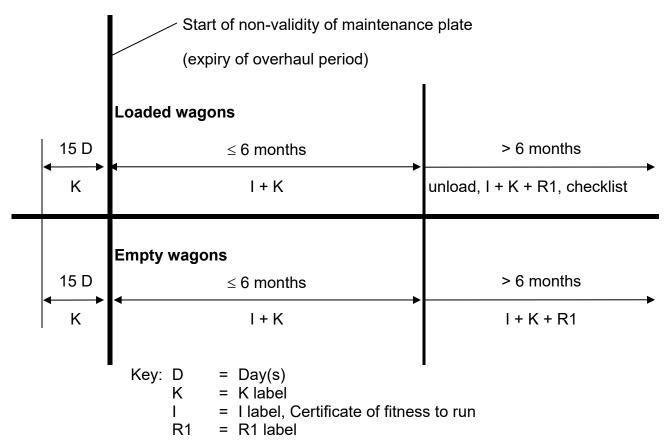
#### HANDLING OF WAGONS:

#### 1. With expired maintenance plate (after expiry of the overhaul period)

Empty and loaded wagons with an expired maintenance plate (overhaul period exceeded) must be accepted.

Since wagons whose overhaul period is expired are no longer formally authorised to run, special measures must be taken at the time of expiry of the overhaul period to record and certify their fitness to run.

1.1 Until the expiry of the overhaul period, empty wagons and loaded wagons shall be treated in the same way. After expiry of this period, extended as appropriate by 3 months if the vehicle carries the "+3M" marking, a distinction shall be made between empty and loaded wagons. The details are given in the following diagram:



1.2 The issuing of an I label (certificate of fitness to run) is always based on an examination of fitness to run. For wagons whose overhaul period is exceeded by at least six months, this examination shall consist of a Technical Transfer Inspection as defined in section 2 (Annex 9 to the GCU). If no damage or irregularity preventing the continued conveyance of the empty wagon without a speed limit is noted, the wagon should be labelled with K and I labels. These wagons, which are fit to run without restriction, shall be handled like damaged vehicles carrying labels and can therefore be included in or remain part of any scheduled train service.

modif. 1/1/2016

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Annex 8

Note concerning the procedure:

The initial examination by the qualified staff is crucial. This shall be carried out according to when the overall period expired (see diagram), and remains valid until the wagon arrives at the destination station or the workshop where the overhaul is to take place. In this case, qualified staff shall act in accordance with their own practical experience.

- 1.3 The wagons shall be removed from the train after reporting of damage or irregularities which have led to a speed restriction. Onward conveyance of these wagons is only authorised after repair or as special consignments (SC).
- 1.4 Empty and loaded wagons with an overhaul period that has been exceeded by over 6 months and under 5 years must be removed; loaded wagons must also be unloaded. Onward conveyance is only authorised once the examination of fitness to run has been conducted in accordance with the specific checklist (Annex 9).
- 1.5 The costs incurred are to be invoiced to the keeper in accordance with the GCU, point 22.4, line 1. The formal damage report described in Appendix 4 to the GCU is to be attached to the invoice as evidence. The costs shall include the cost of conducting the examination of fitness to run, the filling out and affixing of the I label and the cost of operation. If the overhaul period is exceeded, the invoice shall include all the resulting costs.

modif. 1/1/2017

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Annex 8

#### 2. With overloading

Instructions on the procedure to follow for onward conveyance following identification of overloading and for taking the necessary corrective measures

In the event that the maximum load per wheel, wheelset or wagon has been identified as exceeded by means of technical measuring devices (train inspection devices) or on the evidence of visible signs on the wagon, or if other irregularities have been noted, the following procedure must be applied.

Once the wagon has been removed, the weight of the wagon, wheelset or wheel must be checked by means of scales should no data from the dynamic measurement systems in the infrastructure be available.

- If the weight of the load exceeds the max. load limit by 10% or less on wheelsets of over 20 t (UIC Leaflet 510-1: type B or "+25 t") or 5% or less for wheelsets weighing 20 t or less (UIC Leaflet 510-1: type A or other), the load must be corrected. Following a technical assessment the wagon shall be marked with the K label in accordance with the "overloading" checklist (Annex 9).
- If the weight of the load exceeds the max. load limit by over 10% on wheelsets of over 20 t (UIC Leaflet 510-1: type B or "+25 t") or over 5% for wheelsets weighing 20 t or less (UIC Leaflet 510-1: type A or other), transhipment is required. Following a technical assessment the wagon shall be marked with the K label in accordance with the "overloading" checklist (Annex 9) and conveyed empty to a workshop located nearby.

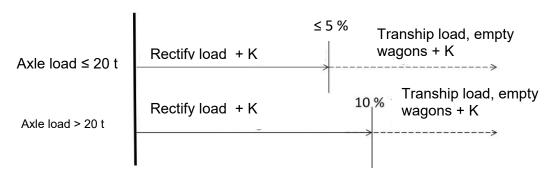
If the permissible wheelset load cannot be identified on the wheelset, proceed in accordance with the approach for types smaller/equal to 20 t (UIC Leaflet 510-1: type A or other).

#### Wheelset markings

The wheelset for which the maximum load limit has been exceeded must be marked with a white cross on the axle.

#### **Summary:**

Maximum axle load limit exceeded



modif. 1/1/2017

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Annex 8

#### 3. With wheels displaying the criteria for thermal overload as per no. 1.2.2

For wheels displaying indications of thermal overload as per no. 1.2.2 and not being marked as being able to withstand high thermal stresses, measure the widening of the inner faces (E value) at the running surface of the rail at 3 distant points of 120° and verify no. 1.7.1

Establish the traceability of **Annex 12**.

#### 4. Equipped with a DET (derailment detector)

- Tracing a tripped detector:
   When a tripped detector is detected, the wagon (all axles) must be examined in accordance with the check-list in order to determine the cause. If it has proved impossible to identify the cause, reset the display unit of the detector by pressing on the red flap of the trip indicator.
- In case of air leakage from the DET:
   Isolate the detector using the handle and replace it as soon as possible.
  - Yellow lever handle in a vertical position: detector tripped
  - Yellow lever handle in a horizontal position: detector not tripped

#### Resetting:

The DET only resets itself automatically once the main brake pipe is fully drained; only then the main brake pipe can be refilled.

The trip indicator (red flap) remains visible at all times and must be reset manually once the pressure in the main brake pipe is zero.

After inspection of the wagon, the trip indicator may be reset.

modif. 1/1/2018

#### **CHECKLISTS**

The checklists shall be followed in its entirety in addition to the criteria in Annex 1. Where applicable, reasons for unfitness to run must be indicated.

### 1. INSPECTION OF FITNESS TO RUN FOR WAGONS WITH AN EXPIRED MAINTENANCE PLATE

**Reference:** Annex 8, point 1.4: empty wagon with a maintenance plate (overhaul period) that has expired since at least 6 months and 5 years at most.

The measured values must be documented for the purpose of traceability (Annex 12).

1	2	3	4	5
Number	Question	Answer	Go to number	Comments
	Provisions common to vehicles with individu	al axles and	bogies	
1	Is the wagon marked with an interoperability sign conform to point 6.1.1.2 and 6.1.1.3 of Annex 1?	Yes No	2 12.2	
2	Is the loading gauge of the participating RUs respected?	Yes No	3 2.1	
2.1	Have the participating RUs agreed for the wagon to be handed over?	Yes No	3 12.2	
3	Do the wheelsets have an identification mark?	Yes No	3.1 12.2	Ask the keeper and wait for his written confirmation.
3.1	Does the keeper confirm that the overhaul date has not been exceeded?	Yes No	4 / 4.1 12.2	If not possible, 12.2
4	Does the wheel tyre thickness conform to the criteria of point 1.1.1 of Annex 1?  or	Yes No	5 12.2	Measure
4.1	Does groove marking the minimum thickness for one piece wheels conform to the criteria of point 1.2.1 of Annex 1?	Yes No	5 12.2	
5	Are there signs of damage due to an incident, derailment, violent shunting impacts or thermal overload (with the exception of wheelsets marked as being able to withstand high thermal stresses)?	Yes No	5.1 5.2	
5.1	Do the values Sd, Sh, qR and E lie within the permissible limits and is there no sign that the wheels are misaligned with the axle?	Yes No	6 12.2	Measure (for the E value measure at 3 points)
5.2	Do the values Sd, Sh, qR and E lie within the permissible limits and is there no sign that the wheels are misaligned with the axle?	Yes No	6 12.2	Measure (for the E value measure at 1 point)

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1	2	3	4	5
Number	Question	Answer	Go to number	Comments
6	Does the distance between active surfaces satisfy the following criteria:  - no more than 1426 mm?  - at least 1410 mm for a wheel diameter > 840 mm?  - at least 1415 mm for a wheel diameter ≤ 840 mm?	Yes No	7 12.2	
7	Is the wagon clearly fitted with a uniform type of suspension springs?	Yes No	8 12.2	
8	Does the buffer height lie within the permissible tolerances?	Yes No	9 12.2	Measure
9	Does the wagon have superstructures liable to rotate, be displaced or otherwise move during the journey?	Yes No	10 11	
10	Are there sufficient devices outwardly visible for securing moving superstructures and are they present and effective?	Yes No	11 12.2	
11	Is the wagon otherwise free of safety- critical damage or defects?	Yes No	12.1 12.2	
	Results of the examination of fitness to run	Measures		
12.1	The wagon may continue to run empty at the marked speed (with the brake isolated).	Fill out the Label I, indicate wagon as fit to run.		
12.2	The wagon may not be included in trains in its present condition.	Do not fill out the Label I, indicate wagon as unfit to run, giving reasons.		

#### 2. INSPECTION OF FITNESS TO RUN FOR AN OVERLOADED WAGON

**Reference:** Annex 8, point 2: procedure for onward conveyance following identification of overloading and for taking the necessary corrective measures.

The measured values must be documented for the purpose of traceability (Annex 12).

#### Wagon checklist

Inspection of wagon overloading	1. Wheelsets / running gear	Check for damage visually.  • Wheelsets > 20 t  ≤ 10% overload  • Wheelsets ≤ 20 t  ≤ 5% overload  Check for damage visually and measure the three points after unloading the wagon (empty).  • Wheelsets > 20 t  > 10% overload  • Wheelsets ≤ 20 t  > 5% overload  Check visually for damage, deformation and cracks on the bogie frame.
	2. Springs	Check visually for damage, deformation and cracks on the suspension springs and spring suspension.
	3. Brake	Check visually for damage, deformation and cracks on the brake rigging
	4. Underframe	Check visually for damage, deformation and cracks on the underframe.
	5. Draw/pushing device	Check visually for damage, deformation and cracks on the draw and pushing device.  Measure the height of the buffers.
	6. Wagon body	Check visually for damage, deformation and cracks on the wagon body.

Version:  $1^{\text{st}}$  of January, 2018

## 3. INSPECTION OF FITNESS TO RUN IN THE EVENT OF IRRGEULARITIES IN OPERATIONS

**Reference:** Annex 1, code 8.1: additional handling of the wagon following irregularities in operations

The measured values must be documented for the purpose of traceability (Annex 12).

1	2	3	4	5
Number	Question	Answer	Go to number	Comments
	Provisions common to vehicles with individual axles and bogies			
1	Is the wagon marked with an interoperability sign conform to point 6.1.1.2 and 6.1.1.3 of Annex 1?	Yes No	2 13.2	
2	Is the loading gauge of the participating RUs respected?	Yes No	4 / 4.1 2.1	
2.1	Have the participating RUs agreed for the wagon to be handed over?	Yes No	4 / 4.1 13.2	
3	Has the wagon derailed?	Yes No	5 4	
4	Has the wagon sustained an abnormal buffering shock?	Yes No	8 13.1	
5	Does the wheel tyre thickness conform to the criteria of point 1.1.1 of Annex 1 or	Yes No	6 13.2	To measure
5.1	Does groove marking the minimum thickness for one piece wheels conform to the criteria of point 1.2.1 of Annex 1?	Yes No	6 13.2	
6	Do the values Sd, Sh, qR and E lie within the permissible limits?	Yes No	5 11.2	For value E, measure at three points.
7	Does the distance between active surfaces satisfy the following criteria:  - no more than 1426 mm?  - at least 1410 mm for a wheel diameter > 840 mm?  - at least 1415 mm for a wheel diameter ≤ 840 mm?	Yes No	8 13.2	
8	Is the wagon clearly fitted with a uniform type of suspension springs?	Yes No	9 11.2	
9	Does the buffer height lie within the permissible tolerances?	Yes No	8 13.2	To measure

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1	2	3	4	5
Number	Question	Answer	Go to number	Comments
10	Does the wagon (or its load) have superstructures liable to rotate, be displaced or otherwise move during the journey?	Yes No	11 12	
11	Are there sufficient devices outwardly visible for securing moving superstructures (or its load) and are they present and effective?	Yes No	12 13.2	
12	Is the wagon otherwise free of safety- critical damage or defects?	Yes No	13.1 13.2	
	Results of the examination of fitness to run	Measures		
13.1	The wagon may continue to run at the marked speed as a special consignment.	Fill out the Label I, indicate wagon as fit to run.		
13.2	The wagon may not be included in trains in its present condition.	Do not fill out the Label I, indicate wagon as unfit to run, giving reasons.		

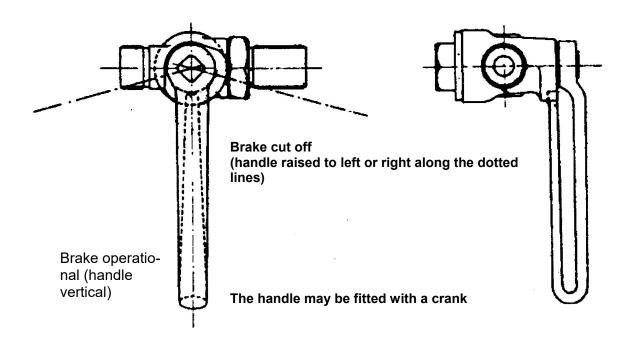
# 4. EXAMINATION OF THE ABILITY TO RUN OF WAGONS EQUIPPED WITH DET (DERAILMENT DETECTOR)

**Reference:** Appendix 8, point 4, procedure concerning continuation of the movement following the tripping of a DET

Inspection of wagon after tripping of DET	1. Wheel	Check visually for any sign of damage. Check visually for any sign of damage, deformation or cracks on the running surface or on the flange
	2. Axles / running gear	Check visually for any sign of damage, deformation or cracks on the axles and the axle boxes
	3. Bogie	Check visually for any sign of damage, deformation or cracks on the bogies
	Link between bogie and underframe	Check visually for any sign of damage, deformation or cracks on the link between bogie and wagon body.

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# Positions of the brake stop-cock handle for compressed air brakes



#### Condition

On wagons fitted with compressed air brakes, the brake stop-cock handle must be pointing vertically downwards when the brake is operational. To cut off the brake, the handle must be turned to the left or right by a maximum of 90°. The handle must meet the conditions set out above.

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Annex 10

- Reserved -

modif. 1/1/2006

#### I, K, M, R1 and U labels - General

The labels mentioned in Annexes 1 and 8 (I, K, M, R1 and U) must be printed in either French, German or Italian. Translations into other languages can be attached. When used, they must always be filled out completely.

#### Label I

RU logo	Lauffähigkeit	e of fitness to r sbescheinigun titude à la circ	g (LB)
The wagon with the Wagon number	e number	<b>⊥</b>  -	(Wagon type)
(Keeper) Was inspected with journey empty / loa marked on the wag	ded*), running on its	to run and safe opera own wheels and with	ation. It make one further nout restriction to the speed
from(Depa	rture station)	(country code)	(destination station**)
(stamp of issuing o	, on	(date)	print name of the wagon inspector
*) delete whichever does not a **) If known	apply		signature of the wagon inspector

Yellow, size roughly 148 x 210 mm

Label I is used to indicate a vehicle's fitness to run following examination of fitness after the examination of fitness to run as set out in Annex 9.

I labels are to be affixed to both sides of the wagon, next to the K label.

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#### Annex 11

#### Label K

(RU's symbol)	Wagon Number	Label				
As per catalogue of irregularities, GCU Appendix 9, Annex 1	Do not reload / To be repaired following	K				
1 Running Gear	2  Suspension $ 3 $ Brake $ 4 $	Wagon underframe and bogie				
5 Buffing and draw gear	6 Wagon body Toads and load units	Miscellaneous				
Other details ————————————————————————————————————						
Stamp of issuing office	Date of stamping Signatur	те				
For issuing RU's use						

blue, size roughly 148 x 210 mm

K labels serve to indicate that there is a problem with the wagon or load unit, but that these can – for the time being – continue to be operated. However, the problems must be resolved prior to reloading; any reloading of the wagon will lead to its withdrawal.

The defect code must be filled out completely in accordance with GCU Appendix 9, Annex 1:

- 1. Circle or tick the number of the defect group/category
- 2. Enter the exact defect number in the empty boxes

K labels are to be affixed to both sides of the wagon in a clearly visible position, close to the label-holder or on the inscription plates. The printed version of the K label must contain the data provided for by this annex.

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### Annex 11

## Label M

As per catalogue of	agon number	Label
Appendix 9, Annex 1 Wa  Running gear	gon to be inspected  Suspension 3 Brake	Wagon underframe and bogie
5 Buffing and draw gear Other	Wagon 7 Loads and load units	
details		
Stamp of issuing office	Date of stamping	Signature
For issuing RU's use		

White, size roughly 148 x 210 mm

Label M is used to record wagon damage and defects that do not prevent the vehicle from continuing to run or being reloaded, but which require particular examination by the user RUs.

The defect code must be filled out completely in accordance with GCU Appendix 9, Annex 1:

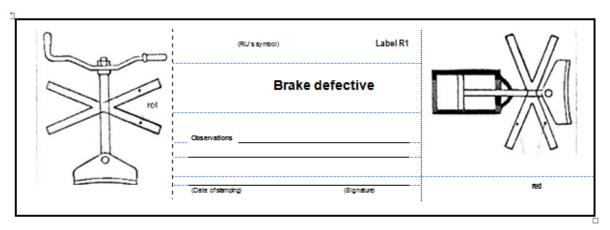
- 1. Circle or tick the number of the defect group/ category
- 2. Enter the exact defect number in the empty boxes

M labels are to be affixed to both sides of the wagon in a clearly visible position close to the label-holder or on the inscription plates. The printed version of the M label must contain the data provided for by this annex.

modif. 1/1/2013

### Annex 11

## Label R1



white, size roughly 105 x 210

Label R1 is used to mark wagons with defective brakes or brakes that must not be used for specific reasons. If the brake in question is the handbrake (operated from the wagon platform or from the ground) then the inapplicable right-hand part of the label should be removed, while if the air brake is defective, the left-hand part of the label R1 does not apply and should be removed accordingly.

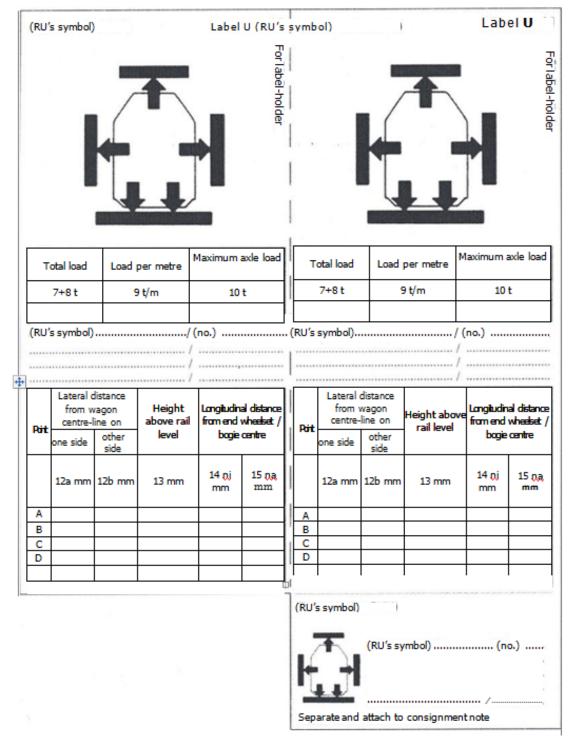
Label R1 is to be affixed to both sides of the wagon close to the brake stop cock or near the braked weight marking.

modif. 1/1/2006

#### Annex 11

## Label U

## **Label for Special Consignments**



White or blue. size roughly 210 x 210/50

Label U is used to indicate Special Consignments (SC) in accordance with Section 1, Figure 7 of the Loading Guidelines. The provisions of UIC Leaflet 502 apply to consignments of this kind. A further application is specified in Annex 8.

Label U is to be inserted in the label holder on both sides of the wagon.

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Annex 11

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## Annex 12

# **Traceability**

The results of measurements by the user RU must be available in electronic format or on paper for a period of at least 2 years. The documentation remains as evidence of activity for the user RU.

Erfassung Radsatzdaten von Wagen im Betrieb Saisie de données d'essieu de wagon en exploitation Registration of axle data for operating wagon

Wageni Numero Wagon	du v	vagon:				_   Ty	pe:			
Halte Détente Keep	eur. er.						Mail / Fax:			
Deraillement Su				Thermische Ü Surchar	nische Überbeanspruchung Surcharge thermique Thermal overload  Lauffähigkeitsuntersuch Examen d'aptitude à la cirr Fit-to-run inspection				rculation n	
	2		8 7		6 5		FAHRRICH TUNG SENS DE LA MARCH URMY G DIRECTEM	<b>→</b> [2]	1	
Sh		8	SR 7R		6R 5R	4R 3F	R	2R 1	R	
Sd qR										
		1L	ZL	3L	4L	5L	6L	7L	8L	
	<u>6</u>	1R	2R	g	e 4R	<u>e</u> 5R	e	호 <b>7R</b>	ළ <b>8R</b>	
Sh										
Sd										
qR										
E1										
E2										
E3										
S <sub>R</sub>										
l	sen	von / Mesu	ıré par / Meası	urements taker	ı by:					
Name: Nom:						Vorname: Prénom:				
Surnam	e:					First name:				
Tel. Nr.						Ort:				
Nº de té						Lieu:				
Tel. no		hre-Numme	or -			Location:				
Num éro	de j									
Num éro	de d no. (b	hre-Numme calibre de r oack-to-bac	nesure:							
Werte eingehalten?  Valeurs respectées?  Values compliant?  Values compliant?										
Suite à	Massnahmen erforderlich? Ja Nein Bemerkungen: Suite à donner? Oui Non Remarques: Follow-up action required? Yes No Remarks:									
Wenn J Si oui, I If so, wh	la, we	elche?								
Datur						Unterso				
Date Date		Signature: Signature:								

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## **APPENDIX 10**

# TO THE GENERAL CONTRACT OF USE FOR WAGONS

**Wagons – Corrective and Preventive Maintenance** 

#### **TABLE OF CONTENT**

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- 0. Principle
- 1. Running gear
- 2. Suspension
- 3. Brake
- 4. Wagon underframe and bogies
- 5. Buffing and draw gear
- 6. Vehicle body and accessories

#### **B - HANDLING OF WAGONS AFTER AN INCIDENT**

- 0. Principle
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- 2. Exceptional impacts
- 3. Overloading
- 4. Flooding
- 5. Contact with energised catenary.

### **C – PREVENTIVE MAINTENANCE**

- 0. Principle
- 1. Overhaul periodicity

### **D - TRANSPORT AND STORAGE OF PARTS**

- 0. Principle
- 1. Wheelsets with axle boxes
- 2. Other parts
- Annex 1 Signs indicating out-of-roundness on wheels
- Annex 2 Diagram of the Y25 bogie suspension
- Annex 3 European Visual Inspection Catalogue (EVIC) for axles
- Annex 4 Composite brake blocks: when to replace and not to replace
- Annex 5 Verification and handling of grease/oil deposits on wheels and axle boxes
- Annex 6 Coding of interventions

#### INTRODUCTION

Appendix 10 is intended for use by staff in workshops<sup>1)</sup> and collates all the provisions governing the minimum condition for parts (in accordance with the criteria set at international level) on leaving the workshop.

It comprises four chapters.

Chapter A (Corrective Maintenance) is structured in the same way as Annex 1 to Appendix 9 (Catalogue of Irregularities). This structure is as follows:

- -Minimum condition and limit values for dimensions
- -Indications for corrective maintenance operations Acceptable and prohibited practices

Chapter B sets out provisions for dealing with wagons after specific incidents which have caused, or potentially caused, damage.

Chapter C contains provisions on the subject of preventive maintenance.

Chapter D contains provisions for the storage and transport of spare and replacement parts in the workshop area before being fitted to and after being removed from the wagon.

The markings and signs that wagons must carry are given in Appendix 11. Appendix 10 only covers those markings that can lead to a wagon being withdrawn from service under the terms of Appendix 9.

<sup>&</sup>lt;sup>1)</sup> A workshop is a body comprising the management, staff, installations and tools necessary for the execution of corrective and preventive maintenance on wagons and/or their component parts. Mobile units are considered to be workshops if they operate under the authority of a maintenance workshop or if they operate independently and meet the aforementioned conditions.

### A - CORRECTIVE MAINTENANCE

### 0. PRINCIPLE

Wagon keepers, customers of repair work and workshops must all ensure that wagons are free from defects that are liable to lead to the vehicle being removed from service again, based on the provisions of Appendix 9 on the instructions issued for repairs to be carried out and Appendix 10, Chapter A (and where appropriate also Chapter B) on the actual execution of repair work.

Chapter A of Appendix 10 contains criteria and guidance to be applied by workshops to remove irregularities as understood by Appendix 9.

It is not necessary to apply the whole of Chapter A of Appendix 10 each time a wagon is sent to a workshop, only those provisions relating to the damage that is to be repaired.

Irrespective of the reason for a wagon's withdrawal from service, compliance with those provisions that are marked with an asterisk (\*) is required systematically whenever a wagon is sent to the workshop.

If the workshop is not in a position to restore the wagon to the minimum specified condition, the vehicle must be handled in accordance with the keeper's instructions (procedure as per Appendix 9).

## 1. RUNNING GEAR

#### Minimum condition and limit values for dimensions

#### **Wheelsets**

- 1.1. The following four conditions concern the distance between the wheels, measured close to rail level, with the wagon empty or loaded, and the thickness of the flanges. They must all be met concurrently:
- 1.1.1 Distance between the active faces of the wheels, measured 10 mm down from the measuring circles:
  - maximum 1426 mm:
  - for wheels with a diameter of greater than 840 mm<sup>1)</sup> at least:
    - 1418 mm for the wheelsets of 2-axle wagons with double-link suspension, suitable for running at 100 km/h with a 22.5t axle-load and a wheelbase of 8 m or more;
    - 1410 mm for the wheelsets of other wagons;
  - at least 1415 mm for wheels with a diameter of less than or equal 840 mm.
- 1.1.2 Distance between the inner faces of tyres or rims of monobloc wheels:
  - maximum 1363 mm<sup>1)</sup>;
  - minimum 1357 mm for wheels with a diameter of greater than 840 mm<sup>1)</sup>;
  - minimum 1359 mm for wheels with a diameter of less than or equal 840 mm.
- 1.1.3 Wheels must show no signs of displacement along the axle;
- 1.1.4 Thickness of the flange of one wheel, measured 10 mm below the running circle:
  - minimum 22 mm for wheels of diameter greater than 840 mm;
  - minimum 27.5 mm for wheels of diameter less than or equal 840 mm but at least 630 (330) mm.
- 1.2 The diameter of the wheel running circle must not be less than:
  - 840 mm for a nominal diameter of 920 to 1000 mm:
  - 760 mm for a nominal diameter of 840 mm when new:
  - 680 mm for a nominal diameter of 760 mm when new;
  - 630 mm for a nominal diameter of 680 mm when new.
- 1.3 The width of the tyre or rim of monobloc wheels must be:
  - maximum 140 mm<sup>2</sup>).
  - minimum 133 mm.
- 1.4. The height of the wheel flanges in relation to the measuring circle must be no more than 36 mm.
- 1.5. The wheel flange, measured with a gauge, must have a qR value that is always greater than 6.5 mm, with no sharp edges or burrs on the outside profile of the flange, at a distance of more than 2 mm from the upper edge (Appendix 9, Annex 4).

<sup>&</sup>lt;sup>1)</sup> These rules also apply to the intermediate axles of wagons with a 3-axle articulated underframe, but not to the intermediate axles of vehicles other than bogie wagons, nor to the intermediate axles of the bogies themselves.

<sup>&</sup>lt;sup>2)</sup> Including the projection formed by the outer edge of the running tread.

- 1.6.1 The wheel tread must not:
  - be partly crushed;
  - display wheel flats, shelling, exfoliation or metal build-up:
  - over 60 mm in length for wheels of diameter > 840 mm and axle load ≤ 22.5 t (maximum load limit D or less):
  - over 50 mm in length (maximum load limit E) for wheels of diameter > 840 mm and axle load > 22.5 t;
  - over 40 mm in length for wheels of diameter ≤ 840 mm and > 630 mm:
  - over 30 mm in length for wheels of diameter ≤ 630 mm;
  - have cracks at the transition between the tread and the outer face or on the flange top;
  - display any hollowing or "false flange" deeper than 2 mm or any sharp-edged grooves.
- Wheelsets fitted with LL blocks must be inspected and dealt with as follows: 1.6.2\*
  - Inspect running surfaces in accordance with 1.6.1
  - Visual inspection of the wheels in accordance with the criteria for thermal overload asset out in 1.18
- The lateral face of the wheel and the inner part of the rim or tyre (active face) must not be gouged or 1.7 marked with sharp-angled notches.
- For monobloc wheels, the wear limit of the tyres must be indicated by the bottom of a circular groove 1.8 concentric with the wheel and traced on the outside surface. 1) This groove must always remain fully visible. It may however be partially obscured by dirt providing this does not detract from the possibility of assessing the wear state of the wheel.
- 1.9 The thickness of the wheel tyre measured in the plane of the running circle – defined as the circle where a vertical plane 70 mm from the inner surface of the tyre intersects the wheel tread – must be at least:
  - for wagons authorised to run at 120 km/h (wagons marked "SS" or "\*\*") ... 35 mm for other wagons<sup>2)</sup> ...... 30 mm
- 1.10 On a wheel with tyre:
- 1.10.1 the tyre must not be loose.

A tyre is considered loose if at least one of the following conditions is met:

- the tyre has been displaced by rotation on the rim in the plane of the running circle (visible from the fact that the check marks on the tyre and those on the wheel rim are not longer aligned);
- dull sound when struck;
- loose tyre clip;
- presence of rust between the tyre and the rim over more than 1/3 of the circumference;
- 1.10.2 The tyre must show no signs of sideways movement (a tyre can only move sideways if the tyre clip is missing or has become loose, broken or clearly deformed);
- 1.10.3 The tyre clip must not be cracked. When the tyre clip is held in place with a wedge, the wedge must not be missing;
- 1.10.4 Tyres must not be cracked or fissured in the transverse or longitudinal directions.
- 1.11 The wheel hub must not be cracked.
- 1.12 The rim of a spoked wheel must not be broken across.
- 1.13 None of the spokes of a wheel may be broken or cracked.

<sup>1)</sup> If exceptionally there are two grooves on a wheel, the outer groove shall indicate the minimum thickness.

<sup>2)</sup> Including wagons suitable for 120 km/h only when empty.

- 1.14 A solid or monobloc wheel must not show:
  - any defects repaired by welding,
  - any cracks.

Minor defects in the wheel body resulting from the casting process are acceptable.

- 1.15.1 Axles must not:
  - show any cracks or any defects repaired by welding;
  - be warped;
  - have any part worn by friction showing sharp edges (sharp-edged notches);
  - show any kind of wear by friction exceeding 1 mm in depth.

Brake rods or other parts must not rub on the axles.

- 1.15.2\* The prescriptions of Annex 3 are to be applied.
- 1.16\* Each time the wagon is in the workshop, the wheel+tyre assembly of all wagons fitted with tyres must be checked. The dates on which this verification and the one before it take place are entered in the maintenance plate specified in Appendix 11, point 7.5 against the initials of the RU and workshops that conducted the check in question.
- 1.17 If a check is required on the distance between the inner faces of the tyres or rims of monobloc wheels, then this distance shall be measured with a gauge at rail level in at least three points on the wheel, at 120° intervals.
- 1.18 Monobloc wheels may not display marks of thermal overload caused by the brake:
  - a paint burn of 50 mm or more at the connection between the rim and wheel centre or recent traces of rust on the tyre (unpainted wheels) or
  - fusion of brake blocks or
  - deterioration of wheel tread with build-up of metal.

If thermal overload is suspected, the distance between the inner faces of the tyres of axles must be measured as indicated in points

1.1.2 and 1.17.

If this distance is within the specified tolerances, the air brake must be isolated and the vehicle fitted with labels R1 and K (Appendix 9, annex 11) marked "Brake and wheel tread to be verified for thermal overload".

These checks are not to be carried out on wheels that are able to withstand high thermal stresses and which are marked on the axle-box casing with a solid vertical white line (Appendix 11, point 6.1).

- 1.19 Wheels shall be tested for out-of-roundness when
  - at least two signs of out-of-roundess and wheel tread defects as defined in Appendix 10, annex 1 are detected on a wagon wheel or its immediate environment,
  - on the wheels of the axle in question, if there are no signs on the second axle,
  - on the wheels of both axles, if there is at least one sign on the second axle,
  - they are indicated "Substantial irregular crushing on the edge of the tyre", as defined in Appendix 10, annex 1, Figure 9 (indication of a particular flat point), irrespective of the presence of any other indication.

In this respect a bogie is to be considered as an axle wagon.

The degree of wheel out-of-roundness must not exceed 0.6 mm.

#### **Axle-boxes**

- 1.20 Axle-boxes must not be damaged to the point of no longer being able to hold their lubricant or of allowing dust and water infiltration.
- 1.21 The sides of the axle-box must cover the guiding surface of the axle guard or of the corresponding bogie parts in all positions of the box, with an overlap of at least 5 mm.

## Indications – Accepted and prohibited practices

- 1.22 Axles must not be repaired by welding.
- 1.23 The side faces of the tyres or rims of monobloc wheels must not be painted or covered over with oily or greasy substances, with the exception of the four painted control markings at 90° intervals used to identify tyred wheels (Appendix 11, point 6.2.).
- 1.24 Brake rods and other parts must not rub against the axles. If this fault cannot be corrected, the parts in question must be removed or suspended so as to prevent contact. The brake must then be isolated and fitted with labels R1 and K (as per Appendix9).
- 1.25 Sharp edges on a flange may be removed on the lathe or by grinding.

  Any flats or build-up of metal on the running tread may be removed on the lathe with the keeper's agreement.
- 1.26 When an axle is replaced, a wheelset or wheelsets with tyred wheels may not be fitted to a wagon equipped with monobloc wheels.
  Tank wagons and wagons loaded with tank containers for the carriage of Class 2 RID products must be fitted with monobloc wheels.
- 1.27 To position the wheelsets on a lathe, the workshop of the user RU may only remove the axle-box covers if they are not fitted with centring holes. All other work on axle-boxes is reserved for the keeper alone.
- 1.28 When reprofiling monobloc wheels with the authorisation of the keeper:1)
  - identify any cracks along the edge of the wheel tread and any sharp-edged dents on the flange and remove by reprofiling,
  - remove any severe radial marks left by the lathe clamping jaws.
  - Wheels with an out-of-roundness of ≥ 0.6 mm (see point 1.19) may not be reprofiled. They must be removed and returned to the keeper, suitably marked.
- 1.29 Existing wheelsets fitted with monobloc wheels of steel grades R2, R3, R8 and R9 must be tested by the keeper to check for the absence of cracking and lathe clamp jaw marks. After the test a triangular metal plate embossed with the steel grade is fixed to one of the bolts of the axle-box cover.
- 1.30 Wagons with load-proportional tread brakes for running under SS conditions may not be fitted with monobloc wheels of steel grades R2, R3, R8 or R9.If thermal overloading is suspected, the provisions of point 1.18 shall apply.

<sup>1)</sup> This authorisation may be permanent or issued on a case-by-case basis

- 1.31 Oil seepage between the axle and wheel hub does not constitute absolute proof of loosening. Displacement must be shown to have occurred.
- 1.32 If there is any sign or suspicion of a hot axle-box, the axle must be replaced.
- 1.33 Bearings shall only be lubricated by the keeper.
- 1.34 No repairs may be carried out on axle-boxes.
- 1.35 If a replacement axle is requested using Form H<sup>R</sup> (see Appendix 7), the diameters of the running circles of all the axles on the wagon must be measured and shown on the Form H<sup>R</sup> (column B) so that the keeper can supply an axle with a running circle whose diameter is within the difference range permitted by the applicable regulations.<sup>2)</sup>

If an axle is replaced without making use of the Form H<sup>R</sup> procedure and with no specific indication from the keeper, the difference in the diameters of the running circles must not be greater than:

- 10 mm between the two axles of a bogie
- -20 mm for axle wagons.

## 2. SUSPENSION

### Minimum condition and limit values for dimensions

- 2.1 The leaves of a suspension spring must not become longitudinally displaced by more than 10 mm in relation to the buckle.
- 2.2 None of the leaves must be missing, broken or cracked. This provision applies both to parabolic springs and trapezoidal springs.
- 2.3 No helical spring must be broken.
- 2.4 None of the parts necessary for fastening the springs must be missing or broken. None of the spring buckles must be loose.
- 2.5 On wagons fitted with leaf spring suspensions, the distance between the buckle of the suspension spring and any parts of the vehicle body, underframe or bogie frame which may be liable to come into contact with it must be at least 15 mm.
- 2.6 There must be no recent traces of contact between:
  - the spring buckle or other parts of the suspension and the wagon underframe or bogie;
  - the wheels and the body or underframe.

Once the causes have been remedied, the traces of contact shall be painted over.

- 2.7 The boss of the leaf spring buckle must be properly engaged in its housing (axle-box case or plug). The axle-box case must not be in an abnormal position (twist) as a result.
- 2.8 The component parts of the elastic suspension (rings, rods, intermediate bearings, suspension pins) must not be displaced, missing or broken. The suspension pins must be properly secured.

<sup>2)</sup> Amendement entering in to force: 01.04.2017

## Indications - Acceptable and prohibited practices

- 2.9 The minimum distance between the buckle of the suspension spring and any parts of the vehicle body, underframe or bogie frame which may be liable to come into contact with it may not be restored by:
  - placing sheet metal shims between the suspension brackets or bearings and the links, even if these sheets are welded;
  - building up the suspension brackets or bearings by welding.
- 2.10 In the event of damage to the suspension spring of a wagon with a rigid underframe (marked as shown in Appendix 11, point 7.4), both springs of the same axle must be replaced by two others with equivalent deflections. The request for spare parts using Form H (see Appendix 7) must therefore specify that the springs are to be used on a wagon with a rigid underframe.

For springs with progressive stiffness, it is not necessary to replace both springs. When requesting springs of this kind, the type of spring must be mentioned specifically on Form H.

- 2.11 Repairing suspension springs by welding is prohibited.
- 2.12 Standard parabolic suspension springs for 22 or 22.5 tonne axle-loads can be freely interchanged in the event of damage.

### 3. BRAKE

#### Minimum condition and limit values for dimensions

#### Compressed air brakes

- 3.1 On wagons with compressed-air brakes, the handle of the brake isolating valve must be turned vertically downwards when the brake is operational. It must be possible to isolate the brake by a 90° turn on the handle at the most. This handle must satisfy the conditions set out in Appendix 9, annex 10.
- 3.2 The function of the brake position changeover controls must be easily identifiable in accordance with the stipulations of Appendix 11, point 4.3.
- 3.3 The main brake pipe must be in proper working order, to ensure a continuous air supply along the train.

#### Brake blocks, shoes, disc brakes and brake rigging

- 3.4 The disc brake indicator device must clearly display the "brake on" and "brake released" positions.
- 3.5 None of the brake rigging safety stirrups must be broken, loose or missing.
- 3.6 If wagons have protruding brake blocks, it is necessary to eliminate the cause of the protrusion after consultation with the keeper and after he has given instructions. If it is not possible to remedy the cause the wagon must be dealt with in accordance with Appendix 9. A brake block shall be considered protruding if, when it is applied, its external face reaches the external face of the rim.
- 3.7\* 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.
- 3.8\* 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;
  - 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, 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 3);
  - blocks are less than 10 mm thick, measured at the thinnest point seen from the outside (Annex 4, Figure 4).
- 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;
  - there is incipient radial cracking in the block material (Annex 4, Figure 5);
  - there are indications of heavy thermal stress such as "white film" on the surface of the the contact area and down to a depth of around 10 mm (Annex 4, Figure 6);
  - there is a branched thermal crack pattern, mainly axial, and a carbonised layer (Annex 4, Figure 7).

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.

#### Brake hose couplings

- 3.9 All wagons must be fitted with brake hose semi-couplings. Wagons with two brake coupling connections at each end for the same main brake pipe must also have two brake semi-couplings at each end.
- 3.10 Brake semi-couplings must not be defective (not airtight).
- 3.11 No part of the brake coupling system (whether connected or disconnected) must hang down within 140 mm of the top of the rails.
- 3.12 The stop cocks must be operable and function correctly. Each air stop cock must be fitted with a stop device in its extreme position that functions correctly.

## Indications – Acceptable and prohibited practices

- 3.13 Damaged or loose brake parts that could constitute a safety hazard or cause other damage must be removed or securely fastened. Damage of this kind should be examined in conjunction with point 1.19. In this case, the compressed air brake must be isolated and the wagon fitted with labels R1 and K.
- 3.14 Work on the pneumatic parts of the brake system (distributors, relay valves, load-weigh valves, brake cylinders) and their replacement by workshops shall not be authorised without the agreement of the wagon keeper.
- 3.15 Wagons with platform-operated or ground-operated hand brakes / parking brakes that are inoperable must be repaired. Otherwise they must be dealt with in accordance with Appendix 9.
- 3.16 Disc brake pads may be replaced exclusively by the keeper, who shall ensure that the brake is in correct working order without needing to be monitored by the user RU.
- 3.17\* Missing or damaged brake semi-couplings must be replaced.
- 3.18 Safety stirrups may not be repaired by welding.
- 3.19 All brake tests in application of Appendix 12 of the GCU shall be carried out in accordance with UIC Leaflet 543-1 prior to any action being taken and the brake test sheet including the values measured communicated to the keeper and to the user RU.
- 3.20 Broken or missing brake release pulls are to be replaced.

## 4. Wagon underframe and bogies

#### Minimum condition and limit values for dimensions

#### **Underframe**

- 4.1 The underframe must not be visibly deformed orwarped.
- 4.2 The flanges of solebars, headstocks and intermediate cross-bars subject to stress from the coupler must not have cracks (transverse tracks) starting at the edge of the flange and extending over more than half the flange width. Longitudinal cracks up to 150 mm are acceptable, except at the points where the suspension brackets are fixed to the solebars. At these points, longitudinal cracks between the flange and the web of the solebar must not exceed 100 mm in length.
- 4.3 Welded joints on underframe crossbars and solebars, and on axle guards and solebars, must not have cracks, nor must any cracks in these parts originate in the joints.
- 4.4 Reserved
- 4.5 Reserved
- 4.6 Wagons with inflammable floors, even if lined with a metal sheet underneath, must be fitted with spark arrestors above the braked wheels. Spark arrestor plates mounted directly beneath the floor are not acceptable.
  - This stipulation also applies to flat wagons that have no floor or with a skeletal floor, intended for carrying containers or semi-trailers.
  - The spark arrestor plates must not be dislodged or pierced through by rust.
- 4.7 Axle wagons carrying the sign specified in Appendix 11, point 2.10 must be fitted with special spark arrestors.
- 4.8 Axle guards must not be dislodged or broken. They may not have cracks over more than ¼ of their cross-section or that are extending towards or close to a fastening point.
- 4.9 No guide-pieces (wear liners) must be missing from the axle guards.
- 4.10 Axle-guard ties must not be missing or broken.
- 4.11 Suspension spring brackets must not be loose, broken, cracked or visibly deformed.

#### **Bogies of all types**

- 4.12 Welded joints on bogie frame crossbars and solebars must not be cracked, nor must any cracks in these parts originate in the welded joints. Solebars, crossbars and bolster swing-links must not have any cracks.
- 4.13 The friction surfaces of damping systems acting on the axle-box or bolster guides must not be lubricated.
- 4.14 No side bearers, side bearer parts or springs must be missing or broken.
- 4.15 The bogie must not be lying in an abnormal position in relation to the frame.
- 4.16 The centre casting must not be broken or loose.

- 4.17 The centre casting kingpin must not be missing, broken or loose.
- 4.18 No guide pieces (wear liners) may be missing.

  The total length of cracks in the weld beads of the wear liners may not exceed 50% of the total length of the welds.
- 4.19 Missing earth connections (straps or cables) must be replaced. It must however be possible to see that an earth connection existed before.

#### Y 25 bogies and their derivatives (see Annex 2)

- 4.20 No tare springs must be cracked or broken. Damage of this kind should be examined in conjunction with point 1.19.
- 4.21 No load springs must be displaced or broken. Damage of this kind should be examined in conjunction with point 1.19.
- 4.22 All the tare springs of the bogie must coil in the same direction.
- 4.23 All the pairs of helical springs on a bogie (tare spring/load spring) must coil in opposite directions.
- 4.24 No outer or inner damper ring may be missing, broken or loose. No tappet must be missing (e.g. following a derailment).
- 4.25 No damper cover may come into contact with the bogie frame (faulty damper).
- 4.26 No lifting T must be missing or loose. Damage of this kind should be examined in conjunction with point 1.19.

#### Indications – Acceptable and prohibited practices

- 4.27 Cracked steps must be replaced by the workshop of the user RU. Repairs involving welding are prohibited.
- 4.28 When the spark arrestor plates of a wagon are missing or damaged without the possibility of proper repairs being carried out, the brake must be isolated and the wagon dealt with in accordance with Appendix 9 (labelling).
- 4.29 Breakages, damage and cracks on solebars, intermediate crossbars, underframe headstocks (wagon or bogie) and welded joints must only be repaired by welding at a workshop selected by the keeper. However, the workshop of the user RU may, exceptionally, be authorised to carry out welding work for the sole purpose of repairing cracks or breakages on underframe profiles, to make it possible for an empty wagon to be returned home.
- 4.30 Wagons whose underframe is warped or deformed and which are not fit to run must be specially treated, in agreement with their keeper.
- 4.31 Damaged axle guards and suspension spring brackets riveted to the underframe can be straightened or replaced by the workshops.
- 4.32 If the rivets or bolts used to fix the axle guards in place are loose or missing, they shall be replaced by the workshops with self-locking screw bolts or bolts locked by splitpins.
- 4.33 The friction surfaces of damping systems acting on the guides of the axle-boxes or swivelling bolster must not be lubricated. Any grease must be removed insofar as possible without demounting. In this case the wagon must be fitted with a Label M.

- 4.34 Welding of wear liners on bogies is only authorised after the axles have been demounted and following instructions from the keeper. Re-welding of cracks on wear liners is not allowed.
- 4.35 Welding and oxygen-cutting are strictly prohibited during the mounting of screw assemblies using highresistance screws (class 8.8 or above) or bolts (class 8 or above) to attach steps, handles and centre castings.
  - Screw assemblies are to be executed in compliance with the rules (e.g. sufficient projection of screw, tightening torque, self-locking screws etc).
  - Welding and oxygen-cutting are prohibited on self-locking screws, irrespective of the type of locking (synthetic or metallic).
- 4.36 During the mounting of screw assemblies with normal-resistance screws (below class 8.8) or bolts (below class 8) to attach steps, handles and centre castings, welding and oxygen-cutting are only permitted if authorised by the keeper. Screw assemblies are to be executed in compliance with the rules (e.g. sufficient projection of screw, tightening torque, self-locking screws etc. Welding and oxygen-cutting are prohibited on self-locking screws, irrespective of the type of locking (synthetic or metallic).

## 5. Buffing and draw gear

#### Minimum condition and limit values for dimensions

#### **Buffing gear**

- 5.1 The height of the centre of the buffing gear, measured vertically from rail level and at rest, must be:
  - for empty wagons ...... maximum 1 065 mm
  - under maximum load......minimum 940 mm.
- 5.2 In abeyance.
- 5.3\* No buffer or buffer fixing bolt must be missing. All fixing bolts must be tight. This also applies to permanent couplings.
- 5.4 The locking or fastening devices holding the buffer plungers in place must not be missing or damaged.
- 5.5 The buffer spring and the other parts of the buffer must not have cracks or damage liable to impede the proper working of the buffer. It is acceptable for one buffer at each end of the wagon to be compressible by hand by a maximum of 15 mm.
- 5.6.1 Buffer casings must not be damaged to the extent that their fastenings are no longer sufficiently robust or that buffer plunger guidance is no longer sufficiently guaranteed. The buffer casings and plungers must not be cracked.
  - The buffer's visible guide surface must not present sharp-edged notches or grooves over 1 mm deep and 15 mm long.
- 5.6.2 For buffers which are to be lubricated, the visible guide surface must be adequately lubricated. Should lubrication be needed, any grease residue must first be removed. Lubrication must then take place by applying a thin layer of grease across the periphery of the guide surfaces.
- 5.7 \* There must be no missing or loose rivets or fixing bolts on the buffer heads. This also applies to permanent couplings.
- 58 \* The contact surfaces of the buffer heads must be sufficiently lubricated. This also applies to permanent couplings.
- 5.9.1\* The steel contact surfaces of buffer heads must not have several sharp-edged grooves measuring > 1 mm in depth and > 50 mm in length. This also applies to permanent couplings.
- 5.9.2\* The contact surfaces of buffer plates with wear pads must not have burrs or sharp-edged grooves measuring > 3 mm in depth, cracks measuring > 30 mm in length, or shelling or fusion of matter measuring > 15 mm in length.
- 5.10 On wagons fitted with anti-crash devices, these devices must not show signs of having been triggered, nor any trace of deformation.

The anti-crash devices have been triggered if

- the arrow marker is not fully visible,
- the deformation marker is missing or deformed,
- the length of the buffer is visibly shortened,
- the buffer casing is deformed or destroyed.

#### Draw gear

- 5.11 No part of the screw coupling gear (coupled or uncoupled) must hang down within 140 mm of the top of the rails.
- 5.12 The length of the screw coupler must be such that the buffers can at least be brought into contact.
- 5.13 The screw couplers and draw hooks must not be missing. Any clearance between the chain link and the screw must be less than 10 mm.
- 5.14.1 The screw coupler must be easy to operate and the coupling screw must be sufficiently lubricated.
- 5.14.2 The screw couplers and draw hooks must not be cracked. Nor must they have sustained any damage liable to prevent the vehicle from being coupled to another vehicle or to stop them performing properly.
- 5.15 Draw bars must not be broken or cracked. Sleeves, bolts or cotter pins must not be broken or missing.
- 5.16 Draw hook rods and guides must not be worn to such an extent that the draw hook is able to rotate on its axis within the guides.
- 5.17 If non-continuous draw gear is used, none of the following types of damage may occur:
  - fracture or defect on a volute or ring spring;
  - deterioration of a rubber or elastomer spring.
- 5.18 If continuous draw gear is used, none of the springs must not be fractured or damaged. The draw gear guides must not have cracks that are liable to prevent the draw gear from functioning properly.
- 5.19 The draw hook pin on the screw coupler must be at least 50 mm indiameter.
- 5.20 When the suspension device on the screw coupler is inoperable or missing, it must be repaired or replaced.

#### Indications – Acceptable or prohibited practices

- 5.21 Use of welding to repair draw gear is prohibited. However, electric welding may be used for temporary repairs to broken or cracked draw bars. The wagons concerned must be handled in accordance with Appendix 9 and transported at the rear of the train.
- 5.22 Wagons fitted with long-stroke shock absorbers whose sliding part is visibly not in the middle position must be dealt with in accordance with Appendix 9.
- 5.23 When a buffer at one end of the wagon is damaged, both buffers must be replaced. The replacement buffers must be identical. In the case of buffers with a stroke of 105 mm, 130 mm or 150 mm, the replacement buffers must however belong to the same category as the buffers removed. Also, for buffers with a stroke of 130 or 150 mm, the replacement parts must have the same design characteristics as the buffers removed. Buffers with wear inserts in the buffer heads must only be replaced in accordance with the keeper's instructions.
- 5.24 Missing buffer head fastening rivets may be replaced using appropriate screw fasteners. Any sharp edges on the buffer head contact surfaces shall be removed by grinding.

- 5.25 It is forbidden to carry out welding or blowtorch work on or near buffers marked on the casing with a yellow dot (see Appendix 11, point 7.9.4).
- 5.26 Damaged or deformed anti-crash devices shall be dealt with in accordance with the keeper's instructions. Buffers fitted with anti-crash devices must, in principle, be replaced by identical buffers. If anti-crash devices are not available, standard buffers may, exceptionally, be fitted to enable the wagon to continue its journey to be unloaded or sent to the workshop for repairs. In this case, a K Label as shown in Appendix 9, annex 11 shall be affixed, together with the sign shown in Appendix 11, points 5.4 or 5.5.
- 5.27 Permanently-coupled wagons must be coupled and uncoupled in line with the keeper's instructions.
- 5.28 Welding and oxygen-cutting are strictly prohibited during the mounting of screw assemblies using high-resistance screws (class 8.8 or above) or bolts (class 8 or above) to attach buffers and draw gear. Screw assemblies are to be executed in compliance with the rules (e.g. sufficient projection of screw, tightening torque, self-locking screws etc.).

  Welding and oxygen-cutting are prohibited on self-locking screws, irrespective of the type of locking (synthetic or metallic).
- 5.29 During the mounting of screw assemblies with normal-resistance screws (below class 8.8) or bolts (below class 8) to attach buffers and draw gear, welding and oxygen-cutting are only permitted if authorised by the keeper. Screw assemblies are to be executed in compliance with the rules (e.g. sufficient projection of screw, tightening torque, self-locking screws etc.). Welding and oxygen-cutting are prohibited on self-locking screws, irrespective of the type of locking (synthetic or metallic).

## 6. Vehicle body and accessories

#### Minimum condition and limit values for dimensions

#### Provisions applicable to all wagons:

- 6.1 The wagon body, superstructures and all additional devices must not be damaged in a way that could lead to deterioration or loss of the load or constitute a safety hazard for railway operations and/or a risk for persons or the environment.
- 6.2 The wagon body and its parts must not foul the loading gauge.
- 6.3 No part of the heating coupling and other coupling devices (coupled or uncoupled) must hang down within 140 mm of the top of the rails.
- 6.4 Moving parts of the wagon and the devices used to control them must not have visible damage that prevents them from functioning normally.
- None of the wall or floor boards must be missing, broken, split or damaged to the point where the load might be lost or damaged as a result of damp.
- The sliding doors must be mounted in such a way that they cannot come off their runners. Drop sides must be secured so they cannot part from their hinges or fastenings.
- 6.7 It must be possible to close and lock all doors and sliding walls completely and securely. They must not be missing or have come out of their runners.
- 6.8 The doors must have no deformation or holes that could lead to loss of the load.
- 6.9 No guiding or locking systems (door frames, hinges, bolts, latch hooks or handles) must be missing or be dislodged, broken or deformed.
- 6.10 Two handrails for use by shunting staff (during coupling) must be fitted below each headstock. All steps, handrails, ladders and walkways must be safe to use and free from cracks. This provision also applies to their fastenings and supporting structures.
- 6.11 Steps may be twisted, deformed or tilted to a maximum of 20 mm.
- 6.12 The clearance between handrails and the nearest part of the wagon must be at least 60 mm.
- 6.13 Plates carrying markings, folding panels and label-holders must not be missing and must be properly secured.

- 6.14 The following markings as specified in Appendix 11 must be fully present and legible:
  - wagon number and signs as depicted in Appendix 11 points 2.1 and 2.2;
  - tare:
  - braked weight of the hand brake;
  - load limits;
  - capacity of tank wagons;
  - goods for which tank wagons are used;
  - length over buffers of wagon;
  - the high voltage warning sign "Caution Electrical hazard" on wagons fitted with steps or ladders placed at a height of more than 2 m;
  - maintenance (overhaul) plate;
  - signs indicating the presence of anti-crash devices;
  - diagonal stripes for wagons with long-stroke shock absorbers.

#### Additional provisions for covered wagons:

- 6.15 Ventilation flaps must not be missing or damaged.
- 6.16 Control gear, shutters and retaining brackets must not be unhooked, dislodged or deformed.
- 6.17 The roof cover and weatherboard must not be loose or deformed.
- 6.18 It must be possible to close and lock opening roofs to prevent them from coming open unexpectedly. None of the controls must be missing, deformed or inoperable. The roofs must lie in their runners.
- 6.19 It must be possible to use roof hatches correctly.

#### Additional provisions for open wagons:

- 6.20 It must be possible to close and lock the side walls to prevent them from opening unexpectedly.
- 6.21 It must be possible to close and lock the end flaps to prevent them from opening unexpectedly.
- 6.22 The locking systems for the end flaps (pins, camshafts, rings, shafts) must not be missing, broken or cracked. They must be fit for use.
- 6.23 The cantrails must not be deformed, broken or cracked so as to foul the gauge.

#### Additional provisions for flat wagons:

- 6.24 It must be possible to lift and secure the drop sides.
- 6.25 The hinges, pins and securing devices of the drop sides must not be missing or broken. They must be fit for use.
- 6.26 Detachable, swivelling and retractable stanchions must not be missing, broken or cracked.

  They must not be deformed, broken or torn to the extent of fouling the loading gauge. This provision also applies to the stanchion mountings and securing devices.

  The stanchion fastenings must be effective.
- 6.27 Folding bolsters must not be loose.

### Additional provisions<sup>1)</sup> for tank wagons<sup>2)</sup>:

- 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 be cracked.
- 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 come loose.
- 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.

#### Additional provisions for mechanically sheeted wagons:

6.39 It must be possible to close and lock the mechanical sheeting correctly (indicator visible). This requirement also applies to the locking system for the end hoops.

### Additional provisions for wagons with telescopic hood:

6.40 It must be possible to close and lock the hoods correctly, keeping them in the guide rails provided.

#### Additional provisions for flat bogie wagons for carrying road and rail vehicles:

- 6.41 The moving headstocks at each end must not be damaged. It must be possible to lock them from both sides
- 6.42 The sealing plates, plate bolts, securing chains and chain eyes must be fit for use.

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<sup>1)</sup> The points indicated by a \* are mandatory only for RID tank wagons (visual inspections)

<sup>&</sup>lt;sup>2)</sup> Tank wagons are wagons used for transporting liquids, gases, powdered or granular goods (visual inspections)

#### Additional provisions for ACTS carrier wagons:

- 6.43 The swivel frames must not be damaged to the extent that they cannot be properly fastened and locked.
- 6.44 The snap locks must function properly.
- 6.45 The central lock must function and clearly show the "locked" position.
- 6.46 It must be possible to erect the stanchions correctly.

#### Additional provisions for car-carrying wagons:

- 6.47 It must be possible to raise and secure the end boards and crossing gangways.
- 6.48 The upper loading deck must rest on the supporting brackets and be properly secured. The indicator device must function.
- None of the accessories must be loose (scotches, wheel scotch guide-pieces, crank handles, lifting or lowering device, end boards, crossing gangways).

#### Additional provisions for self-discharging wagons:

- 6.50 It must be possible to close and lock all valves and hatches.
- 6.51 No part of the locking and discharging system must beloose.

## Indications - Acceptable and prohibited practices

When deformation has occurred and the vehicle gauge profile must be verified, the provisions of point 4, Section 1 of the Loading Guidelines shall be applied.

Exception: for wagons built in accordance with UIC Leaflet 505 and whose width exceeds that obtained by application of point 4, Section 1 of the Loading Guidelines (these wagons are not specially marked), the wagon keeper should be contacted to find out the permitted width of the wagon.

Failing a reply from the keeper, point 4 of Section 1 of the Loading Guidelines shall be applied for safety reasons.

- 6.53 Parts made from plastic or plywood (e.g. roof covers and side wall panels) must not be repaired with nails. These wagons carry the sign specified in Appendix 11, point 2.14.
- 6.54 Rivets used for fastening the tanks of tank wagons may be replaced by bolts when missing.
- 6.55 Welding work on tanks may only be carried out by approved workshops with the keeper's agreement.

### **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. These additional tests are designed to ensure that damage such as deformation of the bogie and/or underframe or cracking, which can jeopardise the wagon's fitness for use, has not occurred. If workshops are unable to restore the wagon to the minimum condition specified, the vehicle shall be referred to the keeper for a decision on what action to take (in accordance with Appendix 9).

### 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.

Derailed wheelsets that have been replaced must be clearly marked before being sent back so that the keeper or the keeper's workshop can recognise that the wheelset has derailed (Model H<sup>R</sup>).

## 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 15 mm,
- 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.

## 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 and the following inspections and measurements carried out:

- 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.

In case of doubt, the wheelset(s) should be replaced 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<sup>R</sup>),
- 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<sup>R</sup>),
- inspection of the vehicle body to check for other damage with potential consequences for the wagon's fitness to run.

## **C – PREVENTIVE MAINTENANCE**

## 0 Principle

The keeper must ensure that wagons are restored to a condition making them fit for normal service in terms of load safety and conservation.

To do so, he has recourse to the services of an Entity in Charge of Maintenance, one of whose responsibilities (as set out in EU Regulation 445/2011 and the corresponding COTIF rules) is to define a preventive maintenance plan and instructions, which the keeper must apply.

## 1 Overhaul periodicity

- 1.1 The date of last overhaul and the overhaul periodicity stipulated by the ECM must be indicated on a maintenance plate as defined in Appendix 11.
- 1.2 A wagon's overhaul period may be extended by 3 months if the keeper so decides, in which case the wagon shall receive the "+3M" marking.
- 1.3 Specific provisions for tank wagons:Tank wagons for which the date (end of month) of the next tank test has become due (Appendix 11, point 6.4) shall be handled in accordance with Appendix 9:

<sup>1)</sup> In accordance with UIC Leaflet 543

### D - TRANSPORT AND STORAGE OF PARTS

## 0 Principle

When wagon parts are transported, transhipped and stored before they are fitted to wagons, after their removal and in preparation for being sent back to the wagon keeper, particular care must be taken to ensure that their inner components remain undamaged and their surfaces and anti-corrosion coatings intact.

### 1 Wheelsets

#### **Storage**

- When stored side-by-side on the track, there must be no contact in the wheel profile area. Flange-toflange contact is permissible.
- When stored in staggered formation (with double rail) there must be no contact between axle-box / flange or flange / axle shaft.
- When storing wheelsets in loading cradles, similar precautions must be taken.
- Storage on flat surfaces is permissible if the wheelsets are resting on suitable materials (wood, rubber, plastic) so that the surfaces in contact are not damaged.
- The wheelsets must be placed and moved in such a way that no damage can occur to the wheelset or its component parts.
- Wheelsets shall be secured against rolling away using wheel scotches, scotch blocks or hollow seats in the track.
- Stacking of wheelsets is permissible, if the above-mentioned provisions are applied for storage. Any axle-to-axle contact is forbidden.

#### **Transport**

- During transport by fork-lift truck, the tines of the fork and their ends must be fitted with protective padding. Damage resulting from wheelsets rolling off the forks should be prevented.
- If load handling attachments are used, the wheelsets must not be damaged as a result.
- Wheelsets should be transported between workshops and spare parts centres in loading cradles wherever possible. The wheelsets must be loaded and secured in such a way that there is no possible contact between them during transit.

# 2 Other parts

- Buffers shall be stored in such a way that no water is able to penetrate between the buffer casing and the plunger.
- If parabolic springs are transported directly by fork-lift truck, the tines of the fork and their ends must be fitted with protective padding (rubber inserts) to avoid damaging the anti-corrosion coating.

# Appendix 10 – Annex 1

# SIGNS INDICATING OUT-OF-ROUNDNESS ON WHEELS

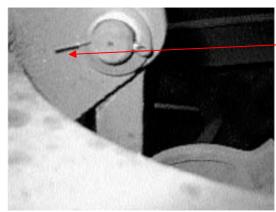


Fig. 1 Sheared-off pin

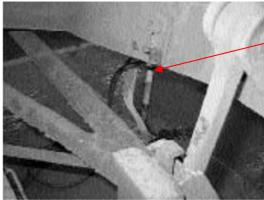


Fig. 2 Broken safety stirrup

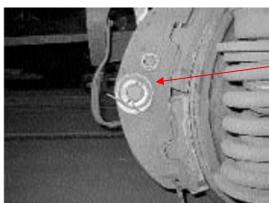


Fig. 3
Shiny traces on the brake triangle end washer

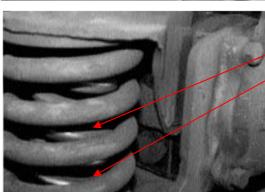
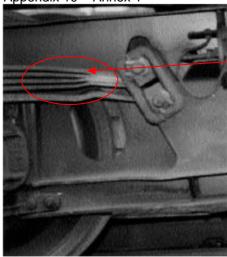


Fig. 4
Shiny traces on the load spring

Appendix 10 - Annex 1



Areas shiny with wear, visible from the outside, on the friction points of the spring leaves of parabolic spring suspensions

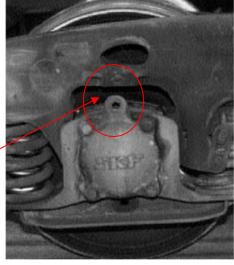


Fig. 6 Lifting safety catch missing or loose

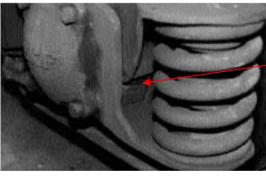


Fig. 7
Manganese wear plates on bogies and axle-boxes detached

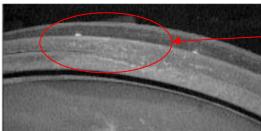


Fig. 8
Irregular contact surface on the edge of tyred wheel rim

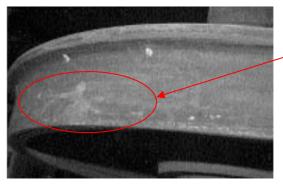
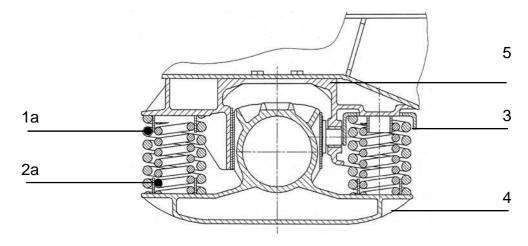


Fig. 9 Major irregular crushing of the edge of the tyred wheel rim

# Appendix 10 – Annex 2

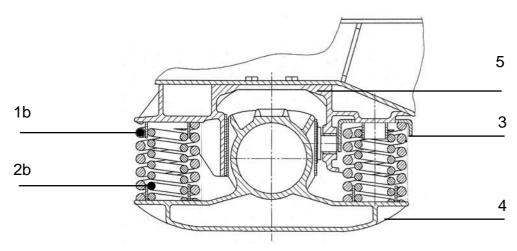
## **DIAGRAM OF THE Y25 BOGIE SUSPENSION**

Figure 1 – Bogie with springs for axle-load of 20 tonnes



- 1a tare spring for 20 taxle-load, right-wound
- 2a load spring for 20 t axle-load, left-wound
- 3 spring cap
- 4 axle-box
- 5 axle-box guide piece

Figure 2 – Bogie with springs for axle-load of 22.5 tonnes



- 1b tare spring for 22.5 taxle-load, left-wound
- 2b load spring for 22.5 t axle-load, right-wound
- 3 spring cap
- 4 axle-box
- 5 axle-box guide piece

## Appendix 10 – Annex 3

## **EUROPEAN VISUAL INSPECTION CATALOGUE (EVIC) FOR WHEELSETS**

### **Preamble**

1. The documents contained in this annex are exact copies of the procedures agreed by the Joint Sector Group for ERA Task Force on wagon/wheelset maintenance as regards the visual inspection of wagon axles, except for modifications of the wording of point 2.1 and 2.6 of chapter B hereafter due to the time lag between the finalisation of the work of the Joint Sector Group and the effective implementation of EVIC in the GCU.

### Chapter A:

European visual inspection catalogue (EVIC) for wagon axles (version V 2.11)

#### Chapter B:

Implementation guide for the European visual inspection catalogue (EVIC) for wagon axles (version V 2.2)

- 2. Axles requiring removal following EVIC must be marked in a clearly visible and indelible manner with "EVIC", the defect code and the number of the corresponding wheelset. This data must also be noted on Form H<sup>R</sup> (Appendix 7 of the GCU) when placing an order for replacement wheelsets from the wagon keeper.
- 3. If a wagon is sent to the workshop because of axle damage according to Appendix 9 of the GCU, the axles of the wheelsets concerned shall not be subjected to visual inspection. Only the provisions of Appendix 10 of the GCU on corrective and preventive maintenance shall be applicable to these wheelsets.
- 4. The cost of the visual inspection of axles according to Chapters A and B of the present Appendix shall be borne by the keeper of the wagon inspected.

# A European visual inspection catalogue (EVIC)

The following pages represent the complete defect catalogue.

### EUROPEAN VISUAL INSPECTION CATALOGUE (EVIC) FOR FREIGHT WAGON AXLES

### DAMAGE CATEGORY

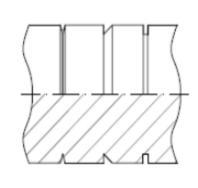
	Painted axles	
<b>30</b>	No defects	OK
31	Mechanical damage sharp edged circumferential fluting	X (not ok)
<b>32</b>	Mechanical damage smooth edged circumferential groove	X (not ok)
33	Mechanical damage sharp edged notching	X (not ok)
<b>34</b>	Mechanical damage cracks	X (not ok)
35	Surface damage large and heavily corroded areas	X (not ok)
<b>36</b>	Surface damage single, deeply pitted corrosion scars	X (not ok)
<b>37</b>	Coating damage with or without corrosion	C
	Unpainted axles	
40	No defects	OK
41	Mechanical damage sharp edged circumferential fluting	X (not ok)
<b>42</b>	Mechanical damage smooth edged circumferential groove	X (not ok)
43	Mechanical damage sharp edged notching	X (not ok)
44	Mechanical damage cracks	X (not ok)
45	Surface damage very heavy, deep and large corrosion	X (not ok)
46	Surface damage single, deeply pitted corrosion scars	X (not ok)
	All axles	
<b>50</b>	Abutment area	X (not ok)

### **CRITERIA FOR PAINTED AXLES**

30 No or	admissible defects found on the axle surface - smooth pitting	Painted axles
Salient inf	ormation:	
Decision:	Pitting may occur either round the entire perimeter or intermittently and is characterised by smooth with no sharp transitions. This type of pitting may arise in the course of maintenance work. The anti-undamaged.	•
	Pitted axles whose coating is nevertheless undamaged may remain on the vehicle	
		OK



31 Mech	anical damage – sharp edged circumferential fluting	Painted axles
Salient in	formation:	
	Flutes are characterised by sharp edged circumferential sharp-edged transitions.	
	Mechanical damage to the base material in the form of fluting is inadmissible.	
<b>Decision:</b>	·	
	Check on the wagon why this damage could have occurred and repair accordingly	
	Remove from service according	Case A
		X







32 Mech	anical damage – smooth edged circumferential grooves	Painted axles
Salient in	formation:	
	Characterised by smooth transitions in the edges (GCU Annex 9, 1.6.2). Pitting that arises during operation (caused e.g. by brake lever connectors dragging) involves damaged anti-corrosion coal.	
<b>Decision:</b>	Check on the wagon why this damage could have occurred and repair accordingly	
	Remove from service	Case B
	if there is damage to the base material > 1mm: (acc. GCU)	Case A
		X









33 Mech	anical damage – sharp edgednotching	Painted axles
Salient in	formation:	
	Sharp edged notches occur locally and are characterised by sharp-edged transitions.	
	Mechanical damage to the base material in the form of notching is inadmissible.	
<b>Decision:</b>		
		~
	Remove from service (according to GCU criteria)	Case A
		X







34 Mechanical damage	e – cracks	Painted axles
<b>Salient information:</b>		
Cracks occur le	ocally on the shaft material (not on the painting) and are characterised and vis	ible by fine lines.
Mechanical dar	mage to the base material in the form of cracks is inadmissible.	
Decision:		
Remove from s	ervice	Case A
		X

35 Surfa	ce damage – large and heavily corroded areas	Painted axles
Salient in	formation:	
	Surface damage to base material in form of large and heavily corroded areas (old corrosion pr	otection) is inadmissible.
<b>Decision:</b>		
	Remove from service	Case B
		X





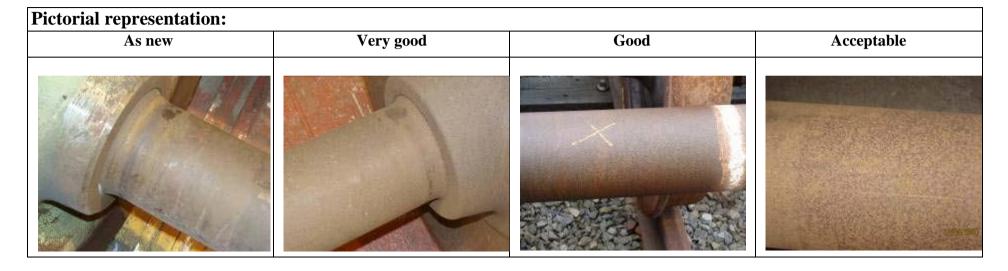


36 Surfac	36 Surface damage – single, deeply pitted corrosion scars Pain	
Salient inf	ormation:	
Decision:	Surface damage to the base material in the form of marked, local corrosion scars (resulting e.g. from inadmissible.	om chemical effects) is
	Remove from service	Case B
		X

37 Coating damage – with or without corrosion	Painted axles
Salient information:	
Minor lack of an anti-corrosion coating, whether corrosion is involved or not.	
Decision:	
Leave in service acc. case C and/or repair the damage in situ on the wheelset	Case C
	С

### **CRITERIA FOR UNPAINTED AXLES**

40 No def	ect - admissible surface appearance	Unpainted axles
Salient inf	ormation:	
	There exist maintenance rules that do not require any anti-corrosion protection. Axles and wl cases and show a thin and uniform layer of rust on their surfaces in service.	heels stay unpainted in such
<b>Decision:</b>	Deep corrosion is not accepted.	
	Leave in service wheelset "as new", "very good", "good" and "acceptable"	
		OK



41 Mech	anical damage – sharp edged circumferential fluting	<b>Unpainted axles</b>
Salient inf	formation:	- L
	Flutes are characterised by sharp edged circumferential sharp-edged transitions.	
	Mechanical damage to the base material in the form of fluting is inadmissible.	
<b>Decision:</b>		
	Check on the wagon why this damage could have occurred and repair accordingly	
	Remove from service according	Case A
		X

42 Mech	anical damage – smooth edged circumferential grooves	Unpainted axles
Salient inf	formation:	
	Characterised by smooth transitions in the egdes (GCU Annex 9, 1.6.2). Pitting that arises during operation (caused e.g. by brake lever connectors dragging) involves damaged anti-corrosion coal.	C
<b>Decision:</b>		
	Check on the wagon why this damage could have occurred and repair accordingly	
	Remove from service	Case B
	if there is damage to the base material > 1mm: (acc. GCU)	Case A
		X









43 Mechanical damage – sharp edgednotching		<b>Unpainted axles</b>
Salient in	formation:	
	Sharp edged notches occur locally and are characterised by sharp-edged transitions.	
	Mechanical damage to the base material in the form of notching is inadmissible.	
<b>Decision:</b>		
	Remove from service (according to GCU criteria)	Case A
		X







44 Mechanical damage – cracks		<b>Unpainted axles</b>	
Salient informatio	n:		
Crack	s occur locally and are characterised and visible by fine lines.		
Mecha	nical damage to the base material in the form of cracks is inadmissible.		
<b>Decision:</b>			
Remov	ve from service	Case A	
		X	

45 Surfa	ce damage – large and heavily corroded areas	<b>Unpainted axles</b>	
Salient in	ormation:		
	Surface damage to base material in form of large and heavily corroded areas (old corrosion protection) is inadmissible.		
<b>Decision:</b>			
	Remove from service	Case B	
		X	



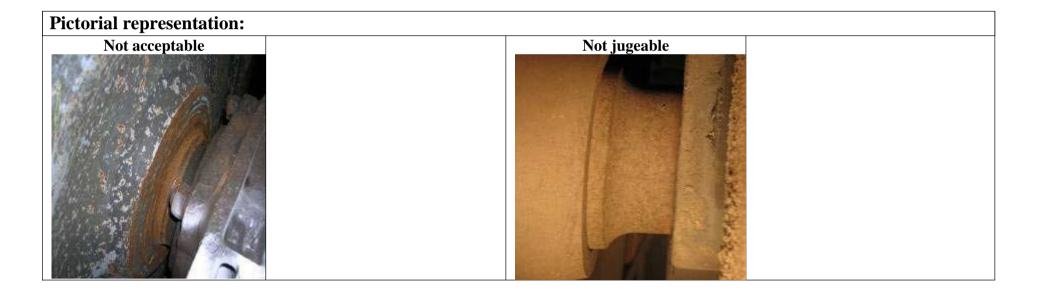




46 Surface damage – single, deeply pitted corrosion scars  Un		<b>Unpainted axles</b>
Salient inf	ormation:	
Decision:	Surface damage to the base material in the form of marked, local corrosion scars (resulting e.g inadmissible.	g. from chemical effects) is
	Remove from service	Case B
		X

### **ABUTMENT AREA**

50 Abutment area	All axles	
Situation:		
Normally, the abutment area cannot be inspected sufficiently for wheelsets mounted in the wa	agon	
Recommendation:		
Only if there is a clear indication on mechanical or corrosion damages		
Take wheelset out	Case A	
	X	
If not judgeable		
Leave wheelset in service		
	OK	



### B Implementation guide

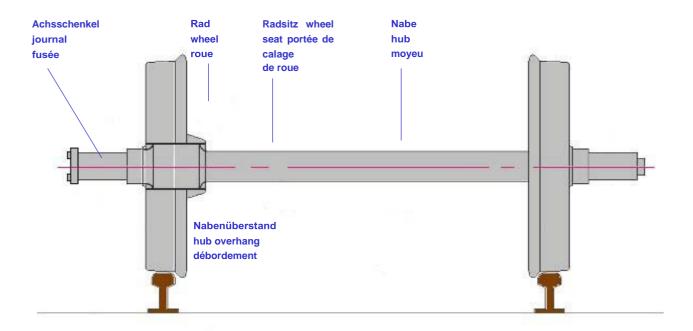
The following pages represent the complete implementation guide

### IMPLEMENTATION GUIDE FOR THE EUROPEAN VISUAL INSPECTION CATALOGUE (EVIC) FOR FREIGHT WAGON AXLES

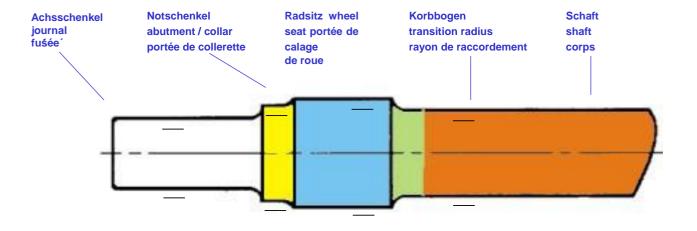
### **Table of Contents**

- 1. Definitions
- 2. Basics and preparing inspections
- 3. Conducting the Visual Inspections

### 1. Definitions



### **Wheelset**



**Axle** 

In the EVIC procedure instructions, the meaning of several expressions is as follows:

Replace = take the wheelset out of the wagon (and repair it in a suitably competent workshop, if possible)

Repair = repair the damage in situ (wheelset mounted) according to the relevant rules

Remove from service = replace or repair (in situ if possible) according to the criteria

### 2. Basics

### 2.1 Mandating and invoicing the EVIC inspection

The keeper must take over the costs for executing the EVIC and potentially for a required change of the wheelset.

The RU or its auxiliary must send the keeper the EVIC code for the operation performed on the wagon (as per Appendix 10, Annex 6) within one month of the wagon exiting the workshop.<sup>1)</sup>

In case of a replacement of "EVIC failed" wheelset, workshop and keeper need to communicate according to appendix 7 (Model H<sup>R</sup>).

### 2.2 Staff qualifications

The inspections have to be conducted by staff qualified in application of this Visual Inspection Catalogue.

It is not necessary for the operatives conducting such visual inspections to be qualified as NDT visual inspectors on the basis of a standard.

The staff involved in this inspection should be trained one day for the correct use of this procedure.

It is under the responsibility of the workshop to update a list of trained workers for the use of the present procedure.

### 3. Conducting the Visual Inspections

### 3.1 Execution of the Visual Inspections

The Visual Inspection of the freight wagon's axle shafts for damage to material and coating (if existing) is mandatory

- during light maintenance
- each time the wagon is in a workshop (not mobile team)

and if one of the following conditions is fulfilled:

- the wagon is on a pit or
- the wagon is lifted

In case of non judgeable defects (not sufficiently detailed by the descriptions in the EVIC), the executor of the EVIC inspection must contact the keeper for further instructions.

A replacing wheelset for a sorted out axle must be in an "EVIC ok" status.

<sup>1)</sup> Amendement entering into force: 01.04.2017

The EVIC doesn't replace existing maintenance rules. First, existing maintenance rules must be applied, then the EVIC check. If an axle is sorted out with current maintenance rules, it is not necessary to apply the EVIC.

The visual inspection covers the complete area of the axle-shaft surface between the wheels. See special instructions for the abutment area in the EVIC.

The inspection area is to be examined for

mechanical damage (fluting, pitting and notching, cracks)
 surface damage (areas eaten away, corrosion scars)

coating damage (with and without corrosion) if coating system existing

Reference images in EVIC (typical damage features) are used for identifying inadmissible forms of damage.

It is not foreseen to clean the axle. In case of doubt, clean axle (locally) to allow examination

If natural light intensity is too poor, a supplementary white light source must be used in order to obtain an adequate visibility on the axle.

Axle shafts with inadmissible forms of damage are to be repaired according to the prescriptions, if possible. Otherwise, the axles must be replaced.

An example for an adequate position for the staff conducting the visual inspection is given in the figure below.

If the wheelset cannot rotate (if the wagon is not lifted up), the visibility of the full surface of the axle must be assured in a different way.

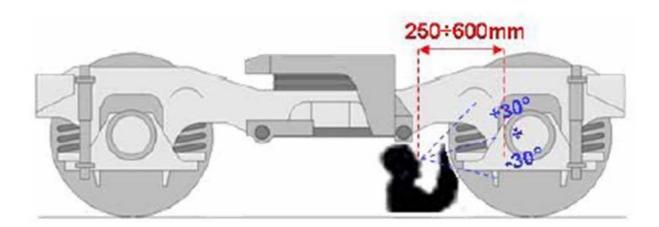


Figure 2 - Inspection angle and distance

### 3.2 Actions to be taken after inspection (cases)

The following cases describe the actions to be taken after a Visual Inspection of the axle:

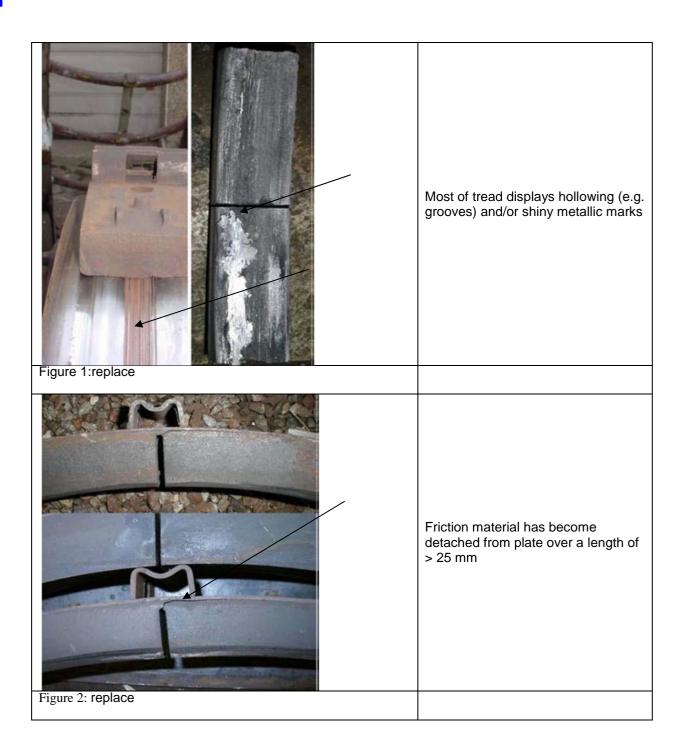
- A Remove the wheelset from service without delay
- B Remove the wheelset from service after unloading the wagon and/or sending back to home workshop
- C Leave wheelset in service until the next revision/overhaul of the wagon or repair the damage in situ on the wheelset.

In the next revision/overhaul, the remove from service is mandatory

Remove from service = replace or repair (in situ if possible) according to the criteria.

### Appendix 10 - Annex 4

### COMPOSITE BRAKE BLOCKS: WHEN TO REPLACE AND NOT TO REPLACE





Incipient cracking of > 25 mm parallel to the wheel circumference

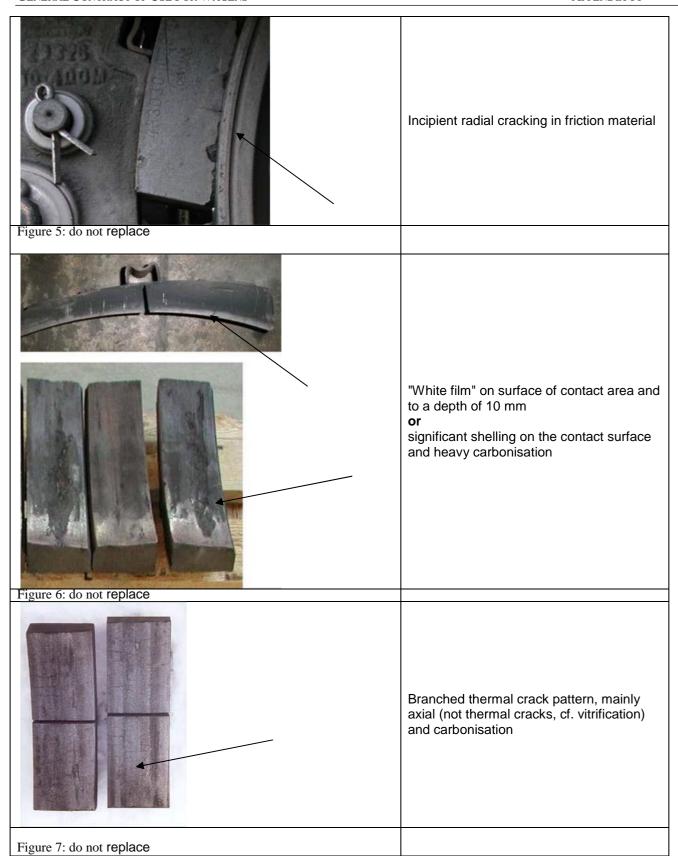
Figure 3: replace



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

Exchange if smallest thickness is below 10 mm

Figure 4: replace



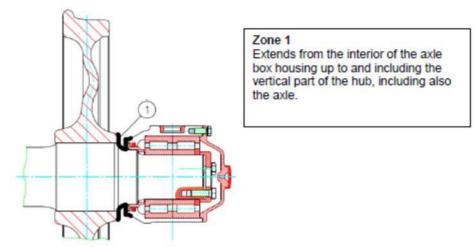
### Appendix 10 - Annex 5

### Verification and handling of grease/oil deposits on wheels and axle boxes

Concerns wagons withdrawn from service due to loss of lubricant or on which a lubricant leak is recorded in the context of an axle/running gear inspection (e.g. EVIC).

### General remark:

The procedure described hereafter must only be applied if no "hot box" or "temperature" notification has been issued by the hot box detection system!

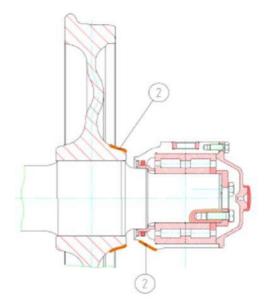


Lubricant on the axle box housing - zone 1

Axles with grease or oil in "zone 1" may remain under the wagon subject to the following measures being taken in the locations concerned:

### Measures to be taken:

- The wagon's keeper must be informed. It is the keeper's job to provide instructions to apply a marking to the axle or to enter it in the axle database, and to decide whether the axle may remain under the wagon or whether it should be replaced.
- ☐ If the keeper says the axle can remain under the wagon, the excess grease/oil is to be wiped away.



### Zone 2 Extends

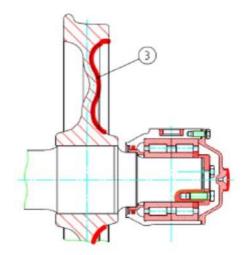
- from the end of zone 1 to the flat part of hub (over approx. 1 cm)
- over the oblique part of the axle box housing adjoining zone 1

### Lubricant on the axle box housing - zone 2

Axles with grease or oil in "zone 2" may remain under the wagon subject to the following measures being taken in the locations concerned:

### Measures to be taken:

- The wagon's keeper must be informed. It is the keeper's job to provide instructions to apply a
  marking to the axle or to enter it in the axle database, and to decide whether the axle may
  remain under the wagon or whether it should be replaced.
- ☐ If the keeper says the axle can remain under the wagon, the excess grease/oil is to be wiped away.



Zone 3 Covers the part of the wheel centre adjoining zone 2

### Projections of oil/grease on the axle box housing - zone 3

For axles with lubricant projections on the wheel centre in "zone 3", **IF THESE PROJECTIONS DO NOT EMANATE FROM the hub or the axle box** but **begin beyond the axle box housing**,

if traces of lubricant, emanating radially from the axle box housing, are observed scattered irregularly across "zone 3".

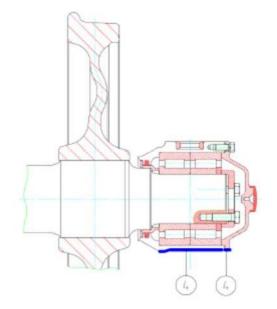
the axles may remain under the wagon subject to the following measures being taken in the locations concerned:

### Measures to be taken:

- The wagon's keeper must be informed. It is the keeper's job to provide instructions to apply a marking
  to the axle or to enter it in the axle database, and to decide whether the axle may remain under the
  wagon or whether it should be replaced.
- ☐ If the keeper says the axle can remain under the wagon, the excess grease/oil is to be wiped away.

### Oil/grease leakage distributed regularly across the whole wheel centre circumference - zone 3

If the lubricant emanates radially from the axle box housing and spreads in a uniform manner across the wheel body, wheel centre or intersection between the wheel body and tyred rim, the axle must be removed and replaced, applying Label H<sup>R</sup>.



### Zone 4

Covers the part of the wheel centre adjoining zone 2, the underside of the axle box housing, and the outer part of the axle box cover

### Oil/grease leakage on the bottom of the axle box housing - zone 4

If lubricant is observed in "zone 4", the location from where the grease/oil is leaking is to be identified. The procedure to be applied varies depending on the origin of the problem:

- a. the grease/oil emanates from zones 1 and 2, within the axle box housing, and is leaking underneath the axle box housing;
- b. there are traces of grease/oil on the axle box cover, running under the axle box housing;
- c. the axle box housing is cracked/broken.

### Measures to be taken if points a or b apply

- The wagon's keeper must be informed. It is the keeper's job to provide instructions to apply a marking
  to the axle or to enter it in the axle database, and to decide whether the axle may remain under the
  wagon or whether it should be replaced.
- ☐ If the keeper says the axle can remain under the wagon, the excess grease/oil is to be wiped away.

### Measures to be taken if point c applies

☐ Remove the axle from the wagon concerned and replace it, applying Label H<sup>R</sup>.

### Appendix 10, Annexe 6

### **CODING OF INTERVENTIONS**

This list comprises the interventions possible under the GCU. They must be communicated to the keeper by the RU or its auxiliary performing the work, using the coding given in column 2. All interventions are to be communicated, irrespective of the type of damage concerned. Codes shall be indicated on the invoice and/or sent separately to the keeper. Any additional information necessary and measurement values may be communicated with the codes or in a separate list. All reports mentioned shall be sent immediately.

Structure of the list:

Column 1, GCU intervention code: the intervention codes shall be sent to the keeper.

Example meaning of code CU12345

CU: Indicates that the code belongs to the GCU, Appendix 10

1: Section of the GCU, Appendix 9 or Appendix 10

234: Sequence number

5: Substance of intervention: 0....inspect

1.....repair, reset (without welding)

2.....exchange

3.....weld

Column 2, action: description of action. May, if so desired, be sent with intervention code.

Column 3, other vital information: the measurement values indicated, position-related data, and any reports shall be communicated to the keeper.

Column 4, inspection as per Appendix 9: intervention corresponds to damage as described in Appendix 9 to the GCU.

Column 5, inspection as per Appendix 10: intervention corresponds to damage as described in Appendix 10 to the GCU.

GCU intervention code	Intervention(s)	Any additional information necessary	Inspection as per Appendix 9	Rules as per Appendix 10	
CU10010	Measure wheelset in accordance with points in section A1	axle number, value, measuring point	1.1.1, 1.3.1, 1.4, 1.7.1	1.1-1.6, 1.9, 1.18, 1.19	
CU10012	Replace wheelset if values measured not within tolerances	axle number, form H <sup>R</sup> , value, measuring points		1.1-1.6, 1.9, 1.18, 1.19	
CU10020	Visually inspect wheelset	axle number,	1.2.1, 1.3.2, 1.6.1, 1.6.3, 1.8.2	1.6-1.8, 1.10-1.15.1	
CU10022	Replace wheelset following visual inspection	axle number, form H <sup>R</sup>	1.5	1.6-1.8, 1.10-1.15.1	
CU10150	Check against EVIC	Axle number 3)		1.15.2	
CU10152	Replace wheelset following EVIC inspection	Axle number, Form H <sup>R 4)</sup>		1.15.2	
CU10160	Check that tyre is not loose		1.1.2-1.1.6	1.16	
CU10162	Replace wheelset following check that tyre has not come loose	axle number, form H <sup>R</sup>		1.16	
CU10170	Measure wheelset in accordance with 1.17 (three-point measurement)	axle number, values		1.17	
CU10172	Replace wheelset if values measured fall outside 1.17 tolerances	axle number, form H <sup>R</sup>		1.17	
CU10200	Check there is no loss of grease/oil	axle number, position of axle box	1.8.1	1.20	
CU10201	Wipe clean any lubricant loss as per Annexe 5	axle number, position of axle box		1.20	
CU10281	Reprofile monobloc wheel	axle number, value, measurement report		1.28	
CU10322	Replace wheelset following hot box	axle number, form HR	1.2.2.2,1.8.3	1.32	
CU20010	Visually inspect leaf-spring suspension	position of axle box,	2.1.1-2.1.4, 2.1.6	2.1, 2.2, 2.4, 2.7	
CU20012	Replace leaf-spring suspension spring	position of axle box, form H, indicate reason for change	2.1.1-2.1.4, 2.1.6	2.1, 2.2, 2.4, 2.7	
CU20030	Check helical springs	position of axle box,	2.5.1, 2.5.2.x	2.3, 4.20-4.23	
CU20032	Replace helical spring	position of axle box, form H, indicate reason for change		2.3, 4.20-4.23	
CU20050	Check distance between spring buckle and fixed part of bogie frame or wagon	position of axle box,	2.1.5, 2.5.6	2.5	
CU20051	Rectify distance between spring buckle and fixed part of bogie frame or wagon	position of axle box,	2.1.5, 2.5.6	2.5	
CU20060	Check for contact marks between spring buckle and fixed part of bogie frame or wagon	position of axle box,	2.4.4, 2.5.6	2.6	
CU20061	Rectify causes and paint any contact marks between spring buckle and fixed part of bogie frame or wagon	position of axle box, detail activities	2.4.4, 2.5.6	2.6	
CU20080	Check elements composing the elastic suspension	position of axle box,	2.4.2- 2.4.4	2.8	
CU20082	Replace elements composing the elastic suspension	position of axle box, indicate reason for change	2.4.2- 2.4.4	2.8	
CU20092	Replace suspension spring shaft	position of axle box, indicate reason for change	2.4.3	2.8	
CU30030	Check main brake pipe			3.3	
CU30040	Check disc brake indicator			3.4	
CU30050	Check brake rigging and mechanical parts		3.1.1	3.1-3.2, 3.6, 3.13	

<sup>3)</sup> Amendement entering into force : 01.04.2017

CU30060	Chock cofety ctirrups		3.1.2	3.5
	Check safety stirrups		3.1.2	
CU30061	Right/straighten safety stirrup			3.5
CU30062	Replace safety stirrup		3.1.2	3.5
CU30070	Check brake blocks		3.2	3.6-3.8
CU30072	Replace brake blocks		3.2	3.6-3.8
CU30100	Check brake hoses		3.3.2	3.9-3.10
CU30102	Replace brake hoses		3.3.2	3.9-3.10, 3.17
CU30110	Check height of brake hoses relative to rail			3.11
CU30111	Rectify height of brake hoses relative to rail			3.11
CU30120	Check cut-off cock		3.3.5	3.12
CU30121	Replace cut-off cock		3.3.5	3.12
CU30131	Remove or secure damaged or detached brake parts	indicate which parts have been removed or secured		3.13
CU30150	Check handbrake		3.5	3.15
CU30151	Repair handbrake		3.5.1	3.15
CU30190	Perform brake test as per UIC 543-1	brake test report		3.19
	·			
CU30200	Inspect brake release pull		3.1.5	3.20
CU30202	Replace brake release pull		3.1.5	3.20
CU40010	Check wagon underframe		4.1.1, 4.1.2	4.1
CU40020	Check flanges of solebars, headstocks and intermediate cross-bars subject to stress from the coupler		4.1.1, 4.1.2	4.2
CU40030	Check welding on wagon underframe		4.1.1, 4.1.2	4.3
CU40033	Repair wagon underframe by welding	indication as per EN 15085-2	4.1.1, 4.1.2	4.3
CU40060	Check spark arrestor plates		3.4	4.6, 4.7
CU40061	Repair spark arrestor plate	position of axle box	3.4	4.6, 4.7
CU40062	Replace spark arrestor plate	position of axle box	3.4	4.6, 4.7
CU40080	Check axle guard and tie		4.2.x, 4.3.1, 4.4.x	4.8-4.10
CU40081	Repair axle guard		4.2.x, 4.3.1	4.8-4.10
CU40082	Replace axle guard		4.2.x, 4.3.1	4.8-4.10
CU40102	Replace axle guard tie	position of axle box	4.2.x, 4.3.1	4.8-4.10
CU40110	Check suspension spring brackets		4.5.1	4.11
CU40111	Repair suspension spring brackets		4.5.1	4.11
CU40112	Replace suspension spring brackets	position of axle box	4.5.1	4.11
CU40120	Check bogies	1	4.7.x	4.12-4.15
		bogie number or position of		
CU40130	Check welds on bogie frames	axle box	4.7.x	4.12-4.15
CU40133	Repair bogie frame by welding	bogie number or position of axle box	4.7.x	4.12-4.15
CU40140	Check side bearer fastenings		4.8.3	4.14
CU40141	Restore side bearer fastenings to working order		4.8.3	4.14
CU40142	Replace side bearer parts		4.8.3	4.14

			T	1
CU40160	Check bogie centre casting	bogie number or position of axle box	4.6.1	4.16
CU40162	Replace bogie centre casting	bogie number or position of axle box	4.6.1	4.16
CU40170	Check kingpin	bogie number or position of axle box	4.6.1	4.17
CU40172	Replace kingpin	bogie number or position of axle box	4.6.1	4.17
CU40180	Check axle guard guiding surface		4.4.x	4.18
CU40183	Weld axle guard guiding surface	position of axle box	4.4.x	4.18
CU40190	Check earthing braid		4.6.2.x	4.19
CU40192	Replace earthing braid	bogie number or position of axle box	4.6.2.x	4.19
CU40322	Replace any rivets, screws or bolts which are loose or missing from the axle guard securing	position of axle box		4.32
CU40331	Clean contact surface of the suspension shock absorber	position of axle box		4.33
CU40343	Weld wear plate onto bogie	bogie number or position of axle box		4.34
CU50010	Measure buffing height	height per buffer	5.1.2	5.1
CU50030	Check buffers, "starred points"		5.1.1, 5.2.x, 5.3.x, 5.4.x, 5.5.x	5.3, 5.7, 5.8, 5.9
CU50040	Check buffers: fastening, spring, casing		5.1.1, 5.2.x, 5.3.x, 5.4.x, 5.5.x	5.4, 5.5, 5.6
CU50032	Replace buffer fastening bolt		5.4.4.x	5.3
CU50081	Lubricate buffer plates		5.2.3.1	5.8
CU50091	Grind buffer plates following detection of grooving		5.2.3.2	5.9.1, 5.9.2
CU50110	Check draw hook and screw coupler		5.6.x	5.11, 5.12, 5.13, 5.14, 5.19
CU50111	Rectify height of screw coupler relative to rail		5.6.3	5.11
CU50132	Replace screw coupler			5.13
CU50141	Lubricate screw coupling			5.14.1
CU50142	Replace draw hook		5.7.1.x	5.13
CU50150	Check draw bar		5.8.1	5.15
CU50170	Check traction		5.6.2	5.17, 5.18
CU50172	Replace traction		5.6.2	5.17, 5.18
CU50200	Check screw coupler dummy hook		5.6.2	5.20
CU50201	Right/straighten screw coupler dummy hook		5.6.2	5.20
CU50202	Replace screw coupler dummy hook		5.6.2	5.20
CU50213	Repair draw bar temporarily by welding			5.21
CU50220	Check shock absorber		5.9.1	5.22
CU50221	Repair shock absorber		5.9.1	5.22
CU50042	Replace buffers at one end			5.23
CU50252	Replace damaged or distorted anti-crash device		5.5.2	5.26
CU50262	Replace buffer fitted with damaged or distorted anti-crash device with standard buffer		5.5.2	5.26
CU60020	Check wagon body		6.1.3.x, 6.1.4.x, 6.1.7.9	6.1,6.2
CU60021	Repair wagon body		6.1.3.x, 6.1.4.x	6.2
CU60022	Repair wagon body following gauge-fouling		6.1.3.x ,6.1.4.x	6.2

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CU60240	Check drop sides	6.4.1.x	6.24	
CU60241	Restore drop side to working order	6.4.1.x	6.24	
CU60250	Check hinges, pins and securing devices of drop sides	6.4.2.x		
CU60251	Repair hinges, pins and securing device of drop sides	6.4.2.x	6.25	
CU60260	Check stanchions	6.4.3.x	6.26, 6.46	
CU60261	Restore stanchions to working order	6.4.3.x	6.26, 6.46	
CU60262	Replace stanchions	6.4.3.x	6.26, 6.46	
CU60270	Check folding bolsters	6.4.4.x	6.27	
CU60271	Repair folding bolsters	6.4.4.x	6.27	
CU60280	Check deformation on tank	6.5.1.x, 6.5.2.x	6.28	
CU60285	Check tank, "starred points"	6.5.1.x, 6.5.2.x, 6.5.3.x, 6.5.5.3, 6.5.5.6, 6.5.5.7, 6.5.5.8, 6.5.5.9, 6.5.5.10	6.28-6.32, 6.34, 6.35, 6.37	
CU60310	Check ladders, platforms and guard rails		6.31	
CU60311	Repair ladders, platforms and guard rails		6.31	
CU60320	Check tank cladding, sun-roofs and insulation	6.5.3.x	6.32	
CU60321	Repair tank cladding, sun-roofs and insulation	6.5.3.x	6.32	
CU60330	Check that tanks and their filling and emptying devices do not leak	6.5.5.x	6.33	
CU60331	Repair any leaks from tanks and their filling and emptying devices	6.5.5.1	6.33	
CU60342	Replace screw cap	6.5.5.3	.634	
CU60350	Check blind flange	6.5.5.6, 6.5.5.7, 6.5.5.8,6.5.5.9	6.35	
CU60351	Tighten blind flange	6.5.5.6, 6.5.5.7, 6.5.5.8, 6.5.5.9	6.35	
CU60352	Replace blind flange	6.5.5.6, 6.5.5.7, 6.5.5.8, 6.5.5.9	6.35	
CU60360	Check emergency control screw	6.5.5.12	6.36	
CU60370	Check indicator on emptying valve	6.5.5.10	6.37	
CU60380	Check dome hatch	6.5.6.2	6.38	
CU60390	Check mechanical sheeting and locking mechanism	6.6.1	6.39	
CU60391	Restore mechanical sheeting and locking mechanism to working order	6.6.1	6.39	
CU60400	Check hood locking system	6.6.2.x	6.40	
CU60401	Restore hood locking system to working order	6.6.2.x	6.40	
CU60410	Check moving headstock	6.6.3.1,6.6.3.2	6.41	
CU60411	Restore moving headstock to working order	6.6.3.1,6.6.3.2	6.41	
CU60420	Check sealing plates, plate bolts, securing chains and chain eyes	6.6.3.3	6.42	
CU60421	Restore sealing plates, plate bolts, securing chains and chain eyes to working order	6.6.3.3	6.42	
CU60430	Check swivel frame (ACTS)	6.6.4.1, 6.6.4.5, 6.6.4.6	6.43	
CU60431	Restore swivel frame (ACTS) to working order	6.6.4.1,6.6.4.5, 6.6.4.6	6.43	
CU60440	Check snap locks (ACTS)	6.6.4.2	6.44	
CU60441	Restore snap locks (ACTS) to working order	6.6.4.2	6.44	
CU60450	Check central lock (ACTS)	6.6.4.4	6.45	
CU60451	Restore central lock (ACTS) to working order	6.6.4.4	6.45	

CU60470	Check end boards and crossing gangways	6.6.5.3	6.47
CU60471	Repair end boards and crossing gangways	6.6.5.3	6.47
CU60472	Replace end boards and crossing gangways	6.6.5.3	6.47
CU60480	Check upper loading deck and indicator device	6.6.5.4, 6.6.5.5, 6.6.5.6, 6.6.5.7	6.48
CU60500	Check valves and hatches	6.6.6.1, 6.6.6.2	6.50
CU60501	Repair valves and hatches	6.6.6.1, 6.6.6.2	6.50
CU60510	Check locking and discharging system		6.51
CU60511	Repair locking and discharging system		6.51
CU61010	Check locking of container spigots		
CU61011	Repair container spigot locking system		
CU61012	Replace container spigot locking system		
CU61020	Check dividing wall		
CU61021	Repair dividing wall		
CU61030	Check securing systems (e.g. hoops)		
CU61031	Repair securing systems (e.g. hoops)		
CU61040	Check detachable accessories	6.1.7.7, 6.1.7.8	
CU61041	Replace detachable accessory with a part from company stocks	6.1.7.7, 6.1.7.8	

Definition of terms:				
Check	Act of assessing, verifying or measuring, and of judging and defining corrective measures			
Position of axle box	Position of the axle as indicated by the marking on the wagon. If there is no such marking, count from one end (choose which) of the wagon.			

# APPENDIX 11 TO THE GENERAL CONTRACT OF USE FOR WAGONS

### **INSCRIPTIONS AND SIGNS ON WAGONS**

*Version: 1-jan-2018* 

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#### 1 Introduction – General provisions

- 1.1 This appendix describes the inscriptions and signs to be affixed to freight wagons (referred to hereafter as wagons) and indicates where they should be positioned. The inscriptions and signs have been grouped together according to certain processes or operations: the loading and provision of wagons, combined transport (CT), train preparation, shunting, technical inspections, workshops and key warning signs but are not exclusively assigned to a specific process, specialist department or user.
- 1.2 Wagons must carry inscriptions and signs in specific places. They should be affixed in the language of the wagon keeper, using Latin characters and Arabic numerals. The inscriptions and signs must always be clearly visible. They should be placed on the side walls, if possible 1600 mm above rail level (height of the middle of the sign). For wagons without side walls, the inscriptions shall be carried on special boards. For the provisions regarding the mark plates on the tank wagons see UIC leaflet 573. No other meanings may be assigned to the inscriptions and signs.
- 1.2 Wagons on which the markings and signs are missing or illegible shall be dealt with in accordance with Annexes 9 and 10.
- 1.4 Inscriptions and signs other than those listed in this annex must be placed on parts of the wagon not occupied by these inscriptions.
  The lower left-hand corner of the side walls is reserved for affixing labels, with the exception of K and M labels.

#### 2.1 Wagon number, country of registration, keeper, type

The markings shall be made on the side of the wagon as follows (examples):

31 RIV 80 <u>D</u>-DB 0691 235-2 Tanoos 32 RIV 80 <u>D</u>-BASF 7369 553-4 Zcs 33 RIV 84 <u>NL</u>-ACTS 4796 100-8 Slpss

43 87 <u>F</u> 4273 361-3 Laeks

or

23 TEN

80 <u>D</u>-DRFC

7369 553-4

Zcs

31 TEN -RIV 80 <u>D</u>-DB 0691 235-2 Tanoos 33 TEN

84 <u>NL</u>-ACTS

4796 100-8

Slpss

When the wagon body does not provide sufficient surface area for this layout (flat wagons in particular) the markings shall be made as follows (example):

01	87	3320 644-7
RIV	F-SNCF	Ks

**Position**: on the left of each side wall, or the left of each solebar in the case of high-sided open wagons or on special boards in the case of wagons without side walls (e.g. tank wagons).

Meaning (based on the first example):

31 Fitness for interoperability (2 digits)

80 Country in which the wagon is registered (2 digits)

O691 Principal technical characteristics (4 digits)

Number of the wagon in its production series (3 digits)

-2 Self-check digit (1 digit)

The RIV marking on wagons means that the vehicle, in addition to having been approved against the rules in force, also meets the regulations of railway Technical Unity (TU) and the provisions of leaflets in the UIC Code and, as a result, satisfies all regulations applicable for its respective type in international rail traffic. These wagons are fully interoperable.

TEN New wagons which have obtained approval against the TSIs (Technical Specifications for Interoperability). The letters TEN (for Trans-European Network) may also appear alongside the RIV marking or additional markings indicating the vehicle gauge.

D Country in which the wagon is registered, in this case Germany

DB Wagon keeper (abbreviation); this information is compulsory if the full name of the company complete with address is not given.

Tanoos Reference to principal technical characteristics of the vehicle:

- T: Letter indicating wagon type (capital letter)
- anoos: identification letters; lower-case letters describing the principal features for the use of the wagon

#### N.B.:

- 1. Further details are given in UIC leaflet 438-2\*.
- 2. Wagons with more than 8 axles can still carry the RIV sign without satisfying the regulations on maximum load (see point 2.4) provided they meet all the other conditions of this appendix and of Appendix 9 and have no parts that are liable to encroach the vehicle gauge under any operating circumstances. Exceptions are authorised for these wagons in respect of the position of the markings.
- 3.\*\* For wagons meeting all the requirements of the Wagons TSI WAG, the pictogram



is used in conjunction with characters 2 or 3 of the wagon number and the "TEN" marking.

4.\*\* For wagons which are basically TSI WAG-compliant but which deviate in terms of their wheelbase or vehicle gauge, or which are subject to other operating restrictions when used in wagonload traffic, the pictogram



is used in conjunction with characters 4 or 8 of the wagon number and the "TEN" marking. In terms of their initial approval for placing in service, these wagons are subject to the conditions in force in all member states; however, under the OPE TSI specific agreements are to be concluded governing their use on individual member-state infrastructure.

- \* For RUs in EU member states, Annex P of the OPE TSI takes precedence as national law.
- \*\* Official part of GCU on 1 March 2014 due to voting and adoption procedure of the GCU.

# 2.2 Derogation plate

Figure 1

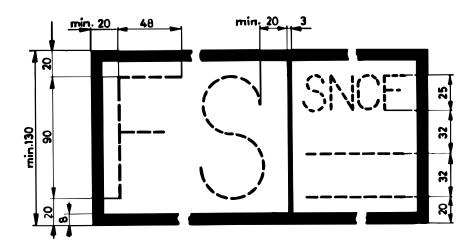


Figure 2

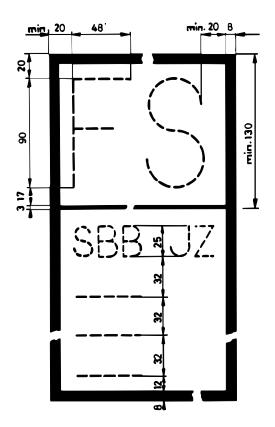


Figure 3

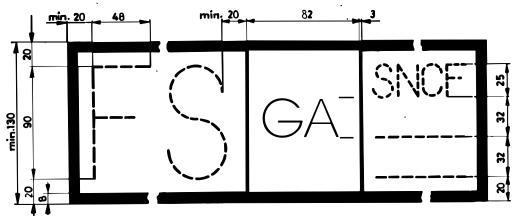
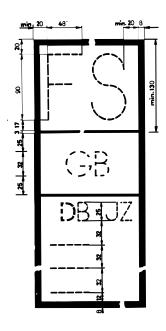


Figure 4



**Position**: On the right of each side wall.

Meaning:

Because they do not comply fully with the UIC Code, these wagons are not marked with the "RIV" sign. Their use is therefore subject to bi- or multilateral agreements between RUs. The initials of the parties to these agreements are entered in this box and these wagons may only be used by the RUs indicated. As such, they are not fully interoperable.

The letters GA or GB indicate the gauge to which the wagons were built, as described in **UIC leaflet 506** 

### 2.3 Maintenance plate

Figure 1

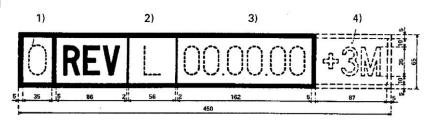
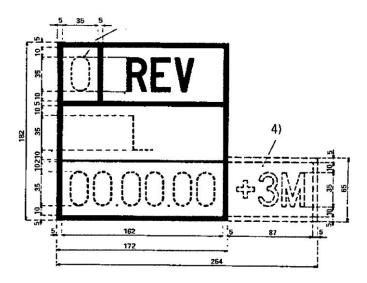


Figure 2



Position: In the middle of each solebar, or on the parts covering the solebar or on special

boards fixed at the same height.

Meaning: From this day, plus the extended validity period of 3 months if duly indicated, the

wagon formally loses its autorisation to run in normal service.

Maintenance plate validity period: see Appendix 10, paragraph C, point 1.3 for additional details

<sup>2)</sup> Identification mark of the workshop that carried out the maintenance work.

Date on which the work was carried out (day, month, year).

Additional marking in accordance with Appendix 10, paragraph C, point 1.3.3. To be applied only on the instructions of the keeper.

# 2.4 Signs indicating load limits

Figure 1

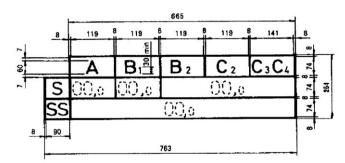


Figure 2

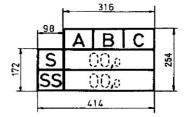


Figure 3

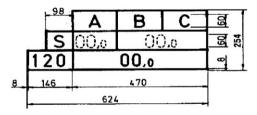


Figure 4

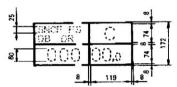


Figure 5

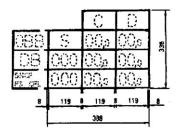


Figure 6

	Α	В	С
S	00x	00	<u>,0</u>
SS		3,0	

Figure 7

	Α	В	В₂	C <sub>2</sub>	<b>C</b> 3	C 4	D₂	D 3	D۷
S	00,a	00,0	00	<b>,</b> 0	00,s	00,a	00,5	ä	00,:
SS	00.s	00s	00	<b>.</b>	00,a	00,5	00.5	00,a	00,a

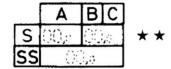
	re	

	Α	В	Βı	C2	<b>C</b> 3	C4
SS	00,0	00,0	00	),o	00,0	00,0

Figure 9\*

	Α	В	С	D		
S	00,0	00,0	00,0	0.00	**	***
120	00.0					

Figure 10\*



\* As an exception to this rule, the stars may also be positioned to the left of the load limit panel.

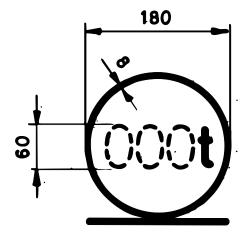
**Position**: On the left of each side wall.

Meaning:

- S Maximum load in t (tonnes) for wagons running in trains operated under S conditions (maximum speed 100 km/h) with no particular operating restrictions.
- SS Maximum load in t (tonnes) for wagons running in trains operated under SS conditions (maximum speed 120 km/h) with no particular operating restrictions.
- 120/00,0 Wagons only authorised to run in trains up to 120 km/h when empty (figures 3 and 9).
- Fig. 4, 5 Maximum load in t (tonnes) and maximum speed (in km/h) agreed between RUs and exceeding the load limit set out in the UIC Code.
- ★ ★ Maximum load in t (tonnes) for wagons authorised to run in trains up to 120 km/h with a brake that does not meet all the requirements for SS conditions.
- ★★★\* Maximum load in t (tonnes) for wagons authorised to run in trains up to 120 km/h with a brake that does not meet all the requirements for SS conditions. The wagons must be fitted with an automatic loadproportional braking system.
- Wagons should only carry the markings for line category D if, for that category of line, they can accommodate a higher maximum axle-load than for category C.
   Wagons should only carry the markings for line category E if, for that category of line, they can accommodate a higher maximum axle-load than for category D.
- **N.B. 2**: For wagons carrying the ★ ★ and ★ ★ signs, RUs shall define the necessary rules for the correct formation of the train (achieving the right brake percentage, timetable changes where appropriate, etc.).

<sup>\*)</sup> Marking \*\*\* for all new wagons meeting the corresponding conditions entering service from 1.1.2007.

### 2.5 Sign indicating the carrying capacity



**Position:** On the right of each solebar, or on parts covering the solebar or on special

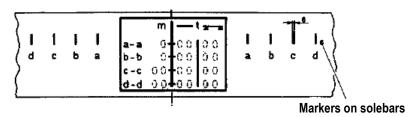
boards fitted at the same height as the solebars

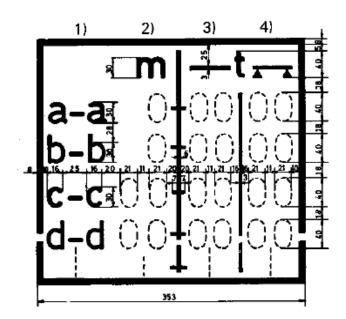
**Meaning:** Sign for wagons with a carrying capacity that is greater than the maximum load

marked, and for wagons with no maximum load marking [t].

# 2.6 Signs indicating concentrated loads distributed over supporting surfaces of different lengths

2.6.1 Example of concentrated loads spread over supporting surfaces of different lengths and loads resting on two separate points (width of bearing surface ≥ 2 m)





**Maximum value for different lengths:** 

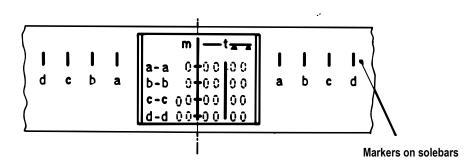
- of concentrated loads spread over the lengths of the supporting surface-
- of loads resting on two supporting points
- 1) Indication of the length of the supporting surfaces of the concentrated loads or distance between supporting points.
- 2) Distance, in metres, between the length markers.
- 3) Maximum value, in tonnes, of the concentrated loads.
- 4) Maximum value, in tonnes, of loads resting on two supporting points.

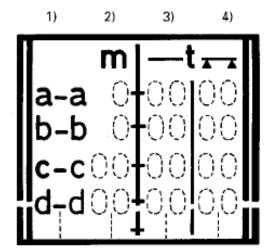
**Position:** In the middle of each solebar, or on parts covering the solebar or on special

boards fitted at the same height as the solebars.

Meaning: See point 2.6.2

2.6.2 Example of concentrated loads distributed over supporting surfaces of different length and loads resting on two separate points (width of bearing surface ≥ 1.20 m)





Maximum value for different lengths:

- of concentrated loads spread over the lengths of the supporting surface \_\_\_\_\_
- of loads resting on two supporting points
- 1) Indication of the length of the supporting surfaces of the concentrated loads or distance between supporting points.
- 2) Distance, in metres, between the length markers.
- 3) Maximum value, in tonnes, of the concentrated loads.
- 4) Maximum value, in tonnes, of loads resting on two supporting points

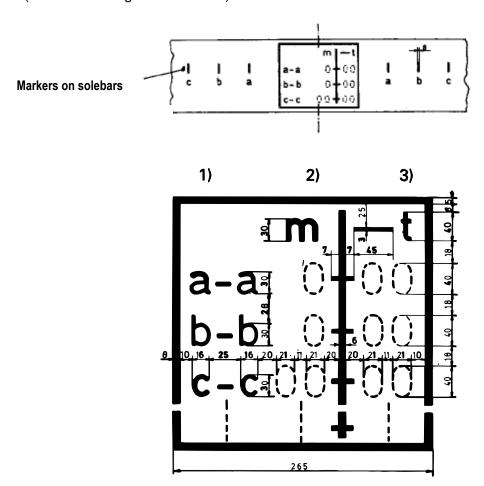
#### Position:

In the middle of each solebar, or on parts covering the solebar or on special boards fitted at the same height as the solebars.

Meaning of the figures shown in points 2.6.1 and 2.6.2:

On unified flat wagons, this sign indicates the maximum values for concentrated loads and loads resting on 2 supporting points according to the stated values for the length of supporting surfaces and distances in the UIC Code. This sign is optional for:other wagons which may, if required, carry the sign specified inpoints 2.6.1 or 2.6.2 or 2.6.3 or 2.6.4.

2.6.3 Example of concentrated loads distributed over supporting surfaces of different length (width of bearing surface  $\geq$  2 m)



#### Maximum value for different lengths:

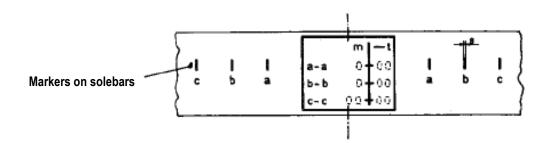
- of concentrated loads spread over the lengths of the supporting surface
- 1) Indication of the length of the supporting surfaces of the concentrated loads or distance between supporting points.
- 2) Distance, in metres, between the length markers.
- 3) Maximum value, in tonnes, of the concentrated loads.

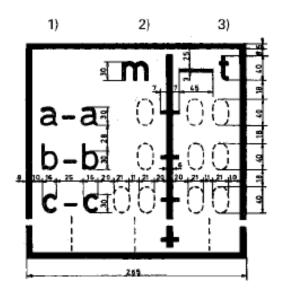
Position: In the middle of each solebar, or on parts covering the solebar or on special

boards fitted at the same height as the solebars.

**Meaning:** See point 2.6.4.

2.6.4 Example of concentrated loads distributed over supporting surfaces of different length (width of bearing surface ≥ 1.20 m)





#### Maximum value for different lengths:

- of concentrated loads spread over the lengths of the supporting surface -
- 1) Indication of the length of the supporting surfaces of the concentrated loads or distance between supporting points.
- 2) Distance, in metres, between the length markers.
- 3) Maximum value, in tonnes, of the concentrated loads.

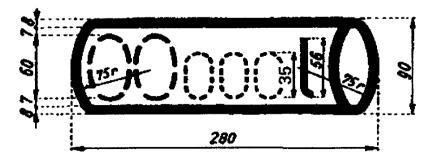
Position:

In the middle of each solebar, or on parts covering the solebar or on special boards fitted at the same height as the solebars.

Meaning of the figures shown in points 2.6.3 and 2.6.4:

For flat wagons not covered by points 2.6.1 and 2.6.2, with a loading plane more than 10 m long, and high-sided open wagons built after 1 January 1968, this sign indicates the maximum value for concentrated loads spread over supporting surfaces for at least three different lengths. This sign is optional for other wagons.

## 2.7 Sign indicating the capacity of tank wagons and cask wagons



**Position:** On the left of each side wall; for tank wagons, on the tank itself or on special

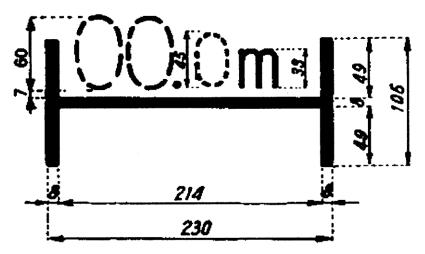
boards.

Meaning: Capacity in m³, hl or l

For tank wagons, this sign should also specify the commodities that the vehicle is authorised to carry, if required by the RID for the carriage of dangerous goods.

### 2.8 Signs indicating the length of load and floor space

Figure 1 Length of load

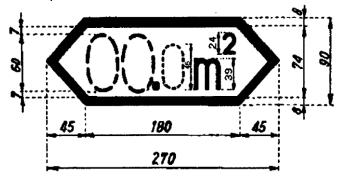


**Position:** On the left of each side wall.

Meaning: Loading length in [m] for flat wagons and covered wagons with a flat floor, minus

the thickness of any intermediate partitions (useful length).

Figure 2 Floor space



**Position:** On the left of each side wall.

**Meaning:** Surface area [m²] of the floor of covered wagons and wagons with an opening

roof and flat floor.

#### 2.9 Sign indicating the distance between end axles and bogie centres



Position:

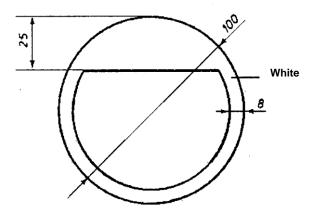
On the right of each solebar, or on the bogie frame (it is sufficient for the sign to feature on the left-hand side of the bogie, on each side of the wagon) or on parts covering the solebar or on special boards fitted at the same height as the solebars.

Meaning:

Indicates the distance:

- between the end axles of bogies and of wagons other than bogie wagons,
- between the bogie centres of bogie wagons.

#### 2.10 Sign indicating spark arrestor plates



Position:

In the middle of each solebar, or on parts covering the solebar or on special boards fitted at the same height as the solebars. This sign may also be affixed on the right of each side wall.

Meaning:

Wagon fitted with spark-arrestor plates in accordance with Appendix A to **UIC leaflet 543**; these plates are required for axle wagons suitable for carrying class 1 commodities, sub-classes 1.1, 1.2, 1.3, 1.5 and 1.6, as well as certain commodities in classes 4.1 and 5.1 (RID, Part 7, points 7.2.4 and W 8).

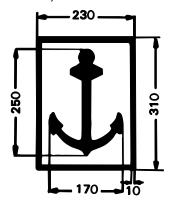
- reserved -

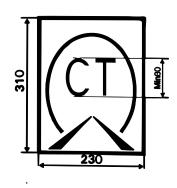
#### 2.11 Additional signs for wagons authorised to run in Great Britain

(NETWORK RAIL infrastructure except HS 1 high speed line from Dollands Moor to London St Pancras International) for wagons accepted on ferries or authorised to use the Cross-Channel Fixe Link (CCFL)

Figure 1: For wagons accepted on ferries and authorised to run in Great Britain (NETWORK RAIL infrastructure)

Figure 2: For wagons authorised to use the Cross-Channel Fixed Link (CCFL) and run in Great Britain (NETWORK RAIL infrastructure)





Figures 3a, 3b, 3c For wagons accepted on ferries and authorised to use the Cross-Channel Fixed Link (CCFL) and run in Great Britain (NETWORK RAIL infrastructure)

Figure 3a

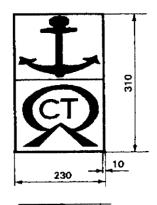


Figure 3b

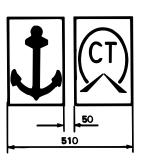
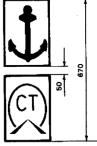


Figure 3c



**Position:** On the left of each side wall.

**Meaning:** These signs are only to be used on wagons that are authorised to run on the

British rail network, based on either Figure 1 or Figure 2, or a combination of both

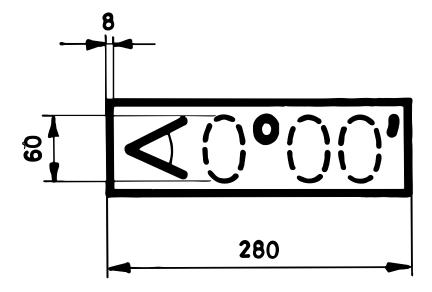
(Figures 3a, 3b or 3c).

**N.B.:** Neither of these signs is necessary to use the Cross-Channel Fixed Link (Frethun

to Dollands Moor) or the HS 1 high speed line from Dollands Moor to London St

Pancras International.

#### 2.12 Sign for ferry ramp angle



**Position:** On the left of each solebar, or on parts covering the solebar or on special boards fitted at the same height as the solebars.

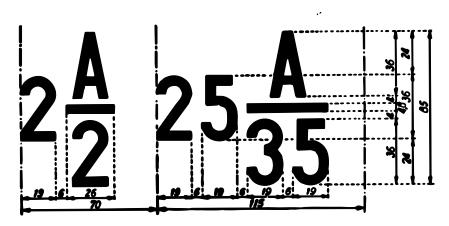
**Meaning:** Indicates bogie wagons that can only negotiate a ramp angle of less than 2°30′ when running onto ferries.

This sign must be carried by bogie wagons which, when entering a ferry, can only negotiate a ramp angle of less than 2°30′. The marking should specify the maximum ramp angle.

**N.B.:** Regulations governing wagons that run on ferries are contained in Appendix 14.

#### 2.13 Sign for removable wagon accessories

Removable wagon accessories



**Position:** On the right of each side wall.

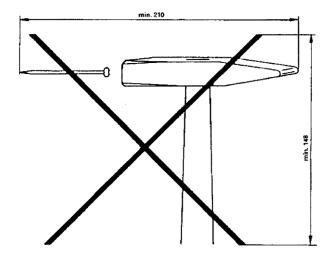
Meaning:

The number and type of removable accessories are to be indicated. In the case of carboy wagons and wagons with removable recipients, the number of such recipients should be indicated. The figure placed before the fraction indicates the number of removable accessories belonging to the wagon; the letter "A" indicates that the accessories are removable, and the denominator of the fraction gives the serial number assigned to the removable accessory in the list below. The names of the accessories may also be added in letters alongside these signs.

Serial number	Description of the removable accessory
1	Removable stanchion
2	Removable side board for flat wagon
3	Removable end board for flat wagon
4	Removable side panel
5	Removable centre post for securing load
6	Stanchion chain
7	Crank handle for car-carrying wagons
8	Adjustment device
9	Swivelling bolster with stanchions
10	Removable bolster
11 – 12	- reserved -
13	- reserved -
14	- reserved -
15 – 16	- reserved -
17	- reserved -
18	- reserved -
19	- reserved -

F	
20	- reserved -
21	- reserved -
22	- reserved -
23	- reserved - (the folding seat for horse boxes is removed from the list)
24	Coupling rod (rigid coupling)
25	- reserved -
26	Ice tank or bunker
27	Ice tank screen
28	Ice tank frame
29	Trestle or bar with meat hooks
30	Removable cross-piece for low-loader wagons
31	Removable support bracket (for wagons used for special loads)
32	Securing crossbar (for wagons used for special loads)
33	Removable floor panel (for wagons used for special loads)
34	- reserved -
35	Wedging block
36	Skid, with or without shoes, for flat wagons used for carrying cars
37	Securing belts for flat wagons used for carrying cars
38	Girder for removable ramps for flat wagons used for carrying cars
39	- reserved -
40	Spare heating coupling
41	Fire extinguishers
42	Wheel scotches for car-carrying vehicles
43	Loading ramp, gangway
44	- reserved -
45	- reserved -
46	- reserved -
47	Metal cradles for rolls of sheeting
48	Panel for covering markings
49	Loading frame for special types of goods

#### 2.14 Sign for the inside of wagons: "Do not use nails or wire staples"



Hammer and nail: Cross:

Outline in black Black or red

**Position:** Inside the wagon in a clearly visible place, if possible at eye level.

**Meaning:** Nails or staples should not be used on the walls or floor of this wagon.

# 2.15 Marking for wagons with special fittings (wagons with automatic discharge facility, opening roof, etc.)

Example: Wandarretierung lösen durch

Schließen und Öffnen mit

Bedienhebel.

Débloquer l'arrêt mural en l'ouvrant et

le fermant avec le levier de

commande.

Release wall locking device by closing and opening with control

lever.

Allentare il blocco della parete mediante

chiusura e apertura con la leva di

servizio.

**Position:** At suitable places on both sides of the wagon.

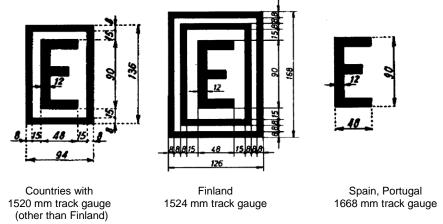
Meaning: Instructions on how to operate these fittings and the safety measures to be

taken, if possible in several languages.

Suitable pictograms can be added to these instructions.

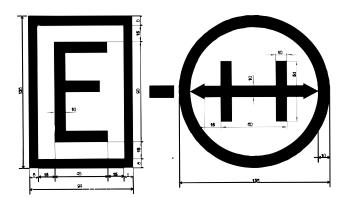
#### 2.16 Signs for wagons built for running between countries with different track gauges

Signs for wagons built for running between countries with different track gauges.



Position and meaning: see point 2.17

#### 2.17 Signs for bogies with gauge-adjustable axles, nominal gauge 1435 mm (automatic gauge changeover facility according to the UIC leaflet 510-4)



**Position:** On the right of each side wall. The right-hand sign on its own also features on the

bogie frame.

The signs shown in point 2.16, which indicate compliance with UIC leaflets Meaning:

430-1 and 430-3, are affixed to wagons suitable for running between countries with different track gauges. For wagons fitted with automatic gauge changeover

facilities, the sign in 2.16 is placed alongside that in point 2.17.

N.B. 1: When changing axles of this type, the date (month and year) of the last axle-box overhaul must be marked, along with the code number of the wagon keeper

(owning RU or RU with which the keeper has concluded a service agreement) on the outside of each axle-box in white paint, clearly visible. Exchangeable bogies

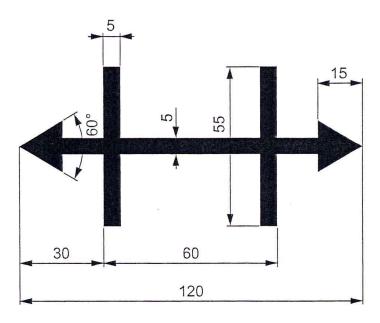
are to be fitted with a special overhaul plate.

N.B. 2: Regulations concerning the use of wagons with interchangeable axles in traffic

across the Pyrenees and in traffic with Finland are given in Appendix 14.

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# 2.18 Sign for bogies fitted with gauge-adjustable axles, nominal gauge 1520 mm (automatic gauge changeover facility according to the UIC leaflet 510-4)



**Position:** On the corresponding bogie frames.

**Meaning:** This sign is used by RUs that are signatories to the PPW\*.

The provisions of point 2.17 apply in principle.

This sign is carried by wagons that have bogies fitted with gauge-adjustable axles with a nominal gauge of 1520 mm. Wagons fitted with bogies of this type should carry the appropriate combination of the signs shown in points 2.16 and 2.18 on the right of each side wall.

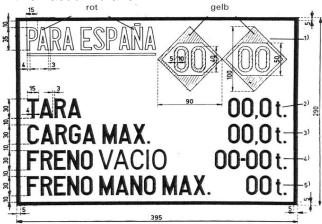
**\*PPW** Agreement among members of the OSJD\*\*:

"Regulations governing the use of wagons in international traffic"

\*\*OSJD Organisation for Collaboration between Railways, based in Warsaw

#### 2.19 Additional signs for wagons accepted for running in Spain and Portugal

For wagons fitted with a vacuum brake:



Position:

On the right of each side wall, in black on wagons that are painted white, and in white on a blue background for other wagons.

Meaning:

1. Left-hand diamond Right-hand diamond

Maximum speed at maximum load Maximum speed when empty. When the maximum

speeds when empty and at maximum load are the same, a single diamond marking will suffice.

2. TARA

Vehicle tare.

CARGA MAX
 FRENO VACIO

Maximum load limit.

Vacuum brake

Left-hand figure = braked weight in "empty"

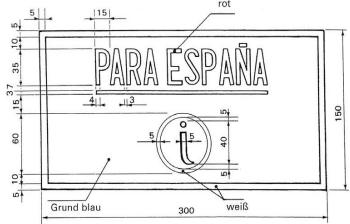
position,

Right-hand figure = braked weight in "loaded"

position.

5. FRENO MANO MAX Maximum braked weight of the screw brake.

For wagons with only one brake pipe for the vacuum brake:



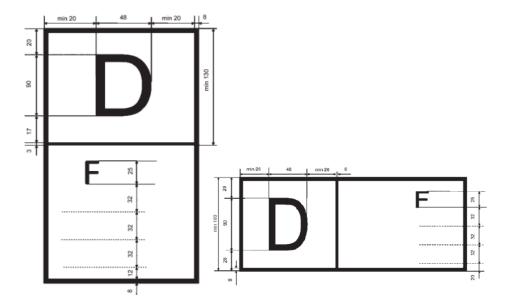
Position:

On the right of each side wall, in black on wagons painted white and in white on a blue background for other wagons.

Meaning:

Wagon can be included in a train with the brake isolated.

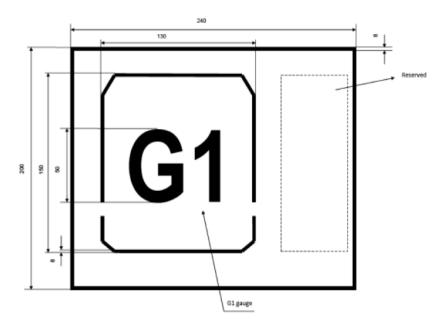
#### 2.20 Approval plate for wagons without the TEN marking



Vehicles which are not authorised for operations in all member states require an indication of the member state in which they are authorised. The list of authorising member states is to be indicated in accordance with one of the following drawings, where "D" stands for the member state which first issued authorisation (here: Germany), and "F" for the second member state which issued authorisation (here: France).

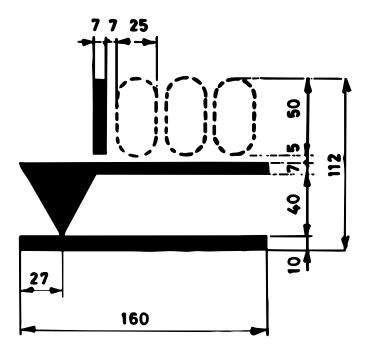
The member states are to be indicated using the codes in Annex P.4. This may concern both TSI-compliant and non-TSI-compliant vehicles. The first digit in these vehicles" codes as per Annex P.6 is code 4 or 8.

#### 2.21 Marking of vehicle gauge on wagon



Indicates wagons built to vehicle gauge "G1" and authorised for interoperable traffic.

### 3.1 Height of the loading plane for container wagons in unladen state



**Position:** On the right of each solebar.

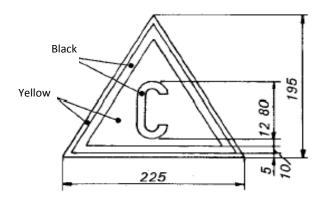
**Meaning:** This sign is carried by container wagons that are suitable for transporting large containers and/or swap bodies. It indicates the height in millimetres of the loading

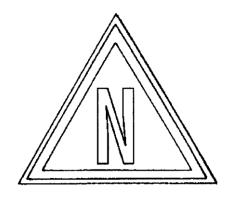
plane when the wagon is not loaded.

## 3.2 Signs for combined transport wagons in accordance with UIC leaflet 571-4

On swap-body carrier wagons and on carrier wagons with independent axles that have equivalent or more favourable characteristics for the coding of load units.

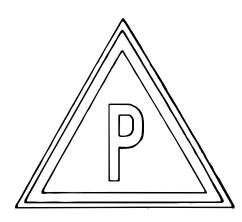
On recess wagons for semi-trailers

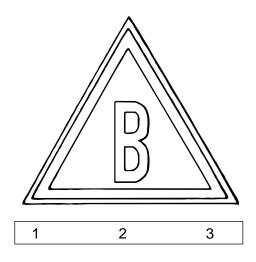




On type 1a and 1b recess wagons and variants for carrying semi-trailers that exceed specified capacity

On roller-unit carrier wagons





**Position:** on the left of each side wall.

For wagons used in rail/road combined transport, the following signs:



On recess wagons for semi-trailers whose characteristics are defined in point 3.3.2 and Appendix 3.4 of **UIC leaflet UIC 596-6**,



On recess wagons for semi-trailers whose characteristics are defined in point 3.3.2 and Appendix 3.4 of **UIC leaflet 596-6**,



On swap-body carrier wagons whose characteristics are defined in point 3.3.2 and Appendix 3.3 of **UIC leaflet 596-6**,

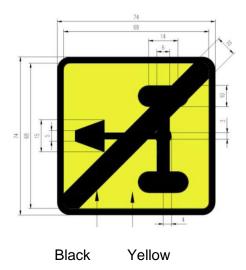


On roller-unit carrier wagons whose characteristics are defined in point 3.3.2 and Appendix 3.3 of **UIC leaflet 596-6**,

+6

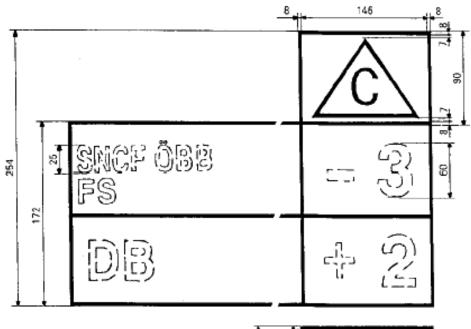
GEN	GENERAL CONTRACT OF USE FOR WAGONS			
-	<u> </u>	On swap-body carrier wagons whose characteristics do not meet the conditions of point 3.3.2 of <b>UIC leaflet 596-6</b> ,		
-	+23	On swap-body carrier wagons whose characteristics are more favourable than the conditions in point 3.3.2 of <b>UIC leaflet 596-6</b> ,		
-	P	On recess wagons whose characteristics when carrying semi-trailers do not meet the conditions of point 3.3.2 of <b>UIC leaflet 596-6</b> ,		
-	<u>P</u> +5	On recess wagons whose characteristics when carrying semi-trailers are more favourable than the conditions in point 3.3.2 of <b>UIC leaflet 596-6</b> ,		
-	1 2 3 +3 -2	On roller-unit carrier wagons whose characteristics do not meet the conditions of point 3.3.2 of <b>UIC leaflet 596-6</b> ,		
-	123 +6	On roller-unit carrier wagons whose characteristics are more favourable than the conditions in point 3.3.2 of <b>UIC leaflet 596-6</b> .		

# Pictogram for seating devices unsuitable for use with steering wedges

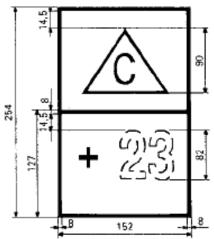


If the seating device is unsuitable for use with steering wedges, the recess wagon is to be marked with the following pictogram, near the wagon compatibility code.

## On swap-body carrier wagons whose characteristics do not meet the conditions of point 3.3.2 of UIC leaflet UIC 596-6



On swap-body carrier wagons with characteristics more favourable than the conditions in point 3.3.2 of **UIC leaflet 596-6** 



#### Meaning:

"- 3": The wagon can only be loaded with swap bodies that have a profile number that is lower (in this example by at least 3 points) than the profile number assigned to

the RU (or RUs) concerned.

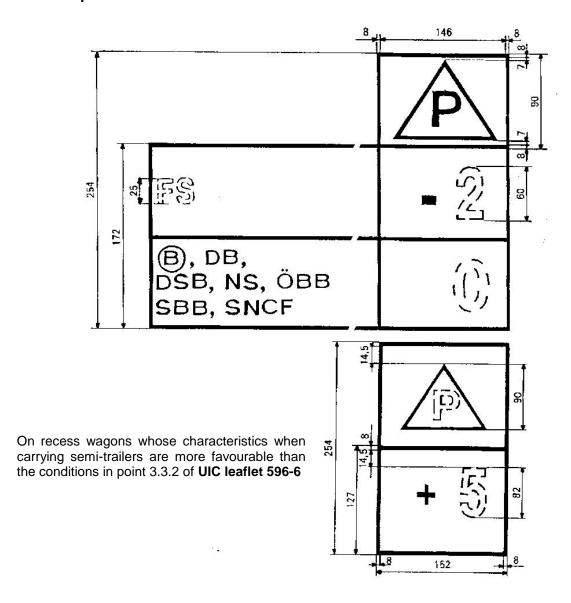
"+ 2": The wagon can be loaded with swap bodies that have a profile number that is greater (in this example by up to 2 points) than the profile number assigned to the

RU (or RUs) concerned.

"+ 23": The wagon can be loaded with swap bodies that have a profile number that is greater (in this example by up to 23 points) than the profile number assigned to

the RU (or RUs) concerned.

On recess wagons whose characteristics when carrying semi-trailers do not meet the conditions of point 3.3.2 of UIC leaflet 596-6



### Meaning:

"- 2": The wagon may only be loaded with semi-trailers that have a profile number that

is lower (in this example by at least 2 points) than the profile number assigned to

the RU (or RUs) concerned.

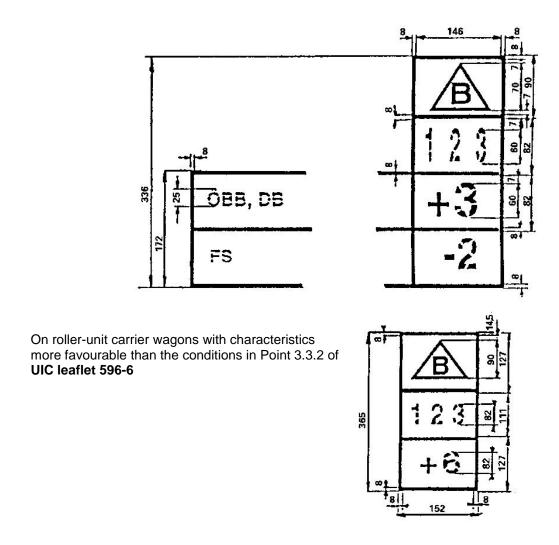
"0": The wagon may only be loaded with semi-trailers that have a profile number that

is no higher than the profile number assigned to the RU (or RUs) concerned.

"+ 5": The wagon can be loaded with semi-trailers that have a profile number that is greater (in this example by up to 5 points) than the profile number assigned to the

RU (or RUs) concerned.

## On roller-unit carrier wagons whose characteristics do not meet the conditions of point 3.3.2 of UIC Leaflet 596-6



### Meaning:

"+ 3": The wagon may be loaded with roller units that have a profile number that is greater (in this case by up to 3 points) than the profile number assigned to the RU (or RUs) concerned.

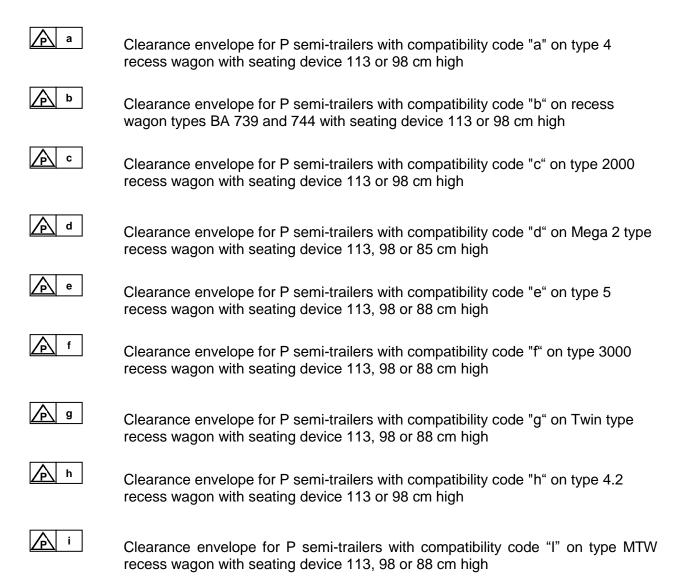
"- 2": The wagon may only be loaded with roller units that have a profile number that is lower (in this example by at least 2 points) than the profile number assigned to the RU (or RUs) concerned.

"+ 6": The wagon may be loaded with roller units that have a profile number that is greater (in this example by up to 6 points) than the profile number assigned to the RU (or RUs) concerned.

#### Compatibility code definition in accordance with UIC leaflet 596-5

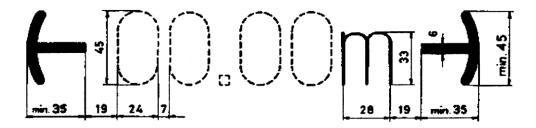
Recess wagons with enlarged clearance envelopes are given a compatibility code which takes the form of the code letter from the wagon compatibility code (in this case "P") and one of the lower-case letters approved by UIC for specific clearance envelopes / wagon types.

The letters are marked on the recess wagon and in the semi-trailer code number plate and must match when loaded.



## 4.1 Sign for length over buffers

Length over buffers



**Position**: On the left of each side wall.

**Meaning**: Indicates the wagon's length over buffers in metres [m].

On wagons made up of separate units joined together by a permanent coupling (multiple wagon units) the total length of the wagon should be indicated.

### 4.2 Signs for tare and braked weight

Figure 1: Wagon tare



Figure 2: Wagon tare and braked weight of the platform-operated hand brake

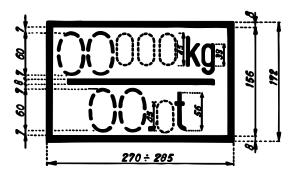
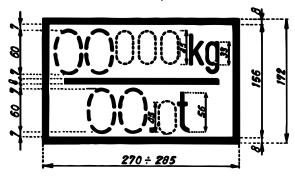


Figure 3: Wagon tare and braked weight of the ground-operated hand brake (the latter to be shown in a red box)



**Position**: On the left of each side wall

**Meaning**: Indicates the wagon tare (upper figure) and braked weight (lower figure).

The sign shown in figures 2 or 3 is marked on the wagon when the braked weight is less than the total mass of the vehicle (tare + load corresponding to the maximum weight).

The braked weight as shown in figure 3 must be marked in a red box when it refers to a ground-operated hand brake.

When a wagon is fitted with more than one independently-acting hand brake, the corresponding number of brakes must be indicated in front of the braked weight marking (for example: 2 x 00.0 t).

**N.B.:** The sign shown in Figure 1 must **not** be affixed to a wagon that is to carry the sign in Figure 2 or 3.

Figure 4: Marking indicating the holding force in KN on wagons fitted with screw brakes.



Example: platform-operated handbrake

27.910 kg 21 t 37 kN Example: ground-operated handbrake

22.190 kg 20 t 36 kN

Remark: This marking is mandatory as of 1/1/2021.

# 4.3 Signs to indicate the changeover device for air brakes - Marking of the braked weight on wagons. Brake type abbreviations

4.3.1 Marking of the braked weight of wagons without changeover device

Brake YY 00

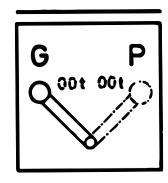
or

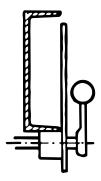
Brake YY 00 t

**Position**: On each solebar, close to the indication of the brake system.

**Meaning**: Sign indicating the brake type (YY) as shown in point 4.3.9 and indication of the braked weight (t). This marking may be preceded by the word "brake" (optional).

4.3.2 "Freight / Passenger" (G/P) changeover device (hand operated)





**Position:** On the plate behind the changeover lever, alongside the corresponding lever

position, if the braked weights (t) in the "freight" (G) and "passenger" (P) positions

are different.

**Meaning:** On wagons that are fitted with a "Freight / Passenger" (G/P) changeover device,

the changeover from one regime to another is made using a lever fitted with an

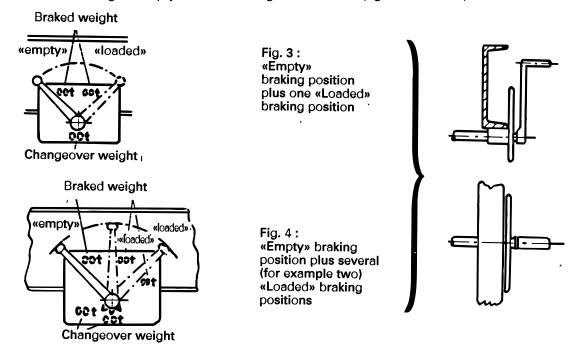
end knob (as illustrated in point 4.3.2).

In the "freight" braking mode, the lever slants upwards and to the left.

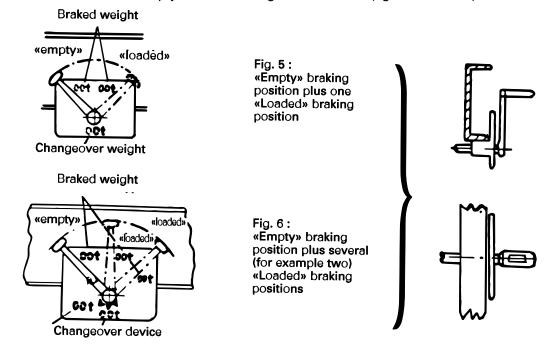
In the "passenger" braking mode, the lever slants upwards and to the right.

### 4.3.3 "Empty / Loaded" changeover device (hand operated)

Vehicles fitted with a single "empty/loaded" changeover device (figures 1 and 2)



Vehicles fitted with 2 or more "empty/loaded" changeover devices (figures 3 and 4)



## Position figures 1 to 4:

On each solebar, approximately in the middle of the wagon, on the plate behind the changeover lever. The braked weights (t) are marked next to the corresponding position of the lever. The changeover weights [t] are indicated on the same plate, near the point of rotation of the lever.

#### Meaning

On wagons featuring an "empty" braking mode and one or more "loaded" braking modes, the changeover from one mode to another is done using a crank handle as shown in the above figures 1, 2, 3 or 4.

When the wagon has only a single "empty / loaded" device, it will be fitted with a lever of the kind shown in figures 1 or 2.

When the wagon has two or more separate "empty / loaded" devices, the levers are fitted with a handle as shown in figures 3 or 4.

In the "empty" braking mode, the lever slants upwards and to the left and will occupy its extreme left-hand position if:

- the wagon is empty,
- the gross weight (tare + load) is less than the changeover weight marked,
- the mass per axle or per bogie is less than half of the changeover weight marked.

In the "loaded" braking mode, in other words when the gross weight (tare + load) is greater than or equal to the changeover weight (the highest, when there are several "loaded" positions), the lever slants upwards to the right and occupies the extreme right-hand position.

The positions corresponding to the other loaded braking modes are situated between these extreme positions, the braking power increasing from left to right.

### 4.3.4 Vehicles fitted with automatic load-proportional braking system

Figure 1

Brake YY – GP – A MAX: 00 t

**Position:** In a box painted on each solebar.

**Meaning:** Indication of the type of brake (YY) in accordance with point 4.3.9. Additional

information also shown in point 4.3.9 (GP, A) and indication of the maximum braked weight [t]  $\rightarrow$  Up to this maximum value, the braked weight [t] is equal to the sum of the wagon tare and the load [t]. This information may be preceded by

the word "brake" (optional).

Figure 2

Bremse...-G-A



**Position:** On each solebar, after the brake system marking.

**Meaning:** On some older wagons, the braked weights for each load state (maximum of five) are shown as tables. Each column in the table contains two figures:

- above: the braked weight value [t];
- below: minimum weight on rail [t] giving a braked weight [t] at least equal to this value.

### 4.3.5 Vehicles fitted with an automatic "empty / loaded" changeover device

Figure 1 Vehicles featuring several braked weight values in the "freight" and "passenger" changeover

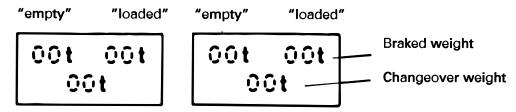


Figure 2 Vehicles featuring a single braked weight value in the "freight" and "passenger" changeover

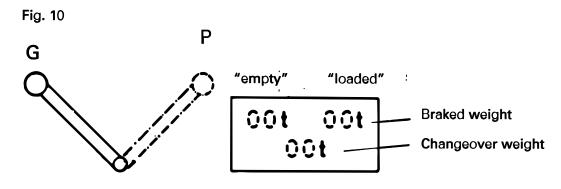
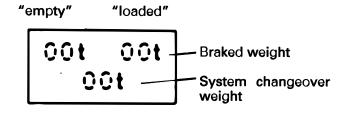


Figure 3 Vehicles featuring a "freight" brake or "passenger" brake only



# Position figures 1 – 3:

On each solebar near to the brake system marking.

### Meaning:

On these wagons, the "empty / loaded" changeover takes place automatically when the gross weight (wagon tare + load) [t] is greater than the changeover weight [t] marked.

### 4.3.6 Marking of the axles of wagons with a single distributor

On wagons fitted with a single brake distributor, an identification marking (serial number) can be applied to the solebar above each axle-box (optional).

#### 4.3.7 Signs for wagons with more than one distributor

## a) Wagons with more than one distributor and separate "empty / loaded" changeover systems

The braked weight [t] of the associated distributor and the changeover weight [t] for the wagon must be marked on the identification plates for each "empty/loaded" changeover device (see point 4.3.3).

#### b) Wagons with several distributors and automatic load-proportional brakes

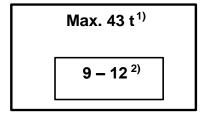
Figure 1

### Meaning:

Example of markings for multiple wagons with three distributors (3X), letter code for brake type in accordance with point 4.3.9 (YY); additional letters in accordance with point 4.3.9 (GP, A).

The braked weights [t] of the corresponding distributor should be marked on the plates for each "empty-loaded" changeover device together with the changeover weight for the wagon as a whole.

Figure 2



## Position of figures 1 and 2

On each solebar near the brake isolating levers.

#### Meaning:

- 1) Braked weight delivered by the system controlled by the distributor in question.
- 2) Indication of the end numbers of the axles on which this braking system acts.

The following must also be indicated (see point 4.3.7):

- the number of brake systems,
- the total braked weight and in brackets the braked weight obtained from each distributor.

### 4.3.8 Marking of the axles of wagons fitted with several distributors and an automatic loadproportional braking system

On multiple wagons with permanent couplings fitted with several distributors and an automatic load-proportional braking system, an identification number should be marked on the solebars to indicate the corresponding position of the axle in ascending order from one end of the wagon to another. This marking must be made by 1.1.2007.

## 4.3.9 Abbreviated references for compressed air brakes accepted for international traffic as of 1.3.2005

### 1. Brake type

Kunze-Knorr	Kk
Drolshammer	Dr
Bozic	Во
Hildebrand-Knorr	Hik
Breda	Bd
Charmilles	Ch
Oerlikon	0
Knorr, type KE	KE
Westinghouse, type E	WE
Dako	DK
Westinghouse, type U	WU
Westinghouse, type A *(approved until 1.1.2000 for new builtwagons)	WA*
Davies and Metcalfe, Distributor DMD 3	DM
MZT HEPOS	MH
SAB-WABCO, Type SW 4/SW 4C/SW 4/3	SW
Distributor KE-483 $^{\star}$ (In position "483" the brake meets the conditions of the CIS networks).	KE 483**
Bumar-Fablok MBF-01A, MBF-01B, MBF-02	FL

### 2. Additional references

Freight train brake	G	
Passenger train brake		
High power brake	R	
G/P changeover device	GP	
P/R changeover device	PR	
G/P/R changeover device	GPR	
Automatic load-proportional braking system	Α	
Electromagnetic rail brake	Mg	

### Position:

In the middle of each solebar, or on parts covering the solebar or on special boards fitted at the height of the solebars, near the changeover devices for the brake with the other brake markings.

## 4.4 Signs for wagons fitted with composite brake blocks

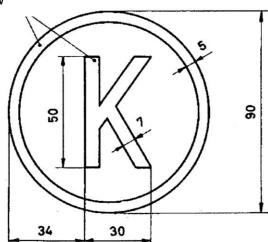
**Position:** On both sides of the wagon, directly to the right of the marking indicating the

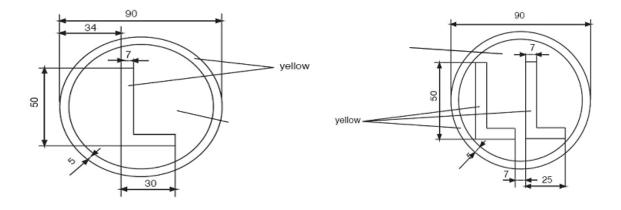
type of brake.

**Meaning:** Marking for vehicles fitted with composite brake blocks with a

- high coefficient of friction ('K' type block)
- medium coefficient of friction ("L" type block)
- low coefficient of friction ("LL" type block)

Ivory to yellow



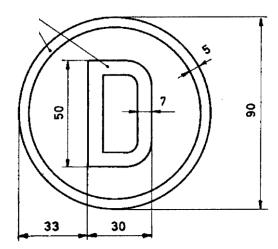


Sign(s) (e.g. C810, J816M): directly below or next to the symbol corresponding to the "K" type block. Declaration of several types of blocks possible.



#### Sign for wagons fitted with disc brakes 4.5

Ivory to yellow

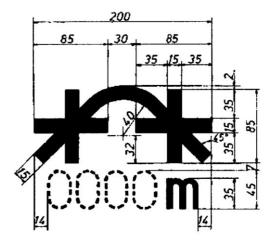


On both sides of the wagon, directly to the right of the marking indicating the type of brake. Position:

Meaning: Wagons that carry this sign are fitted with disc brakes.

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### 5.1 Sign for wagons not authorised to negotiate all shunting humps



**Position:** On the left of each solebar, or on parts covering the solebar or on special boards

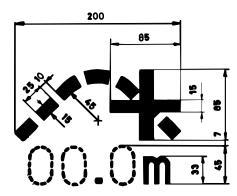
fitted at the same height as the solebars.

**Meaning:** This marking is compulsory for wagons which, because of their design are liable

to sustain damage when crossing shunting humps with a vertical radius of 250 m. The value marked indicates the smallest curve radius that the wagon can

negotiate.

# 5.2 Sign for bogie wagons with a distance of more than 14.0 m between inner axles and accepted on shunting humps



**Position:** On the left of each solebar, or on parts covering the solebar or on special boards

fitted at the same height as the solebars.

Meaning: This marking is compulsory on bogie wagons that are suitable for crossing

shunting humps, but which have a distance of more than 14.0 m between consecutive inner axles. The value indicated is the largest distance between two

consecutive axles.

# 5.3 Sign for wagons that are not authorised to pass through retarders or other shunting and stopping devices in active mode



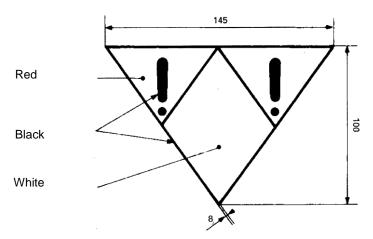
Position: On the left of each solebar, or on parts covering the solebar or on special boards

fitted at the same height as the solebars.

**Meaning**: Because of design considerations these wagons must not pass through retarders

or other types of shunting and stopping devices in active position.

## 5.4 Sign for wagons not to be loose-shunted



**Position:** On the left of each solebar, or on parts covering the solebar or on special boards

fitted at the same height as the solebars.

**Meaning:** Special care should be taken when marshalling trains to avoid damaging the

wagon. Wagon must not be loose-shunted must not be loose-shunted and must

be protected against buffing by other rolling stock without taking special

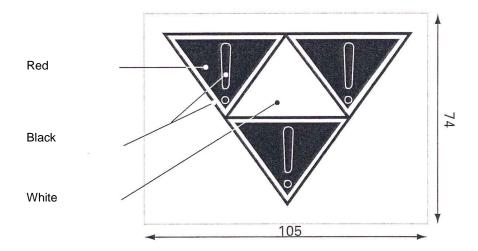
precautions.

**N.B.:** This marking is compulsory on wagons with special fittings (electronic equipment,

refrigerator units, etc.) for which normal buffing impacts are not authorised as they are liable to damage the equipment. These wagons may not carry the RIV

sign but can be covered by bilateral agreements.

## 5.5 Sign for wagons that must not be fly- or gravity-shunted



Position:

On the left of each solebar, or on parts covering the solebar or on special boards fitted at the same height as the solebars.

### Meaning:

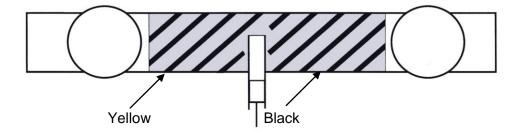
### Wagon

- must not be fly- or gravity-shunted,
- must be marshalled by a motive power unit,
- must not be loose-shunted and must be protected against buffing by other rolling stock.

### N.B.:

Point 5.3.4.1 of the RID states that in place of the shunting label (shown in model 15) the wagon may instead carry permanent shunting signs (wagon markings) providing they conform precisely to the prescribed example.

### 5.6 Marking for wagons fitted with anti-crash components



**Position:** On the headstocks, between the buffers.

**Appearence:** Paint: black diagonal warning stripes painted on a yellow background.

**Meaning:** Wagon fitted with anti-crash components. The Berne rectangle clearances may

be encroached. Follow shunting instructions.

# 5.7 Marking for wagons fitted with long-stroke shock absorbers (schock absorber fitting)



Black and yellow striped surface to be left clear

Position: Black diagonal warning stripes painted on a yellow background covering the

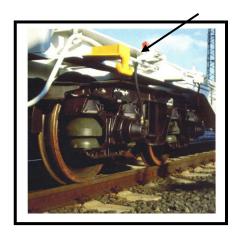
danger areas for wagons fitted with shock absorbers.

**Meaning:** In the event of impact, the wagon ends become displaced in relation to the

underframe. Distances and clearances are reduced as a result. Particular care

must therefore be taken during shunting operations.

## 5.8 Marking for wagons fitted with projecting tow hooks





Position:

Tow hooks and their fenders projecting more than 150 mm, and any supports and brackets, should be colour-marked as follows:

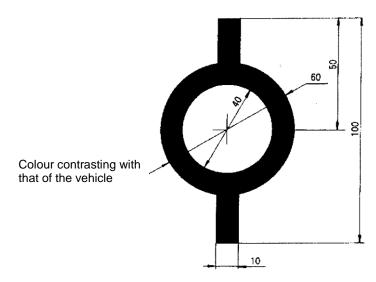
- Tow hooks and fenders: in yellow.

Colour-marking of tow hook supports and brackets:

- Projecting up to 250 mm: in yellow,
- Projecting more than 250 mm: black diagonal stripes on yellow background.

**Meaning:** Marking serving as a warning against the risk of injury.

## 5.9 Sign for permanently-coupled wagon units

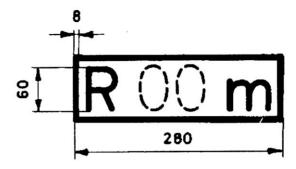


**Position:** On each headstock, next to the right-hand buffer.

**Meaning:** Not to be uncoupled in service. This sign is only used on wagons made up of

several units that are permanently coupled together.

## 5.10 Sign for bogie wagons only able to negotiate curves with a radius greater than 35 m



**Position:** On the left of each solebar, or on parts covering the solebar or on special boards

fitted at the same height as the solebars.

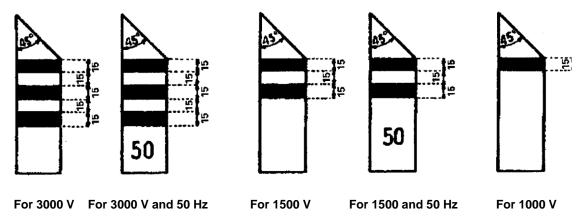
**Meaning:** Indicates the minimum curve radius that the wagon can negotiate.

**N.B.:** On wagons with special fittings, for example low-loader wagons, this indication

refers to the central position of the lateral sliding device and/or the maximum

distance between bogie centres.

### 5.11 Signs indicating wagons fitted with a train line



Position: On the lower part of the corner posts, on both outward-facing surfaces. For

wagons without corner posts, it is recommended that the required markings be

affixed to metal panels.

Appearance: Light yellow rectangle approx. 200 mm high, the same width as the corner post

and with the top corner cut off at an angle of approx. 45° inclined downwards towards the centre of the wagon. Black horizontal stripes approx. 15 mm high are

painted on the yellow rectangle at intervals of 15 mm.

**Meaning:** Wagon is fitted with a train line. One black stripe indicates a 1000 V DC cable,

two stripes a 1500 V cable and three stripes a 3000 V cable. Approval for running

on 50 Hz AC electrified networks is indicated by the number "50".

### 5.12 Sign for wagons fitted with the automatic coupler



**Position:** At each end of the wagon sides or solebar and on each end wall.

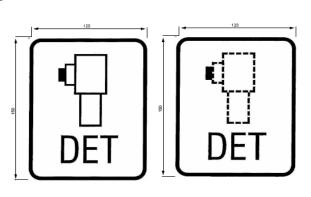
**Meaning:** Wagon fitted with automatic couplers.

**N.B.:** On wagons fitted with the automatic coupler, the Berne rectangle clearances may

be partially encroached.

**\*OSJD:** Organisation for Collaboration between Railways, based in Warsaw.

## 5.13 Sign for derailment detectors





**Position:** On both sides of the wagon, when the derailment detector is visible. The picture

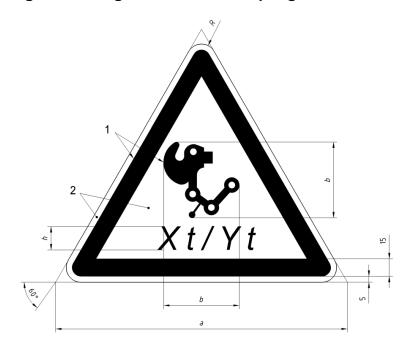
on the sign has a dotted outline when the detector is not visible.

**Meaning:** Wagon derailment detectors are devices used to detect implausibly high vertical

accelerations on the vehicle. A derailment is assumed to have taken place and an emergency brake application is triggered or an alarm sounded. The system

cannot prevent a derailment itself from occurring.

## 5.14 Sign for strengthened screw coupling



Key 1 Black 2 Yellow

Taille	Dimensions				
Taille	a	ь	h	R	
1	400	130	30	22	
2	200	65	20	11	

**Position:** At each extremity of the side faces of the wagon or on frame girder. This marking

must be chosen according to the reserved space for that purpose.

**Meaning:** Wagon with strengthened screw coupling – X t is related to coupling resistance,

Y t to coupling hook. A strengthened screw coupling is described in

EN 15566:2009, paragraph 4.1, table 1. System's recognition is over 1 MN.

- reserved -

## 6.1 Sign for wheels able to withstand high thermal stresses

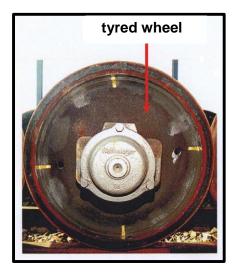


**Position:** On the axle-box cover.

Meaning: The axles in question have wheels that are able to withstand high thermal

loading, in accordance with UIC Leaflets 510-2 and 510-5, Appendix H

## 6.2 Marking of tyred wheels

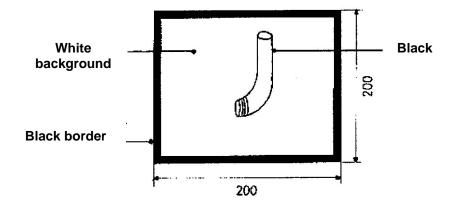


**Position:** Four coloured stripes, at 90° intervals, on the outer surface of the wheel tyre and

rim.

**Meaning:** Control mark to check the position of the tyre in relation to the wheel rim.

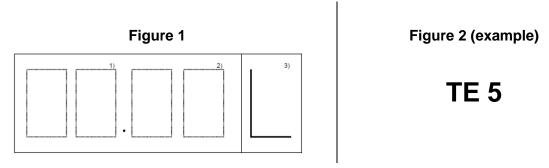
## 6.4 Sign for ventilation pipes



**Position:** On tanks, next to the pipes in question.

**Meaning:** The ventilation pipes marked with this symbol must no

## 6.5 Sign for tank wagon tests, coding of tanks and special regulations



**Position:** On each side of each tank, on the right.

Meaning figure 1:

Indication of the next tank test (end of month) for the carriage of dangerous goods in accordance with the RID. The marking specifies (1) the month (2) the year and if necessary the letter "L" as per RID 6.8.2.4.3.; 3) that the date of the next tank test is extended by 3 months.

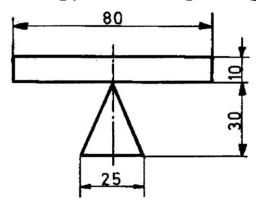
Meaning figure 2:

Example of an alphanumerical code for all the special regulations\* applicable: here, the wagon is fitted with a highly flammable insulating material.

\*N.B.:

The tank code should also be marked near the date of the tank test, in characters at least 90 mm high. The alphanumerical code for all applicable special regulations under the RID should also feature below the tank code or right beside it, in characters 50 mm high. This marking must be made by 1/1/2011 at the latest.

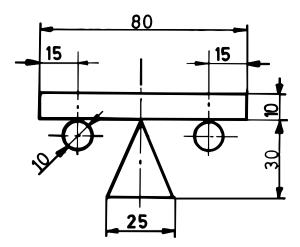
## 7.1 Sign indicating points for lifting the wagon body in the workshop



**Position:** At the designated points on the solebars

**Meaning:** Marking indicating where to place jacks, lifting devices, etc. in order to lift the whole of the wagon body.

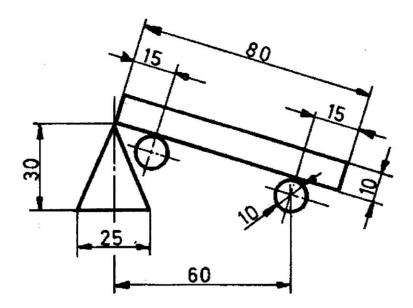
## 7.2 Sign for lifting at 4 points with or without running gear



**Position:** At the designated points on the solebars.

**Meaning:** Marking indicating where to place jacks, lifting devices, etc. in order to lift the whole of the wagon body, including the running gear where appropriate.

# 7.3 Sign for lifting or re-railing with or without running gear at one end only or close to the end



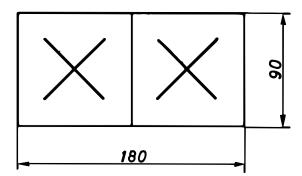
**Position:** At the designated points on the wagon headstocks or nearby.

**Meaning:** Marking indicating where to place jacks, lifting devices, etc. in order to lift the

whole of the wagon body by one end, or close to the end, including the running

gear where appropriate.

## 7.4 Sign for the replacement of springs



**Position:** On the right of each solebar, or on parts covering the solebar or on special

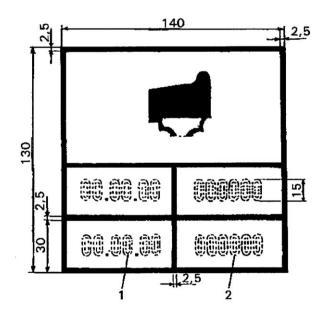
boards fitted at the same height as the solebars.

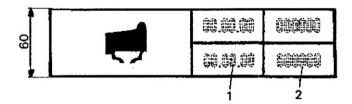
**Meaning:** On wagons with a rigid underframe (tank wagons, hopper wagons, etc.), this sign

indicates that if one spring is damaged, both springs must be replaced. This does not apply to suspension springs with progressive stiffness (e.g. parabolic

springs). See also point 2.10, chapter A of Appendix 10.

## 7.5 Sign for wheel tyre inspection





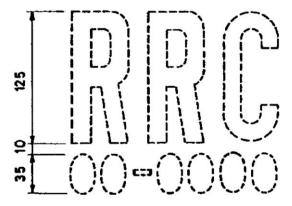
Position:

On the right of each solebar, or on parts covering the solebar or on special boards fitted at the same height as the solebars.

Meaning:

This plate indicates the date (day, month and year) (1) of the last two checks to ensure the tyre is firmly in place on the wheel body. In addition to the date, the initials of the RU and the code number of the workshop are also specified (2).

## 7.6 Sign for inspection periods for temperature controlled units



(Blue characters on a white background)

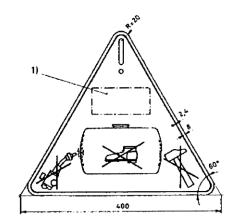
**Position:** On the right of each side wall, beneath the UIC or UIC St sign.

**Meaning:** On wagons used to carry perishable foodstuffs, this sign shows the distinguishing

mark for the temperature control system under the ATP agreement and indicates

the expiry date (month and year) of the certificate held by the wagon.

## 7.7 Sign for the protection of the inner lining of tank wagons



(Paint: Black outline and markings on a yellow background)

**Position:** On the tank at clearly visible points

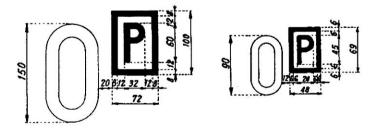
**Meaning:** Precautions designed to protect the inner lining (enamel, coat of paint...).

N.B.: The words "inner lining" may be added to this pictogram in one or more

languages.

## 7.8 Signs for privately-owned wagons, unified wagons, standard wagons

Figure 1 Sign for privately-owned wagons (registered with an RU before the GCU entered force)



**Position:** On the left of each side wall, after the wagon self-check digit.

Marking: if there is no room on the left, the name or company and initials of the

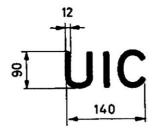
wagon keeper may be marked on the right hand side.

**Meaning:** Privately-owned wagons, registered by their keepers with an RU. The keeper's

name or company and initials should also be indicated (together with its fax

number). This marking will be cancelled in the future.

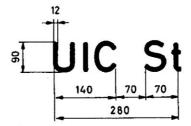
Figure 2 Sign for unified wagons



**Position:** On the right of each side wall.

**Meaning:** Wagon meeting standard international regulations (unified wagons).

Figure 3 Sign for standard wagons



**Position:** On the right of each side wall.

**Meaning:** Only unified wagons built in accordance with ERRI drawings (standard wagons)

may carry this marking.

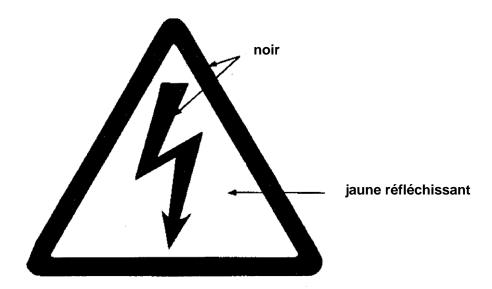
### 7.9 Sign for the spare parts

7.9.1 Standard spare parts carry the (U) sign and wheelsets and buffers also carry the keeper's initials or code number. For wheelsets with axle-boxes manufactured prior to unification or standardisation the (U) sign must be affixed at the next wagon overhaul provided the parts in question conform to the standardisation criteria.

Standard screw couplers also carry the "St" marking.

- 7.9.2 Wheelsets suitable for axle-loads of more than 20.0 tonnes carry the sign 2Q = 00.0 t indicating the permissible axle-load:
  - on the identification ring for wheelsets fitted with a ring (collar) around the axle
  - on the inner face of the wheel hub for wheelsets without an identification ring
- 7.9.3 Suspension leaf springs suitable for axle-loads of more than 20.0 tonnes carry the sign  $2Q = 00.0 \, \text{t}$  on the shackle, indicating the permissible axle-load.
- 7.9.4 When welding or heating work on or near the wagon buffers can constitute an accident hazard, a yellow disc of 50 mm diameter should be painted on the buffer casing.
- 7.9.5 For standard buffers with a stroke of 105 mm, the sign 105 X shall be marked on the buffer casing beneath the (U) sign and the owner's mark to indicate the buffer stroke and buffer category (A, B or C) as defined in the UIC Code. Buffers manufactured before 1/1/1981 that do not meet the conditions of category A do not feature the category letter.

### 8.1 Signs for high voltage warning sign (lightning flash)



**Position**: On wagons fitted with steps or ladders, in the immediate vicinity of these fittings

and at a height such that the sign is visible before the danger zone is reached. For use on wagons where the top step or upper part of the ladder is more than

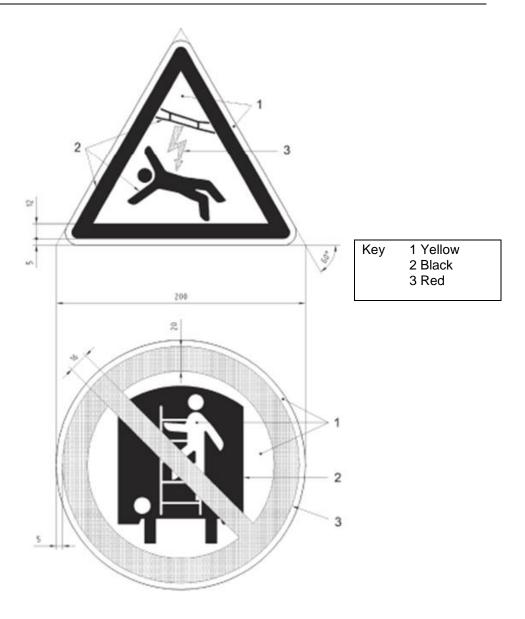
2000 mm above rail level.

Meaning: Warning against high voltage. Stop! You are entering a particularly dangerous

area. Only duly authorised personnel may work in this area having first taken the

necessary precautions.

**N.B.**: The size of the sign will depend on where it is to be placed.



Position:

On wagons with steps or ladders, in the immediate vicinity of these fittings and at a height such that the sign is visible before the danger zone is reached. For use on wagons where the top step or upper part of the ladder is more than 2.0 m above rail level, or whose design enables them to be climbed.

This pictogram may be shown on a rectangular blue background measuring 400 mm x 220 mm.

Meaning:

Warning - high voltage. Stop! You are entering a particularly dangerous area. Only duly authorised personnel may work in this area having first taken the necessary precautions.

**Remark:** This marking is mandatory as of 1/1/2021

### APPENDIX 12 TO THE GENERAL CONTRACT OF USE

**CATALOGUE OF DAMAGE TO WAGONS** 

GENERAL CONTRACT OF USE FOR WAGONS

APPENDIX 12

Category	Part	Type of damage	Additional information	Responsibility	
				Keeper	User RU
Runnig ge	ear				
	Tyred wheel	Tyre lose, laterally displaces, cracked	No sign of thermal overloading		
			Visible signs of thermal overloading (brake equipment faulty)	Х	
			Visible signs of thermal overloading (brake equip. operational)		X
	Tyre / wheel centre /	Thermal overloading	No sign of thermal overloading		
	solid wheel / wheel tread		Braking equipment operational		Х
		Cracks in the disc	No sign of thermal overloading	Х	
			Visible signs of thermal overloading (brake equipment faulty)	Х	
			Visible signs of thermal overloading (brake equipment operational)		Х
		Clamping notches		Х	
		Measuring circle not visible	Excessive wear of wheel centre (diameter too small)	Х	
		Damage from track brakes	Notches with sharp-angled apex in the tyre and the rim or the		Х
		ŭ .	lower rim of the tyre		
		Traces of abrasion, flanges damaged	Accidental damage <sup>1)</sup>		Х
		Cavity, shelling or flaking	Not including thermal overloading	Х	
		Metal inclusions, flats	Brake equipment faulty	Х	
		·	Brake equipment operational		Х
		Occasional dents in wheel tread	Accidental damage <sup>1)</sup>		Х
		Out-of-roundness		Х	
			If the damage can be clearly attributed to the RU		Х
	Axle shaft	Traces of abrasion on the axle shaft	Damage to wagon		
			No damage to wagon		Х
		Bent out of shape			Х
		Cracks	Not the result of force	Х	
	Axle-boxes	Hot axle-box	Confirmed	Х	
			Not confirmed		Х
		Recent leakage of lubrificant	High Axle-box temperatures, abnormal noises in the box when the axle rotates		
		Traces of contact on the axle-box housing (top-contact with bogies)	Suspension and dampers in good condition and wagon not overloaded		Х
	Manganese plates	Missing		Х	
	,	Cracked weld beads		Х	

Accidental damage in the sense of Appendix 12 is understood as damage not resulting from wear but either from inappropriate handling of the wagon (e.g. shunting accidents, side-on collisions or other sudden events), or which can be attributed to culpable violation of wagon custody obligations by an RU.

GENERAL CONTRACT OF USE FOR WAGONS

APPENDIX 12

Category	Part	Type of damage	Additional information	Respon	Responsibility of	
				Keeper	User RU	
Suspension						
•	Springs	Ruptured, cracked, etc.		X		
		Fatigued		Х		
		Wrongly fitted (parallel)		Х		
		Wrongly fitted (characteristic curve) or		X		
		wrong type of leaf spring				
	Friction damper	Any type of damage		X		
Brake						
	Mechanical and pneumatic	Defective brake rigging	Accidental damage <sup>1)</sup>		X	
	brake parts		Wear	X		
		Defective changeover device	Accidental damage <sup>1)</sup>		Х	
		Defective hand brake	Wear	X		
		Brake blocks (all types of damage)		Х		
	,	Defective hand brake	Accidental damage <sup>1)</sup>		Х	
			Wear	Х		
		Safety stirrup missing		Х		
		Safety stirrup damaged or defective	Accidental damage <sup>1)</sup>		Х	
		Other brake parts defective (e.g.	Confirmed (brake report included)	Х		
		distributor, load-weigh valve, brake				
		cylinder, changeover device, relay	Not confirmed		Х	
		valve, etc.)				
		Brake pipe leaking	Wear	X		
			Accidental damage <sup>1)</sup> (distorted, cracked)		Х	
		Defective brake hose	cracked, leaking	Х		
		Defective brake connection		X		
		Defective air brake parts	Confirmed by brake test	Х		
		·	Not confirmed by brake test		Х	

Accidental damage in the sense of Appendix 12 is understood as damage not resulting from wear but either from inappropriate handling of the wagon (e.g. shunting accidents, side-on collisions or other sudden events), or which can be attributed to culpable violation of wagon custody obligations by an RU.

GENERAL CONTRACT OF USE FOR WAGONS

APPENDIX 12

Category	Part	Type of damage	Additional information	Responsibility of	
		,,		Keeper	User RU
Underframe	and bogie				
	Wagon underframe	Fatigue cracks, fissuring		X	
	Headstock or solebar	Deformed	Except traces of fatigue		X
	Axle guard	Deformed			X
		Broken or loose		X	
	Axle guard tie bar	Bent or broken			X
		Loose		X	
	Suspension bracket	Loose, fatigue cracking		X	
		Fissured, deformed	Accidental damage <sup>1)</sup>		X
	Underframe / bogie connection	Connecting parts loose or damaged		X	
	Bogie frame	Deformed			Х
		Fatigue cracks		Х	
_	Bogie side bearers	Any type of damage		Х	
	Overhaul plate	Vehicle erroneously removed from service before expiry of overhaul period	Costs for authorisation to run / special consignment		Х
	General markings as required by law	Incomplete		Х	
		Illegible	E.g. because of projecting load, papered over, graffiti, etc.	Х	
i			Graffiti on RID dangerous goods wagon		Х
	Earthing cable	Missing			Х
		Damaged	Wear	Х	

GENERAL CONTRACT OF USE FOR WAGENS

APPENDIX 12

Category	Part	Type of damage	Additional information	Responsibility of	
				Keeper	User RU
Buffing ar	nd draw gear				
_	Buffer	Different types	Not previously changed by an RU	Χ	
		Buffer position not within tolerance	Traces of impact (contact between plunger and sleeve)		Х
		range / Plunger stuck	Old cracks and / or welds	Χ	
	Anti-crash device	Defective	hunting impacts at too high speeds		Х
			Normal wear	Χ	
	Buffer head	Broke or distorted			Х
	Buffer sleeve	Broken or cracked	Normal wear	Χ	
			Result of force)		Х
	Buffer fastening	Loosened	Normal wear	Χ	
		Broken	No fatigue cracks		Х
	Buffer spring	Ineffective	Can be compressed by hand	Χ	
	Draw hook / draw bar	Broken	Fatigue (old crack)	Χ	
			Accidental damage <sup>1)</sup> (clean recent breakage)		Х
		Twisted	5 (		Х
	Drawgear	Torn out	Accidental damage <sup>1)</sup>		Х
	Screw coupler	Wear		Х	
	·	Accidental damage <sup>1)</sup>			Х
	Screw coupling dummy hook	Twisted, broken			Х
erstruc					
	In general	Wear and tear		Χ	
		Accidental damage <sup>1)</sup> when in the custody of the RU			Х
	Ladders, walkways, steps,	Wear		Χ	
	towing rings, handrails,				
	label-holders	Accidental damage <sup>1)</sup> when in the custody of the RU			Х
	Tank	Damage resulting from damaged underframe	Accidental damage <sup>1)</sup> when in the custody of the RU		Х
		Damage to the tank	Accidental damage <sup>1)</sup> when in the custody of the RU		Х
		Bracing / sealing caps not air /	Accidental damage <sup>1)</sup> when in the custody of the RU		Х
		waterlight			
		Tank cradle cracked		Χ	
			Accidental damage <sup>1)</sup> when in the custody of the RU		Х
	Earthing cable (on the tank)	Missing, damaged		Χ	
	,	Wear		Х	

Accidental damage in the sense of Appendix 12 is understood as damage not resulting from wear but either from inappropriate handling of the wagon (e.g. shunting accidents, side-on collisions or other sudden events), or which can be attributed to culpable violation of wagon custody obligations by an RU

## APPENDIX 13 TO THE GENERAL CONTRACT OF USE

### LIST OF REPAIRS WHICH MAY BE CARRIED OUT BY THE RU ON THE PLACE OF IMMOBILIZATION OF THE WAGON OR IN THE NEARBY VICINITY

The application of appendix 13 is neither mandatory for the RU nor may its application be demanded by the Keeper.

This list contains repair works to re-establish the running order in the scope of article 19 which may be carried out by the RU without the prior agreement of the keeper irrespective of the amount of the related costs.

If the listed repair works are not carried out on the spot where the wagon has been immobilized or in the very nearby vicinity by the operating staff, inspectors, mobile units, etc., the RU will sent the wagon to a workshop. In this case, the regular procedure of article 19.1 will be applied.

If appendix 13 is applied, the provisions set out in article 19.5 have to be complied with for the re-establishment of the running order of the wagon.

### List:

Code Code Code	Anomalie Mängel Irregularities
3.1.1	Organe mécanique ou pièce de timonerie décroché(e) ou cassé(e) Herunterhängde oder gebrochene Teile des Bremsgestänges Part of brake rigging hanging down or broken
3.1.2	Etrier de sécurité du triangle de frein inefficace Fangeinrichtung unwirksam Safety strap ineffective
3.1.3	Robinet d'isolement du frein Bremsabsperrhahn Brake isolating cock
3.1.3.2	position pas nette Stellung nicht eindeutig position unclear
3.3.2.1	Demi-accouplement avarié manquant Bremskupplungen schadhaft, fehlen Brake coupling damaged or missing
3.3.5.1	Robinet d'arrêt d'air, inutilisable, non étanche, forcé, poignée manquante Luftabsperrhahn nicht gangbar, undicht, verbogen, fehlender Griff Stopcock, unusable, leaking, warped or handle missing

Code	Anomalie
Code Code	Mängel
Code	Irregularities
5.2.3	Plateau de tampon - Surface de contact Pufferteller - Berührungsfläche Buffer head - Contact surfaces
5.4.4	Fixation défectueuse Befestigung nicht sichergestellt Fastening defective
5.4.4.1	2 boulons ou plus desserrés 2 oder mehr Schrauben lose 2 or more bolts loose
5.4.4.2	1 boulon manquant 1 Schraube fehlt 1 bolt missing
5.4.4.3	1 boulon desserré 1 Schraube lose 1 bolt loose
5.6	Tendeur d'attelage Schraubenkupplung Screw, coupler
5.6.1	Partie manquante, avariée ou inutilisable Teil fehlt, ist beschädigt oder unbenutzbar Part missing, damaged, or inoperative
5.6.3	Tendeur décroché Herabhängende Kupplung Coupler unhooked
5.8	Autres organes de traction Andere Teile der Zugeinrichtung Other draw gear parts
5.9	Amortisseur à longue course Langhubstoßdämpfer Long-stroke damper
6.1.1	Marques et inscriptions manquantes, illisibles ou incomplètes Anschriften fehlen, nicht lesbar oder unvollständig Markings on wagons and load units, missing, illegible or incomplete
6.1.7.4	Poignées: absentes, avarie qui met en danger la sécurité du personnel, arrachées ou déformation hors tolérance Griffe: fehlen, Schaden der die Sicherheit des Personals gefährdet, angerissen oder unzulässig verbogen Handles: missing, damage representing a safety hazard for staff, torn off or deformed beyond tolerated limit
6.1.7.5	Tôles : inscription, rabatables; portes étiquettes - Fixation insuffisante Ungenügende Befestigung der Anschriftentafeln, Klapptafeln, Zettelhalter Inadequate securing of inscription plates, folding plates, label holders
6.1.7.6	Tôles : inscription, rabatables; portes étiquettes - Absence Fehlen der Anschriftentafeln, Klapptafeln, Zettelhalter Missing: inscription plates, folding plates, label holders

	Accessoires amovibles non assurés
6.1.7.8	Lose Wagenbestandteile nicht gesichert
	Loose wagon accessories not secured

# APPENDIX 14 TO THE GENERAL CONTRACT OF USE FOR WAGONS

ADDITIONAL CONDITIONS FOR THE USE OF WAGONS ON FERRIES AND IN EXCHANGE WITH RAILWAYS OPERATING ON STANDARD OR BROAD GAUGE LINES

### A - CONDITIONS TO BE MET FOR THE CONVEYANCE OF WAGONS ON FERRIES

### Group 1

### RUs operating train ferry services:

DB Schenker Rail Deutschland AG (DBSR)
DB Schenker Rail Dänemark (DBSR)
Green Cargo (GC)
Polish State Railways S.A. (PKP)
TRENITALIA S.P.A. (FS)
Romanian Railways (CFR)

#### Routes:

Trelleborg-Sassnitz ferry port (GC/DBSR)
Trelleberg-Rostock Port ferry terminal (GC/DBSR)
Swinoujscie-Ystad (PKP/GC)
Constanta-Samsun (CFR/TCDD)
Reggio Calabria-Messina (FS)
Villa S. Giovanni-Messina (FS)
Civitavecchia-Golfo Aranci (FS)

Conditions to be met by

#### 1 Two-axle wagons:

No restrictions apply.

### 2 Three-axle wagons:

Three-axle wagons will only be taken on board ferries when the water level permits. They must be able to negotiate the curves on board the ships (see list of routes for groups 1 and 2).

### 3 Bogie wagons suitable for unrestricted conveyance by ferry:

Wagons with two- or three-axle bogies are accepted without restriction provided they are able to negotiate both the maximum ferry ramp angle and the on-board curves (see Appendix 11, points 5.10 and 2.12 and the list of routes in groups 1 and 2).

### 4 Other bogie wagons and shipments carried on more than one wagon or with a buffer wagon:

Wagons with two- or three-axle bogies that do not meet the conditions set out above, as well as wagons with bogies that have more than three axles and shipments that must be carried on more than one wagon (loads carried on two wagons coupled together or with a buffer wagon) may only be taken on board by special agreement and if the water level permits.

It is the responsibility of the forwarding RU to make the necessary arrangements with the RUs involved in operating the ferry. The other RUs on the wagon's route must be advised of the authorisation obtained by an indication to this effect in the accompanying documentation.

### Group 2

RUs operating train ferry services:

Turkish State Railways (TCDD)

Routes:

Sirkeci-Haydarpasa Tatvan-Van

No restrictions apply.

### List of train ferry routes in Groups 1 and 2

Wagons that can be accepted without special arrangement must be able to negotiate the curves and angles indicated for the ferries operating each of the respective routes.

		Curve and counter-curve				
Route	Number of tracks on the ferry	Radius in m	Length of transition section in m	Radius in m	Maximum ramp angle in relation to the horizontal α	Observations
1	2	3	4	5	6	7
Trelleberg-Sassnitz ferry port	5	150	0	140*	2°30'	
	6					
	8					
Trelleberg-Rostock Port	5	150	0	140*	2°30'	
	6					
	8					
Swinoujscie-Ystadt	4	_	_	_	2°30′	
Constanta-Samsun	5+1	120	2.5	120	1°30'	
Reggio Calabria-Messina	3	150	15.5	150	1°30'	
Villa S. Giovanni-Messina	3	150	15.5	150	1°30'	
	4	120	19.6	120		
Civitavecchia-Golfo Aranci	3			_	1°30'	
Sirkeci-Haydarpasa	3		_	_	_	
Tatvan-Van	2	120	_	120	_	
	1	_	_	_		

### **Groupe 3**

### Train ferry routes between standard gauge RUs and Finland:

Lübeck-Skandinavienkai (Germany) – Turku (Finland)1)

Wagons that can be accepted without special arrangement must be able to negotiate the curves and angles indicated for the ferries operating each of the respective routes.

	Number of	Curve and counter-curve			Maximum		
Route	tracks on the ferry	Radius in m	Length of transition section in m	Radius in m	ramp angle in relation to the horizontal α	Observations	
1	2	3	4	5	6	7	
Lübeck-Skandinavienka – Turku	2	150	6	100	2°30'		
	2	150	6	100	2°30'		
	1				2°30'		
Rules governing the reciprocal use of wagons in traffic with Finland are set out in part C below							

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<sup>&</sup>lt;sup>1)</sup> Open as a CIM line only for international shipments of large containers and swap bodies.

### B – RULES GOVERNING THE USE OF WAGONS WITH INTERCHANGEABLES AXLES<sup>1)</sup> IN TRAFFIC ACROSS THE PYRENEES

### 1 General

- 1.1 The provisions of the GCU apply to wagons with interchangeable axles unless otherwise specified in this Appendix.
- 1.2 Because of the conditions prevailing at wheelset changing facilities, the only vehicles that can be accepted for exchange between RUs are wagons with interchangeable axles or bogie wagons with interchangeable axles for which the owner RUs or keepers have concluded a prior agreement with the French and Iberian RUs concerned. This prior agreement must, in particular, define the conditions governing the changing and supply of the axles.

  Failing such prior agreement wagons used on standard or broad gauge lines are subject to the general

Failing such prior agreement wagons used on standard or broad gauge lines are subject to the general conditions applicable to wagons not for variable gauge service.

### 2 Additional technical conditions

2.1 The period between wheelset overhauls shall be 4 years. The overhaul must be carried out by the keeper of the interchangeable wheelset<sup>2</sup>).

The date of the last overhaul of the wheelset, the code number of the keeper and the identification mark of the workshop that carried out the overhaul are to be indicated on a loose collar attached to the axle body.

The wheelsets must also carry the markings specified in section 7 below on the front of their axleboxes.

- 2.2 When the period elapsed since the last overhaul exceeds four years, the following procedure is to be applied as appropriate in each case:
- 2.2.1 If the wheelset changing facility at an exchange station notes that the overhaul period has been exceeded, it must return the wheelsets in question to their keepers<sup>2</sup>. To this end, it should attempt where possible to fit the wheelsets to wagons that are bound for the keeper in question. **M labels** shall then be affixed to these wagons.
- 2.2.2 If the wagon is in a train operated by the RU that is the keeper of the wheelset, the latter shall carry out (or arrange to carry out) the overhaul operation or replace the wheelset, whichever wagon it may be located on.
- 2.2.3 If the wagon is in a train operated by a user RU that is not the keeper of the wheelset, and if exceptionally the overhaul period has been exceeded by two years or more, the RU in question shall:
- 2.2.3.1 affix **K labels** to the wagon, deleting the words "after unloading to be repaired" if the wagon in question is:
  - a loaded wagon,
  - an empty wagon bound for the keeper of the wheelset;

-

<sup>1)</sup> In the text that follows, the term "wheelset" is used to refer to both standard gauge and broad gauge equipment.

<sup>2)</sup> Agreements between RUs or between keepers and RUs may however be concluded in order to facilitate the overhaul of wheelsets.

- 2.2.3.2 Replace the wheelset or wheelsets automatically in all other cases (point 2.3).
- 2.2.4 With the exception of the wagons referred to in point 2.2.3.1, wagons may be refused at exchange stations other than those at the France-Spain border if the overhaul deadline for their wheelsets is exceeded by more than two years.
- 2.3 When, in accordance with point 2.2.3.2, an RU is required to replace a wheelset of which it is not the keeper, it must:
  - send a request for a replacement wheelset to the keeper,
  - return the wheelset to its keeper to be overhauled.
- 2.4 The distance between the centres of the buffer rods or guides must be:
  - maximum 1,860 mm,
  - minimum 1,840 mm.

### 3 Wheelset changeover

3.1 The transferee RU shall be responsible for changing the wheelsets on wagons accepted for exchange.

If the RU does not change the wheelsets itself, it shall inspect the operation from the point of view of operating safety exclusively.

- 3.2 At the changeover point, wagons should preferably be fitted with wheelsets belonging to the keeper.
- 3.3 Wheelset changeover may not be used to justify a request for the wagon to be weighed at the changing point.
- 3.4 Instead of the wheelsets being changed, the load itself must be transhipped in the following cases:
- 3.4.1 if the wagon used is unfit to continue its run beyond the changeover point,
- 3.4.2 if the wheelsets are missing,
- 3.4.3 if the available capacity at the changeover point is exceeded,
- 3.4.4 if the wheelset changeover facility is inoperable.
- 3.5 The cost of the transhipment operation shall be borne as follows:
  - case described in point 3.4.1: by the RU responsible for use of the wagon when it is not suitable for traffic across the Pyrenees,
  - case described in point 3.4.2: by the transferee RU,
  - case described in points 3.4.3 and 3.4.4: by the RU which should normally conduct the changeover operation if it failed to report the problem in accordance with Article 11 of the GCU.

### 4 Cost of wheelset changeover and supply at France-Spain exchange stations

The costs associated with the wheelset changeover operation shall be covered by a flat-rate charge for each wagon submitted for changeover. The amount in question is payable to the RU that carries out the operation.

The cost of supplying a wheelset, where applicable, shall also be covered by a flat-rate charge.

These charges shall be brought to account through the usual tariff mechanisms.

### 5 Return of wagons

Unless otherwise specified, empty wagons must be returned home via the same exchange station as that at which the wheelsets were changed on the outward run.

### 6 Temporary suspension of the use of wagons traffic across the Pyrenees

- 6.1 The keeper of a wagon suitable for traffic across the Pyrenees in accordance with article 1 of part B of the present appendix to the GCU may decide to use it solely subject to the conditions applicable to wagons not suitable for changing wheelsets, only on standard or broad gauge lines, subject to the conditions applicable to wagons not suitable for changing wheelsets.
- 6.2 The conditions of preventive maintenance for these wagons may consequently be revised at the decision of the keeper.
- 6.3 Wagons of this nature are identified on the basis of:
  - Additional markings and wheelset overhaul markings as provided for in point 7 hereafter, permanently affixed to each wall of the wagon, and wheelsets marked with a green saltire.
- The keeper decides on resuming use with a change of wheelsets of a wagon suspended in accordance with the conditions of the present article for traffic across the Pyrenees, provided that:
  - the prescribed markings have been affixed to the wagons and wheelsets;
  - the wheelsets have been overhauled in the past four years.

### 7 Additional wagon markings

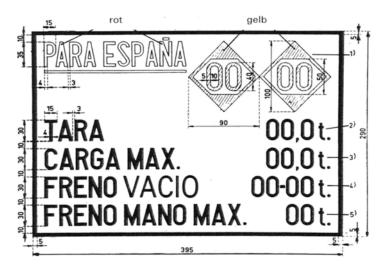
Wagons must carry the following markings:

- 7.1 on each side wall
  - the E sign shown in point 2.16 of Appendix 11,
  - the markings shown in Figures 1 or 2; the values to be indicated will be supplied on request by the RUs (the keeper).
- 7.2 on the wheelsets (front of each axle-box), in white paint and clearly visible, the keeper's code number and the date (month and year) of expiry of last overhaul.

Figure 1

### Additional signs for wagons accepted for running in Spain and Portugal

Figure 1 For wagons fitted with a vacuum brake



Position: On the right of each side wall, in black on wagons that are painted white, and in white

on a blue background for other wagons.

Meaning: 1. Left-hand diamond Maximum speed at maximum load

Right-hand diamond Maximum speed when empty. When the maximum speeds

when empty and at maximum load are the same, a single

diamond marking will suffice.

2. TARA Vehicle tare.

3. CARGA MAX Maximum load limit.

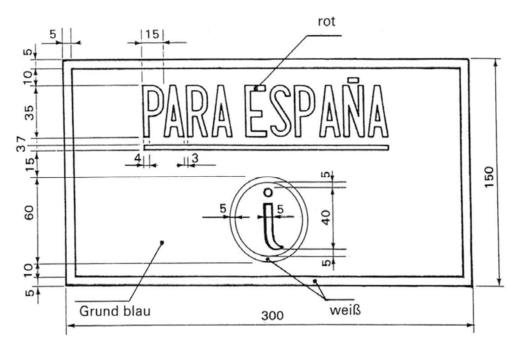
4. FRENO VACIO Vacuum brake

Left-hand figure = braked weight in "empty" position, Right-hand figure = braked weight in "loaded" position.

5. FRENO MANO MAX Maximum braked weight of the screw brake.

Figure 2

Figure 2 For wagons with only one brake pipe for the vacuum brake



Position: On the right of each side wall, in black on wagons painted white and in white on a

blue background for other wagons.

Meaning: Wagon can be included in a train with the brake isolated.

### C - RULES GOVERNING THE RECIPROCAL USE OF WAGONS WITH INTERCHANGEABLE<sup>1)</sup> AXLES (FOR INDIVIDUAL AXLE WAGONS) OR BOGIES<sup>2)</sup> (FOR BOGIE WAGONS) IN TRAFFIC WITH FINLAND

### 1 General

- 1.1 The provisions of the GCU shall apply to wagons with interchangeable axles unless otherwise stipulated in this Annex.
- 1.2 Because of the conditions prevailing at the Tornio (Finland) wheelset/bogie changeover facility, only wagons for which the keeper has concluded a prior agreement with a Finnish RU operating the facility or on whose behalf it is operated can be accepted for exchange between Sweden and Finland and vice-versa.

This prior agreement must, in particular, define the conditions governing the changing and supply of the axles.

### 2 Additional technical conditions

- 2.1 If the overhaul period for an interchangeable wheelset has been exceeded by more than 3 months, the wheelset is to be regarded as damaged and must be replaced.
- 2.2 If the overhaul period for an interchangeable bogie has been exceeded by more than 3 months, the keeper shall be informed and asked for instructions. **K labels** shall be affixed to the wagon, deleting the words "after unloading to be repaired".
- 2.3 The distance between buffer centres must be:
  - maximum 1,800 mm,
  - minimum 1,780 mm.

However, for wagons built before 1.7.1984, a buffer centre distance of between 1,760 mm and 1,740 mm is acceptable.

### 3 Changeover of wheelsets or bogies

- 3.1 The keeper of the wagon, in agreement with the Finnish RU involved, shall ensure that the interchangeable wheelsets or bogies are available as required at Tornio. The detailed arrangements shall be set out in the agreement to be concluded in accordance with point 1.2 of this Appendix.
- 3.2 As a rule, the Finnish RU involved shall be responsible for conducting the wheelset or bogie changeover operation in Tornio.
  In cases where the Finnish RU involved does not itself carry out the changeover, it shall inspect the operation from the point of view of operating safety exclusively.
- 3.3 Wheelset or bogie changeover may not be used to justify a request for the wagon to be weighed at Tornio.

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<sup>1)</sup> In the text that follows, the term "wheelset" is used to refer to both standard gauge and broad gauge equipment.

<sup>2)</sup> In the text that follows, the terms "wheelset" and "bogie" are used to refer to both standard gauge and broad gauge equipment.

- 3.4 Instead of the wheelsets or bogies being changed, the load itself must be transshipped in the following cases:
- 3.4.1 if the wagon used is unfit to continue its run beyond Tornio,
- 3.4.2 if the wheelsets or bogies are missing,
- 3.4.3 if the available capacity at the wheelset/bogie changeover point in Tornio is exceeded,
- 3.4.4 if the wheelset/bogie changeover facility is inoperable.
- 3.5 The cost of the transhipment operation shall be borne as follows:
  - case described in point 3.4.1: by the RU responsible,
  - case described in point 3.4.2: by the keeper,
  - case described in points 3.4.3 and 3.4.4: by the Finnish RU involved if it failed to report the problem in accordance with Article 11 of the GCU.

### 4 Cost of wheelset and bogie changeover and supply at Tornio

The costs associated with wheelset and bogie changeover operations shall be covered by a flatrate charge for each wagon submitted for changeover, payable to the Finnish RU involved. These charges shall be brought to account through the usual tariff mechanisms.

### 5 Additional wagon markings

- 5.1 All wagons must be marked on the right of each side wall (or on the right of each solebar for flat wagons) with the **E** sign shown in **point 2.16 of Appendix 11** (Finland) which certifies that they meet the constructional provisions of **UIC Leaflet 430-3** and are accepted for traffic with Finland.
- 5.2 Wagons with interchangeable axles (axle wagons) must also carry the following additional marking near to the overhaul markings, in the language of the RU with which the wagon keeper has concluded a service agreement, and in Finnish:
  - "Observe axle overhaul markings"
  - "Huomi Pyöräkerran korjausmerkintä".
- 5.3 Wagons with interchangeable bogies (bogie wagons) must also carry the following additional marking near to the overhaul markings, in the language of the RU with which the wagon keeper has concluded a service agreement, and in Finnish:
  - "Observe bogie overhaul markings"
  - "Huom! Telin korjausmerkintä".
- 5.4 Interchangeable axles must be permanently marked on each axle-box with the code number or initials of the RU with which the keeper has concluded a service agreement, as well as the overhaul period and date (month and year) of their last overhaul.
- Interchangeable bogies must be clearly marked on the solebar in white paint with the code number or initials of the RU with which the keeper has concluded a service agreement, the keeper's identification mark, as well as the overhaul markings described in **point 2.3 of Appendix 11**.

### 6 Reserved