APPENDIX 11
TO THE GENERAL CONTRACT OF USE

MARKINGS AND SIGNS ON WAGONS

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1 Introduction

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, train preparation, shunting, technical inspections, workshops and key warning signs – but are not exclusively assigned to a specific process, specialist department or user.

The annexes that follow set out detailed regulations applicable to wagons authorised for conveyance by ferry or on different track gauges.

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.

1.3 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 D-DB 0691 235-2 Tanoos	32 RIV 80 D-BASF 7369 553-4 Zcs	33 RIV 84 NL-ACTS 4796 100-8 Slpss	43 87 F 4273 361-3 Laeks

or

23 TEN 80 D-DRFC 7369 553-4 Zcs	31 TEN - RIV 80 D-DB 0691 235-2 Tanoos	33 TEN 84 NL-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 above):

31	Fitness for interoperability (2 digits)
80	Country in which the wagon is registered (2 digits)
0691	Principal technical characteristics (4 digits)
235	Number of the wagon in its production series (3 digits)
-2	Self-check digit (1 digit)
RIV	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.
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.

*) For RUs in EU member states, Annex P of the OPE TSI takes precedence as national law.

2.2 Derogation plate

Figure 1

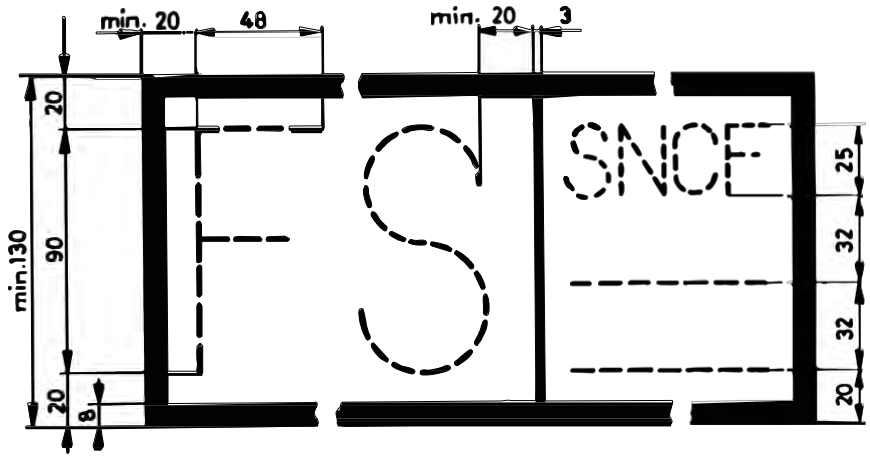


Figure 2

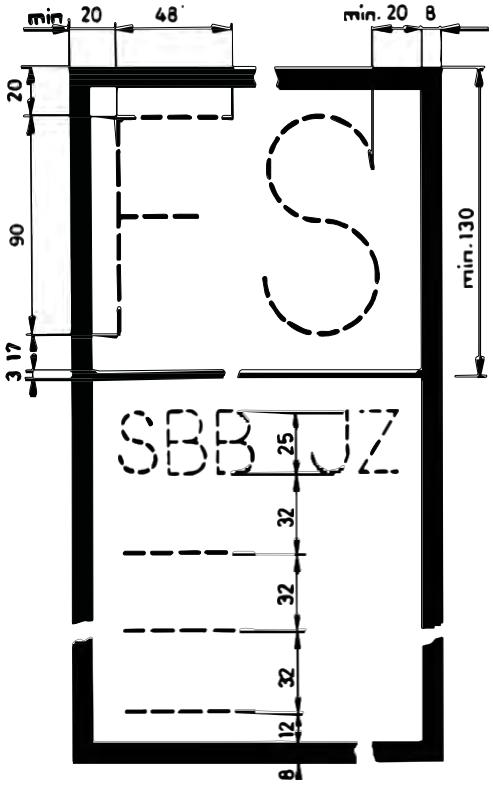


Figure 3

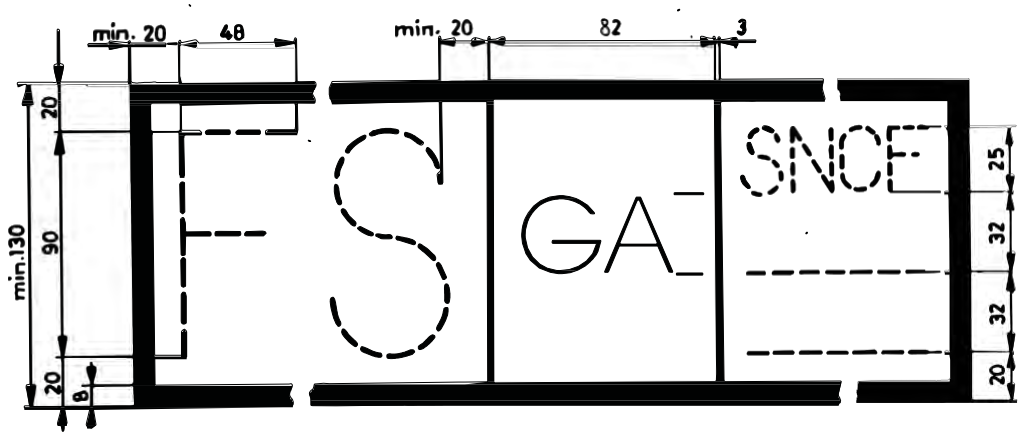
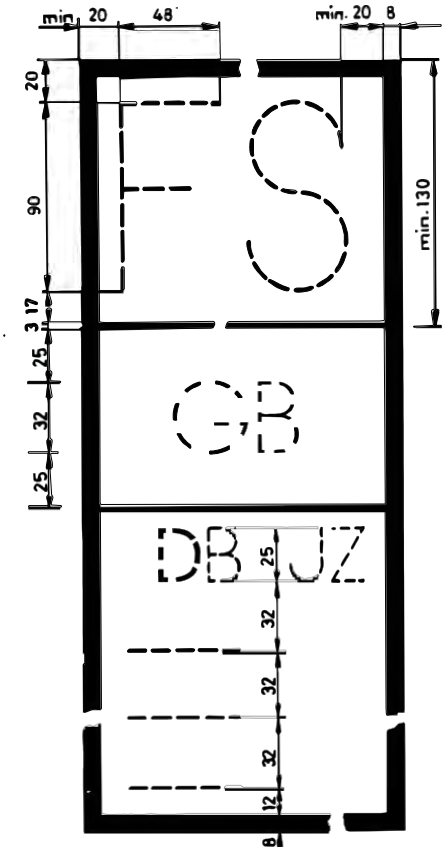


Figure 4



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

N.B.: Each RU shall bear the cost of securing approval for non-RIV wagons to run on the lines in question.

2.3 Maintenance plate

Figure 1

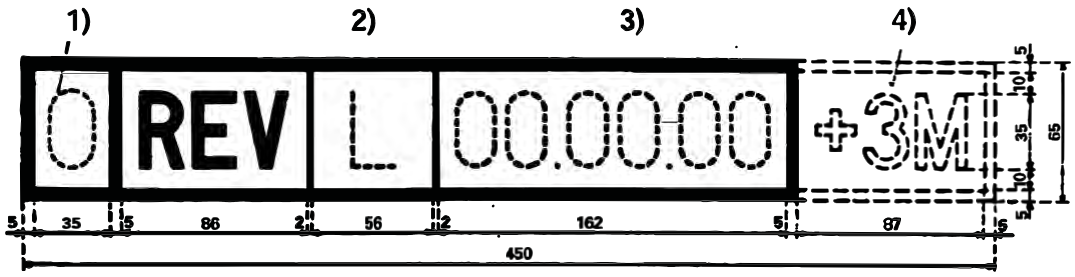
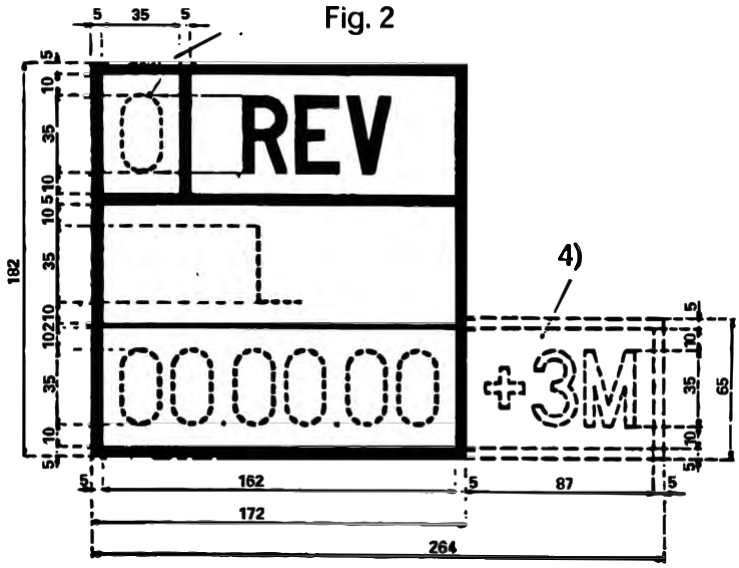


Figure 2



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.

1) Maintenance plate validity period: see Appendix 10, paragraph C, point 1.3 for additional details
2) Identification mark of the workshop that carried out the maintenance work.
3) Date on which the work was carried out (day, month, year).
4) 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

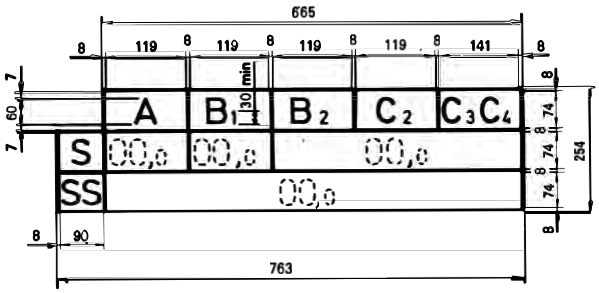


Figure 2

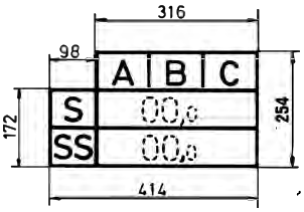


Figure 3

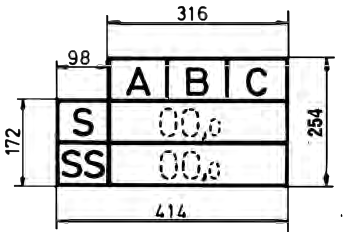


Figure 4

4)

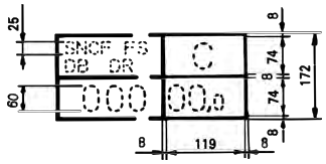


Figure 5

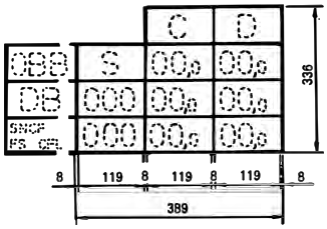


Figure 6

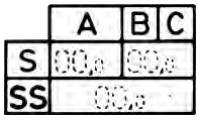


Figure 7

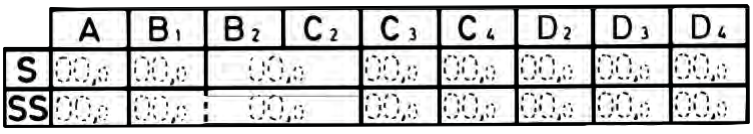
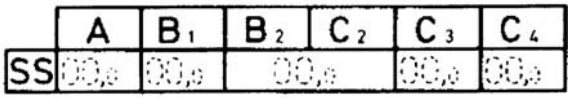


Figure 8

Figure 9*



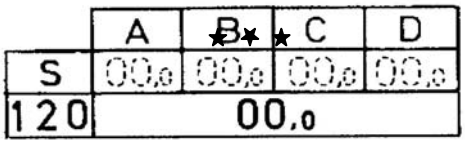
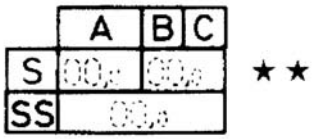


Figure 10*



* 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 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 load-proportional braking system.

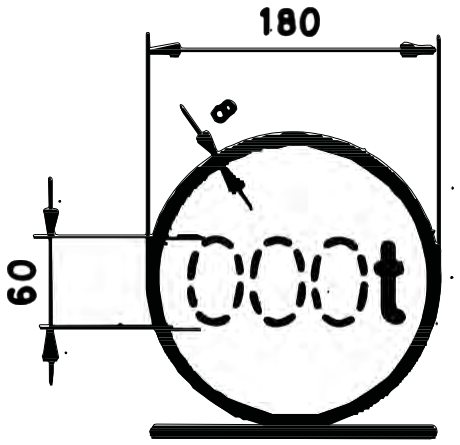
N.B. 1 Wagons should only carry the markings for line category D if, for that category of line, they can accommodate a higher maximum axle-load than for category C.

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.).

*) Marking *** for all new wagons meeting the corresponding conditions entering service from 1.1.2007.

2.5 Carrying capacity

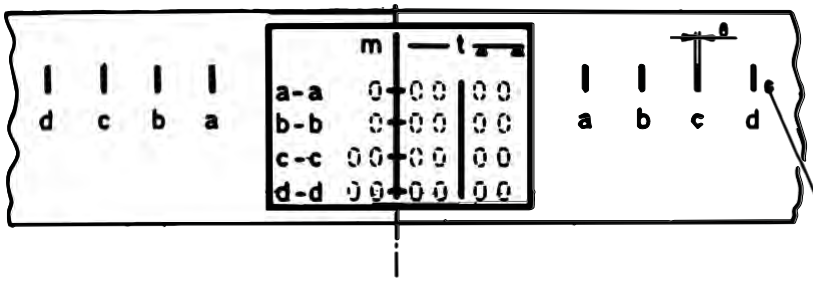


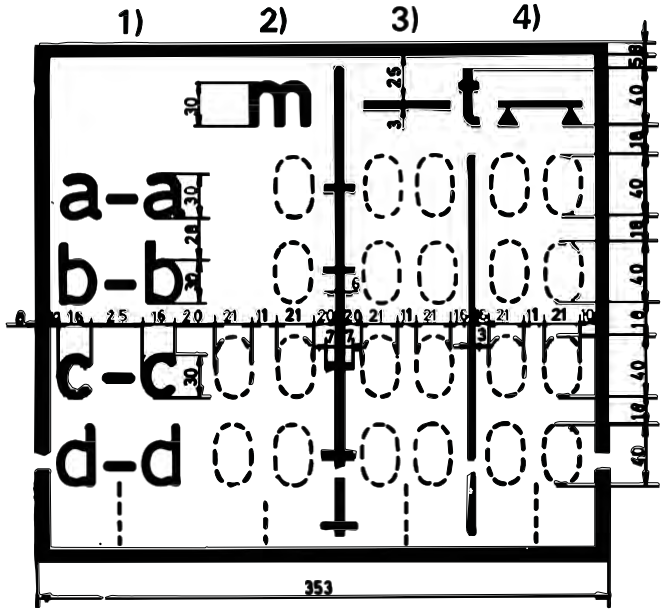
Position: On the right of each solebar, or on parts covering the solebar or on special boards fitted at the same height as the solebars

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 Sign for 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)





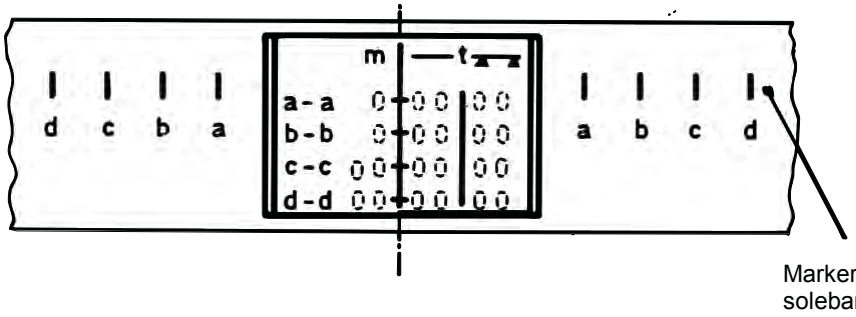
Maximum value for different lengths:
- of concentrated loads spread over the lengths of the supporting surface
- of loads resting on two supporting points

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.

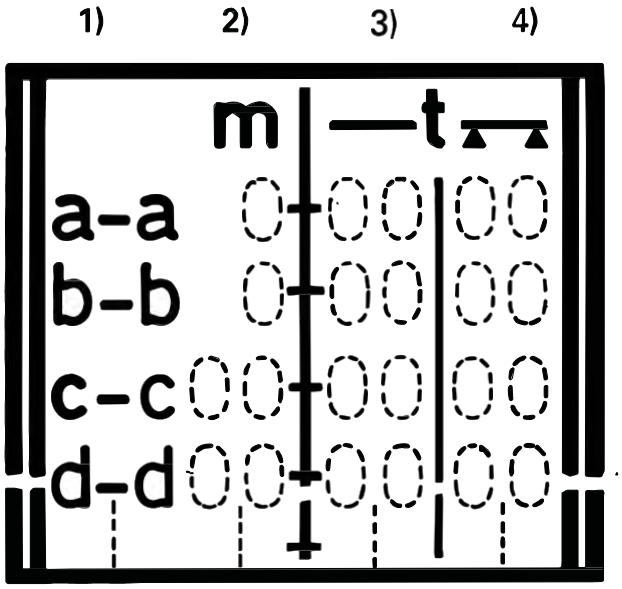
Position: In the middle of each solebar, or on parts covering the solebar or on special boards fitted at the same height as the solebars.

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 ≥ 1.20m)



Markers on solebars



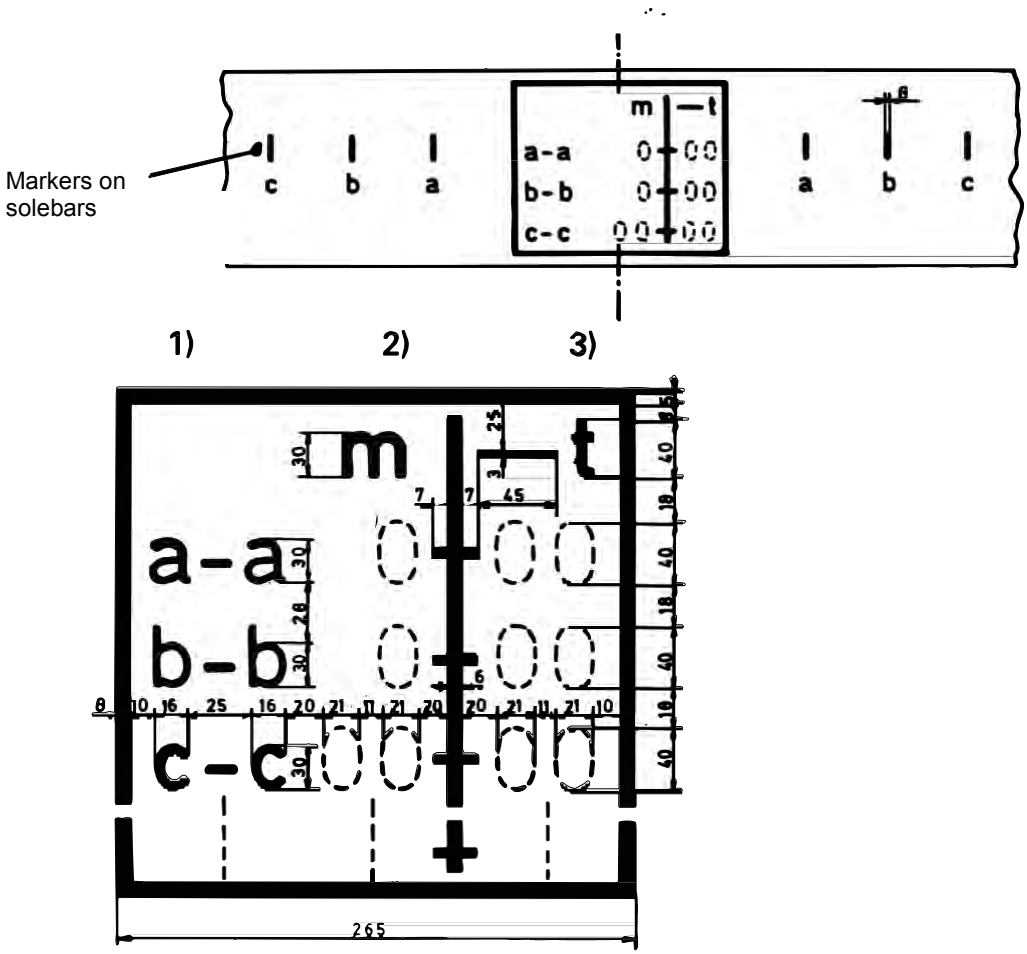
Maximum value for different lengths:
- of concentrated loads spread over the lengths of the supporting surface
- of loads resting on two supporting points

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 in points 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 ≥ 2 m)



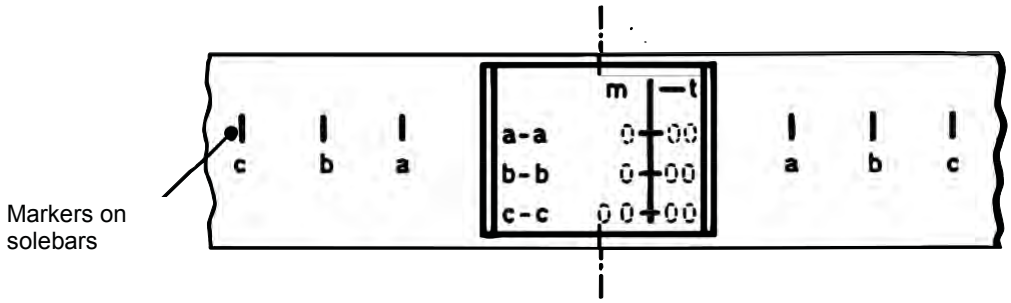
Maximum value for different lengths of concentrated loads:
- spread over the lengths of the supporting surface

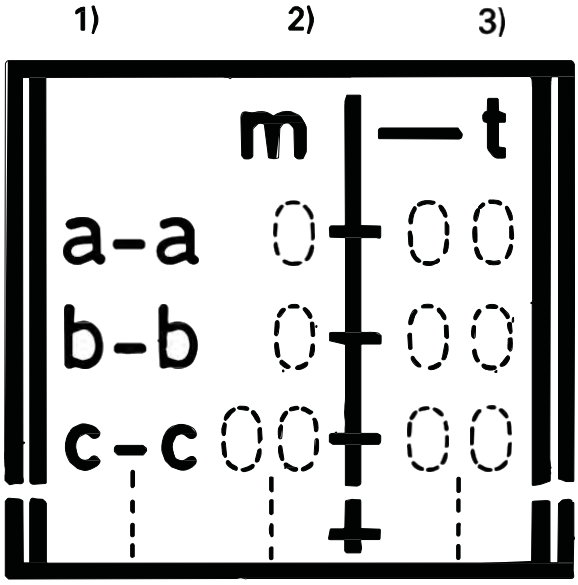
1) Indication of the length of the supporting surfaces of the concentrated loads or distance between supporting points.
2) Distance, in metres, between the length markers.
3) Maximum value, in tonnes, of the concentrated loads.

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)



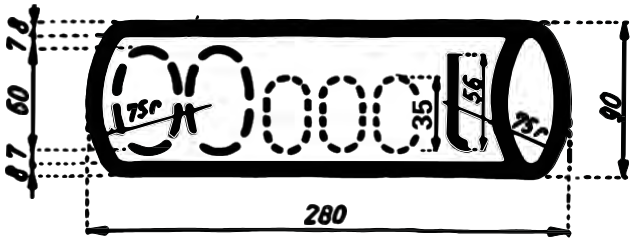


Maximum value for different lengths of concentrated loads:
- spread over the lengths of the supporting surface

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



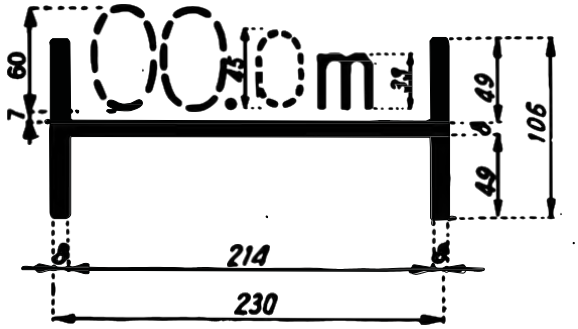
Position: On the left of each side wall; for tank wagons, on the tank itself or on special boards.

Meaning: Capacity in m^3, 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 Length of load and floor space

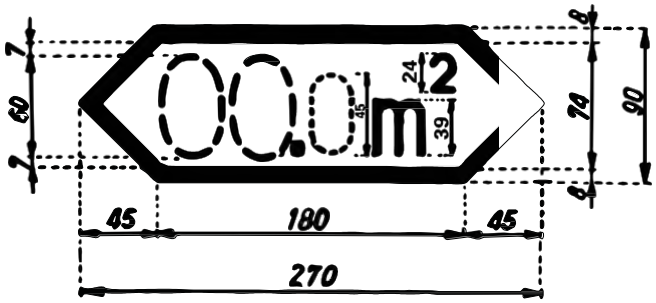
Figure 1 Length of load



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).

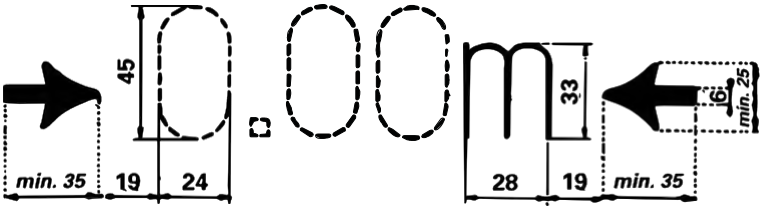
Figure 2 Floor space



Position: On the left of each side wall.

Meaning: Surface area [m^2] of the floor of covered wagons and wagons with an opening roof and flat floor.

2.9 Distance between end axles and bogie centres

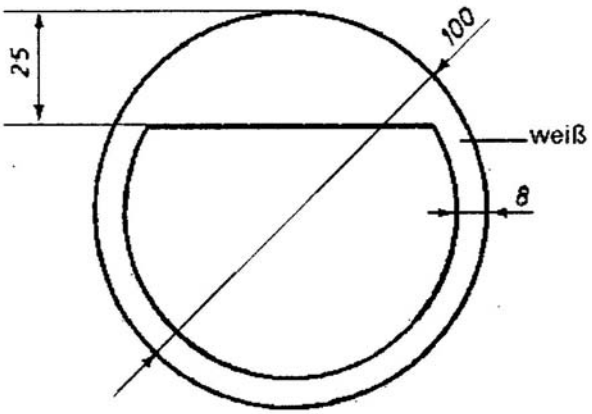


Position: On the right of each solebar, or on the bogie frame (it is sufficient for the sign to feature on the left-hand side of the bogie, on each side of the wagon) or on parts covering the solebar or on special boards fitted at the same height as the solebars.

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 for 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).2.11Additional signs for wagons authorised to run in Great Britain

Figure 1 For wagons accepted on ferries to run

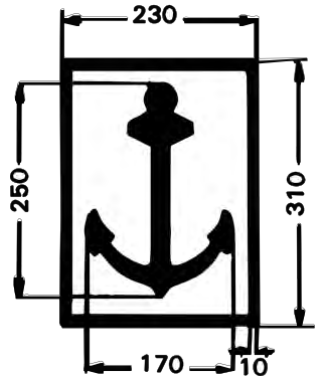
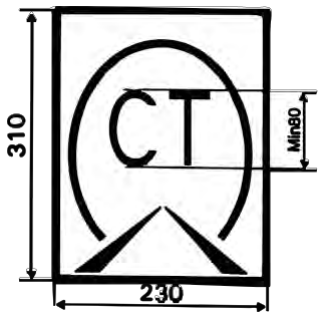


Figure 2 For wagons authorised through the Channel Tunnel



Figures 3a, 3b, 3c For wagons accepted on ferries and authorised to run through the Channel Tunnel

Figure 3a For wagons accepted on ferries

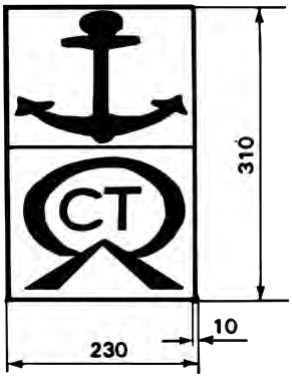


Figure 3b For wagons authorised to run through the Channel Tunnel

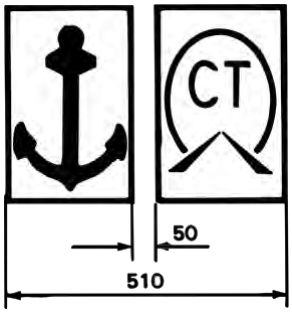
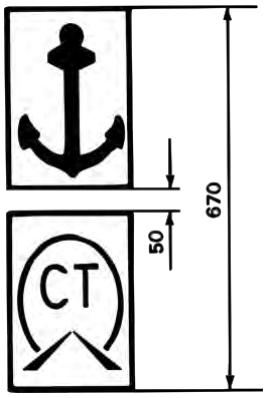


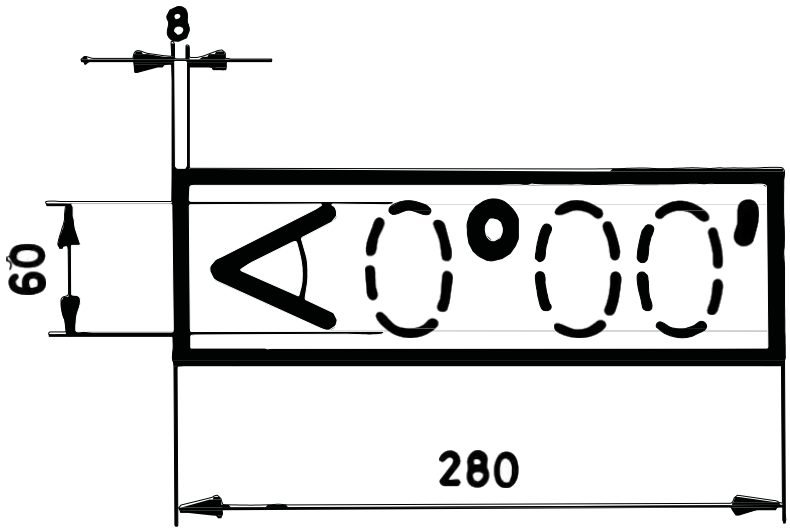
Figure 3c



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, on the basis of either Figure 1 or Figure 2, or a combination of both (Figures 3a, 3b or 3c).

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.

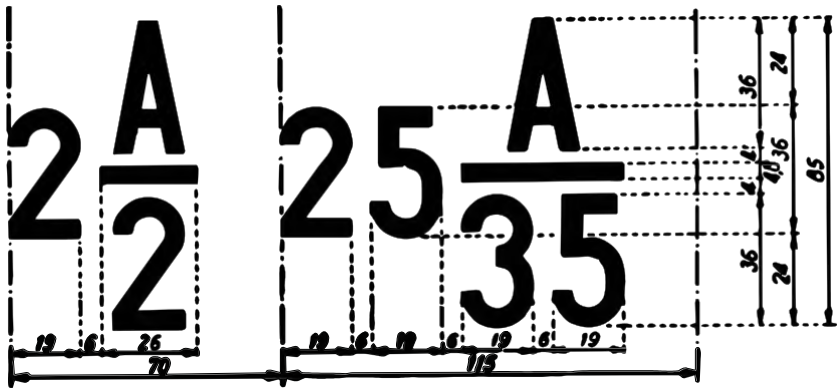
Meaning: Indicates bogie wagons that can only negotiate a ramp angle of less than 2°30′ when running onto ferries.

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 Annex 1.

2.13 Sign for removable wagon accessories

Removable wagon accessories



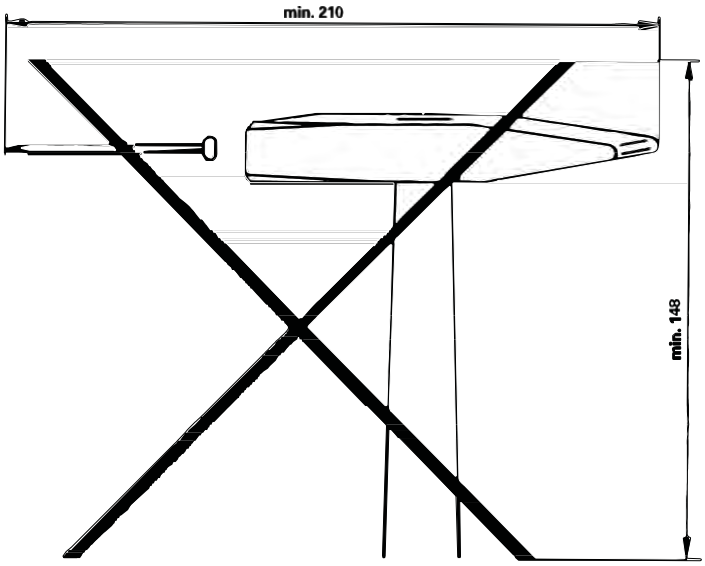
Position: On the right of each side wall.

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	– reserved –
9	Swivelling bolster with stanchions
10	Removable bolster
11 – 12	– reserved –
13	– reserved –
14	– reserved –
15 – 16	– reserved –

Serial number	Description of the removable accessory
17	– reserved –
18	– reserved –
19	– reserved –
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:	Outline in black
Cross:	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 Markings for wagons with special fittings (wagons with automatic discharge facility, opening roof, etc.)

Example:

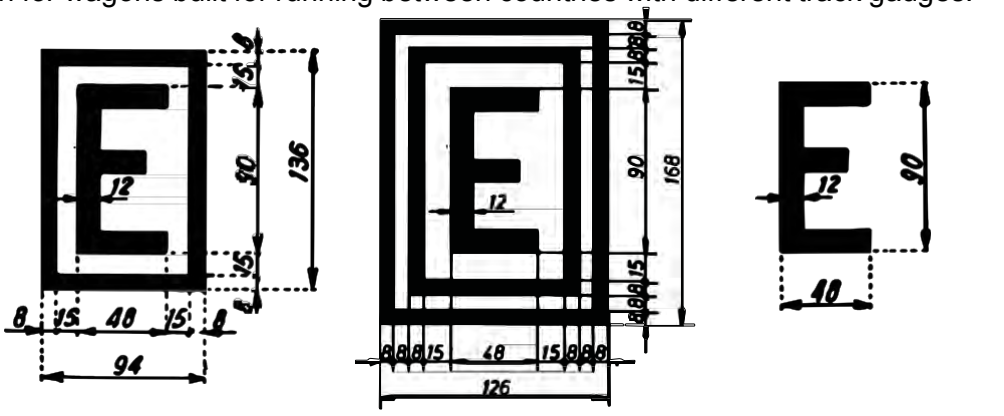
Wandarretierung lösen durch Schließen und Öffnen mit Bedienhebel.	Débloquer l'arrêt mural en l'ouvrant et le fermant avec le levier de comande.
Release wall locking device by closing and opening with control lever.	Allentare il blocco della parete mediante chiusura e apertura con la leva di servizio.

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 Wagons built for running between countries with different track gauges

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



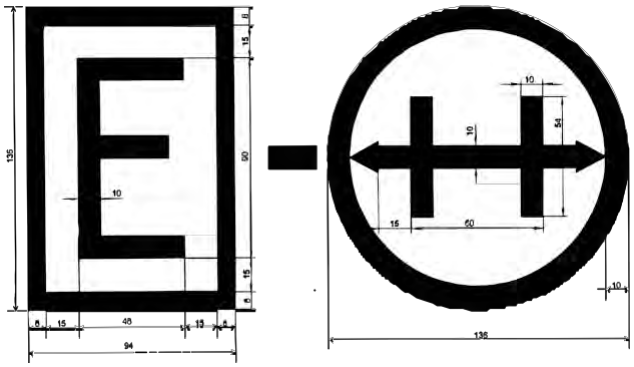
Countries with 1520 mm track gauge (other than Finland)

Finland 1524 mm track gauge

Spain, Portugal 1668 mm track gauge

Position and meaning: see point 2.17

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



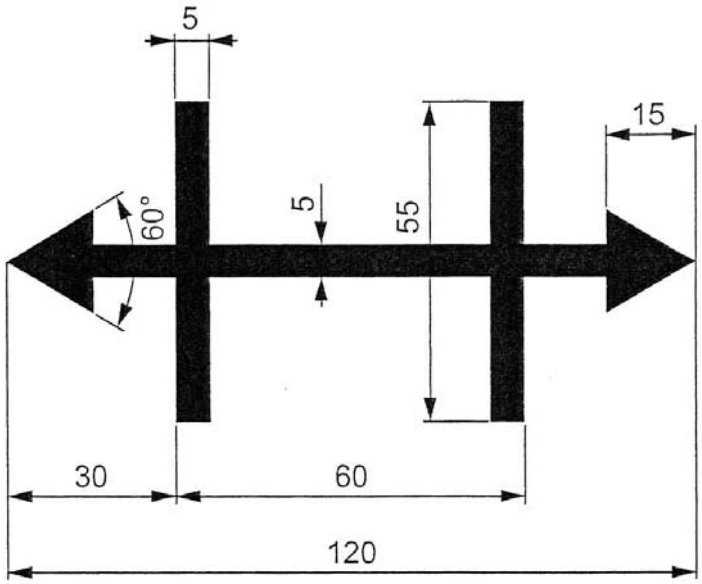
Position: On the right of each side wall. The right-hand sign on its own also features on the bogie frame.

Meaning: The signs shown in point 2.16, which indicate compliance with UIC Leaflets 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 reciprocal use of wagons with interchangeable axles in traffic across the Pyrenees are given in Annex 2 and with VR in Annex 3.

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.

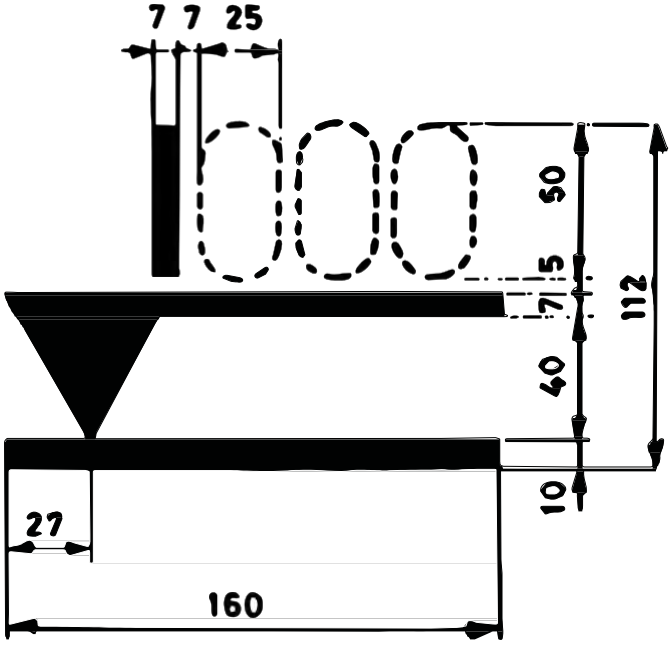
This sign is carried by wagons that have bogies fitted with gauge-adjustable axles with a nominal gauge of 1520 mm. Wagons fitted with bogies of this type should carry the appropriate combination of the signs shown in points 2.16 and 2.18 on the right of each side wall.

*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

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

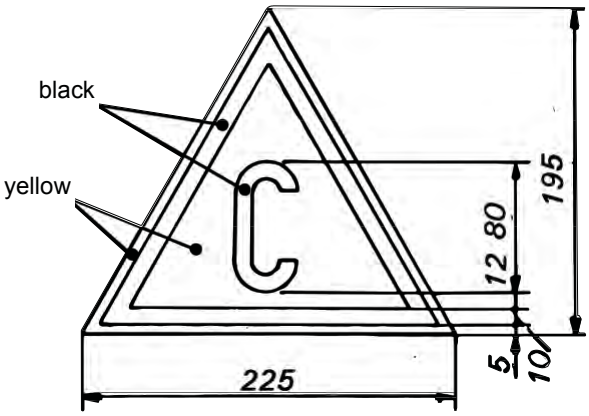


Position: On the right of each solebar.

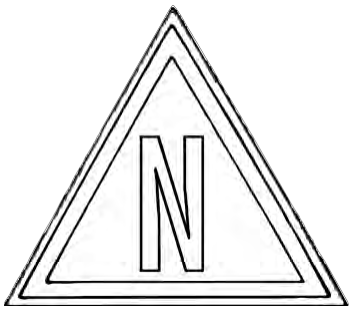
Meaning: This sign is carried by container wagons that are suitable for transporting large containers and/or swap bodies. It indicates the height in millimetres of the loading plane when the wagon is not loaded.

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

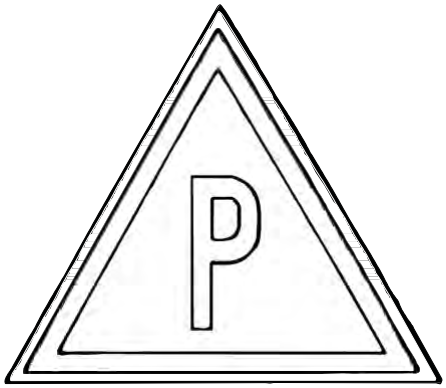
On swap-body carrier wagons and on carrier wagons with independent axles that have equivalent or more favourable characteristics for the coding of load units.



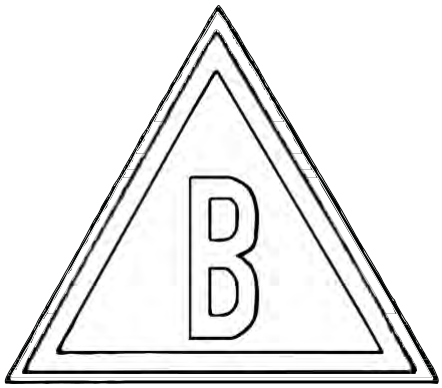
On recess wagons for semi-trailers



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



On roller-unit carrier wagons



1	2	3

Position: on the left of each side wall.

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

- P 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,
- N On recess wagons for semi-trailers whose characteristics are defined in point 3.3.2 and Appendix 3.4 of UIC Leaflet 596-6,
- C On swap-body carrier wagons whose characteristics are defined in point 3.3.2 and Appendix 3.3 of UIC Leaflet 596-6,
- B On roller-unit carrier wagons whose characteristics are defined in point 3.3.2 and Appendix 3.3 of UIC Leaflet 596-6,

-	C

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

-	C
	+23

On swap-body carrier wagons whose characteristics are more favourable than the conditions in point 3.3.2 of UIC Leaflet 596-6,

-	P

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

-	P
	+5

On recess wagons whose characteristics when carrying semi-trailers are more favorable than the conditions in point 3.3.2 of UIC Leaflet 596-6,

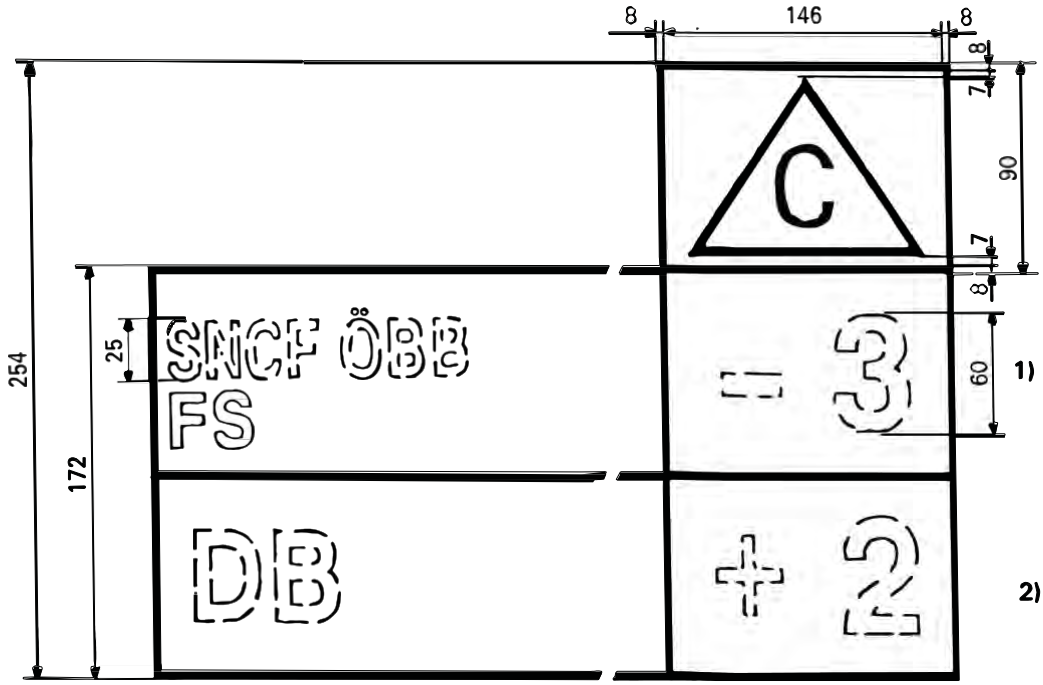
-	B
	1 2 3
	+3
	-2

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

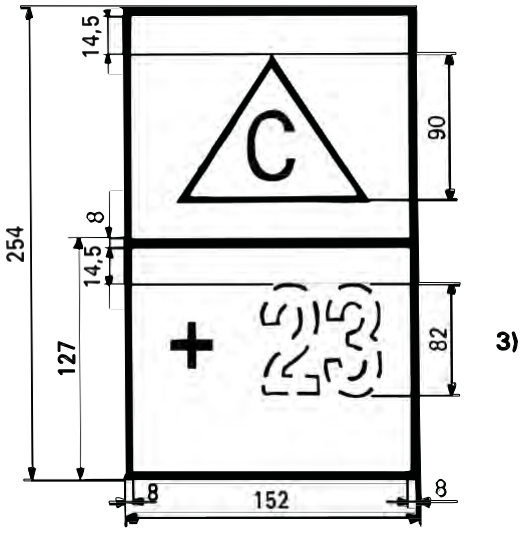
-	B
	1 2 3
	+6

On roller-unit carrier wagons whose characteristics are more favorable than the conditions in point 3.3.2 of UIC Leaflet 596-6.

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 favorable than the conditions in point 3.3.2 of UIC Leaflet 596-6



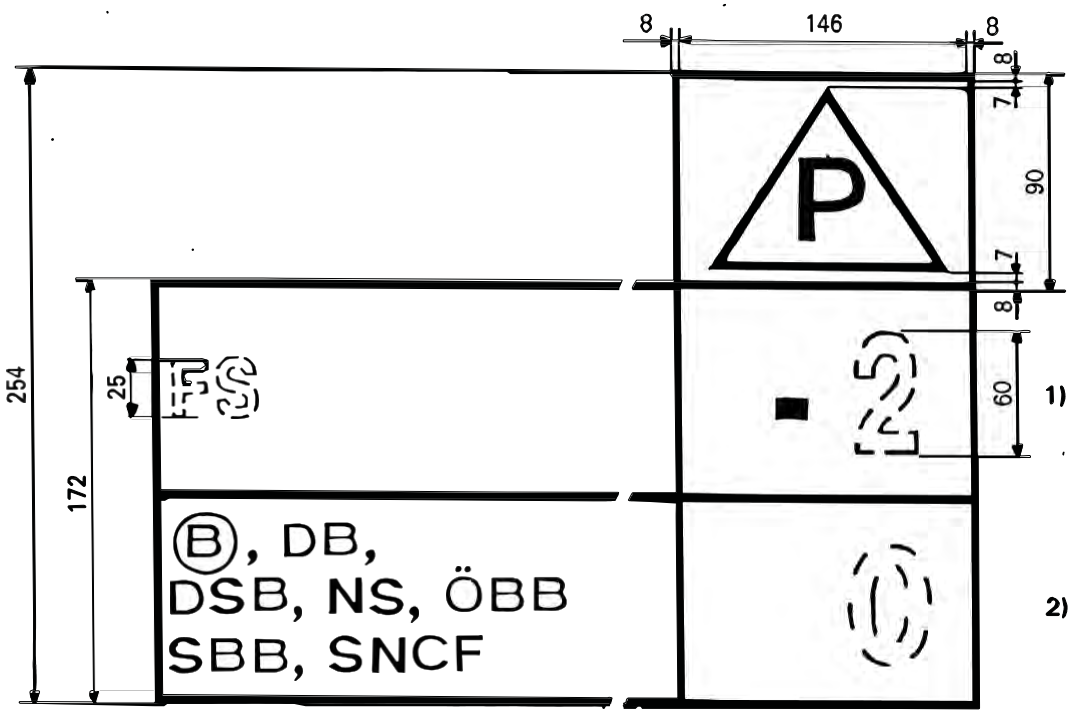
Meaning:

- 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.

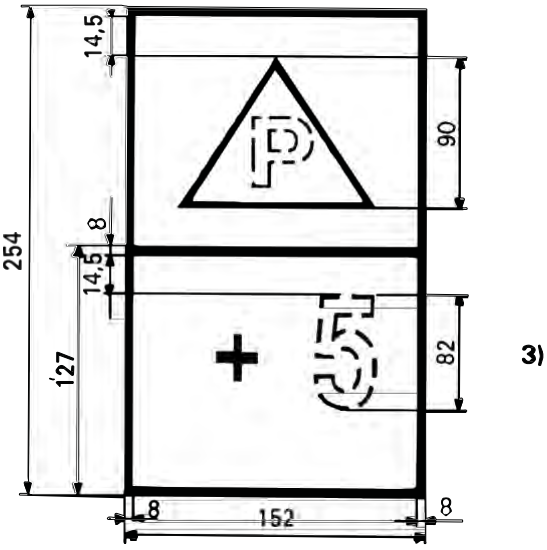
+ 2 The wagon can be loaded with swap bodies that have a profile number that is greater (in this example by up to 2 points) than the profile number assigned to the RU (or RUs) concerned.

+ 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



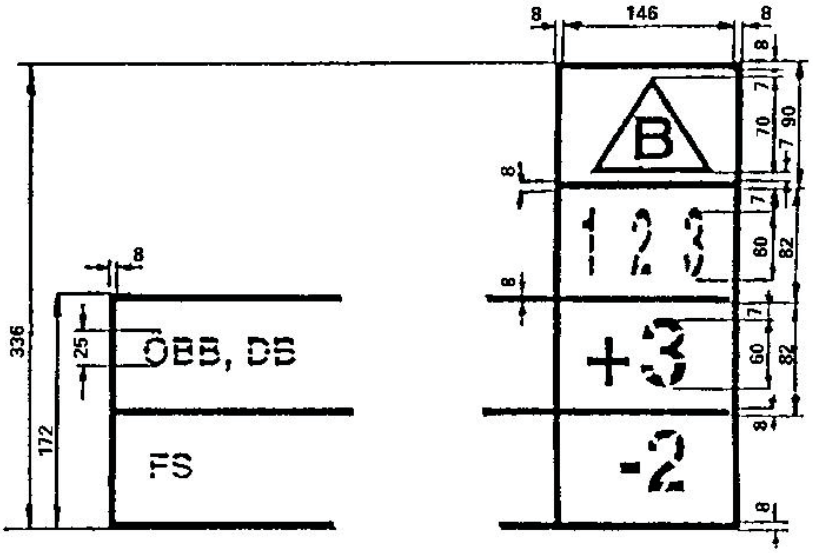
On recess wagons whose characteristics when carrying semi-trailers are more favorable than the conditions in point 3.3.2 of UIC Leaflet 596-6



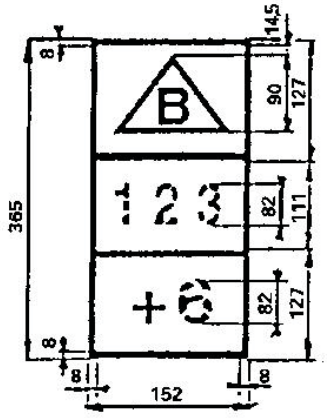
Meaning:

- 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



On roller-unit carrier wagons with characteristics more favorable than the conditions in Point 3.3.2 of UIC Leaflet 596-6

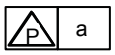


Meaning:

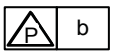
+ 3	The wagon may be loaded with roller units that have a profile number that is greater (in this case by up to 3 points) than the profile number assigned to the RU (or RUs) concerned.
- 2	The wagon may only be loaded with roller units that have a profile number that is lower (in this example by at least 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.

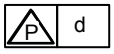


Clearance envelope for P semi-trailers with compatibility code "a" on type 4 recess wagon with seating device 113 or 98 cm high

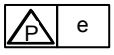


Clearance envelope for P semi-trailers with compatibility code "b— on recess wagon types BA 739 and 744 with seating device 113 or 98 cm high

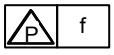
Clearance envelope for P semi-trailers with compatibility code "c— on type 2000 recess wagon with seating device 113 or 98 cm high



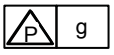
Clearance envelope for P semi-trailers with compatibility code "d— on Mega 2 type recess wagon with seating device 113, 98 or 85 cm high



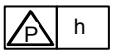
Clearance envelope for P semi-trailers with compatibility code "e— on type 5 recess wagon with seating device 113, 98 or 88 cm high



Clearance envelope for P semi-trailers with compatibility code "f—on type 3000 recess wagon with seating device 113, 98 or 88 cm high



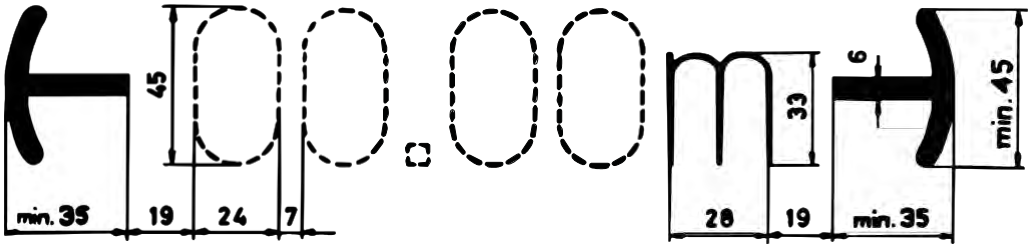
Clearance envelope for P semi-trailers with compatibility code "g— on Twin type recess wagon with seating device 113, 98 or 88 cm high



Clearance envelope for P semi-trailers with compatibility code "h— on type 4.2 recess wagon with seating device 113 or 98 cm high

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 Sign for tare and braked weight

Figure 1: Tare

Figure 2: Wagon tare and braked weight of the platform-operated hand brake

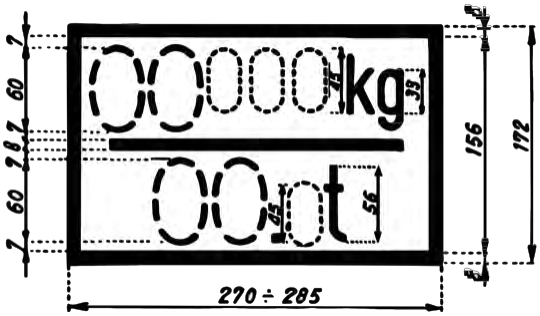
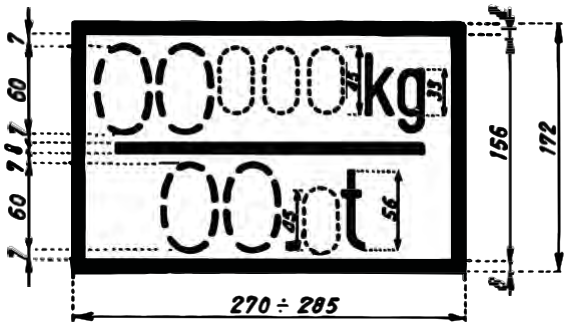


Figure 3: Wagon tare and braked weight of the ground-operated hand brake (the latter to be shown in a red box)



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. 1: The sign shown in Figure 1 must not be affixed to a wagon that is to carry the sign in Figure 2.

N.B. 2: Wagons with a marked tare that differs by more than 2% from the actual tare must be fitted with M labels.

4.3 Signs to indicate the changeover device for air brakes. Marking of the braked weight on wagons. Brake type abbreviations

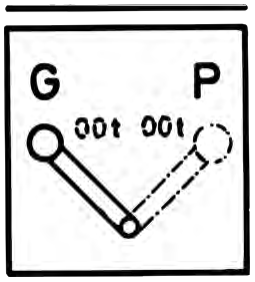
4.3.1 Marking of the braked weight of wagons without changeover device

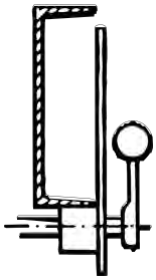
Brake YY 00	or	Brake YY 00 t

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)

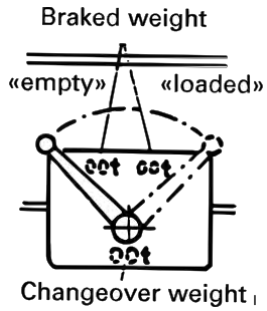
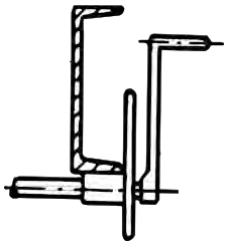


Fig. 3 : «Empty» braking position plus one «Loaded» braking position



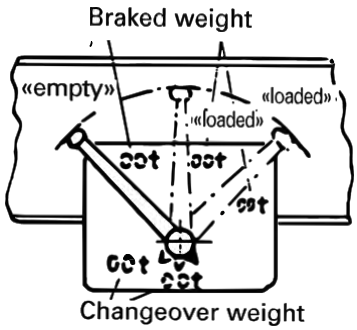
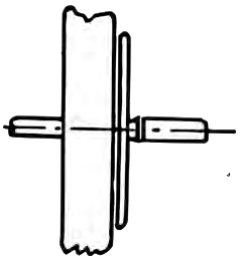


Fig. 4 : «Empty» braking position plus several (for example two) «Loaded» braking positions



Vehicles fitted with 2 or more "empty/loaded" changeover devices (Figures 3 and 4)

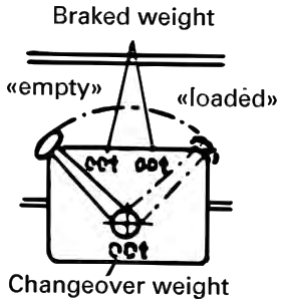
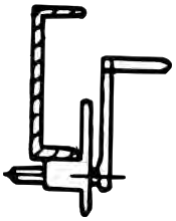


Fig. 5 : «Empty» braking position plus one «Loaded» braking position



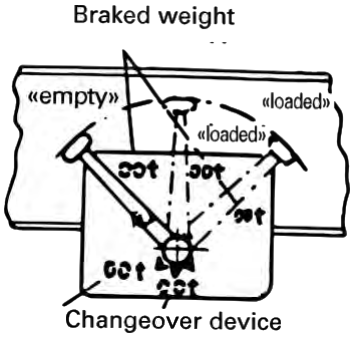
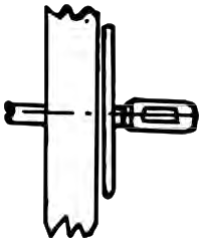


Fig. 6 : «Empty» braking position plus several (for example two) «Loaded» braking positions



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 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 effected 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.

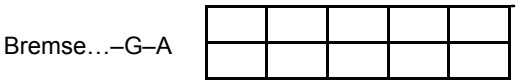
4.3.4 Vehicles fitted with automatic load-proportional braking system

Figure 1

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] → 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



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 positions

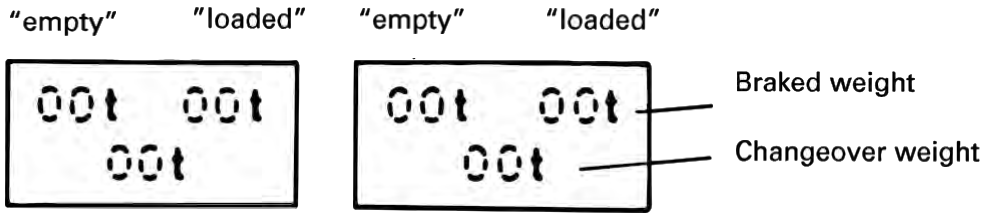


Figure 2 Vehicles featuring a single braked weight value in the Freight and Passenger positions

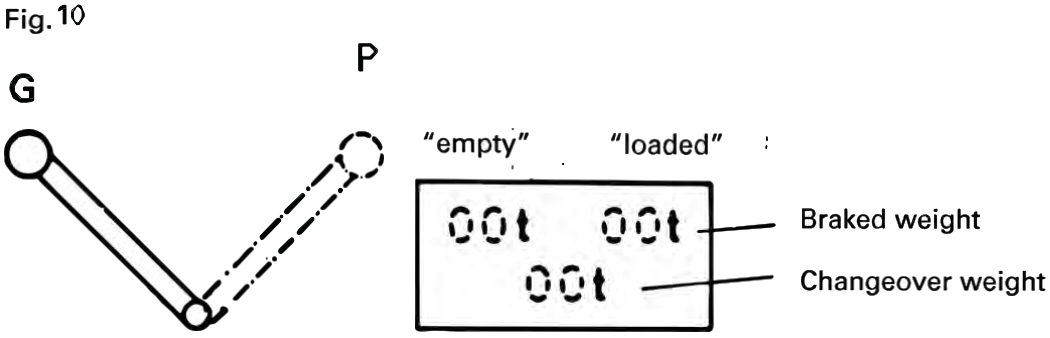
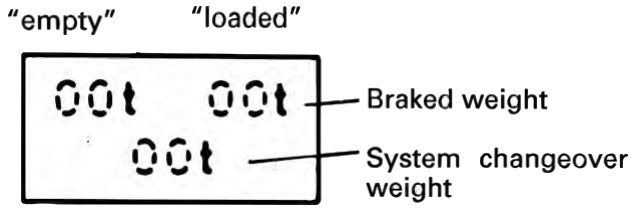


Figure 3 Vehicles featuring a Freight brake or Passenger brake only



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).

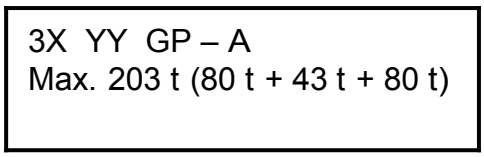
4.3.7 Signs for wagons with more than one distributor

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 (cf. point 4.3.3).

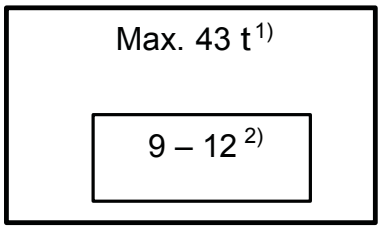
b) Wagons with several distributors and automatic load-proportional brakes

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

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 load-proportional 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	Bo
Hildebrand-Knorr	Hik
Breda	Bd
Charmilles	Ch
Oerlikon	O
Knorr, type KE	KE
Westinghouse, type E	WE
Dako	DK
Westinghouse, type U	WU
Westinghouse, type A *(approved until 1.1.2000 for new wagons)	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 * (In position "483", the brake meets the conditions of the CIS networks).	KE 483**

2. Additional references

Freight train brake	G
Passenger train brake	P
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	A
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.

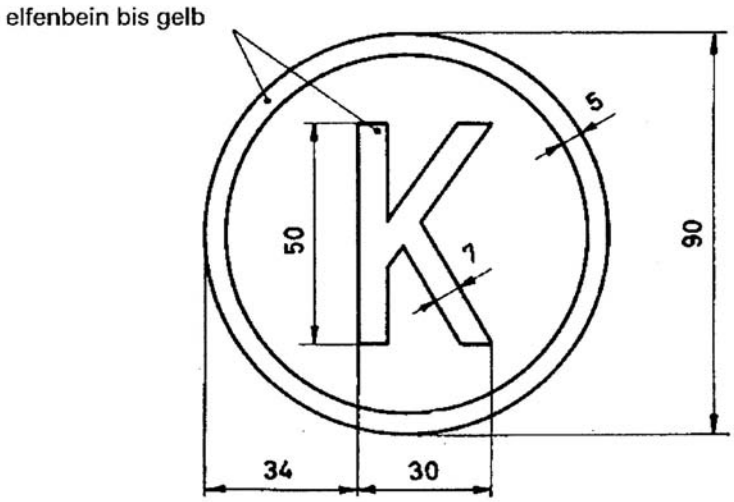
4.4 Sign for wagons fitted with composite brake blocks

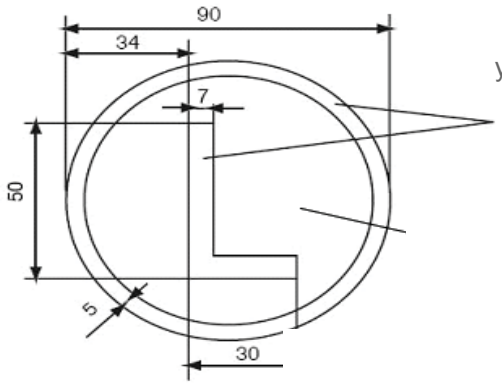
Position: On both sides of the wagon, directly to the right of the marking indicating the type of brake.

Meaning: Marking for vehicles fitted with composite brake blocks with a

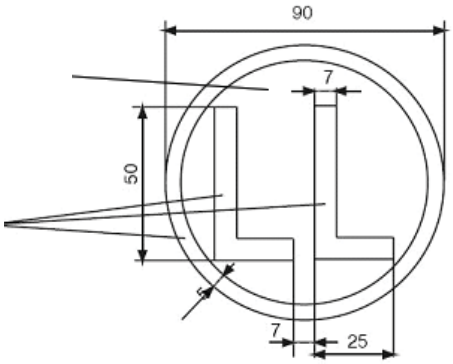
- high coefficient of friction (type K block)
- medium coefficient of friction (type L block)
- low coefficient of friction (type LL block)

ivory to yellow - yellow





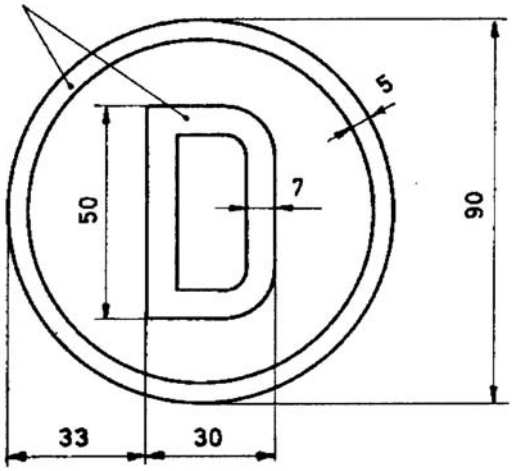
yellow



yellow

4.5 Sign for wagons fitted with disc brakes

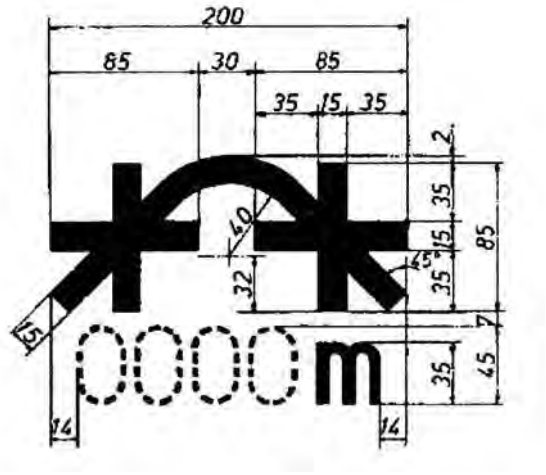
ivory to yellow



Position: On both sides of the wagon, directly to the right of the marking indicating the type of brake.

Meaning: Wagons that carry this sign are fitted with disc brakes.

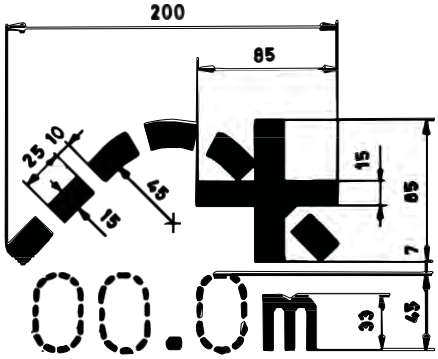
5.1 Sign for wagons not authorised to negotiate all shunting humps



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, by reason 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.

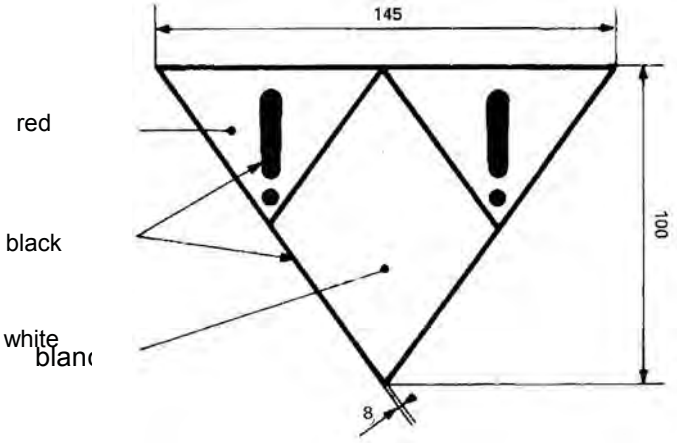
Meaning: This marking is compulsory on bogie wagons that are suitable for crossing shunting humps but which have a distance of more than 14.0 m between consecutive inner axles. The value indicated is the largest distance between two consecutive axles.

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

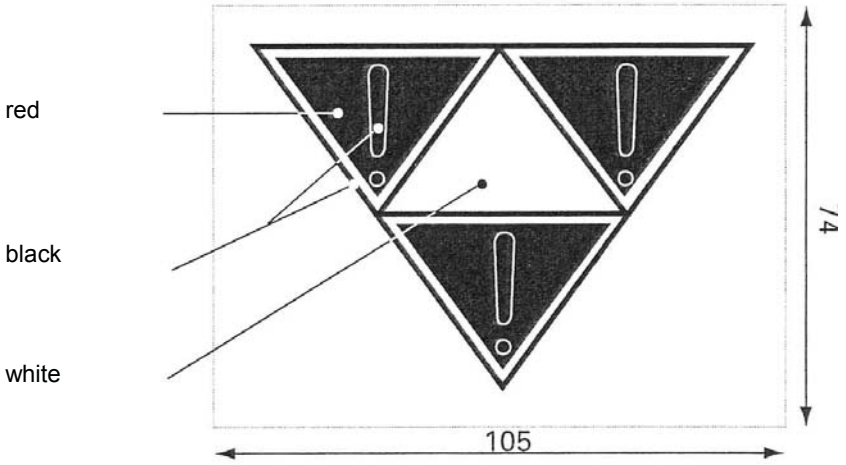


Position: On the left of each solebar, or on parts covering the solebar or on special boards fitted at the same height as the solebars.

Meaning: Special care should be taken when marshalling trains to avoid damaging the wagon. Wagon must not be loose-shunted (must not impact or be impacted) with 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

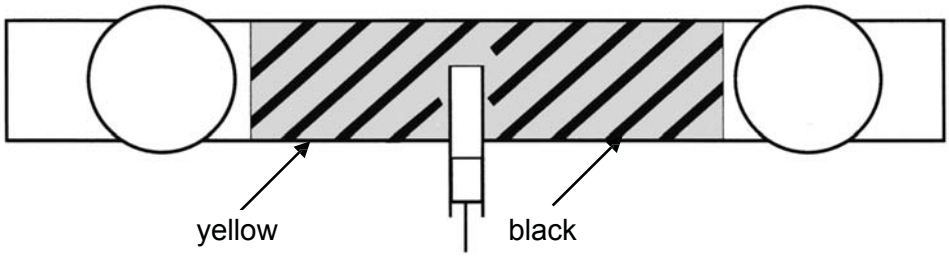


Position: On the left of each solebar, or on parts covering the solebar or on special boards fitted at the same height as the solebars.

Meaning:
- Wagon must not be fly- or gravity-shunted,
- Wagon must be marshalled by a motive power unit,
- Wagon must not be loose-shunted.

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

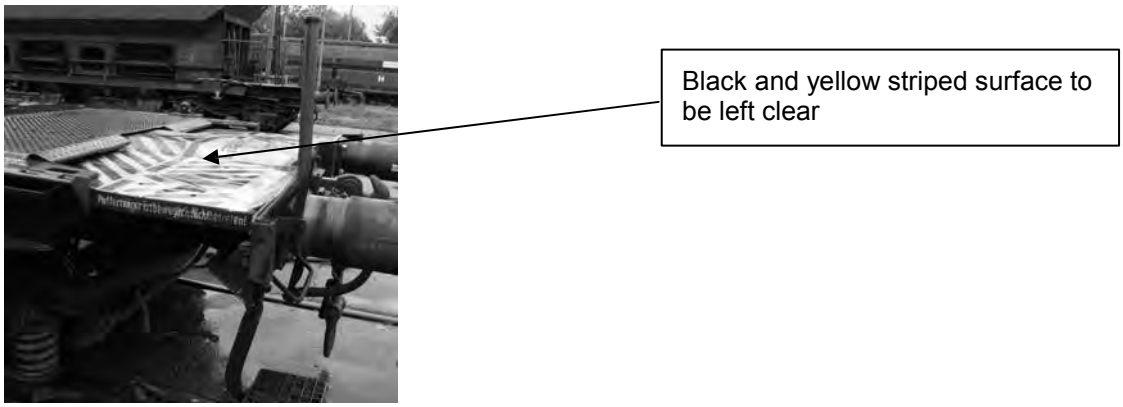


Position: On the headstocks, between the buffers.

Appearence: 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.

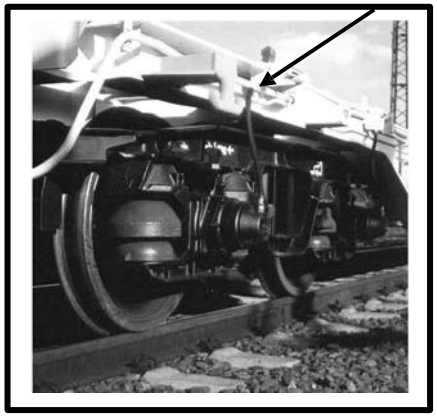
5.7 Marking for wagons fitted with long-stroke shock absorbers



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.

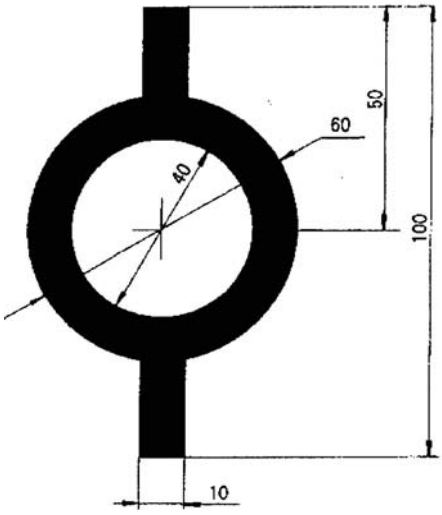
Colour-marking of tow hook supports and brackets:

- 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

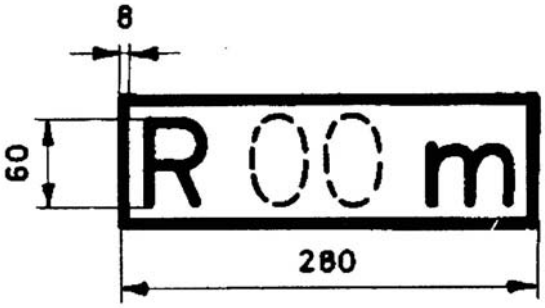
colour contrasting with that of the vehicle



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

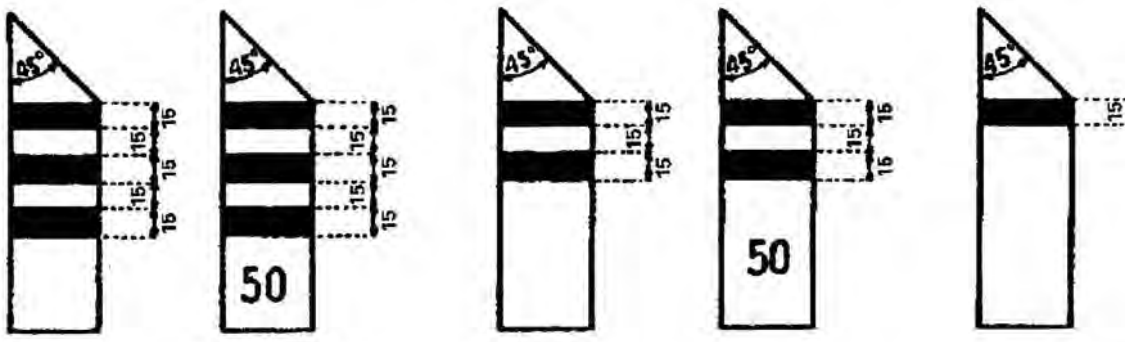


Position: On the left of each solebar, or on parts covering the solebar or on special boards fitted at the same height as the solebars.

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 Sign indicating wagons fitted with a train line



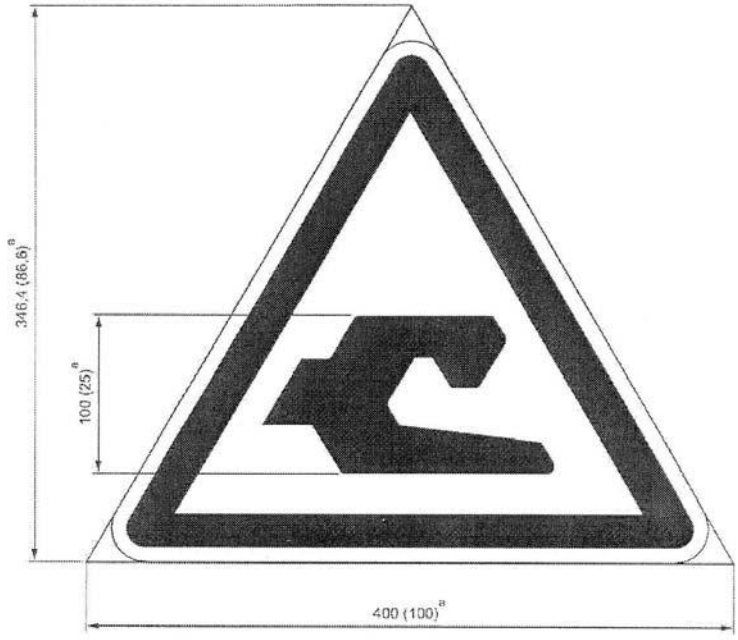
3000 V | 3000 V and 50 Hz | 1500 V | 1500 and 50 Hz | 300 V

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 (conforming to the OSJD* standard)



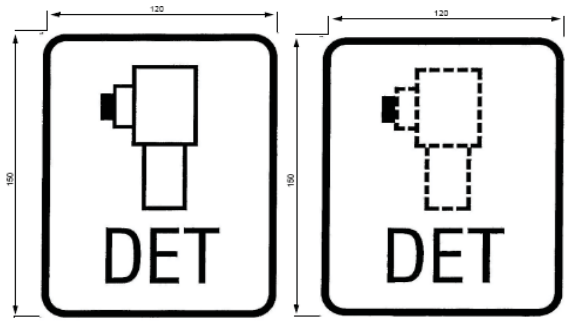
Position: At each end of the wagon sides or solebar and on each end wall.

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.

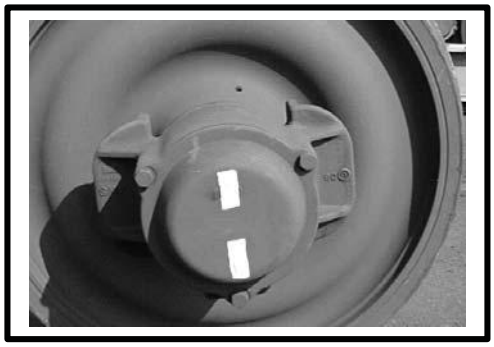
5.13 Sign for derailment detectors



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.

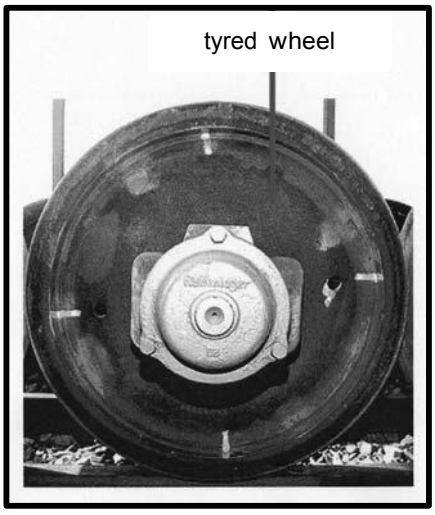
6.1 Sign for wheels able to withstand high thermal stresses



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.

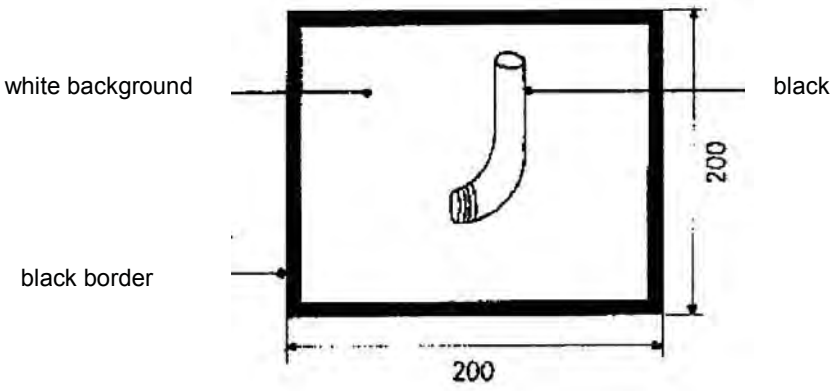
6.2 Marking of tyred wheels



Position: Control marks (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.

6.3 Sign for ventilation pipes



Position: On tanks, next to the pipes in question.

Meaning: The ventilation pipes marked with this symbol must not be sealed off.

6.4 Sign for tank wagon tests, coding of tanks and special regulations

Figure 1

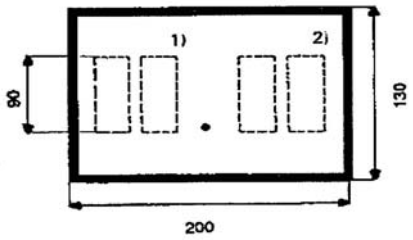


Figure 2

(example)

TE 5

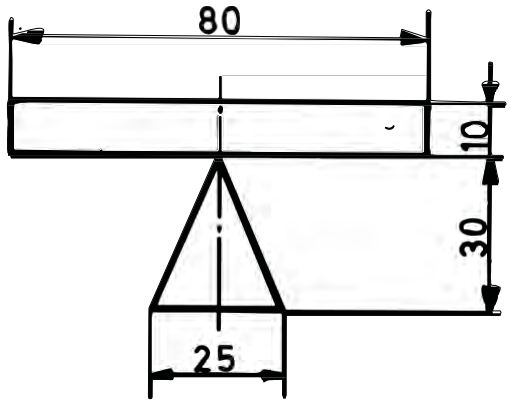
Position: On each side of each tank, on the right.

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 the month (1) and year (2) of the next test.

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.

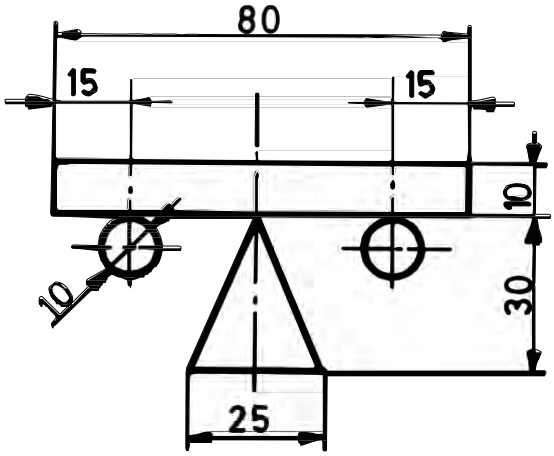
7.1 Sign indicating points for lifting the wagon body in the workshop



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.

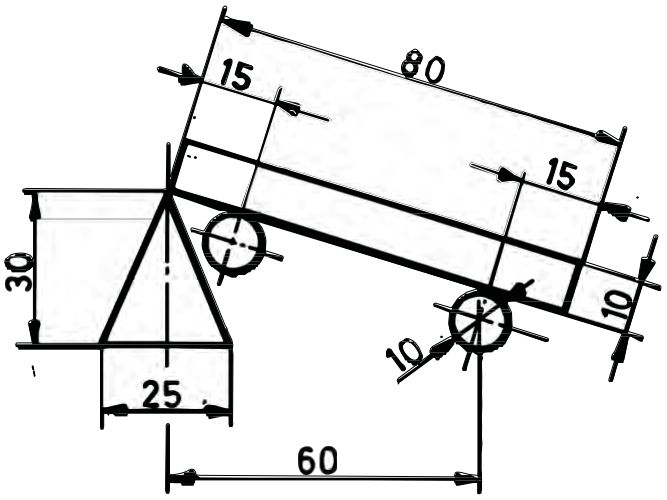
7.2 Sign for lifting at 4 points with or without running gear



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.

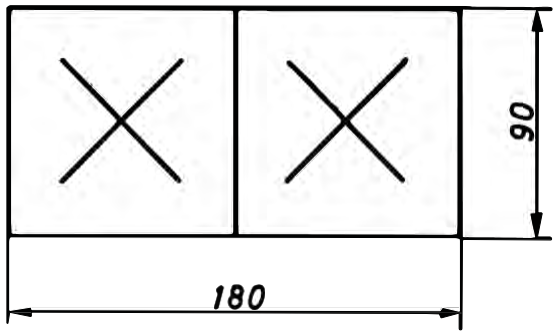
7.3 Sign for lifting or re-railing with or without running gear at one end only or close to the end



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.

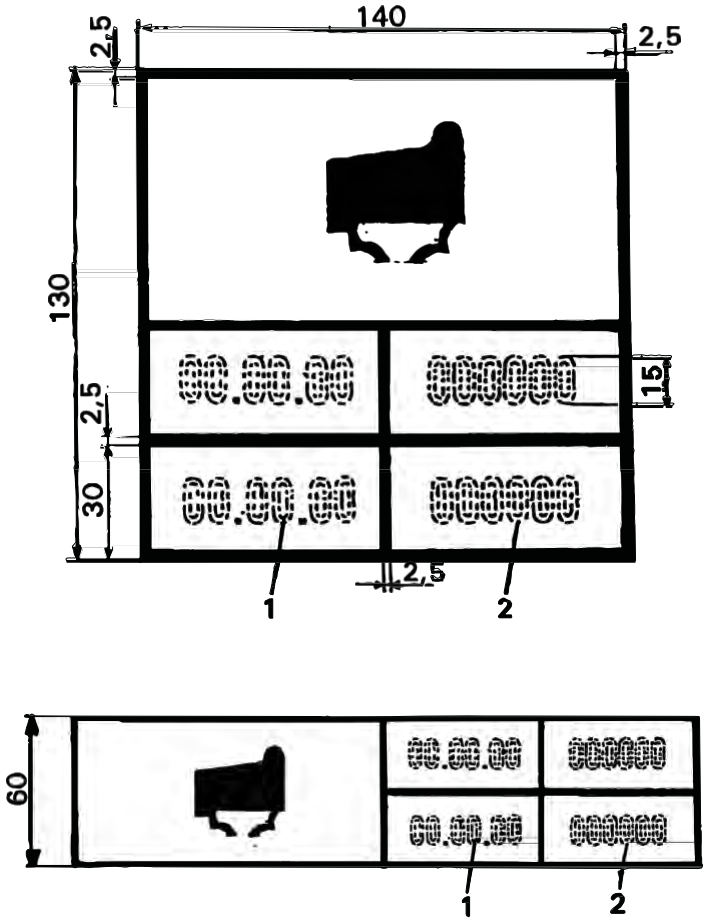
7.4 Sign for the replacement of springs



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 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).

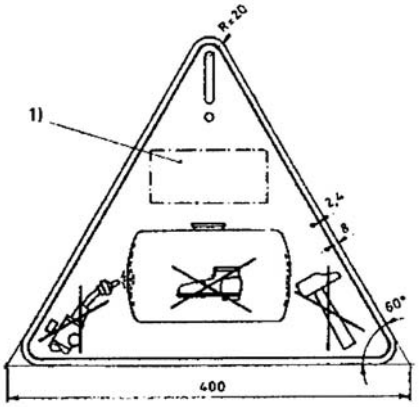
7.6 Sign for inspection periods for temperature controlled units

(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



Painted: Black outline and markings on a yellow background

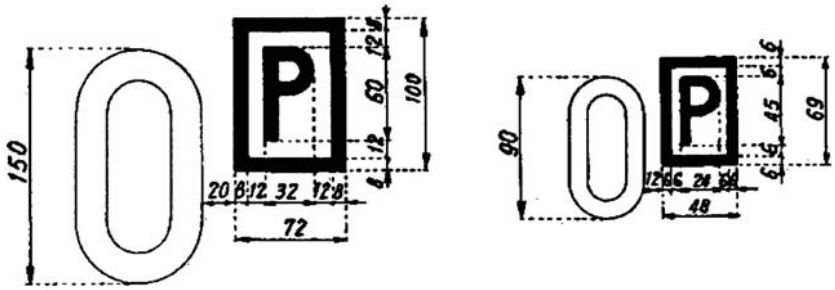
Position: On the tank at clearly visible points

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 Privately-owned wagons, UIC unified wagons, standard wagons

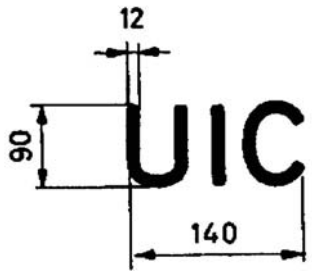
Figure 1 Sign for privately-owned wagons registered with an RU before the GCU entered force



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.

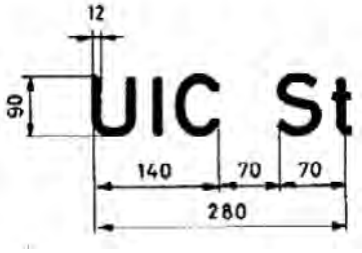
Figure 2 Sign for unified wagons



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 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:

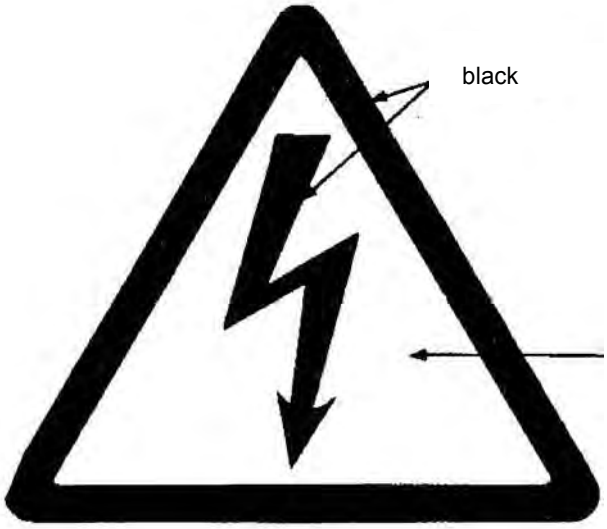
- on the identification ring for wheelsets fitted with a ring (collar) around the axle
- on the inner face of the wheel hub for wheelsets without an identification ring

7.9.3 Suspension leaf springs suitable for axle-loads of more than 20.0 tonnes carry the sign 2Q = *00,0* 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 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.

ANNEX 1 / APPENDIX 11

Conditions to be met for the conveyance of wagons on ferries

Group 1

RUs operating train ferry services:

Railion Deutschland (DB)
Railion Danmark (DSB)
Green Cargo (GC)
Polish State Railways S.A. (PKP)
TRENITALIA S.P.A. (FS)
Romanian Railways (CFR)

Train ferry routes:

Trelleborg-Sassnitz Fährhafen (GC/DB)
Trelleborg-Rostock Seehafen, Hafenbereich Fähre (GC/DSB)
Helsingborg Syd-København (GC/DSB)
Goeteborg-Fredrikshavn (GC/DSB)
Malmoe-Travemuende (GC/DB)
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 on page 68).

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 on page 68).

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 ferry operator. The other RUs on the wagon's route must be advised of the authorization obtained by an indication to this effect in the accompanying documentation.

Group 2

RU 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.

Route	Number of tracks on the ferry	Curves and reverse curves			Maximum ramp angle in relation to the horizontal	Observations
		Radius in m	Length of transition section in m	Radius in m		
1	2	3	4	5	6	7
Trelleborg-Sassnitz Fährhafen	5 6 8	150	0	140*	2°30‿	
Trelleborg-Rostock Seehafen	5 6 8	150	0	140*	2°30‿	
Helsingborg Syd-København	5	190 150	0 11.7	190 190	2°30‿	
Goeteborg-Fredrikshavn	4+2	150	12	150	2°30‿	
Malmoe-Travemuende	5	180	14	180	2°30‿	
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 4	150 120	15.5 19.6	150 120	1°30‿	
Civitavecchia-Golfo Aranci	3	—	—	—	1°30‿	
Sirkeci-Haydarpasa	3	—	—	—	—	
Tatvan-Van	2 1	120 —	— —	120 —	—	

Group 3

Train ferry routes between standard gauge RUs and Finland:

Lübeck-Skandinavienkai (Germany)-Turku (Finland)[1)]
Stockholm (Sweden)-Turku (Finland)[2)]
Hargshamn (Sweden)-Uusikaupunki (Finland)[3)]

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.

Route	Number of tracks on the ferry	Curves and reverse curves			Maximum ramp angle in relation to the horizontal	Observations
		Radius in m	Length of transition section in m	Radius in m		
1	2	3	4	5	6	7
Lübeck-Skandinavienkai-Turku	2 2 1	150 150 —	6 6 —	100 100 —	2°30‗ 2°30‗ 2°30‗	
Stockholm-Turku	2 2	150 150	4 0	150 150	2°30‗ 0°	
Hargshamn-Uusikaupunki	1 1 1 1	150 150 — 150	3.8 5 — 6	150 150 — 150	2°30‗ 2°30‗ 2°30‗ 2°30‗	
Rules governing the reciprocal use of privately-owned wagons in traffic with VR are set out in Annex 3.						

1) Open as a CIM line only for international shipments of large containers and swap bodies.
2) Not a CIM line.
3) CIM line.

ANNEX 2 / APPENDIX 11

Rules governing the use of wagons with interchangeable axles[1)] 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 Annex.

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 2 interchangeable axles or bogie wagons with interchangeable axles for which the 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.

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[1)].

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 of this Annex on the front of their axle-boxes.

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[2)]. 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.

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

1) In the text that follows, the term "wheelset" is used to refer to both standard gauge and broad gauge equipment.
2) Agreements between RUs or between keepers and RUs may however be concluded in order to facilitate the overhaul of wheelsets.

2.2.3 If the wagon is in a train operated by a user RU that is not the keeper of the wheelsets, 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;

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 1860 mm,
- minimum 1840 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 Wagons carrying partload traffic

Wagons carrying partload traffic may only be accepted for transit if:

- the load fills the wagon completely
  or
- the load weighs at least 3000 kg.

7 Additional wagon markings

Wagons must carry the following markings:

7.1 on each side wall

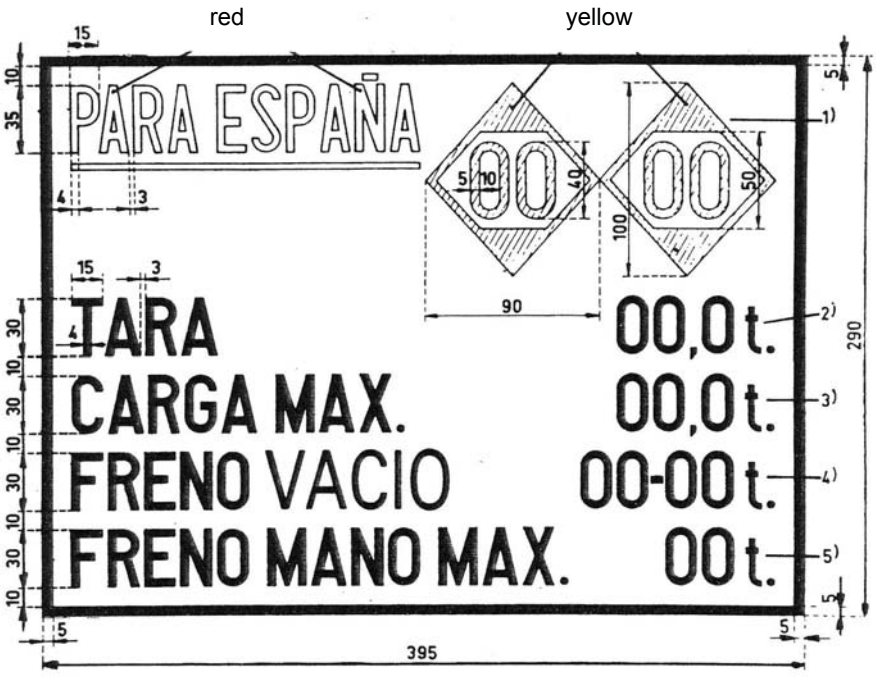
- the E sign shown in point 2.16 of Appendix 11,
- the markings shown in Plate 1, Figures 1 or 2; the values to be indicated will be supplied on request by the RUs (the keeper).

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 their last overhaul.

Annex 2
Figure 1

Additional signs for wagons accepted for running in Spain and Portugal

Figure 1 For wagons fitted with a vacuum brake

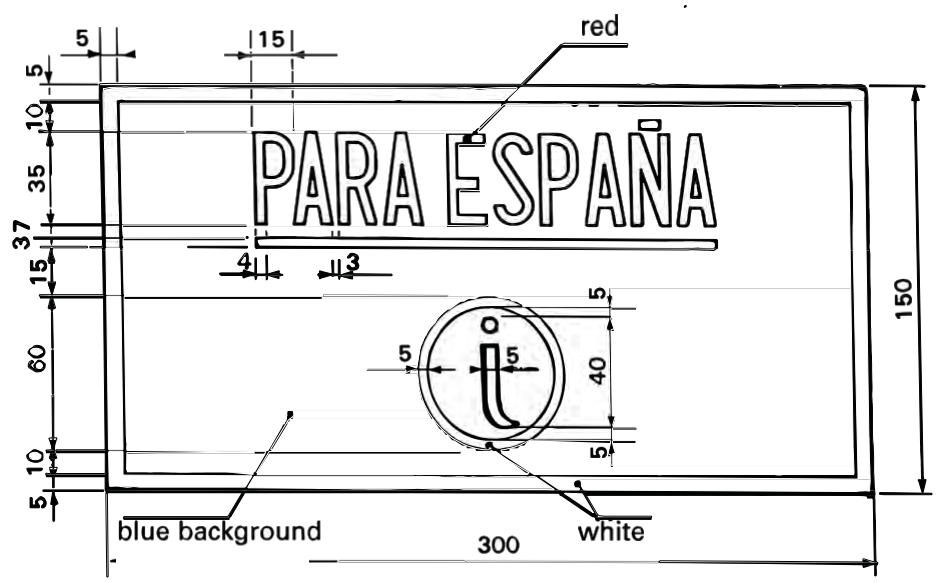


Position: On the right of each side wall, in black on wagons that are painted white, and in blue on a white background for other wagons.

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 suf fice.
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 For wagons with only one brake pipe for 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.

ANNEX 3 / APPENDIX 11

Rules governing the use of wagons with interchangeable axles (for axle wagons) or bogies (for bogie wagons)[1)] in traffic with VR

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 (VR) wheelset/bogie changeover facility, only wagons for which the keeper has concluded a prior agreement with VR can be accepted for exchange between GC and VR 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. 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:

- a maximum of 1800 mm,
- a minimum of 1780 mm.

However, for wagons built before 1.7.1984, a buffer centre distance of between 1760 mm and 1740 mm is acceptable.

3 Changeover of wheelsets or bogies

3.1 The keeper of the wagon, in agreement with VR, 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 Annex.

3.2 As a rule, VR shall be responsible for conducting the wheelset or bogie changeover operation in Tornio. In cases where VR 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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1) 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 transhipped 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 VR if it failed to report the problem in accordance with Article 11 of the CUU.

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 flat-rate charge for each wagon submitted for changeover, payable to VR. 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, each in the language of the wagon keeper 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, each in the language of the wagon keeper and in Finnish:

"Observe bogie overhaul

markings" "Huom! Telin

korjausmerkintä".

5.4 Interchangeable axles must be permanently marked on each axle-box with the keeper's code number or initials as well as the overhaul period and date (month and year) of their last overhaul.

5.5 Interchangeable bogies must be clearly marked on the solebar in white paint with the keeper's code or initials and identification mark as well as the overhaul markings described in point 2.3 of Appendix 11.