

UIC CODE

596-5

5th edition, January 2014

Translation

OR

Transport of road vehicles on wagons - Technical Organisation - Conveyance of semi-trailers with P coding or N coding on recess wagons

Trafic de véhicules routiers sur wagons - Organisation technique - Transport sur wagons poches de semi-remorques avec codification P ou codification N

Verkehr von Straßenfahrzeugen auf Güterwagen - Technische Organisation - Beförderung von Sattelanhängern mit P- und N-Kodifizierung auf Taschenwagen



INTERNATIONAL UNION
OF RAILWAYS



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Leaflet to be classified in volume:

V - Rolling Stock

Application :

With effect from 1 January 2014

All members of the International Union of Railway

Record of updates

1st edition, January 1977	Under the title: "Transport of road vehicles on wagons - Technical organisation - Method No. 5"
2nd edition, January 1979	Under the title: "Transport of road vehicles on wagons - Technical organisation - Method No. 1" and 1 amendment
3rd edition, July 1985	Under the title: "Transport of road vehicles on wagons - Technical organisation - Method 1 - Conveyance of ordinary grab-handled semi-trailers on special wagons (standard recess wagons)"
4th edition, February 2008	Overhaul of leaflet Addition of compatibility codes g and h in point 1 and points G7 and G8
5th edition, January 2014	Replacing Railway Undertaking by Competent Authority Reference to EN 13044 Removal of the loading position pictograms Removal of the examples of envelopes compatibility

The person responsible for this leaflet is indicated in the UIC Code

Summary	1
1 - Semi-trailers with P coding	2
1.1 - Procedure and system prerequisites	2
1.2 - Technical requirements	2
1.3 - Semi-trailers with compatibility codes	5
2 - Semi-trailers with N coding	6
2.1 - Procedure and system pre-requisites	6
2.2 - Technical requirements	6
Appendix A - Measurements and arrangement of grab handles on semi-trailers	7
Appendix B - Arrangement of identification plates and markings on semi-trailers	8
Appendix C - Envelope for semi-trailers with a special design as per variant 1 (N technology) on standard recess wagons	9
Appendix D - Semi-trailers with N coding - supporting shoe	10
Appendix E - Pictogram for semi-trailers with N coding	11
Appendix F - Envelope for P semi-trailers on standard recess wagons	12
F.1 - Envelope for P semi-trailers with compatibility code "a" on recess wagon type 4 with seating device height of 113 or 98 cm	13
F.2 - Envelope for P semi-trailers with compatibility code "b" on recess wagon types 739 and 744 with seating device heights of 113 or 98 cm	14
F.3 - Envelope for P semi-trailers with compatibility code "c" on recess wagon type 2000 with seating device heights of 113 or 98 cm	14
F.4 - Envelope for P semi-trailers with compatibility code "d" on recess wagon type Mega 2 with seating device heights of 113, 98 or 85 cm	15
F.5 - Envelope for P semi-trailers with compatibility code "e" on recess wagon type 5 and type 3000e with seating device heights of 113, 98 or 88 cm	16
F.6 - Envelope for P semi-trailers with compatibility code "p" on recess wagon type 3000 with seating device heights of 113, 98 or 88 cm	17
F.7 - Envelope for P semi-trailers with compatibility code "g" on recess wagon type Twin with seating device heights of 113 cm, 98 cm and 88 cm	18

F.8 - Envelope for P semi-trailers with compatibility code "h" on recess wagon type 4.2 with seating device heights of 113 or 98 cm	19
F.9 - Envelope for P semi-trailers with compatibility code "i" on recess wagon type MTW with seating device heights of 113, 98 or 88 cm	20
Appendix G - Pictogram for semi-trailers equipped with ladders/ascent platforms for accessing the upper section.....	21
Appendix H - Air suspension pictogram	22
Appendix I - Grab-handling groove markings	23
Appendix J - Examples of modified code number plates.....	24
Bibliography	25

Summary

This Leaflet sets out regulations and provisions to be observed by semi-trailers with normal road transport characteristics for conveyance on fixed-recess carrier wagons.

The provisions are valid for:

- Semi-trailers,
- Gantry equipment/industrial trucks with grab handles,
- Recess wagon types 1a and 1b in accordance with *UIC Leaflet 571-4*.

1 - Semi-trailers with P coding

1.1 - Procedure and system prerequisites

The semi-trailers must comply with the road traffic regulations applicable in the countries where they are registered. The procedure involves the conveyance of semi-trailers with P coding on recess wagons, where the following prerequisites apply:

Semi-trailers, which possess:

- a manufacturer's certificate testifying to the equipment's compliance with the provisions of the present leaflet,
- proof of loading tests carried out on the type of semi-trailer in question on all recess wagons foreseen for such transport in accordance with *UIC Leaflet 571-4* (see [Bibliography](#)) or Appendices [C - page 9](#) or [F - page 12](#),
- P code number plate in accordance with *EN 13044-2* (see [Bibliography](#)).

1.2 - Technical requirements

1.2.1 - Grab handling grooves

For transshipment, semi-trailers must be equipped with grab handling grooves, the positions, dimensions and shape of which conform to [Appendix A - page 7](#).

The distance between the grab handling grooves and the wagon solebar must be at least 100 mm.

1.2.2 - King pins

The semi-trailers must be equipped with a standardised king pin with 2" diameter (functional measurements in accordance with *Directive 94/20/EC class H50*, *DIN 74080* and *ISO 337* - see [Bibliography - page 25](#)) king pin with 2" diameter.

1.2.3 - Road combination

The road combination must be suitable for horizontal transshipment of semi-trailers.

When lifting the trailer, the distance between the axles and the chassis must not vary more than 250 mm for air suspension systems.

The tyres of the semi-trailer must rest for the most part on the floor of the recess wagon (reference plane).

There must be a device for releasing the brakes. The device must be located on the left side of the vehicle, near the road combination.

1.2.4 - Air suspension

Semi-trailers must be equipped with air suspension wheelsets.

The following requirements apply to the air suspension:

- Central draining valve on the left side of the vehicle, the service (running) and draining positions of which should be clearly marked by symbols,
- the drained air suspension system must not refill during transit.

1.2.5 - Vehicle gauge

For a semi-trailer to be given a P marking without a compatibility code, its outer edges must comply with [Appendix F - page 12](#) for type-1a and 1b standard recess wagons.

For a semi-trailer to be given a P marking with a compatibility code, its outer edges must comply with the dimensions of the relevant compatibility code.

Retractable components may be used in order to remain within the vehicle gauge.

1.2.6 - Retractable components

Retractable components as well as the moveable parts of landing gear must be equipped with a locking mechanism preventing their dropping down or falling out during transport and transshipment.

1.2.7 - Landing gear

It must be possible to use the landing gear when the grab handles are in the grab handling grooves.

1.2.8 - Strength provisions

Compliance of vehicles with the following strength provisions is to be checked. The vehicle manufacturer must produce a certificate stating that these strength provisions are respected in terms of manufacturing tolerances, material composition and wear.

Additional checks shall be required in case of vehicle design changes, such as those providing for increased permissible total laden weight.

1.2.8.1 - Lifting

The lifting strength may be assessed through actual technical tests and/or calculations based on verifiable procedures.

In actual tests the semi-trailer must be loaded to 1,25 R (R = total laden weight of the semi-trailer) in accordance with the manufacturer's prescriptions. The semi-trailer must be able to withstand suspension by its grab-handling grooves for at least 5 minutes without suffering any damage or permanent deformation.

Following the test, the semi-trailer must not show any permanent deformations or other irregularities which would prevent it from being used as intended; the semi-trailer must remain compliant with the measurement requirements for manipulation, securing and transshipment.

1.2.8.2 - Strength of vehicle body structure

In order to be given the L or XL code, semi-trailers must comply with *EN 12642* (see [Bibliography - page 25](#)).

NB: semi-trailers bearing the code L are used for speed up to 120 km/h and semi-trailers bearing the code XL are used for speed up to 140 km/h.

1.2.8.3 - Sheeting

Sheeting components must be in accordance with the minimum requirements of *EN 12641-1* and *EN 12641-2* (see [Bibliography - page 25](#)).

From 1 January 2016, all new-build semi-trailers fitted with a tensioned sheeting system must also be fitted with an additional securing device preventing accidental opening.

1.2.9 - Identification plates and markings

Semi-trailers with codes must bear the following plates and inscriptions in accordance with [Appendix B - page 8](#).

1.2.9.1 - Code number plate

On each side wall in the area of the coupling pivot a code number plate must be affixed in accordance with *EN 13044-3* (see [Bibliography - page 25](#)).

In some specific cases (e.g. double coding), the code number plate prescribed by *EN 13044-3* may be adapted (see [Appendix J - page 24](#) for examples of such plates).

1.2.9.2 - Owner identification number

The owner of the semi-trailer must be identified, preferably in accordance with *EN 13044-1* (see [Bibliography - page 25](#)).

1.2.9.3 - Grab-handling groove markings

There shall be a yellow strip, approximately 100 mm high, above the grab-handling grooves (see [Appendix I - page 23](#)).

A contrasting colour is to be chosen for yellow load units.

1.2.9.4 - "Air suspension" pictogram

Semi-trailers with air suspension are to be marked with a pictogram (see [Appendix H - page 22](#)) to the right of the code number plate indicating that the semi-trailer is to be conveyed with drained air suspension.

1.2.9.5 - "Warning: high voltage" pictogram (zigzag arrow)

If semi-trailers are fitted with ladders/ascent platforms, a "zigzag" arrow pictogram as shown in [Appendix G - page 21](#) must appear next to each ladder/ascent platform.

1.3 - Semi-trailers with compatibility codes

1.3.1 - Compatibility code

Compatibility codes (letters: a,b,c,etc.) are used to ensure the deployment of semi-trailers with the appropriate recess wagons.

The designation of new clearance envelopes (additional letters) must be approved by UIC.

1.3.2 - Markings on semi-trailers

The profile number is determined in accordance with the coding procedure defined in *UIC Leaflet 596-6* for a specific seating device height on the recess wagon.

The code number plates must be produced in accordance with [point 1.2.9.1 - page 4](#) and affixed to both sides of the semi-trailer.

◦ 2 - Semi-trailers with N coding

2.1 - Procedure and system pre-requisites

The semi-trailers used must comply with the road traffic regulations applicable in the countries where they are registered. The procedure involves the conveyance of semi-trailers with N coding on recess wagons, where the following prerequisites apply:

Semi-trailers, which possess:

- a manufacturer's certificate testifying to the equipment's compliance with the provisions of the present leaflet,
- proof of loading tests carried out on the type of semi-trailer in question on the wagon type foreseen for such transport,
- N coding in accordance with *EN 13044* (see Bibliography - page 25).

2.2 - Technical requirements

Semi-trailers with N coding must comply with [point 1.2 - page 2](#) and meet the following additional requirements.

2.2.1 - Supporting shoes

These semi-trailers should be fitted at the front with 2 supporting shoes in accordance with [Appendix D - page 10](#). The supporting shoes must be able to withstand the weight of the semi-trailer positioned on the wagon and loaded at 1,25 R and accelerations of 0,8 g applied longitudinally and 0,3 g applied horizontally and transversely when the semi-trailer is loaded at 1R. If the shoes are retractable, they should be locked in the active position by means of an appropriate device.

2.2.2 - Coupling pin - last axle distance

The distance between the coupling pin and the last axle must be 7 659 mm - 10 174 mm.

2.2.3 - Suspension

These semi-trailers must be air-sprung. The air suspension should deflate automatically before being loaded onto the wagon.

2.2.4 - Identification plates and markings

In addition to the identification plates and markings described under [point 1.2.9 - page 4](#), the pictogram shown in [Appendix E - page 11](#) is to be affixed to the front of the semi-trailer.

Semi-trailers with the N coding may also be fitted with a P code plate at a seating device height of 98 cm and the compatibility code of the relevant wagons. In such cases, depending on whether the N or P system is used, the plate and marking not in use must be concealed.