



**COUNCIL OF
THE EUROPEAN UNION**

Brussels, 18 July 2013

12541/13

TRANS 400

COVER NOTE

from:	European Commission
date of receipt:	16 July 2013
to:	General Secretariat of the Council

No Cion doc.:	D027153/02
Subject:	COMMISSION REGULATION (EU) No .../.. of XXX concerning the technical specification for interoperability relating to the subsystem 'rolling stock - freight wagons' of the rail system in the European Union and amending Commission Regulation (EU) No 321/2013

Delegations will find attached Commission document D027153/02.

Encl.: D027153/02



Brussels, **XXX**
[...](2013) **XXX** draft

COMMISSION REGULATION (EU) No .../..

of **XXX**

**concerning the technical specification for interoperability relating to the subsystem
'rolling stock - freight wagons' of the rail system in the European Union and amending
Commission Regulation (EU) No 321/2013**

(Text with EEA relevance)

COMMISSION REGULATION (EU) No .../..

of XXX

**concerning the technical specification for interoperability relating to the subsystem
'rolling stock - freight wagons' of the rail system in the European Union and amending
Commission Regulation (EU) No 321/2013**

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2008/57/EC of the European Parliament and of the Council of 17 June 2008 on the interoperability of the rail system within the Community¹, and in particular Article 6(1) thereof,

Whereas:

- (1) Article 12 of Regulation (EC) No 881/2004 of the European Parliament and of the Council of 29 April 2004 establishing a European railway agency² requires the European Railway Agency (hereinafter 'the Agency') to ensure that the technical specifications for interoperability (hereinafter 'the TSIs') are adapted to technical progress, market trends and social requirements and to propose to the Commission the amendments to the TSIs which it considers necessary.
- (2) By Decision C(2007)3371 of 13 July 2007, the Commission gave the Agency a framework mandate to perform certain activities under Council Directive 96/48/EC of 23 July 1996 on the interoperability of the trans-European high-speed rail system³ and Directive 2001/16/EC of the European Parliament and of the Council of 19 March 2001 on the interoperability of the trans-European conventional rail system⁴. Under the terms of that framework mandate, the Agency was requested to revise the TSI on freight wagons.
- (3) On 25 March 2013, the Agency issued a recommendation on amendments to the TSI on freight wagons (ERA/REC/01-2013/INT).

¹ OJ L 191, 18.7.2008, p.1
² OJ L 164, 21.6.2004, p. 1.
³ OJ L 235, 17.9.1996, p. 6.
⁴ OJ L 110, 20.4.2001, p. 1.

- (4) It is therefore necessary to amend Regulation (EU) No 321/2013 of 13 March 2013 concerning the technical specification for interoperability relating to the subsystem 'rolling stock - freight wagons' of the rail system in the European Union⁵.
- (5) The measures provided for in this Regulation are in conformity with the opinion of the Committee established in accordance with Article 29(1) of Directive 2008/57/EC,

HAS ADOPTED THIS REGULATION:

Article 1

Regulation (EU) No 321/2013 is amended as follows:

1. Article 8(4) is replaced by the following:

‘4. After a transitional period of one year following the entry into force of this Regulation, newly produced interoperability constituents of ‘rear-end signals’, shall be covered by the required EC declaration of conformity.’
2. The Annex is amended in accordance with the Annex to this Regulation.

Article 2

This Regulation shall enter into force on the day following that of its publication in the *Official Journal of the European Union*.

It shall apply from 1 January 2014.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels,

For the Commission
Siim KALLAS
Vice-President

⁵ OJ L 104, 12.4.2013, p.1

ANNEX

The Annex to Regulation (EU) No 321/2013 (WAG TSI) is amended as follows:

- (1) Clause 1.2 ‘Geographical scope’ is replaced by the following:

‘The geographical scope of this TSI is the network of the whole rail system, composed of:

 - the trans-European conventional rail system network (TEN) as described in Annex I section 1.1 ‘Network’ of Directive 2008/57/EC,
 - the trans-European high-speed rail system network (TEN) as described in Annex I section 2.1 ‘Network’ of Directive 2008/57/EC,
 - other parts of the network of the whole rail system, following the extension of scope as described in Annex I section 4 of Directive 2008/57/EC,

and excludes the cases referred to in Article 1(3) of Directive 2008/57/EC.’
- (2) In Clause 4.2.3.5.2 ‘Running dynamic behaviour’, the fourth paragraph is replaced by the following:

‘Running dynamic behaviour is permitted to be assessed at interoperability constituent level in accordance with point 6.1.2.1. In this case a specific test or simulation at subsystem level is not required.’
- (3) In Clause 4.2.3.6.1 ‘Structural design of bogie frame’, the second paragraph is replaced by the following:

‘The integrity of the structure of a bogie frame is permitted to be assessed at interoperability constituent level in accordance with point 6.1.2.1. In this case a specific test or simulation at subsystem level is not required.’
- (4) In Clause 4.2.4.3.2.1 ‘Service brake’:
 - (a) the text of the second paragraph, second bullet point is replaced by the following:

‘ - UIC leaflet 544-1:2013’;
 - (b) the text of the third paragraph is replaced by the following:

"The calculation shall be validated by tests. Brake performance calculation in accordance with UIC 544-1 shall be validated as set out in UIC 544-1:2013".
- (5) In Clause 4.2.4.3.2.2 ‘Parking brake’, the second paragraph, third bullet point, is replaced by the following:

‘ - the minimum parking brake performance, considering no wind, shall be determined by calculations as defined in Clause 6 of EN 14531-6:2009.’

- (6) In Clause 4.2.4.3.3 ‘Thermal capacity’, the second paragraph is replaced by the following:

‘The thermal load that the unit is capable of withstanding without any adverse loss of brake performance due to thermal or mechanical effects, shall be defined and expressed in terms of speed, axle load, gradient and brake distance.’

- (7) In Clause 4.2.4.3.4 ‘Wheel slide protection (WSP)’ the text of the fourth paragraph is replaced by the following:

‘The following types of units shall be fitted with WSP:

- types of units equipped with all types of brake blocks except composite brake blocks, for which the maximum mean utilisation of adhesion is greater than 0,12.
- types of units equipped with disc brakes only and/or with composite brake blocks, for which the maximum mean utilisation of adhesion is greater than 0,11.’

- (8) Clause 4.2.6.3. ‘Attachment devices for rear-end signal’ is replaced by the following:

‘On all units designed to receive a rear-end signal, two devices at the end of the unit shall provide for the installation of two lamps or two reflective plates as set out in Appendix E at the same height above rail and not higher than 2000 mm. The dimensions and clearance of these attachment devices shall be as described in chapter 1 of ERA technical document ERA/TD/2012-04/INT version 1.2 of 18.01.2013 published on the ERA website (<http://www.era.europa.eu>).’

- (9) In Clause 4.3.3 ‘Interface with the subsystem ‘control, command and signalling’ the table 7 ‘Interface with control, command and signalling subsystem’ is replaced by the following:

Reference in this TSI	Reference Commission Decision 2012/88/EU Annex A, Table A2, index 77
4.2.3.3 a) Rolling stock characteristics compatible with train detection system based on track circuits	<ul style="list-style-type: none">– axle distances (3.1.2.1, 3.1.2.4, 3.1.2.5 and 3.1.2.6),– vehicle axle load (3.1.7.1),– impedance between wheels (3.1.9),– use of composite brake blocks (3.1.6).

Reference in this TSI	Reference Commission Decision 2012/88/EU Annex A, Table A2, index 77
4.2.3.3 b) Rolling stock characteristics compatible with train detection system based on axle counters	<ul style="list-style-type: none"> – axle distances (3.1.2.1, 3.1.2.2, 3.1.2.5 and 3.1.2.6), – wheel geometry (3.1.3.1 - 3.1.3.4), – metal / inductive components-free space between wheels (3.1.3.5) – wheel material (3.1.3.6).
4.2.3.3 c) Rolling stock characteristics compatible with train detection system based on loop equipment	<ul style="list-style-type: none"> – vehicle metal-construction (3.1.7.2).

- (10) In Clause 4.4 ‘Operating rules’, the third paragraph, first bullet point, is replaced by the following:

‘- a description of operation in normal mode, including the operational characteristics and limitations of the unit (e.g. vehicle gauge, maximum design speed, axle loads, brake performance, compatibility with train detection systems, permitted environmental conditions).’

- (11) In Clause 4.7 ‘Health and safety conditions’ the first paragraph is replaced by the following:

‘The provisions for health and safety of staff required for the operation and maintenance of units are covered by essential requirements 1.1.5, 1.3.1, 1.3.2, 2.5.1 and 2.6.1 set out in Annex III to Directive 2008/57/EC.’

- (12) Clause 4.8 ‘Parameters to be recorded in the technical file’ is amended as follows:

- (a) the title is replaced by the following:

‘4.8 Parameters to be recorded in the technical file and European register of authorised types of vehicles’;

- (b) the text of the 18th bullet point is replaced by the following:

" - Thermal load of the brake components expressed in terms of speed, axle load, gradient and brake distance.";

- (c) the following paragraph is added at the end of Clause 4.8:

‘The rolling stock data that must be recorded in the ‘European register of authorised types of vehicles (ERATV)’ are set out in the Commission Decision on the European register of authorised types of vehicles (2011/665/EU).’

- (13) In Clause 6.1.2.1 ‘Running gear’, the first sentence is replaced by the following:

‘The demonstration of conformity for the running gear is set out in chapter 2 of ERA technical document ERA/TD/2013/01/INT version 1.0 of 11.02.2013 published on the ERA website (<http://www.era.europa.eu>).’

- (14) In Clause 6.1.2.3 ‘Wheel’ the text in indent (b), the second paragraph is replaced by the following:

‘A verification procedure shall exist to ensure at the production phase that no defects may adversely affect safety due to any change in the mechanical characteristics of the wheels. The tensile strength of the material in the wheel, the hardness of the rim, the fracture toughness (only for tread-braked wheels), the resistance to impact, the material characteristics and the material cleanliness shall be verified. The verification procedure shall specify the batch sampling used for each characteristic to be verified.’

- (15) Clause 6.1.2.4 ‘Axle’ is amended as follows:

- (a) the first paragraph is replaced by the following:

‘In addition to the requirement for the assembly above, the demonstration of conformity of the mechanical resistance and fatigue characteristics of the axle shall be based on Clauses 4, 5 and 6 of EN13103:2009+A2:2012.’

- (b) the second paragraph is replaced by the following:

‘The decision criteria for the permissible stress are specified in Clause 7 of EN EN13103:2009+A2:2012. A verification procedure shall exist to ensure at the production phase that no defects may adversely affect safety due to any change in the mechanical characteristics of the axles. The tensile strength of the material in the axle, the resistance to impact, the surface integrity, the material characteristics and the material cleanliness shall be verified. The verification procedure shall specify the batch sampling used for each characteristic to be verified.’

- (16) In Clause 6.2.2.3 ‘Running dynamic behaviour’, the fourth paragraph is replaced by the following:

‘When an on-track test with normal measuring method is required the unit shall be assessed against the limit values set out in sections 1.2 and 1.3 of ERA technical document ERA/TD/2013/01/INT version 1.0 of 11.02.2013 published on the ERA website (<http://www.era.europa.eu>).’

- (17) In Clause 6.2.2.5 ‘Running gear for manual change of wheelsets’, the paragraph ‘Changeover between 1435 mm and 1668 mm track gauges’ is replaced by the following:

‘The technical solutions described in the following figures of UIC leaflet 430-1:2012 are deemed to be compliant with the requirements in point 4.2.3.6.7 :

- for axle units: Figures 9 and 10 of Annex B.4, and Figure 18 of Annex H of UIC leaflet 430-1:2012,
- for bogie units: Figure 18 of Annex H of UIC leaflet 430-1:2012. ’

- (18) In Clause 6.3 the title shall read ‘Subsystem containing components corresponding to interoperability constituents not holding an EC declaration’ and the first paragraph is replaced by the following:

‘A Notified Body is permitted to issue an EC certificate of verification of a subsystem, even if one or more of the components corresponding to interoperability constituents incorporated within the subsystem are not covered by a relevant EC declaration of conformity in accordance with this TSI (non-certified ICs), if the constituent was manufactured before the entry into force of this TSI and the type of constituent has been:

- used in a subsystem already approved, and
- placed in service in at least one Member State before the entry in force of this TSI.’

- (19) In Clause 6.5 ‘Constituents holding an EC declaration of conformity’, indent b) is replaced by the following:

‘The EC certificates of conformity, EC-type examination certificates and EC-design examination certificates of the following ICs shall remain valid under this TSI until their expiry:

Wheelset;

Wheel;

Axle.’

- (20) Appendix B ‘Specific procedures for running dynamics’ is amended as follows:

- (a) the title is replaced by the following:

‘Appendix B’.

- (b) the text is replaced by the following:

‘Not used.’

- (21) Appendix C ‘Additional optional conditions’ is amended as follows:

- (a) in paragraph ‘1. Manual coupling system’, the fifth bullet point is replaced by the following:

‘ - The clearance for the draw hook shall be in accordance with chapter 2 of ERA technical document ERA/TD/2012-04/INT version 1.2 of 18.01.2013 published on the Agency website (<http://www.era.europa.eu>).’

- (b) in paragraph ‘1. Manual coupling system’, the ninth bullet point is replaced by the following:

‘ - The space for shunting staff operation shall be in accordance with chapter 3 of ERA technical document ERA/TD/2012-04/INT version 1.2 of 18.01.2013 published on the Agency website (<http://www.era.europa.eu>).’

- (c) paragraph ‘2. UIC footsteps and handrails’ is replaced by the following:

‘The unit shall be equipped with footsteps and handrails in accordance with chapter 4 of ERA technical document ERA/TD/2012-04/INT version 1.2 of 18.01.2013 published on the Agency website (<http://www.era.europa.eu>).’

- (d) Table C.3 ‘Minimum braking performance for brake modes G and P’ is replaced by the following table, including footnotes:

Braking mode	Command Equipment	unit type	Load status	Requirement for running speed at 100km/h		Requirement for running speed at 120km/h	
				Maximum braking distance	Minimum braking distance	Maximum braking distance	Minimum braking distance
Braking mode ‘P’	Changeover ⁽⁹⁾	‘S1’ ⁽²⁾	Empty	$S_{\max} = 700\text{m}$ $\lambda_{\min} = 65 \%$ $a_{\min} = 0,60\text{m/s}^2$	$S_{\min} = 390\text{m}$, $\lambda_{\max} = 125\%, (130\%)*$, $a_{\max} = 1,15\text{m/s}^2$	$S_{\max} = 700\text{m}$ $\lambda_{\min} = 100\%$ $a_{\min} = 0,88\text{m/s}^2$	$S_{\min} = 580\text{m}$, $\lambda_{\max} = 125\%, (130\%)*$, $a_{\max} = 1,08\text{m/s}^2$
			Inter-mediate	$S_{\max} = 810\text{m}$ $\lambda_{\min} = 55\%$ $a_{\min} = 0,51\text{m/s}^2$	$S_{\min} = 390\text{m}$, $\lambda_{\max} = 125\%$, $a_{\max} = 1,15\text{m/s}^2$		
			Loaded	$S_{\max} = 700\text{m}$ $\lambda_{\min} = 65 \%$ $a_{\min} = 0,60\text{m/s}^2$	$S_{\min} = \text{Max} [(S = 480\text{m}, \lambda_{\max} = 100\%, a_{\max} = 0,91\text{m/s}^2), (S \text{ obtained with a mean retardation force of } 16,5 \text{ kN per axle})]^{(5)}$		
	Variable load Relay ⁽¹⁰⁾	‘SS’, ‘S2’	Empty	$S_{\max} = 480\text{m}$ $\lambda_{\min} = 100\%^{(1)}$ $a_{\min} = 0,91\text{m/s}^2^{(1)}$	$S_{\min} = 390\text{m}$, $\lambda_{\max} = 125\%, (130\%)*$, $a_{\max} = 1,15\text{m/s}^2$	$S_{\max} = 700\text{m}$ $\lambda_{\min} = 100\%$ $a_{\min} = 0,88\text{m/s}^2$	$S_{\min} = 580\text{m}$, $\lambda_{\max} = 125\%, (130\%)*$, $a_{\max} = 1,08\text{m/s}^2$
			Loaded	$S_{\max} = 700\text{m}$ $\lambda_{\min} = 65 \%$ $a_{\min} = 0,60\text{m/s}^2$	$S_{\min} = \text{Max} [(S = 480\text{m}, \lambda_{\max} = 100\%, a_{\max} = 0,91\text{m/s}^2), (S \text{ obtained with a mean retardation force of } 16,5 \text{ kN per axle})]^{(6)}$		
		‘S2’ ⁽³⁾	Loaded	$S_{\max} = 700\text{m}$ $\lambda_{\min} = 65 \%$ $a_{\min} = 0,60\text{m/s}^2$	$S_{\min} = \text{Max} [(S = 480\text{m}, \lambda_{\max} = 100\%, a_{\max} = 0,91\text{m/s}^2), (S \text{ obtained with a mean retardation force of } 16,5 \text{ kN per axle})]^{(6)}$		

			Loaded (18t per axle for brake blocks)		$S_{\max}^{(8)} = \text{Max} [S = 700\text{m}, \lambda_{\max}=100\%,$ $a_{\max} = 0,88\text{m/s}^2), (S \text{ obtained with a mean}$ $\text{retardation force of } 16\text{kN per axle})]^{(7)}.$
Braking mode 'G'				There shall be no separate assessment of the braking performance of units in position G. A unit's braked weight in position G is the result of the braked weight in position P (see UIC 544-1:2013)	

Footnotes:

**Only for two stage load brake (changeover command) and P10 (cast iron blocks with 10 ‰ phosphor)- or LL-brake blocks*

(1) 'a' = ((Speed km/h)/3,6)^2/(2x(S-((Te)x(Speed (km/h)/3,6)))), with Te=2sec. Distance calculation in accordance with EN 14531-1:2005 section 5.11

(2) An 'S1' unit is a unit with empty/load device. The maximum load per axle is 22,5 t.

(3) An 'S2' unit is a unit with a variable load relay. The maximum load per axle is 22,5 t.

(4) An 'SS' unit shall be equipped with a variable load relay. The maximum load per axle is 22,5 t.

(5) The maximum mean retardation force allowed (for running speed at 100km/h) is $18 \times 0,91 = 16,5 \text{ kN/axle}$. This value comes from the maximum braking energy input permitted on a clasp braked wheel with a nominal new diameter in the range of [920 mm; 1 000 mm] during braking (the brake weight shall be limited to 18 tonnes/axle).

(6) The maximum mean retardation force allowed (for running speed at 100km/h) is $18 \times 0,91 = 16,5 \text{ kN/axle}$. This value comes from the maximum braking energy input permitted on a clasp braked wheel with a nominal new diameter in the range of [920 mm; 1 000 mm] during braking (the brake weight shall be limited to 18 tonnes/axle). Usually a unit, with $V_{\max} = 100 \text{ km/h}$ and fitted with a variable relay is designed to obtain $\lambda = 100\%$ up to 14.5 t/axle.

(7) The maximum mean retardation force allowed (for running speed at 120km/h) is $18 \times 0,88 = 16 \text{ kN/axle}$. This value comes from the maximum braking energy input permitted on a clasp braked wheel with a nominal new diameter in the range of [920 mm; 1 000 mm] during braking (the brake weight shall be limited to 18 tonnes). The mass/axle is limited to 20 t/axle and the corresponding λ is 90%. If it is required that $\lambda > 100\%$ with mass/axle > 18 t then it is necessary to consider another kind of brake.

(8) λ must not exceed 125%, considering for braking only on wheels (brake blocks), the maximum mean retardation force allowed of 16 kN/axle (for running speed at 120km/h).

(9) Changeover in accordance with EN 15624:2008+A1:2010.

(10) Variable load relay in accordance with EN 15611:2008+A1:2010 in combination with a variable load sensing device in accordance with EN 15625:2008+A1:2010.

(22) Appendix D 'Standards or normative documents referred to in this TSI' is amended as follows:

- (a) First table - the text 'Content of prEN 16235 included in Appendix B of this TSI' in the cell in the column 'Reference to mandatory standards', 17th row, is replaced by the following:

‘ERA technical document ERA/TD/2013/01/INT version 1.0 of 11.02.2013 published on the Agency website (<http://www.era.europa.eu>).’

- (b) First table - the text ‘Content of prEN 16235 included in Appendix B of this TSI’ in the cell in the column ‘Reference to mandatory standards’, 20th row, is replaced by the following:

‘ERA technical document ERA/TD/2013/01/INT version 1.0 of 11.02.2013 published on the Agency website (<http://www.era.europa.eu>).’

- (c) First table - the text ‘EN 13103:2009+A1:2010’ in the cell in the column ‘Reference to mandatory standards’, 28th row, is replaced by the following:

‘EN13103:2009+A2:2012’.

- (d) First table - the text ‘UIC 430-1:2006’ in the cell in the column ‘Reference to mandatory standards’, 32nd row, is replaced by the following:

‘UIC leaflet 430-1:2012’.

- (e) First table – the text ‘UIC 544-1:2012’ in the cell in the column ‘Reference to mandatory standards’, 35th row, is replaced by the following:

‘UIC 544-1:2013’.

- (f) First table - the text ‘ERA technical document ERA/TD/2012-04/INT version 1.0 of 04.06.2012’ in the cell in the column ‘Reference to mandatory standards’, last row, is replaced by the following:

‘ERA technical document ERA/TD/2012-04/INT version 1.2 of 18.01.2013 published on the Agency website (<http://www.era.europa.eu>).’

- (g) Second table - the text ‘ERA technical document ERA/TD/2012-04/INT version 1.0 of 04.06.2012’ in the cell in the column ‘Standard / UIC leaflet’, fourth row, is replaced by the following:

‘ERA technical document ERA/TD/2012-04/INT version 1.2 of 18.01.2013 published on the Agency website (<http://www.era.europa.eu>).’

- (h) Second table - the text ‘ERA technical document ERA/TD/2012-04/INT version 1.0 of 04.06.2012’ in the cell in the column ‘Standard / UIC leaflet’, sixth row, is replaced by the following:

‘ERA technical document ERA/TD/2012-04/INT version 1.2 of 18.01.2013 published on the Agency website (<http://www.era.europa.eu>).’