EUROPEAN UNION AGENCY FOR RAILWAYS

Making the railway system work better for society.

ACCOMPANYING REPORT N. 006REC1072 TO THE RECOMMENDATION OF THE EUROPEAN UNION AGENCY FOR RAILWAYS

on

The amendment of Commission Regulation (EU) No 1304/2014 on the technical specification for interoperability relating to the subsystem 'rolling stock — noise' amending Decision 2008/232/EC and repealing Decision 2011/229/EU

Contents

1. Executive summary

This accompanying report complements the recommendation N. 006REC1072 of the European Union Agency for Railways on the amendment of Commission Regulation (EU) No 1304/2014 on the technical specification for interoperability relating to the subsystem 'rolling stock — noise' amending Decision 2008/232/EC and repealing Decision 2011/229/EU. It details the legal basis for this NOI TSI revision, the workgroup, the working methods, the main aspects covered, the points of disagreement and the aspects to be considered in a future revision of the NOI TSI. It also contains the reasoning behind each recommended text change in the NOI TSI.

The target of this NOI TSI amendment is to prescribe the mandatory application of the NOI TSI to existing wagons on a part of the network defined as quieter routes. On the quieter routes, noisy wagons cannot be operated. This is aligned with a request from the European Commission to the European Union Agency for Railways from September 2017.

Noisy wagons are those which do not comply with any of the NOI TSIs (NOI TSI:2006, NOI TSI:2011, NOI TSI:2014), those which are not fitted with quieter brake blocks or brake discs for the service brake function or those, which are not fitted with composite brake blocks listed in Appendix E of the NOI TSI for the service brake function.

A quieter route is defined based on criteria, which are common for the whole European Union. The Member States thus do not have any discretion over which routes should become quieter and which not. The definition states that all routes with more than 12 freight trains during night shall be declared quieter.

Member States are obliged to send a list of the quieter routes on their territory to the European Union Agency for Railways so that it is published on its website. On top of a list, Member States may voluntary provide a map of the quieter routes. An update of the quieter routes is mandatory at least every 5 years.

The proposed application date of the quieter routes is 8th December 2024.

2. Introduction

This accompanying report complements the recommendation N. 006REC1072 of the European Union Agency for Railways on the amendment of Commission Regulation (EU) No 1304/2014 on the technical specification for interoperability relating to the subsystem 'rolling stock — noise' amending Decision 2008/232/EC and repealing Decision 2011/229/EU. It deals with the technical and organisational aspects, which lead to the text of the recommendation whereas another accompanying document to the recommendation - impact assessment - deals with the related economic aspects.

Delegated Decision (EU) 2017/1474 sets out the specific objectives applicable to all TSIs and to specific TSIs. Its Article 6(1) states that: *'Regulation (EU) No 1304/2014 ('NOI TSI') shall include provisions to effectively address rail freight noise by retrofitting of existing freight wagons with composite brake blocks, or via other appropriate solutions.'*

A letter from the European Commission to the European Union Agency for Railways entitled '*Request for recommendations to the Commission pursuant to Article 5 paragraph 2 of the interoperability Directive (EU) 2016/797*', ref. MOVE/C.4/BC/tg, mandates the European Union Agency for Railways to propose a clause or clauses specifying the application of the TSI NOI to the existing freight wagons following the 'quieter routes' implementation strategy with a deadline of April 2018.

The legal base for the European Union Agency for Railways to issue the recommendation is Article 4(a) of Directive (EU) 2016/797: *'The Agency may address recommendations to the Commission concerning the application of Articles 13, 15, 17, 19, 35, 36 and 37.'* as well as Article 19(1)(a): *'The Agency shall address recommendations to the Commission on the TSIs and their revision, in accordance with Article 5 of Directive (EU) 2016/797.'*

This recommendation takes into account the findings of the report ERA-REP-155. Further information on this report and its background is available in chapter 4.

3. Workgroups

3.1. Composition of the working party

The invitation to participate to the working party was sent to the 12 representative bodies and to the 26 national safety authorities. From other organisations, the OTIF Secretariat was invited to participate as an observer. Based on this invitation, the Agency received nominations of the interested stakeholders.

Six working party meetings were organised, to which participants came from 7 representative bodies, 16 national safety authorities and the OTIF Secretariat.

The European Commission participated to 4 meetings of the working party.

3.2. Working party meetings participation

The table 1 below summarises the attendance of all representative bodies, national safety authorities and other organisations, which replied to the Agency's invitation and appointed their representatives to the working party (WP).

Table 1 : Working party meetings participation

Organisation	*Kick-off meeting 18/10/2017*	*Meeting N°2 09/11/2017*	*Meeting N°3 06/12/2017*	*Meeting N°4 23/01/2018*	*Meeting N°5 27/02/2018*	*Meeting N°6 17/04/2018*
CER	Y	Y	Y	Y	Y	Y
EIM	Y	Y	Y	Y	Y	Y
ERFA	Y	Y	Y	Y	Y	Y
ETF	Y	Y		Y		Y
NB-Rail AISBL	Y	Y	Y	Y		
NSA AT	Y					
NSA BG						
NSA CH	Y		Y	Y		
NSA CZ	Y		Y	Y	Y	Y
NSA DE	Y	Y	Y	Y	Y	Y
NSA DK			Y			
NSA EL				Y		
NSA ES	Y	Y	Y	Y	Y	Y
NSA FI	Y	Y	Y	Y		
NSA FR	Y	Y	Y	Y	Y	Y
NSA IT	Y	Y	Y		Y	
NSA NL			Y	Y	Y	Y
NSA NO	Y	Y	Y	Y		
NSA PL	Y	Y	Y	Y	Y	Y

Organisation	*Kick-off meeting 18/10/2017*	*Meeting N°2 09/11/2017*	*Meeting N°3 06/12/2017*	*Meeting N°4 23/01/2018*	*Meeting N°5 27/02/2018*	*Meeting N°6 17/04/2018*
NSA SE	Y	Y	Y	Y	Y	Y
NSA SI	Y			Y	Y	Y
NSA UK	Y		Y	Y	Y	Y
OTIF Secretariat	Y	Y		Y		
UIP	Y	Y		Y	Y	Y
UNIFE	Y	Y	Y	Y		

4. Working methods

The Agency chaired, managed and coordinated the WP. It ensured interface with its other activities and tasks. It applied relevant internal procedures and guidelines (e.g. procedure on issuing a recommendation or guide for drafting TSIs). It took into account the final output of the WP; however, it had the right to deviate from it, when justified (such deviations needed to be recorded in the minutes of the WP meetings and in this report).

The represented organisations were required to ensure continuity of their representative members for the duration of the WP. Whenever possible, the representative members were required to express their organisation's position in advance of the WP meetings through written methods, such as commenting on the draft documents or the draft minutes of the WP meetings. Representative members were also required to express the view of their organisation during the WP meetings. If this opinion has not been validated by their represented organisation, it should have been indicated as such. In order to achieve a common and agreed position of their organisation, the members should have shared pre- and post- meeting information within their organisations. The organisations were expected to facilitate the internal exchange of opinions and the elaboration of their position, for instance through 'mirror groups'.

The text of the recommendation was prepared by the Agency based on a working document, which gathered together the current NOI TSI text and the amendments to it needed for its application to existing wagons following the concept of quieter routes.

The working document was thoroughly discussed during every WP meeting. Before each WP meeting, the Agency prepared a new version and set a deadline for receiving comments to it from the WP members. After this deadline, the Agency incorporated all comments received and this document formed the basis for the discussions during the WP meeting. Based on these discussions, the Agency prepared a new version for a next WP meeting. The impact assessment was also discussed during every WP meeting.

To facilitate exchange of documents, an Extranet workspace of the project was established at:

https://extranet.era.europa.eu/NOI17/SitePages/Home.aspx.

This workspace gathers all documents of the project and is accessible to the working party members and their deputies as well as to all experts involved in other working parties organised by the Agency.

It has to be stated that the WP followed after the work of a task force on the subject of application of the NOI TSI to existing wagons and 2 workshops on quieter routes. This task force met 5 times in 2016 and 2017 and the 2 workshops were also organised in 2017. Some outcomes of the WP were thus discussed in advance as part of these 2 platforms. A report from them is available in the Agency webpage at:

http://www.era.europa.eu/Document-Register/Pages/Application-of-NOI-TSI-to-existing-wagons.aspx

5. Main aspects covered

5.1. Concept of quieter routes

A 'quieter route' is a part of the railway network where noisy wagons cannot be operated. Noisy wagons are:

- Wagons, which do not comply with any of the NOI TSIs (NOI TSI:2006, NOI TSI:2011, NOI TSI:2014)
- Wagons, which are not fitted with quieter brake blocks or brake discs for the service brake function
- Wagons, which are not fitted with composite brake blocks listed in Appendix E of the NOI TSI for the service brake function (this appendix contains one table with historic composite brake blocks for international use and one table with historic composite brake blocks for national use)

A quieter brake block is either a brake block listed in Appendix G of the WAG TSI or a brake block positively evaluated concerning its acoustic performance, which is currently an open point. This open point should be closed as part of another NOI TSI revision, which is scheduled to kick off in autumn 2018.

The concept of quieter routes links the pass-by noise set out in the NOI TSI with the noise immission aspects. It takes into account facets such as traffic on the railway lines or density of population living along railway lines.

The legal services of the European Commission validated the concept of quieter routes as far as the following principles are respected:

- No staged implementation or transposition period at the level of Member States is allowed
- Exemptions such as low population density or existence of noise barriers should be part of the definition of a quieter route and applied equally by all Member States
- Specific cases are possible only on very strict conditions:
  - They must be objectively justified
  - Interoperability must not be undermined (i.e. they must be confined to national situations)
  - The environmental objective served by the NOI TSI must be reached in a best possible way, so they must be limited in time

The definition of a quieter routes is the following: **'A quieter route is a part of the network with a minimum length of 20 km in the geographical scope of this TSI, on which the annual average daily operated freight trains in the year preceding the publication date of this regulation during night time was higher than 12.'**

The underlying reasoning behind this definition is based in a one-off calculation, on which the following simplifications are applied:

- All freight trains are equal to a conventional train, in which all wagons are fitted with cast-iron brake blocks. This conventional train is defined by fixed levels of pass-by noise, speed and length.
- The impacted population lives at a conventional distance from the railway lines.
- There are no noise mitigation measures between the track and the people living nearby (not even house walls or windows).

The conventional train and distance of the people from the railway lines is given below:

- The pass-by noise of the wagons of the conventional train is 91 dB(A). This value is representative of a wagon fitted with cast-iron brake blocks.
- Conventional train speed: 100 km/h
- Conventional train length: 300 m
- Conventional distance of people from a railway line: 25 m

The noise emission criteria relating to this 'conventional environmental noise situation' reflect the disturbance during night, as this is the most dimensioning period from the environmental noise impact point of view. Moreover, freight traffic is often carried out during night.

The result of this one-off calculation is the number of conventional freight trains per night exceeding the noise emission criteria.

The freight traffic of each route is then compared to the result of the one-off calculation. If the freight traffic on a route is higher, the route should be quieter. Otherwise, the route should not be made quieter.

The quieter routes are proposed to become applicable from **8th December 2024**. This date is chosen because it coincides with the annual timetable change in 2024 and the year 2024 is chosen as to allow the sector a sufficient time for managing retrofitting of wagons and this preferably during the usual 6-year wagon maintenance cycle.

The freight traffic on a route is defined as the annual average daily operated freight trains during night time. The night time is defined for each Member State in its national legislation transposing Directive 2002/49/EC (generally either 22:00 - 6:00 or 23:00 - 7:00).

Regarding the definition of a freight train needed for establishing their numbers on a route, the following applies: Any train containing at least one freight wagon as defined in the WAG TSI and trains exclusively composed of one or several locomotives count as a freight train for the determination of quieter routes. The reasons for including the locomotives in the definition of freight train is that locomotives are classified as freight trains by most of the infrastructure managers.

Non-passenger carrying vehicles included in a passenger train are not in the scope of the WAG TSI - they fall under the scope of the LOC&PAS TSI (see point 2.3.1(C)).

The Working Party considered initially exempting the application of the 'quieter routes' concept on low population density areas. As requested by the Legal services of the Commission in the principles above, this could be done only by defining such exception in the definition of the quieter route, to be applied equally on all member states.

However, detailed maps of population density close to the railway lines are not readily available across EU. The Working Party agreed to solve this issue by assuming that population density is the same in each NUTS3 region.

Note: a detailed definition of the NUTS3 region is available here: http://ec.europa.eu/eurostat/web/nuts/background

Therefore, it was proposed the following definition of quieter routes:

'A 'quieter route' is a route on which the average daily operated freight trains between 22:00 and 6:00 in 2016 were:

- *Equal to or higher than 38, for routes in NUTS 3 regions with a population density in 2016 equal to or lower than x persons/km^2, and*
- *Equal to or higher than 12, for all other routes'*

Even though the 'quieter routes' definition should be formulated with reference to the number of train circulating and to a reference population density affected along the tracks, it was not possible to reach a consensus on the value of the population density to be included in the definition above. Therefore, it was decided that the quieter routes would apply to any level of population density.

5.2. Implementation of the quieter routes

A list of the quieter routes on their territory should be provided by the Member States to the Agency so that the Agency can publish them on its website. Voluntarily, the Member States may provide the Agency with a map depicting the quieter routes on their territory.

The following template should be used for communicating the quieter routes:

Quieter route	Sections in the route	Unique section ID	Quieter route starts/finishes at the border of the Member State
Point A - Point E	Point A - Point B	201	POINT E (Country Y)
	Point B - Point C	202	
	Point C - Point D	203	
	Point D - Point E	204	
Point F - Point I	Point F - Point G	501	N
	Point G - Point H	502	
	Point H - Point I	503	

The quieter routes should be updated at least every 5 years since they are applicable. The traffic data used shall refer to the year preceding the update. The Member States shall provide the Agency with the updated quieter routes so that the Agency can publish them on its website and inform the Member States of the changes through RISC of the European Commission. The updated quieter routes are applicable from the next December timetable change following 1 year after the European Commission has informed the Member States of the changes.

5.3. Exemptions and specific cases

As a general exemption, wagons which are operated on lines with a gradient of more than 40 ‰, wagons with a maximum operating speed higher than 120 km/h, wagons with an axle load higher than 22.5 t, wagons exclusively operated for infrastructure works and wagons used in rescue trains need not be retrofitted for operation on the quieter routes. The reasoning for the wagons operated on lines with a gradient of more than 40 ‰, wagons with a maximum operating speed higher than 120 km/h, and wagons with an axle load higher than 22.5 t is that there are no composite brake blocks approved for use on such lines. Concerning wagons exclusively operated for infrastructure works and wagons used in rescue trains, the WP did not consider it necessary to retrofit them given their purpose other than transportation of freight, its low number and its low average annual mileage.

5.3.1 Specific implementation rules

The WP futher discussed several cases of wagons not covered by the exemption above for which a simple 1:1 replacement of cast-iron brake blocks with composite brake blocks is not possible due to e.g. unavailability of composite brake blocks for particular brake configurations, need for further alterations to the brake system on top of this simple replacement or need for any other intervention to the structure of a wagon.

It was agreed that specific exceptions could be given at Member State level for wagons, for which there is no immediately industrially available technical solution for simple replacement of cast-iron brake blocks with LL composite brake blocks (e.g. wagons with small wheels, wagons with 1Bg or 1Bgu brake block configuration) and wagons, for which there is suitable technical solution for retrofitting with LL composite brake blocks but which is more complex than a simple 1:1 replacement of cast-iron brake blocks (e.g. wagons fitted with tyred

wheels, wagons that need to be equipped with wheels complying with EN 13979-1 and a kink valve, S wagons with SS brake). The reasoning is that either such wagons can be operated outside the quieter routes and thus need not be retrofitted or they can be retrofitted assuming a much higher cost (e.g. equipping tyred wheel wagons with wheels complying with EN 13979-1 and a kink valve).

The Member State should specify in its request the specifc type of wagons exempted and the corresponding deadline.

5.3.2 Specific cases

Member States can choose not to apply the concept of quieter routes in case of rolling concealed in separate networks such as the channel tunnel and in case of reported uncertainties with the available technical solutions for the retrofitting of the existing wagons.

5.4. Operating rules

A reference to the OPE TSI is necessary to ensure a correct link between the new provisions in the NOI TSI and corresponding operational aspects covered by the OPE TSI. It is therefore proposed to include a reference in section 4.3 of the NOI TSI to the OPE TSI and to include a reference in section 4.3 of the OPE TSI to the NOI TSI.

Furthermore, specific operating rules are described in section 4.4 of the NOI TSI relating to the operation of wagons on quieter routes in case of degraded operation and in case of infrastructure works and wagons maintenance. These specific operating rules ensure the possibility of operating non-NOI TSI compliant wagons on the quieter routes in identified cases. These cases are:

- To address capacity restrictions or operational constraints caused by rolling stock failures, extreme weather conditions, accidents or incidents and infrastructure failures
- To allow wagons maintenance and infrastructure works where a quieter routes is the only suitable alternative

5.5. Points of disagreement

The points of disagreement below are limited to those related to the quieter routes implementation strategy. For the discussion between other implementation strategies, see the Report ERA-REP-155.

- Stability of quieter routes
  EIM proposed during the WP meetings that once a route is quieter it stays quieter forever regardless the actual traffic. This would ensure certainty during legal procedures of bigger infrastructure projects. This proposal was discussed and it was not retained.
- Deadline for the operation of silent wagons on quieter routes
  A consensus was found around 8th December 2024. However, some Member States (Germany, the Netherlands) pointed out that operation of silent wagons on quieter routes should be ensured in 2022 the latest, while others (Spain, Sweden) pointed out that it should be delayed to 2027 at least.

6. Proposed amendments

6.1. Proposed amendment no 1

In chapter 1 'Introduction', the section 1.1 'Technical scope' is replaced by the following:

'1.1 Technical scope

1.1.1 Scope related to rolling stock

This TSI applies to all rolling stock within the scope of Regulation (EU) No 1302/2014 (LOC&PAS TSI) and Regulation (EU) No 321/2013 (WAG TSI);

1.1.2 Scope related to operational aspects

On top of Decision 2012/757/EU (OPE TSI), this TSI applies to the operation of freight wagons which are used on infrastructure designated as 'quieter routes'.'

Reasoning:

The technical scope of the NOI TSI needs to be divided into scope related to rolling stock and scope related to operational aspects. The operational aspects are introduced because the NOI TSI is made applicable to existing wagons.

6.2. Proposed amendment no 2

The chapter 2 'Definition of the subsystem' is replaced by the following:

'2. Definition of the subsystem

A 'unit' means the rolling stock which is subject to the application of this TSI, and therefore subject to the 'EC' verification procedure. Chapter 2 of the LOC&PAS TSI and chapter 2 of the WAG TSI describe what a unit can consist of.

The requirements of this TSI apply to the following categories of rolling stock set out in section 1.2 in Annex I of Directive 2008/57/EC:

(a) *Self-propelling thermal or electric trains.* This category is further defined in chapter 2 of the LOC&PAS TSI and shall be referred to in this TSI as multiple units, EMU (electrified) or DMU (diesel).

(b) *Thermal or electric traction units.* This category is further defined in chapter 2 of the LOC&PAS TSI and shall be referred to in this TSI as locomotives. Power units that form part of a 'self-propelling thermal or electric train' and railcars are not included in this category and belong to the category under point (a).

(c) *Passenger carriages and other related cars.* This category is further defined in chapter 2 of the LOC&PAS TSI and shall be referred to in this TSI as coaches.

(d) *Freight wagons, including vehicles designed to carry lorries.* This category is further defined in chapter 2 of the WAG TSI and shall be referred to in this TSI as wagons.

(e) *Mobile railway infrastructure construction and maintenance equipment.* This category is further defined in chapter 2 of the LOC&PAS TSI and consists of on-track machines (referred to in this TSI as OTMs) and infrastructure inspection vehicles, which belong to the categories in points (a), (b) or (d) depending on their design.'

Reasoning:

Editorial. In fact, chapter 2 of Regulation (EU) No 1302/2014 and chapter 2 of Regulation (EU) No 321/2013 do not exist. The right wording is either chapter 2 of the Annex of Regulation (EU) No 1302/2014 or chapter 2 of the LOC&PAS TSI because the LOC&PAS TSI has already been defined in the new point 1.1.1 of the NOI TSI. *Mutatis mutandis* for the WAG TSI.

6.3. Proposed amendment no 3

In chapter 4 'Characterisation of the subsystem', the section 4.3 'Functional and technical specifications of the interfaces' is replaced by the following:

'4.3 Functional and technical specifications of the interfaces

This TSI has the following interfaces with the rolling stock subsystem:

Interface with subsystems of points (a), (b), (c) and (e) of chapter 2 (dealt with in the LOC&PAS TSI) with regard to:

— stationary noise,

— starting noise (not applicable to coaches),

— pass-by noise,

— interior noise within the driver's cab, where applicable.

Interface with subsystems of point (d) of chapter 2 (dealt with in the WAG TSI) with regard to:

— pass-by noise,

— stationary noise.

This TSI has the following interface with the operation and traffic management subsystem dealt with in Decision 2012/757/EU (OPE TSI) with regard to:

— pass-by noise.'

Reasoning:

For the functional and technical specifications of the interfaces, the link to the OPE TSI needs to be added.

6.4. Proposed amendment no 4

In chapter 4 'Characterisation of the subsystem', the section 4.4 'Operating rules' is replaced by the following:

'4.4 Operating rules

Requirements concerning the operating rules for the subsystem rolling stock are set out in section 4.4 of the LOC&PAS TSI and in section 4.4 of the WAG TSI.

4.4.1 Specific rules for the operation of wagons on quieter routes in case of degraded operation

The contingency arrangements as defined in point 4.2.3.6.3 of the OPE TSI include the operation of wagons not compliant with point 7.2.2.2 on quieter routes.

This measure can be applied to address capacity restrictions or operational constraints caused by rolling stock failures, extreme weather conditions, accidents or incidents and infrastructure failures.

4.4.2 Specific rules for the operation of wagons on quieter routes in case of infrastructure works and wagons maintenance

The operation of wagons not compliant with point 7.2.2.2 on quieter routes is possible in case of wagons maintenance activities where only a quieter route is available in order to access the maintenance workshop.

Contingency arrangements set out in clause 4.4.1 are applicable in case of infrastructure works where a quieter route is the only suitable alternative.'

Reasoning:

The operating rules are extended to cover rules on the operation of wagons on the quieter routes in case of degraded operation and in case of infrastructure works and wagons maintenance.

6.5. Proposed amendment no 5

In chapter 4 'Characterisation of the subsystem', the section 4.5 'Maintenance rules' is replaced by the following:

'4.5 Maintenance rules

Requirements concerning the maintenance rules for the subsystem rolling stock are set out in section 4.5 of the LOC&PAS TSI and in section 4.5 of the WAG TSI.'

Reasoning:

Editorial. In fact, section 4.5 of Regulation (EU) No 1302/2014 and section 4.5 of Regulation (EU) No 321/2013 do not exist. The right wording is either section 4.5 of the Annex of Regulation (EU) No 1302/2014 or section 4.5 of the LOC&PAS TSI because the LOC&PAS TSI has already been defined in the new point 1.1.1 of the NOI TSI. *Mutatis mutandis* for the WAG TSI.

6.6. Proposed amendment no 6

In chapter 6 'Conformity assessment and EC verification', in point 6.2.2.3.2.1 'EMU, DMUs, locomotives and coaches' and in point 6.2.2.3.2.2 'Wagons', the text 'V_{test}' is replaced by 'v_{test}' (four replacements).

Reasoning:

Editorial.

6.7. Proposed amendment no 7

In chapter 7 'Implementation', the section 7.2 'Application of this TSI to renewed and upgraded subsystems' is replaced by the following:

'7.2 Application of this TSI to existing subsystems

7.2.1 General provisions in case of renewal or upgrade

The applicant shall demonstrate that the noise levels of renewed or upgraded units remain below the limits set out in the TSI which was applicable when the unit in question was first authorised. If no TSI existed at the time of the first authorisation, it shall be demonstrated that the noise levels of renewed or upgraded units are either not increased or remain below the limits set out in Decision 2006/66/EC or Decision 2002/735/EC.

The demonstration shall be limited to the basic parameters affected by the renewal/upgrade.

If the simplified evaluation is applied, the original unit may represent the reference unit in accordance with the provisions of point 6.2.3.

The replacement of a whole unit or (a) vehicle(s) within a unit (e.g. a replacement after a severe damage) does not require a conformity assessment against this TSI, as long as the unit or the vehicle(s) are identical to the ones they replace.

7.2.2 Additional provisions for the application of this TSI to existing wagons

From 8 December 2024, wagons which do not fulfil the conditions set out in point 7.2.2.2 of this TSI shall not be operated on the quieter routes as defined in Appendix D.

The provision above does not apply to wagons operated on lines with a gradient of more than 40 ‰, wagons with a maximum operating speed higher than 120 km/h, wagons with an axle load higher than 22.5 t, wagons exclusively operated for infrastructure works and wagons used in rescue trains.

If a wagon is being equipped with quieter brake blocks as defined in 7.2.2.1 and no noise sources are added to the wagon, then it shall be assumed that the requirements of point 4.2.3 are met without further testing.

7.2.2.1 Quieter brake blocks

A quieter brake block is a brake block belonging to one of the following categories:

(a) Brake block listed in Appendix G of the WAG TSI;

(b) Brake block assessed in accordance with the procedure set out in Appendix F of this TSI.

7.2.2.2 Wagons operated on quieter routes

Wagons belonging to one of the categories below can be operated on the quieter routes:

— Wagons holding an EC declaration of verification against Commission Decision 2006/66/EC concerning the technical specification for interoperability relating to the subsystem 'rolling stock — noise' of the trans-European conventional rail system;

— Wagons holding an EC declaration of verification against Commission Decision 2011/229/EU concerning the technical specifications of interoperability relating to the subsystem 'rolling stock – noise' of the trans-European conventional rail system;

— Wagons holding an EC declaration of verification against this TSI;

— Wagons fitted with quieter brake blocks as defined in point 7.2.2.1 or brake discs for the service brake function;

— Wagons fitted with composite brake blocks listed in Appendix E for the service brake function. The operation of these wagons on the quieter routes is limited in accordance with the conditions described in this appendix.'

Reasoning:

The current section 7.2 'Application of this TSI to renewed and upgraded subsystems' is divided into 2 points - 7.2.1 'General provisions in case of renewal or upgrade' and 7.2.2 'Additional provisions for the application of this TSI to existing wagons'. The first point remains almost identical to the current TSI text whereas the second point contains the actual ban on the use of 'noisy' wagons on the quieter routes. However, some exemptions to this ban are defined.

6.8. Proposed amendment no 8

In chapter 7 'Implementation', the point 7.3.2.1 'General specific case' is replaced by the following:

'7.3.2.1. General specific cases

a) Specific case Estonia, Finland, Latvia, Lithuania and Poland

('P') For units which are in shared use with third countries, the track gauge of which is different from that of the main rail network within the Union, the application of national technical rules instead of the requirements in this TSI is permitted.

b) Specific case Finland

('T') Decision 2011/229/EU may continue to be applied for freight wagons to be used only on the territory of Finland and until the relevant technical solution in relation to Nordic winter conditions is found, but in any case not later than until 31st December 2032. This shall not prevent freight wagons from other Member States to operate on the Finnish network. Thus, the concept of quieter routes is not applicable for Finnish 1524 mm network.'

Reasoning:

See point 5.3 of this report (exceptions and specific cases).

6.9. Proposed amendment no 9

In chapter 7 'Implementation', the point 7.3.2.4 'Limits for pass-by noise (point 4.2.3)' is replaced by the following:

'7.3.2.4. Limits for pass-by noise (point 4.2.3)

a) Specific case Channel Tunnel

('P') For the Channel Tunnel, the limits for pass-by shall not apply to wagons dedicated to the transport of heavy goods vehicles between Coquelles (France) and Folkestone (United Kingdom).

b) Specific case Sweden

('T') For locomotives with total tractive power of more than 6 000 kW and a maximum axle load of more than 25 t the limit values for pass-by noise $L_{pAeq,Tp\,(80\ km/h)}$ in Table 4 may be raised up to 85 dB.'

Reasoning:

See point 5.3 of this report (exceptions and specific cases).

6.10. Proposed amendment no 10

In chapter 7 'Implementation', the new point 7.3.2.5 is added below point 7.3.2.4 'Limits for pass-by noise (point 4.2.3)':

'7.3.2.5. Additional provisions for the application of this TSI to existing wagons (point 7.2.2)

a) Specific case Finland

('T') Concept of quieter routes will not be applied on Finnish network due to uncertainties related to the operation in severe winter conditions with composite brake blocks until 31st December 2032.'

Reasoning:

See point 5.3 of this report (exceptions and specific cases).

6.11. Proposed amendment no 11

In chapter 7 'Implementation', the new section 7.4 'Particular implementation rules for wagons operated on quieter routes (point 7.2.2.2)' is added below section 7.3 'Specific cases':

'7.4. Particular implementation rules for wagons operated on quieter routes (point 7.2.2.2)

a) Particular implementation rules for wagons operated on quieter routes of Belgium

('T') On top of the wagons listed in point 7.2.2.2, the following existing wagons can be operated on quieter routes in the territory of Belgium:

— Wagons with tyred wheels until 20xx[1]

— Wagons which require the fitting of a kink valve in order to replace the cast iron block with composite brake blocks until 20xx[2]

— Wagons fitted with cast iron blocks which require the replacement of wheels with wheels compliant with the requirements set out in EN 13749-1 in order to be retrofitted with composite brake blocks until 20xx[3]

b) Specific case Channel Tunnel

[1] Date to be specified in agreement with the respective Member State
[2] Date to be specified in agreement with the respective Member State
[3] Date to be specified in agreement with the respective Member State

('P') On top of the wagons listed in point 7.2.2.2, the following existing wagons can be operated on quieter routes in the Channel Tunnel concession:

Wagons dedicated to the transport of heavy goods vehicles between Coquelles (France) and Folkestone (United Kingdom)'

c) Particular implementation rules for wagons operated on quieter routes of Czech Republic

('T') On top of the wagons listed in point 7.2.2.2, the following existing wagons can be operated on quieter routes in the territory of Czech Republic:

— Wagons with tyred wheels, until 1st January 2027

— Wagons with bogies of type 26-2.8 fitted with cast iron blocks until 1st January 2035

— Wagons which require the fitting of a kink valve in order to replace the cast iron block with composite brake blocks, until 1st January 2035

d) Particular implementation rules for wagons operated on quieter routes of France

('T') On top of the wagons listed in point 7.2.2.2, the following existing wagons can be operated on quieter routes in the territory of France:

— Wagons with 1Bg or 1Bgu brake configuration fitted with cast iron brake blocks until 2030

— Wagons fitted with small wheels (diameter under 920mm) until 2030

e) Particular implementation rules for wagons operated on quieter routes of Italy

('T') On top of the wagons listed in point 7.2.2.2, the following existing wagons can be operated on quieter routes in the territory of Italy:

— Wagons with tyred wheels until 2026

— Wagons which require the fitting of a kink valve in order to replace the cast iron block with composite brake blocks until 2026

— Wagons fitted with cast iron blocks which require the replacement of wheels with wheels compliant with the requirements set out in EN 13749-1 in order to be retrofitted with composite brake blocks until 2026

Furthermore, it is not mandatory to use composite brake blocks on quieter routes for existing wagons not covered by the three bullet points above and for which there exists no 1-to-1-solution for replacement of cast iron brake blocks until 2030.

f) Particular implementation rules for wagons operated on quieter routes of Norway

('T') The use of composite brake blocks on any freight wagon for use on quieter routes within the Norwegian railway network is not mandatory.

When wagons equipped with composite brake blocks are used during severe winter conditions the RU shall take necessary provisions through their SMS in order to assure satisfactory braking performance for the train composition.

('T') Furthermore, it is not mandatory to use composite brake blocks on quieter routes for wagons for which there exists no 1-to-1-solution for replacement of cast iron brake blocks.'

g) Particular implementation rules for wagons operated on quieter routes of Poland

('T') On top of the wagons listed in point 7.2.2.2, the following existing wagons can be operated on quieter routes in the territory of Poland until 1st January 2037:

— Wagons with tyred wheels

— Wagons with 1Bg or 1Bgu brake configuration fitted with cast iron blocks

— Wagons designed for 'S' traffic equipped with 'SS' brake fitted with cast iron blocks

— Wagons fitted with cast iron blocks and designed for 'SS' traffic for which retrofitting with LL brake blocks would require fitting with wheels complying with EN 13979-1 and a kink valve

h) Particular implementation rules for wagons operated on quieter routes of Sweden

('T') The use of composite brake blocks is not mandatory on freight wagons for use on quieter routes within the Swedish railway network.

The railway undertakings must take necessary operative provisions when using wagons equipped with composite brake blocks in severe winter conditions in order to assure satisfactory braking performance for the train composition.

('P') It is not mandatory to use composite brake blocks on existing freight wagons for which there exists no 1-to-1-solution for replacement of cast iron brake blocks on quieter routes within the Swedish railway network until 20xx[4].

i) Particular implementation rules for wagons operated on quieter routes of Great Britain

('P') For units intended to operate solely on the GB Network, where existing wagons are equipped with composite brake blocks published in GMGN 2688 it shall be permissible to operate over quieter routes.

This specific case does not prevent the access of TSI compliant rolling stock to the national network

('T')The following types of existing wagons equipped with cast iron brake blocks intended to operate on the GB Network shall be permitted to operate over quieter routes:

— Wagons equipped with a non-UIC braking system for which there are no compatible silent brake blocks available for retrofitment (until 2030)

— Wagons with a designed braking distance of 810m or less from 60 mph in Goods timing / 75 mph in Passenger timing, where they are operated in trains with wagons braked to GB domestic stopping distance criteria (until 2030)

— Wagons used exclusively for the transport of nuclear products (until 2050).

This specific case does not prevent the access of TSI compliant rolling stock to the national network.'

Reasoning:

See point 5.3 of this report (exceptions and specific cases).

6.12. Proposed amendment no 12

In Appendix A 'Open points', the text 'This TSI does not contain any open points' is replaced by the following table:

Element of the rolling stock subsystem	Clause of this TSI	Technical aspect not covered by this TSI	Comments
Quieter brake block	7.2.2.1 and Appendix F	Assessment of the acoustic properties of the brake blocks	Alternative technical solutions available (see point 7.2.2)

[4] Date to be specified in agreement with the respective Member State

Reasoning:

A new open point is created for the acoustic performance of a brake block. This open point needs to be added in the table of open points.

6.13. Proposed amendment no 13

The following text is added at the end of the TSI:

'Appendix D

Quieter routes

D.1 Definition

A 'quieter route' is a part of the network with a minimum length of 20 km in the geographical scope of this TSI, on which the annual average daily operated freight trains in the year preceding the *publication date of Regulation (EU) xxxx/xxxx [amendment to TSI Noise]* during night time was higher than 12.

Night time is defined for each Member State in its national legislation transposing Directive 2002/49/EC.

D.2 Identification of quieter routes

The Member States shall provide the Agency with a list of quieter routes no later than 6 months after the date of publication of this TSI.

The list shall be provided in a format allowing further processing by the users with IT-tools and shall contain at least the following information:

— Start and end point of the quieter route and their corresponding sections. If one of these points is at the border of the Member State, it shall be reflected

— Identification of the sections making up the quieter route

The list shall be provided using the template below:

Quieter route	Sections in the route	Unique section ID	Quieter route starts/finishes at the border of the Member State
Point A - Point E	Point A - Point B	201	POINT E (Country Y)
	Point B - Point C	202	
	Point C - Point D	203	
	Point D - Point E	204	
Point F - Point I	Point F - Point G	501	N
	Point G - Point H	502	
	Point H - Point I	503	

In addition, the Member States may provide maps illustrating the quieter routes on a voluntary basis. All lists and maps shall be published on the Agency website (http://www.era.europa.eu) no later than 6 months after the date of publication of this TSI.

D.3 Update of quieter routes

Member States shall update the quieter routes at least every 5 years after 8th December 2024. The traffic data used shall refer to the year preceding the update. Member States shall provide the Agency with the

updated quieter routes for their publication. In case of new or upgraded lines added to the existing network, the expected traffic shall be used for classification.

The Agency shall publish the updated quieter routes on its website (http://www.era.europa.eu) no later than 3 months after their reception and they shall be applicable from the next December timetable change following one year after their publication.

The Agency shall inform the Commission of any changes to the quieter routes. The Commission shall inform the Member States of these changes through the committee referred to in Article 51 of Directive (EU) 2016/797.

Appendix E

Historic composite brake blocks

E.1 Historic composite brake blocks for international use.

Existing wagons equipped with the brake blocks listed below are allowed to be used on the EU railway network, including quieter routes, until the relevant date set out in Appendix N of UIC 541-4.

Manufacturer/name of product	Designation/type of block	Type of friction coefficient
Valeo/Hersot Wabco/Cobra	693 W554	K
Ferodo	I/B 436	K
Abex	229	K (Fe - sintered)
Jurid	738	K (Fe - sintered)

E.2 Historic composite brake blocks for national use

Existing wagons equipped with the brake blocks listed below are only allowed to be used on the railway networks, including quieter routes, of the corresponding Member States.

Manufacturer/name of the product	Designation/type of block	Member State	Remarks
Becorit	929-1	Switzerland	
Cobra/Wabco	V133	Italy	
Cofren	M128 Mix S153	Norway, Sweden	
Cofren	229	Italy	
Federal Mogul	J816M	Italy	Nominal wheel diameter of 680 mm, brake blocks arrangement 2x Bg
ICER	904	Spain	
ICER	905	Spain, Portugal	
Jurid	816	Switzerland	

Manufacturer/name of the product	Designation/type of block	Member State	Remarks
Jurid	838	Spain	
	S 153	Norway, Sweden	
Wabtec	333	Norway, Sweden	

Appendix F

Assessment of acoustic performance of a brake block

The purpose of this procedure is to demonstrate the acoustic performance of a composite brake block at interoperability constituent level.

This procedure is an open point.'

Reasoning:

These new 3 appendixes contain:

- Appendix D: Definition of a quieter route, their identification and update
- Appendix E: Tables with historic composite brake blocks for international use and national use
- Appendix F: This appendix will contain the assessment procedure of the acoustic performance of a brake block, currently an open point

7. Aspects to be considered in future revisions of the NOI TSI

The following aspects should be considered in future revisions of the NOI TSI:

- Operational aspects defined in point 4.4 of the amended NOI TSI should be transferred to the OPE TSI
- Closure of the open point regarding the procedure to demonstrate the acoustic performance of a composite brake block at interoperability constituent level
- Alignment of the NOI TSI with the 4th railway package
- Specific technical issues

8. Annex 1: Definitions and abbreviations

8.1. Definitions

Table 2 : Table of definitions

Definition	*Description*
1Bg	Unilateral configuration of brake blocks with one brake block per brake block holder
1Bgu	Unilateral configuration of brake blocks with two brake blocks per brake block holder
The Agency	European Union Agency for Railways
LL composite brake block	Composite brake block with low friction coefficient
LOC&PAS TSI	Technical specification for interoperability relating to the 'rolling stock — locomotives and passenger rolling stock' subsystem
NOI TSI	Technical specification for interoperability relating to the subsystem 'rolling stock — noise'
NOI TSI:2006	Commission Decision of 23 December 2005 concerning the technical specification for interoperability relating to the subsystem 'rolling stock — noise' of the trans-European conventional rail system (2006/66/EC)
NOI TSI:2011	Commission Decision of 4 April 2011 concerning the technical specifications of interoperability relating to the subsystem 'rolling stock – noise' of the trans-European conventional rail system (2011/229/EU)
NOI TSI:2014	Commission Regulation (EU) No 1304/2014 of 26 November 2014 on the technical specification for interoperability relating to the subsystem 'rolling stock — noise' amending Decision 2008/232/EC and repealing Decision 2011/229/EU
OPE TSI	Technical specification for interoperability relating to the 'operation and traffic management' subsystem
S wagon	Wagon of a maximum permitted speed of 100 km/h
SS brake	Brake used in a wagon of a maximum permitted speed of 120 km/h
TSI NOI	Technical specification for interoperability relating to the subsystem 'rolling stock — noise'

8.2. Abbreviations

Table 3 : Table of abbreviations

Abbreviation	*Description*
AT	Austria
BG	Bulgaria
CER	Community of European Railway and Infrastructure Companies
CH	Switzerland
CZ	Czechia
DE	Germany

Abbreviation	*Description*
DK	Denmark
EIM	European Rail Infrastructure Managers
EL	Greece
ERFA	European Rail Freight Association
ES	Spain
ETF	European Transport Workers' Federation
EU	European Union
FI	Finland
FR	France
IM	Infrastructure Manager
IT	Italy
NB-Rail AISBL	Notified Bodies Association
NL	The Netherlands
NO	Norway
NSA	National Safety Authority
ÖBB	Österreichische Bundesbahnen
OTIF	Intergovernmental Organisation for International Carriage by Rail
PL	Poland
RISC	Railway Safety and Interoperability Committee
RU	Railway Undertaking
SE	Sweden
SI	Slovenia
SNCF	Société nationale des chemins de fer français
TSI	Technical Specification for Interoperability
UK	United Kingdom
UIP	International Union of Wagon Keepers
UNIFE	The European Rail Industry
WP	Working Party

9. Annex 2: Reference documents

Table 4 : Table of reference documents

N°	*Title*	*Reference*	*Version*
[1]	Request for recommendations to the Commission pursuant to Article 5 paragraph 2 of the interoperability Directive (EU) 2016/797	MOVE/C.4/BC/tg	22/09/2017
[2]	Railway applications - Wheelsets and bogies - Monobloc wheels - Technical approval procedure - Part 1: Forged and rolled wheels	EN 13979-1	2003
[3]	The Agency report on 'Application of NOI TSI to existing wagons'	ERA-REP-155	V 1.0

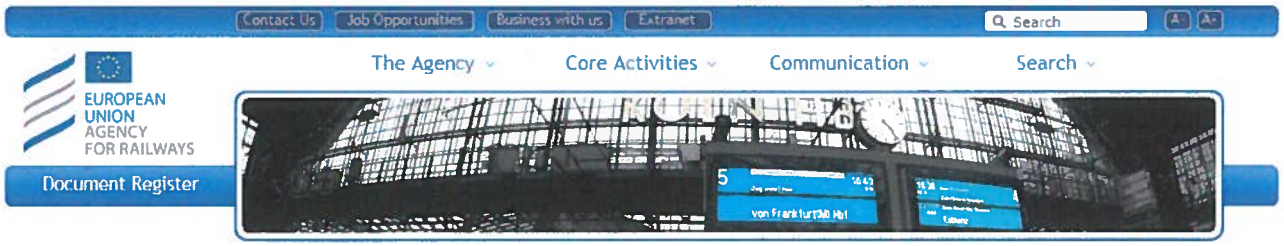
10. Annex 3: Reference legislation

Table 5 : Table of reference legislation

N°	*Title*	*Reference*	*Version*
[1]	Regulation (EU) 2016/796 of the European Parliament and of the Council of 11 May 2016 on the European Union Agency for Railways and repealing Regulation (EC) No 881/2004	2016/796	
[2]	Directive (EU) 2016/797 of the European Parliament and of the Council of 11 May 2016 on the interoperability of the rail system within the European Union (recast)	2016/797	
[3]	Commission Delegated Decision (EU) 2017/1474 of 8 June 2017 supplementing Directive (EU) 2016/797 of the European Parliament and of the Council with regard to specific objectives for the drafting, adoption and review of technical specifications for interoperability	2017/1474	
[4]	Commission Regulation (EU) No 1304/2014 of 26 November 2014 on the technical specification for interoperability relating to the subsystem 'rolling stock — noise' amending Decision 2008/232/EC and repealing Decision 2011/229/EU	1304/2014	
[5]	Commission Decision of 21 February 2008 concerning a technical specification for interoperability relating to the 'rolling stock' sub-system of the trans-European high-speed rail system	2008/232/EC	
[6]	Commission Decision of 4 April 2011 concerning the technical specifications of interoperability relating to the subsystem 'rolling stock – noise' of the trans-European conventional rail system	2011/229/EU	
[7]	Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise	2002/49/EC	

11. Annex 4: Contributions received as part of the consultation

The Agency launched a consultation on the draft of the limited revision of the NOI TSI on 22nd December 2017 with a deadline 3 months later, i.e. 22nd March 2018:



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Consultation on the draft of the limited revision of the TSI relating the subsystem rolling stock - Noise (TSI Noise)

Reference:	006REC1072
Publication Date :	22/12/2017
Published by:	Interoperability
Document Types:	Consultations
Keywords:	Noise;NOI;TSI;Consultation
Description:	This draft of the limited revision of the TSI Noise is deemed to impact the freight traffic and the social environment. Therefore, associations and bodies representing users on matters having a direct impact on freight customers as well as social partners shall be consulted in accordance with articles 6 and 7 of Regulation (EU) 2016/796 of the European Parliament and of the Council of 11 May 2016 on the European Union Agency for Railways and to article 5 (7) of Directive (EU) 2016/797 of the European Parliament and of the Council of 11 May 2016 on the interoperability of the rail system within the European Union.
Status:	New
Closing Date :	22/03/2018
Related documents:	**Documents for consultation:** - Draft of the limited revision of the TSI relating rolling stock subsystem - Noise (TSI Noise) (EN). This draft document is a recommendation amending the TSI Noise in order to make it applicable to the existing freight wagons. **Other reference documents:** The document for consultation is a recommendation to amend to the Commission Regulation (EU) No 1304/2014 of 26 November 2014 concerning the technical specification for interoperability relating to the subsystem rolling stock - noise, which is available here: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R1304&from=EN Please send your comments to 006REC1072@era.europa.eu.

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The Agency has received contributions from:

- Association of German Transport Companies (Verband Deutscher Verkehrsunternehmen
- Association of Swedish Train Operating Companies (Branschföreningen Tågoperatörerna
- Austrian Association of the Railway Industry (Bahnindustrie.at - Verband der Bahnindustrie)
- Bavarian Ministry of the Interior, for Building and Transport
- Bundesvereinigung gegen Schienenlärm
- CER
- Deutsche Banh AG - Transport Policy Europe
- EIM
- Federal Office of Transport of Switzerland

- Federal Ministry of Transport and Digital Infrastructure of Germany (Bundesministerium für Verkehr und digitale Infrastruktur)
- France Nature Environnement
- Der Senator für Umwelt, Bau und Verkehr of Freie Hansestadt Bremen
- Hessian Ministry of Economics, Energy, Transport and Regional Development (Hessisches Ministerium für Wirtschaft, Energie, Verkehr und Landesentwicklung)
- Ministry of Infrastructure and Water Management of the Netherlands
- Ministry of Transport Baden-Württemberg (Ministerium für Verkehr Baden-Württemberg)
- Noise Control Association of the German Acoustic Society (Arbeitsring Lärm der DEGA - Deutsche Gesellschaft für Akustik e. V.)
- NSA SE
- ÖBB
- OTIF Secretariat
- SNCF
- Swedish Shippers' Council (Näringslivets Transportråd - för transportköpare)
- VR Group

The contributions authorised by the sender for publication are available in the following link: http://www.era.europa.eu/Document-Register/Pages/Consultation-draft-limited-revision-TSI-subsystem-rolling-stock-Noise.aspx