EUROPEAN UNION AGENCY FOR RAILWAYS

Making the railway system work better for society.

TSI revision 2022
Digital Rail and Green Freight

Annex 10- parameters of ERATV

Based on Annexes II and III of the Commission Implementing Decision 2011/665/EU

Version	*Date*	*Comments*
1.0	18 March 2022	Version for consultation. The table lists the proposed evolution of the Annex II of the (consolidated) ERATV Decision.
2.0	30 March 2022	Version for the draft recommendation including the proposal for Annex III in addition
3.0	30 June 2022	Version for the recommendation

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ANNEX II

Table 2

Parameters of ERATV

Parameter		Data format	Applicability to vehicle categories (Yes, No, Optional, Open Point)				Parameters for technical compatibility between Vehicle and the network(s) of area of use
			1. Traction vehicles	2. Hauled passenger vehicles	3. Freight wagons	4. Special vehicles	
0	**Identification of the type**	**Heading (no data)**					
0.1	Type number (in accordance with Annex III)	[number] XX-XXX-XXXX-X	Y	Y	Y	Y	
0.2	Variant included in this type (in accordance with Article 2(13) of Regulation (EU) 2018/545)	[alphanumeric] ZZZ	Y	Y	Y	Y	
0.4	Versions included in this type. (in accordance with Article 2(14) of Regulation (EU) 2018/545)	[alphanumeric] VVV	Y	Y	Y	Y	
0.3	Date of record in ERATV	[date] YYYYMMDD	Y	Y	Y	Y	
1	**General information**	**Heading (no data)**					
1.1	Type name	[character string] (max 256 characters)	O	O	O	O	
1.2	Alternative type name	[character string] (max 256 characters)	O	O	O	O	
1.3	**Manufacturer's name**	**Heading (no data)**					
1.3.1	**Manufacturer identification data**	**Heading (no data)**					
1.3.1.1	Name of organisation	[character string] (max 256 characters) Selection from a predefined list,	Y	Y	Y	Y	

Parameter		Data format	Applicability to vehicle categories (Yes, No, Optional, Open Point)				Parameters for technical compatibility between Vehicle and the network(s) of area of use
			1. Traction vehicles	2. Hauled passenger vehicles	3. Freight wagons	4. Special vehicles	
		possibility to add new organisations					
1.3.1.2	Registered business number	Text	O	O	O	O	
1.3.1.3	Organisation code	Alphanumeric code	O	O	O	O	
1.3.2	**Manufacturer contact data**	**Heading (no data)**					
1.3.2.1	Address of organisation, street and number	Text	O	O	O	O	
1.3.2.2	Town	Text	O	O	O	O	
1.3.2.3	Country code	Code as in EU interinstitutional style guide	O	O	O	O	
1.3.2.4	Post code	Alphanumeric code	O	O	O	O	
1.3.2.5	Email address	Email	O	O	O	O	
1.4	Category	[character string] Selection from a predefined list (according to Annex III)	Y	Y	Y	Y	
1.5	Subcategory	[character string] Selection from a predefined list (according to Annex III)	Y	Y	Y	Y	
2	**Conformity with TSIs**	**Heading (no data)**					
2.1	Conformity with TSI	For each TSI: [character string] Y/N/Partial/Not applicable Selection from a predefined list of vehicle related TSIs (both in force and those that were previously in force) (multiple	Y	Y	Y	Y	

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Parameter		Data format	Applicability to vehicle categories (Yes, No, Optional, Open Point)				Parameters for technical compatibility between Vehicle and the network(s) of area of use
			1. Traction vehicles	2. Hauled passenger vehicles	3. Freight wagons	4. Special vehicles	
		selection possible)					
2.2	EC certificate of verification: Reference of 'EC type examination certificates' (if module SB applied) and/or 'EC design examination certificates' (if module SH1 applied)	[character string] (possibility to indicate several certificates, e.g. certificate for rolling stock subsystem, certificate for CCS, etc.)	Y	Y	Y	Y	
2.3	Applicable specific cases (specific cases conformity with which has been assessed)	[character string] Selection from a predefined list (multiple selection possible) based on TSIs (for each TSI marked as Y or P)	Y	Y	Y	Y	
2.4	Sections of TSI not complied with	[character string] Selection from a predefined list (multiple selection possible) based on TSIs (for each TSI marked as P)	Y	Y	Y	Y	
3	**Authorisations**	**Heading (no data)**					
3.0	Area of use	[character string] Selection from a predefined list (multiple selection): MS — Network	Y	Y	Y	Y	
3.1	**Authorisation in**	**Heading (no data)**					
3.1.1	Member State of authorisation	[character string] Selection from a predefined list	Y	Y	Y	Y	

Parameter		Data format	Applicability to vehicle categories (Yes, No, Optional, Open Point)				Parameters for technical compatibility between Vehicle and the network(s) of area of use
			1. Traction vehicles	2. Hauled passenger vehicles	3. Freight wagons	4. Special vehicles	
		(multiple selection)					
3.1.2	**Current status**	**Heading (no data)**					
3.1.2.1	Status	[character string] + [date] Possible options: Valid, Suspended YYYYMMDD, Revoked YYYYMMDD, to be renewed YYYYMMDD	Y	Y	Y	Y	
3.1.2.2	Validity of authorisation (if defined)	[date] YYYYMMDD	Y	Y	Y	Y	
3.1.2.3	Coded conditions for use and other restrictions	[character string] Code assigned by the Agency	Y	Y	Y	Y	
3.1.2.4	Non-coded conditions for use and other restrictions	[character string]	Y	Y	Y	Y	
3.1.3	**Historical**	**Heading (no data)**					
3.1.3.1	**Original authorisation**	**Heading (no data)**					
3.1.3.1.1	Date of the original authorisation	[date] YYYYMMDD	Y	Y	Y	Y	
3.1.3.1.2	**Authorisation holder**	**Heading (no data)**					
3.1.3.1.2.1	**Authorisation holder identification data**	**Heading (no data)**					
3.1.3.1.2.1.1	Name of organisation	[character string] (max 256 characters) Selection from a predefined list, possibility to add new organisations	Y	Y	Y	Y	
3.1.3.1.2.1.2	Registered business number	Text	Y	Y	Y	Y	

Parameter		Data format	Applicability to vehicle categories (Yes, No, Optional, Open Point)				Parameters for technical compatibility between Vehicle and the network(s) of area of use
			1. Traction vehicles	2. Hauled passenger vehicles	3. Freight wagons	4. Special vehicles	
3.1.3.1.2.1.3	Organisation code	Alphanumeric code	O	O	O	O	
3.1.3.1.2.2	**Authorisation holder contact data**	**Heading (no data)**					
3.1.3.1.2.2.1	Address of organisation, street and number	Text	Y	Y	Y	Y	
3.1.3.1.2.2.2	Town	Text	Y	Y	Y	Y	
3.1.3.1.2.2.3	Country code	Code as in EU interinstitutional style guide	Y	Y	Y	Y	
3.1.3.1.2.2.4	Post code	Alphanumeric code	Y	Y	Y	Y	
3.1.3.1.2.2.5	Email address	Email	Y	Y	Y	Y	
3.1.3.1.3	Authorisation document reference	[character string] (EIN)	Y	Y	Y	Y	
3.1.3.1.4	Certificate of verification: Reference of type examination or design examination type	[character string] (Possibility to indicate several certificates, e.g. certificate for rolling stock subsystem, certificate for Control, command and signalling subsystem, etc.)	Y	Y	Y	Y	
3.1.3.1.5	Parameters for which conformity to applicable national rules has been assessed	[character string] Selection from a predefined list (multiple selection possible) based on Commission Decision 2015/2299/EU	Y	Y	Y	Y	
3.1.3.1.6	Comments	[character string] (max 1 024 characters)	O	O	O	O	

Parameter		Data format	Applicability to vehicle categories (Yes, No, Optional, Open Point)				Parameters for technical compatibility between Vehicle and the network(s) of area of use
			1. Traction vehicles	2. Hauled passenger vehicles	3. Freight wagons	4. Special vehicles	
3.1.3.1.7	Reference to the written declaration by the proposer referred to in Article 3(11) of Regulation (EU) No 402/2013	[character string]	Y	Y	Y	Y	
3.1.3.X	**Modification of authorisation**	**Heading (no data) (X is progressive from 2 onwards, as many times as modifications of the authorisation of type have been issued)**	Y	Y	Y	Y	
3.1.3.X.1	Type of modification	[character string] Text from a predefined list	Y	Y	Y	Y	
3.1.3.X.2	Date	[date] YYYYMMDD	Y	Y	Y	Y	
3.1.3.X.3	Authorisation holder (if applicable)	[character string] (max 256 characters) Selection from a predefined list, possibility to add new organisations	Y	Y	Y	Y	
3.1.3.X.3.1	**Authorisation holder identification data**	**Heading (no data)**					
3.1.3.X.3.1.1	Name of organisation	[character string] (max 256 characters) Selection from a predefined list, possibility to add new organisations	Y	Y	Y	Y	
3.1.3.X.3.1.2	Registered business number	Text	Y	Y	Y	Y	
3.1.3.X.3.1.3	Organisation code	Alphanumeric code	O	O	O	O	

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Parameter		Data format	Applicability to vehicle categories (Yes, No, Optional, Open Point)				Parameters for technical compatibility between Vehicle and the network(s) of area of use
			1. Traction vehicles	2. Hauled passenger vehicles	3. Freight wagons	4. Special vehicles	
3.1.3.X.3.2	**Authorisation holder contact data**	**Heading (no data)**					
3.1.3.X.3.2.1	Address of organisation, street and number	Text	Y	Y	Y	Y	
3.1.3.X.3.2.2	Town	Text	Y	Y	Y	Y	
3.1.3.X.3.2.3	Country code	Code as in EU interinstitutional style guide	Y	Y	Y	Y	
3.1.3.X.3.2.4	Post code	Alphanumeric code	Y	Y	Y	Y	
3.1.3.X.3.2.5	Email address	Email	Y	Y	Y	Y	
3.1.3.X.4	Authorisation modification document reference	[character string]	Y	Y	Y	Y	
3.1.3.X.5	Certificate of verification: Reference of type examination or design examination type	[character string] (possibility to indicate several certificates, e.g. certificate for rolling stock subsystem, certificate for CCS, etc.)	Y	Y	Y	Y	
3.1.3.X.6	Applicable national rules (if applicable)	[character string] Selection from a predefined list (multiple selection possible) based on Commission Decision 2015/2299/EU	Y	Y	Y	Y	
3.1.3.X.7	Comments	[character string] (max 1 024 characters)	O	O	O	O	
3.1.3.X.8	Reference to the written declaration by the proposer referred to in Article 3(11)	[character string]	Y	Y	Y	Y	

Parameter		Data format	Applicability to vehicle categories (Yes, No, Optional, Open Point)				Parameters for technical compatibility between Vehicle and the network(s) of area of use
			1. Traction vehicles	2. Hauled passenger vehicles	3. Freight wagons	4. Special vehicles	
	of Regulation (EU) No 402/2013						
3.X	**Authorisation in**	**Heading (no data) (X is progressive incremented by one unit from 2 onwards each time an authorisation for this type has been granted). This Section contains same fields as 3.1**	Y	Y	Y	Y	
4	**Technical characteristics of the vehicle**	**Heading (no data)**					
4.1	**General technical characteristics**	**Heading (no data)**					
4.1.1	Number of driving cabs	[Number] 0/1/2	Y	Y	Y	Y	N
4.1.2	**Speed**	**Heading (no data)**					
4.1.2.1	Maximum design speed	[Number] km/h	Y	Y	Y	Y	N
4.1.3	Wheel set gauge	[character string] Selection from predefined list	Y	Y	Y	Y	Y
4.1.5	Maximum number of trainsets or locomotives coupled together in multiple operation.	[number]	Y	N	N	N	N
4.1.11	Wheelset gauge changeover facility	[character string] Selection from predefined list	Y	Y	Y	Y	Y
4.1.12	Number of vehicles composing the fixed formation (for fixed formation only)	[number]	Y	Y	Y	Y	N

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Parameter		Data format	Applicability to vehicle categories (Yes, No, Optional, Open Point)				Parameters for technical compatibility between Vehicle and the network(s) of area of use
			1. Traction vehicles	2. Hauled passenger vehicles	3. Freight wagons	4. Special vehicles	
4.2	**Vehicle gauge**	**Heading (no data)**					
4.2.1	Reference profile	[character string] Selection from predefined list (more than one possible) (the list will be different for different categories depending on the applicable TSI)	Y	Y	Y	Y	Y
4.3	**Environmental conditions**	**Heading (no data)**					
4.3.1	Temperature range	[character string] Selection from a predefined list (more than one possible)	Y	Y	Y	Y	N
4.3.3	Snow, ice and hail conditions	[character string] Selection from a predefined list	Y	Y	Y	Y	N
4.4	**Fire safety**	**Heading (no data)**					
4.4.1	Fire safety category	[character string] Selection from a predefined list	Y	Y	N	Y	Y
4.5	**Design mass and loads**	**Heading (no data)**					
4.5.1	Permissible payload for different line categories	[number] t for line category [character string]	N~~OP~~	N~~OP~~	Y	N~~OP~~	Y
4.5.1.1	EN line category(ies)	[character string] from a predefined list (more than one option possible)	Y	Y	N	Y	Y
▼M2							
4.5.2	**Design mass**	**Heading (no data)**					

Parameter		Data format	Applicability to vehicle categories (Yes, No, Optional, Open Point)				Parameters for technical compatibility between Vehicle and the network(s) of area of use
			1. Traction vehicles	2. Hauled passenger vehicles	3. Freight wagons	4. Special vehicles	
4.5.2.1	Design mass in working order	[number] kg	Y	Y	N	Y	Y
4.5.2.2	Design mass under normal payload	[number] kg	Y	Y	N	Y	Y
4.5.2.3	Design mass under exceptional payload	[number] kg	Y	Y	N	Y	Y
4.5.2.4	Operational mass in working order	[number] kg	Y	Y	N	N	Y
4.5.2.5	Operational mass under normal payload	[number] kg	Y	Y	N	N	Y
4.5.3	**Static axle load**	**Heading (no data)**					
4.5.3.1	Static axle load in working order	[number] kg	Y	Y	N	Y	Y
4.5.3.2	Static axle load under normal payload	[number] kg	Y	Y	N	Y	Y
4.5.3.3	Static axle load under exceptional payload	[number] kg	Y	Y	N	Y	Y
4.5.3.4	Position of the axles along the unit (axle spacing): a: Distance between axles b: Distance from end axle to the end of the nearest coupling plane c: distance between two inside axles	a [number] m b [number] m c [number] m Explanation of the values for a, b and c [character string]	Y	Y	N	Y	Y
4.5.5	Total vehicle mass (for each vehicle of the unit)	[number] kg	Y	Y	N	Y	Y
4.5.6	Mass per wheel	[number] kg	Y	Y	N	Y	Y
4.6	**Rolling stock dynamic behaviour**	**Heading (no data)**					
4.6.4	Combination of maximum speed and maximum	[number] km/h - [number] mm	Y	Y	Y	Y	Y

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Parameter		Data format	Applicability to vehicle categories (Yes, No, Optional, Open Point)				Parameters for technical compatibility between Vehicle and the network(s) of area of use
			1. Traction vehicles	2. Hauled passenger vehicles	3. Freight wagons	4. Special vehicles	
	cant deficiency for which the vehicle was assessed						
4.6.5	Rail inclination	[character string] from a predefined list	Y	Y	Y	Y	Y
4.7	**Braking**	**Heading (no data)**					
4.7.1	Maximum average deceleration	[number] m/s^2	Y	N	N	Y	N
4.7.2	**Thermal capacity**	**Heading (no data)**					
4.7.2.1	**Brake performance on steep gradients with normal payload**	**Heading (no data)**					
4.7.2.1.1	Reference case of TSI	[character string] from a predefined list	Y	Y	Y	Y	N
4.7.2.1.2	Speed (if no reference case is indicated)	[number] km/h	Y	Y	Y	Y	N
4.7.2.1.3	Gradient (if no reference case is indicated)	[number] ‰ (mm/m)	Y	Y	Y	Y	N
4.7.2.1.4	Distance (if no reference case is indicated)	[number] km	Y	Y	Y	Y	N
4.7.2.1.5	Time (if distance is not indicated) (if no reference case is indicated)	[number] min	Y	Y	Y	Y	N
4.7.2.1.6	Maximum brake thermal energy capacity	[number] kJ	Y	Y	Y	Y	N
4.7.3	**Parking brake**	**Heading (no data)**					
4.7.3.3	Maximum gradient on which the unit is kept immobilised by the parking brake alone (if the vehicle is fitted with it)	[number] ‰ (mm/m)	Y	Y	N	Y	N

Parameter		Data format	Applicability to vehicle categories (Yes, No, Optional, Open Point)				Parameters for technical compatibility between Vehicle and the network(s) of area of use
			1. Traction vehicles	2. Hauled passenger vehicles	3. Freight wagons	4. Special vehicles	
4.7.3.4	Parking brake	[Boolean] Y/N	N	N	Y	N	N
4.7.4	**Braking systems fitted on the vehicle**	**Heading (no data)**					
4.7.4.1	**Eddy current brake**	**Heading (no data)**					
4.7.4.1.1	Eddy current track brake fitted	[Boolean] Y/N	Y	Y	N	Y	Y
4.7.4.1.2	Possibility of preventing the use of the eddy current track brake (only if fitted with eddy current track brake)	[Boolean] Y/N	Y	Y	N	Y	Y
4.7.4.2	**Magnetic brake**	**Heading (no data)**					
4.7.4.2.1	Magnetic track brake fitted	[Boolean] Y/N	Y	Y	N	Y	Y
4.7.4.2.2	Possibility of preventing the use of the magnetic track brake (only if fitted with magnetic brake)	[Boolean] Y/N	Y	Y	N	Y	Y
4.7.4.3	**Regenerative brake (only for vehicles with electrical traction)**	**Heading (no data)**					
4.7.4.3.1	Regenerative brake fitted	[Boolean] Y/N	Y	N	N	Y	Y
4.7.4.3.2	Possibility of preventing the use of the regenerative brake (only if fitted with regenerative brake)	[Boolean] Y/N	Y	N	N	Y	Y
4.7.5	Emergency brake: Stopping distance and deceleration profile for each load condition per design maximum speed	[number] m [number] m/s^2	Y	Y	N	Y	N

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Parameter		Data format	Applicability to vehicle categories (Yes, No, Optional, Open Point)				Parameters for technical compatibility between Vehicle and the network(s) of area of use
			1. Traction vehicles	2. Hauled passenger vehicles	3. Freight wagons	4. Special vehicles	
4.7.6	For general operation: Brake weight percentage (lambda) or Braked mass	Lambda (%) [number] tonnes	Y	Y	Y	Y	N
4.7.7	Service brake: At maximum service brake: Stopping distance, Maximum deceleration, for the load condition 'design mass under normal payload' at the design maximum speed.	[number] m [number] m/s^2	Y	Y	Y	Y	N
4.7.8	Wheel slide protection system	[Boolean] Y/N	Y	Y	Y	Y	N
4.8	**Geometrical characteristics**	**Heading (no data)**					
4.8.1	Vehicle length	[number] m	Y	Y	N	Y	N
4.8.2	Minimum in-service wheel diameter	[number] mm	Y	Y	Y	Y	Y
4.8.4	Minimum horizontal curve radius capability	[number] m	Y	Y	N	Y	Y
4.8.5	Minimum vertical convex curve radius capability	[number] m	Y	Y	Y	Y	N
4.8.6	Minimum vertical concave curve radius capability	[number] m	Y	Y	Y	Y	N
▼M1							
4.9	**Equipment**	**Heading (no data)**					
4.9.1	Type of end coupling	[Character string] From a predefined list (multiple selection possible)	Y	Y	Y	Y	N
4.9.2	Axle bearing condition	[Character string] From a	Y	Y	Y	Y	Y

Parameter		Data format	Applicability to vehicle categories (Yes, No, Optional, Open Point)				Parameters for technical compatibility between Vehicle and the network(s) of area of use
			1. Traction vehicles	2. Hauled passenger vehicles	3. Freight wagons	4. Special vehicles	
	monitoring (hot axles box detection)	predefined list (multiple selection possible)					
4.10	**Energy supply**	**Heading (no data)**					
4.10.1	Energy supply system (voltage and frequency)	[Character string] From a predefined list (multiple selection possible)	Y	Y	N	Y	Y
4.10.4	Maximum current at standstill per pantograph (to be indicated for each DC systems the vehicle is equipped for)	[Number] A for [Voltage automatically prefilled in]	Y	Y	N	Y	N
4.10.5	Height of interaction of pantograph with contact wires (over top of rail) (to be indicated for each energy supply system the vehicle is equipped for)	[Number] From [m] to [m] (with two decimals)	Y	Y	N	Y	Y
4.10.6	Pantograph head geometry (to be indicated for each energy supply system the vehicle is equipped for)	[Character string] for [energy supply system automatically prefilled in] From a predefined list (multiple selection possible)	Y	Y	N	Y	Y
4.10.7	Number of pantographs in contact with the overhead contact line (OCL) (to be indicated for each energy supply system the vehicle is equipped for)	[Number]	Y	Y	N	Y	Y

Parameter		Data format	Applicability to vehicle categories (Yes, No, Optional, Open Point)				Parameters for technical compatibility between Vehicle and the network(s) of area of use
			1. Traction vehicles	2. Hauled passenger vehicles	3. Freight wagons	4. Special vehicles	
4.10.8	Shortest distance between two pantographs in contact with the OCL (to be indicated for each energy supply system the vehicle is equipped for; to be indicated for single and, if applicable, multiple operation) (only if number of raised pantographs is more than 1)	[Number] [m]	Y	Y	N	Y	Y
4.10.10	Material of pantograph contact strip the vehicle may be equipped with (to be indicated for each energy supply system the vehicle is equipped for)	[Character string] for [energy supply system automatically prefilled in] From a predefined list (multiple selection possible)	Y	Y	N	Y	Y
4.10.11	Automatic dropping device (ADD) fitted (to be indicated for each energy supply system the vehicle is equipped for)	[Boolean] Y/N	Y	Y	N	Y	Y
4.10.14	Electric units equipped with power or current limitation function	[Boolean] Y/N	Y	N	N	Y	Y
4.10.15	Mean contact force	[Number] [N]	Y	Y	N	Y	Y
4.10.16	Vehicle equipped with electric energy storage for traction purposes and with the function of charging with OCL at standstill	[Boolean] Y/N	Y	N	N	Y	Y

Parameter		Data format	Applicability to vehicle categories (Yes, No, Optional, Open Point)				Parameters for technical compatibility between Vehicle and the network(s) of area of use
			1. Traction vehicles	2. Hauled passenger vehicles	3. Freight wagons	4. Special vehicles	
4.12	**Passenger related characteristics**	**Heading (no data)**					
4.12.3.1	Platform heights for which the vehicle is designed.	[Number] from predefined list (multiple selection possible)	Y	Y	N	N	Y
4.13	**On-board CCS equipment (for vehicles with a driving cab only)**	**Heading (no data)**					
4.13.1	**Signalling**	**Heading (no data)**					
4.13.1.1	ETCS equipment on-board and the set of specifications from CCS TSI ~~Annex~~ Appendix A	[Character string] From a predefined list	Y	~~N~~Y	N	Y	~~Y~~N
4.13.1.5	Class B or other train protection, control and warning legacy systems installed (system and, if applicable, version)	[Character string] From a predefined list (more than one option possible)	Y	~~N~~Y	N	Y	Y
4.13.1.7	ETCS on-board implementation	[Character string]	Y	~~N~~Y	N	Y	N~~Y~~
4.13.1.8	ETCS System Compatibility	[Character string] From a predefined list (more than one option possible)	Y	~~N~~Y	N	Y	Y~~N~~
4.13.1.9	Managing information about the completeness of the train (not from driver)	[Boolean] Y/N	Y	~~N~~Y	N	Y	Y
4.13.1.10	Safe consist length information from on-board necessary for access the line and SIL level	[Character string] From a predefined list	Y	Y	N	Y	Y

Parameter		Data format	Applicability to vehicle categories (Yes, No, Optional, Open Point)				Parameters for technical compatibility between Vehicle and the network(s) of area of use
			1. Traction vehicles	2. Hauled passenger vehicles	3. Freight wagons	4. Special vehicles	
4.13.1.11	Envelope of legally operated ETCS system versions	[Character string] From a predefined list	Y	Y	N	Y	Y
4.13.2	**Radio**	**Heading (no data)**					
4.13.2.1	GSM-R Radio voice on board and its Baseline	[Character string] From a predefined list	Y	~~N~~Y	N	Y	~~Y~~N
4.13.2.3	Class B or other radio legacy systems installed (system and, if applicable, version)	[Character string] From a predefined list (more than one option possible)	Y	~~N~~Y	N	Y	Y
4.13.2.5	Radio Voice System Compatibility	[Character string] From a predefined list (more than one option possible)	Y	~~N~~Y	N	Y	~~N~~Y
4.13.2.6	GSM-R Voice and operational communication implementation	[Character string]	Y	~~N~~Y	N	Y	~~Y~~N
4.13.2.7	GSM-R Radio Data communication on board and its Baseline	[Character string] From a predefined list	Y	~~N~~Y	N	Y	~~Y~~N
4.13.2.8	Radio Data System Compatibility	[Character string] From a predefined list (more than one option possible)	Y	~~N~~Y	N	Y	~~N~~Y
4.13.2.9	GSM-R Data communication application for ETCS and ATO implementation	[Character string]	Y	~~N~~Y	N	Y	N~~Y~~
4.13.2.10	Voice SIM Card GSM-R Home Network	[Character string] From a predefined list	Y	~~N~~Y	N	Y	Y~~N~~
4.13.2.11	Data SIM Card GSM-R Home Network	[Character string] From a predefined list	Y	~~N~~Y	N	Y	Y~~N~~
4.13.2.12	GSM-R Voice SIM Card support of Group ID 555	[Boolean] Y/N	Y	~~N~~Y	N	Y	Y~~N~~

Parameter		Data format	Applicability to vehicle categories (Yes, No, Optional, Open Point)				Parameters for technical compatibility between Vehicle and the network(s) of area of use
			1. Traction vehicles	2. Hauled passenger vehicles	3. Freight wagons	4. Special vehicles	
4.13.3	**ATO**	**Heading (no data)**					
4.3.13.1	On-board ATO system version	[Character string] From a predefined list	Y	~~N~~Y	N	Y	N
4.3.13.2	On-board ATO implementation	[Character string]	Y	~~N~~Y	N	Y	N
4.14	**Compatibility with train detection systems**	**Heading (no data)**					
4.14.1	Type of train detection systems for which the vehicle has been designed and assessed	[Character string] From a predefined list (more than one option possible)	Y	Y	Y	Y	Y
4.14.2	TSI compliant track circuit – Frequency bands	[character string] Selection from a predefined list (more than one option possible)	Y	Y	Y	Y	Y
4.15	Derailment detection and prevention functions	Heading (no data)					
4.15.1	Presence and type of derailment detection and prevention function(s)	[Character string] From a predefined list (more than one option possible)	N	N	Y	N	N
4.15.2	Presence of derailment prevention and detection function	[Boolean] Y/N	Y	N	N	N	N
4.15.3	Presence of derailment prevention and detection signal processing	[Boolean] Y/N	Y	N	N	N	N

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ANNEX III

Structure of type number

Each type of vehicle shall receive a number consisting of 10 digits with the following structure:

XX	XXX	XXXX	X
Category — Subcategory	Family (Platform)	Incremental number	Check digit
ield	Field 2	Field 3	Field 4

Where:

Field 1 (digits 1 and 2) is assigned according to category and subcategory of the vehicle type in accordance with the following table:

Code	Category	Subcategory
11	Traction vehicles	Locomotive
12		~~Reserved~~ Power Unit (or power car)
13		Self-propelled passenger trainset (incl. railbuses)
14		Reserved
15		Reserved ~~Self-propelled freight trainset~~
16		~~Reserved~~ Railcar
17		Shunter
18		~~Reserved~~ Tram-Train
19		Other (~~tramways, light rail vehicles, etc.~~see article (1)(4) of directive (EU) 2016/797~~)~~
31	Hauled passenger vehicles	~~Passenger~~ C~~c~~oach ~~(incl. sleeping cars, restaurant, etc.)~~
32		Reserved
33		Van
34		~~Reserved~~ Driving trailer
35		Car carrier
36		~~Reserved~~ Driving Coach
37		Reserved ~~Vehicle for services (e.g. kitchen)~~
38		~~Reserved~~ Driving Van
39		Fixed rake of coaches
40		Reserved
41		Other
42-49		Reserved

51	Freight wagons (hauled)	Freight wagon
52		Reserved
53		Fixed rake of freight wagons
54~~-59~~		~~Reserved~~ Separate rail bogies connected to compatible road vehicle(s)
55-59		Reserved
71	Special vehicles	NOT TO BE USED ANYMORE AFTER ***date"*** (date to be the Entry into force of ERATV amendment, e.g. 2022-12-30) - Self-propelled special vehicle
72		~~Reserved~~ On track Machines (OTMs)
73		NOT TO BE USED ANYMORE AFTER ***date"*** (date to be the Entry into force of ERATV amendment, e.g. 2022-12-30) - Hauled special vehicle
74~~-79~~		~~Reserved~~ Infrastructure inspection vehicles
75		Environment vehicles
76		Emergency vehicles
77		Road-Rail
78		Reserved
79		Reserved