



Cross Acceptance Unit	
<p>NATIONAL REFERENCE DOCUMENT: IRELAND</p> <p>NATIONAL RULES APPLIED IN CONJUNCTION WITH THE AUTHORISATION OF RAILWAY VEHICLES IN ACCORDANCE TO ART.27 OF DIRECTIVE 2008/57/EC IN IRELAND</p>	
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AMENDMENT RECORD

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Introduction

The document references national rules applied in conjunction with the authorization of **railway vehicles** in the respective Member States against the detailed list of parameters as agreed by RISC 12/06/2009 and published by decision 2009/965/EC. The Reference Document itself does not itself give the national rules legal status but it is intended to be comprehensive by referencing and cross referencing “all the national rules applied by the Member States” as advised to the Agency.

Due to time constraints for referencing national rules against these parameters the first versions of the National Reference Document may not contain a full set of references to appropriate rules, for this reason for certain parameters the reference “to be investigated” has been added. As soon as possible this information will be substituted by a reference to an appropriate rule, or if a check of this parameter is not required for authorizing the railway vehicle in the Member State, by the term “no requirement”.

As far as the Member State evaluate rules of another Member State and agreed with the authority of this Member State an evaluation of that rule for a certain parameter the agreed evaluation as A, B or C had been included into the document as far as this information had been made available; in relation to Member States which are not considered within this document the respective rules has to be considered as evaluated “B”.

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Ref.	Parameter of detailed list of parameters in accordance to Decision 2009/965/EC	Explanation	National Rule for Ireland
1.0	General documentation	General documentation (including description of new, renewed or upgraded vehicle and its intended use, design, repair, operation and maintenance information, technical file, etc.)	Heading only, no rule required to be notified
1.1	General documentation	General documentation, technical description of the vehicle, its design and intended use for the kind of traffic (long-distance train, suburban vehicles, commuter services, etc.) inclusive of intended and max design speed, including general plans, diagrams and necessary data for registers, e.g. length of vehicle, axle arrangement, axle spacing, mass per unit, etc.	RSC-G-015 appropriate TSI
1.2	Maintenance instructions and requirements		Heading only, no rule required to be notified
1.2.1	Maintenance instructions	Maintenance manuals and leaflets, including requirements necessary to maintain design safety level of the vehicle. Any appropriate professional qualifications i.e. skills and associated training that are requested for equipment maintenance.	RSC-G-015
1.2.2	The maintenance design justification file		RSC-G-015 SMS to EN50126
1.3	Instructions and documentation for operation		Heading only, no rule required to be notified
1.3.1	Instructions for operation in normal and degraded modes of the vehicle		RSC-G-015
1.4	Track-side tests of the complete vehicle		RSC-G-015
2.0	Structure and mechanical parts	Mechanical integrity and interface between vehicles (including draw and buffer gear, gangways, strength of vehicle structure and fittings (e.g. seats), loading capability, passive safety (incl. interior and exterior crashworthiness).	Heading only, no rule required to be notified
2.1	Vehicle structure		Heading only, no rule required to be notified

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2.1.1	Strength and integrity	This parameter covers, for example, requirements of the mechanical strength of car body, under-frame, suspension systems, couplings, track sweeper and snow plough. Mechanical strength of separate items of this list such as bogie/running gear, axle box, axle, wheel, and pantograph will be defined separately	EN 12663
2.1.2	Load capability		Heading only, no rule required to be notified
2.1.2.1	Load conditions and weighted mass		EN50215 EN14363 EN15663
2.1.2.2	Axle load and wheel load	For individual wheels/axles in accordance with load conditions and tolerances of 2.1.2.1	To be investigated
2.1.3	Joining technology		EN15085series EN473
2.1.4	Lifting and jacking		EN12663 To be investigated
2.1.5	Fixing of devices to carbody structure		EN12663 To be investigated
2.1.6	(not used)		
2.1.7	Connections between various parts of the vehicle	E.g. connection/suspension between car body and bogie	EN12663 To be investigated
2.2	Mechanical interfaces for end coupling or intermediate coupling		Heading only, no rule required to be notified
2.2.1	Automatic coupling		To be investigated
2.2.2	Characteristic of rescue coupling	for operational requirements to rescue trains see also 13.1 and 13.3	To be investigated
2.2.3	Screw couplings		To be investigated EN 15566 >calculation of coupling height ERRI B12 DT135 annE
2.2.4	Buffer, inner coupling and draw gear components	Including design, functionality and characteristics e.g. elasticity of buffers	EN 15551 >width to ERRI B85 DT135 annD (to be adapted) >calculation of spring and buffer height ERRI B12 DT135 annE
2.2.5	Buffer marking		EN 15551

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2.2.6	Draw hook		To be investigated
2.2.7	Gangways		To be investigated
2.3	Passive safety	Including e.g. obstacle deflector, limiting deceleration, survival space, structural integrity of occupied areas, reducing the risk of derailment and over-riding, limiting consequences of hitting a track obstruction, interior fittings for passive safety	To be investigated UIC 651 for forward facing areas
3	Track interaction and gauging	Mechanical interfaces to the infrastructure (including static and dynamic behaviour, clearances and fits, gauge, running gear, etc.)	Heading only, no rule required to be notified
3.1	Vehicle gauge	Compatibility of the vehicle profile with the infrastructure and other vehicles (static and dynamic gauge) based on reference static and dynamic gauge	To be investigated (Standard in progress)
3.1.1	Specific case	Specific case (e.g. vehicles to be carried on a ferry)	To be investigated I.E.-CME Technical Standard 301 I.E.-CME Technical Standard 302
3.2	Vehicle dynamics	Rolling stock dynamic behaviour including equivalent conicity, instability criterion, tilting, safety against derailments on twisted track, track loading, etc.	Heading only, no rule required to be notified
3.2.1	Running safety and dynamics	Including tolerance of vehicle to distortion of track, running on curved or twisted tracks, safe running on points and diamond crossings, etc.	To be investigated I.E.-CME Technical Standard 301 I.E.-CME Technical Standard 302
3.2.2	Equivalent conicity, wheel profile and limits		To be investigated
3.2.3	Track loading compatibility parameters	E. g. dynamic wheel force, wheel forces exerted by a wheel set on the track (quasi static wheel force, maximum total dynamic lateral force, quasi static guiding force)	To be investigated
3.2.4	Vertical acceleration	e.g. dynamic effects transmitted to bridge decks including resonance in bridges	To be investigated
3.3	Bogies / running gear		Heading only, no rule required to be notified
3.3.1	Bogies		EN 13749
3.3.2	Wheel set (axle + wheels)	Including variable gauge wheelsets, axle body, etc.	EN 13103 EN 13104 EN 13260 EN 13261
3.3.3	Wheel		EN 13262 I.E.-CME Technical Standard 301
3.3.4	Wheel/rail interface (including wheel flange lubrication and sanding)	Wheel/rail interface (including wheel flange lubrication, upper sway / wearing track wheel interactions and sanding requirements deriving from traction, braking, train detection)	
3.3.5	Bearings on the wheelset		EN 12080 EN 12081 EN 12082

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3.3.6	Minimum curve radius to be negotiated	Values and conditions (e.g. coach coupled/uncoupled)	>min radius assessment to ERRI B85 DT135 annB I.E.-CME Technical Standard 302
3.3.7	Rail guard	"protection of wheels from obstacles on the rails"	To be investigated
3.4	Limit of maximum longitudinal positive and negative acceleration		To be investigated
4	Braking	Braking-related items (including wheel-slide protection, braking control and braking performance in service, emergency and parking modes)	Heading only, no rule required to be notified
4.1	Functional requirements for braking at train level	e.g. automaticity, continuity, inexhaustibility	To be investigated
4.2	Safety requirements for braking at train level		Heading only, no rule required to be notified
4.2.1	Traction/braking interlocking	E.g. traction inhibition	To be investigated
4.3	Brake system, Recognised architecture and associated standards	Reference to existing solutions e.g. UIC	To be investigated
4.4	Brake command	Requirement on brake command per type of brake e.g. number and type of device, allowed delay between command and action on brake	Heading only, no rule required to be notified
4.4.1	Emergency braking command		To be investigated
4.4.2	Service braking command		To be investigated
4.4.3	Direct braking command		To be investigated
4.4.4	Dynamic braking command		To be investigated
4.4.5	Parking braking command		To be investigated
4.5	Brake performance		Heading only, no rule required to be notified
4.5.1	Emergency braking		To be investigated I-SIG-2145
4.5.2	Service braking		To be investigated
4.5.3	Calculations related to thermal capacity		To be investigated
4.5.4	Parking brake		To be investigated
4.6	Braking adhesion management		Heading only, no rule required to be notified
4.6.1	Limit of wheel rail adhesion profile		To be investigated

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4.6.2	Wheel slide protection system		To be investigated EN 15595 EN 50126
4.7	Braking force production	Requirement on equipment creating the brake force per type of brake	Heading only, no rule required to be notified
4.7.1	Friction brake	Including material properties e.g. for composite brake blocks	Heading only, no rule required to be notified
4.7.1.1	Brake blocks		UIC V-BKS ERA/TD/2009-02/INT
4.7.1.2	Brake discs		To be investigated
4.7.1.3	Brake pads		To be investigated
4.7.2	Dynamic brake linked to traction		To be investigated
4.7.3	Magnetic track brake		To be investigated
4.7.4	Eddy current track brake		To be investigated
4.7.5	Parking brake		To be investigated
4.8	Brake state and fault indication		To be investigated
4.9	Brake requirements for rescue purposes		To be investigated
5.0	Passenger-related items	Passenger facilities and passenger environment including passenger windows and doors and requirements for persons with reduced mobility etc.	Heading only, no rule required to be notified
5.1	Access	Functional and technical specifications e.g. for people with reduced mobility	Heading only, no rule required to be notified
5.1.1	Exterior doors		To be investigated TSI PRM 2008/164/EC
5.1.2	Interior doors		To be investigated TSI PRM 2008/164/EC
5.1.3	Clearways		To be investigated TSI PRM 2008/164/EC
5.1.4	Steps and lighting		To be investigated TSI PRM 2008/164/EC
5.1.5	Floor height changes		To be investigated TSI PRM 2008/164/EC
5.1.6	Handrails		To be investigated TSI PRM 2008/164/EC
5.1.7	Boarding aids		To be investigated TSI PRM 2008/164/EC
5.2	Windows	E.g. mechanical characteristics of windows and glass, requirements for emergencies, for mechanical characteristics of windscreens see 9.1.3.1	To be investigated TSI PRM 2008/164/EC TSI SRT 2008/163/EC

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5.3	Toilets	See 6.2.1.1 for toilet emissions	TSI PRM 2008/164/EC EN 12221-1 EN 12221-2
5.4	Passenger information		Heading only, no rule required to be notified
5.4.1	Public address system		To be investigated TSI PRM 2008/164/EC
5.4.2	Signs and information	Including safety instructions to passengers and emergency markings for passengers	TSI PRM 2008/164/EC +D227
5.5	Seats and specific PRM arrangements	except access (covered by 5.1)	To be investigated TSI PRM 2008/164/EC
5.6	Specific passenger-related facilities		To be investigated TSI PRM 2008/164/EC
5.6.1	Lift systems	conformity to CE (EC) or national regulation if any	To be investigated TSI PRM 2008/164/EC
5.6.2	Heating, ventilation and Air condition systems	e.g. internal air quality, requirement in case of fire (switch off)	To be investigated
5.6.3	Other	e.g. beverage dispensing units	To be investigated
6.0	Environmental conditions and aerodynamic effects	Impact of the environment on the vehicle and impact of the vehicle on the environment (including aerodynamic conditions and both the interface between the vehicle and the trackside part of the railway system and the interface to the external environment)	Heading only, no rule required to be notified
6.1	Impact of the environment on the vehicle		Heading only, no rule required to be notified
6.1.1	Environmental conditions impacting on the vehicle		Heading only, no rule required to be notified
6.1.1.1	Altitude		To be investigated
6.1.1.2	Temperature		To be investigated
6.1.1.3	Humidity	e.g. anti-condensation and anti-freezing measures	To be investigated
6.1.1.4	Rain		To be investigated
6.1.1.5	Snow, ice and hail	e.g. snow cleaning devices, snow plough, ice free heaters, etc	To be investigated
6.1.1.6	Solar radiation		To be investigated
6.1.1.7	Chemical and particulate matter	Impact upon vehicle equipment and functions due to chemicals and small airborne objects (e.g. ballast)	To be investigated
6.1.2	Aerodynamic effects on the vehicle	Aerodynamic impacts upon the vehicle's equipment and functions	Heading only, no rule required to be notified
6.1.2.1	Crosswind effects	Impact upon vehicle equipment and functions due to crosswinds	To be investigated
6.1.2.2	Maximum pressure variation in tunnels	Impact upon vehicle equipment and functions due to rapid changes in ambient pressure	To be investigated

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6.2	Impact of the vehicle on the environment		Heading only, no rule required to be notified
6.2.1	Chemical and particulate emissions	Limits for chemical and particulate emissions from the vehicle	Heading only, no rule required to be notified
6.2.1.1	Toilet emissions	Toilet discharge emissions to the external environment	To be investigated
6.2.1.2	Exhaust gas emissions	Exhaust gas emissions to the external environment	To be investigated
6.2.2	Limits for noise emissions	Limits for noise emissions from the vehicle to the external environment	Heading only, no rule required to be notified
6.2.2.1	Exterior noise impact	Exterior noise impact caused by the vehicle upon the environment external to the railway system	To be investigated TSI NOI 2006/66/EC
6.2.2.2	Stationary noise impact	Stationary noise impact caused by the vehicle upon the environment external to the railway system	To be investigated TSI NOI 2006/66/EC
6.2.2.3	Starting noise impact	Starting noise impact caused by the vehicle upon the environment external to the railway system	To be investigated TSI NOI 2006/66/EC
6.2.2.4	Pass-by noise impact	Pass-by noise impact caused by the vehicle upon the environment external to the railway system	To be investigated TSI NOI 2006/66/EC
6.2.3	Limits for aerodynamic loads impact	Limits for impact of aerodynamic loads caused by the vehicle upon other parts of the railway system and upon the environment	Heading only, no rule required to be notified
6.2.3.1	Head pressure pulses	Effect of pressure pulses caused by the head of the train at the track side	To be investigated
6.2.3.2	Aerodynamic impact on passengers / materials on the platform	Aerodynamic disturbance to passengers / materials on platform including assessment methods and operational loading conditions	To be investigated
6.2.3.3	Aerodynamic impact on track workers	Aerodynamic disturbance to Track workers	To be investigated
6.2.3.4	Ballast pick-up and projection onto neighbouring property		To be investigated
7.0	External warning, marking functions and software integrity requirements	External warnings, marking functions and integrity of software, e.g. safety-related functions with impact on the train behaviour including train bus	Heading only, no rule required to be notified
7.1	Integrity of software employed for safety-related functions	e.g. Integrity of software of train bus	To be investigated
7.2	Visual and audible vehicle identification and warning functions		Heading only, no rule required to be notified
7.2.1	Vehicle marking		To be investigated
7.2.2	External lights		Heading only, no rule required to be notified
7.2.2.1	Headlights		To be investigated
7.2.2.2	Marker lights		To be investigated
7.2.2.3	Tail lights		To be investigated
7.2.2.4	Lamp controls		To be investigated
7.2.3	Warning horn		Heading only, no rule required to be notified

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7.2.3.1	Warning horn tones		To be investigated
7.2.3.2	Warning horn sound pressure levels	Outside the cab - For internal sound level, see 9.2.1.2	To be investigated
7.2.3.3	Warning horns, protection		To be investigated
7.2.3.4	Warning horns, control		To be investigated
7.2.3.5	Warning horns verification of sound pressure levels		To be investigated
7.2.4	Brackets	e.g. requirements for rear end signals: lamps, flags, etc.	To be investigated
8.0	On-board power supply and control systems	On-board propulsion, power and control systems plus the interface of the vehicle to the power supply infrastructure and all aspects of EMC	Heading only, no rule required to be notified
8.1	Traction performance requirements		Heading only, no rule required to be notified
8.1.1	Residual acceleration at max speed		To be investigated
8.1.2	Residual traction capability in degraded mode		To be investigated
8.1.3	Traction wheel/rail adhesion requirements		To be investigated
8.2	Functional and technical specification related to the interface between the vehicle and the energy subsystem		Heading only, no rule required to be notified
8.2.1	Functional and technical specification related to the electric power supply		Heading only, no rule required to be notified
8.2.1.1	Power supply		To be investigated
8.2.1.2	Impedance between pantograph and wheels		To be investigated
8.2.1.3	Voltage and frequency of overhead contact line power supply		To be investigated
8.2.1.4	Energy recuperation		To be investigated
8.2.1.5	Maximum power and maximum current that is permissible to be drawn from the overhead contact line	Incl. maximum current at standstill	To be investigated
8.2.1.6	Power factor		To be investigated
8.2.1.7	System energy disturbances		Heading only, no rule required to be notified

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8.2.1.7.1	Harmonic characteristics and related overvoltages on the overhead contact line		To be investigated
8.2.1.7.2	Effects of DC content in AC supply		To be investigated
8.2.1.8	Electrical protection	e.g. selectivity of onboard protections and substation protection system	To be investigated
8.2.2	Pantograph functional and design parameters		Heading only, no rule required to be notified
8.2.2.1	Pantograph overall design		To be investigated
8.2.2.2	Pantograph head geometry		To be investigated
8.2.2.3	Pantograph static contact force		To be investigated
8.2.2.4	Pantograph contact force (including dynamic behaviour and aerodynamic effects)	Incl. quality of current collection	To be investigated
8.2.2.5	Working range of pantographs		To be investigated
8.2.2.6	Current capacity		To be investigated
8.2.2.7	Arrangement of pantographs		To be investigated
8.2.2.8	Insulation of pantograph from the vehicle		To be investigated
8.2.2.9	Pantograph lowering		To be investigated RSC-G-015
8.2.2.10	Running through phase separation sections		To be investigated
8.2.2.11	Running through system separation sections		To be investigated
8.2.3	Contact strip functional and design parameters		Heading only, no rule required to be notified
8.2.3.1	Contact strip geometry		To be investigated
8.2.3.2	Contact strip material		To be investigated
8.2.3.3	Contact strip assessment.		To be investigated
8.2.3.4	Detection of contact strip breakage		To be investigated
8.2.3.5	Current capacity		To be investigated
8.3	Electrical power supply and traction system		Heading only, no rule required to be notified

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8.3.1	Energy consumption measurement		To be investigated
8.3.2	Main electrical circuit configuration		To be investigated
8.3.3	High voltage components		To be investigated
8.3.4	Earthing		To be investigated
8.4	Electromagnetic compatibility	The electromagnetic compatibility between the on-board electrical power supply and control system and: > other parts of the onboard electrical power supply and control system on the same vehicle; > other vehicles; > the trackside part of the railway system; > the external environment.	Heading only, no rule required to be notified
8.4.1	Electromagnetic compatibility within the onboard electrical power supply and control system	The electromagnetic compatibility between parts of the onboard electrical power supply and control system	To be investigated
8.4.2	Electromagnetic compatibility with the signalling and telecommunications network	The electromagnetic compatibility between the onboard electrical power supply and control system and the signalling and telecommunications network part of the trackside	To be investigated
8.4.3	Electromagnetic compatibility with other vehicles and with the trackside part of the railway system	The electromagnetic compatibility between the onboard electrical power supply and control system and other vehicles and the trackside part of the railway system other than the signalling and telecommunications network	To be investigated
8.4.4	Electromagnetic compatibility with the environment	The electromagnetic compatibility between the onboard electrical power supply and control system and the environment external to the railway system (including people in the neighbourhood or on the platform, passengers, drivers/staff)	To be investigated
8.5	Protection against electrical hazards		To be investigated
8.6	Diesel and other thermal traction system requirements		To be investigated
8.7	Systems requiring special monitoring and protection measures		Heading only, no rule required to be notified
8.7.1	Tanks and pipe systems for flammable liquids	Special requirements for tanks and pipe systems for flammable liquids (including fuel)	To be investigated
8.7.2	Pressure vessel systems / pressure equipment		To be investigated
8.7.3	Steam boiler installations		To be investigated

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8.7.4	Technical systems in potentially explosive atmospheres	Special requirements for technical systems in potentially explosive atmospheres (e.g. liquid gas, natural gas and battery-powered systems, including protection of transformer tank)	To be investigated
8.7.5	Ionisation detectors		To be investigated
8.7.6	Hydraulic/pneumatic supply and control systems	Functional and technical specifications, e.g. compressed air power supply, capacity, type, temperature range, air dryers (towers), dew point indicators, insulation, air intake characteristics, fault indicators, etc.	To be investigated
9.0	Staff facilities, interfaces and environment	On-board facilities, interfaces, working conditions and environment for staff (including drivers, drivers cabs and driver/machine interfaces)	Heading only, no rule required to be notified
9.1	Driver's cab design		Heading only, no rule required to be notified
9.1.1	Cab design		Heading only, no rule required to be notified
9.1.1.1	Interior layout	e.g. space availability, cab arrangement and ergonomic requirements	To be investigated
9.1.1.2	Desk ergonomics		To be investigated
9.1.1.3	Driver's seat		To be investigated
9.1.1.4	Means for the driver to exchange documents		To be investigated
9.1.1.5	Other facilities to control operation of the train		To be investigated
9.1.2	Access to driver's cab		Heading only, no rule required to be notified
9.1.2.1	Access, egress and doors		To be investigated
9.1.2.2	Driver's cab emergency exits		To be investigated
9.1.3	Windscreen in driver's cab		Heading only, no rule required to be notified
9.1.3.1	mechanical characteristics		To be investigated UIC 651 for forward facing areas
9.1.3.2	optical characteristics		To be investigated
9.1.3.3	equipment	e.g. de-icing, de-misting, external cleaning devices, etc.	To be investigated
9.1.3.4	front visibility		To be investigated
9.2	Working conditions		Heading only, no rule required to be notified
9.2.1	Environmental conditions		Heading only, no rule required to be notified
9.2.1.1	Heating, ventilation and air condition systems in driver cabs		To be investigated
9.2.1.2	Noise in driver cabs	Including horn level inside the cab	To be investigated
9.2.1.3	Lighting in driver cabs		To be investigated
9.2.2	Others		To be investigated

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9.3	Driver/machine interface	Equipment in driver's cab to supervise and control safe operation of the train	Heading only, no rule required to be notified
9.3.1	Driver/machine interface		Heading only, no rule required to be notified
9.3.1.1	speed indication	recording of speed covered by 9.6	To be investigated
9.3.1.2	driver display unit and screens		To be investigated
9.3.1.3	controls and indicators		To be investigated
9.3.2	Driver supervision	Driver activity control function e.g. vigilance	To be investigated
9.3.3	rear and side view		To be investigated
9.4	Marking and labelling in Driver cabs	Static display of basic information for the driver	To be investigated
9.5	Equipment and other facilities onboard for staff		Heading only, no rule required to be notified
9.5.1	Facilities onboard for staff		Heading only, no rule required to be notified
9.5.1.1	Staff access for coupling /uncoupling		To be investigated TSI WAG 2006/861/EC+2008/107/EC for screw coupling system
9.5.1.2	External steps and handrails for shunting staff		To be investigated
9.5.1.3	Storage facilities for use by staff		To be investigated
9.5.1.4	Other facilities		To be investigated
9.5.2	Staff and freight access doors	doors equipped with security device for opening only by staff including catering	To be investigated
9.5.3	On-board tools and portable equipment	e.g. equipment needed by driver or staff in emergency situation	To be investigated CME-TS-TECH-305
9.5.4	Audible communication system	e.g. for communication between - the train crew, - the train crew and people inside/outside of the train	To be investigated
9.6	Recording device	for the purpose of monitoring the behaviour of driver and train	To be investigated
9.7	(not used)		
9.8	Remote control function		To be investigated
10	Fire safety and evacuation		Heading only, no rule required to be notified
10.1	Fire safety		To be investigated TSI SRT 2008/163/EC
10.1.1	Fire protection concept		Heading only, no rule required to be notified
10.1.1.1	Classification of vehicle / Fire categories		To be investigated TSI SRT 2008/163/EC
10.1.2	Fire protection measures		Heading only, no rule required to be notified

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10.1.2.1	General protection measures for vehicles		To be investigated TSI SRT 2008/163/EC TSI WAG 2006/861/EC+2008/107/EC
10.1.2.2	Fire protection measures for specific kinds of vehicles	E.g. requirements for freight trains or passenger trains on running capability, drivers' protection, etc.	To be investigated TSI SRT 2008/163/EC TSI WAG 2006/861/EC+2008/107/EC
10.1.2.3	Protection of driver's cab		To be investigated
10.1.2.4	Fire barriers		To be investigated
10.1.2.5	Material properties		To be investigated
10.1.2.6	Fire detectors		To be investigated
10.1.2.7	Fire extinction equipment		To be investigated
10.2	Emergency		Heading only, no rule required to be notified
10.2.1	Passenger emergency exits		To be investigated
10.2.2	Rescue services' information, equipment and access		To be investigated
10.2.3	Passenger alarm		To be investigated
10.2.4	Emergency lighting		EN13272
10.3	Additional measures		To be investigated
11	Servicing	On-board facilities and interfaces for servicing	Heading only, no rule required to be notified
11.1	Train cleaning facilities		Heading only, no rule required to be notified
11.1.1	Train external cleaning facilities	e.g. external cleaning through a washing plant	To be investigated
11.1.2	Train internal cleaning		To be investigated
11.2	Train refuelling facilities		Heading only, no rule required to be notified
11.2.1	Waste water disposal systems	Including interface to toilet discharge system	To be investigated TSI HS RST
11.2.2	Water supply system	Conformity to sanitary regulations	To be investigated I.E.-CME Technical Standard 307
11.2.3	Further supply facilities	e.g. special requirement for stabling of trains	To be investigated I.E.-CME Technical Standard 307
11.2.4	Interface to refuelling equipment for non-electric rolling stock	e.g. nozzles used for diesel fuels and others	To be investigated I.E.-CME Technical Standard 308
12.0	On-board control command and signalling	All the on-board equipment necessary to ensure safety and to command and control movements of trains authorised to travel on the network and its effects on the trackside part of the railway system	Heading only, no rule required to be notified

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12.1	On-board radio system		Heading only, no rule required to be notified
12.1.1	NON GSM-R radio system		To be investigated
12.1.2	GSM-R compliant radio system		Heading only, no rule required to be notified
12.1.2.1	Text messages	Specific requirements for text messages (e.g. in emergency)	To be investigated
12.1.2.2	Call forwarding	Requirements and conditions governing call forwarding	To be investigated
12.1.2.3	Broadcast calls	Requirements and conditions governing broadcast calls	To be investigated
12.1.2.4	Cab-radio related requirements	i.e. other national mandatory cab radio-related requirements not made mandatory by TSI	To be investigated
12.1.2.5	Network selection by external trigger		To be investigated
12.1.2.6	General purpose radio-related functions	i.e. other national mandatory general purpose radio-related functions not made mandatory by TSI	To be investigated
12.1.2.7	Primary controller's MMI functionality	Requirements exported to the cab mobile derived from controller's MMI functionality	To be investigated
12.1.2.8	Use of hand portables as cab mobile radio	As primary or fall-back radio	To be investigated
12.1.2.9	Capacity of on-board GSMR	e.g. requirement for packet switching capability	To be investigated
12.1.2.10	GSM-R-ETCS interface	e.g. train ID synchronisation	To be investigated
12.1.2.11	Interconnection and roaming between GSM-R networks	applicable until new release of Eirene target during 2010	To be investigated
12.1.2.12	Border crossing	applicable until new release of Eirene target during 2010	To be investigated
12.1.2.13	GPRS and ASCI	Covered by change request no national rules expected.	To be investigated
12.1.2.14	Interface between rolling stock driver's safety device, vigilance device, and GSM-R onboard assembly.	applicable until new release of Eirene target during 2010	To be investigated
12.1.2.15	Test specification for mobile equipment GSM-R	to be closed with additions to Eirene specs	To be investigated
12.1.2.16	Directed/automatic network selection		To be investigated
12.1.2.17	Registration and deregistration		To be investigated
12.1.2.18	GSM-R Version Management	No longer an open point - covered by Agency Procedure - to be removed from open points in TSI. No national rules expected	To be investigated
12.2	On-board signalling		Heading only, no rule required to be notified

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12.2.1	National on-board signalling systems	Control and warning systems including e.g. "area emergency braking function" and other national requirements for train protection	To be investigated
12.2.2	Compatibility of signalling system with the rest of the train	Compatibility of on-board signalling equipment with other systems on board of a train e.g. brakes, traction, etc.	To be investigated
12.2.3	Compatibility of rolling stock with track infrastructure	Compatibility e.g. with track-side detection systems or Hot Axle box detectors, for EMC see 8.4.2	Heading only, no rule required to be notified
12.2.3.1	Relation between axle distance and wheel diameter		To be investigated
12.2.3.2	Metal free space around wheels		To be investigated
12.2.3.3	Metal mass of a vehicle		To be investigated
12.2.4	ETCS cab signalling system		Heading only, no rule required to be notified
12.2.4.1	Awakening	to be resolved in Baseline 3	To be investigated
12.2.4.2	Train categories	to be resolved in Baseline 3	To be investigated
12.2.4.3	Performance requirements for on-board GSM-R equipment related to quality of service	Service quality of GSM-R required for ETCS	To be investigated
12.2.4.4	Use of ETCS modes	Requirements on use of ETCS modes that affect vehicle authorisation over and above those in the TSIs	To be investigated
12.2.4.5	ETCS requirements when vehicle is driven from outside the cab	Requirements over and above or conflicting with the TSIs in respect of driving outside the cab e.g. radio control by ground staff when shunting	To be investigated
12.2.4.6	Level crossing functionality	to be resolved in Baseline 3	To be investigated
12.2.4.7	Braking safety margins	to be resolved in Baseline 3	To be investigated
12.2.4.8	Reliability - Availability - Safety Requirements	to be resolved by TSI revision	To be investigated
12.2.4.9	Marker boards	Requirements exported to vehicle to ensure visibility of boards (e.g. spread of headlight beam, visibility from cab) partially solved in 2.3.0d to be fully resolved in Baseline 3	To be investigated
12.2.4.10	Ergonomic aspects of the DMI	to be resolved in Baseline 3	To be investigated
12.2.4.11	ETCS values of variables controlled outside UNISIG - Manual	to be resolved in Baseline 3	To be investigated
12.2.4.12	KM Conformance Requirements	to be resolved in Baseline 3	To be investigated
12.2.4.13	Requirements for pre-fitting ETCS on-board equipment	No longer an open point - covered by Chapter 7 agreed by RISC March 09 - will be removed from the next version of the TSI. No national rules expected.	To be investigated

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12.2.4.1 4	ETCS Version Management	No longer an open point - covered by Agency Procedure - to be removed from open points in TSI. No national rules expected	To be investigated
12.2.4.1 5	Specification of ETCS variables	to be resolved in Baseline 3	To be investigated
12.2.4.1 6	RBC - RBC interface	will be covered in 2.3.0d, test specification to be recommended in June 2009 RISC	To be investigated
12.2.4.1 7	Additional requirements on locomotives and multiple units		To be investigated
12.2.4.1 8	Functionality and interfaces of staff protection systems to the signalling system	to be resolved in Baseline 3	To be investigated
12.2.4.1 9	Interface with service brake	to be resolved by TSI CCS revision	To be investigated
13	Specific operational requirements	Specific operational requirements (including degraded mode, vehicle recovery, etc.)	Heading only, no rule required to be notified
13.1	Specific items to place on-board		To be investigated CME-TS-TECH-305
13.2	Occupational health and safety	e.g. occupational health and safety at loading/unloading/shunting	To be investigated
13.3	Lifting diagram and instructions for rescue	Rescue, lifting and rerailling	To be investigated TSI WAG 2006/861/EC+2008/107/EC
14	Freight-related items	Freight-specific requirements and environment (including facilities specifically required for dangerous goods)	Heading only, no rule required to be notified
14.1	Design, operation and maintenance constraints for the transport of dangerous goods	e.g. requirements derived from RID, national rules or other regulations for the transport of dangerous goods	RID
14.2	Specific facilities for the transport of freight		TSI WAG 2006/861/EC+2008/107/EC
14.3	Doors and loading facilities		TSI WAG 2006/861/EC+2008/107/EC