Train Control
ETCS 2 on High Speed Network

ETCS System Compatibility
Test Description

Document Management

	Name	Signature Date	Signature
Written	Thomas Destrée	Thomas Destrée	Signature numérique de Thomas Destrée Date : 2023.09.13 14:01:31 +02'00'
Checked	Patrick Janssens	Janssens Patrick	Digitally signed by Janssens Patrick Date: 2023.09.13 19:23:05 +02'00'
Approved	Yves Werner	Werner Yves	Digitally signed by Werner Yves Date: 2023.09.14 07:52:36 +02'00'

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History

Author	Version	Date	§ Adapted	Reason
T. Destrée	1.1 draft 1	16/09/2020	/	Creation of the document
T. Destrée	1.1 draft 2	09/02/2021		Update after review comments.
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T. Destrée	1.2	5/05/2022		Update test case ESC_L2LGV_2
T. Destrée	1.3	17/07/2023		ESC_L2LGV_2 removed

Abrogated documents

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1. Introduction

1.1 Purpose of the document

The purpose of this document is to define the test scenarios to perform in order to prove the ETCS System Compatibility (ESC) between the On-board and the trackside ETCS Level 2 on High Speed Lines with system version 1.Y.
The test scenarios describe more in detail each “high level” scenarios defined in the ESC test plan [1].
The success of these test scenarios shall prove the technical compatibility between ETCS On-board and the Trackside part ETCS of the CCS subsystems within the ETCS2 with system version 1.Y area on Infrabel high-speed network.

The technical specification for interoperability used inside an ETCS2 high speed area on Infrabel network is Baseline Corridor 2007 v2, SRS v2.2.2 (+ CR748, CR770 for level 2).

These test scenarios for ETCS system compatibility do not cover all design rules used in an ETC2 high-speed area. If required, Infrabel can provide additional operational test scenarios performed during the verification that the trackside subsystem complies with the requirement of the TSI.

In case of doubt concerning the ESC of the board with the trackside, the railway undertaking shall take the required action with his supplier and inform Infrabel.

1.2 Basic documents

Ref.	*Title*	*Owner*
[1]	PSI (TC,ETCSsys,z) ESC TST PLN 1.7	Infrabel

1.3 Reference documents

Ref.	*Title*	*Owner*
[2]	None	

1.4 Annexes

Ref.	*Title*	*Owner*
[3]	None	

1.5 Scope

This document is applicable for all trains would run under the protection of ETCS level 2 in an ETCS2 with system version 1.Y area on the Infrabel high speed network.

1.6 Definitions, symbols and abbreviations

CCS	Control Command System
DMI	Driver Machine Interface
ESC	ETCS System Compatibility
ETCS	European Train Control System
IBG	Infill Balise Group
LS	Limited Supervision
NR	Not Relevant
SBG	Signal Balise Group
TSI	Technical Specification for Interoperability
VLS	Vitesse Limitée Snelheidsbeperking

1.7 *Known imperfections*

None

2. On-board Equipment

Out of scope of railway manager Infrabel.

3. Functionalities

The tested functionalities are described in the table here under:

Test scenario (ref ESC TST PLN [1])	Tested functionality
ESC_L2LGV_1	CR843
ESC_L2LGV_2	Test case deleted

The document will only describe the sequences to perform the scenarios but not all the actions to prepare the execution of the test scenarios.

4. Test scenarios

4.1 *ESC_L2LGV_1: CR843*

4.1.1 Description

ID	Date	Location / Line
ESC_L2LGV_1	<dd/mm/yyyy>	<Line>
Description	Functionalities tested : • ESC_L2LGV_1: CR843 Multiple non-revocable TSR are sent in a single message.	
Signal passed		
Name		Trackside datafile in service
Test Scenarios		
Starting condition	VLS (TSR) are set on two consecutive sections.	
	Train A • Train A is in Level 2 mode FS on HSL-Zuid approaching the border in the direction of Belgium • A VLS (TSR) is set on 2 sections beyond the border (leave 1 section without VLS (TSR) between both sections).	
	Be sure all authorisations are filled in before performing the test scenarios	

Sequences of the test scenario				
Step	Step description	Description of what to be tested	Statement	Comment
1	Train receives a non revocable TSR.	Speed profile is updated.	Pass / Fail	
2	Train receives a second non revocable TSR	Speed profile is updated.	Pass / Fail	
3	Train enters the first TSR area	Permitted speed is reduced to <TSR 1 speed> km/h.	Pass / Fail	
4	Train leaves the TSR area	Permitted speed is not reduced.	Pass / Fail	

5	Train enters the second TSR area.	Permitted speed is reduced to <TSR 2 speed> km/h.	Pass / Fail	
Test scenario finished				

4.1.2 Scenario diagram

None	
Final State	Train in level2 FS in the second TSR area

4.2 *ESC_L2LGV_2*

Test case deleted