

**ERTMS/ETCS – Class 1**

**FFFIS STM test cases of Functional identity 010**

**PROCEDURE SPECIFIC DATA ENTRY / DATA VIEW**

**Total: 9 Test cases**

REF : Subset-074-2-10

ISSUE : Version 1.0.0

DATE : 13.10.2005

<b>Company</b>	<b>Technical Approval</b>	<b>Management approval</b>
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## Modification History

Issue Number Date	Section Number	Modification / Description	Author
0.0.1 20/10/2004	All	First version	Alstom AS
0.0.2 15/11/2004	All	First version/review in Stuttgart on 08/11/04	Alstom AS
0.0.3 29/11/2004	All	reviewed in Bruxelles on 29/11/04	Alstom AS
0.0.4 15/11/2004	All	reviewed in Madrid on 15/12/04	Alstom AS
0.0.5 05/01/2005	All	reviewed on 05/01/2005	Alstom AS
0.0.6 26/01/2005	All	reviewed on 26/01/2005 in Paris	Alstom AS
0.0.6 26/01/2005	Editorial	Editorial changed	Alstom AS
1.0.0 13.10.2005		Editorial changes for delivery	Invensys Rail

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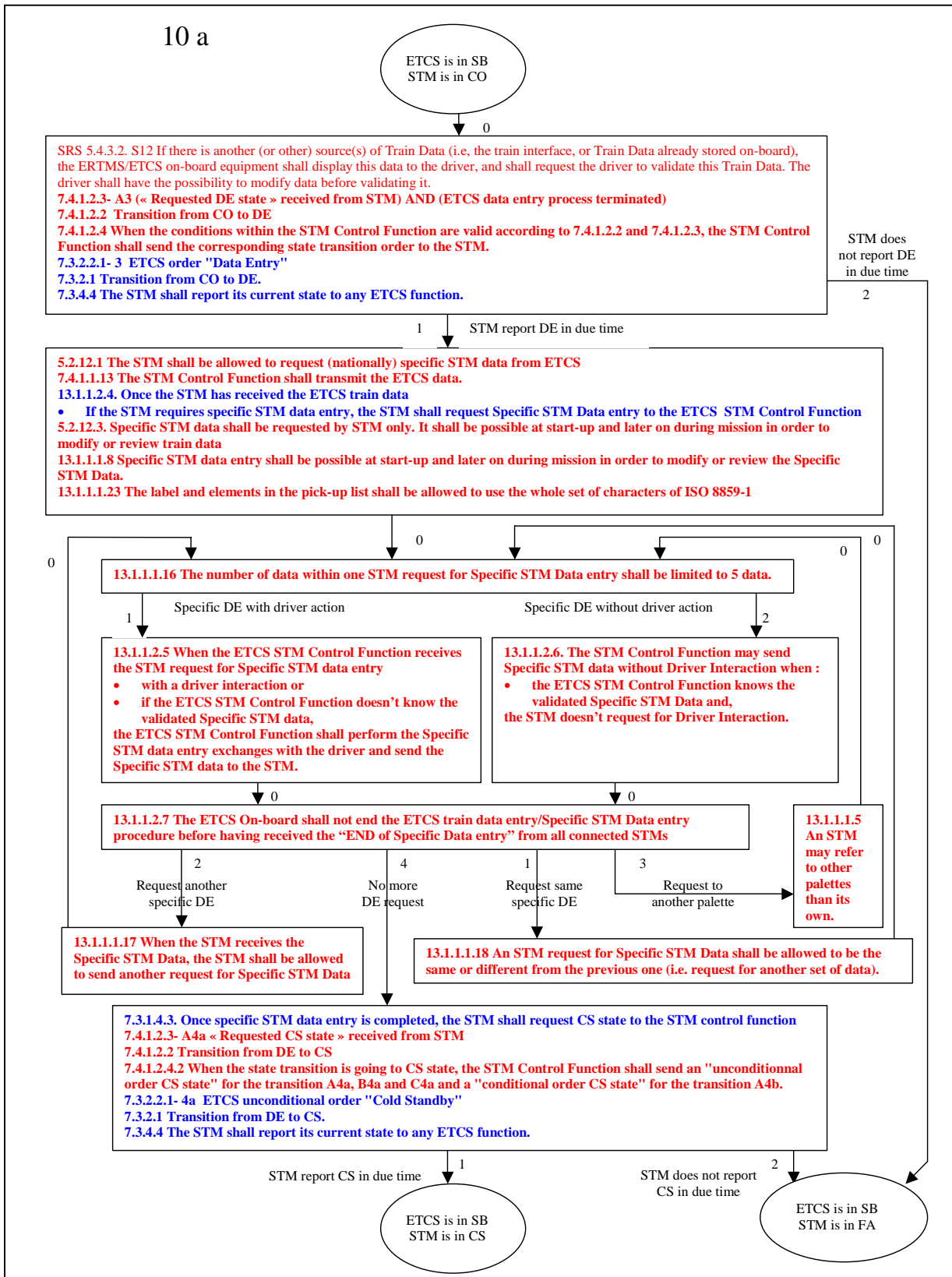
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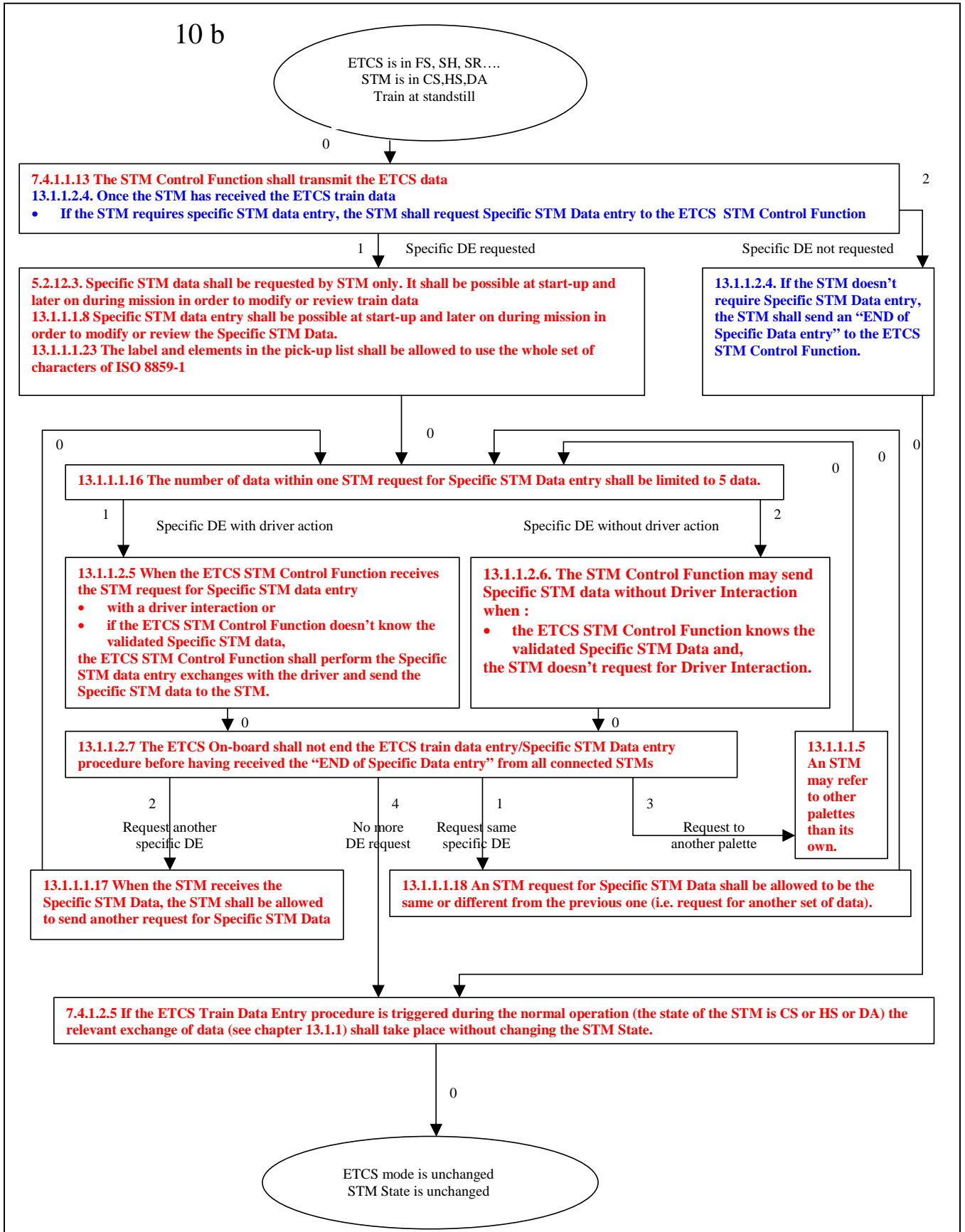
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## Diagrams



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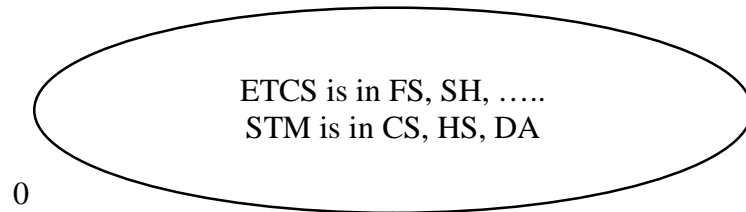
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**13.1.2.2. When the view procedure of ETCS train data is triggered, the ETCS On-board STM Control Function shall send a request to all connected STMs for their Specific STM Data values.**

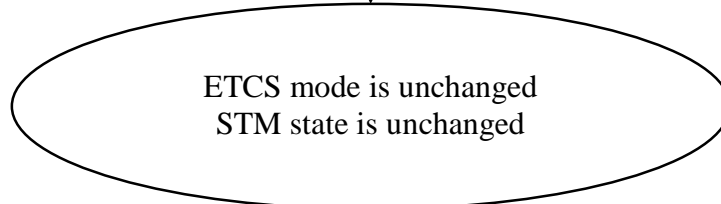
**13.1.2.3. Once the STM has received the ETCS request for Specific STM Data values:**

- **If the STM requires Specific STM data entry, the STM shall send Specific STM Data Values (labels and corresponding values) to the ETCS STM Control Function. Those data shall be called “Specific STM Data View values”.**
- **If the STM doesn't require Specific STM data entry, the STM shall send a «NO Specific Data values» to the ETCS STM Control Function.**

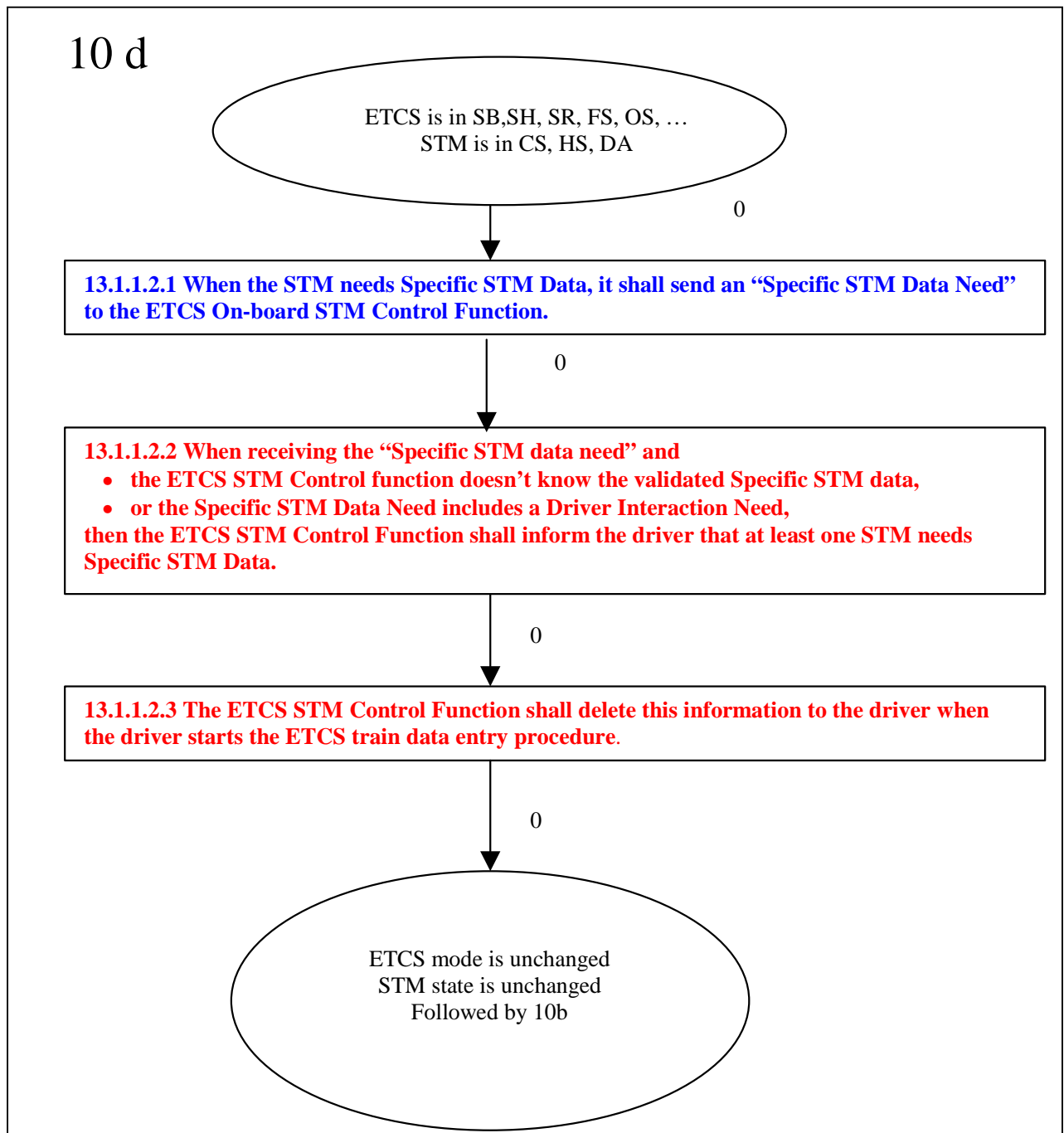
**13.1.2.4. The Specific STM Data View Values transmitted by the STM to the ETCS STM Control Function shall be composed of text string only. Each element of a text string contains a single character encoded as ISO 8859-1, also known as Latin alphabet #1.**

**13.1.2.5. When the ETCS STM Control Function receives the Specific STM Data View Values, the ETCS STM Control Function shall present the Specific STM Data View Values to the driver.**

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TEST CASE 10A.0.1.0.1.0.1.0.2.0.1.0.3.0.1.0.4.1

TEST CASE HEADER	
Test case Identification	Functional identity Procedure Specific Data Entry / Data View
	Data Entry at Start-up. STM answers in due time. Driver reaction is needed.
ETCS Requirements Tested	Subset-035: 7.4.1.2.3; 7.4.1.2.2; 7.4.1.2.4; 5.2.12.1; 7.4.1.1.13; 5.2.12.3; 13.1.1.1.8; 13.1.1.1.23;13.1.1.1.16; 13.1.1.2.5; 13.1.1.2.7; 13.1.1.1.17; 13.1.1.1.5; 13.1.1.1.18; 7.4.1.2.3; 7.4.1.2.2; 7.4.1.2.4.2
	Subset-026: None
STM Requirements Tested	Subset-035: 7.3.2.2.1; 7.3.2.1; 7.3.4.4; 13.1.1.2.4; 7.3.1.4.3; 7.3.2.2.1; 7.3.2.1.; 7.3.4.4.
	Subset-026: None
Packets transmitted via FFFIS STM	STM-13, STM-14, STM-15, STM-175, STM-176,STM-177, STM-178, STM-179, STM-180.
Comments and constraints	This test case is only valid when the STM shall request Specific Data Entry.

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Starting Conditions	Value	Comments
STM_STATE	CO	
ETCS Mode	SB	
ETCS Level	1	
Train State	Standstill	
Train Data	Invalid	
Additional Data	Invalid	
National Values	Invalid	
STM Control Function Connection	Established	
DMI Connection	Not established	
Odometry Data	Not relevant	
Reference Time Data	Transmitted	
TIU Connection	Not relevant	
BIU Connection	Not relevant	
JRU Connection	Not relevant	
Other connections	Not relevant	
TIU Regenerative Brake Command	Not relevant	
TIU Magnetic Shoes Command	Not relevant	
TIU Eddy Current Brake Command	Not relevant	
TIU Inhibit Passenger Emergency Brake Command	Not relevant	
TIU Pantograph Command	Not relevant	
TIU Air Tightness Command	Not relevant	
TIU Main Switch / Circuit Breaker Command	Not relevant	
TIU Traction Cut Off Command	Not relevant	
TIU Sleeping Status	Not Sleeping	
TIU Traction Cut Off Status	Not relevant	
TIU Direction Controller Position Status	Not relevant	
TIU Cab Status (Desk Status)	Desk A opened	
BIU Status	Not relevant	
BIU Emergency Brake Command	Not relevant	
BIU Service Brake Command	Not relevant	
BIU Emergency Brake Status	Not relevant	

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BIU Service Brake Status		Not relevant	
STM Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-058	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
ETCS Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
	Subset-058	3.0.z	
Track Adhesion		Not relevant	

**Test case for ETCS On-board:**

Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
-	This test case is only valid when the STM shall request Specific Data Entry					
1,	ETCS transmit the ETCS data to STM. (7.4.1.1.13)	DMI	Driver enters and validates ETCS Train Data -	ETCS	Prof	Message 3: Packet STM-175 Train Data Packet STM-176 Train Data additional „braking characteristic” to STM Packet STM-177: Additional Data Values and date/time to STM Packet STM-178 National Values to STM
2.	The ETCS receives from STM a DE state request (7.4.1.2.3; 7.4.1.2.2; 7.4.1.2.4; 5.2.12.1)	Prof	Message 1: STM-13 State request from STM. STM-15 State report from STM	ETCS	Prof	Message 2: Packet STM-14 State order to STM
3.	Time: T0 STM sends a message for specific data entry with 5 data and a set of character of ISO8859-1. This request of specific data entry request a driver reaction. (5.2.12.1; 7.4.1.1.13; 5.2.12.3; 13.1.1.1.8; 13.1.1.1.23; 13.1.1.1.16; 13.1.1.2.5)	Prof	Message 4a : Packet STM-179 Specific STM data-entry request Packet STM-15 State report from STM	ETCS	DMI	Nothing happens
	Time: T0+ 2s	Prof	Message 4b : Packet STM-179 Specific STM data-entry request Packet STM-15 State report from STM	ETCS	DMI	Specific Data-Entry procedure is started.

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Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
4.	ETCS sends the parameter to the STM	DMI	The Driver enters all the needed parameters and acknowledges them.	ETCS	Prof	Message 5 Packet STM-180 Specific STM Data to STM
5.	Time: T0 The STM is allowed to request the same data to the STM.(13.1.1.2.7; 13.1.1.1.18)	Prof	Message 4a : Packet STM-179 Specific STM data-entry request Packet STM-15 State report from STM	ETCS	DMI	Nothing happens
	Time: T0+ 2s	Prof	Message 4b : Packet STM-179 Specific STM data-entry request Packet STM-15 State report from STM	ETCS	DMI	Specific Data-Entry procedure is started.
6.	ETCS sends the parameter to the STM	DMI	The Driver enters all the needed parameters and acknowledges them	ETCS	Prof	Message 5 Packet STM- 180 Specific STM Data to STM
7.	The STM is allowed to request the another data to the STM with another palette for one data. (13.1.1.1.17; 13.1.1.1.5)	Prof	Message 6 : Packet STM-179 Specific STM data-entry request Packet STM-15 State report from STM	ETCS	DMI	New Specific Data-Entry procedure is started.
8.	ETCS sends the parameter to the STM	DMI	The Driver enters all the needed parameters and acknowledges them	ETCS	Prof	Message 7: Packet STM-180 Specific STM Data to STM
9.	STM shall send the "END of specific data entry" (13.1.1.2.7)	Prof	Message 8: Packet 179 with N_ITER = 0 Packet-STM-15 State report from STM	ETCS		

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Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
10.	STM shall request CS state (7.4.1.2.3; 7.4.1.2.2; 7.4.1.2.4.2)	Prof	Message 9: Packet STM-13 State request from STM. Packet STM-15 State report from STM	ETCS	Prof	Message 10: Packet STM-14 State order to STM
11.	STM reports CS state in due time.	Prof	Message 11: Packet STM-15 State report from STM	ETCS		

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**Test case for STM:**

Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
-	This test case is only valid when the STM shall request Specific Data Entry					
1.	Once the STM has received the ETCS train data, the STM requests specific STM data-entry (13.1.1.2.4).	Prof	Message 3: Packet STM-175 Train Data Packet STM-176 Train Data additional „braking characteristic” to STM Packet STM-177: Additional Data Values and date/time to STM Packet STM-178 National Values to STM	STM		
2a1	STM requests Data Entry state.				Prof	STM requests to go to DE Message 1- : packet STM-13 State request from STM Packet STM-15 State report from STM
2a2.	ETCS orders STM state to change to “Data-Entry” (7.3.2.2.1;7.3.2.1;7.3.4.4)	Prof	Message 2: Packet STM-14 State order to STM	STM	Prof	Message 12 : Packet STM-15 State report from STM
2b1	STM requests specific STM Data (the STM may be in state CO or DE while sending this message).				Prof	STM request data entry : Message 4c: packet STM-15 State report from STM Packet STM-179 Specific STM data-entry request

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Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
2b2	STM requests specific STM Data (the STM may be in state CO or DE while sending this message).			STM	Prof	Message 4b : Packet STM-179 Specific STM data-entry request Packet STM-15 State report from STM
2b3.	ETCS sends the parameter to the STM.	DMI	Message 7: Packet STM-180 Specific STM Data to STM	STM		
2b4.	Iteration(s) of step 3 and step 4 is possible depending on STM			STM		
Ending Specific Data Entry procedure for STM						
2b5.	The STM sends the "END of specific data entry"			STM		Message 8: Packet 179 with N_ITER = 0 Packet-STM-15 State report from STM
3.	The data entry is completed, then the STM requests CS state to the ETCS (7.3.1.4.3.).	-	-	STM	Prof	Message 9: Packet STM-13 State request from STM. Packet STM-15 State report from STM
4..	ETCS orders CS state	Prof	Message 10: Packet STM-14 State order to STM	STM	Prof	Message 11: Packet STM-15 State report from STM

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Message 1: (STM => ETCS STM control function) Packet STM-13 State request from STM.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	2	CO
NID_PACKET	8	13	State request from STM
L_PACKET	13	COMPUTED	
NID_STMSTATEREQUEST	4	3	DE
Padding bits	COMPUTED	COMPUTED	

Message 2: (ETCS STM control function => STM) Packet STM-14 State order to STM.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	14	State order to STM
L_PACKET	13	COMPUTED	
NID_STMSTATEORDER	4	3	DE
Padding bits	COMPUTED	COMPUTED	



Message 3: (ETCS => STM) Packet STM-175 TRAIN DATA, STM-176 STM-177, STM-178 ADDITIONAL Train Data.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	175	Train Data
L_PACKET	13	COMPUTED	
NID_OPERATIONAL	32	FINITE VALUE	
NC_TRAIN	15	FINITE VALUE	
L_TRAIN	12	FINITE VALUE	
V_MAXTRAIN	7	FINITE VALUE	
M_LOADINGGAUGE	8	FINITE VALUE	
M_AXLELOAD	7	FINITE VALUE	
M_AIRTIGHT	2	FINITE VALUE	
N_ITER	5	0	
NID_PACKET	8	176	Train data additional 'braking characteristic' to STM
L_PACKET	13	COMPUTED	
T_BEGIN_SB_EF	16	FINITE VALUE	
T_FULL_SB_EF	16	FINITE VALUE	
N_ITER	5	0	
T_BEGIN_EB_EF	10	FINITE VALUE	
T_FULL_EB_EF	8	FINITE VALUE	
N_ITER	5	0	
T_TRQCTION_CUT_OFF	16	FINITE VALUE	
A_MAX	8	FINITE VALUE	
NID_PACKET	8	177	ETCS additional data and date / Time
L_PACKET	13	COMPUTED	
NID_DRIVER	32	FINITE VALUE	
NID_ENGINE	24	FINITE VALUE	
M_ADHESION	1	FINITE VALUE	
T_YEAR	7	FINITE VALUE	
T_MONTH	4	FINITE VALUE	
T_DAY	5	FINITE VALUE	
T_MINUTES	5	FINITE VALUE	

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T_SECONDS	6	FINITE VALUE	
T_TTS	5	FINITE VALUE	
NID_PACKET	8	178	National Value To STM
L_PACKET	13	COMPUTED	
Q_SCALE	2	FINITE VALUE	
V_NVSHUNT	7	FINITE VALUE	
V_NVSTFF	7	FINITE VALUE	
V_NVONSIGHT	7	FINITE VALUE	
V_NVUNFIT	7	FINITE VALUE	
V_NVREL	7	FINITE VALUE	
D_NVROLL	15	FINITE VALUE	
V_NVALLOWOVTRP	7	FINITE VALUE	
V_NVSUPOVTRP	7	FINITE VALUE	
D_NVOVTRP	15	FINITE VALUE	
T_NVOVTRP	8	FINITE VALUE	
D_NVPOTRP	15	FINITE VALUE	
D_NVSTFF	15	FINITE VALUE	
Q_NVDRIVER_ADHES	1	FINITE VALUE	
Padding bits	COMPUTED	COMPUTED	

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Message 4a: (STM => ETCS) Packet STM-179 Specific Data Entry			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	2	DE
NID_PACKET	8	179	Specific STM data entry request
L_PACKET	13	COMPUTED	
Q_DRIVERINT	1	1	Driver intervention is requested
Q_FOLLOWING	1	1	
N_ITER	5	4	
NID_STM(1)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(1)	8	1	
M_XATTRIBUTE(1)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(1)	5	7	
X_CAPTION(1,1)	8	'V'	
X_CAPTION(1,2)	8	'A'	
X_CAPTION(1,3)	8	'L'	
X_CAPTION(1,4)	8	'U'	
X_CAPTION(1,5)	8	'E'	
X_CAPTION(1,6)	8	' '	
X_CAPTION(1,7)	8	'1'	
L_VALUE(1)	8	1	
X_VALUE(1,1)	8	'A'	
N_ITER(1)	5	3	
L_VALUE(1,1)	8	1	
X_VALUE(1,1,1)	8	'A'	
L_VALUE(1,2)	8	1	
X_VALUE(1,2,1)	8	'-B'	
L_VALUE(1,3)	8	1	
X_VALUE(1,3,1)	8	'C'	
NID_STM(2)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated

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NID_DATA(2)	8	2	
M_XATTRIBUTE(2)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(2)	5	7	
X_CAPTION(2,1)	8	'V'	
X_CAPTION(2,2)	8	'A'	
X_CAPTION(2,3)	8	'L'	
X_CAPTION(2,4)	8	'U'	
X_CAPTION(2,5)	8	'E'	
X_CAPTION(2,6)	8	' '	
X_CAPTION(2,7)	8	'2'	
L_VALUE(2)	8	1	
X_VALUE(2,1)	8	'A'	
N_ITER(2)	5	3	
L_VALUE(2,1)	8	1	
X_VALUE(2,1,1)	8	'A'	
L_VALUE(2,2)	8	1	
X_VALUE(2,2,1)	8	'B'	
L_VALUE(2,3)	8	1	
X_VALUE(2,3,1)	8	'C'	
NID_STM(3)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(3)	8	3	
M_XATTRIBUTE(3)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(3)	5	7	
X_CAPTION(3,1)	8	'V'	
X_CAPTION(3,2)	8	'A'	
X_CAPTION(3,3)	8	'L'	
X_CAPTION(3,4)	8	'U'	
X_CAPTION(3,5)	8	'E'	
X_CAPTION(3,6)	8	' '	
X_CAPTION(3,7)	8	'3'	
L_VALUE(3)	8	1	
X_VALUE(3,1)	8	'A'	
N_ITER(3)	5	3	
L_VALUE(3,1)	8	1	

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X_VALUE(3,1,1)	8	'A'	
L_VALUE(3,2)	8	1	
X_VALUE(3,2,1)	8	'B'	
L_VALUE(3,3)	8	1	
X_VALUE(3,3,1)	8	'C'	
NID_STM(4)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(4)	8	4	
M_XATTRIBUTE(4)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(4)	5	7	
X_CAPTION(4,1)	8	'V'	
X_CAPTION(4,2)	8	'A'	
X_CAPTION(4,3)	8	'L'	
X_CAPTION(4,4)	8	'U'	
X_CAPTION(4,5)	8	'E'	
X_CAPTION(4,6)	8	' '	
X_CAPTION(4,7)	8	'4'	
L_VALUE(4)	8	4	
X_VALUE(4,1)	8	'R'	
X_VALUE(4,2)	8	'O'	
X_VALUE(4,3)	8	'M'	
X_VALUE(4,4)	8	'A'	
N_ITER(4)	5	16	
L_VALUE(4,1)	8	10	
X_VALUE(4,1,1)	8	'L'	
X_VALUE(4,1,2)	8	'U'	
X_VALUE(4,1,3)	8	'X'	
X_VALUE(4,1,4)	8	'E'	
X_VALUE(4,1,5)	8	'M'	
X_VALUE(4,1,6)	8	'B'	
X_VALUE(4,1,7)	8	'O'	
X_VALUE(4,1,8)	8	'U'	
X_VALUE(4,1,9)	8	'R'	
X_VALUE(4,1,10)	8	'G'	
L_VALUE(4,2)	8	9	

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X_VALUE(4,2,1)	8	'B'	
X_VALUE(4,2,2)	8	'R'	
X_VALUE(4,2,3)	8	'U'	
X_VALUE(4,2,4)	8	'X'	
X_VALUE(4,2,5)	8	'E'	
X_VALUE(4,2,6)	8	'L'	
X_VALUE(4,2,7)	8	'L'	
X_VALUE(4,2,8)	8	'E'	
X_VALUE(4,2,9)	8	'S'	
L_VALUE(4,3)	8	9	
X_VALUE(4,3,1)	8	'A'	
X_VALUE(4,3,2)	8	'M'	
X_VALUE(4,3,3)	8	'S'	
X_VALUE(4,3,4)	8	'T'	
X_VALUE(4,3,5)	8	'E'	
X_VALUE(4,3,6)	8	'R'	
X_VALUE(4,3,7)	8	'D'	
X_VALUE(4,3,8)	8	'A'	
X_VALUE(4,3,9)	8	'M'	
L_VALUE(4,4)	8	9	
X_VALUE(4,4,1)	8	'S'	
X_VALUE(4,4,2)	8	'T'	
X_VALUE(4,4,3)	8	'O'	
X_VALUE(4,4,4)	8	'C'	
X_VALUE(4,4,5)	8	'K'	
X_VALUE(4,4,6)	8	'H'	
X_VALUE(4,4,7)	8	'O'	
X_VALUE(4,4,8)	8	'L'	
X_VALUE(4,4,9)	8	'M'	
L_VALUE(4,5)	8	8	
X_VALUE(4,5,1)	8	'W'	
X_VALUE(4,5,2)	8	'A'	
X_VALUE(4,5,3)	8	'R'	
X_VALUE(4,5,4)	8	'S'	

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X_VALUE(4,5,5)	8	'Z'	
X_VALUE(4,5,6)	8	'O'	
X_VALUE(4,5,7)	8	'w'	
X_VALUE(4,5,8)	8	'A'	
L_VALUE(4,6)	8	8	
X_VALUE(4,6,1)	8	'L'	
X_VALUE(4,6,2)	8	'A'	
X_VALUE(4,6,3)	8	'U'	
X_VALUE(4,6,4)	8	'S'	
X_VALUE(4,6,5)	8	'A'	
X_VALUE(4,6,6)	8	'N'	
X_VALUE(4,6,7)	8	'N'	
X_VALUE(4,6,8)	8	'E'	
L_VALUE(4,7)	8	9	
X_VALUE(4,7,1)	8	'B'	
X_VALUE(4,7,2)	8	'A'	
X_VALUE(4,7,3)	8	'R'	
X_VALUE(4,7,4)	8	'C'	
X_VALUE(4,7,5)	8	'E'	
X_VALUE(4,7,6)	8	'L'	
X_VALUE(4,7,7)	8	'O'	
X_VALUE(4,7,8)	8	'N'	
X_VALUE(4,7,9)	8	'A'	
L_VALUE(4,8)	8	8	
X_VALUE(4,8,1)	8	'B'	
X_VALUE(4,8,2)	8	'U'	
X_VALUE(4,8,3)	8	'D'	
X_VALUE(4,8,4)	8	'A'	
X_VALUE(4,8,5)	8	'P'	
X_VALUE(4,8,6)	8	'E'	
X_VALUE(4,8,7)	8	'S'	
X_VALUE(4,8,8)	8	'T'	
L_VALUE(4,9)	8	9	
X_VALUE(4,9,1)	8	'F'	

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X_VALUE(4,9,2)	8	'R'	
X_VALUE(4,9,3)	8	'A'	
X_VALUE(4,9,4)	8	'N'	
X_VALUE(4,9,5)	8	'K'	
X_VALUE(4,9,6)	8	'F'	
X_VALUE(4,9,7)	8	'U'	
X_VALUE(4,9,8)	8	'R'	
X_VALUE(4,9,9)	8	'T'	
L_VALUE(4,10)	8	10	
X_VALUE(4,10,1)	8	'D'	
X_VALUE(4,10,2)	8	'U'	
X_VALUE(4,10,3)	8	'S'	
X_VALUE(4,10,4)	8	'S'	
X_VALUE(4,10,5)	8	'E'	
X_VALUE(4,10,6)	8	'L'	
X_VALUE(4,10,7)	8	'D'	
X_VALUE(4,10,8)	8	'O'	
X_VALUE(4,10,9)	8	'R'	
X_VALUE(4,10,10)	8	'F'	
L_VALUE(4,11)	8	8	
X_VALUE(4,11,1)	8	'T'	
X_VALUE(4,11,2)	8	'O'	
X_VALUE(4,11,3)	8	'U'	
X_VALUE(4,11,4)	8	'L'	
X_VALUE(4,11,5)	8	'O'	
X_VALUE(4,11,6)	8	'U'	
X_VALUE(4,11,7)	8	'S'	
X_VALUE(4,11,8)	8	'E'	
L_VALUE(4,12)	8	10	
X_VALUE(4,12,1)	8	'S'	
X_VALUE(4,12,2)	8	'T'	
X_VALUE(4,12,3)	8	'R'	
X_VALUE(4,12,4)	8	'A'	
X_VALUE(4,12,5)	8	'S'	

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X_VALUE(4,12,6)	8	'B'	
X_VALUE(4,12,7)	8	'O'	
X_VALUE(4,12,8)	8	'U'	
X_VALUE(4,12,9)	8	'R'	
X_VALUE(4,12,10)	8	'G'	
L_VALUE(4,13)	8	9	
X_VALUE(4,13,1)	8	'M'	
X_VALUE(4,13,2)	8	'A'	
X_VALUE(4,13,3)	8	'R'	
X_VALUE(4,13,4)	8	'S'	
X_VALUE(4,13,5)	8	'E'	
X_VALUE(4,13,6)	8	'I'	
X_VALUE(4,13,7)	8	'L'	
X_VALUE(4,13,8)	8	'L'	
X_VALUE(4,13,9)	8	'E'	
L_VALUE(4,14)	8	8	
X_VALUE(4,14,1)	8	'C'	
X_VALUE(4,14,2)	8	'H'	
X_VALUE(4,14,3)	8	'A'	
X_VALUE(4,14,4)	8	'M'	
X_VALUE(4,14,5)	8	'O'	
X_VALUE(4,14,6)	8	'N'	
X_VALUE(4,14,7)	8	'I'	
X_VALUE(4,14,8)	8	'X'	
L_VALUE(4,15)	8	9	
X_VALUE(4,15,1)	8	'C'	
X_VALUE(4,15,2)	8	'H'	
X_VALUE(4,15,3)	8	'A'	
X_VALUE(4,15,4)	8	'R'	
X_VALUE(4,15,5)	8	'L'	
X_VALUE(4,15,6)	8	'E'	
X_VALUE(4,15,7)	8	'R'	
X_VALUE(4,15,8)	8	'O'	
X_VALUE(4,15,9)	8	'I'	

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L_VALUE(4,16)	8	4	
X_VALUE(4,16,1)	8	'R'	
X_VALUE(4,16,2)	8	'O'	
X_VALUE(4,16,3)	8	'M'	
X_VALUE(4,16,4)	8	'A'	
Padding bits	COMPUTED	COMPUTED	

Message 4b: (STM => ETCS) Packet STM-179 Specific Data Entry			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	2	DE (It may be state CO due to the fact that the state has not yet changed to DE)
NID_PACKET	8	179	Specific STM data entry request
L_PACKET	13	COMPUTED	
Q_DRIVERINT	1	1	Driver intervention is requested
Q_FOLLOWING	1	0	
N_ITER	5	1	
NID_STM(1)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(1)	8	5	
M_XATTRIBUTE(1)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(1)	5	7	
X_CAPTION(1,1)	8	'V'	
X_CAPTION(1,2)	8	'A'	
X_CAPTION(1,3)	8	'L'	
X_CAPTION(1,4)	8	'U'	
X_CAPTION(1,5)	8	'E'	
X_CAPTION(1,6)	8	' '	
X_CAPTION(1,7)	8	'5'	
L_VALUE(1)	8	1	
X_VALUE(1,1)	8	'A'	
N_ITER(1)	5	3	
L_VALUE(1,1)	8	1	
X_VALUE(1,1,1)	8	'A'	
L_VALUE(1,2)	8	1	
X_VALUE(1,2,1)	8	'B'	
L_VALUE(1,3)	8	1	
X_VALUE(1,3,1)	8	'C'	

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Padding bits	COMPUTED	COMPUTED	
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Message 4c: (STM => ETCS) Packet STM-179 Specific Data Entry			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	2	DE (It may be state CO due to the fact that the state has not yet changed to DE)
NID_PACKET	8	179	Specific STM data entry request
L_PACKET	13	COMPUTED	
Q_DRIVERINT	1	1	Driver intervention is requested
Q_FOLLOWING	1	1	
N_ITER	5	4	
NID_STM(1)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(1)	8	1	
M_XATTRIBUTE(1)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(1)	5	7	
X_CAPTION(1,1)	8	'V'	
X_CAPTION(1,2)	8	'A'	
X_CAPTION(1,3)	8	'L'	
X_CAPTION(1,4)	8	'U'	
X_CAPTION(1,5)	8	'E'	
X_CAPTION(1,6)	8	' '	
X_CAPTION(1,7)	8	'1'	
L_VALUE(1)	8	1	
X_VALUE(1,1)	8	'A'	
N_ITER(1)	5	3	
L_VALUE(1,1)	8	1	
X_VALUE(1,1,1)	8	'A'	
L_VALUE(1,2)	8	1	
X_VALUE(1,2,1)	8	'-B'	
L_VALUE(1,3)	8	1	
X_VALUE(1,3,1)	8	'C'	
NID_STM(2)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated

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NID_DATA(2)	8	2	
M_XATTRIBUTE(2)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(2)	5	7	
X_CAPTION(2,1)	8	'V'	
X_CAPTION(2,2)	8	'A'	
X_CAPTION(2,3)	8	'L'	
X_CAPTION(2,4)	8	'U'	
X_CAPTION(2,5)	8	'E'	
X_CAPTION(2,6)	8	' '	
X_CAPTION(2,7)	8	'2'	
L_VALUE(2)	8	1	
X_VALUE(2,1)	8	'A'	
N_ITER(2)	5	3	
L_VALUE(2,1)	8	1	
X_VALUE(2,1,1)	8	'A'	
L_VALUE(2,2)	8	1	
X_VALUE(2,2,1)	8	'B'	
L_VALUE(2,3)	8	1	
X_VALUE(2,3,1)	8	'C'	
NID_STM(3)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(3)	8	3	
M_XATTRIBUTE(3)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(3)	5	7	
X_CAPTION(3,1)	8	'V'	
X_CAPTION(3,2)	8	'A'	
X_CAPTION(3,3)	8	'L'	
X_CAPTION(3,4)	8	'U'	
X_CAPTION(3,5)	8	'E'	
X_CAPTION(3,6)	8	' '	
X_CAPTION(3,7)	8	'3'	
L_VALUE(3)	8	1	
X_VALUE(3,1)	8	'A'	
N_ITER(3)	5	3	
L_VALUE(3,1)	8	1	

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X_VALUE(3,1,1)	8	'A'	
L_VALUE(3,2)	8	1	
X_VALUE(3,2,1)	8	'B'	
L_VALUE(3,3)	8	1	
X_VALUE(3,3,1)	8	'C'	
NID_STM(4)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(4)	8	4	
M_XATTRIBUTE(4)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(4)	5	7	
X_CAPTION(4,1)	8	'V'	
X_CAPTION(4,2)	8	'A'	
X_CAPTION(4,3)	8	'L'	
X_CAPTION(4,4)	8	'U'	
X_CAPTION(4,5)	8	'E'	
X_CAPTION(4,6)	8	' '	
X_CAPTION(4,7)	8	'4'	
L_VALUE(4)	8	4	
X_VALUE(4,1)	8	'R'	
X_VALUE(4,2)	8	'O'	
X_VALUE(4,3)	8	'M'	
X_VALUE(4,4)	8	'A'	
N_ITER(4)	5	16	
L_VALUE(4,1)	8	10	
X_VALUE(4,1,1)	8	'L'	
X_VALUE(4,1,2)	8	'U'	
X_VALUE(4,1,3)	8	'X'	
X_VALUE(4,1,4)	8	'E'	
X_VALUE(4,1,5)	8	'M'	
X_VALUE(4,1,6)	8	'B'	
X_VALUE(4,1,7)	8	'O'	
X_VALUE(4,1,8)	8	'U'	
X_VALUE(4,1,9)	8	'R'	
X_VALUE(4,1,10)	8	'G'	
L_VALUE(4,2)	8	9	

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X_VALUE(4,2,1)	8	'B'	
X_VALUE(4,2,2)	8	'R'	
X_VALUE(4,2,3)	8	'U'	
X_VALUE(4,2,4)	8	'X'	
X_VALUE(4,2,5)	8	'E'	
X_VALUE(4,2,6)	8	'L'	
X_VALUE(4,2,7)	8	'L'	
X_VALUE(4,2,8)	8	'E'	
X_VALUE(4,2,9)	8	'S'	
L_VALUE(4,3)	8	9	
X_VALUE(4,3,1)	8	'A'	
X_VALUE(4,3,2)	8	'M'	
X_VALUE(4,3,3)	8	'S'	
X_VALUE(4,3,4)	8	'T'	
X_VALUE(4,3,5)	8	'E'	
X_VALUE(4,3,6)	8	'R'	
X_VALUE(4,3,7)	8	'D'	
X_VALUE(4,3,8)	8	'A'	
X_VALUE(4,3,9)	8	'M'	
L_VALUE(4,4)	8	9	
X_VALUE(4,4,1)	8	'S'	
X_VALUE(4,4,2)	8	'T'	
X_VALUE(4,4,3)	8	'O'	
X_VALUE(4,4,4)	8	'C'	
X_VALUE(4,4,5)	8	'K'	
X_VALUE(4,4,6)	8	'H'	
X_VALUE(4,4,7)	8	'O'	
X_VALUE(4,4,8)	8	'L'	
X_VALUE(4,4,9)	8	'M'	
L_VALUE(4,5)	8	8	
X_VALUE(4,5,1)	8	'W'	
X_VALUE(4,5,2)	8	'A'	
X_VALUE(4,5,3)	8	'R'	
X_VALUE(4,5,4)	8	'S'	

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X_VALUE(4,5,5)	8	'Z'	
X_VALUE(4,5,6)	8	'O'	
X_VALUE(4,5,7)	8	'w'	
X_VALUE(4,5,8)	8	'A'	
L_VALUE(4,6)	8	8	
X_VALUE(4,6,1)	8	'L'	
X_VALUE(4,6,2)	8	'A'	
X_VALUE(4,6,3)	8	'U'	
X_VALUE(4,6,4)	8	'S'	
X_VALUE(4,6,5)	8	'A'	
X_VALUE(4,6,6)	8	'N'	
X_VALUE(4,6,7)	8	'N'	
X_VALUE(4,6,8)	8	'E'	
L_VALUE(4,7)	8	9	
X_VALUE(4,7,1)	8	'B'	
X_VALUE(4,7,2)	8	'A'	
X_VALUE(4,7,3)	8	'R'	
X_VALUE(4,7,4)	8	'C'	
X_VALUE(4,7,5)	8	'E'	
X_VALUE(4,7,6)	8	'L'	
X_VALUE(4,7,7)	8	'O'	
X_VALUE(4,7,8)	8	'N'	
X_VALUE(4,7,9)	8	'A'	
L_VALUE(4,8)	8	8	
X_VALUE(4,8,1)	8	'B'	
X_VALUE(4,8,2)	8	'U'	
X_VALUE(4,8,3)	8	'D'	
X_VALUE(4,8,4)	8	'A'	
X_VALUE(4,8,5)	8	'P'	
X_VALUE(4,8,6)	8	'E'	
X_VALUE(4,8,7)	8	'S'	
X_VALUE(4,8,8)	8	'T'	
L_VALUE(4,9)	8	9	
X_VALUE(4,9,1)	8	'F'	

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X_VALUE(4,9,2)	8	'R'	
X_VALUE(4,9,3)	8	'A'	
X_VALUE(4,9,4)	8	'N'	
X_VALUE(4,9,5)	8	'K'	
X_VALUE(4,9,6)	8	'F'	
X_VALUE(4,9,7)	8	'U'	
X_VALUE(4,9,8)	8	'R'	
X_VALUE(4,9,9)	8	'T'	
L_VALUE(4,10)	8	10	
X_VALUE(4,10,1)	8	'D'	
X_VALUE(4,10,2)	8	'U'	
X_VALUE(4,10,3)	8	'S'	
X_VALUE(4,10,4)	8	'S'	
X_VALUE(4,10,5)	8	'E'	
X_VALUE(4,10,6)	8	'L'	
X_VALUE(4,10,7)	8	'D'	
X_VALUE(4,10,8)	8	'O'	
X_VALUE(4,10,9)	8	'R'	
X_VALUE(4,10,10)	8	'F'	
L_VALUE(4,11)	8	8	
X_VALUE(4,11,1)	8	'T'	
X_VALUE(4,11,2)	8	'O'	
X_VALUE(4,11,3)	8	'U'	
X_VALUE(4,11,4)	8	'L'	
X_VALUE(4,11,5)	8	'O'	
X_VALUE(4,11,6)	8	'U'	
X_VALUE(4,11,7)	8	'S'	
X_VALUE(4,11,8)	8	'E'	
L_VALUE(4,12)	8	10	
X_VALUE(4,12,1)	8	'S'	
X_VALUE(4,12,2)	8	'T'	
X_VALUE(4,12,3)	8	'R'	
X_VALUE(4,12,4)	8	'A'	
X_VALUE(4,12,5)	8	'S'	

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X_VALUE(4,12,6)	8	'B'	
X_VALUE(4,12,7)	8	'O'	
X_VALUE(4,12,8)	8	'U'	
X_VALUE(4,12,9)	8	'R'	
X_VALUE(4,12,10)	8	'G'	
L_VALUE(4,13)	8	9	
X_VALUE(4,13,1)	8	'M'	
X_VALUE(4,13,2)	8	'A'	
X_VALUE(4,13,3)	8	'R'	
X_VALUE(4,13,4)	8	'S'	
X_VALUE(4,13,5)	8	'E'	
X_VALUE(4,13,6)	8	'I'	
X_VALUE(4,13,7)	8	'L'	
X_VALUE(4,13,8)	8	'L'	
X_VALUE(4,13,9)	8	'E'	
L_VALUE(4,14)	8	8	
X_VALUE(4,14,1)	8	'C'	
X_VALUE(4,14,2)	8	'H'	
X_VALUE(4,14,3)	8	'A'	
X_VALUE(4,14,4)	8	'M'	
X_VALUE(4,14,5)	8	'O'	
X_VALUE(4,14,6)	8	'N'	
X_VALUE(4,14,7)	8	'I'	
X_VALUE(4,14,8)	8	'X'	
L_VALUE(4,15)	8	4	
X_VALUE(4,15,1)	8	'R'	
X_VALUE(4,15,2)	8	'I'	
X_VALUE(4,15,3)	8	'G'	
X_VALUE(4,15,4)	8	'A'	
L_VALUE(4,16)	8	4	
X_VALUE(4,16,1)	8	'R'	
X_VALUE(4,16,2)	8	'O'	
X_VALUE(4,16,3)	8	'M'	
X_VALUE(4,16,4)	8	'A'	

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Padding bits	COMPUTED	COMPUTED	
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Message 5: (ETCS=> STM) Packet STM-180 Specific STM Data to STM			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	180	Specific STM Data to STM
L_PACKET	13	COMPUTED	
N_ITER	5	5	
NID_STM(1)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(1)	8	1	
L_VALUE(1)	8	1	
X_VALUE(1,1)	8	FINITE VALUE	
NID_STM(2)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(2)	8	2	
L_VALUE(2)	8	1	
X_VALUE(2,1)	8	FINITE VALUE	
NID_STM(3)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(3)	8	3	
L_VALUE(3)	8	1	
X_VALUE(3,1)	8	FINITE VALUE	
NID_STM(4)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(4)	8	4	
L_VALUE(4)	8	10	
X_VALUE(4,1)	8	FINITE VALUE	
X_VALUE(4,2)	8	FINITE VALUE	
X_VALUE(4,3)	8	FINITE VALUE	
X_VALUE(4,4)	8	FINITE VALUE	
X_VALUE(4,5)	8	FINITE VALUE	
X_VALUE(4,6)	8	FINITE VALUE	
X_VALUE(4,7)	8	FINITE VALUE	
X_VALUE(4,8)	8	FINITE VALUE	
X_VALUE(4,9)	8	FINITE VALUE	
X_VALUE(4,10)	8	FINITE VALUE	
NID_STM(5)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated

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NID_DATA(5)	8	5	
L_VALUE(5)	8	1	
X_VALUE(5,1)	8	FINITE VALUE	
Padding bits	COMPUTED	COMPUTED	

Message 6: (STM => ETCS) Packet STM-179 Specific Data Entry			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	2	DE
NID_PACKET	8	179	Specific STM Data Entry Request
L_PACKET	13	COMPUTED	
Q_DRIVERINT	1	1	Driver intervention is requested
Q_FOLLOWING	1	0	
N_ITER	5	5	
NID_STM(1)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(1)	8	6	
M_XATTRIBUTE(1)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(1)	5	7	
X_CAPTION(1,1)	8	'V'	
X_CAPTION(1,2)	8	'A'	
X_CAPTION(1,3)	8	'L'	
X_CAPTION(1,4)	8	'U'	
X_CAPTION(1,5)	8	'E'	
X_CAPTION(1,6)	8	' '	
X_CAPTION(1,7)	8	'6'	
L_VALUE(1)	8	1	
X_VALUE(1,1)	8	'A'	
N_ITER(1)	5	3	
L_VALUE(1,1)	8	1	
X_VALUE(1,1,1)	8	'A'	
L_VALUE(1,2)	8	1	
X_VALUE(1,2,1)	8	'B'	
L_VALUE(1,3)	8	1	
X_VALUE(1,3,1)	8	'C'	
NID_STM(2)	8	FINITE VALUE	Use <b>ANOTHER</b> palette of the STM to be tested or simulated

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NID_DATA(2)	8	7	
M_XATTRIBUTE(2)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(2)	5	7	
X_CAPTION(2,1)	8	'V'	
X_CAPTION(2,2)	8	'A'	
X_CAPTION(2,3)	8	'L'	
X_CAPTION(2,4)	8	'U'	
X_CAPTION(2,5)	8	'E'	
X_CAPTION(2,6)	8	' '	
X_CAPTION(2,7)	8	'7'	
L_VALUE(2)	8	A	
X_VALUE(2,1)	8	'A'	
N_ITER(2)	5	3	
L_VALUE(2,1)	8	1	
X_VALUE(2,1,1)	8	'A'	
L_VALUE(2,2)	8	1	
X_VALUE(2,2,1)	8	'B'	
L_VALUE(2,3)	8	1	
X_VALUE(2,3,1)	8	'C'	
NID_STM(3)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(3)	8	8	
M_XATTRIBUTE(3)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(3)	5	7	
X_CAPTION(3,1)	8	'V'	
X_CAPTION(3,2)	8	'A'	
X_CAPTION(3,3)	8	'L'	
X_CAPTION(3,4)	8	'U'	
X_CAPTION(3,5)	8	'E'	
X_CAPTION(3,6)	8	' '	
X_CAPTION(3,7)	8	'8'	
L_VALUE(3)	8	1	
X_VALUE(3,1)	8	'A'	
N_ITER(3)	5	3	
L_VALUE(3,1)	8	1	

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X_VALUE(3,1,1)	8	'A'	
L_VALUE(3,2)	8	1	
X_VALUE(3,2,1)	8	'B'	
L_VALUE(3,3)	8	1	
X_VALUE(3,3,1)	8	'C'	
NID_STM(4)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(4)	8	9	
M_XATTRIBUTE(4)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(4)	5	7	
X_CAPTION(4,1)	8	'V'	
X_CAPTION(4,2)	8	'A'	
X_CAPTION(4,3)	8	'L'	
X_CAPTION(4,4)	8	'U'	
X_CAPTION(4,5)	8	'E'	
X_CAPTION(4,6)	8	' '	
X_CAPTION(4,7)	8	'g'	
L_VALUE(4)	8	1	
X_VALUE(4,1)	8	'A'	
N_ITER(4)	5	3	
L_VALUE(4,1)	8	1	
X_VALUE(4,1,1)	8	'A'	
L_VALUE(4,2)	8	1	
X_VALUE(4,2,1)	8	'B'	
L_VALUE(4,3)	8	1	
X_VALUE(4,3,1)	8	'C'	
NID_STM(5)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(5)	8	10	
M_XATTRIBUTE(5)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(5)	5	8	
X_CAPTION(5,1)	8	'V'	
X_CAPTION(5,2)	8	'A'	
X_CAPTION(5,3)	8	'L'	
X_CAPTION(5,4)	8	'U'	
X_CAPTION(5,5)	8	'E'	

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X_CAPTION(5,6)	8	' '	
X_CAPTION(5,7)	8	'1'	
X_CAPTION(5,8)	8	'0'	
L_VALUE(5)	8	1	
X_VALUE(5,1)	8	'A'	
N_ITER(5)	5	3	
L_VALUE(5,1)	8	1	
X_VALUE(5,1,1)	8	'A'	
L_VALUE(5,2)	8	1	
X_VALUE(5,2,1)	8	'B'	
L_VALUE(5,3)	8	1	
X_VALUE(5,3,1)	8	'C'	
Padding bits	COMPUTED	COMPUTED	

Message 7: (ETCS=> STM) Packet STM-180 Specific STM Data to STM			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	180	Specific STM Data to STM
L_PACKET	13	COMPUTED	
N_ITER	5	5	
NID_STM(1)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(1)	8	6	
L_VALUE(1)	8	1	
X_VALUE(1,1)	8	FINITE VALUE	
NID_STM(2)	8	FINITE VALUE	Use <b>ANOTHER</b> palette of the STM to be tested or simulated
NID_DATA(2)	8	7	
L_VALUE(2)	8	1	
X_VALUE(2,1)	8	FINITE VALUE	
NID_STM(3)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(3)	8	8	
L_VALUE(3)	8	1	
X_VALUE(3,1)	8	FINITE VALUE	
NID_STM(4)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(4)	8	9	
L_VALUE(4)	8	1	
X_VALUE(4,1)	8	FINITE VALUE	
NID_STM(5)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(5)	8	10	
L_VALUE(5)	8	1	
X_VALUE(5,1)	8	FINITE VALUE	
Padding bits	COMPUTED	COMPUTED	

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Message 8: (STM => ETCS) Packet STM-179 End of Specific Data Entry			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	2	DE
NID_PACKET	8	179	Specific STM data entry request
L_PACKET	13	COMPUTED	
Q_DRIVERINT	1	0	
Q_FOLLOWING	1	0	
N_ITER	5	0	End of Specific Data Entry
Padding bits	COMPUTED	COMPUTED	

Message 9: (STM => ETCS STM control function) Packet STM-13 State request from STM.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	3	DE
NID_PACKET	8	13	State request from STM
L_PACKET	13	COMPUTED	
NID_STMSTATEREQUEST	4	4	CS
Padding bits	COMPUTED	COMPUTED	

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Message 10: (ETCS STM control function => STM) Packet STM-14 State order to STM.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	14	State order to STM
L_PACKET	13	COMPUTED	
NID_STMSTATEORDER	4	4	Unconditional order to CS
Padding bits	COMPUTED	COMPUTED	

Message 11: (STM => ETCS STM control function) Packet STM-15 State request from STM.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	4	CS
Padding bits	COMPUTED	COMPUTED	

[illegible]

Message 1: (STM => ETCS STM control function) Packet STM-15 State request from STM.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	3	DE

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End Conditions		Value	Comments
STM_STATE		CS	
ETCS Mode		Unchanged	
ETCS Level		Unchanged	
Train State		Unchanged	
Train Data		Valid	
Additional Data		Valid	
National Values		Valid	
STM Control Function Connection		Unchanged	
DMI Connection		Unchanged	
Odometry Data		Unchanged	
Reference Time Data		Unchanged	
TIU Connection		Unchanged	
BIU Connection		Unchanged	
JRU Connection		Unchanged	
Other connections		Unchanged	
TIU Regenerative Brake Command		Unchanged	
TIU Magnetic Shoes Command		Unchanged	
TIU Eddy Current Brake Command		Unchanged	
TIU Inhibit Passenger Emergency Brake Command		Unchanged	
TIU Pantograph Command		Unchanged	
TIU Air Tightness Command		Unchanged	
TIU Main Switch / Circuit Breaker Command		Unchanged	
TIU Traction Cut Off Command		Unchanged	
TIU Sleeping Status		Unchanged	
TIU Traction Cut Off Status		Unchanged	
TIU Direction Controller Position Status		Unchanged	
TIU Cab Status (Desk Status)		Unchanged	
BIU Status		Unchanged	
BIU Emergency Brake Command		Unchanged	
BIU Service Brake Command		Unchanged	
BIU Emergency Brake Status		Unchanged	
BIU Service Brake Status		Unchanged	
STM Version Number	Subset-026	1.0	

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	Subset-035	3.0.z	
	Subset-058	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
ETCS Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
	Subset-058	3.0.z	
Track Adhesion		Unchanged	



TEST CASE 10A.0.1.0.1.0.1.0.2.0.1.0.3.0.1.0.4.2

TEST CASE HEADER	
Test case Identification	Functional identity Procedure Specific Data Entry / Data View
	Data Entry at Start-up. STM answers in due time for the transition CO to DE. The STM does not answer in due time for the transition DE to CS. Driver reaction is needed.
ETCS Requirements Tested	Subset-035: 7.4.1.2.3; 7.4.1.2.2; 7.4.1.2.4; 5.2.12.1; 7.4.1.1.13; 5.2.12.3; 13.1.1.1.8; 13.1.1.1.23; 13.1.1.1.16; 13.1.1.2.5; 13.1.1.2.7; 13.1.1.1.17; 13.1.1.1.5; 13.1.1.1.18; 7.4.1.2.3; 7.4.1.2.2; 7.4.1.2.4.2
	Subset-026: NONE
STM Requirements Tested	Subset-035: NONE
	Subset-026: None
Packets transmitted via FFFIS STM	STM-13, STM-14, STM-15, STM-175, STM-176, STM-177, STM-178, STM-179, STM-180.
Comments and constraints	This test case is only valid when the STM shall request Specific Data Entry.

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Starting Conditions	Value	Comments
STM_STATE	CO	
ETCS Mode	SB	
ETCS Level	1	
Train State	Standstill	
Train Data	Invalid	
Additional Data	Invalid	
National Values	Invalid	
STM Control Function Connection	Established	
DMI Connection	Not established	
Odometry Data	Not relevant	
Reference Time Data	Transmitted	
TIU Connection	Not relevant	
BIU Connection	Not relevant	
JRU Connection	Not relevant	
Other connections	Not relevant	
TIU Regenerative Brake Command	Not relevant	
TIU Magnetic Shoes Command	Not relevant	
TIU Eddy Current Brake Command	Not relevant	
TIU Inhibit Passenger Emergency Brake Command	Not relevant	
TIU Pantograph Command	Not relevant	
TIU Air Tightness Command	Not relevant	
TIU Main Switch / Circuit Breaker Command	Not relevant	
TIU Traction Cut Off Command	Not relevant	
TIU Sleeping Status	Not Sleeping	
TIU Traction Cut Off Status	Not relevant	
TIU Direction Controller Position Status	Not relevant	
TIU Cab Status (Desk Status)	Desk A opened	
BIU Status	Not relevant	
BIU Emergency Brake Command	Not relevant	
BIU Service Brake Command	Not relevant	
BIU Emergency Brake Status	Not relevant	

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BIU Service Brake Status		Not relevant	
STM Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-058	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
ETCS Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
	Subset-058	3.0.z	
Track Adhesion		Not relevant	

**Test case for ETCS On-board:**

Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
-	This test case is only valid when the STM shall request Specific Data Entry					
1.	ETCS transmit the ETCS data to STM. (7.4.1.1.13)	DMI	Driver enters and validates ETCS Train Data	ETCS	Prof	Message 3: Packet STM-175 Train Data Packet STM-176 Train Data additional „braking characteristic” to STM Packet STM-177: Additional Data Values and date/time to STM Packet STM-178 National Values to STM
2.	The ETCS receives from STM a DE state request (7.4.1.2.3; 7.4.1.2.2; 7.4.1.2.4; 5.2.12.1)	Prof	Message 1: STM-13 State request from STM. STM-15 State report from STM	ETCS	Prof	Message 2: Packet STM-14 State order to STM
3.	STM sends a message for specific data entry with 5 data and a set of character of ISO8859-1. This request of specific data entry request a driver reaction. (5.2.12.1; 7.4.1.1.13; 5.2.12.3; 13.1.1.1.8; 13.1.1.1.23; 13.1.1.1.16; 13.1.1.2.5)	Prof	Message 4 : Packet STM-179 Specific STM data-entry request Packet STM-15 State report from STM	ETCS	DMI	Specific Data-Entry procedure is started.
4.	ETCS sends the parameter to the STM	DMI	The Driver enters all the needed parameters and acknowledges them.	ETCS	Prof	Message 5 Packet STM-180 Specific STM Data to STM

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Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
5.	The STM is allowed to request the same data to the STM.(13.1.1.2.7; 13.1.1.1.18)	Prof	Message 4 : Packet STM-179 Specific STM data-entry request Packet STM-15 State report from STM	ETCS	DMI	Same Specific Data-Entry procedure is started.
6.	ETCS sends the parameter to the STM	DMI	The Driver enters all the needed parameters and acknowledges them	ETCS	Prof	Message 5 Packet STM- 180 Specific STM Data to STM
7.	The STM is allowed to request the another data to the STM with another palette for one data. (13.1.1.1.17; 13.1.1.1.5)	Prof	Message 6 : Packet STM-179 Specific STM data-entry request Packet STM-15 State report from STM	ETCS	DMI	New Specific Data-Entry procedure is started.
8.	ETCS sends the parameter to the STM	DMI	The Driver enters all the needed parameters and acknowledges them	ETCS	Prof	Message 7: Packet STM-180 Specific STM Data to STM
9.	STM shall send the "END of specific data entry" (13.1.1.2.7)	Prof	Message 8: Packet 179 with N_ITER = 0 Packet-STM-15 State report from STM	ETCS		
10.	STM shall request CS state (7.4.1.2.3; 7.4.1.2.2; 7.4.1.2.4.2) TIME:T0	Prof	Message 9: Packet STM-13 State request from STM. Packet STM-15 State report from STM	ETCS	Prof	Message 10: Packet STM-14 State order to STM
11.	TIME:T0+10s STM does not report CS state in due time.	Prof	-	ETCS		Message 10: Packet STM-14 State order to STM to go to FA

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**Test case for STM:**

All requirements are tested in test case 10A.0.1.0.1.0.1.0.2.0.1.0.3.0.1.0.4.1

Message 1: (STM => ETCS STM control function) Packet STM-13 State request from STM.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	2	CO
NID_PACKET	8	13	State request from STM
L_PACKET	13	COMPUTED	
NID_STMSTATEREQUEST	4	3	DE
Padding bits	COMPUTED	COMPUTED	

Message 2: (ETCS STM control function => STM) Packet STM-14 State order to STM.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	14	State order to STM
L_PACKET	13	COMPUTED	
NID_STMSTATEORDER	4	3	DE
Padding bits	COMPUTED	COMPUTED	

Message 3: (ETCS => STM) Packet STM-175 TRAIN DATA, STM-176 STM-177, STM-178 ADDITIONAL Train Data.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	175	Train Data
L_PACKET	13	COMPUTED	
NID_OPERATIONAL	32	FINITE VALUE	
NC_TRAIN	15	FINITE VALUE	
L_TRAIN	12	FINITE VALUE	
V_MAXTRAIN	7	FINITE VALUE	
M_LOADINGGAUGE	8	FINITE VALUE	
M_AXLELOAD	7	FINITE VALUE	
M_AIRTIGHT	2	FINITE VALUE	
N_ITER	5	0	
NID_PACKET	8	176	Train data additional 'braking characteristic' to STM
L_PACKET	13	COMPUTED	
T_BEGIN_SB_EF	16	FINITE VALUE	
T_FULL_SB_EF	16	FINITE VALUE	
N_ITER	5	0	
T_BEGIN_EB_EF	10	FINITE VALUE	
T_FULL_EB_EF	8	FINITE VALUE	
N_ITER	5	0	
T_TRQCTION_CUT_OFF	16	FINITE VALUE	
A_MAX	8	FINITE VALUE	
NID_PACKET	8	177	ETCS additional data and date / Time
L_PACKET	13	COMPUTED	
NID_DRIVER	32	FINITE VALUE	
NID_ENGINE	24	FINITE VALUE	
M_ADHESION	1	FINITE VALUE	
T_YEAR	7	FINITE VALUE	
T_MONTH	4	FINITE VALUE	
T_DAY	5	FINITE VALUE	
T_MINUTES	5	FINITE VALUE	

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T_SECONDS	6	FINITE VALUE	
T_TTS	5	FINITE VALUE	
NID_PACKET	8	178	National Value To STM
L_PACKET	13	COMPUTED	
Q_SCALE	2	FINITE VALUE	
V_NVSHUNT	7	FINITE VALUE	
V_NVSTFF	7	FINITE VALUE	
V_NVONSIGHT	7	FINITE VALUE	
V_NVUNFIT	7	FINITE VALUE	
V_NVREL	7	FINITE VALUE	
D_NVROLL	15	FINITE VALUE	
V_NVALLOWOVTRP	7	FINITE VALUE	
V_NVSUPOVTRP	7	FINITE VALUE	
D_NVOVTRP	15	FINITE VALUE	
T_NVOVTRP	8	FINITE VALUE	
D_NVPOTRP	15	FINITE VALUE	
D_NVSTFF	15	FINITE VALUE	
Q_NVDRIVER_ADHES	1	FINITE VALUE	
Padding bits	COMPUTED	COMPUTED	

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Message 4: (STM => ETCS) Packet STM-179 Specific Data Entry			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	2	DE
NID_PACKET	8	179	Specific STM data entry request
L_PACKET	13	COMPUTED	
Q_DRIVERINT	1	1	
Q_FOLLOWING	1	0	
N_ITER	5	5	
NID_STM(1)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(1)	8	1	
M_XATTRIBUTE(1)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(1)	5	7	
X_CAPTION(1,1)	8	'V'	
X_CAPTION(1,2)	8	'A'	
X_CAPTION(1,3)	8	'L'	
X_CAPTION(1,4)	8	'U'	
X_CAPTION(1,5)	8	'E'	
X_CAPTION(1,6)	8	' '	
X_CAPTION(1,7)	8	'1'	
L_VALUE(1)	8	1	
X_VALUE(1,1)	8	'A'	
N_ITER(1)	5	3	
L_VALUE(1,1)	8	1	
X_VALUE(1,1,1)	8	'A'	
L_VALUE(1,2)	8	1	
X_VALUE(1,2,1)	8	'B'	
L_VALUE(1,3)	8	1	
X_VALUE(1,3,1)	8	'C'	
NID_STM(2)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated

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NID_DATA(2)	8	2	
M_XATTRIBUTE(2)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(2)	5	7	
X_CAPTION(2,1)	8	'V'	
X_CAPTION(2,2)	8	'A'	
X_CAPTION(2,3)	8	'L'	
X_CAPTION(2,4)	8	'U'	
X_CAPTION(2,5)	8	'E'	
X_CAPTION(2,6)	8	' '	
X_CAPTION(2,7)	8	'2'	
L_VALUE(2)	8	3	
X_VALUE(2,1)	8	'A'	
N_ITER(2)	5	3	
L_VALUE(2,1)	8	1	
X_VALUE(2,1,1)	8	'A'	
L_VALUE(2,2)	8	1	
X_VALUE(2,2,1)	8	"B"	
L_VALUE(2,3)	8	1	
X_VALUE(2,3,1)	8	"C"	
NID_STM(3)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(3)	8	3	
M_XATTRIBUTE(3)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(3)	5	7	
X_CAPTION(3,1)	8	'V'	
X_CAPTION(3,2)	8	'A'	
X_CAPTION(3,3)	8	'L'	
X_CAPTION(3,4)	8	'U'	
X_CAPTION(3,5)	8	'E'	
X_CAPTION(3,6)	8	' '	
X_CAPTION(3,7)	8	'3'	
L_VALUE(3)	8	1	
X_VALUE(3,1)	8	'A'	
N_ITER(3)	5	3	
L_VALUE(3,1)	8	1	

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X_VALUE(3,1,1)	8	'A'	
L_VALUE(3,2)	8	1	
X_VALUE(3,2,1)	8	'B'	
L_VALUE(3,3)	8	1	
X_VALUE(3,3,1)	8	'C'	
NID_STM(4)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(4)	8	4	
M_XATTRIBUTE(4)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(4)	5	7	
X_CAPTION(4,1)	8	'V'	
X_CAPTION(4,2)	8	'A'	
X_CAPTION(4,3)	8	'L'	
X_CAPTION(4,4)	8	'U'	
X_CAPTION(4,5)	8	'E'	
X_CAPTION(4,6)	8	' '	
X_CAPTION(4,7)	8	'4'	
L_VALUE(4)	8	1	
X_VALUE(4,1)	8	'A'	
N_ITER(4)	5	3	
L_VALUE(4,1)	8	1	
X_VALUE(4,1,1)	8	'A'	
L_VALUE(4,2)	8	1	
X_VALUE(4,2,1)	8	'B'	
L_VALUE(4,3)	8	1	
X_VALUE(4,3,1)	8	'C'	
NID_STM(5)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(5)	8	5	
M_XATTRIBUTE(5)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(5)	5	7	
X_CAPTION(5,1)	8	'V'	
X_CAPTION(5,2)	8	'A'	
X_CAPTION(5,3)	8	'L'	
X_CAPTION(5,4)	8	'U'	
X_CAPTION(5,5)	8	'E'	

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X_CAPTION(5,6)	8	' '	
X_CAPTION(5,7)	8	'5'	
L_VALUE(5)	8	1	
X_VALUE(5,1)	8	'A'	
N_ITER(5)	5	3	
L_VALUE(5,1)	8	1	
X_VALUE(5,1,1)	8	'A'	
L_VALUE(5,2)	8	1	
X_VALUE(5,2,1)	8	'B'	
L_VALUE(5,3)	8	1	
X_VALUE(5,3,1)	8	'C'	
Padding bits	COMPUTED	COMPUTED	

Message 5: (ETCS=> STM) Packet STM-180 Specific STM Data to STM			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	180	Specific STM Data to STM
L_PACKET	13	COMPUTED	
N_ITER	5	5	
NID_STM(1)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(1)	8	1	
L_VALUE(1)	8	1	
X_VALUE(1,1)	8	FINITE VALUE	
NID_STM(2)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(2)	8	2	
L_VALUE(2)	8	1	
X_VALUE(2,1)	8	FINITE VALUE	
NID_STM(3)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(3)	8	3	
L_VALUE(3)	8	1	
X_VALUE(3,1)	8	FINITE VALUE	
NID_STM(4)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(4)	8	4	
L_VALUE(4)	8	1	
X_VALUE(4,1)	8	FINITE VALUE	
NID_STM(5)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(5)	8	5	
L_VALUE(5)	8	1	
X_VALUE(5,1)	8	FINITE VALUE	
Padding bits	COMPUTED	COMPUTED	

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Message 6: (STM => ETCS) Packet STM-179 Specific Data Entry			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	2	DE
NID_PACKET	8	179	Specific STM Data Entry Request
L_PACKET	13	COMPUTED	
Q_DRIVERINT	1	1	
Q_FOLLOWING	1	0	
N_ITER	5	5	
NID_STM(1)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(1)	8	6	
M_XATTRIBUTE(1)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(1)	5	7	
X_CAPTION(1,1)	8	'V'	
X_CAPTION(1,2)	8	'A'	
X_CAPTION(1,3)	8	'L'	
X_CAPTION(1,4)	8	'U'	
X_CAPTION(1,5)	8	'E'	
X_CAPTION(1,6)	8	' '	
X_CAPTION(1,7)	8	'6'	
L_VALUE(1)	8	1	
X_VALUE(1,1)	8	'A'	
N_ITER(1)	5	3	
L_VALUE(1,1)	8	1	
X_VALUE(1,1,1)	8	'A'	
L_VALUE(1,2)	8	1	
X_VALUE(1,2,1)	8	'B'	
L_VALUE(1,3)	8	1	
X_VALUE(1,3,1)	8	'C'	
NID_STM(2)	8	FINITE VALUE	Use <b>ANOTHER</b> palette of the STM to be tested or simulated

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NID_DATA(2)	8	7	
M_XATTRIBUTE(2)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(2)	5	7	
X_CAPTION(2,1)	8	'V'	
X_CAPTION(2,2)	8	'A'	
X_CAPTION(2,3)	8	'L'	
X_CAPTION(2,4)	8	'U'	
X_CAPTION(2,5)	8	'E'	
X_CAPTION(2,6)	8	' '	
X_CAPTION(2,7)	8	'7'	
L_VALUE(2)	8	1	
X_VALUE(2,1)	8	'A'	
N_ITER(2)	5	3	
L_VALUE(2,1)	8	1	
X_VALUE(2,1,1)	8	'A'	
L_VALUE(2,2)	8	1	
X_VALUE(2,2,1)	8	'B'	
L_VALUE(2,3)	8	1	
X_VALUE(2,3,1)	8	'C'	
NID_STM(3)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(3)	8	8	
M_XATTRIBUTE(3)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(3)	5	7	
X_CAPTION(3,1)	8	'V'	
X_CAPTION(3,2)	8	'A'	
X_CAPTION(3,3)	8	'L'	
X_CAPTION(3,4)	8	'U'	
X_CAPTION(3,5)	8	'E'	
X_CAPTION(3,6)	8	' '	
X_CAPTION(3,7)	8	'8'	
L_VALUE(3)	8	1	
X_VALUE(3,1)	8	'A'	
N_ITER(3)	5	3	
L_VALUE(3,1)	8	1	

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X_VALUE(3,1,1)	8	'A'	
L_VALUE(3,2)	8	1	
X_VALUE(3,2,1)	8	'B'	
L_VALUE(3,3)	8	1	
X_VALUE(3,3,1)	8	'C'	
NID_STM(4)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(4)	8	9	
M_XATTRIBUTE(4)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(4)	5	7	
X_CAPTION(4,1)	8	'V'	
X_CAPTION(4,2)	8	'A'	
X_CAPTION(4,3)	8	'L'	
X_CAPTION(4,4)	8	'U'	
X_CAPTION(4,5)	8	'E'	
X_CAPTION(4,6)	8	' '	
X_CAPTION(4,7)	8	'g'	
L_VALUE(4)	8	1	
X_VALUE(4,1)	8	'A'	
N_ITER(4)	5	3	
L_VALUE(4,1)	8	1	
X_VALUE(4,1,1)	8	'A'	
L_VALUE(4,2)	8	1	
X_VALUE(4,2,1)	8	'B'	
L_VALUE(4,3)	8	1	
X_VALUE(4,3,1)	8	'C'	
NID_STM(5)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(5)	8	10	
M_XATTRIBUTE(5)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(5)	5	8	
X_CAPTION(5,1)	8	'V'	
X_CAPTION(5,2)	8	'A'	
X_CAPTION(5,3)	8	'L'	
X_CAPTION(5,4)	8	'U'	
X_CAPTION(5,5)	8	'E'	

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X_CAPTION(5,6)	8	' '	
X_CAPTION(5,7)	8	'1'	
X_CAPTION(5,8)	8	'0'	
L_VALUE(5)	8	1	
X_VALUE(5,1)	8	'A'	
N_ITER(5)	5	'3'	
L_VALUE(5,1)	8	1	
X_VALUE(5,1,1)	8	'A'	
L_VALUE(5,2)	8	1	
X_VALUE(5,2,1)	8	'B'	
L_VALUE(5,3)	8	1	
X_VALUE(5,3,1)	8	'C'	
Padding bits	COMPUTED	COMPUTED	

Message 7: (ETCS=> STM) Packet STM-180 Specific STM Data to STM			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	180	Specific STM Data to STM
L_PACKET	13	COMPUTED	
N_ITER	5	5	
NID_STM(1)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(1)	8	6	
L_VALUE(1)	8	1	
X_VALUE(1,1)	8	FINITE VALUE	
NID_STM(2)	8	FINITE VALUE	Use <b>ANOTHER</b> palette of the STM to be tested or simulated
NID_DATA(2)	8	7	
L_VALUE(2)	8	1	
X_VALUE(2,1)	8	FINITE VALUE	
NID_STM(3)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(3)	8	8	
L_VALUE(3)	8	1	
X_VALUE(3,1)	8	FINITE VALUE	
NID_STM(4)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(4)	8	9	
L_VALUE(4)	8	1	
X_VALUE(4,1)	8	FINITE VALUE	
NID_STM(5)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(5)	8	10	
L_VALUE(5)	8	3	
X_VALUE(5,1)	8	FINITE VALUE	
Padding bits	COMPUTED	COMPUTED	

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Message 8: (STM => ETCS) Packet STM-179 End of Specific Data Entry			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	2	DE
NID_PACKET	8	179	Specific STM data entry request
L_PACKET	13	COMPUTED	
Q_DRIVERINT	1	0	
Q_FOLLOWING	1	0	
N_ITER	5	0	End of Specific Data Entry
Padding bits	COMPUTED	COMPUTED	

Message 9: (STM => ETCS STM control function) Packet STM-13 State request from STM.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	3	DE
NID_PACKET	8	13	State request from STM
L_PACKET	13	COMPUTED	
NID_STMSTATEREQUEST	4	4	CS
Padding bits	COMPUTED	COMPUTED	

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Message 10: (ETCS STM control function => STM) Packet STM-14 State order to STM.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	14	State order to STM
L_PACKET	13	COMPUTED	
NID_STMSTATEORDER	4	4	Unconditional order to CS
Padding bits	COMPUTED	COMPUTED	

Message 11: (ETCS STM control function => STM) Packet STM-14 State order to STM.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	14	State order to STM
L_PACKET	13	COMPUTED	
NID_STMSTATEORDER	4	8	FA
Padding bits	COMPUTED	COMPUTED	

End Conditions		Value	Comments
STM_STATE		FA	
ETCS Mode		Unchanged	
ETCS Level		Unchanged	
Train State		Unchanged	
Train Data		Unchanged	
Additional Data		Unchanged	
National Values		Unchanged	
STM Control Function Connection		Unchanged	
DMI Connection		Unchanged	
Odometry Data		Unchanged	
Reference Time Data		Unchanged	
TIU Connection		Unchanged	
BIU Connection		Unchanged	
JRU Connection		Unchanged	
Other connections		Unchanged	
TIU Regenerative Brake Command		Unchanged	
TIU Magnetic Shoes Command		Unchanged	
TIU Eddy Current Brake Command		Unchanged	
TIU Inhibit Passenger Emergency Brake Command		Unchanged	
TIU Pantograph Command		Unchanged	
TIU Air Tightness Command		Unchanged	
TIU Main Switch / Circuit Breaker Command		Unchanged	
TIU Traction Cut Off Command		Unchanged	
TIU Sleeping Status		Unchanged	
TIU Traction Cut Off Status		Unchanged	
TIU Direction Controller Position Status		Unchanged	
TIU Cab Status (Desk Status)		Unchanged	
BIU Status		Unchanged	
BIU Emergency Brake Command		Unchanged	
BIU Service Brake Command		Unchanged	
BIU Emergency Brake Status		Unchanged	
BIU Service Brake Status		Unchanged	
STM Version Number	Subset-026	1.0	

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	Subset-035	3.0.z	
	Subset-058	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
ETCS Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
	Subset-058	3.0.z	
Track Adhesion		Unchanged	

## TEST CASE 10A.0.2

TEST CASE HEADER	
Test case Identification	Functional identity Procedure Specific Data Entry / Data View
	Data Entry at Start-up. The STM does not answer in due time.
ETCS Requirements Tested	Subset-035: 7.4.1.2.3; 7.4.1.2.2; 7.4.1.2.4.
	Subset-026: None .
STM Requirements Tested	Subset-035: None.
	Subset-026: None
Packets transmitted via FFFIS STM	STM-13, STM-14, STM-15.
Comments and constraints	This test case is only valid when the STM shall request Specific Data Entry



Starting Conditions	Value	Comments
STM_STATE	CO	
ETCS Mode	SB	
ETCS Level	1	
Train State	Standstill	
Train Data	Invalid	
Additional Data	Invalid	
National Values	Invalid	
STM Control Function Connection	Established	
DMI Connection	Not established	
Odometry Data	Not relevant	
Reference Time Data	Transmitted	
TIU Connection	Not relevant	
BIU Connection	Not relevant	
JRU Connection	Not relevant	
Other connections	Not relevant	
TIU Regenerative Brake Command	Not relevant	
TIU Magnetic Shoes Command	Not relevant	
TIU Eddy Current Brake Command	Not relevant	
TIU Inhibit Passenger Emergency Brake Command	Not relevant	
TIU Pantograph Command	Not relevant	
TIU Air Tightness Command	Not relevant	
TIU Main Switch / Circuit Breaker Command	Not relevant	
TIU Traction Cut Off Command	Not relevant	
TIU Sleeping Status	Not Sleeping	
TIU Traction Cut Off Status	Not relevant	
TIU Direction Controller Position Status	Not relevant	
TIU Cab Status (Desk Status)	Desk A opened	
BIU Status	Not relevant	
BIU Emergency Brake Command	Not relevant	
BIU Service Brake Command	Not relevant	
BIU Emergency Brake Status	Not relevant	

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BIU Service Brake Status		Not relevant	
STM Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-058	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
ETCS Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
	Subset-058	3.0.z	
Track Adhesion		Not relevant	

**Test case for ETCS On-board:**

Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
-	This test case is only valid when the STM shall request Specific Data Entry					
1.	The ETCS receives from STM a DE state request (7.4.1.2.3; 7.4.1.2.2; 7.4.1.2.4; 5.2.12.1) TIME: T0	Prof	Message 1: STM-13 State request from STM. STM-15 State report from STM	ETCS	Prof	Message 2: Packet STM-14 State order to STM
2.	STM does not report DE state in due time. TIME: T0+10s	Prof	-	ETCS		Message 3: Packet STM-14 State order to STM to go to FA

**Test case for STM:**

Not applicable. Degraded mode is not tested.

Message 1: (STM => ETCS STM control function) Packet STM-13 State request from STM.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	2	CO
NID_PACKET	8	13	State request from STM
L_PACKET	13	COMPUTED	
NID_STMSTATEREQUEST	4	3	DE
Padding bits	COMPUTED	COMPUTED	

Message 2: (ETCS STM control function => STM) Packet STM-14 State order to STM.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	14	State order to STM
L_PACKET	13	COMPUTED	
NID_STMSTATEORDER	4	3	DE
Padding bits	COMPUTED	COMPUTED	

Message 3: (ETCS STM control function => STM) Packet STM-14 State order to STM.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	14	State order to STM
L_PACKET	13	COMPUTED	
NID_STMSTATEORDER	4	8	FA
Padding bits	COMPUTED	COMPUTED	

End Conditions		Value	Comments
STM_STATE		FA	
ETCS Mode		Unchanged	
ETCS Level		Unchanged	
Train State		Unchanged	
Train Data		Unchanged	
Additional Data		Unchanged	
National Values		Unchanged	
STM Control Function Connection		Unchanged	
DMI Connection		Unchanged	
Odometry Data		Unchanged	
Reference Time Data		Unchanged	
TIU Connection		Unchanged	
BIU Connection		Unchanged	
JRU Connection		Unchanged	
Other connections		Unchanged	
TIU Regenerative Brake Command		Unchanged	
TIU Magnetic Shoes Command		Unchanged	
TIU Eddy Current Brake Command		Unchanged	
TIU Inhibit Passenger Emergency Brake Command		Unchanged	
TIU Pantograph Command		Unchanged	
TIU Air Tightness Command		Unchanged	
TIU Main Switch / Circuit Breaker Command		Unchanged	
TIU Traction Cut Off Command		Unchanged	
TIU Sleeping Status		Unchanged	
TIU Traction Cut Off Status		Unchanged	
TIU Direction Controller Position Status		Unchanged	
TIU Cab Status (Desk Status)		Unchanged	
BIU Status		Unchanged	
BIU Emergency Brake Command		Unchanged	
BIU Service Brake Command		Unchanged	
BIU Emergency Brake Status		Unchanged	
BIU Service Brake Status		Unchanged	
STM Version Number	Subset-026	1.0	

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	Subset-035	3.0.z	
	Subset-058	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
ETCS Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
	Subset-058	3.0.z	
Track Adhesion		Unchanged	

TEST CASE 10A.0.1.0.2.0.1.0.2.0.2.0.2.0.3.0.2.0.4.1

TEST CASE HEADER	
Test case Identification	Functional identity Procedure Specific Data Entry / Data View
	Data Entry at Start-up. STM answers in due time. Driver reaction is not needed. The train is at standstill.
ETCS Requirements Tested	Subset-035: 7.4.1.2.3; 7.4.1.2.2; 7.4.1.2.4; 5.2.12.1; 7.4.1.1.13; 5.2.12.3; 13.1.1.1.8; 13.1.1.1.23; 13.1.1.1.16; 13.1.1.2.5; 13.1.1.2.7; 13.1.1.1.17; 13.1.1.1.6; 13.1.1.1.18; 7.4.1.2.3; 7.4.1.2.2; 7.4.1.2.4.2
	Subset-026: None
STM Requirements Tested	Subset-035: None
	Subset-026: None
Packets transmitted via FFFIS STM	STM-13, STM-14, STM-15, STM-175, STM-176, STM-177, STM-178, STM-179, STM-180.
Comments and constraints	This test case is only valid when the STM shall request Specific Data Entry

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Starting Conditions	Value	Comments
STM_STATE	CO	
ETCS Mode	SB	
ETCS Level	1	
Train State	Standstill	
Train Data	Invalid	
Additional Data	Invalid	
National Values	Invalid	
STM Control Function Connection	Established	
DMI Connection	Not established	
Odometry Data	Not relevant	
Reference Time Data	Transmitted	
TIU Connection	Not relevant	
BIU Connection	Not relevant	
JRU Connection	Not relevant	
Other connections	Not relevant	
TIU Regenerative Brake Command	Not relevant	
TIU Magnetic Shoes Command	Not relevant	
TIU Eddy Current Brake Command	Not relevant	
TIU Inhibit Passenger Emergency Brake Command	Not relevant	
TIU Pantograph Command	Not relevant	
TIU Air Tightness Command	Not relevant	
TIU Main Switch / Circuit Breaker Command	Not relevant	
TIU Traction Cut Off Command	Not relevant	
TIU Sleeping Status	Not Sleeping	
TIU Traction Cut Off Status	Not relevant	
TIU Direction Controller Position Status	Not relevant	
TIU Cab Status (Desk Status)	Desk A opened	
BIU Status	Not relevant	
BIU Emergency Brake Command	Not relevant	
BIU Service Brake Command	Not relevant	
BIU Emergency Brake Status	Not relevant	

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BIU Service Brake Status		Not relevant	
STM Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-058	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
ETCS Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
	Subset-058	3.0.z	
Track Adhesion		Not relevant	

**Test case for ETCS On-board:**

Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
-	This test case is only valid when the STM shall request Specific Data Entry					
1.	ETCS transmit the ETCS data to STM. (7.4.1.1.13)	DMI	Driver enters and validates ETCS Train Data	ETCS	Prof	Message 3: Packet STM-175 Train Data Packet STM-176 Train Data additional „braking characteristic” to STM Packet STM-177: Additional Data Values and date/time to STM Packet STM-178 National Values to STM
2.	The ETCS receives from STM a DE state request (7.4.1.2.3; 7.4.1.2.2; 7.4.1.2.4; 5.2.12.1)	Prof	Message 1: STM-13 State request from STM. STM-15 State report from STM	ETCS	Prof	Message 2: Packet STM-14 State order to STM
3.	STM sends a message for specific data entry with 5 data and a set of character of ISO8859-1. This request of specific data entry does not request a driver reaction. (5.2.12.1; 7.4.1.1.13; 5.2.12.3; 13.1.1.1.8; 13.1.1.1.23; 13.1.1.1.16; 13.1.1.2.6)	Prof	Message 4 : Packet STM-179 Specific STM data-entry request Packet STM-15 State report from STM	ETCS	Prof	Message 5 Packet STM-180 Specific STM Data to STM
4.	The STM is allowed to request the same data to the STM.(13.1.1.2.7; 13.1.1.1.18)	Prof	Message 4 : Packet STM-179 Specific STM data-entry request Packet STM-15 State report from STM	ETCS	Prof	Message 5 Packet STM- 180 Specific STM Data to STM

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Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
5.	The STM is allowed to request the another data to the STM with another palette for one data. (13.1.1.1.17; 13.1.1.1.5)	Prof	Message 6 : Packet STM-179 Specific STM data-entry request Packet STM-15 State report from STM	ETCS	Prof	Message 7: Packet STM-180 Specific STM Data to STM
6.	STM shall send the "END of specific data entry" (13.1.1.2.7)	Prof	Message 8: Packet 179 with N_ITER = 0 Packet-STM-15 State report from STM	ETCS		
7.	STM shall request CS state (7.4.1.2.3; 7.4.1.2.2; 7.4.1.2.4.2)	Prof	Message 9: Packet STM-13 State request from STM. Packet STM-15 State report from STM	ETCS	Prof	Message 10: Packet STM-14 State order to STM
8.	STM reports CS state in due time.	Prof	Message 11: Packet STM-15 State report from STM	ETCS		

**Test case for STM:**

All requirement are tested in test case 10A.0.1.0.1.0.1.0.1.0.2.0.1.0.3.0.1.0.4.1

Message 1: (STM => ETCS STM control function) Packet STM-13 State request from STM.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	2	CO
NID_PACKET	8	13	State request from STM
L_PACKET	13	COMPUTED	
NID_STMSTATEREQUEST	4	3	DE
Padding bits	COMPUTED	COMPUTED	

Message 2: (ETCS STM control function => STM) Packet STM-14 State order to STM.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	14	State order to STM
L_PACKET	13	COMPUTED	
NID_STMSTATEORDER	4	3	DE
Padding bits	COMPUTED	COMPUTED	

Message 3: (ETCS => STM) Packet STM-175 TRAIN DATA, STM-176 STM-177, STM-178 ADDITIONALTrain Data.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	175	Train Data
L_PACKET	13	COMPUTED	
NID_OPERATIONAL	32	FINITE VALUE	
NC_TRAIN	15	FINITE VALUE	
L_TRAIN	12	FINITE VALUE	
V_MAXTRAIN	7	FINITE VALUE	
M_LOADINGGAUGE	8	FINITE VALUE	
M_AXLELOAD	7	FINITE VALUE	
M_AIRTIGHT	2	FINITE VALUE	
N_ITER	5	0	
NID_PACKET	8	176	Train data additional 'braking characteristic' to STM
L_PACKET	13	COMPUTED	
T_BEGIN_SB_EF	16	FINITE VALUE	
T_FULL_SB_EF	16	FINITE VALUE	
N_ITER	5	0	
T_BEGIN_EB_EF	10	FINITE VALUE	
T_FULL_EB_EF	8	FINITE VALUE	
N_ITER	5	0	
T_TRQCTION_CUT_OFF	16	FINITE VALUE	
A_MAX	8	FINITE VALUE	
NID_PACKET	8	177	ETCS additional data and date / Time
L_PACKET	13	COMPUTED	
NID_DRIVER	32	FINITE VALUE	
NID_ENGINE	24	FINITE VALUE	
M_ADHESION	1	FINITE VALUE	
T_YEAR	7	FINITE VALUE	
T_MONTH	4	FINITE VALUE	
T_DAY	5	FINITE VALUE	
T_MINUTES	5	FINITE VALUE	

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T_SECONDS	6	FINITE VALUE	
T_TTS	5	FINITE VALUE	
NID_PACKET	8	178	National Value To STM
L_PACKET	13	COMPUTED	
Q_SCALE	2	FINITE VALUE	
V_NVSHUNT	7	FINITE VALUE	
V_NVSTFF	7	FINITE VALUE	
V_NVONSIGHT	7	FINITE VALUE	
V_NVUNFIT	7	FINITE VALUE	
V_NVREL	7	FINITE VALUE	
D_NVROLL	15	FINITE VALUE	
V_NVALLOWOVTRP	7	FINITE VALUE	
V_NVSUPOVTRP	7	FINITE VALUE	
D_NVOVTRP	15	FINITE VALUE	
T_NVOVTRP	8	FINITE VALUE	
D_NVPOTRP	15	FINITE VALUE	
D_NVSTFF	15	FINITE VALUE	
Q_NVDRIVER_ADHES	1	FINITE VALUE	
Padding bits	COMPUTED	COMPUTED	

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Message 4: (STM => ETCS) Packet STM-179 Specific Data Entry			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	2	DE
NID_PACKET	8	179	Specific STM data entry request
L_PACKET	13	COMPUTED	
Q_DRIVERINT	1	0	No driver intervention is requested
Q_FOLLOWING	1	0	
N_ITER	5	5	
NID_STM(1)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(1)	8	1	
M_XATTRIBUTE(1)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(1)	5	7	
X_CAPTION(1,1)	8	'V'	
X_CAPTION(1,2)	8	'A'	
X_CAPTION(1,3)	8	'L'	
X_CAPTION(1,4)	8	'U'	
X_CAPTION(1,5)	8	'E'	
X_CAPTION(1,6)	8	' '	
X_CAPTION(1,7)	8	'1'	
L_VALUE(1)	8	A	
X_VALUE(1,1)	8	'A'	
N_ITER(1)	5	3	
L_VALUE(1,1)	8	1	
X_VALUE(1,1,1)	8	'A'	
L_VALUE(1,2)	8	1	
X_VALUE(1,2,1)	8	'B'	
L_VALUE(1,3)	8	1	
X_VALUE(1,3,1)	8	'C'	
NID_STM(2)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated

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NID_DATA(2)	8	2	
M_XATTRIBUTE(2)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(2)	5	7	
X_CAPTION(2,1)	8	'V'	
X_CAPTION(2,2)	8	'A'	
X_CAPTION(2,3)	8	'L'	
X_CAPTION(2,4)	8	'U'	
X_CAPTION(2,5)	8	'E'	
X_CAPTION(2,6)	8	' '	
X_CAPTION(2,7)	8	'2'	
L_VALUE(2)	8	'1'	
X_VALUE(2,1)	8	'A'	
N_ITER(2)	5	3	
L_VALUE(2,1)	8	1	
X_VALUE(2,1,1)	8	'A'	
L_VALUE(2,2)	8	1	
X_VALUE(2,2,1)	8	'B'	
L_VALUE(2,3)	8	1	
X_VALUE(2,3,1)	8	'C'	
NID_STM(3)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(3)	8	3	
M_XATTRIBUTE(3)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(3)	5	7	
X_CAPTION(3,1)	8	'V'	
X_CAPTION(3,2)	8	'A'	
X_CAPTION(3,3)	8	'L'	
X_CAPTION(3,4)	8	'U'	
X_CAPTION(3,5)	8	'E'	
X_CAPTION(3,6)	8	' '	
X_CAPTION(3,7)	8	'3'	
L_VALUE(3)	8	1	
X_VALUE(3,1)	8	'A'	
N_ITER(3)	5	3	
L_VALUE(3,1)	8	1	

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X_VALUE(3,1,1)	8	'A'	
L_VALUE(3,2)	8	1	
X_VALUE(3,2,1)	8	'B'	
L_VALUE(3,3)	8	1	
X_VALUE(3,3,1)	8	'C'	
NID_STM(4)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(4)	8	4	
M_XATTRIBUTE(4)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(4)	5	7	
X_CAPTION(4,1)	8	'V'	
X_CAPTION(4,2)	8	'A'	
X_CAPTION(4,3)	8	'L'	
X_CAPTION(4,4)	8	'U'	
X_CAPTION(4,5)	8	'E'	
X_CAPTION(4,6)	8	' '	
X_CAPTION(4,7)	8	'4'	
L_VALUE(4)	8	1	
X_VALUE(4,1)	8	'A'	
N_ITER(4)	5	3	
L_VALUE(4,1)	8	1	
X_VALUE(4,1,1)	8	'-A'	
L_VALUE(4,2)	8	1	
X_VALUE(4,2,1)	8	'B'	
L_VALUE(4,3)	8	1	
X_VALUE(4,3,1)	8	'C'	
NID_STM(5)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(5)	8	5	
M_XATTRIBUTE(5)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(5)	5	7	
X_CAPTION(5,1)	8	'V'	
X_CAPTION(5,2)	8	'A'	
X_CAPTION(5,3)	8	'L'	
X_CAPTION(5,4)	8	'U'	
X_CAPTION(5,5)	8	'E'	

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X_CAPTION(5,6)	8	' '	
X_CAPTION(5,7)	8	'5'	
L_VALUE(5)	8	1	
X_VALUE(5,1)	8	'A'	
N_ITER(5)	5	3	
L_VALUE(5,1)	8	1	
X_VALUE(5,1,1)	8	'A'	
L_VALUE(5,2)	8	1	
X_VALUE(5,2,1)	8	'B'	
L_VALUE(5,3)	8	1	
X_VALUE(5,3,1)	8	'C'	
Padding bits	COMPUTED	COMPUTED	

Message 5: (ETCS=> STM) Packet STM-180 Specific STM Data to STM			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	180	Specific STM Data to STM
L_PACKET	13	COMPUTED	
N_ITER	5	5	
NID_STM(1)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(1)	8	1	
L_VALUE(1)	8	1	
X_VALUE(1,1)	8	FINITE VALUE	
NID_STM(2)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(2)	8	2	
L_VALUE(2)	8	1	
X_VALUE(2,1)	8	FINITE VALUE	
NID_STM(3)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(3)	8	3	
L_VALUE(3)	8	1	
X_VALUE(3,1)	8	FINITE VALUE	
NID_STM(4)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(4)	8	4	
L_VALUE(4)	8	1	
X_VALUE(4,1)	8	FINITE VALUE	
NID_STM(5)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(5)	8	5	
L_VALUE(5)	8	1	
X_VALUE(5,1)	8	FINITE VALUE	
Padding bits	COMPUTED	COMPUTED	

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Message 6: (STM => ETCS) Packet STM-179 Specific Data Entry			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	2	DE
NID_PACKET	8	179	Specific STM Data Entry Request
L_PACKET	13	COMPUTED	
Q_DRIVERINT	1	0	No driver intervention is requested
Q_FOLLOWING	1	0	
N_ITER	5	5	
NID_STM(1)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(1)	8	6	
M_XATTRIBUTE(1)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(1)	5	7	
X_CAPTION(1,1)	8	'V'	
X_CAPTION(1,2)	8	'A'	
X_CAPTION(1,3)	8	'L'	
X_CAPTION(1,4)	8	'U'	
X_CAPTION(1,5)	8	'E'	
X_CAPTION(1,6)	8	' '	
X_CAPTION(1,7)	8	'6'	
L_VALUE(1)	8	1	
X_VALUE(1,1)	8	'A'	
N_ITER(1)	5	3	
L_VALUE(1,1)	8	1	
X_VALUE(1,1,1)	8	'A'	
L_VALUE(1,2)	8	1	
X_VALUE(1,2,1)	8	'B'	
L_VALUE(1,3)	8	1	
X_VALUE(1,3,1)	8	FINITE VALUE	
NID_STM(2)	8	'C'	Use <b>ANOTHER</b> palette of the STM to be tested or simulated

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NID_DATA(2)	8	7	
M_XATTRIBUTE(2)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(2)	5	7	
X_CAPTION(2,1)	8	'V'	
X_CAPTION(2,2)	8	'A'	
X_CAPTION(2,3)	8	'L'	
X_CAPTION(2,4)	8	'U'	
X_CAPTION(2,5)	8	'E'	
X_CAPTION(2,6)	8	' '	
X_CAPTION(2,7)	8	'7'	
L_VALUE(2)	8	1	
X_VALUE(2,1)	8	'A'	
N_ITER(2)	5	3	
L_VALUE(2,1)	8	1	
X_VALUE(2,1,1)	8	'A'	
L_VALUE(2,2)	8	1	
X_VALUE(2,2,1)	8	'B'	
L_VALUE(2,3)	8	1	
X_VALUE(2,3,1)	8	'C'	
NID_STM(3)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(3)	8	8	
M_XATTRIBUTE(3)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(3)	5	7	
X_CAPTION(3,1)	8	'V'	
X_CAPTION(3,2)	8	'A'	
X_CAPTION(3,3)	8	'L'	
X_CAPTION(3,4)	8	'U'	
X_CAPTION(3,5)	8	'E'	
X_CAPTION(3,6)	8	' '	
X_CAPTION(3,7)	8	'8'	
L_VALUE(3)	8	1	
X_VALUE(3,1)	8	'A'	
N_ITER(3)	5	3	
L_VALUE(3,1)	8	1	

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X_VALUE(3,1,1)	8	'A'	
L_VALUE(3,2)	8	1	
X_VALUE(3,2,1)	8	'B'	
L_VALUE(3,3)	8	1	
X_VALUE(3,3,1)	8	'C'	
NID_STM(4)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(4)	8	9	
M_XATTRIBUTE(4)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(4)	5	7	
X_CAPTION(4,1)	8	'V'	
X_CAPTION(4,2)	8	'A'	
X_CAPTION(4,3)	8	'L'	
X_CAPTION(4,4)	8	'U'	
X_CAPTION(4,5)	8	'E'	
X_CAPTION(4,6)	8	' '	
X_CAPTION(4,7)	8	'g'	
L_VALUE(4)	8	1	
X_VALUE(4,1)	8	'A'	
N_ITER(4)	5	3	
L_VALUE(4,1)	8	1	
X_VALUE(4,1,1)	8	'A'	
L_VALUE(4,2)	8	1	
X_VALUE(4,2,1)	8	'B'	
L_VALUE(4,3)	8	1	
X_VALUE(4,3,1)	8	'C'	
NID_STM(5)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(5)	8	10	
M_XATTRIBUTE(5)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(5)	5	8	
X_CAPTION(5,1)	8	'V'	
X_CAPTION(5,2)	8	'A'	
X_CAPTION(5,3)	8	'L'	
X_CAPTION(5,4)	8	'U'	
X_CAPTION(5,5)	8	'E'	

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X_CAPTION(5,6)	8	' '	
X_CAPTION(5,7)	8	'1'	
X_CAPTION(5,8)	8	'0'	
L_VALUE(5)	8	1	
X_VALUE(5,1)	8	'A'	
N_ITER(5)	5	3	
L_VALUE(5,1)	8	1	
X_VALUE(5,1,1)	8	'A'	
L_VALUE(5,2)	8	1	
X_VALUE(5,2,1)	8	'B'	
L_VALUE(5,3)	8	1	
X_VALUE(5,3,1)	8	'C'	
Padding bits	COMPUTED	COMPUTED	



Message 7: (ETCS=> STM) Packet STM-180 Specific STM Data to STM			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	180	Specific STM Data to STM
L_PACKET	13	COMPUTED	
N_ITER	5	5	
NID_STM(1)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(1)	8	6	
L_VALUE(1)	8	1	
X_VALUE(1,1)	8	FINITE VALUE	
NID_STM(2)	8	FINITE VALUE	Use <b>ANOTHER</b> palette of the STM to be tested or simulated
NID_DATA(2)	8	7	
L_VALUE(2)	8	1	
X_VALUE(2,1)	8	FINITE VALUE	
NID_STM(3)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(3)	8	8	
L_VALUE(3)	8	1	
X_VALUE(3,1)	8	FINITE VALUE	
NID_STM(4)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(4)	8	9	
L_VALUE(4)	8	1	
X_VALUE(4,1)	8	FINITE VALUE	
NID_STM(5)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(5)	8	10	
L_VALUE(5)	8	1	
X_VALUE(5,1)	8	FINITE VALUE	
Padding bits	COMPUTED	COMPUTED	

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Message 8: (STM => ETCS) Packet STM-179 End of Specific Data Entry			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	2	DE
NID_PACKET	8	179	Specific STM data entry request
L_PACKET	13	COMPUTED	
Q_DRIVERINT	1	0	
Q_FOLLOWING	1	0	
N_ITER	5	0	End of Specific Data Entry
Padding bits	COMPUTED	COMPUTED	

Message 9: (STM => ETCS STM control function) Packet STM-13 State request from STM.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	3	DE
NID_PACKET	8	13	State request from STM
L_PACKET	13	COMPUTED	
NID_STMSTATEREQUEST	4	4	CS
Padding bits	COMPUTED	COMPUTED	

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Message 10: (ETCS STM control function => STM) Packet STM-14 State order to STM.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	14	State order to STM
L_PACKET	13	COMPUTED	
NID_STMSTATEORDER	4	4	Unconditional order to CS
Padding bits	COMPUTED	COMPUTED	

Message 11: (STM => ETCS STM control function) Packet STM-15 State request from STM.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	4	CS
Padding bits	COMPUTED	COMPUTED	

End Conditions		Value	Comments
STM_STATE		CS	
ETCS Mode		Unchanged	
ETCS Level		Unchanged	
Train State		Unchanged	
Train Data		Unchanged	
Additional Data		Unchanged	
National Values		Unchanged	
STM Control Function Connection		Unchanged	
DMI Connection		Unchanged	
Odometry Data		Unchanged	
Reference Time Data		Unchanged	
TIU Connection		Unchanged	
BIU Connection		Unchanged	
JRU Connection		Unchanged	
Other connections		Unchanged	
TIU Regenerative Brake Command		Unchanged	
TIU Magnetic Shoes Command		Unchanged	
TIU Eddy Current Brake Command		Unchanged	
TIU Inhibit Passenger Emergency Brake Command		Unchanged	
TIU Pantograph Command		Unchanged	
TIU Air Tightness Command		Unchanged	
TIU Main Switch / Circuit Breaker Command		Unchanged	
TIU Traction Cut Off Command		Unchanged	
TIU Sleeping Status		Unchanged	
TIU Traction Cut Off Status		Unchanged	
TIU Direction Controller Position Status		Unchanged	
TIU Cab Status (Desk Status)		Unchanged	
BIU Status		Unchanged	
BIU Emergency Brake Command		Unchanged	
BIU Service Brake Command		Unchanged	
BIU Emergency Brake Status		Unchanged	
BIU Service Brake Status		Unchanged	
STM Version Number	Subset-026	1.0	

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	Subset-035	3.0.z	
	Subset-058	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
ETCS Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
	Subset-058	3.0.z	
Track Adhesion		Unchanged	

TEST CASE 10B.0.1.0.1.0.1.0.1.0.2.0.1.0.3.0.1.0.4.0

TEST CASE HEADER	
Test case Identification	Functional identity Procedure Specific Data Entry / Data View
	The train was running in level 1 and is now at standstill. STM answers in due time. Driver interaction is needed.
ETCS Requirements Tested	Subset-035: 7.4.1.1.13; 5.2.12.3; 13.1.1.1.8; 13.1.1.1.23;13.1.1.1.16; 13.1.1.2.5; 13.1.1.2.7; 13.1.1.1.17; 13.1.1.1.5; 13.1.1.1.18; 7.4.1.2.5
	Subset-026: None
STM Requirements Tested	Subset-035: 13.1.1.2.4.
	Subset-026: None
Packets transmitted via FFFIS STM	STM-15, STM-175, STM-176, STM-177, STM-178, STM-179, STM-180.
Comments and constraints	This test case is only valid when the STM shall request Specific Data Entry

Starting Conditions	Value	Comments
STM_STATE	CS	
ETCS Mode	FS	
ETCS Level	1	
Train State	Standstill	
Train Data	Valid	
Additional Data	Valid	
National Values	Valid	
STM Control Function Connection	Established	
DMI Connection	Not established	
Odometry Data	transmitted	
Reference Time Data	Transmitted	
TIU Connection	Not relevant	
BIU Connection	Not relevant	
JRU Connection	Not relevant	
Other connections	Not relevant	
TIU Regenerative Brake Command	Not relevant	
TIU Magnetic Shoes Command	Not relevant	
TIU Eddy Current Brake Command	Not relevant	
TIU Inhibit Passenger Emergency Brake Command	Not relevant	
TIU Pantograph Command	Not relevant	
TIU Air Tightness Command	Not relevant	
TIU Main Switch / Circuit Breaker Command	Not relevant	
TIU Traction Cut Off Command	Not relevant	
TIU Sleeping Status	Not Sleeping	
TIU Traction Cut Off Status	Not relevant	
TIU Direction Controller Position Status	Not relevant	
TIU Cab Status (Desk Status)	Desk A opened	
BIU Status	Not relevant	
BIU Emergency Brake Command	Not relevant	
BIU Service Brake Command	Not relevant	
BIU Emergency Brake Status	Not relevant	

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BIU Service Brake Status		Not relevant	
STM Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-058	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
ETCS Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
	Subset-058	3.0.z	
Track Adhesion		Not relevant	



**Test case for ETCS On-board:**

Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
-	This test case is only valid when the STM shall request Specific Data Entry					
1.	ETCS transmit the ETCS data to STM. (7.4.1.1.13)	DMI	Driver enters and validates ETCS Train Data	ETCS	Prof	Message 1: Packet STM-175 Train Data Packet STM-176 Train Data additional „braking characteristic” to STM Packet STM-177: Additional Data Values and date/time to STM Packet STM-178 National Values to STM
2.	STM sends a message for specific data entry with 5 data and a set of character of ISO8859-1. This request of specific data entry request a driver reaction. (5.2.12.3; 13.1.1.1.8; 13.1.1.1.23; 13.1.1.1.16; 13.1.1.2.5)	Prof	Message 2 : Packet STM-179 Specific STM data-entry request Packet STM-15 State report from STM	ETCS	DMI	Specific Data-Entry procedure is started.
3.	ETCS sends the parameter to the STM	DMI	The Driver enters all the needed parameters and acknowledges them.	ETCS	Prof	Message 3: Packet STM-180 Specific STM Data to STM
4.	The STM is allowed to request the same data to the STM.(13.1.1.2.7; 13.1.1.1.18)	Prof	Message 42: Packet STM-179 Specific STM data-entry request Packet STM-15 State report from STM	ETCS	DMI	Driver is requested to enter the specific data entry again.
5.	ETCS sends the parameter to the STM	DMI	The Driver enters all the needed parameters and acknowledges them	ETCS	Prof	Message 3 Packet STM- 180 Specific STM Data to STM

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Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
6.	The STM is allowed to request the another data to the STM with another palette for one data. (13.1.1.1.17; 13.1.1.1.5)	Prof	Message 4 : Packet STM-179 Specific STM data-entry request Packet STM-15 State report from STM	ETCS	DMI	The driver is requested to enter a new specific list of data.
7.	ETCS sends the parameter to the STM	DMI	The Driver enters all the needed parameters and acknowledges them	ETCS	Prof	Message 5: Packet STM-180 Specific STM Data to STM
8.	STM shall send the "END of specific data entry" (13.1.1.2.7)	Prof	Message 6: Packet 179 with N_ITER = 0 Packet-STM-15 State report from STM	ETCS		Check that the STM has not changed the State.

**Test case for STM:**

Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
-	This test case is only valid when the STM shall request Specific Data Entry					

Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
1.	STM shall receive the ETCS train data, the STM requests specific STM data-entry (13.1.1.2.4).	Prof	Message 1: Packet STM-175 Train Data Packet STM-176 Train Data additional „braking characteristic” to STM Packet STM-177: Additional Data Values and date/time to STM Packet STM-178 National Values to STM	STM		
Specific STM Data Entry is performed depending on STM						
3.	ETCS sends the parameter to the STM.	DMI	Message 5: Packet STM-180 Specific STM Data to STM	STM		
4.	Iteration(s) of step 3 and step 4 is possible depending on STM					
Ending Specific Data Entry procedure for STM						
5.	The STM sends the “END of specific data entry”					Message 6: Packet 179 with N_ITER = 0 Packet-STM-15 State report from STM

Message 1: (ETCS => STM) Packet STM-175 TRAIN DATA, STM-176 STM-177, STM-178 ADDITIONAL Train Data.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	175	Train Data
L_PACKET	13	COMPUTED	
NID_OPERATIONAL	32	FINITE VALUE	
NC_TRAIN	15	FINITE VALUE	
L_TRAIN	12	FINITE VALUE	
V_MAXTRAIN	7	FINITE VALUE	
M_LOADINGGAUGE	8	FINITE VALUE	
M_AXLELOAD	7	FINITE VALUE	
M_AIRTIGHT	2	FINITE VALUE	
N_ITER	5	0	
NID_PACKET	8	176	Train data additional 'braking characteristic' to STM
L_PACKET	13	COMPUTED	
T_BEGIN_SB_EF	16	FINITE VALUE	
T_FULL_SB_EF	16	FINITE VALUE	
N_ITER	5	0	
T_BEGIN_EB_EF	10	FINITE VALUE	
T_FULL_EB_EF	8	FINITE VALUE	
N_ITER	5	0	
T_TRQCTION_CUT_OFF	16	FINITE VALUE	
A_MAX	8	FINITE VALUE	
NID_PACKET	8	177	ETCS additional data and date / Time
L_PACKET	13	COMPUTED	
NID_DRIVER	32	FINITE VALUE	
NID_ENGINE	24	FINITE VALUE	
M_ADHESION	1	FINITE VALUE	
T_YEAR	7	FINITE VALUE	
T_MONTH	4	FINITE VALUE	
T_DAY	5	FINITE VALUE	

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T_MINUTES	5	FINITE VALUE	
T_SECONDS	6	FINITE VALUE	
T_TTS	5	FINITE VALUE	
NID_PACKET	8	178	National Value To STM
L_PACKET	13	COMPUTED	
Q_SCALE	2	FINITE VALUE	
V_NVSHUNT	7	FINITE VALUE	
V_NVSTFF	7	FINITE VALUE	
V_NVONSIGHT	7	FINITE VALUE	
V_NVUNFIT	7	FINITE VALUE	
V_NVREL	7	FINITE VALUE	
D_NVROLL	15	FINITE VALUE	
V_NVALLOWOVTRP	7	FINITE VALUE	
V_NVSUPOVTRP	7	FINITE VALUE	
D_NVOVTRP	15	FINITE VALUE	
T_NVOVTRP	8	FINITE VALUE	
D_NVPOTRP	15	FINITE VALUE	
D_NVSTFF	15	FINITE VALUE	
Q_NVDRIVER_ADHES	1	FINITE VALUE	
Padding bits	COMPUTED	COMPUTED	

Message 2: (STM => ETCS) Packet STM-179 Specific Data Entry			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	2	DE
NID_PACKET	8	179	Specific STM data entry request
L_PACKET	13	COMPUTED	
Q_DRIVERINT	1	1	Driver intervention is requested
Q_FOLLOWING	1	0	
N_ITER	5	5	
NID_STM(1)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(1)	8	1	
M_XATTRIBUTE(1)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(1)	5	7	
X_CAPTION(1,1)	8	'V'	
X_CAPTION(1,2)	8	'A'	
X_CAPTION(1,3)	8	'L'	
X_CAPTION(1,4)	8	'U'	
X_CAPTION(1,5)	8	'E'	
X_CAPTION(1,6)	8	' '	
X_CAPTION(1,7)	8	'1'	
L_VALUE(1)	8	1	
X_VALUE(1,1)	8	'A'	
N_ITER(1)	5	3	
L_VALUE(1,1)	8	1	
X_VALUE(1,1,1)	8	'A'	
L_VALUE(1,2)	8	1	
X_VALUE(1,2,1)	8	'B'	
L_VALUE(1,3)	8	1	
X_VALUE(1,3,1)	8	'C'	
NID_STM(2)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated

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NID_DATA(2)	8	2	
M_XATTRIBUTE(2)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(2)	5	7	
X_CAPTION(2,1)	8	'V'	
X_CAPTION(2,2)	8	'A'	
X_CAPTION(2,3)	8	'L'	
X_CAPTION(2,4)	8	'U'	
X_CAPTION(2,5)	8	'E'	
X_CAPTION(2,6)	8	' '	
X_CAPTION(2,7)	8	'2'	
L_VALUE(2)	8	1	
X_VALUE(2,1)	8	'A'	
N_ITER(2)	5	3	
L_VALUE(2,1)	8	1	
X_VALUE(2,1,1)	8	'A'	
L_VALUE(2,2)	8	1	
X_VALUE(2,2,1)	8	'B'	
L_VALUE(2,3)	8	1	
X_VALUE(2,3,1)	8	'C'	
NID_STM(3)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(3)	8	3	
M_XATTRIBUTE(3)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(3)	5	7	
X_CAPTION(3,1)	8	'V'	
X_CAPTION(3,2)	8	'A'	
X_CAPTION(3,3)	8	'L'	
X_CAPTION(3,4)	8	'U'	
X_CAPTION(3,5)	8	'E'	
X_CAPTION(3,6)	8	' '	
X_CAPTION(3,7)	8	'3'	
L_VALUE(3)	8	1	
X_VALUE(3,1)	8	'A'	
N_ITER(3)	5	3	
L_VALUE(3,1)	8	1	

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X_VALUE(3,1,1)	8	'A'	
L_VALUE(3,2)	8	1	
X_VALUE(3,2,1)	8	'B'	
L_VALUE(3,3)	8	1	
X_VALUE(3,3,1)	8	'C'	
NID_STM(4)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(4)	8	4	
M_XATTRIBUTE(4)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(4)	5	7	
X_CAPTION(4,1)	8	'V'	
X_CAPTION(4,2)	8	'A'	
X_CAPTION(4,3)	8	'L'	
X_CAPTION(4,4)	8	'U'	
X_CAPTION(4,5)	8	'E'	
X_CAPTION(4,6)	8	' '	
X_CAPTION(4,7)	8	'4'	
L_VALUE(4)	8	1	
X_VALUE(4,1)	8	'A'	
N_ITER(4)	5	3	
L_VALUE(4,1)	8	1	
X_VALUE(4,1,1)	8	'A'	
L_VALUE(4,2)	8	1	
X_VALUE(4,2,1)	8	'B'	
L_VALUE(4,3)	8	1	
X_VALUE(4,3,1)	8	'C'	
NID_STM(5)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(5)	8	5	
M_XATTRIBUTE(5)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(5)	5	7	
X_CAPTION(5,1)	8	'V'	
X_CAPTION(5,2)	8	'A'	
X_CAPTION(5,3)	8	'L'	
X_CAPTION(5,4)	8	'U'	
X_CAPTION(5,5)	8	'E'	

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X_CAPTION(5,6)	8	' '	
X_CAPTION(5,7)	8	'5'	
L_VALUE(5)	8	1	
X_VALUE(5,1)	8	'A'	
N_ITER(5)	5	3	
L_VALUE(5,1)	8	1	
X_VALUE(5,1,1)	8	'A'	
L_VALUE(5,2)	8	1	
X_VALUE(5,2,1)	8	'B'	
L_VALUE(5,3)	8	1	
X_VALUE(5,3,1)	8	'C'	
Padding bits	COMPUTED	COMPUTED	

Message 3: (ETCS=> STM) Packet STM-180 Specific STM Data to STM			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	180	Specific STM Data to STM
L_PACKET	13	COMPUTED	
N_ITER	5	5	
NID_STM(1)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(1)	8	1	
L_VALUE(1)	8	1	
X_VALUE(1,1)	8	FINITE VALUE	
NID_STM(2)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(2)	8	2	
L_VALUE(2)	8	1	
X_VALUE(2,1)	8	FINITE VALUE	
NID_STM(3)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(3)	8	3	
L_VALUE(3)	8	1	
X_VALUE(3,1)	8	FINITE VALUE	
NID_STM(4)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(4)	8	4	
L_VALUE(4)	8	1	
X_VALUE(4,1)	8	FINITE VALUE	
NID_STM(5)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(5)	8	5	
L_VALUE(5)	8	1	
X_VALUE(5,1)	8	FINITE VALUE	
Padding bits	COMPUTED	COMPUTED	

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Message 4: (STM => ETCS) Packet STM-179 Specific Data Entry			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	2	DE
NID_PACKET	8	179	Specific STM Data Entry Request
L_PACKET	13	COMPUTED	
Q_DRIVERINT	1	1	Driver intervention is requested
Q_FOLLOWING	1	0	
N_ITER	5	5	
NID_STM(1)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(1)	8	6	
M_XATTRIBUTE(1)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(1)	5	7	
X_CAPTION(1,1)	8	'V'	
X_CAPTION(1,2)	8	'A'	
X_CAPTION(1,3)	8	'L'	
X_CAPTION(1,4)	8	'U'	
X_CAPTION(1,5)	8	'E'	
X_CAPTION(1,6)	8	' '	
X_CAPTION(1,7)	8	'6'	
L_VALUE(1)	8	1	
X_VALUE(1,1)	8	'A'	
N_ITER(1)	5	3	
L_VALUE(1,1)	8	1	
X_VALUE(1,1,1)	8	'A'	
L_VALUE(1,2)	8	1	
X_VALUE(1,2,1)	8	'B'	
L_VALUE(1,3)	8	1	
X_VALUE(1,3,1)	8	'C'	
NID_STM(2)	8	FINITE VALUE	Use <b>ANOTHER</b> palette of the STM to be tested or simulated

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NID_DATA(2)	8	7	
M_XATTRIBUTE(2)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(2)	5	7	
X_CAPTION(2,1)	8	'V'	
X_CAPTION(2,2)	8	'A'	
X_CAPTION(2,3)	8	'L'	
X_CAPTION(2,4)	8	'U'	
X_CAPTION(2,5)	8	'E'	
X_CAPTION(2,6)	8	' '	
X_CAPTION(2,7)	8	'7'	
L_VALUE(2)	8	1	
X_VALUE(2,1)	8	'A'	
N_ITER(2)	5	3	
L_VALUE(2,1)	8	1	
X_VALUE(2,1,1)	8	'A'	
L_VALUE(2,2)	8	1	
X_VALUE(2,2,1)	8	'B'	
L_VALUE(2,3)	8	1	
X_VALUE(2,3,1)	8	'C'	
NID_STM(3)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(3)	8	8	
M_XATTRIBUTE(3)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(3)	5	7	
X_CAPTION(3,1)	8	'V'	
X_CAPTION(3,2)	8	'A'	
X_CAPTION(3,3)	8	'L'	
X_CAPTION(3,4)	8	'U'	
X_CAPTION(3,5)	8	'E'	
X_CAPTION(3,6)	8	' '	
X_CAPTION(3,7)	8	'8'	
L_VALUE(3)	8	1	
X_VALUE(3,1)	8	'A'	
N_ITER(3)	5	3	
L_VALUE(3,1)	8	1	

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X_VALUE(3,1,1)	8	'A'	
L_VALUE(3,2)	8	1	
X_VALUE(3,2,1)	8	'B'	
L_VALUE(3,3)	8	1	
X_VALUE(3,3,1)	8	'C'	
NID_STM(4)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(4)	8	9	
M_XATTRIBUTE(4)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(4)	5	7	
X_CAPTION(4,1)	8	'V'	
X_CAPTION(4,2)	8	'A'	
X_CAPTION(4,3)	8	'L'	
X_CAPTION(4,4)	8	'U'	
X_CAPTION(4,5)	8	'E'	
X_CAPTION(4,6)	8	' '	
X_CAPTION(4,7)	8	'g'	
L_VALUE(4)	8	1	
X_VALUE(4,1)	8	'A'	
N_ITER(4)	5	3	
L_VALUE(4,1)	8	1	
X_VALUE(4,1,1)	8	'A'	
L_VALUE(4,2)	8	1	
X_VALUE(4,2,1)	8	'B'	
L_VALUE(4,3)	8	1	
X_VALUE(4,3,1)	8	'C'	
NID_STM(5)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(5)	8	10	
M_XATTRIBUTE(5)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(5)	5	8	
X_CAPTION(5,1)	8	'V'	
X_CAPTION(5,2)	8	'A'	
X_CAPTION(5,3)	8	'L'	
X_CAPTION(5,4)	8	'U'	
X_CAPTION(5,5)	8	'E'	

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X_CAPTION(5,6)	8	' '	
X_CAPTION(5,7)	8	'1'	
X_CAPTION(5,8)	8	'0'	
L_VALUE(5)	8	1	
X_VALUE(5,1)	8	'A'	
N_ITER(5)	5	3	
L_VALUE(5,1)	8	1	
X_VALUE(5,1,1)	8	'A'	
L_VALUE(5,2)	8	1	
X_VALUE(5,2,1)	8	'B'	
L_VALUE(5,3)	8	1	
X_VALUE(5,3,1)	8	'C'	
Padding bits	COMPUTED	COMPUTED	

Message 5: (ETCS=> STM) Packet STM-180 Specific STM Data to STM			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	180	Specific STM Data to STM
L_PACKET	13	COMPUTED	
N_ITER	5	5	
NID_STM(1)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(1)	8	6	
L_VALUE(1)	8	1	
X_VALUE(1,1)	8	FINITE VALUE	
NID_STM(2)	8	FINITE VALUE	Use <b>ANOTHER</b> palette of the STM to be tested or simulated
NID_DATA(2)	8	7	
L_VALUE(2)	8	1	
X_VALUE(2,1)	8	FINITE VALUE	
NID_STM(3)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(3)	8	8	
L_VALUE(3)	8	1	
X_VALUE(3,1)	8	FINITE VALUE	
NID_STM(4)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(4)	8	9	
L_VALUE(4)	8	1	
X_VALUE(4,1)	8	FINITE VALUE	
NID_STM(5)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(5)	8	10	
L_VALUE(5)	8	1	
X_VALUE(5,1)	8	FINITE VALUE	
Padding bits	COMPUTED	COMPUTED	

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Message 6: (STM => ETCS) Packet STM-179 End of Specific Data Entry			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	2	DE
NID_PACKET	8	179	Specific STM data entry request
L_PACKET	13	COMPUTED	
Q_DRIVERINT	1	0	
Q_FOLLOWING	1	0	
N_ITER	5	0	End of Specific Data Entry
Padding bits	COMPUTED	COMPUTED	

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End Conditions		Value	Comments
STM_STATE		Unchanged	
ETCS Mode		Unchanged	
ETCS Level		Unchanged	
Train State		Unchanged	
Train Data		Unchanged	
Additional Data		Unchanged	
National Values		Unchanged	
STM Control Function Connection		Unchanged	
DMI Connection		Unchanged	
Odometry Data		Unchanged	
Reference Time Data		Unchanged	
TIU Connection		Unchanged	
BIU Connection		Unchanged	
JRU Connection		Unchanged	
Other connections		Unchanged	
TIU Regenerative Brake Command		Unchanged	
TIU Magnetic Shoes Command		Unchanged	
TIU Eddy Current Brake Command		Unchanged	
TIU Inhibit Passenger Emergency Brake Command		Unchanged	
TIU Pantograph Command		Unchanged	
TIU Air Tightness Command		Unchanged	
TIU Main Switch / Circuit Breaker Command		Unchanged	
TIU Traction Cut Off Command		Unchanged	
TIU Sleeping Status		Unchanged	
TIU Traction Cut Off Status		Unchanged	
TIU Direction Controller Position Status		Unchanged	
TIU Cab Status (Desk Status)		Unchanged	
BIU Status		Unchanged	
BIU Emergency Brake Command		Unchanged	
BIU Service Brake Command		Unchanged	
BIU Emergency Brake Status		Unchanged	
BIU Service Brake Status		Unchanged	
STM Version Number	Subset-026	1.0	

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	Subset-035	3.0.z	
	Subset-058	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
ETCS Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
	Subset-058	3.0.z	
Track Adhesion		Unchanged	

TEST CASE 10B.0.2.0.0.

TEST CASE HEADER	
Test case Identification	Functional identity Procedure Specific Data Entry / Data View
	The train was running in level 1 and is now at standstill. STM answers in due time. Driver reaction is needed.
ETCS Requirements Tested	Subset-035: 7.4.1.1.13; - - - - - 7.4.1.2.5
	Subset-026: None
STM Requirements Tested	Subset-035: 13.1.1.2.4.
	Subset-026: None
Packets transmitted via FFFIS STM	STM-15, STM-175, STM-176, STM-177, STM-178, STM-179.
Comments and constraints	The STM shall <b>NOT</b> request Specific Data Entry.

Starting Conditions	Value	Comments
STM_STATE	CS	
ETCS Mode	FS	
ETCS Level	1	
Train State	Standstill	
Train Data	Valid	
Additional Data	Valid	
National Values	Valid	
STM Control Function Connection	Established	
DMI Connection	Not established	
Odometry Data	Transmitted	
Reference Time Data	Transmitted	
TIU Connection	Not relevant	
BIU Connection	Not relevant	
JRU Connection	Not relevant	
Other connections	Not relevant	
TIU Regenerative Brake Command	Not relevant	
TIU Magnetic Shoes Command	Not relevant	
TIU Eddy Current Brake Command	Not relevant	
TIU Inhibit Passenger Emergency Brake Command	Not relevant	
TIU Pantograph Command	Not relevant	
TIU Air Tightness Command	Not relevant	
TIU Main Switch / Circuit Breaker Command	Not relevant	
TIU Traction Cut Off Command	Not relevant	
TIU Sleeping Status	Not Sleeping	
TIU Traction Cut Off Status	Not relevant	
TIU Direction Controller Position Status	Not relevant	
TIU Cab Status (Desk Status)	Desk A opened	
BIU Status	Not relevant	
BIU Emergency Brake Command	Not relevant	
BIU Service Brake Command	Not relevant	
BIU Emergency Brake Status	Not relevant	

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BIU Service Brake Status		Not relevant	
STM Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-058	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
ETCS Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
	Subset-058	3.0.z	
Track Adhesion		Not relevant	

**Test case for ETCS On-board:**

Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
-	The STM shall <b>NOT</b> request Specific Data Entry.					
1.	ETCS transmit the ETCS data to STM. (7.4.1.1.13)	DMI	Driver enters and validates ETCS Train Data	ETCS	Prof	Message 1: Packet STM-175 Train Data Packet STM-176 Train Data additional „braking characteristic” to STM Packet STM-177: Additional Data Values and date/time to STM Packet STM-178 National Values to STM
2.	STM sends end of specific data entry message.	Prof	Message 2 : Packet STM-179 Specific STM data-entry request (N_ITER=0) Packet STM-15 State report from STM	ETCS	DMI	Data-Entry procedure is finished.

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**Test case for STM:**

Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
-	The STM shall <b>NOT</b> request Specific Data Entry.					
1.	Once the STM has received the ETCS train data, the STM sends end of specific STM data-entry (13.1.1.2.4).	Prof	Message 1: Packet STM-175 Train Data Packet STM-176 Train Data additional „braking characteristic” to STM Packet STM-177: Additional Data Values and date/time to STM Packet STM-178 National Values to STM	STM	Prof	Message 2 : Packet STM-179 Specific STM data-entry request (N_ITER=0) Packet STM-15 State report from STM

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Message 1: (ETCS => STM) Packet STM-175 TRAIN DATA, STM-176 STM-177, STM-178 ADDITIONAL Train Data.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	175	Train Data
L_PACKET	13	COMPUTED	
NID_OPERATIONAL	32	FINITE VALUE	
NC_TRAIN	15	FINITE VALUE	
L_TRAIN	12	FINITE VALUE	
V_MAXTRAIN	7	FINITE VALUE	
M_LOADINGGAUGE	8	FINITE VALUE	
M_AXLELOAD	7	FINITE VALUE	
M_AIRTIGHT	2	FINITE VALUE	
N_ITER	5	0	
NID_PACKET	8	176	Train data additional 'braking characteristic' to STM
L_PACKET	13	COMPUTED	
T_BEGIN_SB_EF	16	FINITE VALUE	
T_FULL_SB_EF	16	FINITE VALUE	
N_ITER	5	0	
T_BEGIN_EB_EF	10	FINITE VALUE	
T_FULL_EB_EF	8	FINITE VALUE	
N_ITER	5	0	
T_TRQCTION_CUT_OFF	16	FINITE VALUE	
A_MAX	8	FINITE VALUE	
NID_PACKET	8	177	ETCS additional data and date / Time
L_PACKET	13	COMPUTED	
NID_DRIVER	32	FINITE VALUE	
NID_ENGINE	24	FINITE VALUE	
M_ADHESION	1	FINITE VALUE	
T_YEAR	7	FINITE VALUE	
T_MONTH	4	FINITE VALUE	
T_DAY	5	FINITE VALUE	

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T_MINUTES	5	FINITE VALUE	
T_SECONDS	6	FINITE VALUE	
T_TTS	5	FINITE VALUE	
NID_PACKET	8	178	National Value To STM
L_PACKET	13	COMPUTED	
Q_SCALE	2	FINITE VALUE	
V_NVSHUNT	7	FINITE VALUE	
V_NVSTFF	7	FINITE VALUE	
V_NVONSIGHT	7	FINITE VALUE	
V_NVUNFIT	7	FINITE VALUE	
V_NVREL	7	FINITE VALUE	
D_NVROLL	15	FINITE VALUE	
V_NVALLOWOVTRP	7	FINITE VALUE	
V_NVSUPOVTRP	7	FINITE VALUE	
D_NVOVTRP	15	FINITE VALUE	
T_NVOVTRP	8	FINITE VALUE	
D_NVPOTRP	15	FINITE VALUE	
D_NVSTFF	15	FINITE VALUE	
Q_NVDRIVER_ADHES	1	FINITE VALUE	
Padding bits	COMPUTED	COMPUTED	

Message 2: (STM => ETCS) Packet STM-179 End of Specific Data Entry			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	4	CS
NID_PACKET	8	179	Specific STM data entry request
L_PACKET	13	COMPUTED	
Q_DRIVERINT	1	0	
Q_FOLLOWING	1	0	
N_ITER	5	0	End of Specific Data Entry
Padding bits	COMPUTED	COMPUTED	

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End Conditions		Value	Comments
STM_STATE		Unchanged	
ETCS Mode		Unchanged	
ETCS Level		Unchanged	
Train State		Unchanged	
Train Data		Unchanged	
Additional Data		Unchanged	
National Values		Unchanged	
STM Control Function Connection		Unchanged	
DMI Connection		Unchanged	
Odometry Data		Unchanged	
Reference Time Data		Unchanged	
TIU Connection		Unchanged	
BIU Connection		Unchanged	
JRU Connection		Unchanged	
Other connections		Unchanged	
TIU Regenerative Brake Command		Unchanged	
TIU Magnetic Shoes Command		Unchanged	
TIU Eddy Current Brake Command		Unchanged	
TIU Inhibit Passenger Emergency Brake Command		Unchanged	
TIU Pantograph Command		Unchanged	
TIU Air Tightness Command		Unchanged	
TIU Main Switch / Circuit Breaker Command		Unchanged	
TIU Traction Cut Off Command		Unchanged	
TIU Sleeping Status		Unchanged	
TIU Traction Cut Off Status		Unchanged	
TIU Direction Controller Position Status		Unchanged	
TIU Cab Status (Desk Status)		Unchanged	
BIU Status		Unchanged	
BIU Emergency Brake Command		Unchanged	
BIU Service Brake Command		Unchanged	
BIU Emergency Brake Status		Unchanged	
BIU Service Brake Status		Unchanged	
STM Version Number	Subset-026	1.0	

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	Subset-035	3.0.z	
	Subset-058	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
ETCS Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
	Subset-058	3.0.z	
Track Adhesion		Unchanged	

TEST CASE 10B.0.1.0.2.0.1.0.2.0.2.0.2.0.3.0.2.0.4.0

TEST CASE HEADER	
Test case Identification	Functional identity Procedure Specific Data Entry / Data View
	The train was running in level 1 and is now at standstill. STM answers in due time. Driver reaction is not needed.
ETCS Requirements Tested	Subset-035: 7.4.1.1.13; 5.2.12.3; 13.1.1.1.8; 13.1.1.1.23;13.1.1.1.16; 13.1.1.2.6; 13.1.1.2.7; 13.1.1.1.17; 13.1.1.1.5; 13.1.1.1.18; 7.4.1.2.5
	Subset-026: None
STM Requirements Tested	Subset-035: 13.1.1.2.4.
	Subset-026: None
Packets transmitted via FFFIS STM	STM-15, STM-175, STM-176, STM-177, STM-178, STM-179, STM-180.
Comments and constraints	This test case is applicable only if : 1.The STM shall request Specific Data Entry. 2. The ETCS shall be able to store train data.

Starting Conditions	Value	Comments
STM_STATE	CS	
ETCS Mode	FS	ETCS data entry is completed
ETCS Level	1	
Train State	Standstill	
Train Data	Valid	
Additional Data	Valid	
National Values	Valid	
STM Control Function Connection	Established	
DMI Connection	Not established	
Odometry Data	Not relevant	
Reference Time Data	Transmitted	
TIU Connection	Not relevant	
BIU Connection	Not relevant	
JRU Connection	Not relevant	
Other connections	Not relevant	
TIU Regenerative Brake Command	Not relevant	
TIU Magnetic Shoes Command	Not relevant	
TIU Eddy Current Brake Command	Not relevant	
TIU Inhibit Passenger Emergency Brake Command	Not relevant	
TIU Pantograph Command	Not relevant	
TIU Air Tightness Command	Not relevant	
TIU Main Switch / Circuit Breaker Command	Not relevant	
TIU Traction Cut Off Command	Not relevant	
TIU Sleeping Status	Not Sleeping	
TIU Traction Cut Off Status	Not relevant	
TIU Direction Controller Position Status	Not relevant	
TIU Cab Status (Desk Status)	Desk A opened	
BIU Status	Not relevant	
BIU Emergency Brake Command	Not relevant	
BIU Service Brake Command	Not relevant	
BIU Emergency Brake Status	Not relevant	

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BIU Service Brake Status		Not relevant	
STM Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-058	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
ETCS Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
	Subset-058	3.0.z	
Track Adhesion		Not relevant	

**Test case for ETCS On-board:**

Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
-	This test case is applicable only if : 1.The STM shall request Specific Data Entry. 2. The ETCS shall be able to store train data.					
1.	ETCS transmit the ETCS data to STM. (7.4.1.1.13)	DMI	Driver enters and validates ETCS Train Data	ETCS	Prof	Message 1: Packet STM-175 Train Data Packet STM-176 Train Data additional „braking characteristic” to STM Packet STM-177: Additional Data Values and date/time to STM Packet STM-178 National Values to STM
2.	STM sends a message for specific data entry with 5 data and a set of character of ISO8859-1. This request of specific data entry request a driver reaction. (5.2.12.3; 13.1.1.1.8; 13.1.1.1.23; 13.1.1.1.16; 13.1.1.2.6)	Prof	Message 2 : Packet STM-179 Specific STM data-entry request Packet STM-15 State report from STM	ETCS	Prof	Message 3: Packet STM-180 Specific STM Data to STM
3.	The STM is allowed to request the same data to the STM.(13.1.1.2.7; 13.1.1.1.18)	Prof	Message 42: Packet STM-179 Specific STM data-entry request Packet STM-15 State report from STM	ETCS	Prof	Message 3 Packet STM- 180 Specific STM Data to STM

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Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
4.	The STM is allowed to request the another data to the STM with another palette for one data. (13.1.1.1.17; 13.1.1.1.5)	Prof	Message 4 : Packet STM-179 Specific STM data-entry request Packet STM-15 State report from STM	ETCS	Prof	Message 5: Packet STM-180 Specific STM Data to STM
5.	STM shall send the "END of specific data entry" (13.1.1.2.7)	Prof	Message 6: Packet 179 with N_ITER = 0 Packet-STM-15 State report from STM	ETCS		Check that the STM state has not changed-

**Test case for STM:**

Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
-	This test case is applicable only if : 1.The STM shall request Specific Data Entry. 2. The ETCS shall be able to store train data.					
1.	Once the STM has received the ETCS train data, the STM requests specific STM data-entry (13.1.1.2.4).	Prof	Message 1: Packet STM-175 Train Data Packet STM-176 Train Data additional „braking characteristic" to STM Packet STM-177: Additional Data Values and date/time to STM Packet STM-178 National Values to STM	STM	Prof	Message 2 : Packet STM-179 Specific STM data-entry request Packet STM-15 State report from STM

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Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
2.	ETCS sends the parameter to the STM and than the STM sends the "END of specific data entry"	Prof	Message 5: Packet STM-180 Specific STM Data to STM	STM	Prof	Message 6: Packet 179 with N_ITER = 0 Packet-STM-15 State report from STM

Message 1: (ETCS => STM) Packet STM-175 TRAIN DATA, STM-176 STM-177, STM-178 ADDITIONAL Train Data.			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	175	Train Data
L_PACKET	13	COMPUTED	
NID_OPERATIONAL	32	FINITE VALUE	
NC_TRAIN	15	FINITE VALUE	
L_TRAIN	12	FINITE VALUE	
V_MAXTRAIN	7	FINITE VALUE	
M_LOADINGGAUGE	8	FINITE VALUE	
M_AXLELOAD	7	FINITE VALUE	
M_AIRTIGHT	2	FINITE VALUE	
N_ITER	5	0	
NID_PACKET	8	176	Train data additional 'braking characteristic' to STM
L_PACKET	13	COMPUTED	
T_BEGIN_SB_EF	16	FINITE VALUE	
T_FULL_SB_EF	16	FINITE VALUE	
N_ITER	5	0	
T_BEGIN_EB_EF	10	FINITE VALUE	
T_FULL_EB_EF	8	FINITE VALUE	
N_ITER	5	0	
T_TRQCTION_CUT_OFF	16	FINITE VALUE	
A_MAX	8	FINITE VALUE	
NID_PACKET	8	177	ETCS additional data and date / Time
L_PACKET	13	COMPUTED	
NID_DRIVER	32	FINITE VALUE	
NID_ENGINE	24	FINITE VALUE	
M_ADHESION	1	FINITE VALUE	
T_YEAR	7	FINITE VALUE	
T_MONTH	4	FINITE VALUE	
T_DAY	5	FINITE VALUE	

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T_MINUTES	5	FINITE VALUE	
T_SECONDS	6	FINITE VALUE	
T_TTS	5	FINITE VALUE	
NID_PACKET	8	178	National Value To STM
L_PACKET	13	COMPUTED	
Q_SCALE	2	FINITE VALUE	
V_NVSHUNT	7	FINITE VALUE	
V_NVSTFF	7	FINITE VALUE	
V_NVONSIGHT	7	FINITE VALUE	
V_NVUNFIT	7	FINITE VALUE	
V_NVREL	7	FINITE VALUE	
D_NVROLL	15	FINITE VALUE	
V_NVALLOWOVTRP	7	FINITE VALUE	
V_NVSUPOVTRP	7	FINITE VALUE	
D_NVOVTRP	15	FINITE VALUE	
T_NVOVTRP	8	FINITE VALUE	
D_NVPOTRP	15	FINITE VALUE	
D_NVSTFF	15	FINITE VALUE	
Q_NVDRIVER_ADHES	1	FINITE VALUE	
Padding bits	COMPUTED	COMPUTED	

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Message 2: (STM => ETCS) Packet STM-179 Specific Data Entry			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	2	DE
NID_PACKET	8	179	Specific STM data entry request
L_PACKET	13	COMPUTED	
Q_DRIVERINT	1	0	No driver intervention is requested
Q_FOLLOWING	1	0	
N_ITER	5	5	
NID_STM(1)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(1)	8	1	
M_XATTRIBUTE(1)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(1)	5	7	
X_CAPTION(1,1)	8	'V'	
X_CAPTION(1,2)	8	'A'	
X_CAPTION(1,3)	8	'L'	
X_CAPTION(1,4)	8	'U'	
X_CAPTION(1",5)	8	'E'	
X_CAPTION(1,6)	8	' '	
X_CAPTION(1,7)	8	'1'	
L_VALUE(1)	8	1	
X_VALUE(1,1)	8	'A'	
N_ITER(1)	5	3	
L_VALUE(1,1)	8	1	
X_VALUE(1,1,1)	8	'A'	
L_VALUE(1,2)	8	1	
X_VALUE(1,2,1)	8	'B'	
L_VALUE(1,3)	8	1	
X_VALUE(1,3,1)	8	'C'	
NID_STM(2)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated

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NID_DATA(2)	8	2	
M_XATTRIBUTE(2)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(2)	5	7	
X_CAPTION(2,1)	8	'V'	
X_CAPTION(2,2)	8	'A'	
X_CAPTION(2,3)	8	'L'	
X_CAPTION(2,4)	8	'U'	
X_CAPTION(2,5)	8	'E'	
X_CAPTION(2,6)	8	' '	
X_CAPTION(2,7)	8	'2'	
L_VALUE(2)	8	1	
X_VALUE(2,1)	8	'A'	
N_ITER(2)	5	3	
L_VALUE(2,1)	8	1	
X_VALUE(2,1,1)	8	'A'	
L_VALUE(2,2)	8	1	
X_VALUE(2,2,1)	8	'B'	
L_VALUE(2,3)	8	1	
X_VALUE(2,3,1)	8	'C'	
NID_STM(3)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(3)	8	3	
M_XATTRIBUTE(3)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(3)	5	7	
X_CAPTION(3,1)	8	'V'	
X_CAPTION(3,2)	8	'A'	
X_CAPTION(3,3)	8	'L'	
X_CAPTION(3,4)	8	'U'	
X_CAPTION(3,5)	8	'E'	
X_CAPTION(3,6)	8	' '	
X_CAPTION(3,7)	8	'3'	
L_VALUE(3)	8	1	
X_VALUE(3,1)	8	'A'	
N_ITER(3)	5	3	
L_VALUE(3,1)	8	1	

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X_VALUE(3,1,1)	8	'A'	
L_VALUE(3,2)	8	1	
X_VALUE(3,2,1)	8	'B'	
L_VALUE(3,3)	8	1	
X_VALUE(3,3,1)	8	'C'	
NID_STM(4)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(4)	8	4	
M_XATTRIBUTE(4)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(4)	5	7	
X_CAPTION(4,1)	8	'V'	
X_CAPTION(4,2)	8	'A'	
X_CAPTION(4,3)	8	'L'	
X_CAPTION(4,4)	8	'U'	
X_CAPTION(4,5)	8	'E'	
X_CAPTION(4,6)	8	' '	
X_CAPTION(4,7)	8	'4'	
L_VALUE(4)	8	1	
X_VALUE(4,1)	8	'A'	
N_ITER(4)	5	3	
L_VALUE(4,1)	8	1	
X_VALUE(4,1,1)	8	'A'	
L_VALUE(4,2)	8	1	
X_VALUE(4,2,1)	8	'B'	
L_VALUE(4,3)	8	1	
X_VALUE(4,3,1)	8	'C'	
NID_STM(5)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(5)	8	5	
M_XATTRIBUTE(5)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(5)	5	7	
X_CAPTION(5,1)	8	'V'	
X_CAPTION(5,2)	8	'A'	
X_CAPTION(5,3)	8	'L'	
X_CAPTION(5,4)	8	'U'	
X_CAPTION(5,5)	8	'E'	

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X_CAPTION(5,6)	8	' '	
X_CAPTION(5,7)	8	'5'	
L_VALUE(5)	8	1	
X_VALUE(5,1)	8	'A'	
N_ITER(5)	5	3	
L_VALUE(5,1)	8	1	
X_VALUE(5,1,1)	8	'A'	
L_VALUE(5,2)	8	1	
X_VALUE(5,2,1)	8	'B'	
L_VALUE(5,3)	8	1	
X_VALUE(5,3,1)	8	'C'	
Padding bits	COMPUTED	COMPUTED	



Message 3: (ETCS=> STM) Packet STM-180 Specific STM Data to STM			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	180	Specific STM Data to STM
L_PACKET	13	COMPUTED	
N_ITER	5	5	
NID_STM(1)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(1)	8	1	
L_VALUE(1)	8	1	
X_VALUE(1,1)	8	FINITE VALUE	
NID_STM(2)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(2)	8	2	
L_VALUE(2)	8	1	
X_VALUE(2,1)	8	FINITE VALUE	
NID_STM(3)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(3)	8	3	
L_VALUE(3)	8	1	
X_VALUE(3,1)	8	FINITE VALUE	
NID_STM(4)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(4)	8	4	
L_VALUE(4)	8	1	
X_VALUE(4,1)	8	FINITE VALUE	
NID_STM(5)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(5)	8	5	
L_VALUE(5)	8	1	
X_VALUE(5,1)	8	FINITE VALUE	
Padding bits	COMPUTED	COMPUTED	

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Message 4: (STM => ETCS) Packet STM-179 Specific Data Entry			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	2	DE
NID_PACKET	8	179	Specific STM Data Entry Request
L_PACKET	13	COMPUTED	
Q_DRIVERINT	1	0	No driver intervention is requested
Q_FOLLOWING	1	0	
N_ITER	5	5	
NID_STM(1)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(1)	8	6	
M_XATTRIBUTE(1)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(1)	5	7	
X_CAPTION(1,1)	8	'V'	
X_CAPTION(1,2)	8	'A'	
X_CAPTION(1,3)	8	'L'	
X_CAPTION(1,4)	8	'U'	
X_CAPTION(1,5)	8	'E'	
X_CAPTION(1,6)	8	' '	
X_CAPTION(1,7)	8	'6'	
L_VALUE(1)	8	1	
X_VALUE(1,1)	8	'A'	
N_ITER(1)	5	3	
L_VALUE(1,1)	8	1	
X_VALUE(1,1,1)	8	'A'	
L_VALUE(1,2)	8	1	
X_VALUE(1,2,1)	8	'B'	
L_VALUE(1,3)	8	1	
X_VALUE(1,3,1)	8	'C'	
NID_STM(2)	8	FINITE VALUE	Use <b>ANOTHER</b> palette of the STM to be tested or simulated

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NID_DATA(2)	8	7	
M_XATTRIBUTE(2)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(2)	5	7	
X_CAPTION(2,1)	8	'V'	
X_CAPTION(2,2)	8	'A'	
X_CAPTION(2,3)	8	'L'	
X_CAPTION(2,4)	8	'U'	
X_CAPTION(2,5)	8	'E'	
X_CAPTION(2,6)	8	' '	
X_CAPTION(2,7)	8	'7'	
L_VALUE(2)	8	1	
X_VALUE(2,1)	8	'A'	
N_ITER(2)	5	3	
L_VALUE(2,1)	8	1	
X_VALUE(2,1,1)	8	'A'	
L_VALUE(2,2)	8	1	
X_VALUE(2,2,1)	8	'B'	
L_VALUE(2,3)	8	1	
X_VALUE(2,3,1)	8	'C'	
NID_STM(3)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(3)	8	8	
M_XATTRIBUTE(3)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(3)	5	7	
X_CAPTION(3,1)	8	'V'	
X_CAPTION(3,2)	8	'A'	
X_CAPTION(3,3)	8	'L'	
X_CAPTION(3,4)	8	'U'	
X_CAPTION(3,5)	8	'E'	
X_CAPTION(3,6)	8	' '	
X_CAPTION(3,7)	8	'8'	
L_VALUE(3)	8	1	
X_VALUE(3,1)	8	'A'	
N_ITER(3)	5	3	
L_VALUE(3,1)	8	1	

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X_VALUE(3,1,1)	8	'A'	
L_VALUE(3,2)	8	1	
X_VALUE(3,2,1)	8	'B'	
L_VALUE(3,3)	8	1	
X_VALUE(3,3,1)	8	'C'	
NID_STM(4)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(4)	8	9	
M_XATTRIBUTE(4)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(4)	5	7	
X_CAPTION(4,1)	8	'V'	
X_CAPTION(4,2)	8	'A'	
X_CAPTION(4,3)	8	'L'	
X_CAPTION(4,4)	8	'U'	
X_CAPTION(4,5)	8	'E'	
X_CAPTION(4,6)	8	' '	
X_CAPTION(4,7)	8	'g'	
L_VALUE(4)	8	1	
X_VALUE(4,1)	8	'A'	
N_ITER(4)	5	3	
L_VALUE(4,1)	8	1	
X_VALUE(4,1,1)	8	'A'	
L_VALUE(4,2)	8	1	
X_VALUE(4,2,1)	8	'B'	
L_VALUE(4,3)	8	1	
X_VALUE(4,3,1)	8	'C'	
NID_STM(5)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(5)	8	10	
M_XATTRIBUTE(5)	10	1000000001b	Text in white on black background and no flashing
L_CAPTION(5)	5	8	
X_CAPTION(5,1)	8	'V'	
X_CAPTION(5,2)	8	'A'	
X_CAPTION(5,3)	8	'L'	
X_CAPTION(5,4)	8	'U'	
X_CAPTION(5,5)	8	'E'	

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X_CAPTION(5,6)	8	' '	
X_CAPTION(5,7)	8	'1'	
X_CAPTION(5,8)	8	'0'	
L_VALUE(5)	8	1	
X_VALUE(5,1)	8	'A'	
N_ITER(5)	5	3	
L_VALUE(5,1)	8	1	
X_VALUE(5,1,1)	8	'A'	
L_VALUE(5,2)	8	1	
X_VALUE(5,2,1)	8	'B'	
L_VALUE(5,3)	8	1	
X_VALUE(5,3,1)	8	'C'	
Padding bits	COMPUTED	COMPUTED	

Message 5: (ETCS=> STM) Packet STM-180 Specific STM Data to STM			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	180	Specific STM Data to STM
L_PACKET	13	COMPUTED	
N_ITER	5	5	
NID_STM(1)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(1)	8	6	
L_VALUE(1)	8	1	
X_VALUE(1,1)	8	FINITE VALUE	
NID_STM(2)	8	FINITE VALUE	Use <b>ANOTHER</b> palette of the STM to be tested or simulated
NID_DATA(2)	8	7	
L_VALUE(2)	8	1	
X_VALUE(2,1)	8	FINITE VALUE	
NID_STM(3)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(3)	8	8	
L_VALUE(3)	8	1	
X_VALUE(3,1)	8	FINITE VALUE	
NID_STM(4)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(4)	8	9	
L_VALUE(4)	8	1	
X_VALUE(4,1)	8	FINITE VALUE	
NID_STM(5)	8	FINITE VALUE	Use the palette of the STM to be tested or simulated
NID_DATA(5)	8	10	
L_VALUE(5)	8	3	
X_VALUE(5,1)	8	FINITE VALUE	
X_VALUE(5,2)	8	FINITE VALUE	
X_VALUE(5,3)	8	FINITE VALUE	
Padding bits	COMPUTED	COMPUTED	

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Message 6: (STM => ETCS) Packet STM-179 End of Specific Data Entry			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	State report from STM
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	2	DE
NID_PACKET	8	179	Specific STM data entry request
L_PACKET	13	COMPUTED	
Q_DRIVERINT	1	0	
Q_FOLLOWING	1	0	
N_ITER	5	0	End of Specific Data Entry
Padding bits	COMPUTED	COMPUTED	

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End Conditions		Value	Comments
STM_STATE		Unchanged	
ETCS Mode		Unchanged	
ETCS Level		Unchanged	
Train State		Unchanged	
Train Data		Unchanged	
Additional Data		Unchanged	
National Values		Unchanged	
STM Control Function Connection		Unchanged	
DMI Connection		Unchanged	
Odometry Data		Unchanged	
Reference Time Data		Unchanged	
TIU Connection		Unchanged	
BIU Connection		Unchanged	
JRU Connection		Unchanged	
Other connections		Unchanged	
TIU Regenerative Brake Command		Unchanged	
TIU Magnetic Shoes Command		Unchanged	
TIU Eddy Current Brake Command		Unchanged	
TIU Inhibit Passenger Emergency Brake Command		Unchanged	
TIU Pantograph Command		Unchanged	
TIU Air Tightness Command		Unchanged	
TIU Main Switch / Circuit Breaker Command		Unchanged	
TIU Traction Cut Off Command		Unchanged	
TIU Sleeping Status		Unchanged	
TIU Traction Cut Off Status		Unchanged	
TIU Direction Controller Position Status		Unchanged	
TIU Cab Status (Desk Status)		Unchanged	
BIU Status		Unchanged	
BIU Emergency Brake Command		Unchanged	
BIU Service Brake Command		Unchanged	
BIU Emergency Brake Status		Unchanged	
BIU Service Brake Status		Unchanged	
STM Version Number	Subset-026	1.0	

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	Subset-035	3.0.z	
	Subset-058	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
ETCS Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
	Subset-058	3.0.z	
Track Adhesion		Unchanged	

## TEST CASE 10c.0.0

TEST CASE HEADER	
Test case Identification	Functional identity Procedure Specific Data Entry / Data View
	Data View.
ETCS Requirements Tested	Subset-035: 13.1.2.2; 13.1.2.4; 13.1.2.5
	Subset-026: None
STM Requirements Tested	Subset-035: 13.1.2.3
	Subset-026: None
Packets transmitted via FFFIS STM	STM-15, STM-182, STM-183.
Comments and constraints	Specific data entry is needed for STM-1 Specific data entry is not needed for STM-2

Starting Conditions	Value	Comments
STM_STATE	CS	
ETCS Mode	FS	
ETCS Level	1	
Train State	Standstill	
Train Data	Valid	
Additional Data	Valid	
National Values	Valid	
STM Control Function Connection	Established	
DMI Connection	Not established	
Odometry Data	Transmitted	
Reference Time Data	Transmitted	
TIU Connection	Not relevant	
BIU Connection	Not relevant	
JRU Connection	Not relevant	
Other connections	Not relevant	
TIU Regenerative Brake Command	Not relevant	
TIU Magnetic Shoes Command	Not relevant	
TIU Eddy Current Brake Command	Not relevant	
TIU Inhibit Passenger Emergency Brake Command	Not relevant	
TIU Pantograph Command	Not relevant	
TIU Air Tightness Command	Not relevant	
TIU Main Switch / Circuit Breaker Command	Not relevant	
TIU Traction Cut Off Command	Not relevant	
TIU Sleeping Status	Not Sleeping	
TIU Traction Cut Off Status	Not relevant	
TIU Direction Controller Position Status	Not relevant	
TIU Cab Status (Desk Status)	Desk A opened	
BIU Status	Not relevant	
BIU Emergency Brake Command	Not relevant	
BIU Service Brake Command	Not relevant	
BIU Emergency Brake Status	Not relevant	

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BIU Service Brake Status		Not relevant	
STM Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-058	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
ETCS Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
	Subset-058	3.0.z	
Track Adhesion		Not relevant	

**Test case for ETCS On-board:**

Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
-	Specific data entry is needed for STM-1 Specific data entry is not needed for STM-2					
1.	The ERTMS/ETCS On-board send a request of "STM specific Data Need" to the STMs	DMI	Driver requests to see the train data.	ETCS	Prof	Message 1 : Packet STM-182 (request of specific STM data view on STM-1) Message 2 : Packet STM-182 (request of specific STM data view on STM-2)
2.	Answer of STM-1	Prof	Message 3 : Packet STM-15 (STM state report) and Packet STM-183 (specific STM data view values)	STM	Prof DMI	Message is present on the profibus. Data for STM-1 are displayed on the DMI.
3.	Answer of STM-2	Prof	Message 4 : Packet STM-15 (STM state report) and Packet STM-183 (specific STM data view values)	STM	Prof DMI	Message is present on the profibus. No data for STM-2 are displayed on the DMI.

**Test case for STM:**

Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
-	Specific data entry is needed for STM-1 Specific data entry is not needed for STM-2					

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Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
1.	Answer of STM-1	Prof	Message 1 : Packet STM-182 (request of specific STM data view on STM-1)	STM	Prof	Message 3 : Packet STM-15 (STM state report) and Packet STM-183 (specific STM data view values)

Message 1: ETCS => STM-1 Packet STM-181 request of specific STM data view			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	181	
L_PACKET	13	COMPUTED	
Padding bits	COMPUTED	COMPUTED	

Message 2: ETCS => STM-2 Packet STM-181 request of specific STM data view			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-2 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	181	
L_PACKET	13	COMPUTED	
Padding bits	COMPUTED	COMPUTED	

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Message 3: STM-1 => ETCS Packet STM-183 specific STM data view values			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-1 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	4	The State is CS
NID_PACKET	8	183	
L_PACKET	13	COMPUTED	
Q_FOLLOWING	1	1	
N_ITER	5	1	
NID_STM(1)	8	FINITE VALUE	STM-1 ID
NID_DATA(1)	8	1	
M_XATTRIBUTE(1)	10	1001000011	Blue text with flashing on black background
L_CAPTION(1)	5	10	
X_CAPTION(1,1)	8	"T"	
X_CAPTION(1,2)	8	"E"	
X_CAPTION(1,3)	8	"S"	
X_CAPTION(1,4)	8	"T"	
X_CAPTION(1,5)	8	" "	
X_CAPTION(1,6)	8	"V"	
X_CAPTION(1,7)	8	"A"	
X_CAPTION(1,8)	8	"L"	
X_CAPTION(1,9)	8	"U"	
X_CAPTION(1,10)	8	"E"	
L_VALUE(1)	8	7	
X_VALUE(1,1)	8	"1"	
X_VALUE(1,2)	8	"0"	
X_VALUE(1,3)	8	"C"	
X_VALUE(1,4)	8	" "	
X_VALUE(1,5)	8	"0"	
X_VALUE(1,6)	8	" "	
X_VALUE(1,7)	8	"0"	

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X_VALUE(1,8)	8	“ ”	
Padding bits	COMPUTED	COMPUTED	

Message 4: STM-2 => ETCS Packet STM-183 specific STM data view values			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM-2 ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	
L_PACKET	13	COMPUTED	
NID_STMSTATE	4	4	The State is CS
NID_PACKET	8	183	
L_PACKET	13	COMPUTED	
Q_FOLLOWING	1	1	
N_ITER	5	0	
Padding bits	COMPUTED	COMPUTED	



End Conditions		Value	Comments
STM_STATE		Unchanged	
ETCS Mode		Unchanged	
ETCS Level		Unchanged	
Train State		Unchanged	
Train Data		Unchanged	
Additional Data		Unchanged	
National Values		Unchanged	
STM Control Function Connection		Unchanged	
DMI Connection		Unchanged	
Odometry Data		Unchanged	
Reference Time Data		Unchanged	
TIU Connection		Unchanged	
BIU Connection		Unchanged	
JRU Connection		Unchanged	
Other connections		Unchanged	
TIU Regenerative Brake Command		Unchanged	
TIU Magnetic Shoes Command		Unchanged	
TIU Eddy Current Brake Command		Unchanged	
TIU Inhibit Passenger Emergency Brake Command		Unchanged	
TIU Pantograph Command		Unchanged	
TIU Air Tightness Command		Unchanged	
TIU Main Switch / Circuit Breaker Command		Unchanged	
TIU Traction Cut Off Command		Unchanged	
TIU Sleeping Status		Unchanged	
TIU Traction Cut Off Status		Unchanged	
TIU Direction Controller Position Status		Unchanged	
TIU Cab Status (Desk Status)		Unchanged	
BIU Status		Unchanged	
BIU Emergency Brake Command		Unchanged	
BIU Service Brake Command		Unchanged	
BIU Emergency Brake Status		Unchanged	
BIU Service Brake Status		Unchanged	
STM Version Number	Subset-026	1.0	

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	Subset-035	3.0.z	
	Subset-058	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
ETCS Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
	Subset-058	3.0.z	
Track Adhesion		Unchanged	

TEST CASE 10d.0.0.0

TEST CASE HEADER	
Test case Identification	Functional identity Procedure Specific Data Entry / Data View Data Entry/View, while the STM is in CS,HS,DA.
	Test the data exchange between ERTMS/ETCS On-board, STM and driver related to Data Entry when the STM is in CS,HS,DA state.
ETCS Requirements Tested	Subset-035: 13.1.1.2.2; 13.1.1.2.3
	Subset-026: None
STM Requirements Tested	Subset-035: 13.1.1.2.1
	Subset-026: None
Packets transmitted via FFFIS STM	STM-15, STM-181
Comments and constraints	

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Starting Conditions	Value	Comments
STM_STATE	CS	
ETCS Mode	FS	
ETCS Level	1	
Train State	Standstill	
Train Data	Valid	
Additional Data	Valid	
National Values	Valid	
STM Control Function Connection	Established	
DMI Connection	Not relevant	If CS is closed, if HS or DA it is up to the STM.
Odometry Data	Transmitted	
Reference Time Data	Transmitted	
TIU Connection	Not relevant	
BIU Connection	Not relevant	
JRU Connection	Not relevant	
Other connections	Not relevant	
TIU Regenerative Brake Command	Not relevant	
TIU Magnetic Shoes Command	Not relevant	
TIU Eddy Current Brake Command	Not relevant	
TIU Inhibit Passenger Emergency Brake Command	Not relevant	
TIU Pantograph Command	Not relevant	
TIU Air Tightness Command	Not relevant	
TIU Main Switch / Circuit Breaker Command	Not relevant	
TIU Traction Cut Off Command	Not relevant	
TIU Sleeping Status	Not Sleeping	
TIU Traction Cut Off Status	Not relevant	
TIU Direction Controller Position Status	Not relevant	
TIU Cab Status (Desk Status)	Desk A opened	
BIU Status	Not relevant	
BIU Emergency Brake Command	Not relevant	
BIU Service Brake Command	Not relevant	
BIU Emergency Brake Status	Not relevant	

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BIU Service Brake Status		Not relevant	
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	Subset-035	3.0.z	
	Subset-058	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
ETCS Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
	Subset-058	3.0.z	
Track Adhesion		Not relevant	

**Test case for ETCS On-board:**

Step	Description/Comments	Input I/F	Input Action	DUT	Output I/F	Output action
1.	The ERTMS/ETCS On-board receives "STM specific Data Need" from the STM	Profibus	Message 1 : Packet STM-15 (STM state report) and Packet STM-181 (specific STM data need)	ETCS	DMI	The ETCS shall inform the driver that at least one STM needs Specific STM data. Check the message on the DMI
2.	Driver starts the ETCS train data entry procedure	DMI	Complete data entry request procedure is finished Driver action on the DMI	ETCS	DMI	The message is deleted. Check that the message is deleted on the DMI.

**Test case for STM:**

Not applicable (see test case in the FI ASU).

Message 1: STM=>ETCS Packet STM-181 request of specific STM data view			
VARIABLE	Length	VALUE	COMMENTS
NID_STM	8	FINITE VALUE	Should be replaced by STM ID when testing STM. When testing ETCS On-board a valid value should be used.
L_MESSAGE	8	COMPUTED	
NID_PACKET	8	15	
L-PACKET	13	COMPUTED	
NID_STMSTATE	4	1	The State is PO
NID_PACKET	8	181	
L_PACKET	13	COMPUTED	
Q_DATAENTRY	1	1	The specific data entry is requested.
Q_DRIVERINT	1	1	The driver intervention is needed.
Padding bits	COMPUTED	COMPUTED	

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End Conditions		Value	Comments
STM_STATE		Unchanged	
ETCS Mode		Unchanged	
ETCS Level		Unchanged	
Train State		Unchanged	
Train Data		Unchanged	
Additional Data		Unchanged	
National Values		Unchanged	
STM Control Function Connection		Unchanged	
DMI Connection		Unchanged	
Odometry Data		Unchanged	
Reference Time Data		Unchanged	
TIU Connection		Unchanged	
BIU Connection		Unchanged	
JRU Connection		Unchanged	
Other connections		Unchanged	
TIU Regenerative Brake Command		Unchanged	
TIU Magnetic Shoes Command		Unchanged	
TIU Eddy Current Brake Command		Unchanged	
TIU Inhibit Passenger Emergency Brake Command		Unchanged	
TIU Pantograph Command		Unchanged	
TIU Air Tightness Command		Unchanged	
TIU Main Switch / Circuit Breaker Command		Unchanged	
TIU Traction Cut Off Command		Unchanged	
TIU Sleeping Status		Unchanged	
TIU Traction Cut Off Status		Unchanged	
TIU Direction Controller Position Status		Unchanged	
TIU Cab Status (Desk Status)		Unchanged	
BIU Status		Unchanged	
BIU Emergency Brake Command		Unchanged	
BIU Service Brake Command		Unchanged	
BIU Emergency Brake Status		Unchanged	
BIU Service Brake Status		Unchanged	
STM Version Number	Subset-026	1.0	

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	Subset-035	3.0.z	
	Subset-058	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
ETCS Version Number	Subset-026	1.0	
	Subset-035	3.0.z	
	Subset-056	3.0.z	
	Subset-057	3.0.z	
	Subset-058	3.0.z	
Track Adhesion		Unchanged	