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| *TEST CASE DESCRIPTION* | | | | | | |
|  | | Code | Version | | Title | |
| Test Case | | 3.17.30 | 1 | | TSR management at level transition from L2 to LSTM LZB. TSR in LZB area. | |
|
| Baseline applicable | | Baseline 2 (2.3.0.d) | | | | |
| Test case author | | ADIF | | | | |
| Test Objective(s) | | Verify that the EVC supervises the permitted speed for the TSR in the LZB area after performing the level transition from level 2 to level STM LZB (TSR is announced from the level 2 area). | | | | |
| Diagram | |  | | | | |
| Starting conditions | | Level | | 2 | | |
| Mode | | FS | | |
| Train Speed (km/h) | | NR | | |
| Additional starting conditions | | The train is approaching the transition border to LSTM LZB. It is requested to the signalman to set a TSR in the LZB area and close to the level transition. This TSR shall be set in both systems (LZB and ETCS) | | |
| Sequence of the Test Case | | Checkpoints | | | | |
| Step | Step description | Interfaces | Description of what to be tested at the interface | | | OK? |
| 1 | The RBC sends a MA with EoA beyond the transition border. | DMI (O) |  | | |  |
| DMI (I) |  | | |  |
| JRU | Message 3/33  Packet 15  Packet 21  Packet 27 | | |  |
| 2 | The train receives the level transition announcement via balise group or RBC. | DMI (O) | Level STM LZB transition announcement | | |  |
| DMI (I) |  | | |  |
| JRU | (LRBG1)  (If received from RBC Message 3/24/33)  Packet 41  D\_LEVELTR = D1  M\_LEVELTR = 1  L\_ACKLEVELTR = L1  NID\_STM  START DISPLAYING TEXT MESSAGE (1) | | |  |
| 3 | The EVC receives TSR information located in the level STM LZB area. | DMI (O) |  | | |  |
| DMI (I) |  | | |  |
| JRU | (LRBG2) Message 3/24/33  Packet 65   NID\_TSR= TSR1  V\_TSR = V1  L\_TSR= L2  D\_TSR= D2 > D1 | | |  |
| 4 | The train starts the braking curve to the TSR. | DMI (O) | Braking curve with Vtarget = V1  Vtrain < Vpermitted | | |  |
| DMI (I) |  | | |  |
| JRU | V\_TRAIN < V\_PERMITTED V\_TARGET = V1 | | |  |
| 5 | The EVC runs the distance “D1-L1” at which the acknowledgement window of the transition to Level STM LZB is shown to the driver. | DMI (O) | Level STM LZB acknowledgement is displayed | | |  |
| DMI (I) |  | | |  |
| JRU | START DISPLAYING TEXT MESSAGE (2)  Estimated front end=D1-L1-L\_DOUBTUNDER | | |  |
| 6 | The driver acknowledges the level transition. | DMI (O) | Level STM LZB acknowledgement disappears | | |  |
| DMI (I) | Driver acknowledges the level transition. | | |  |
| JRU | M\_DRIVERACTIONS = 10  STOP DISPLAYING TEXT MESSAGE (2) | | |  |
| 7 | The EVC runs the distance "D1" or the balise group with level transition order to LSTM LZB is read. | DMI (O) |  | | |  |
| DMI (I) |  | | |  |
| JRU | (LRBG3)  Packet 41  D\_LEVELTR =32767  M\_LEVELTR = 1  NID\_STM = 10 (LZB) | | |  |
| 8 | The EVC switches to Level STM LZB.  No abrupt decrease in the permitted speed takes place during the level transition. | DMI (O) | Level STM Symbol  SN Symbol  LSTM LZB transition announcement disappears | | |  |
| DMI (I) |  | | |  |
| JRU | M\_LEVEL=1  M\_MODE=13  STOP DISPLAYING TEXT MESSAGE (1) | | |  |
| 9 | The train reports its position to the RBC due to the level transition. | DMI (O) |  | | |  |
| DMI (I) |  | | |  |
| JRU | Message 136  Packet 0  M\_LEVEL=1 | | |  |
| 10 | The train reaches the TSR area when the max safe front end of the train has run the distance D2. | DMI (O) | Vpermitted = V1 Vtrain ≤ V1 | | |  |
| DMI (I) |  | | |  |
| JRU | V\_PERMITTED = V1 V\_TRAIN ≤ V1  estimated front end = D2(LRBG2) - L\_DOUBTUNDER | | |  |
| 11 | The EVC runs the length of the train from the transition border. | DMI (O) |  | | |  |
| DMI (I) |  | | |  |
| JRU | Message 136  Packet 0/1  Estimated front end (LRBG3) = L\_TRAIN + L\_DOUBTOVER | | |  |
| 12 | The RBC sends an order to terminate the communication session and the termination of the communication session is performed. | DMI (O) | Radio Connection Symbol disappears | | |  |
| DMI (I) |  | | |  |
| JRU | Message 3/24/33  Packet 42  Q\_RBC=0  Message 156  Message 39 | | |  |
| 13 | The supervision of the TSR finishes when the min safe rear end of the train has reached the end of the TSR area. | DMI (O) | Vpermitted > V1 | | |  |
| DMI (I) |  | | |  |
| JRU | estimated front end = D2 (LRBG2) + L2 + L\_TRAIN + L\_DOUBTOVER V\_PERMITTED ≥ V1 | | |  |
| Final state | | Level | STM | | |  |
| Mode | SN | | |  |
| Train Speed (km/h) | NR | | |  |
| Other parameters |  | | |  |
| Final Test Result | |  | | | | |
| Field of Application | | Spain | | | | |
| Briefing instructions | | It shall be verified that no abrupt decrease in the permitted speed takes place during the level transition, and that the TSR is correctly managed in the LZB area.  If the train is equipped with L0+LZB instead of LSTM LZB, the test case shall be performed with L0+LZB. | | | | |