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| *TEST CASE DESCRIPTION* | | | | | | | |
|  | | Code | Version | | Title | | |
| Test Case | | 2.2.2 | 1 | | Level transition from L1 to LSTM LZB. TSR management. 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 1 to level STM LZB. | | | | | |
| 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 with a speed as low as possible in the LZB area and close to the level transition.  The TSR shall be set according to the procedure in force (this could imply to set the TSR 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 train receives the level transition announcement via balise group. | DMI (O) | | Level STM LZB transition announcement | | |  |
| DMI (I) | |  | | |  |
| JRU | | M\_LEVEL = 2  M\_MODE = 0  Packet 41 (LRBG1)  D\_LEVELTR = D1  M\_LEVELTR = 1  L\_ACKLEVELTR = L1  NID\_STM | | |  |
| 2 | The EVC receives TSR information located in the level STM LZB area. | DMI (O) | |  | | |  |
| DMI (I) | |  | | |  |
| JRU | | (LRBG2) Packet 65   NID\_TSR= TSR1  V\_TSR = V1  L\_TSR= L2  D\_TSR= D2 > D1 (LRBG1) | | |  |
| 3 | 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 | | |  |
| 4 | 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 | | Estimated front end=D1 (LRBG1)-L1-L\_DOUBTUNDER | | |  |
| 5 | The driver acknowledges the level transition. | DMI (O) | | Level STM LZB acknowledgement disappears | | |  |
| DMI (I) | | Driver acknowledges the level transition. | | |  |
| JRU | | M\_DRIVERACTIONS = 10 | | |  |
| 6 | The EVC runs the distance "D1" or the balise group with level transition order to LSTM LZB is read. | DMI (O) | |  | | |  |
| DMI (I) | |  | | |  |
| JRU | | Packet 41  D\_LEVELTR =32767  M\_LEVELTR = 1  NID\_STM = 10 (LZB) | | |  |
| 7 | The EVC switches to Level STM LZB (without abrupt changes in the permitted speed). | DMI (O) | | Level STM Symbol  SN Symbol  LSTM LZB transition announcement disappears | | |  |
| DMI (I) | |  | | |  |
| JRU | | M\_LEVEL=1  M\_MODE=13 | | |  |
| 8 | 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 | | |  |
| 9 | STM LZB continues with transmission mode. | DMI (O) | |  | | |  |
| DMI (I) | |  | | |  |
| JRU | |  | | |  |
| Final state | | Level | | STM | | |  |
| Mode | | SN | | |  |
| Train Speed (km/h) | | ≤ V1 | | |  |
| 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.  In case the train is equipped with L0+LZB instead of STM LZB, the test case shall be adapted accordingly. | | | | | |