|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *TEST CASE DESCRIPTION* | | | | | | | |
|  | | Code | Version | | | Title | |
| Test Case | | 3.17.9 | 2 | | | Level transition from L2 to LSTM LZB.  Degraded braking conditions + maximum train length. | |
|
| Baseline applicable | | Baseline 2 (2.3.0.d) | | | | | |
| Test case author | | ADIF | | | | | |
| Test Objective(s) | | Verify that the transition from level 2 to level STM LZB is performed correctly. | | | | | |
| Diagram | |  | | | | | |
| Starting conditions | | Level | | | 2 | | |
| Mode | | | FS | | |
| Train Speed (km/h) | | | Maximum permitted speed | | |
| Additional starting conditions | | | The train is approaching the level transition to Level STM LZB and the first signal after the transition border displays stop aspect.  The braked weight percentage entered in the train data entry is the corresponding to the worst running conditions, and the entered train length is the maximum train length possible. | | |
| 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 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 = 10 (LZB)  START DISPLAYING TEXT MESSAGE (1) | | |  |
| 2 (\*) | The RBC sends a MA with EoA beyond the transition border. | DMI (O) | |  | | |  |
| DMI (I) | |  | | |  |
| JRU | | Message 3  Packet 15  Packet 21  Packet 27 | | |  |
| 3 | 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 | | |  |
| 4 | The train passes over CDI and enters in LZB transmission | DMI (O) | |  | | |  |
| DMI (I) | |  | | |  |
| JRU | |  | | |  |
| 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  STOP DISPLAYING TEXT MESSAGE (2) | | |  |
| 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 | | NID\_BG = BG2  Packet 41  D\_LEVELTR =32767  M\_LEVELTR = 1  L\_ACKLEVELTR = 0  NID\_STM = 10 (LZB) | | |  |
| 7 | The EVC switches to Level STM LZB (permitted speed does not decrease abruptly) | DMI (O) | | Level STM Symbol  SN Symbol  LSTM LZB transition announcement disappears  Vpermitted does not decrease | | |  |
| DMI (I) | |  | | |  |
| JRU | | M\_LEVEL=1  M\_MODE=13  STOP DISPLAYING TEXT MESSAGE (1) | | |  |
| 8 | 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 | | |  |
| 9 | The train is at standstill in front of the light signal showing stop aspect. The driver selects “Override” in the STM LZB equipment. | DMI (O) | | Vtrain = 0 km/h | | |  |
| DMI (I) | | STM LZB Override | | |  |
| JRU | | V\_TRAIN = 0  LZB Command = True | | |  |
| 10 | SN Override functionality activation. | DMI (O) | | EoA Override Symbol  Vpermitted = VOV | | |  |
| DMI (I) | |  | | |  |
| JRU | | V\_PERMITTED = V\_NVSUPOVTRP | | |  |
| 11 (\*\*) | The train runs the length of the train from the transition border. | DMI (O) | |  | | |  |
| DMI (I) | |  | | |  |
| JRU | | Message 136  Packet 0/1  Estimated front end (LRBG2) = 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 | | |  |
| Final state | | Level | | STM LZB | | |  |
| Mode | | SN | | |  |
| Train Speed (km/h) | | NR | | |  |
| Other parameters | |  | | |  |
| Final Test Result | |  | | | | | |
| Field of Application | | Spain | | | | | |
| Briefing instructions | | The braked weight percentage corresponding to the worst running conditions shall be defined by the rolling stock operator for each train.  (\*) The order of this step could be different. In any case, to enter the LZB area the EVC must have information of the new area. This information can be transmitted as MA and track description of the new area or as a V\_LOA at the transition border.  (\*\*) These steps could be executed before steps 8 and 9 if the distance from the transition point to the first light signal of the LZB area is longer than the train length. | | | | | |