|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *TEST CASE DESCRIPTION* | | | | | | | |
|  | | Code | Version | | | Title | |
| Test Case | | 4.2.2 | 2 | | | Level transition from L2 to L0+LZB. Degraded braking conditions + maximum train length | |
|
| Baseline applicable | | Baseline 3 | | | | | |
| Test case author | | ADIF | | | | | |
| Test Objective(s) | | Verify that the transition from level 2 to level L0 + 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 L0 + LZB and the first signal after the transition border displays stop aspect.  A level 2 movement authority beyond the transition border is stored onboard.(\*).  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 0 transition announcement | | |  |
| DMI (I) | |  | | |  |
| JRU | | (LRBG1)  (If received from RBC Message 3/24/33)  Packet 41 | | |  |
| D\_LEVELTR = D1  M\_LEVELTR = 0  L\_ACKLEVELTR = L1  DMI\_SYMB\_STATUS  LE06  START DISPLAYING TEXT MESSAGE (1) | | |
| 2 (\*\*) | The EVC runs the distance “D1-L1” at which the acknowledgement window of the transition to Level L0 + LZB is shown to the driver. | DMI (O) | | Level 0 acknowledgement is displayed | | |  |
| DMI (I) | |  | | |  |
| JRU | | START DISPLAYINGTEXT MESSAGE (2)  Estimated front end=D1-L1-L\_DOUBTUNDER  DMI\_SYMB\_STATUS  LE07 | | |  |
| 3 (\*\*)  (\*\*\*\*) | The train passes over BKW/CDI with its rear End. The LZB onboard unit enters in “transmission mode”. | DMI (O) | |  | | |  |
| DMI (I) | |  | | |  |
| JRU | |  | | |  |
| 4 (\*\*) | The driver acknowledges the level transition. | DMI (O) | | Level 0 acknowledgement disappears | | |  |
| DMI (I) | | Driver acknowledges the level transition. | | |  |
| JRU | | M\_DRIVERACTIONS = 6  STOP DISPLAYINGTEXT MESSAGE (2) | | |  |
| 5 | The EVC runs the distance "D1" or the balise group with level transition order to L0 is read. | DMI (O) | |  | | |  |
| DMI (I) | |  | | |  |
| JRU | | (LRBG2)  Packet 41 | | |  |
| D\_LEVELTR =32767  M\_LEVELTR = 0 | | |
| 6 | The EVC switches to Level L0 + LZB (the permitted speed in the LZB system does not decrease). | DMI (O) | | Level 0 symbol | | |  |
| UN Symbol  Level 0 transition announcement disappears | | |
| DMI (I) | |  | | |  |
| JRU | | M\_LEVEL=0  M\_MODE=4 | | |  |
| DMI\_SYMB\_STATUS  LE01, MO16  STOP DISPLAYING TEXT MESSAGE (1) | | |
| 7 | The train reports its position to the RBC due to the level transition. | DMI (O) | |  | | |  |
| DMI (I) | |  | | |  |
| JRU | | Message 136  Packet 0 | | |  |
| M\_LEVEL=0 | | |
| 8 | The EVC runs the distance 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 | | |
| 9 (\*\*\*) | The RBC sends an order to terminate the communication session and the termination of the communication session is performed. | DMI (O) | | Safe radio connection “Connection Up” symbol disappears | | |  |
| DMI (I) | |  | | |  |
| JRU | | Message 3/24/33  Packet 42 | | |  |
| Q\_RBC=0  Message 156  Message 39 | | |
| 10 (\*\*\*) | The train is at standstill in front of the light signal showing stop aspect. The driver selects “Override” in the LZB equipment. | DMI (O) | | Vtrain = 0 km/h | | |  |
| DMI (I) | |  | | |  |
| JRU | | V\_TRAIN = 0 | | |  |
| 11 (\*\*\*)  (\*\*\*\*) | LZB system continues with transmission mode. | DMI (O) | |  | | |  |
| DMI (I) | |  | | |  |
| JRU | |  | | |  |
| Final state | | Level | | 0 + LZB | | |  |
| Mode | | UN | | |  |
| 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.  (\*) 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 in different order.  (\*\*\*) These steps could be executed in different order.  (\*\*\*\*) These steps should be checked in the LZB onboard unit. | | | | | |