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| *TEST CASE DESCRIPTION* | | | | | | | |
|  | | Code | Version | | Title | | |
| Test Case | | 4.2.5 | 1 | | TSR management at Level transition from L1 to L0+LZB. TSR in LZB area. | | |
|
| Baseline applicable | | Baseline 3 | | | | | |
| Test case author | | ADIF | | | | | |
| Test Objective(s) | | Verify that the transition from level 1 to level L0 + LZB is performed correctly and without abrupt changes in the permitted speed. | | | | | |
| Diagram | |  | | | | | |
| Starting conditions | | Level | | | | 1 | |
| Mode | | | | FS | |
| Train Speed (km/h) | | | | NR | |
| Additional starting conditions | | | | A TSR is set in the LZB area close to the level transition border.  The 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 train receives the level transition announcement via balise group. | DMI (O) | | Level L0 transition announcement | | |  |
| DMI (I) | |  | | |  |
| JRU | | M\_LEVEL = 2  M\_MODE = 0  Packet 41 | | |  |
| D\_LEVELTR = D1  M\_LEVELTR = 0  L\_ACKLEVELTR = L1  NID\_NTC  L1 = 5 sec. x Vmax (track section)  DMI\_SYMB\_STATUS  LE06 | | |
| 2 (\*) | The EVC receives TSR information located in the level L0 + 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 train passes a BKW/CDI point with the rear End.  LZB system enters in “transmission mode”. | DMI (O) | |  | | |  |
| DMI (I) | |  | | |  |
| JRU | |  | | |  |
| 5 (\*) | The EVC runs the distance “D1-L1” at which the acknowledgement window of the transition to Level 0 is shown to the driver. | DMI (O) | | Level 0 acknowledgement is displayed | | |  |
| DMI (I) | |  | | |  |
| JRU | | Estimated front end=D1-L1-L\_DOUBTUNDER  DMI\_SYMB\_STATUS  LE07 | | |  |
| 6 (\*) | The driver acknowledges the level transition. | DMI (O) | | Level 0 acknowledgement disappears | | |  |
| DMI (I) | | Driver acknowledges the level transition. | | |  |
| JRU | | M\_DRIVERACTIONS = 6 | | |  |
| 7 | The EVC runs the distance "D1" or the balise group with level transition order to Level 0 is read. | DMI (O) | |  | | |  |
| DMI (I) | |  | | |  |
| JRU | | Packet 41 | | |  |
| D\_LEVELTR =0/32767  M\_LEVELTR = 0 | | |
| 8 | The EVC switches to Level 0 (without abrupt changes in the permitted speed). | DMI (O) | | Level 0 Symbol  UN Symbol  L0 transition announcement disappears | | |  |
| DMI (I) | |  | | |  |
| JRU | | M\_LEVEL=0  M\_MODE=4 | | |  |
| DMI\_SYMB\_STATUS  LE01, MO16 | | |
| 9  (\*\*) | LZB system continues with transmission mode. | DMI (O) | |  | | |  |
| DMI (I) | |  | | |  |
| JRU | |  | | |  |
| 10 | The train reaches the TSR area when the max safe front end of the train has run the distance D2. | DMI (O) | | Vtrain ≤ V1 | | |  |
| DMI (I) | |  | | |  |
| JRU | | V\_PERMITTED = V1 V\_TRAIN ≤ V1  estimated front end = D2(LRBG2) - L\_DOUBTUNDER | | |  |
| Final state | | Level | | 0 | | |  |
| Mode | | UN | | |  |
| Train Speed (km/h) | | NR | | |  |
| Other parameters | |  | | |  |
| Final Test Result | |  | | | | | |
| Field of Application | | Spain | | | | | |
| Briefing instructions | | This test case shall be executed with the maximum train length  (\*) These steps could be executed in different order.  (\*\*) These steps should be checked in the LZB onboard unit. | | | | | |