|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *TEST CASE DESCRIPTION* | | | | | | | |
|  | | Code | Version | | | Title | |
| Test Case | | 1.4.13 | 2 | | | Level transition from L1 to L0 + ASFA. TSR in ASFA area. | |
|
| Baseline applicable | | Baseline 3 | | | | | |
| Test case author | | ADIF | | | | | |
| Test Objective(s) | | Verify that the system correctly supervises the permitted speed in the vicinity of a level transition from level 1 to level 0 + ASFA when the train approaches the ASFA area and a TSR is set in the ASFA area. | | | | | |
| Diagram | |  | | | | | |
| Starting conditions | | Level | | | 1 | | |
| Mode | | | FS | | |
| Train Speed (km/h) | | | NR | | |
| Additional starting conditions | | | A TSR (in the ETCS system) is set in the ASFA area close to the transition border. (this TSR must have the most restrictive value).  A level 1 MA beyond the level transition border is stored on board. All the signals are in proceed aspect | | |
| 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 0 transition announcement | | |  |
| DMI (I) | |  | | |  |
| JRU | | (LRBG1)  Packet 41  D\_LEVELTR = d  M\_LEVELTR = 0  L\_ACKLEVELTR = L  DMI\_SYMB\_STATUS  LE06 | | |  |
| 2 (\*) | The ETCS on-board unit changes the ASFA mode from EXT to AV/CONV. |  | |  | | |  |
| 3 | TSR information is received via balise group. | DMI (O) | |  | | |  |
| DMI (I) | |  | | |  |
| JRU | | (LRBG2)  Packet 65   NID\_TSR   V\_TSR = V1  L\_TSR= L1  D\_TSR= D1 | | |  |
| 4 | The train starts the braking curve to the TSR. | DMI (O) | | Braking curve with V\_target = V1  Vtrain < Vpermitted | | |  |
| DMI (I) | |  | | |  |
| JRU | | V\_TRAIN < V\_PERM  V\_TARGET = V1  SPEED AND DISTANCE MONITORING INFORMATION  V\_TARGET= V1  D\_TARGET = D1 - D\_LRBG1 - L\_DOUBTUNDER  M\_SDMTYPE=1 | | |  |
| 5 | The EVC runs the distance 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=d-L-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 "d" 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 | | |  |
| 8 | The EVC switches to level 0. | DMI (O) | | Level 0  UN mode symbol  Level 0 transition announcement disappears | | |  |
| DMI (I) | |  | | |  |
| JRU | | M\_LEVEL=0  M\_MODE=4  DMI\_SYMB\_STATUS  LE01, MO16 | | |  |
| 9 | The permitted speed in the level transition point is adequate for reaching the starting point of the TSR with comfort braking. |  | |  | | |  |
| 10 | The train reaches the TSR area when the max safe front end of the train has run the distance D1 from LRBG2. | DMI (O) | | Vperm= V1 Vtrain ≤ V1 | | |  |
| DMI (I) | |  | | |  |
| JRU | | V\_TRAIN ≤ V1  estimated front end = D1(LRBG2) - L\_DOUBTUNDER  SPEED AND DISTANCE MONITORING INFORMATION  V\_PERM = V1  M\_SDMTYPE=0 | | |  |
| 11 | 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) | | Vperm ≥ V1 | | |  |
| DMI (I) | |  | | |  |
| JRU | | estimated front end = D1 (LRBG2) + L1 + L\_TRAIN + L\_DOUBTOVER SPEED AND DISTANCE MONITORING INFORMATION  V\_PERM ≠ V1  M\_SDMTYPE=0 | | |  |
| Final state | | Level | | 0 | | |  |
| Mode | | UN | | |  |
| Train Speed (km/h) | | NR | | |  |
| Other parameters | |  | | |  |
| Final Test Result | |  | | | | | |
| Field of Application | | Spain | | | | | |
| Briefing instructions | | (\*) These steps verify functionality related to NF-27.  This test does not check ASFA functionality related to TSRs. | | | | | |