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| *TEST CASE DESCRIPTION* | | | | | | |
|  | | Code | Version | Title | | |
| Test Case | | 3.5.5 | 2 | Verification of track condition: lowering and raising pantograph | | |
|
| Baseline applicable | | Baseline 3 | | | | |
| Test case author | | ADIF | | | | |
| Test Objective(s) | | Verify the management of the changing of traction power sections on lowering/raising the pantograph. | | | | |
| Diagram | |  | | | | |
| Starting conditions | | Level | | | 2 | |
| Mode | | | FS | |
| Train Speed (km/h) | | | Maximum permitted speed | |
| Additional starting conditions | | | The train is approaching to a change of traction power section or a non-electrified section | |
| Sequence of the Test Case | | Checkpoints | | | | |
| Step | Step description | Interfaces | Description of what to be tested at the interface | | | OK? |
| 1 | The train receives information about the track conditions “non-stopping area - other reasons” and “powerless section – lower pantograph”. | DMI (O) | Lower Pantograph symbol in the planning information area | | |  |
| DMI (I) |  | | |  |
| JRU | Message 3/24/33  LRBG1  Packet 68  M\_TRACKCOND = 0\*  D\_TRACKCOND = D1  L\_TRACKCOND = L1  M\_TRACKCOND = 3  D\_TRACKCOND = D2  L\_TRACKCOND = L2  D2 corresponds approximately to 30 meters before the change of traction power start location | | |  |
| 2 | The EVC receives from balise or from RBC the change traction power section announcement (text message information). | DMI (O) |  | | |  |
| DMI (I) |  | | |  |
| JRU | (LRBG1)  Packet 72  Q\_TEXTCLASS = 01  Q\_TEXTDISPLAY = 0  D\_TEXTDISPLAY = D1  M\_MODETEXTDISPLAY = 15  M\_LEVELTEXTDISPLAY = 5  L\_TEXTDISPLAY = 32767  T\_TEXTDISPLAY = 15s  M\_MODETEXTDISPLAY = 15  M\_LEVELTEXTDISPLAY = 5  Q\_TEXTCONFIRM = 0  X\_TEXT="Aproximación a Zona de Cambio de Tensión" | | |  |
| 3 | Non-Stopping Area symbol is displayed when the train reaches the distance D1 with its max safe front end.  “D1” is determined by the emergency brake distance running at the maximum track speed. | DMI (O) | Non-Stopping Area symbol | | |  |
| DMI (I) |  | | |  |
| JRU | estimated front end = D1 (LRBG1) – L\_DOUBTUNDER  DMI\_SYMB\_STATUS  TC10 | | |  |
| 4 | The text message “aproximación a zona de cambio de tension” is displayed according the initial conditions given by the packet 72 | DMI (O) | Text message “Aproximación a zona de cambio de tensión” | | |  |
| DMI (I) |  | | |  |
| JRU | estimated front end = D1 (LRBG1)  START DISPLAYING PLAIN TEXT MESSAGE (1) | | |  |
| 5 | After 15 seconds the text message stops being displayed | DMI (O) | Text message “Aproximación a zona de cambio de tensión” disappears | | |  |
| DMI (I) |  | | |  |
| JRU | STOP DISPLAYING PLAIN TEXT MESSAGE (1) | | |  |
| 6 | The EVC receives the information related to the text message indicating that the train is reaching the change of power traction section | DMI (O) |  | | |  |
| DMI (I) |  | | |  |
| JRU | (LRBG2)  Packet 72  Q\_TEXTCLASS = 01  Q\_TEXTDISPLAY = 0  D\_TEXTDISPLAY = D3  M\_MODETEXTDISPLAY = 15  M\_LEVELTEXTDISPLAY = 5  L\_TEXTDISPLAY = L3  T\_TEXTDISPLAY = 1023  M\_MODETEXTDISPLAY = 15  M\_LEVELTEXTDISPLAY = 5  Q\_TEXTCONFIRM = 0  X\_TEXT="Llegada a Zona de Cambio de Tensión"  L3=Change of traction power start location | | |  |
| 7 | The text message “Llegada a zona de cambio de tension” is displayed according the initial conditions given by the packet 72 | DMI (O) | Text message “Llegada a zona de cambio de tensión” | | |  |
| DMI (I) |  | | |  |
| JRU | START DISPLAYING PLAIN TEXT MESSAGE (2)  Estimated front end (LRBG2) = D3 | | |  |
| 8 | The train reaches the lower pantograph announcement start location with its max safe front end. | DMI (O) | Lower pantograph symbol  Non-Stopping Area symbol | | |  |
| DMI (I) |  | | |  |
| JRU | DMI\_SYMB\_STATUS  TC02, TC10  estimated front end= D2 (LRBG1)-L\_DOUBTUNDER | | |  |
| 9 | The train reaches the change of traction power section start location | DMI (O) | Lowered pantograph symbol  Non-Stopping Area symbol  Text message “Llegada a zona de cambio de tensión” disappears | | |  |
| DMI (I) |  | | |  |
| JRU | estimated front end = L3 (LRBG2)  STOP DISPLAYING PLAIN TEXT MESSAGE (2)  DMI\_SYMB\_STATUS  TC01, TC10 | | |  |
| 10\*\* | When the train reaches the distance “L2” with its min safe front end, the pantograph is raised. | DMI (O) | Raise pantograph symbol  Non-Stopping Area symbol | | |  |
| DMI (I) |  | | |  |
| JRU | estimated front end = D2 (LRBG1) + L2 + L\_DOUBTOVER  DMI\_SYMB\_STATUS  TC04, TC10 | | |  |
| 11\*\* | When the train leaves the end of the change of traction power section with its min safe rear end, the non-stopping area symbol is removed. | DMI (O) | Stop displaying Non-Stopping Area symbol  Raise pantograph symbol | | |  |
| DMI (I) |  | | |  |
| JRU | estimated front end = D2 (LRBG1) + L2 + L\_TRAIN + L\_DOUBTOVER  DMI\_SYMB\_STATUS  TC04 | | |  |
| 12\*\* | 5s after the train leaves the end of the change of traction power section with its min safe rear end, the raise pantograph symbol is removed. | DMI (O) | Stop displaying Raise pantograph symbol | | |  |
| DMI (I) |  | | |  |
| JRU |  | | |  |
| Final state | | Level | 2 | | |  |
| Mode | FS | | |  |
| Train Speed (km/h) | NR | | | |
| Other parameters |  |  |  |  |
| Final Test Result | |  | | | | |
| Field of Application | | Spain | | | | |
| Briefing instructions | | The automatic lowering / raising of the pantograph shall be checked in the desk.  \*The RBC may send M\_TRACKCOND = 0 or 2, but the EVC will always translate it to M\_TRACKCOND = 0  \*\*These steps do not apply in case the train enters in a non- electrified area | | | | |