

| PROJECT         | CUSTOMER | TRAIN     |
|-----------------|----------|-----------|
| Xtrapolis-PRASA | PRASA    | 217 – TFD |

RTR Train Functional Dynamic Testing TS217 Report  
GIB0000006340



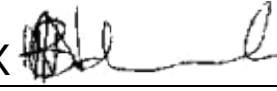
|           | CREATED             | VERIFIED          | APPROVED        | DISTRIBUTION                                                                                                                                                        |
|-----------|---------------------|-------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name      | Kealeboga MOCWAGOLE | Nkululeko NDOVELA | Kgomotso NKOANA | Confidentiality Category<br><i>Restricted</i> <i>Project</i> <i>Normal</i><br><input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> |
| Date      | 18/04/2024          | 18/04/2024        | 18/04/2024      | Control Category<br><i>Controlled</i> <i>Not Controlled</i><br><input checked="" type="checkbox"/> <input type="checkbox"/>                                         |
| Signature |                     |                   |                 | Language<br><b>EN</b>                                                                                                                                               |

This report has been automatically generated from TES version 1

## Table of modifications

| Rev | Date       | Modifications Content | Writer              |
|-----|------------|-----------------------|---------------------|
| A0  | 18/04/2024 | Creation              | Kealeboga MOCWAGOLE |

## Internal validations

|          | Name                | Function                 | Date       | Signature                                                                               |
|----------|---------------------|--------------------------|------------|-----------------------------------------------------------------------------------------|
| Creator  | Kealeboga MOCWAGOLE | EPU Manager              | 18/04/2024 | X    |
|          |                     |                          |            | Kealeboga MOCWAGOLE<br>EPU Manager                                                      |
| Verifier | Nkululeko NDOVELA   | Test Engineering Manager | 18/04/2024 | X  |
|          |                     |                          |            | Nkululeko NDOVELA<br>Test Engineering Manager                                           |
| Approver | Kgomotso NKOANA     | Test Expert              | 18/04/2024 | X  |
|          |                     |                          |            | Kgomotso NKOANA<br>Test Expert                                                          |

## Execution Plan

|            |            |
|------------|------------|
| Start Date | 15/04/2024 |
| End Date   | 15/04/2024 |

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| Serial Tests Report<br>TS217 – TFD<br>RTR Train Functional Static Test Report | Document Reference<br>GIB0000006340<br>Version: A0 | Emission date<br>18/04/2024 |
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**Section 1 – Purpose / Objectives**

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|                                                                               |                                                    |                             |
|-------------------------------------------------------------------------------|----------------------------------------------------|-----------------------------|
| Serial Tests Report<br>TS217 – TFD<br>RTR Train Functional Static Test Report | Document Reference<br>GIB0000006340<br>Version: A0 | Emission date<br>18/04/2024 |
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## Section 3 – Dynamic

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### 3.3 Instructions list

### 3.3.1 TFD-Dynamic

I - Information      A - Action      R - Result      NE - Not Executed

| N°    | Type | Instruction                                                                                                                                                                                                                                | File                                                                                | Result status | Result value | Operator                | Vehicle |
|-------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------|--------------|-------------------------|---------|
| 10001 | I    | Dynamic Test                                                                                                                                                                                                                               |                                                                                     | OK            |              | Celiwe Sokhela - 491462 | Train   |
| 10002 | I    | Initial conditions                                                                                                                                                                                                                         |                                                                                     | OK            |              | Celiwe Sokhela - 491462 | Train   |
| 10003 | I    | This test shall be done under dry weather conditions i.e. no rain                                                                                                                                                                          |                                                                                     | OK            |              | Celiwe Sokhela - 491462 | Train   |
| 10004 | I    | This test shall be carried out on a straight rail(R>=700m). The track must be well bedded with a maximum gradient =<5% of 3 km length. The track must be dry and clean before commencing the test to prevent degraded adhesion conditions. |                                                                                     | OK            |              | Celiwe Sokhela - 491462 | Train   |
| 10005 | I    | The catenary nominal voltage should be 3.3 +/- 0.3 kV DC.                                                                                                                                                                                  |                                                                                     | OK            |              | Celiwe Sokhela - 491462 | Train   |
| 10006 | I    | The test must be done with a complete 6-car configuration Prasa X'Trapolis Train.                                                                                                                                                          |                                                                                     | OK            |              | Celiwe Sokhela - 491462 | Train   |
| 10007 | I    | All routine static tests must be completed before commencing with this test, unless authorization has been given by Management                                                                                                             |                                                                                     | OK            |              | Celiwe Sokhela - 491462 | Train   |
| 10008 | I    | Dynamic Pre-Test has been completed                                                                                                                                                                                                        |                                                                                     | OK            |              | Celiwe Sokhela - 491462 | Train   |
| 10009 | I    | The test shall be performed in M1 load configuration                                                                                                                                                                                       |                                                                                     | OK            |              | Celiwe Sokhela - 491462 | Train   |
| 10010 | I    | Have a laptop ready with Train Tracer installed and loaded with the dashboard attached.                                                                                                                                                    |  | OK            |              | Celiwe Sokhela - 491462 | Train   |
| 10011 | I    | Refer to this image for all lamp in alarm module                                                                                                                                                                                           |  | OK            |              | Celiwe Sokhela - 491462 | Train   |
| 10012 | I    | Initial Conditions                                                                                                                                                                                                                         |                                                                                     | OK            |              | Celiwe Sokhela - 491462 | Train   |
| 10013 | I    | Deadman switch 60S1 is in NORMAL position on both TC cars                                                                                                                                                                                  |                                                                                     | OK            |              | Celiwe Sokhela - 491462 | Train   |

|       |   |                                                                                 |  |    |      |                         |       |
|-------|---|---------------------------------------------------------------------------------|--|----|------|-------------------------|-------|
| 10014 | I | The Traction Isolation switch 22S1 should be in NORMAL position on both TC cars |  | OK |      | Celiwe Sokhela - 491462 | Train |
| 10015 | A | Put the ERTMS switch 62S1 in ISOLATION position in both TC cars                 |  | OK |      | Celiwe Sokhela - 491462 | Train |
| 10016 | A | Apply the Safety procedure for movements before starting the test below         |  | OK |      | Celiwe Sokhela - 491462 | Train |
| 10017 | I | All traction units are in black colour on the DDU maintenance screen            |  | OK |      | Celiwe Sokhela - 491462 | Train |
| 10018 | A | Prepare the train in high voltage with active cab on TC1                        |  | OK |      | Celiwe Sokhela - 491462 | Train |
| 10019 | R | Read Min [TT] BKT_LineVoltageGl : 2700<= x                                      |  | OK | 3230 | Celiwe Sokhela - 491462 | Train |
| 10020 | I | Movement preparation                                                            |  | OK |      | Celiwe Sokhela - 491462 | Train |
| 10021 | A | Put the switch 45S1 to 0 position to release the parking brake                  |  | OK |      | Celiwe Sokhela - 491462 | Train |
| 10022 | A | Select Driving Mode to EFFORT position                                          |  | OK |      | Celiwe Sokhela - 491462 | Train |
| 10023 | A | Put the direction selector switch in FORWARD position in TC1                    |  | OK |      | Celiwe Sokhela - 491462 | Train |
| 10024 | R | Lamp 31H1 is "ON" on the alarm module                                           |  | OK |      | Celiwe Sokhela - 491462 | Train |
| 10025 | R | TA appears on DDU screen                                                        |  | OK |      | Celiwe Sokhela - 491462 | Train |
| 10026 | A | Force [TT] (TBCU1)DSP2_WR_inv_B_inv_on = 0.0                                    |  | OK |      | Celiwe Sokhela - 491462 | Train |
| 10027 | A | Force [TT] (TBCU2)DSP2_WR_inv_B_inv_on = 0.0                                    |  | OK |      | Celiwe Sokhela - 491462 | Train |
| 10028 | A | Force [TT] (TBCU3)DSP2_WR_inv_B_inv_on = 0.0                                    |  | OK |      | Celiwe Sokhela - 491462 | Train |
| 10029 | A | Force [TT] (TBCU4)DSP2_WR_inv_B_inv_on = 0.0                                    |  | OK |      | Celiwe Sokhela - 491462 | Train |
| 10030 | A | Slowly move the Master Controller to TRACTION position                          |  | OK |      | Celiwe Sokhela - 491462 | Train |

|       |   |                                                                                                         |  |    |   |                         |       |
|-------|---|---------------------------------------------------------------------------------------------------------|--|----|---|-------------------------|-------|
| 10031 | R | The train does not move                                                                                 |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10032 | R | Read Defined Variable [TT]<br>(MPU1)BKT_Tbcu1EffAchPerc = 0.0                                           |  | OK | 0 | Celiwe Sokhela - 491462 | Train |
| 10033 | R | Read Defined Variable [TT]<br>(MPU1)BKT_Tbcu2EffAchPerc = 0.0                                           |  | OK | 0 | Celiwe Sokhela - 491462 | Train |
| 10034 | R | Read Defined Variable [TT]<br>(MPU1)BKT_Tbcu3EffAchPerc = 0.0                                           |  | OK | 0 | Celiwe Sokhela - 491462 | Train |
| 10035 | R | Read Defined Variable [TT]<br>(MPU1)BKT_Tbcu4EffAchPerc = 0.0                                           |  | OK | 0 | Celiwe Sokhela - 491462 | Train |
| 10036 | A | Release [TT]<br>(TBCU1)DSP2_WR_inv_B_inv_on                                                             |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10037 | A | Release [TT]<br>(TBCU2)DSP2_WR_inv_B_inv_on                                                             |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10038 | A | Release [TT]<br>(TBCU3)DSP2_WR_inv_B_inv_on                                                             |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10039 | A | Release [TT]<br>(TBCU4)DSP2_WR_inv_B_inv_on                                                             |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10040 | A | Put the direction selector switch in NEUTRAL position in TC1                                            |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10041 | R | Read Defined Variable [TT]<br>(MPU1)bcu1_tlnb = 0.0                                                     |  | OK | 0 | Celiwe Sokhela - 491462 | Train |
| 10042 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dsnozeror1 = 0.0                                          |  | OK | 0 | Celiwe Sokhela - 491462 | Train |
| 10043 | A | Put the direction selector switch to FORWARD and again in NEUTRAL position to reset the emergency brake |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10044 | I | Traction and Electric Brake - Wheel Turn Test                                                           |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10045 | A | Prepare and run Dynamic dashboard                                                                       |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10046 | A | Record and SAVE the above dashboard for each car                                                        |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10047 | I | Traction and Brake M4 - Wheel Turn Test                                                                 |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10048 | A | Force [TT]                                                                                              |  | OK |   | Celiwe Sokhela - 491462 | Train |

|       |   |                                                                                                                                                                               |  |    |     |                         |       |
|-------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----|-----|-------------------------|-------|
|       |   | (TBCU1)DSP2_WR_inv_B_inv_on = 0.0                                                                                                                                             |  |    |     |                         |       |
| 10049 | A | Force [TT]<br>(TBCU2)DSP2_WR_inv_B_inv_on = 0.0                                                                                                                               |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10050 | A | Force [TT]<br>(TBCU3)DSP2_WR_inv_B_inv_on = 0.0                                                                                                                               |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10051 | R | Read Defined Variable [TT]<br>(MPU1)BKT_Tbcu1TcuDinC1 = 1.0                                                                                                                   |  | OK | 1   | Celiwe Sokhela - 491462 | Train |
| 10052 | R | Read Defined Variable [TT]<br>(MPU1)BKT_Tbcu2TcuDinC2 = 1.0                                                                                                                   |  | OK | 1   | Celiwe Sokhela - 491462 | Train |
| 10053 | R | Read Defined Variable [TT]<br>(MPU1)BKT_Tbcu3TcuDinC3 = 1.0                                                                                                                   |  | OK | 1   | Celiwe Sokhela - 491462 | Train |
| 10054 | R | Read Defined Variable [TT]<br>(MPU1)BKT_Tbcu4TcuDinC4 = 1.0                                                                                                                   |  | OK | 1   | Celiwe Sokhela - 491462 | Train |
| 10055 | A | Put the direction selector switch in FORWARD position                                                                                                                         |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10056 | A | Put the Master controller in 100% TRACTION immediately, accelerate to speed 15 km/h                                                                                           |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10057 | R | The train is moving forward towards TC1 direction                                                                                                                             |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10058 | R | Read Min [TT]<br>(MPU1)BKT_Tbcu4EffAchPerc : 1<= x                                                                                                                            |  | OK | 100 | Celiwe Sokhela - 491462 | Train |
| 10059 | R | Read Defined Variable [TT]<br>(MPU1)BKT_Tbcu2EffAchPerc = 0.0                                                                                                                 |  | OK | 0   | Celiwe Sokhela - 491462 | Train |
| 10060 | R | Read Defined Variable [TT]<br>(MPU1)BKT_Tbcu3EffAchPerc = 0.0                                                                                                                 |  | OK | 0   | Celiwe Sokhela - 491462 | Train |
| 10061 | R | Read Defined Variable [TT]<br>(MPU1)BKT_Tbcu1EffAchPerc = 0.0                                                                                                                 |  | OK | 0   | Celiwe Sokhela - 491462 | Train |
| 10062 | I | For FORWARD direction:<br>Speed sensor 1 axle 1 (+)<br>Speed sensor 2 axle 1 (direction) (-)<br>Speed sensor axle 2 (+)<br>Speed sensor axle 3 (+)<br>Speed sensor axle 4 (+) |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10063 | R | Read Min [TT]                                                                                                                                                                 |  | OK | 3   | Celiwe Sokhela - 491462 | Train |

|       |   |                                                                                       |  |    |    |                         |       |
|-------|---|---------------------------------------------------------------------------------------|--|----|----|-------------------------|-------|
|       |   | (TBCU4)dsp2_rd_inv_fq_axle0_4 : 1<= x                                                 |  |    |    |                         |       |
| 10064 | R | Result Max [TT]<br>(TBCU4)dsp2_rd_inv_fq_axle1_4 : x <= 0                             |  | OK | -3 | Celiwe Sokhela - 491462 | Train |
| 10065 | R | Read Min [TT]<br>(TBCU4)dsp2_rd_inv_fq_axle2_4 : 1<= x                                |  | OK | 3  | Celiwe Sokhela - 491462 | Train |
| 10066 | R | Read Min [TT]<br>(TBCU4)dsp2_rd_inv_fq_axle3_4 : 1<= x                                |  | OK | 3  | Celiwe Sokhela - 491462 | Train |
| 10067 | R | Read Min [TT]<br>(TBCU4)dsp2_rd_inv_fq_axle4_4 : 1<= x                                |  | OK | 4  | Celiwe Sokhela - 491462 | Train |
| 10068 | A | Put the Master controller in BRAKE position until the train comes to a complete stop  |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10069 | A | Put the direction selector switch in REVERSE position                                 |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10070 | A | Put the Master controller in TRACTION position and slowly accelerate to speed <5 km/h |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10071 | R | The train is moving backward towards TC2 direction                                    |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10072 | R | Result Max [TT]<br>(TBCU4)dsp2_rd_inv_fq_axle0_4 : x <= 0                             |  | OK | 0  | Celiwe Sokhela - 491462 | Train |
| 10073 | R | Read Min [TT]<br>(TBCU4)dsp2_rd_inv_fq_axle1_4 : 1<= x                                |  | OK | 1  | Celiwe Sokhela - 491462 | Train |
| 10074 | A | Put the Master controller in BRAKE position until the train comes to a complete stop  |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10075 | A | Release [TT]<br>(TBCU1)DSP2_WR_inv_B_inv_on                                           |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10076 | I | Traction and Brake M1 - Wheel Turn Test                                               |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10077 | A | Force [TT]<br>(TBCU4)DSP2_WR_inv_B_inv_on = 0.0                                       |  | OK |    | Celiwe Sokhela - 491462 | Train |

|       |   |                                                                                       |  |    |     |                         |       |
|-------|---|---------------------------------------------------------------------------------------|--|----|-----|-------------------------|-------|
| 10078 | A | Put the direction selector switch in FORWARD position                                 |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10079 | A | Put the Master controller in 100% TRACTION immediately, accelerate to speed 15 km/h   |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10080 | R | The train is moving forward towards TC1 direction                                     |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10081 | R | Read Min [TT]<br>(MPU1)BKT_Tbcu1EffAchPerc : 1<= x                                    |  | OK | 100 | Celiwe Sokhela - 491462 | Train |
| 10082 | R | Read Defined Variable [TT]<br>(MPU1)BKT_Tbcu2EffAchPerc = 0.0                         |  | OK | 0   | Celiwe Sokhela - 491462 | Train |
| 10083 | R | Read Defined Variable [TT]<br>(MPU1)BKT_Tbcu3EffAchPerc = 0.0                         |  | OK | 0   | Celiwe Sokhela - 491462 | Train |
| 10084 | R | Read Defined Variable [TT]<br>(MPU1)BKT_Tbcu4EffAchPerc = 0.0                         |  | OK | 0   | Celiwe Sokhela - 491462 | Train |
| 10085 | R | Read Min [TT]<br>(TBCU1)dsp2_rd_inv_fq_axle0_1 : 1<= x                                |  | OK | 5   | Celiwe Sokhela - 491462 | Train |
| 10086 | R | Result Max [TT]<br>(TBCU1)dsp2_rd_inv_fq_axle1_1 : x <= 0                             |  | OK | -5  | Celiwe Sokhela - 491462 | Train |
| 10087 | R | Read Min [TT]<br>(TBCU1)dsp2_rd_inv_fq_axle2_1 : 1<= x                                |  | OK | 5   | Celiwe Sokhela - 491462 | Train |
| 10088 | R | Read Min [TT]<br>(TBCU1)dsp2_rd_inv_fq_axle3_1 : 1<= x                                |  | OK | 5   | Celiwe Sokhela - 491462 | Train |
| 10089 | R | Read Min [TT]<br>(TBCU1)dsp2_rd_inv_fq_axle4_1 : 1<= x                                |  | OK | 6   | Celiwe Sokhela - 491462 | Train |
| 10090 | A | Put the Master controller in BRAKE position until the train comes to a complete stop  |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10091 | A | Put the direction selector switch in REVERSE position                                 |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10092 | A | Put the Master controller in TRACTION position and slowly accelerate to speed <5 km/h |  | OK |     | Celiwe Sokhela - 491462 | Train |

|       |   |                                                                                      |  |    |    |                         |       |
|-------|---|--------------------------------------------------------------------------------------|--|----|----|-------------------------|-------|
| 10093 | R | The train is moving backward towards TC2 direction                                   |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10094 | R | Result Max [TT]<br>(TBCU1)dsp2_rd_inv_fq_axle0_1 : x<br>≤ 0                          |  | OK | 0  | Celiwe Sokhela - 491462 | Train |
| 10095 | R | Read Min [TT]<br>(TBCU1)dsp2_rd_inv_fq_axle1_1 : 1≤ x                                |  | OK | 1  | Celiwe Sokhela - 491462 | Train |
| 10096 | A | Put the Master controller in BRAKE position until the train comes to a complete stop |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10097 | A | Release [TT]<br>(TBCU2)DSP2_WR_inv_B_inv_on                                          |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10098 | I | Traction and Brake M2 - Wheel Turn Test                                              |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10099 | A | Force [TT]<br>(TBCU1)DSP2_WR_inv_B_inv_on = 0.0                                      |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10100 | A | Put the direction selector switch in FORWARD position                                |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10101 | A | Put the Master controller in 100% TRACTION immediately, accelerate to speed 15 km/h  |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10102 | R | The train moves forward towards TC1 direction                                        |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10103 | R | Read Defined Variable [TT]<br>(MPU1)BKT_Tbcu1EffAchPerc = 0.0                        |  | OK | 0  | Celiwe Sokhela - 491462 | Train |
| 10104 | R | Read Min [TT]<br>(MPU1)BKT_Tbcu2EffAchPerc : 1≤ x                                    |  | OK | 19 | Celiwe Sokhela - 491462 | Train |
| 10105 | R | Read Defined Variable [TT]<br>(MPU1)BKT_Tbcu3EffAchPerc = 0.0                        |  | OK | 0  | Celiwe Sokhela - 491462 | Train |
| 10106 | R | Read Defined Variable [TT]<br>(MPU1)BKT_Tbcu4EffAchPerc = 0.0                        |  | OK | 0  | Celiwe Sokhela - 491462 | Train |
| 10107 | R | Result Max [TT]<br>(TBCU2)dsp2_rd_inv_fq_axle0_2 : x<br>≤ 0                          |  | OK | -8 | Celiwe Sokhela - 491462 | Train |
| 10108 | R | Read Min [TT]                                                                        |  | OK | 8  | Celiwe Sokhela - 491462 | Train |

|       |   |                                                                                       |  |    |    |                         |       |
|-------|---|---------------------------------------------------------------------------------------|--|----|----|-------------------------|-------|
|       |   | (TBCU2)dsp2_rd_inv_fq_axle1_2 : 1<= x                                                 |  |    |    |                         |       |
| 10109 | R | Read Min [TT]<br>(TBCU2)dsp2_rd_inv_fq_axle2_2 : 1<= x                                |  | OK | 8  | Celiwe Sokhela - 491462 | Train |
| 10110 | R | Read Min [TT]<br>(TBCU2)dsp2_rd_inv_fq_axle3_2 : 1<= x                                |  | OK | 8  | Celiwe Sokhela - 491462 | Train |
| 10111 | R | Read Min [TT]<br>(TBCU2)dsp2_rd_inv_fq_axle4_2 : 1<= x                                |  | OK | 8  | Celiwe Sokhela - 491462 | Train |
| 10112 | A | Put the Master controller in BRAKE position until the train comes to a complete stop  |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10113 | A | Put the direction selector switch in REVERSE position                                 |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10114 | A | Put the Master controller in TRACTION position and slowly accelerate to speed <5 km/h |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10115 | R | The train moves backward towards TC2 direction                                        |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10116 | R | Read Min [TT]<br>(TBCU2)dsp2_rd_inv_fq_axle0_2 : 1<= x                                |  | OK | 1  | Celiwe Sokhela - 491462 | Train |
| 10117 | R | Result Max [TT]<br>(TBCU2)dsp2_rd_inv_fq_axle1_2 : x <= 0                             |  | OK | -1 | Celiwe Sokhela - 491462 | Train |
| 10118 | A | Put the Master controller in BRAKE position until the train comes to a complete stop  |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10119 | A | Release [TT]<br>(TBCU3)DSP2_WR_inv_B_inv_on                                           |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10120 | I | Traction and Brake M3 - Wheel Turn Test                                               |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10121 | A | Force [TT]<br>(TBCU2)DSP2_WR_inv_B_inv_on = 0.0                                       |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10122 | A | Put the direction selector switch in FORWARD position                                 |  | OK |    | Celiwe Sokhela - 491462 | Train |

|       |   |                                                                                       |  |    |     |                         |       |
|-------|---|---------------------------------------------------------------------------------------|--|----|-----|-------------------------|-------|
| 10123 | A | Put the Master controller in 100% TRACTION immediately, accelerate to speed 15 km/h   |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10124 | R | The train moves forward towards TC1 direction                                         |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10125 | R | Read Defined Variable [TT] (MPU1)BKT_Tbcu1EffAchPerc = 0.0                            |  | OK | 0   | Celiwe Sokhela - 491462 | Train |
| 10126 | R | Read Defined Variable [TT] (MPU1)BKT_Tbcu2EffAchPerc = 0.0                            |  | OK | 0   | Celiwe Sokhela - 491462 | Train |
| 10127 | R | Read Min [TT] (MPU1)BKT_Tbcu3EffAchPerc : 1<= x                                       |  | OK | 101 | Celiwe Sokhela - 491462 | Train |
| 10128 | R | Read Defined Variable [TT] (MPU1)BKT_Tbcu4EffAchPerc = 0.0                            |  | OK | 0   | Celiwe Sokhela - 491462 | Train |
| 10129 | R | Result Max [TT] (TBCU3)dsp2_rd_inv_fq_axle0_3 : x <= 0                                |  | OK | -2  | Celiwe Sokhela - 491462 | Train |
| 10130 | R | Read Min [TT] (TBCU3)dsp2_rd_inv_fq_axle1_3 : 1<= x                                   |  | OK | 2   | Celiwe Sokhela - 491462 | Train |
| 10131 | R | Read Min [TT] (TBCU3)dsp2_rd_inv_fq_axle2_3 : 1<= x                                   |  | OK | 2   | Celiwe Sokhela - 491462 | Train |
| 10132 | R | Read Min [TT] (TBCU3)dsp2_rd_inv_fq_axle3_3 : 1<= x                                   |  | OK | 2   | Celiwe Sokhela - 491462 | Train |
| 10133 | R | Read Min [TT] (TBCU3)dsp2_rd_inv_fq_axle4_3 : 1<= x                                   |  | OK | 2   | Celiwe Sokhela - 491462 | Train |
| 10134 | A | Put the Master controller in BRAKE position until the train comes to a complete stop  |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10135 | A | Put the direction selector switch in REVERSE position                                 |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10136 | A | Put the Master controller in TRACTION position and slowly accelerate to speed <5 km/h |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10137 | R | The train moves backward towards TC2 direction                                        |  | OK |     | Celiwe Sokhela - 491462 | Train |

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| 10138 | R | Read Min [TT]<br>(TBCU3)dsp2_rd_inv_fq_axle0_3 : 1<=<br>x                                                                                                                                                 |  | OK | 1     | Celiwe Sokhela -<br>491462 | Train |
| 10139 | R | Result Max [TT]<br>(TBCU3)dsp2_rd_inv_fq_axle1_3 : x<br><= 0                                                                                                                                              |  | OK | -1    | Celiwe Sokhela -<br>491462 | Train |
| 10140 | A | Put the Master controller in BRAKE<br>position until the train comes to a<br>complete stop                                                                                                                |  | OK |       | Celiwe Sokhela -<br>491462 | Train |
| 10141 | I | Wheel Turn Test Results Check                                                                                                                                                                             |  | OK |       | Celiwe Sokhela -<br>491462 | Train |
| 10142 | A | Analyse the recorded results before<br>continuing with the test. If the results are<br>out of range, the test must be STOPPED<br>immediately, and the respective car motor<br>wiring needs to be checked. |  | OK |       | Celiwe Sokhela -<br>491462 | Train |
| 10143 | R | M4 - Time taken to reach 15km/h<br>Result Max : x <= 24 (s)                                                                                                                                               |  | OK | 22.68 | Celiwe Sokhela -<br>491462 | Train |
| 10144 | R | M1 - Time taken to reach 15km/h<br>Result Max : x <= 24 (s)                                                                                                                                               |  | OK | 21.07 | Celiwe Sokhela -<br>491462 | Train |
| 10145 | R | M2 - Time taken to reach 15km/h<br>Result Max : x <= 24 (s)                                                                                                                                               |  | OK | 19.36 | Celiwe Sokhela -<br>491462 | Train |
| 10146 | R | M3 - Time taken to reach 15km/h<br>Result Max : x <= 24 (s)                                                                                                                                               |  | OK | 20.12 | Celiwe Sokhela -<br>491462 | Train |
| 10147 | R | All M cars reach 15km/h in less than 24<br>seconds                                                                                                                                                        |  | OK |       | Celiwe Sokhela -<br>491462 | Train |
| 10148 | I | All Motors Test Run                                                                                                                                                                                       |  | OK |       | Celiwe Sokhela -<br>491462 | Train |
| 10149 | A | Release [TT]<br>(TBCU1)DSP2_WVR_inv_B_inv_on                                                                                                                                                              |  | OK |       | Celiwe Sokhela -<br>491462 | Train |
| 10150 | A | Release [TT]<br>(TBCU2)DSP2_WVR_inv_B_inv_on                                                                                                                                                              |  | OK |       | Celiwe Sokhela -<br>491462 | Train |
| 10151 | A | Release [TT]<br>(TBCU4)DSP2_WVR_inv_B_inv_on                                                                                                                                                              |  | OK |       | Celiwe Sokhela -<br>491462 | Train |
| 10152 | A | Put the direction selector switch in<br>FORWARD position                                                                                                                                                  |  | OK |       | Celiwe Sokhela -<br>491462 | Train |
| 10153 | A | Slowly move the Master Controller to<br>TRACTION position until the train speed<br>reaches 15km/h                                                                                                         |  | OK |       | Celiwe Sokhela -<br>491462 | Train |
| 10154 | R | Read Defined Variable [TT]<br>(MPU1)bcu1_tlnb = 1.0                                                                                                                                                       |  | OK | 1     | Celiwe Sokhela -<br>491462 | Train |

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| 10155 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dsnozeror1 = 1.0                                                                                                                                                              |                                                                                     | OK | 1   | Celiwe Sokhela -<br>491462 | Train |
| 10156 | A | Put the Master Controller in OFF position                                                                                                                                                                                   |                                                                                     | OK |     | Celiwe Sokhela -<br>491462 | Train |
| 10157 | R | The train comes to a standstill                                                                                                                                                                                             |                                                                                     | OK |     | Celiwe Sokhela -<br>491462 | Train |
| 10158 | I | Wheel Diameter Calibration                                                                                                                                                                                                  |                                                                                     | OK |     | Celiwe Sokhela -<br>491462 | Train |
| 10159 | I | Following conditions need to be met in order to successfully calibrate the wheel diameter. Ensure that the OTDR reference value of a Wheel Diameter has been entered.                                                       |                                                                                     | OK |     | Celiwe Sokhela -<br>491462 | Train |
| 10160 | A | 1) Train running on a straight track<br>2) Effort Driving Mode<br>3) Speed>15km/h<br>4) No wheel slippage<br>5) No Emergency Braking<br>6) Traction Effort = 0% (Coasting)<br>7) All Traction and Braking Units are working |                                                                                     | OK |     | Celiwe Sokhela -<br>491462 | Train |
| 10161 | A | On the DDU screen select "First Acquisition Request"                                                                                                                                                                        |                                                                                     | OK |     | Celiwe Sokhela -<br>491462 | Train |
| 10162 | A | Check if the wheel diameter for each axle is between 838 mm and 842 mm, see picture attached.                                                                                                                               |  | OK |     | Celiwe Sokhela -<br>491462 | Train |
| 10163 | R | Read Min/Max [TT]<br>(MPU1)BKT_Bcu1WhDiamAx1 : 839<= x <= 841                                                                                                                                                               |                                                                                     | OK | 839 | Celiwe Sokhela -<br>491462 | Train |
| 10164 | R | Read Min/Max [TT]<br>(MPU1)BKT_Bcu1WhDiamAx2 : 839<= x <= 841                                                                                                                                                               |                                                                                     | OK | 839 | Celiwe Sokhela -<br>491462 | Train |
| 10165 | R | Read Min/Max [TT]<br>(MPU1)BKT_Bcu1WhDiamAx3 : 839<= x <= 841                                                                                                                                                               |                                                                                     | OK | 839 | Celiwe Sokhela -<br>491462 | Train |
| 10166 | R | Read Min/Max [TT]<br>(MPU1)BKT_Bcu1WhDiamAx4 : 839<= x <= 841                                                                                                                                                               |                                                                                     | OK | 839 | Celiwe Sokhela -<br>491462 | Train |
| 10167 | R | Read Min/Max [TT]<br>(MPU1)BKT_Bcu2WhDiamAx1 : 839<= x <= 841                                                                                                                                                               |                                                                                     | OK | 840 | Celiwe Sokhela -<br>491462 | Train |
| 10168 | R | Read Min/Max [TT]                                                                                                                                                                                                           |                                                                                     | OK | 840 | Celiwe Sokhela -<br>491462 | Train |

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|       |   | (MPU1)BKT_Bcu2WhDiamAx2 : 839<= x<br><= 841                       |  |    |     |                            |       |
| 10169 | R | Read Min/Max [TT]<br>(MPU1)BKT_Bcu2WhDiamAx3 : 839<= x<br><= 841  |  | OK | 840 | Celiwe Sokhela -<br>491462 | Train |
| 10170 | R | Read Min/Max [TT]<br>(MPU1)BKT_Bcu2WhDiamAx4 : 839<= x<br><= 841  |  | OK | 840 | Celiwe Sokhela -<br>491462 | Train |
| 10171 | R | Read Min/Max [TT]<br>(MPU1)BKT_Tbcu1WhDiamAx1 : 839<= x<br><= 841 |  | OK | 839 | Celiwe Sokhela -<br>491462 | Train |
| 10172 | R | Read Min/Max [TT]<br>(MPU1)BKT_Tbcu1WhDiamAx2 : 839<= x<br><= 841 |  | OK | 839 | Celiwe Sokhela -<br>491462 | Train |
| 10173 | R | Read Min/Max [TT]<br>(MPU1)BKT_Tbcu1WhDiamAx3 : 839<= x<br><= 841 |  | OK | 839 | Celiwe Sokhela -<br>491462 | Train |
| 10174 | R | Read Min/Max [TT]<br>(MPU1)BKT_Tbcu1WhDiamAx4 : 839<= x<br><= 841 |  | OK | 840 | Celiwe Sokhela -<br>491462 | Train |
| 10175 | R | Read Min/Max [TT]<br>(MPU1)BKT_Tbcu2WhDiamAx1 : 839<= x<br><= 841 |  | OK | 839 | Celiwe Sokhela -<br>491462 | Train |
| 10176 | R | Read Min/Max [TT]<br>(MPU1)BKT_Tbcu2WhDiamAx2 : 839<= x<br><= 841 |  | OK | 839 | Celiwe Sokhela -<br>491462 | Train |
| 10177 | R | Read Min/Max [TT]<br>(MPU1)BKT_Tbcu2WhDiamAx3 : 839<= x<br><= 841 |  | OK | 840 | Celiwe Sokhela -<br>491462 | Train |
| 10178 | R | Read Min/Max [TT]<br>(MPU1)BKT_Tbcu2WhDiamAx4 : 839<= x<br><= 841 |  | OK | 840 | Celiwe Sokhela -<br>491462 | Train |
| 10179 | R | Read Min/Max [TT]<br>(MPU1)BKT_Tbcu3WhDiamAx1 : 839<= x<br><= 841 |  | OK | 840 | Celiwe Sokhela -<br>491462 | Train |
| 10180 | R | Read Min/Max [TT]<br>(MPU1)BKT_Tbcu3WhDiamAx2 : 839<= x<br><= 841 |  | OK | 839 | Celiwe Sokhela -<br>491462 | Train |
| 10181 | R | Read Min/Max [TT]<br>(MPU1)BKT_Tbcu3WhDiamAx3 : 839<= x<br><= 841 |  | OK | 840 | Celiwe Sokhela -<br>491462 | Train |

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| 10182 | R | Read Min/Max [TT]<br>(MPU1)BKT_Tbcu3WhDiamAx4 : 839<=<br>x <= 841                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | OK | 840 | Celiwe Sokhela -<br>491462 | Train |
| 10183 | R | Read Min/Max [TT]<br>(MPU1)BKT_Tbcu4WhDiamAx1 : 839<=<br>x <= 841                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | OK | 839 | Celiwe Sokhela -<br>491462 | Train |
| 10184 | R | Read Min/Max [TT]<br>(MPU1)BKT_Tbcu4WhDiamAx2 : 839<=<br>x <= 841                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | OK | 839 | Celiwe Sokhela -<br>491462 | Train |
| 10185 | R | Read Min/Max [TT]<br>(MPU1)BKT_Tbcu4WhDiamAx3 : 839<=<br>x <= 841                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | OK | 839 | Celiwe Sokhela -<br>491462 | Train |
| 10186 | R | Read Min/Max [TT]<br>(MPU1)BKT_Tbcu4WhDiamAx4 : 839<=<br>x <= 841                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | OK | 840 | Celiwe Sokhela -<br>491462 | Train |
| 10187 | I | Brake Tests                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | OK |     | Celiwe Sokhela -<br>491462 | Train |
| 10188 | I | For each test run, ensure the following are done:<br>-Prepare the dashboard on train tracer to record train performance<br>-Activate the relevant cab<br>-Login to DDU as Maintainer (70979080)<br>-Save each performance (only for speed of 60Km/h) result as .CVS on local drive of service laptop<br>-Ensure there is enough space remaining for each run, else put the train at the end of the line<br>-From 40km/h tests IT IS FORBIDDEN to do more than one run at a time on the track, each run should start at the beginning/end of the track |  | OK |     | Celiwe Sokhela -<br>491462 | Train |
| 10189 | I | Initial Conditions for each car:<br>-ERTMS is ISOLATED<br>-Driving mode set to EFFORT mode                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  | OK |     | Celiwe Sokhela -<br>491462 | Train |
| 10190 | I | ALL the brake tests should be done from the extremities of the test track                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | OK |     | Celiwe Sokhela -<br>491462 | Train |
| 10191 | I | Emergency Brake @ 20km/h TC1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | OK |     | Celiwe Sokhela -<br>491462 | Train |
| 10192 | A | Force [TT] SBK_BrakeDist = 0.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  | OK |     | Celiwe Sokhela -<br>491462 | Train |
| 10193 | A | Release [TT] SBK_BrakeDist                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  | OK |     | Celiwe Sokhela -<br>491462 | Train |
| 10194 | A | Put the direction selector switch in FORWARD position                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | OK |     | Celiwe Sokhela -<br>491462 | Train |

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| 10195 | A | Put the Master Controller in MAX TRACTION position until the train speed reaches 20 +/- 2 km/h |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10196 | A | Push the emergency brake mushroom button 44S1                                                  |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10197 | R | Result Max [TT] SBK_BrakeDist : x <= 42                                                        |  | OK | 18 | Celiwe Sokhela - 491462 | Train |
| 10198 | A | Put the direction selector switch in NEUTRAL position                                          |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10199 | A | Release the emergency brake button 44S1                                                        |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10200 | I | Service Brake @ 30km/h TC1                                                                     |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10201 | A | Force [TT] SBK_BrakeDist = 0.0                                                                 |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10202 | A | Release [TT] SBK_BrakeDist                                                                     |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10203 | A | Put the direction selector switch in FORWARD position                                          |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10204 | A | Put the Master Controller in MAX TRACTION position until the train speed reaches 30 +/- 2 km/h |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10205 | A | Put the Master Controller in 100% BRAKE position                                               |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10206 | R | Result Max [TT] SBK_BrakeDist : x <= 87                                                        |  | OK | 48 | Celiwe Sokhela - 491462 | Train |
| 10207 | A | Put the direction selector switch in NEUTRAL position                                          |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10208 | I | Emergency Brake @ 40km/h TC1                                                                   |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10209 | A | Force [TT] SBK_BrakeDist = 0.0                                                                 |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10210 | A | Release [TT] SBK_BrakeDist                                                                     |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10211 | A | Put the direction selector switch in FORWARD position                                          |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10212 | A | Put the Master Controller in MAX TRACTION position until the train speed reaches 40 +/- 2 km/h |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10213 | A | Push the emergency brake mushroom button 44S1                                                  |  | OK |    | Celiwe Sokhela - 491462 | Train |

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| 10214 | R | Result Max [TT] SBK_BrakeDist : $x \leq 80$                                                    |  | OK | 65 | Celiwe Sokhela - 491462 | Train |
| 10215 | A | Put the direction selector switch in NEUTRAL position                                          |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10216 | A | Release the emergency brake button 44S1                                                        |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10217 | I | Service Brake @ 20km/h TC2                                                                     |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10218 | A | Force [TT] SBK_BrakeDist = 0.0                                                                 |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10219 | A | Release [TT] SBK_BrakeDist                                                                     |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10220 | A | Put the direction selector switch in FORWARD position                                          |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10221 | A | Put the Master Controller in MAX TRACTION position until the train speed reaches 20 +/- 2 km/h |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10222 | A | Put the Master Controller in OFF position                                                      |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10223 | R | Result Max [TT] SBK_BrakeDist : $x \leq 60$                                                    |  | OK | 14 | Celiwe Sokhela - 491462 | Train |
| 10224 | A | Put the direction selector switch in NEUTRAL position                                          |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10225 | I | Emergency Brake @ 30km/h TC2                                                                   |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10226 | A | Force [TT] SBK_BrakeDist = 0.0                                                                 |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10227 | A | Release [TT] SBK_BrakeDist                                                                     |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10228 | A | Put the direction selector switch in FORWARD position                                          |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10229 | A | Put the Master Controller in MAX TRACTION position until the train speed reaches 30 +/- 2 km/h |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10230 | A | Put the Master Controller in OFF position                                                      |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10231 | A | Push the emergency brake mushroom button 44S1                                                  |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10232 | R | Result Max [TT] SBK_BrakeDist : $x \leq 62$                                                    |  | OK | 32 | Celiwe Sokhela - 491462 | Train |
| 10233 | A | Put the direction selector switch in NEUTRAL position                                          |  | OK |    | Celiwe Sokhela - 491462 | Train |

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| 10234 | A | Release the emergency brake button 44S1                                                                                                                                                           |                                                                                     | OK |    | Celiwe Sokhela - 491462 | Train |
| 10235 | I | Service Brake @ 40km/h TC2                                                                                                                                                                        |                                                                                     | OK |    | Celiwe Sokhela - 491462 | Train |
| 10236 | A | Force [TT] SBK_BrakeDist = 0.0                                                                                                                                                                    |                                                                                     | OK |    | Celiwe Sokhela - 491462 | Train |
| 10237 | A | Release [TT] SBK_BrakeDist                                                                                                                                                                        |                                                                                     | OK |    | Celiwe Sokhela - 491462 | Train |
| 10238 | A | Put the direction selector switch in FORWARD position                                                                                                                                             |                                                                                     | OK |    | Celiwe Sokhela - 491462 | Train |
| 10239 | A | Put the Master Controller in MAX TRACTION position until the train speed reaches 40 +/- 2 km/h                                                                                                    |                                                                                     | OK |    | Celiwe Sokhela - 491462 | Train |
| 10240 | A | Put the Master Controller in 100% BRAKE position                                                                                                                                                  |                                                                                     | OK |    | Celiwe Sokhela - 491462 | Train |
| 10241 | R | Result Max [TT] SBK_BrakeDist : x <= 113                                                                                                                                                          |                                                                                     | OK | 62 | Celiwe Sokhela - 491462 | Train |
| 10242 | A | Put the direction selector switch in NEUTRAL position                                                                                                                                             |                                                                                     | OK |    | Celiwe Sokhela - 491462 | Train |
| 10243 | I | ERTMS Dynamic                                                                                                                                                                                     |                                                                                     | OK |    | Celiwe Sokhela - 491462 | Train |
| 10244 | A | Put the ERTMS switch 62S1 in NORMAL position in both TC cars                                                                                                                                      |                                                                                     | OK |    | Celiwe Sokhela - 491462 | Train |
| 10245 | A | Active cab on TC1                                                                                                                                                                                 |                                                                                     | OK |    | Celiwe Sokhela - 491462 | Train |
| 10246 | A | Use the procedure attached for ERTMS dynamic commissioning.                                                                                                                                       |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10247 | R | Dynamic ERTMS commissioning has been completed successfully                                                                                                                                       |                                                                                     | OK |    | Celiwe Sokhela - 491462 | Train |
| 10248 | I | HIGH SPEED TEST                                                                                                                                                                                   |                                                                                     | OK |    | Celiwe Sokhela - 491462 | Train |
| 10249 | I | For each and the following high-speed test make sure that the train is positioned at the start of the track, and the driver can see the Eurobalise on the track as shown in the picture attached. |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10250 | I | Service Brake @ 50km/h TC1                                                                                                                                                                        |                                                                                     | OK |    | Celiwe Sokhela - 491462 | Train |
| 10251 | A | Use maintenance code (70979080) to log into DMI screen and do start of mission                                                                                                                    |                                                                                     | OK |    | Celiwe Sokhela - 491462 | Train |

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| 10252 | A | Force [TT] SBK_BrakeDist = 0.0                                                                             |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10253 | A | Release [TT] SBK_BrakeDist                                                                                 |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10254 | A | Put the direction selector switch in FORWARD position                                                      |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10255 | A | Put the Master Controller in MAX TRACTION position until the train speed reaches 50 +/- 2 km/h             |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10256 | A | Put the Master Controller in 100% BRAKE position                                                           |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10257 | R | Result Max [TT] SBK_BrakeDist : x <= 142                                                                   |  | OK | 90 | Celiwe Sokhela - 491462 | Train |
| 10258 | A | Put the direction selector switch in NEUTRAL position                                                      |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10259 | I | Emergency Brake @ 50km/h TC2                                                                               |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10260 | A | Use maintenance code (70979080) to log into DMI screen and do start of mission                             |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10261 | A | Force [TT] SBK_BrakeDist = 0.0                                                                             |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10262 | A | Release [TT] SBK_BrakeDist                                                                                 |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10263 | A | Put the direction selector switch in FORWARD position                                                      |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10264 | A | Put the Master Controller in MAX TRACTION position until the train speed reaches 50 +/- 2 km/h             |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10265 | A | Push the emergency brake mushroom button 44S1                                                              |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10266 | R | Result Max [TT] SBK_BrakeDist : x <= 100                                                                   |  | OK | 81 | Celiwe Sokhela - 491462 | Train |
| 10267 | A | Put the direction selector switch in NEUTRAL position                                                      |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10268 | A | Release the emergency brake button 44S1                                                                    |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10269 | I | For the following tests, ensure the dashboard is running and record each result and save each file as .CSV |  | OK |    | Celiwe Sokhela - 491462 | Train |

|       |   |                                                                                                |  |    |     |                         |       |
|-------|---|------------------------------------------------------------------------------------------------|--|----|-----|-------------------------|-------|
| 10270 | I | Service Brake @ 60km/h TC1                                                                     |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10271 | A | Use maintenance code (70979080) to log into DMI screen and do start of mission                 |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10272 | A | Put the train in starting position on the track                                                |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10273 | A | Force [TT] SBK_BrakeDist = 0.0                                                                 |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10274 | A | Release [TT] SBK_BrakeDist                                                                     |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10275 | A | Put the direction selector switch in FORWARD position                                          |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10276 | A | Put the Master Controller in MAX TRACTION position until the train speed reaches 60 +/- 2 km/h |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10277 | A | Put the Master Controller in 100% BRAKE position                                               |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10278 | R | Result Max [TT] SBK_BrakeDist : x <= 171                                                       |  | OK | 137 | Celiwe Sokhela - 491462 | Train |
| 10279 | A | Put the direction selector switch in NEUTRAL position                                          |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10280 | I | Service Brake @ 60km/h TC2                                                                     |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10281 | A | Use maintenance code (70979080) to log into DMI screen and do start of mission                 |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10282 | A | Force [TT] SBK_BrakeDist = 0.0                                                                 |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10283 | A | Release [TT] SBK_BrakeDist                                                                     |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10284 | A | Put the direction selector switch in FORWARD position                                          |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10285 | A | Put the Master Controller in MAX TRACTION position until the train speed reaches 60 +/- 2 km/h |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10286 | A | Put the Master Controller in 100% BRAKE position                                               |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10287 | R | Result Max [TT] SBK_BrakeDist : x <= 171                                                       |  | OK | 149 | Celiwe Sokhela - 491462 | Train |

|       |   |                                                                                                |  |    |     |                         |       |
|-------|---|------------------------------------------------------------------------------------------------|--|----|-----|-------------------------|-------|
| 10288 | A | Put the direction selector switch in NEUTRAL position                                          |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10289 | I | Emergency brake @ 60kh/h TC1                                                                   |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10290 | A | Use maintenance code (70979080) to log into DMI screen and do start of mission                 |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10291 | A | Force [TT] SBK_BrakeDist = 0.0                                                                 |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10292 | A | Release [TT] SBK_BrakeDist                                                                     |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10293 | A | Put the direction selector switch in FORWARD position                                          |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10294 | A | Put the Master Controller in MAX TRACTION position until the train speed reaches 60 +/- 2 km/h |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10295 | A | Push the emergency brake mushroom button 44S1                                                  |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10296 | R | Result Max [TT] SBK_BrakeDist : x <= 121                                                       |  | OK | 111 | Celiwe Sokhela - 491462 | Train |
| 10297 | A | Put the direction selector switch in NEUTRAL position                                          |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10298 | A | Release the emergency brake button 44S1                                                        |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10299 | A | Put the train at the end of the line                                                           |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10300 | I | Remember to save the .csv result file on the local drive of the PC used                        |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10301 | I | Emergency brake @ 60km/h TC2                                                                   |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10302 | A | Use maintenance code (70979080) to log into DMI screen and do start of mission                 |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10303 | A | Force [TT] SBK_BrakeDist = 0.0                                                                 |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10304 | A | Release [TT] SBK_BrakeDist                                                                     |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10305 | A | Put the direction selector switch in FORWARD position                                          |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10306 | A | Put the Master Controller in MAX TRACTION position until the train speed reaches 60 +/- 2 km/h |  | OK |     | Celiwe Sokhela - 491462 | Train |

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|-------|---|------------------------------------------------------------------------------------------------|--|----|-----|-------------------------|-------|
| 10307 | A | Push the emergency brake mushroom button 44S1                                                  |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10308 | R | Result Max [TT] SBK_BrakeDist : x <= 121                                                       |  | OK | 113 | Celiwe Sokhela - 491462 | Train |
| 10309 | A | Release the emergency brake button 44S1                                                        |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10310 | A | Put the direction selector switch in NEUTRAL position                                          |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10311 | I | Remember to save the .csv result file on the local drive of the PC used                        |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10312 | I | Degraded mode @60 km/h TC1                                                                     |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10313 | A | Use maintenance code (70979080) to log into DMI screen and do start of mission                 |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10314 | I | Degraded mode simulation                                                                       |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10315 | A | Force [TT] (TBCU1)f55_b_br_auth = 0.0                                                          |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10316 | A | Force [TT] (TBCU2)f55_b_br_auth = 0.0                                                          |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10317 | A | Force [TT] (TBCU3)f55_b_br_auth = 0.0                                                          |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10318 | A | Force [TT] (TBCU4)f55_b_br_auth = 0.0                                                          |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10319 | A | Put the direction selector switch in FORWARD position                                          |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10320 | R | Lamp 31H1 is "ON" on the alarm module                                                          |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10321 | R | TA appears on DDU screen                                                                       |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10322 | A | Prepare the dashboard on Train Tracer to record the train performance                          |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10323 | A | Force [TT] SBK_BrakeDist = 0.0                                                                 |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10324 | A | Release [TT] SBK_BrakeDist                                                                     |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10325 | A | Put the Master Controller in MAX TRACTION position until the train speed reaches 60 +/- 2 km/h |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10326 | A | Put the Master Controller in 100% BRAKE position                                               |  | OK |     | Celiwe Sokhela - 491462 | Train |

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|-------|---|------------------------------------------------------------------------------------------------|--|----|-----|-------------------------|-------|
| 10327 | R | Result Max [TT] SBK_BrakeDist : x <= 171                                                       |  | OK | 154 | Celiwe Sokhela - 491462 | Train |
| 10328 | A | Put the train at the end of the line                                                           |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10329 | I | Remember to save the .csv result file on the local drive of the PC used                        |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10330 | I | Degraded mode @ 60km/h TC2                                                                     |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10331 | A | Use maintenance code (70979080) to log into DMI screen and do start of mission                 |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10332 | A | Put the direction selector switch in FORWARD position                                          |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10333 | R | Lamp 31H1 is ON on the alarm module                                                            |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10334 | R | TA appears on DDU screen                                                                       |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10335 | A | Prepare the dashboard on Train Tracer to record the train performance                          |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10336 | A | Force [TT] SBK_BrakeDist = 0.0                                                                 |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10337 | A | Release [TT] SBK_BrakeDist                                                                     |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10338 | A | Put the Master Controller in MAX TRACTION position until the train speed reaches 60 +/- 2 km/h |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10339 | A | Put the Master Controller in 100% BRAKE position                                               |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10340 | R | Result Max [TT] SBK_BrakeDist : x <= 171                                                       |  | OK | 143 | Celiwe Sokhela - 491462 | Train |
| 10341 | A | Release [TT] (TBCU1)f55_b_br_auth                                                              |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10342 | A | Release [TT] (TBCU2)f55_b_br_auth                                                              |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10343 | A | Release [TT] (TBCU3)f55_b_br_auth                                                              |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10344 | A | Release [TT] (TBCU4)f55_b_br_auth                                                              |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10345 | I | Remember to save the .csv result file on the local drive of the PC used                        |  | OK |     | Celiwe Sokhela - 491462 | Train |
| 10346 | A | Put the train at the end of the line                                                           |  | OK |     | Celiwe Sokhela - 491462 | Train |

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|-------|---|-------------------------------------------------------------------------------------------------|--|----|----|-------------------------|-------|
| 10347 | I | Normal service brake operation                                                                  |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10348 | A | Active cab on TC1                                                                               |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10349 | A | Put the direction selector switch in FORWARD position                                           |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10350 | R | Lamp 31H1 is "ON" on the alarm module                                                           |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10351 | R | TA appears on DDU screen                                                                        |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10352 | A | Put the Master controller in TRACTION position until the train speed reaches 10km/h             |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10353 | A | Put the Master controller in LOW BRAKE position until the train reaches a speed less than 3km/h |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10354 | R | Read Defined Variable [TT] (BCU1)LI_NOT_INHIB = 0.0                                             |  | OK | 0  | Celiwe Sokhela - 491462 | Train |
| 10355 | R | Read Defined Variable [TT] (BCU2)LI_NOT_INHIB = 0.0                                             |  | OK | 0  | Celiwe Sokhela - 491462 | Train |
| 10356 | R | Read Defined Variable [TT] (TBCU1)LI_NOT_INHIB = 0.0                                            |  | OK | 0  | Celiwe Sokhela - 491462 | Train |
| 10357 | R | Read Defined Variable [TT] (TBCU2)LI_NOT_INHIB = 0.0                                            |  | OK | 0  | Celiwe Sokhela - 491462 | Train |
| 10358 | R | Read Defined Variable [TT] (TBCU3)LI_NOT_INHIB = 0.0                                            |  | OK | 0  | Celiwe Sokhela - 491462 | Train |
| 10359 | R | Read Defined Variable [TT] (TBCU4)LI_NOT_INHIB = 0.0                                            |  | OK | 0  | Celiwe Sokhela - 491462 | Train |
| 10360 | A | Put the Master controller in OFF position                                                       |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10361 | R | Observe that the train continues to brake until it comes to a complete stop                     |  | OK |    | Celiwe Sokhela - 491462 | Train |
| 10362 | R | Read Min [TT] (BCU1)AO_SERV_BRAKE : 1.2<= x                                                     |  | OK | 38 | Celiwe Sokhela - 491462 | Train |
| 10363 | R | Read Min [TT] (BCU2)AO_SERV_BRAKE : 1.2<= x                                                     |  | OK | 38 | Celiwe Sokhela - 491462 | Train |
| 10364 | R | Read Min [TT] (TBCU1)AO_SERV_BRAKE : 1.2<= x                                                    |  | OK | 38 | Celiwe Sokhela - 491462 | Train |

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|-------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----|------|----------------------------|-------|
| 10365 | R | Read Min [TT]<br>(TBCU2)AO_SERV_BRAKE : 1.2<= x                                                                                                                                                                 |                                                                                     | OK | 38   | Celiwe Sokhela -<br>491462 | Train |
| 10366 | R | Read Min [TT]<br>(TBCU3)AO_SERV_BRAKE : 1.2<= x                                                                                                                                                                 |                                                                                     | OK | 38   | Celiwe Sokhela -<br>491462 | Train |
| 10367 | R | Read Min [TT]<br>(TBCU4)AO_SERV_BRAKE : 1.2<= x                                                                                                                                                                 |                                                                                     | OK | 38   | Celiwe Sokhela -<br>491462 | Train |
| 10368 | A | Put the ERTMS switch 62S1 in<br>ISOLATION position in both TC cars                                                                                                                                              |                                                                                     | OK |      | Celiwe Sokhela -<br>491462 | Train |
| 10369 | I | Brake Distances Results                                                                                                                                                                                         |                                                                                     | OK |      | Celiwe Sokhela -<br>491462 | Train |
| 10370 | A | Zip All the recorded CSV files of Braking<br>distances into one folder and upload on<br>teams "shifts reports" channel under a<br>specific train folder.<br><br>Rename the folder as:<br>TSXX_Braking_Distances |                                                                                     | OK |      | Celiwe Sokhela -<br>491462 | Train |
| 10371 | I | Train Acceleration Results                                                                                                                                                                                      |                                                                                     | OK |      | Celiwe Sokhela -<br>491462 | Train |
| 10372 | A | Use the following spreadsheet to calculate<br>the acceleration                                                                                                                                                  |                                                                                     | OK |      | Celiwe Sokhela -<br>491462 | Train |
| 10373 | A |                                                                                                                                                                                                                 |  | OK |      | Celiwe Sokhela -<br>491462 | Train |
| 10374 | A | On the recorded dashboard, check how<br>long it takes to reach 55km/h from<br>Rec_speed>0 using Trace CSV software.<br><br>Delta T (s)<br>Delta V (km/h)                                                        |                                                                                     | OK |      | Celiwe Sokhela -<br>491462 | Train |
| 10375 | R | TC1 Acceleration<br>Result Min : 0.85<= x (m/s <sup>2</sup> )                                                                                                                                                   |                                                                                     | OK | 0.91 | Celiwe Sokhela -<br>491462 | Train |
| 10376 | R | TC2 Acceleration<br>Result Min : 0.85<= x (m/s <sup>2</sup> )                                                                                                                                                   |                                                                                     | OK | 0.93 | Celiwe Sokhela -<br>491462 | Train |
| 10377 | I | 25km/h Speed limit in Reverse Direction                                                                                                                                                                         |                                                                                     | OK |      | Celiwe Sokhela -<br>491462 | Train |
| 10378 | A | Active Cab in TC1                                                                                                                                                                                               |                                                                                     | OK |      | Celiwe Sokhela -<br>491462 | Train |
| 10379 | A | Select Driving Mode to EFFORT position                                                                                                                                                                          |                                                                                     | OK |      | Celiwe Sokhela -<br>491462 | Train |
| 10380 | A | Put the direction selector switch in<br>REVERSE position                                                                                                                                                        |                                                                                     | OK |      | Celiwe Sokhela -<br>491462 | Train |
| 10381 | A | Put the Master controller in 100% Traction<br>position                                                                                                                                                          |                                                                                     | OK |      | Celiwe Sokhela -<br>491462 | Train |

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| 10382 | R | The maximum train speed reached is 25km/h             |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10383 | A | Put the Master controller in OFF position             |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10384 | R | The train comes to a complete stop                    |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10385 | A | Put the direction selector switch in NEUTRAL position |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10386 | A | Remove active cab in TC1                              |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10387 | I | 25km/h Speed limit in Reverse Direction               |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10388 | A | Active Cab in TC2                                     |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10389 | A | Select Driving Mode to EFFORT position                |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10390 | A | Put the direction selector switch in REVERSE position |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10391 | A | Put the Master controller in 100% Traction position   |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10392 | R | The maximum train speed reached is 25km/h             |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10393 | A | Put the Master controller in OFF position             |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10394 | R | The train comes to a complete stop                    |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10395 | A | Put the direction selector switch in NEUTRAL position |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10396 | I | DEPOT mode speed limit TC1                            |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10397 | A | Put the driving mode switch in DEPOT position         |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10398 | A | Put the direction selector switch in FORWARD position |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10399 | A | Put the Master controller in 100% Traction position   |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10400 | R | The maximum train speed reached is 15km/h             |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10401 | A | Put the Master controller in OFF position             |  | OK |  | Celiwe Sokhela - 491462 | Train |

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|-------|---|--------------------------------------------------------------------------------------|--|----|--|-------------------------|-------|
| 10402 | R | The train comes to a complete stop                                                   |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10403 | A | Put the direction selector switch in NEUTRAL position                                |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10404 | I | DEPOT mode speed limit TC2                                                           |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10405 | A | Active cab on TC2                                                                    |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10406 | A | Put the driving mode switch in DEPOT position                                        |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10407 | A | Put the direction selector switch in FORWARD position                                |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10408 | A | Put the Master controller in 100% Traction position                                  |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10409 | R | The maximum train speed reached is 15km/h                                            |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10410 | A | Put the Master controller in OFF position                                            |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10411 | R | The train comes to a complete stop                                                   |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10412 | A | Put the direction selector switch in NEUTRAL position                                |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10413 | A | Remove active cab on TC2                                                             |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10414 | I | Doors                                                                                |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10415 | I | Test 04 - PEA activation and override within timeout [PRASA-40-Val-2]                |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10416 | A | Put the Master controller in TRACTION position and accelerate the train up to 10km/h |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10417 | A | Press Left and Right Door Authorization Buttons (50S6 and 50S5)                      |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10418 | R | When train is running above 5km/h it is not possible to get Door Authorization.      |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10419 | A | Pull any PEA on the train                                                            |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10420 | A | Before 10s elapses with PEA pulled, press the button 44S5 to override the PEA        |  | OK |  | Celiwe Sokhela - 491462 | Train |

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|-------|---|----------------------------------------------------------------------------------------------------------------|--|----|--|-------------------------|-------|
| 10421 | R | TA lamp is ON                                                                                                  |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10422 | A | Apply brake until the complete stop of the Train.                                                              |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10423 | A | Reset PEA using the switch 44S6                                                                                |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10424 | I | Test 06 - PEA activation with timeout respected [PRASA-40-Val-1]                                               |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10425 | A | Put the Master controller in TRACTION position and accelerate the train up to 10km/h                           |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10426 | A | Pull another PEA on the train                                                                                  |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10427 | R | After 10s with PEA pulled, Emergency Brakes should be applied.                                                 |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10428 | A | Put the Master controller in OFF position                                                                      |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10429 | A | Press the button 54S3 twice to acknowledge the PEA                                                             |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10430 | A | Reset PEA using the switch 44S6                                                                                |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10431 | A | Release Emergency Brakes                                                                                       |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10432 | I | Test 05 - PEA activation with Train speed lower than 5 km/h [PRASA-40-Val-4]                                   |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10433 | A | Put the Master controller in TRACTION position, pull any PEA on the train before the train speed reaches 5km/h |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10434 | R | An alarm appears on DDU screen warning that a PEA was pulled                                                   |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10435 | R | TA lamp turns OFF                                                                                              |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10436 | R | Emergency Brake is applied                                                                                     |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10437 | A | Press the button 54S3 twice to acknowledge the PEA                                                             |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10438 | A | Reset the PEA using switch 44S6                                                                                |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10439 | A | Open and close the doors on the side where the PEA was pulled                                                  |  | OK |  | Celiwe Sokhela - 491462 | Train |

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| 10440 | R | All doors are closed on DDU screen                                                 |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10441 | A | Put the Master controller in OFF position                                          |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10442 | A | Reset Emergency Brakes                                                             |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10443 | I | Test 07 - PEA activation with reset PEA switch permanently active [PRASA-40-Val-3] |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10444 | A | Force [TT] (MPU1)lo_ubk_tc1resetpea = 1.0                                          |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10445 | A | Accelerate the train up to 10 km/h.                                                |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10446 | A | Pull any in TC1 car, but not till its final position                               |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10447 | I | The lamp 44H1 (Emergency Brake Interlock Open) turns ON.                           |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10448 | R | Read Defined Variable [TT] (MPU1)li_ubk_tc1pealoop = 1.0                           |  | OK | 1 | Celiwe Sokhela - 491462 | Train |
| 10449 | R | Read Defined Variable [TT] (MPU1)li_dor_tc1alldoorsclosedr1 = 0.0                  |  | OK | 0 | Celiwe Sokhela - 491462 | Train |
| 10450 | R | Read Defined Variable [TT] (MPU1)li_dor_tc1alldoorsclosedr2 = 0.0                  |  | OK | 0 | Celiwe Sokhela - 491462 | Train |
| 10451 | R | An alarm appears on DDU screen warning that a PEA was pulled.                      |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10452 | I | The lamp 31H1 (Traction Authorized) turns OFF.                                     |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10453 | R | Traction effort bar graph is indicating no effort on the line voltage module       |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10454 | R | Read Defined Variable [TT] (MPU1)lo_drc_tc1tractionloopr2 = 0.0                    |  | OK | 0 | Celiwe Sokhela - 491462 | Train |
| 10455 | R | Read Defined Variable [TT] (MPU1)lo_drc_tc1tractionloopr1 = 0.0                    |  | OK | 0 | Celiwe Sokhela - 491462 | Train |
| 10456 | A | After 10 seconds that PEA has been pulled check that:                              |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10457 | R | Read Defined Variable [TT] UBK_EmgcyBrkApld = 1.0                                  |  | OK | 1 | Celiwe Sokhela - 491462 | Train |

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| 10458 | I | The lamp 44H4 (Emergency Brake Loop) turns ON.                                                                   |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10459 | R | Read Defined Variable [TT] (MPU1)bcu1_tlnb = 0.0                                                                 |  | OK | 0 | Celiwe Sokhela - 491462 | Train |
| 10460 | A | Release [TT] (MPU1)lo_ubk_tc1resetpea                                                                            |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10461 | R | The lamp 51H1 turns OFF (door closed and locked).                                                                |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10462 | A | Set Passenger Emergency Alarm Reset Switch (44S6) to "Reset" position.                                           |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10463 | R | PEA alarm signal is reset.                                                                                       |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10464 | A | Move Master Controller Handle (30A1) to "OFF" position.                                                          |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10465 | A | Reset the emergency brake setting the direction switch (S2.2) to "NEUTRAL" and then to "FORWARD" position again. |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10466 | R | Read Defined Variable [TT] UBK_EmgcyBrkApld = 0.0                                                                |  | OK | 0 | Celiwe Sokhela - 491462 | Train |
| 10467 | I | The lamp 44H4 (Emergency Brake Loop) turns OFF.                                                                  |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10468 | R | Read Defined Variable [TT] (MPU1)bcu1_tlnb = 1.0                                                                 |  | OK | 1 | Celiwe Sokhela - 491462 | Train |
| 10469 | I | The lamp 31H1 (Traction Authorized) turns ON.                                                                    |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10470 | R | Read Defined Variable [TT] (MPU1)lo_drc_tc1tractionloopr1 = 1.0                                                  |  | OK | 1 | Celiwe Sokhela - 491462 | Train |
| 10471 | R | Read Defined Variable [TT] (MPU1)lo_drc_tc1tractionloopr2 = 1.0                                                  |  | OK | 1 | Celiwe Sokhela - 491462 | Train |
| 10472 | I | Test 08 - Safety Requirement [PRASA-34A-a]                                                                       |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10473 | I | On the beginning the Train shall be stationary.                                                                  |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10474 | A | Force [TT] (MPU1)lo_ets_tc2rstotdrr1 = 1.0                                                                       |  | OK |   | Celiwe Sokhela - 491462 | Train |

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| 10475 | A | Force [TT] (MPU1)lo_ets_tc2rstotdr2 = 1.0                       |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10476 | R | Check on DDU that the On-board Train Data Recorder is offline   |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10477 | R | Read Defined Variable [TT] (MPU1)li_rec_tc1thresholdfive1 = 0.0 |  | OK | 0 | Celiwe Sokhela - 491462 | Train |
| 10478 | R | Read Defined Variable [TT] (MPU1)li_rec_tc1thresholdfive2 = 0.0 |  | OK | 0 | Celiwe Sokhela - 491462 | Train |
| 10479 | R | Read Defined Variable [TT] (MPU1)li_rec_tc2thresholdfive1 = 0.0 |  | OK | 0 | Celiwe Sokhela - 491462 | Train |
| 10480 | R | Read Defined Variable [TT] (MPU1)li_rec_tc2thresholdfive2 = 0.0 |  | OK | 0 | Celiwe Sokhela - 491462 | Train |
| 10481 | R | Read Defined Variable [TT] (BCU2)LO_SPEED_THRSLD1 = 1.0         |  | OK | 1 | Celiwe Sokhela - 491462 | Train |
| 10482 | A | Accelerate the Train up to 4km/h.                               |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10483 | R | Read Defined Variable [TT] (BCU2)LO_SPEED_THRSLD1 = 0.0         |  | OK | 0 | Celiwe Sokhela - 491462 | Train |
| 10484 | A | Accelerate the Train up to 10km/h.                              |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10485 | R | Read Defined Variable [TT] (MPU1)li_rec_tc1thresholdfive1 = 0.0 |  | OK | 0 | Celiwe Sokhela - 491462 | Train |
| 10486 | R | Read Defined Variable [TT] (MPU1)li_rec_tc1thresholdfive2 = 0.0 |  | OK | 0 | Celiwe Sokhela - 491462 | Train |
| 10487 | R | Read Defined Variable [TT] (MPU1)li_rec_tc2thresholdfive1 = 0.0 |  | OK | 0 | Celiwe Sokhela - 491462 | Train |
| 10488 | R | Read Defined Variable [TT] (MPU1)li_rec_tc2thresholdfive2 = 0.0 |  | OK | 0 | Celiwe Sokhela - 491462 | Train |
| 10489 | R | Read Defined Variable [TT] (BCU2)LO_SPEED_THRSLD1 = 0.0         |  | OK | 0 | Celiwe Sokhela - 491462 | Train |
| 10490 | R | Read Defined Variable [TT] (MPU1)REC_Speed5ThresholdFail = 1.0  |  | OK | 1 | Celiwe Sokhela - 491462 | Train |
| 10491 | A | Apply brake until the complete stop of the Train.               |  | OK |   | Celiwe Sokhela - 491462 | Train |
| 10492 | R | Read Defined Variable [TT] (BCU2)LO_SPEED_THRSLD1 = 1.0         |  | OK | 1 | Celiwe Sokhela - 491462 | Train |

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| 10493 | R | The OTDR is maintained OFF.                                                                                                                                                                                                                                                                         |                                                                                   | OK |        | Celiwe Sokhela - 491462 | Train |
| 10494 | A | Release [TT] (MPU1)lo_ets_tc2rstotdrr1                                                                                                                                                                                                                                                              |                                                                                   | OK |        | Celiwe Sokhela - 491462 | Train |
| 10495 | R | The OTDR is turned ON.                                                                                                                                                                                                                                                                              |                                                                                   | OK |        | Celiwe Sokhela - 491462 | Train |
| 10496 | I | Test 09 - Safety Requirement [PRASA-23-Val-2]                                                                                                                                                                                                                                                       |                                                                                   | OK |        | Celiwe Sokhela - 491462 | Train |
| 10497 | I | On the beginning the Train shall be stationary.                                                                                                                                                                                                                                                     |                                                                                   | OK |        | Celiwe Sokhela - 491462 | Train |
| 10498 | A | Force [TT] (BCU2)LO_SPEED_THRSLD1 = 0.0                                                                                                                                                                                                                                                             |                                                                                   | OK |        | Celiwe Sokhela - 491462 | Train |
| 10499 | R | Read Undefined Variable [TT] (MPU1)DCU1_TC1_HwIOStatus                                                                                                                                                                                                                                              |                                                                                   | OK | 136756 | Celiwe Sokhela - 491462 | Train |
| 10500 | I | TrainTracer gives a numerical information through the variable "DCU1_TC1_HwIOStatus". In order to check the state of the bits 2 and 8, with the help of a programable calculator (use the computer's one), change the numerical information to a word information and read the state of these bits. |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10501 | R | DCU1_TC1_HwIOStatus.bit2 = 1                                                                                                                                                                                                                                                                        |                                                                                   | OK |        | Celiwe Sokhela - 491462 | Train |
| 10502 | R | DCU1_TC1_HwIOStatus.bit8 = 0                                                                                                                                                                                                                                                                        |                                                                                   | OK |        | Celiwe Sokhela - 491462 | Train |
| 10503 | R | Read Defined Variable [TT] (MPU1)li_rec_tc1thresholdfive1 = 0.0                                                                                                                                                                                                                                     |                                                                                   | OK | 0      | Celiwe Sokhela - 491462 | Train |
| 10504 | R | Read Defined Variable [TT] (MPU1)li_rec_tc1thresholdfive2 = 0.0                                                                                                                                                                                                                                     |                                                                                   | OK | 0      | Celiwe Sokhela - 491462 | Train |
| 10505 | R | Read Defined Variable [TT] (MPU1)li_rec_tc2thresholdfive1 = 0.0                                                                                                                                                                                                                                     |                                                                                   | OK | 0      | Celiwe Sokhela - 491462 | Train |
| 10506 | R | Read Defined Variable [TT] (MPU1)li_rec_tc2thresholdfive2 = 0.0                                                                                                                                                                                                                                     |                                                                                   | OK | 0      | Celiwe Sokhela - 491462 | Train |
| 10507 | A | Accelerate the Train up to 10km/h and check the variable "DCU1_TC1_HwIOStatus" as soon as the speed overpasses 5km/h (according to DDU's speed value).                                                                                                                                              |                                                                                   | OK |        | Celiwe Sokhela - 491462 | Train |
| 10508 | R | Read Undefined Variable [TT] (MPU1)DCU1_TC1_HwIOStatus                                                                                                                                                                                                                                              |                                                                                   | OK | 136756 | Celiwe Sokhela - 491462 | Train |

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| 10509 | R | DCU1_TC1_HwIOStatus.bit2 = 0                                                                                                   |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10510 | R | DCU1_TC1_HwIOStatus.bit8 = 1                                                                                                   |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10511 | R | Read Defined Variable [TT]<br>(MPU1)li_rec_tc1thresholdfive1 = 1.0                                                             |  | OK | 1      | Celiwe Sokhela - 491462 | Train |
| 10512 | R | Read Defined Variable [TT]<br>(MPU1)li_rec_tc1thresholdfive2 = 1.0                                                             |  | OK | 1      | Celiwe Sokhela - 491462 | Train |
| 10513 | R | Read Defined Variable [TT]<br>(MPU1)li_rec_tc2thresholdfive1 = 1.0                                                             |  | OK | 1      | Celiwe Sokhela - 491462 | Train |
| 10514 | R | Read Defined Variable [TT]<br>(MPU1)li_rec_tc2thresholdfive2 = 1.0                                                             |  | OK | 1      | Celiwe Sokhela - 491462 | Train |
| 10515 | I | Test 10 - Safety Requirement [PRASA-23-Val-1]                                                                                  |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10516 | R | Read Undefined Variable [TT]<br>(MPU1)DCU1_TC1_HwIOStatus                                                                      |  | OK | 137008 | Celiwe Sokhela - 491462 | Train |
| 10517 | R | DCU1_TC1_HwIOStatus.bit2 = 1                                                                                                   |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10518 | R | DCU1_TC1_HwIOStatus.bit8 = 0                                                                                                   |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10519 | A | Release [TT]<br>(BCU2)LO_SPEED_THRSLD1                                                                                         |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10520 | I | Test 11 - Safety Requirement [PRASA-23-Val-4]                                                                                  |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10521 | I | In case it is not possible to go further at the same direction, change cab and perform the tests with the opposite cab active. |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10522 | A | Force [TT] (BCU1)LO_SPEED_THRSLD1 = 1.0                                                                                        |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10523 | A | Force [TT] (BCU2)LO_SPEED_THRSLD1 = 1.0                                                                                        |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10524 | R | Relay 61k3 permanently supplied in all cars.                                                                                   |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10525 | R | DCU1_TC1_HwIOStatus.bit2 = 1                                                                                                   |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10526 | R | DCU1_TC1_HwIOStatus.bit8 = 0                                                                                                   |  | OK |        | Celiwe Sokhela - 491462 | Train |

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| 10527 | I | TrainTracer gives a numerical information through the variable "DCU1_TC1_DiagData1". In order to check the state of the bits 22 and 23, with the help of a programmable calculator (use the computer's one), change the numerical information to a Dword information and read the state of these bits. |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10528 | R | Read Undefined Variable [TT] (MPU1)DCU1_TC1_DiagData1                                                                                                                                                                                                                                                  |  | OK | 0      | Celiwe Sokhela - 491462 | Train |
| 10529 | R | DCU1_TC1_DiagData1.bit22 = 0                                                                                                                                                                                                                                                                           |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10530 | R | DCU1_TC1_DiagData1.bit23 = 0                                                                                                                                                                                                                                                                           |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10531 | A | Accelerate the Train up to 10km/h and check the status of the variables "DCU1_TC1_HwIOStatus" and "DCU1_TC1_DiagData1" when the speed overpasses 5km/h (according to DDU's speed value).                                                                                                               |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10532 | R | Read Undefined Variable [TT] (MPU1)DCU1_TC1_HwIOStatus                                                                                                                                                                                                                                                 |  | OK | 137008 | Celiwe Sokhela - 491462 | Train |
| 10533 | R | DCU1_TC1_HwIOStatus.bit2 = 1                                                                                                                                                                                                                                                                           |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10534 | R | DCU1_TC1_HwIOStatus.bit8 = 1                                                                                                                                                                                                                                                                           |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10535 | R | Read Undefined Variable [TT] (MPU1)DCU1_TC1_DiagData1                                                                                                                                                                                                                                                  |  | OK | 0      | Celiwe Sokhela - 491462 | Train |
| 10536 | R | DCU1_TC1_DiagData1.bit22 = 1                                                                                                                                                                                                                                                                           |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10537 | R | DCU1_TC1_DiagData1.bit23 = 0                                                                                                                                                                                                                                                                           |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10538 | A | Force [TT] (MPU1)OTDR_5kphSpeedFlt = 1.0                                                                                                                                                                                                                                                               |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10539 | R | Check on DDU screen the appearance of an IOS (838) requiring a reparation at the end of the day.                                                                                                                                                                                                       |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10540 | A | Release [TT] (MPU1)OTDR_5kphSpeedFlt                                                                                                                                                                                                                                                                   |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10541 | A | Release [TT] (BCU1)LO_SPEED_THRSLD1                                                                                                                                                                                                                                                                    |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10542 | A | Release [TT] (BCU2)LO_SPEED_THRSLD1                                                                                                                                                                                                                                                                    |  | OK |        | Celiwe Sokhela - 491462 | Train |

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| 10543 | A | Brake the train until its complete stop.                                                         |                                                                                   | OK |        | Celiwe Sokhela - 491462 | Train |
| 10544 | I | Test 12 - Safety Requirement [PRASA-23-Val-5]                                                    |                                                                                   | OK |        | Celiwe Sokhela - 491462 | Train |
| 10545 | A | For the following test use OTDR web portal to force the speed of above 5km/h                     |  | OK |        | Celiwe Sokhela - 491462 | Train |
| 10546 | R | Relays 61k1 permanently supplied in all cars plus relays 61k2 in TC1 and TC2 cars.               |                                                                                   | OK |        | Celiwe Sokhela - 491462 | Train |
| 10547 | R | Read Undefined Variable [TT] (MPU1)DCU1_TC1_HwIOStatus                                           |                                                                                   | OK | 137008 | Celiwe Sokhela - 491462 | Train |
| 10548 | R | DCU1_TC1_HwIOStatus.bit2 = 1                                                                     |                                                                                   | OK |        | Celiwe Sokhela - 491462 | Train |
| 10549 | R | DCU1_TC1_HwIOStatus.bit8 = 1                                                                     |                                                                                   | OK |        | Celiwe Sokhela - 491462 | Train |
| 10550 | R | Read Defined Variable [TT] (MPU1)li_rec_tc1thresholdfive1 = 1.0                                  |                                                                                   | OK | 1      | Celiwe Sokhela - 491462 | Train |
| 10551 | R | Read Defined Variable [TT] (MPU1)li_rec_tc2thresholdfive1 = 1.0                                  |                                                                                   | OK | 1      | Celiwe Sokhela - 491462 | Train |
| 10552 | R | Check on DDU screen the appearance of an IOS (839) requiring a reparation at the end of the day. |                                                                                   | OK |        | Celiwe Sokhela - 491462 | Train |
| 10553 | R | Read Defined Variable [TT] (MPU1)DOR_FDcuSpeedThr = 1.0                                          |                                                                                   | OK | 1      | Celiwe Sokhela - 491462 | Train |
| 10554 | A | Accelerate the Train up to 10km/h.                                                               |                                                                                   | OK |        | Celiwe Sokhela - 491462 | Train |
| 10555 | R | Read Undefined Variable [TT] (MPU1)DCU1_TC1_HwIOStatus                                           |                                                                                   | OK | 137008 | Celiwe Sokhela - 491462 | Train |
| 10556 | R | DCU1_TC1_HwIOStatus.bit2 = 0                                                                     |                                                                                   | OK |        | Celiwe Sokhela - 491462 | Train |
| 10557 | R | DCU1_TC1_HwIOStatus.bit8 = 1                                                                     |                                                                                   | OK |        | Celiwe Sokhela - 491462 | Train |
| 10558 | R | Read Undefined Variable [TT] (MPU1)DCU1_TC1_DiagData1                                            |                                                                                   | OK | 0      | Celiwe Sokhela - 491462 | Train |
| 10559 | R | DCU1_TC1_DiagData1.bit22 = 0                                                                     |                                                                                   | OK |        | Celiwe Sokhela - 491462 | Train |
| 10560 | R | DCU1_TC1_DiagData1.bit23 = 0                                                                     |                                                                                   | OK |        | Celiwe Sokhela - 491462 | Train |
| 10561 | R | Read Defined Variable [TT] (MPU1)li_rec_tc1thresholdfive1 = 1.0                                  |                                                                                   | OK | 1      | Celiwe Sokhela - 491462 | Train |

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| 10562 | R | Read Defined Variable [TT]<br>(MPU1)li_rec_tc2thresholdfive1 = 1.0                                                                                                              |                                                                                     | OK | 1      | Celiwe Sokhela -<br>491462 | Train |
| 10563 | A | Decelerate the Train untill comes to a complete stop and check the status of the variables "DCU1_TC1_HwIOSStatus" and "DCU1_TC1_DiagData1" as soon as the speed is below 5km/h. |                                                                                     | OK |        | Celiwe Sokhela -<br>491462 | Train |
| 10564 | R | Read Undefined Variable [TT]<br>(MPU1)DCU1_TC1_HwIOSStatus                                                                                                                      |                                                                                     | OK | 137008 | Celiwe Sokhela -<br>491462 | Train |
| 10565 | R | DCU1_TC1_HwIOSStatus.bit2 = 0, if 5km/h > train speed > 3km/h.                                                                                                                  |                                                                                     | OK |        | Celiwe Sokhela -<br>491462 | Train |
| 10566 | R | DCU1_TC1_HwIOSStatus.bit2 = 1, if train speed < 3km/h.                                                                                                                          |                                                                                     | OK |        | Celiwe Sokhela -<br>491462 | Train |
| 10567 | R | DCU1_TC1_HwIOSStatus.bit8 = 1                                                                                                                                                   |                                                                                     | OK |        | Celiwe Sokhela -<br>491462 | Train |
| 10568 | R | Read Undefined Variable [TT]<br>(MPU1)DCU1_TC1_DiagData1                                                                                                                        |                                                                                     | OK | 0      | Celiwe Sokhela -<br>491462 | Train |
| 10569 | R | DCU<i>_<car>_DiagData1.bit22 = 0                                                                                                                                                |                                                                                     | OK |        | Celiwe Sokhela -<br>491462 | Train |
| 10570 | R | DCU<i>_<car>_DiagData1.bit23 = 1                                                                                                                                                |                                                                                     | OK |        | Celiwe Sokhela -<br>491462 | Train |
| 10571 | R | Read Defined Variable [TT]<br>(MPU1)li_rec_tc1thresholdfive1 = 0.0                                                                                                              |                                                                                     | OK | 0      | Celiwe Sokhela -<br>491462 | Train |
| 10572 | R | Read Defined Variable [TT]<br>(MPU1)li_rec_tc2thresholdfive1 = 0.0                                                                                                              |                                                                                     | OK | 0      | Celiwe Sokhela -<br>491462 | Train |
| 10573 | R | Read Defined Variable [TT]<br>(MPU1)DOR_FDcuSpeedThr = 0.0                                                                                                                      |                                                                                     | OK | 0      | Celiwe Sokhela -<br>491462 | Train |
| 10574 | I | Rescue Mode and Emergency Disconnection                                                                                                                                         |                                                                                     | OK |        | Celiwe Sokhela -<br>491462 | Train |
| 10575 | I | BACKUP MODE                                                                                                                                                                     |                                                                                     | OK |        | Celiwe Sokhela -<br>491462 | Train |
| 10576 | A | Active cab in TC1                                                                                                                                                               |                                                                                     | OK |        | Celiwe Sokhela -<br>491462 | Train |
| 10577 | A | Put the backup mode switch 27S1 in Backup position                                                                                                                              |                                                                                     | OK |        | Celiwe Sokhela -<br>491462 | Train |
| 10578 | A | Put the Driving Direction Switch to FORWARD position                                                                                                                            |                                                                                     | OK |        | Celiwe Sokhela -<br>491462 | Train |
| 10579 | A | Hold pressed the "Master's Deadman Device (30A1.S4)" and move "Master Controller handle (30A1)" to initial                                                                      |  | OK |        | Celiwe Sokhela -<br>491462 | Train |

|       |   |                                                                                                                                                    |                                                                                   |    |  |                         |       |
|-------|---|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----|--|-------------------------|-------|
|       |   | "Traction" zone position.                                                                                                                          |                                                                                   |    |  |                         |       |
| 10580 | I | Low tractive effort demand is requested.                                                                                                           |                                                                                   | OK |  | Celiwe Sokhela - 491462 | Train |
| 10581 | R | Although the low tractive effort demand has been requested, the Train moves with a standard tractive demand                                        |                                                                                   | OK |  | Celiwe Sokhela - 491462 | Train |
| 10582 | A | Move "Master Controller (30A1)" handle to extreme "Traction" zone position                                                                         |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10583 | R | Verify that there wasn't an impact on train movement and the tractive demand was maintained                                                        |                                                                                   | OK |  | Celiwe Sokhela - 491462 | Train |
| 10584 | A | Release the Master's Deadman Device (30A1.S4) for more than 5 seconds                                                                              |                                                                                   | OK |  | Celiwe Sokhela - 491462 | Train |
| 10585 | R | Train applies emergency brake                                                                                                                      |                                                                                   | OK |  | Celiwe Sokhela - 491462 | Train |
| 10586 | I | The Deadman device must remain pressed to allow traction in backup mode, otherwise the emergency brake loop is opened when the timer relay expire. |                                                                                   | OK |  | Celiwe Sokhela - 491462 | Train |
| 10587 | A | Set the master controller to "OFF" position.                                                                                                       |                                                                                   | OK |  | Celiwe Sokhela - 491462 | Train |
| 10588 | A | Set the Driving Direction Switch to NEUTRAL and then to FORWARD position again                                                                     |                                                                                   | OK |  | Celiwe Sokhela - 491462 | Train |
| 10589 | R | Emergency brake released on Train.                                                                                                                 |                                                                                   | OK |  | Celiwe Sokhela - 491462 | Train |
| 10590 | I | From now on, when operating the master controller don't forget to maintain anyone of the deadman devices pressed.                                  |                                                                                   | OK |  | Celiwe Sokhela - 491462 | Train |
| 10591 | A | Move "Master Controller (30A1)" handle to "Traction" zone position.                                                                                |                                                                                   | OK |  | Celiwe Sokhela - 491462 | Train |
| 10592 | R | Train starts to move.                                                                                                                              |                                                                                   | OK |  | Celiwe Sokhela - 491462 | Train |
| 10593 | A | Keeping the Master's handle within traction zone, check that the train is capable to reach 25km/h.                                                 |                                                                                   | OK |  | Celiwe Sokhela - 491462 | Train |
| 10594 | R | Verify that train reaches, but does not exceed the speed of 25km/h.                                                                                |                                                                                   | OK |  | Celiwe Sokhela - 491462 | Train |

|       |   |                                                                                                                                      |                                                                                     |    |  |                         |       |
|-------|---|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----|--|-------------------------|-------|
| 10595 | I | On Backup mode, train speed is limited to 25km/h.                                                                                    |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10596 | A | Move "Master Controller (30A1)" handle to initial "Brake" zone position.                                                             |    | OK |  | Celiwe Sokhela - 491462 | Train |
| 10597 | I | Low brake effort demand is requested.                                                                                                |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10598 | R | Verify that the train starts to brake with a standard brake effort.                                                                  |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10599 | A | Move "Master Controller (30A1)" handle to extreme "Brake" zone position (stop before achieving "Emergency Brake" position).          |    | OK |  | Celiwe Sokhela - 491462 | Train |
| 10600 | I | High brake effort demand is requested.                                                                                               |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10601 | R | Verify that there wasn't an impact on train movement, and the brake demand was maintained.                                           |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10602 | I | On Backup Mode, brake system considers a single brake demand and disregards master controller handle position within brake zone.     |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10603 | R | Train stops.                                                                                                                         |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10604 | I | BACKUP MODE TC2                                                                                                                      |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10605 | A | Active cab in TC2                                                                                                                    |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10606 | A | Press the automatic start button 20S1 to prepare the train in high voltage                                                           |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10607 | R | After few seconds, the train is prepared in high voltage with HSCBs closed                                                           |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10608 | A | Put the backup mode switch 27S1 in Backup position                                                                                   |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10609 | A | Put the Driving Direction Switch to FORWARD position                                                                                 |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10610 | A | Hold pressed the "Master's Deadman Device (30A1.S4)" and move "Master Controller handle (30A1)" to initial "Traction" zone position. |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10611 | I | Low tractive effort demand is requested.                                                                                             |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |

|       |   |                                                                                                                                                    |                                                                                     |    |  |                         |       |
|-------|---|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----|--|-------------------------|-------|
| 10612 | R | Although the low tractive effort demand has been requested, the Train moves with a standard tractive demand                                        |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10613 | A | Move "Master Controller (30A1)" handle to extreme "Traction" zone position                                                                         |    | OK |  | Celiwe Sokhela - 491462 | Train |
| 10614 | R | Verify that there wasn't an impact on train movement and the tractive demand was maintained                                                        |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10615 | A | Release the Master's Deadman Device (30A1.S4) for more than 5 seconds                                                                              |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10616 | R | Train applies emergency brake                                                                                                                      |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10617 | I | The Deadman device must remain pressed to allow traction in backup mode, otherwise the emergency brake loop is opened when the timer relay expire. |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10618 | A | Set the master controller to "OFF" position.                                                                                                       |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10619 | A | Set the Driving Direction Switch to NEUTRAL and then to FORWARD position again                                                                     |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10620 | R | Emergency brake released on Train.                                                                                                                 |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10621 | I | From now on, when operating the master controller don't forget to maintain anyone of the deadman devices pressed.                                  |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10622 | A | Move "Master Controller (30A1)" handle to "Traction" zone position.                                                                                |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10623 | R | Train starts to move.                                                                                                                              |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10624 | A | Keeping the Master's handle within traction zone, check that the train is capable to reach 25km/h.                                                 |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10625 | R | Verify that train reaches, but does not exceed the speed of 25km/h.                                                                                |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10626 | I | On Backup mode, train speed is limited to 25km/h.                                                                                                  |                                                                                     | OK |  | Celiwe Sokhela - 491462 | Train |
| 10627 | A | Move "Master Controller (30A1)" handle to initial "Brake" zone position.                                                                           |  | OK |  | Celiwe Sokhela - 491462 | Train |

|       |   |                                                                                                                                  |                                                                                   |    |  |                         |       |
|-------|---|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----|--|-------------------------|-------|
| 10628 | I | Low brake effort demand is requested.                                                                                            |                                                                                   | OK |  | Celiwe Sokhela - 491462 | Train |
| 10629 | R | Verify that the train starts to brake with a standard brake effort.                                                              |                                                                                   | OK |  | Celiwe Sokhela - 491462 | Train |
| 10630 | A | Move "Master Controller (30A1)" handle to extreme "Brake" zone position (stop before achieving "Emergency Brake" position).      |  | OK |  | Celiwe Sokhela - 491462 | Train |
| 10631 | I | High brake effort demand is requested.                                                                                           |                                                                                   | OK |  | Celiwe Sokhela - 491462 | Train |
| 10632 | R | Verify that there wasn't an impact on train movement, and the brake demand was maintained.                                       |                                                                                   | OK |  | Celiwe Sokhela - 491462 | Train |
| 10633 | I | On Backup Mode, brake system considers a single brake demand and disregards master controller handle position within brake zone. |                                                                                   | OK |  | Celiwe Sokhela - 491462 | Train |
| 10634 | R | Train stops.                                                                                                                     |                                                                                   | OK |  | Celiwe Sokhela - 491462 | Train |
| 10635 | I | End of Test                                                                                                                      |                                                                                   | OK |  | Celiwe Sokhela - 491462 | Train |



|                                                                               |                                                    |                             |
|-------------------------------------------------------------------------------|----------------------------------------------------|-----------------------------|
| Serial Tests Report<br>TS217 – TFD<br>RTR Train Functional Static Test Report | Document Reference<br>GIB0000006340<br>Version: A0 | Emission date<br>18/04/2024 |
|-------------------------------------------------------------------------------|----------------------------------------------------|-----------------------------|



|                                                                               |                                                    |                             |
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| Serial Tests Report<br>TS217 – TFD<br>RTR Train Functional Static Test Report | Document Reference<br>GIB0000006340<br>Version: A0 | Emission date<br>18/04/2024 |
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## Section 2 – Report summaries

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### 2.2 Results status

| Test Instruction Sheet | Compliant | Incomplete | Non-compliant |
|------------------------|-----------|------------|---------------|
| Dynamic                | X         |            |               |

### 2.3 Tools used

| Function | Tool name | Tool number      | Next Calibration date |
|----------|-----------|------------------|-----------------------|
| Vehicle  | Equipment | Expected version | Version loaded        |
| Train    |           |                  |                       |