

| PROJECT         | CUSTOMER | TRAIN     |
|-----------------|----------|-----------|
| Xtrapolis-PRASA | PRASA    | 223 – ACT |

RTR Acceptance Test on Customer Track TS223 Report  
 GIB0000006496



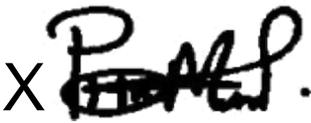
|                  | CREATED             | VERIFIED       | APPROVED        | DISTRIBUTION  |
|------------------|---------------------|----------------|-----------------|---|
| <b>Name</b>      | Nhlakanipho MASONDO | Sifiso LUKHELE | Kgomotso NKOANA | Confidentiality Category<br><i>Restricted</i> <i>Project</i> <i>Normal</i><br><input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> |
| <b>Date</b>      | 10/06/2024          | 10/06/2024     | 10/06/2024      | Control Category<br><i>Controlled</i> <i>Not Controlled</i><br><input checked="" type="checkbox"/> <input type="checkbox"/>   |
| <b>Signature</b> |                     |                |                 | Language<br><b>EN</b>   |

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### Table of modifications

| Rev | Date       | Modifications Content | Writer              |
|-----|------------|-----------------------|---------------------|
| A0  | 10/06/2024 | Creation              | Nhlakanipho MASONDO |

### Internal validations

|                 | Name                | Function            | Date       | Signature  |
|-----------------|---------------------|---------------------|------------|--|
| <b>Creator</b>  | Nhlakanipho MASONDO | EPU Manager         | 10/06/2024 | X <br>Nhlakanipho MASONDO<br>EPU Manager     |
| <b>Verifier</b> | Sifiso LUKHELE      | Serial Test Manager | 10/06/2024 | X <br>Sifiso LUKHELE<br>Serial Test Manager |
| <b>Approver</b> | Kgomotso NKOANA     | Test Expert         | 10/06/2024 | X <br>Kgomotso NKOANA<br>Test Expert       |
| <b>Approver</b> | Khehla VEZI         | PRASA Validation    | 10/06/2024 | X <br>Khehla VEZI<br>PRASA Validation      |

### Execution Plan

|                   |            |
|-------------------|------------|
| <b>Start Date</b> | 07/06/2024 |
| <b>End Date</b>   | 07/06/2024 |



Serial Tests Report  
TS223 – ACT  
RTR Acceptance Test Report

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## Section 1 – Purpose / Objectives

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## Section 2 – Acceptance Test

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### 2.3 Instructions list

### 2.3.1 ACT-Acceptance Test

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

| N°    | Type | Instruction   | File  | Result status | Result value | Operator                | Vehicle |
|-------|------|---|---|---------------|--------------|-------------------------|---------|
| 10001 | I    | Customer Acceptance Test  |   | OK            |              | Ntobeko Ndlovu - 421595 | Train   |
| 10002 | I    | Static Tests  |    | OK            |              | Ntobeko Ndlovu - 421595 | Train   |
| 10003 | I    | Automatic Train Preparation TC1   |   | OK            |              | Ntobeko Ndlovu - 421595 | Train   |
| 10004 | I    | Train should be OFF   |   | OK            |              | Ntobeko Ndlovu - 421595 | Train   |
| 10005 | I    | Backup Mode switch 27S1 should be in NORMAL position                          |   | OK            |              | Ntobeko Ndlovu - 421595 | Train   |
| 10006 | A    | Turn the Driver's Master Key to ON position                                   |   | OK            |              | Ntobeko Ndlovu - 421595 | Train   |
| 10007 | A    | Close the battery contactor 18S1  |   | OK            |              | Ntobeko Ndlovu - 421595 | Train   |
| 10008 | R    | After few minutes, the train is LV ready with TCMS available                  |   | OK            |              | Ntobeko Ndlovu - 421595 | Train   |
| 10009 | R    | The battery voltage is 110V on the line voltage indicator                     |   | OK            |              | Ntobeko Ndlovu - 421595 | Train   |
| 10010 | A    | Login on the ERTMS Screen as using the Driver's code 70787878                 |   | OK            |              | Ntobeko Ndlovu - 421595 | Train   |
| 10011 | A    | Enter the Train number  |   | OK            |              | Ntobeko Ndlovu - 421595 | Train   |
| 10012 | A    | Launch the mission 8100 for Pretoria  |   | OK            |              | Ntobeko Ndlovu - 421595 | Train   |
| 10013 | R    | The Train number and mission are displayed on the DDU screen                  |   | OK            |              | Ntobeko Ndlovu - 421595 | Train   |
| 10014 | A    | Press the automatic start button 20S1 or the virtual button on the DDU screen |   | OK            |              | Ntobeko Ndlovu - 421595 | Train   |
| 10015 | R    | The automatic start button 20S1 is flashing during the train preparation      |   | OK            |              | Ntobeko Ndlovu - 421595 | Train   |
| 10016 | R    | On DDU screen, both pantographs are raised                                    |  | OK            |              | Ntobeko Ndlovu - 421595 | Train   |
| 10017 | R    | Verify that both pantographs are raised when looking outside the train        |   | OK            |              | Ntobeko Ndlovu - 421595 | Train   |

|       |   |  |   |    |      |                         |       |
|-------|---|--|---|----|------|-------------------------|-------|
| 10018 | R | On the Driver's desk, the button lamp of 21S1 is ON  |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10019 | R | On DDU screen, both HSCBs are closed   |  | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10020 | R | On the Driver's desk, the button lamp of HSCB closed 22S11 is ON   |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10021 | R | The automatic start button 20S1 stays ON after train preparation is complete   |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10022 | I | Train is in Prepared state   |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10023 | R | Check the line voltage on the Line voltage indicator and verify on the DDU screen that the value is more or less the same  |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10024 | R | Line Voltage<br>Result Min : 2700<= x (V)  |   | OK | 3000 | Ntobeko Ndlovu - 421595 | Train |
| 10025 | A | Check the pressure indicator on the pneumatic gauge are correctly set  |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10026 | R | The indicator for the Main pipe is Red and the brake pipe is Yellow  |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10027 | R | Note the distance travelled by the train on the DDU screen<br>Read Undefined Value : x (km)  |   | OK | 37   | Ntobeko Ndlovu - 421595 | Train |
| 10028 | I | Train Status   |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10029 | R | Check on the DDU screen that at least one type of brake is applied in all cars (Holding Brake, Emergency Brake or Parking Brake)   |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10030 | R | Train is on standstill   |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10031 | A | Check the Events screen on the DDU   |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10032 | R | No faults have been logged on the events list  |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10033 | I | If there are any events listed on the DDU screen, please verify that they are not critical events which can compromise the safety performances of the train. If not, create an event on TES for the events listed on the train for further investigation |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10034 | I | Quality Inspection   |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10035 | I | Outside Train  |   | OK |      | Ntobeko Ndlovu - 421595 | Train |

|       |   |  |  |    |  |                         |       |
|-------|---|--|--|----|--|-------------------------|-------|
| 10036 | A | Take a walk around the train and verify if there is not any abnormal noise that can be heard and also verify if all equipment are correctly mounted & normalized e.g. Speed sensors, connectors, normalization of test point covers for air. |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10037 | R | No abnormal noise or equipments which are not correctly mounted  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10038 | R | All underframe connectors are connected and tightly secured with screws  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10039 | R | All exterior pacis displays are working  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10040 | I | Inside Train   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10041 | A | Check both MCE's in LV 2 if they are normalized.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10042 | R | Both MCE's are normalized.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10043 | A | Talk a walk inside the train and verify the correct operation of all subsystems  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10044 | R | All internal pacis displays are working and the mission can be seen on the display   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10045 | R | Internal lights are ON in all cars in 100% brightness, all LEDs are working in each light panel  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10046 | R | There is no component with defect inside the train   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10047 | A | RESET ERTMS Novrams.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10048 | R | ERTMS NOVRAMS reset is successful.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10049 | I | If anything is noted during the train walk, please create an Event on TES for all defects for further investigation  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10050 | I | HVAC System  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10051 | A | Launch the HVAC auto-test for all cars one by one on the DDU screen  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10052 | R | The HVAC is cooling, Ventilating and Heating in all cars including the Cabin   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10053 | R | No faults are reported on the DDU event's list from the HVAC system  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |

|       |   |   |   |    |  |                         |       |
|-------|---|---|---|----|--|-------------------------|-------|
| 10054 | I | Doors command TC1   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10055 | I | Door status on DDU screen   |    | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10056 | A | Put the Door Auth Switch 50S7 in DRIVER position                                  |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10057 | A | Put the switch 30S1 in Depot Driving mode   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10058 | R | All doors are closed and indicated in BLUE color on the DDU screen                |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10059 | A | Press the DOOR AUTH left button 50S5  |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10060 | A | Press the DOOR OPEN left button 50S1  |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10061 | A | Press the DOOR AUTH right button 50S6   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10062 | A | Press the DOOR OPEN right button 50S2   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10063 | R | All doors are open and indicated in WHITE color on the DDU screen                 |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10064 | A | Walk around the train to verify that all doors are physically open                |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10065 | R | All doors are open  |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10066 | A | Press the DOOR CLOSE left button 50S3   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10067 | A | Press the DOOR CLOSE right button 50S4  |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10068 | R | All doors are closed and indicated in BLUE color on the DDU screen                |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10069 | A | Walk around the train to verify that all doors are physically closed              |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10070 | R | All doors are closed  |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10071 | I | External Lighting and Signalling TC1  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10072 | I | The light status should be verified in both TC cars (front and back) in each case |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10073 | R | Check white light 70H11 is ON (TC1 car).  |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10074 | R | Check red light 70H11 is OFF. Left side of the car (TC1 car).                     |   | OK |  | Ntobeko Ndlovu - 421595 | Train |

|       |   |  |    |                         |       |
|-------|---|--|----|-------------------------|-------|
| 10075 | R | Check white lights 70H5 and 70H6 are ON (TC1 car).   | OK | Ntobeko Ndlovu - 421595 | Train |
| 10076 | R | Check red lights 70H7 and 70H9 are OFF (TC1 car).  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10077 | R | Check white light 70H11 is OFF (TC2 car).  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10078 | R | Check red light 70H11 is ON. Left side of the car (TC2 car).   | OK | Ntobeko Ndlovu - 421595 | Train |
| 10079 | R | Check white lights 70H5 and 70H6 are OFF (TC2 car).  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10080 | R | Check red lights 70H7 and 70H9 are ON (TC2 car).   | OK | Ntobeko Ndlovu - 421595 | Train |
| 10081 | R | Check Headlights 70H3 and 70H4 are OFF (TC2 car).  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10082 | A | Press button 70S2 to activate Bright Headlight   | OK | Ntobeko Ndlovu - 421595 | Train |
| 10083 | R | White light 70H3 and 70H4 are in bright mode   | OK | Ntobeko Ndlovu - 421595 | Train |
| 10084 | R | Verify on the DDU screen that the bright mode is ON and corresponds with the square lighting on the button 70S2 and label on the Driver's desk | OK | Ntobeko Ndlovu - 421595 | Train |
| 10085 | A | Press button 70S2 to activate Dimmed Headlight   | OK | Ntobeko Ndlovu - 421595 | Train |
| 10086 | R | White light 70H3 and 70H4 are in dimmed mode   | OK | Ntobeko Ndlovu - 421595 | Train |
| 10087 | R | Verify label on the Driver's desk  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10088 | A | Press and maintain the whistle button 71S1   | OK | Ntobeko Ndlovu - 421595 | Train |
| 10089 | R | The whistle can be heard on TC1 cab  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10090 | A | Release the whistle button 71S1  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10091 | R | The whistle stops  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10092 | A | Press the foot pedal and maintain it   | OK | Ntobeko Ndlovu - 421595 | Train |
| 10093 | R | The high pitch horn can be heard within 100m distance  | OK | Ntobeko Ndlovu - 421595 | Train |

|       |   |   |  |    |  |                         |       |
|-------|---|---|--|----|--|-------------------------|-------|
| 10094 | A | Release the foot pedal  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10095 | R | The high pitch horn stops   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10096 | A | Press the DOOR AUTH LEFT button 50S5  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10097 | A | Turn the switch 72S10 to open the left mirror and maintain it   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10098 | R | The mirror opens wide enough to show the full platform and the glass is not blurry  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10099 | A | Release the switch 72S10  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10100 | R | The mirror returns to the closed position   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10101 | A | Press the DOOR AUTH RIGHT button 50S6   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10102 | A | Turn the switch 72S10 to open the right mirror and maintain it  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10103 | R | The mirror opens wide enough to show the full platform and the glass is not blurry  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10104 | A | Release the switch 72S10  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10105 | R | The mirror returns to the closed position   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10106 | A | Press the door close left button 50S3   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10107 | A | Press the door close right button 50S4  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10108 | I | Pre-departure tests TC1   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10109 | A | On the DDU screen, press the Brake Test virtual button and follow the steps to run the brake test for all four traction units   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10110 | R | After the brake test has been completed, the test indicates as passed on DDU screen   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10111 | R | No brake faults have been loaded on the event's list on the DDU screen  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10112 | A | On the DDU screen, press the Traction Test virtual button and follow the steps to run the traction test                         |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10113 | R | After the traction test has been completed and passed on the DDU screen, verify that no faults have been loaded on the Driver's |  | OK |  | Ntobeko Ndlovu - 421595 | Train |

|       |   | event list  |  |    |  |                               |
|-------|---|---|--|----|--|-------------------------------|
| 10114 | A | Turn the battery contactor 18S1 to OFF position   |  | OK |  | Ntobeko Ndlovu - 421595 Train |
| 10115 | A | Wait at least 1 minute for Pacis system to completely shutdown  |  | OK |  | Ntobeko Ndlovu - 421595 Train |
| 10116 | R | Verify that the ACU agate is OFF in TC1   |  | OK |  | Ntobeko Ndlovu - 421595 Train |
| 10117 | A | Turn the battery contactor 18S1 to ON position  |  | OK |  | Ntobeko Ndlovu - 421595 Train |
| 10118 | A | After TCMS initialisation, press the automatic start button 20S1  |  | OK |  | Ntobeko Ndlovu - 421595 Train |
| 10119 | R | After few minutes, the train is in Prepared state   |  | OK |  | Ntobeko Ndlovu - 421595 Train |
| 10120 | A | Login on the ERTMS Screen as using the Driver's code 70787878   |  | OK |  | Ntobeko Ndlovu - 421595 Train |
| 10121 | A | Enter the Train number  |  | OK |  | Ntobeko Ndlovu - 421595 Train |
| 10122 | A | Launch the mission 8100 for Pretoria  |  | OK |  | Ntobeko Ndlovu - 421595 Train |
| 10123 | R | The Train number and mission are displayed on the DDU screen  |  | OK |  | Ntobeko Ndlovu - 421595 Train |
| 10124 | I | UHF Radio Test TC1  |  | OK |  | Ntobeko Ndlovu - 421595 Train |
| 10125 | A | Enter train number "91001" and press select   |  | OK |  | Ntobeko Ndlovu - 421595 Train |
| 10126 | R | The Radio displays "D 9900" and the network bars are visible  |  | OK |  | Ntobeko Ndlovu - 421595 Train |
| 10127 | A | Dial " 204 2001 203" and press the PTT key to call the Metro base station in Johannesburg                                 |  | OK |  | Ntobeko Ndlovu - 421595 Train |
| 10128 | R | The radio displays a calling screen, with a 4 minute timer  |  | OK |  | Ntobeko Ndlovu - 421595 Train |
| 10129 | A | Listen for a response, Identify yourself and request a call back to verify that the radio can receive calls. End the call |  | OK |  | Ntobeko Ndlovu - 421595 Train |
| 10130 | R | The Radio can make a call and communication is clear  |  | OK |  | Ntobeko Ndlovu - 421595 Train |
| 10131 | A | Answer the incoming call, Identify yourself and end the call  |  | OK |  | Ntobeko Ndlovu - 421595 Train |

|       |   |  |  |    |  |                         |       |
|-------|---|--|--|----|--|-------------------------|-------|
| 10132 | R | The Radio can receive a call and communication is clear  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10133 | I | GSM Radio Test TC1   |  |    |  |                         |       |
| 10134 | A | On the GSM cab radio, verify radio is not faulty and the network is available  |  |    |  |                         |       |
| 10135 | A | Initiate a call by dialling the phone number provided by the Prasa personnel available during ACT to communicate with the Prasa ground station |  |    |  |                         |       |
| 10136 | R | When call has been received at the Prasa station, Identify yourself and verify communication is clear during the call                          |  |    |  |                         |       |
| 10137 | A | Request permission to use the Mainline for Acceptance test   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10138 | R | Permission to use the Mainline for Acceptance test has been granted  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10139 | A | Turn the battery contactor 18S1 to OFF position  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10140 | I | Automatic Train Preparation TC2  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10141 | I | Train should be OFF  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10142 | I | Backup Mode switch 27S1 should be in NORMAL position   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10143 | A | Turn the Driver's Master Key to ON position  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10144 | A | Close the battery contactor 18S1   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10145 | R | After few minutes, the train is LV ready with TCMS available   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10146 | R | The battery voltage is 110V on the line voltage indicator  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10147 | A | Login on the ERTMS Screen as using the Driver's code 70787878  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10148 | A | Enter the Train number   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10149 | A | Launch the mission 8100 for Pretoria   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10150 | R | The Train number and mission are displayed on the DDU screen   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |

|       |   |   |   |    |      |                         |       |
|-------|---|---|---|----|------|-------------------------|-------|
| 10151 | A | Press the automatic start button 20S1 or the virtual button on the DDU screen   |    | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10152 | R | The automatic start button 20S1 is flashing during the train preparation  |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10153 | R | On DDU screen, both pantographs are raised  |    | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10154 | R | Verify that both pantographs are raised when looking outside the train  |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10155 | R | On the Driver's desk, the button lamp of 21S1 is ON   |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10156 | R | On DDU screen, both HSCBs are closed  |    | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10157 | R | On the Driver's desk, the button lamp of HSCB closed 22S11 is ON  |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10158 | R | The automatic start button 20S1 stays ON after train preparation is complete  |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10159 | I | Train is in Prepared state  |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10160 | R | Check the line voltage on the Line voltage indicator and verify on the DDU screen that the value is more or less the same |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10161 | R | Line Voltage<br>Result Min : 2700<= x (V)   |   | OK | 3000 | Ntobeko Ndlovu - 421595 | Train |
| 10162 | A | Check the pressure indicator on the pneumatic gauge are correctly set   |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10163 | R | The indicator for the Main pipe is Red and the brake pipe is Yellow   |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10164 | I | Doors command TC2   |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10165 | I | Door status on DDU screen   |  | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10166 | A | Put the Door Auth Switch 50S7 in DRIVER position  |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10167 | A | Put the switch 30S1 in Depot Driving mode   |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10168 | R | All doors are closed and indicated in BLUE colour on the DDU screen   |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10169 | A | Press the DOOR AUTH left button 50S5  |   | OK |      | Ntobeko Ndlovu - 421595 | Train |
| 10170 | A | Press the DOOR OPEN left button 50S1  |   | OK |      | Ntobeko Ndlovu - 421595 | Train |

|       |   |   |   |    |  |                         |       |
|-------|---|---|---|----|--|-------------------------|-------|
| 10171 | A | Press the DOOR AUTH right button 50S6   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10172 | A | Press the DOOR OPEN right button 50S2   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10173 | R | All doors are open and indicated in WHITE color on the DDU screen   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10174 | A | Press the DOOR CLOSE left button 50S3   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10175 | A | Press the DOOR CLOSE right button 50S4  |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10176 | R | All doors are closed and indicated in BLUE color on the DDU screen  |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10177 | I | External Lighting and Signalling TC2  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10178 | I | The light status should be verified in both TC cars (front and back) in each case                                   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10179 | R | Check white light 70H11 is ON (TC2 car)   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10180 | R | Check red light 70H11 is OFF. Left side of the car (TC2 car)  |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10181 | R | Check white lights 70H5 and 70H6 are ON (TC2 car)   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10182 | R | Check red lights 70H7 and 70H9 are OFF (TC2 car).   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10183 | R | Check white light 70H11 is OFF (TC1 car)  |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10184 | R | Check red light 70H11 is ON. Left side of the car (TC1 car)   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10185 | R | Check white lights 70H5 and 70H6 are OFF (TC1 car)  |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10186 | R | Check red lights 70H7 and 70H9 are ON (TC1 car)   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10187 | R | Check Headlights 70H3 and 70H4 are OFF (TC1 car)  |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10188 | A | Press button 70S2 to activate Bright Headlight  |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10189 | R | White light 70H3 and 70H4 are in bright mode  |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10190 | R | Verify on the DDU screen that the bright mode is ON and corresponds with the square lighting on the button 70S2 and |   | OK |  | Ntobeko Ndlovu - 421595 | Train |

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|-------|---|--|--|----|-------------------------|-------|
|       |   | label on the Driver's desk   |  |    |                         |       |
| 10191 | A | Press button 70S2 to activate Dimmed Headlight                                     |  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10192 | R | White light 70H3 and 70H4 are in dimmed mode                                       |  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10193 | R | Verify label on the Driver's desk  |  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10194 | A | Press and maintain the whistle button 71S1   |  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10195 | R | The whistle can be heard on TC1 cab  |  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10196 | A | Release the whistle button 71S1  |  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10197 | R | The whistle stops  |  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10198 | A | Press the foot pedal and maintain it   |  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10199 | R | The high pitch horn can be heard within 100m distance                              |  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10200 | A | Release the foot pedal   |  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10201 | R | The high pitch horn stops  |  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10202 | A | Press the DOOR AUTH LEFT button 50S5   |  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10203 | A | Turn the switch 72S10 to open the left mirror and maintain it                      |  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10204 | R | The mirror opens wide enough to show the full platform and the glass is not blurry |  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10205 | A | Release the switch 72S10   |  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10206 | R | The mirror returns to the closed position  |  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10207 | A | Press the DOOR AUTH RIGHT button 50S6  |  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10208 | A | Turn the switch 72S10 to open the right mirror and maintain it                     |  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10209 | R | The mirror opens wide enough to show the full platform and the glass is not blurry |  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10210 | A | Release the switch 72S10   |  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10211 | R | The mirror returns to the closed position  |  | OK | Ntobeko Ndlovu - 421595 | Train |

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|-------|---|--|--|----|--|-------------------------|-------|
| 10212 | A | Press the door close left button 50S3  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10213 | A | Press the door close right button 50S4   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10214 | I | Pre-departure tests TC2  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10215 | A | On the DDU screen, press the Brake Test virtual button and follow the steps to run the brake test for all four traction units              |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10216 | R | After the brake test has been completed, the test indicates as passed on DDU screen  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10217 | R | No brake faults have been loaded on the event's list on the DDU screen   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10218 | A | On the DDU screen, press the Traction Test virtual button and follow the steps to run the traction test                                    |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10219 | R | After the traction test has been completed and passed on the DDU screen, verify that no faults have been loaded on the Driver's event list |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10220 | A | Turn the battery contactor 18S1 to OFF position  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10221 | A | Wait at least 1 minute for Pacis system to completely shutdown   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10222 | R | Verify that the ACU agate is OFF in TC2  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10223 | A | Turn the battery contactor 18S1 to ON position   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10224 | A | After TCMS initialisation, press the automatic start button 20S1   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10225 | R | After few minutes, the train is in Prepared state  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10226 | A | Login on the ERTMS Screen as using the Driver's code 12345612  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10227 | A | Enter the Train number   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10228 | A | Launch the mission 8100 for Pretoria   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10229 | R | The Train number and mission are displayed on the DDU screen   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |

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|-------|---|---|--|----|--|-------------------------|-------|
| 10230 | I | UHF Radio Test TC2  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10231 | A | Enter train number "91001" and press select   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10232 | R | The Radio displays "D 9900" and the network bars are visible  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10233 | A | Dial " 204 2001 203" and press the PTT key to call the Metro base station in Johannesburg   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10234 | R | The radio displays a calling screen, with a 4 minute timer  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10235 | A | Listen for a response, Identify yourself and request a call back to verify that the radio can receive calls. End the call                       |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10236 | R | The Radio can make a call and communication is clear  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10237 | A | Answer the incoming call, Identify yourself and end the call  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10238 | R | The Radio can receive a call and communication is clear   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10239 | I | GSM Radio Test TC2  |  |    |  |                         |       |
| 10240 | A | On the GSM cab radio, verify radio is not faulty and the network is available   |  |    |  |                         |       |
| 10241 | A | Initiate a call by dialling the phone number provided by the Prasa personnel available during ACT to communicate with the Prasa ground station. |  |    |  |                         |       |
| 10242 | R | When call has been received at the Prasa station, Identify yourself and verify communication is clear during the call                           |  |    |  |                         |       |
| 10243 | A | Turn the battery contactor 18S1 to OFF position   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10244 | A | Remove active cab on TC2  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10245 | I | Dynamic Test  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10246 | I | Initial conditions  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10247 | I | The tests shall be done under dry and calm weather conditions.  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |

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|-------|---|---|--|----|--|-------------------------|-------|
| 10248 | I | Traction and Braking tests shall be carried out on a straight ( $R \geq 700m$ ) well bedded level track (maximum gradient $\leq 5\%$ with at least 3km length. This track should be dry and clean when performing the tests, and not carried out under degraded adhesion conditions.  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10249 | I | The 3,3kV nominal electric supply should be capable to accelerate the Module up to required speed. The supply voltage should not drop below 2,7kV during the tests.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10250 | I | The tests must be performed on a healthy PRASA Xtrapolis 6 car module and fully mounted. If components are missing (in particular components participating in the vehicle aerodynamics or mass), it shall be noted down, and it shall be decided at the time of the test if can be performed or not. Tests could be conducted with maximum diameter wheels. Tests must be conducted with all cars fully functional except when otherwise requested. |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10251 | I | It is required one test to each direction, but the variation on the results must be considered and additional tests may be necessary.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10252 | I | The tests shall be performed in M1 load condition (mass per vehicle with all equipment).  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10253 | I | Train running in ETCS level 0 TC1   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10254 | A | Active cab on TC1   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10255 | I | Take the Train till ERTMS zone and there the Train shall be turned off.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10256 | A | Push the Automatic Start Pushbutton (20S1) on the Driver Desk or virtual button on DDU Screen.  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10257 | R | Train deprepared.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10258 | A | Turn Battery Contactor Switch (18S1) to "OFF" Position on TC1 Car.  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10259 | R | Check on DDU SCREEN the message: "Shutdown In Progress".  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10260 | R | In 30 seconds, Train will be completely OFF.  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |

|       |   |  |  |    |  |                         |       |
|-------|---|--|--|----|--|-------------------------|-------|
| 10261 | A | Turn the ERTMS Isolation switch (62S1) to the "NORMAL" position in TC1 and TC2 cabs.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10262 | A | Turn the Driver's Master key (30A1S1) into the "ON" position in the TC1 cab.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10263 | A | Turn Battery Contactor Switch (18S1) to "ON" Position on TC1 Car.  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10264 | A | Wait until appears the Login screen on ERTMS DMI screen, and then enters the driver's identification number.                                 |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10265 | A | Select ETCS level 0.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10266 | A | On ERTMS DMI screen, enter the number of cars of the Train (6 cars).   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10267 | A | On ERTMS DMI screen, enter the nominal brake percentage (209%), which means that there is no car with pneumatic brake isolated on the Train. |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10268 | A | On ERTMS DMI screen, enter the respective Train Running Number.  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10269 | A | Select start from main menu option 1 (ETCS should now be in unfitted mode).  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10270 | I | In unfitted mode the ETCS speed protection mode is set to 100km/h.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10271 | A | Push the Automatic Start Pushbutton (20S1) on the Driver Desk or virtual button on DDU Screen.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10272 | R | Train in Prepared state with both Pantographs UP and both HSCBs closed.  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10273 | A | Set the Driving Mode Switch to "EFFORT" position in TC1 cab.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10274 | A | Set the Driving Direction Switch to "FORWARD" position.  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10275 | A | Accelerate the train to 100 km/h and continue to slowly to increase the speed (Note stay within allowed track speed).                        |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10276 | R | When the Train speed overpass the warning speed of 104 km/h, a warning sound can be heard on active cab.                                     |  | OK |  | Ntobeko Ndlovu - 421595 | Train |

|       |   |  |  |    |  |                         |       |
|-------|---|--|--|----|--|-------------------------|-------|
| 10277 | R | Full service brake applied on the Train by ERTMS because Train speed overpasses the service brake intervention curve calculated by ERTMS system.                     |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10278 | R | The service brake is released below 100 km/h.  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10279 | A | Set the Master Controller to "MAX TRACTION" position.  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10280 | R | Train starts to run with max traction effort.  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10281 | A | Continue increasing slowly the traction effort until the train applies full service brake by the ERTMS (around 106 km/h).  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10282 | R | When the Train overpass the emergency brake intervention of 107.5 km/h, the emergency brake is applied by the ERTMS and ERTMS Brake Icon displayed on the ERTMS DMI. |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10283 | R | Train comes to a complete stop and ERTMS brake Icon disappears from the DMI.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10284 | R | The pantographs are lowered and the HSCB are opened.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10285 | A | Raise the pantographs and close the HSCB by the automatic switch.  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10286 | A | Reset the emergency brake setting the direction switch (S2.2) to "NEUTRAL" position and then to "FORWARD" position again.  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10287 | A | Remove active cab on TC1   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10288 | I | Train running in ETCS level 0 TC2  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10289 | A | Active cab on TC2  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10290 | A | Turn the ERTMS Isolation switch (62S1) to the "NORMAL" position in TC1 and TC2 cabs.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10291 | A | Wait until appears the Login screen on ERTMS DMI screen, and then enters the driver's identification number.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10292 | A | Select ETCS level 0.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |

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|-------|---|--|--|----|--|-------------------------|-------|
| 10293 | A | On ERTMS DMI screen, enter the number of cars of the Train (6 cars).   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10294 | A | On ERTMS DMI screen, enter the nominal brake percentage (209%), which means that there is no car with pneumatic brake isolated on the Train.     |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10295 | A | On ERTMS DMI screen, enter the respective Train Running Number.  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10296 | A | Select start from main menu option 1 (ETCS should now be in unfitted mode).  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10297 | I | The Train shall be turned off.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10298 | I | In unfitted mode the ETCS speed protection mode is set to 100km/h.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10299 | A | Push the Automatic Start Pushbutton (20S1) on the Driver Desk or virtual button on DDU Screen.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10300 | R | Train in Prepared state with both Pantographs UP and both HSCBs closed.  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10301 | A | Set the Driving Mode Switch to "EFFORT" position in TC1 cab.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10302 | A | Set the Driving Direction Switch to "FORWARD" position.  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10303 | A | Accelerate the train to 100 km/h and continue to slowly to increase the speed (Note stay within allowed track speed).                            |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10304 | R | When the Train speed overpass the warning speed of 104 km/h, a warning sound can be heard on active cab.   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10305 | R | Full service brake applied on the Train by ERTMS because Train speed overpasses the service brake intervention curve calculated by ERTMS system. |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10306 | R | The service brake is released below 100 km/h.  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10307 | A | Set the Master Controller to "MAX TRACTION" position.  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10308 | R | Train starts to run with max traction effort.  |  | OK |  | Ntobeko Ndlovu - 421595 | Train |

|       |   |  |   |    |  |                         |       |
|-------|---|--|---|----|--|-------------------------|-------|
| 10309 | A | Continue increasing slowly the traction effort until the train applies full service brake by the ERTMS (around 106 km/h).  |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10310 | R | When the Train overpass the emergency brake intervention of 107.5 km/h, the emergency brake is applied by the ERTMS and ERTMS Brake Icon displayed on the ERTMS DMI.   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10311 | R | Train comes to a complete stop and ERTMS brake Icon disappears from the DMI.   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10312 | R | The pantographs are lowered and the HSCB are opened.   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10313 | A | Put the direction switch (S2.2) to "NEUTRAL" position.   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10314 | A | Raise the pantographs and close the HSCB by the automatic switch.  |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10315 | I | Brakes Bedding   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10316 | I | Bedding is a process where the brake pads and the brake disc must be at maximum contact with each other (Smooth surface). This allows the train to have maximum performance on the brakes.   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10317 | I | When bedding the train, set the master controller to max traction position and accelerate the train up to 120km/h and use emergency brake to stop.   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10318 | A | After ERTMS test start bedding all the way to Taillardshoop Station. Then bed all the way to Rosslyn Station and back to Taillardshoop Station. These equates to 3 bedding runs.   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10319 | I | Preparation for Traction and Braking tests   |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10320 | A | Connect a laptop to the train network through the software TrainTracer and prepare it to record the following variables:<br>REC_TrainSpeed<br>Li_DRC_Tc1MCBrakeR1<br>Li_DRC_Tc2MCBrakeR1<br>Li_UBK_Tc1EmgcyBrkPBR1<br>Li_UBK_Tc2EmgcyBrkPBR1 |   | OK |  | Ntobeko Ndlovu - 421595 | Train |
| 10321 | A | Use the following attached document to calculate the Acceleration for each speed   |  | OK |  | Ntobeko Ndlovu - 421595 | Train |

|       |   |  |    |                         |       |
|-------|---|--|----|-------------------------|-------|
| 10322 | A | Use the following attached document to save all the curves for each speed                                       | OK | Ntobeko Ndlovu - 421595 | Train |
| 10323 | A | Prepare the train with active cab on TC1   | OK | Ntobeko Ndlovu - 421595 | Train |
| 10324 | A | Verify that the emergency brake mushroom buttons "44S1" are released in both cabs.   | OK | Ntobeko Ndlovu - 421595 | Train |
| 10325 | A | Set the Master Controller to "OFF" position.   | OK | Ntobeko Ndlovu - 421595 | Train |
| 10326 | A | Turn the ERTMS Isolation switch (62S1) to the "ISOLATION" position in TC1 cab.   | OK | Ntobeko Ndlovu - 421595 | Train |
| 10327 | A | Set the Driving Mode Switch to "EFFORT" position in TC1 cab.   | OK | Ntobeko Ndlovu - 421595 | Train |
| 10328 | A | Set the Driving Direction Switch to "FORWARD" position.  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10329 | R | Traction system is enabled to start the test.  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10330 | I | Train maximum speed and stopping distance test in normal brake condition at 120km/h TC1  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10331 | A | Force [TT] SBK_BrakeDist = 0.0   | OK | Ntobeko Ndlovu - 421595 | Train |
| 10332 | A | Release [TT] SBK_BrakeDist   | OK | Ntobeko Ndlovu - 421595 | Train |
| 10333 | A | Active Cab on TC1  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10334 | A | With the Train Tracer, start to record the variables listed on Preparation topic above.  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10335 | A | Set the Master Controller to "MAX TRACTION" position and accelerate the train up to 120 km/h.  | OK | Ntobeko Ndlovu - 421595 | Train |
| 10336 | A | At 120km/h, keep the Master Controller in "MAX TRACTION" position accelerating the train up to a speed of 123km/h.   | OK | Ntobeko Ndlovu - 421595 | Train |
| 10337 | A | After reached the speed of 123km/h, set the Master Controller to "OFF" position until the Train reduces the speed to 120±2km/h and then set the Master to "MAX SERVICE BRAKE" position until the | OK | Ntobeko Ndlovu - 421595 | Train |

|       |   |  |  |    |     |                         |       |
|-------|---|--|--|----|-----|-------------------------|-------|
|       |   | train comes to a complete stop.  |  |    |     |                         |       |
| 10338 | A | Stop the Train Tracer recording process.   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10339 | R | Result Max [TT] SBK_BrakeDist : $x \leq 680$   |  | OK | 564 | Ntobeko Ndlovu - 421595 | Train |
| 10340 | A | Check that the train reached a speed of 123km/h within approximately 4 seconds after reaching 120km/h.   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10341 | R | Time to reach 123km/h from 120km/h is not higher than 4 seconds.   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10342 | A | Take a screenshot of the recorded variables from TrainTracer and paste on the Brake Test Results Template (Showing the acceleration from 120 to 123 km/h)  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10343 | A | Use the Deceleration Calculation Template to calculate the deceleration  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10344 | R | The mean deceleration rate must be at least $0,9m/s^2$ .   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10345 | A | Remove active cab on TC1   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10346 | I | Train maximum speed and stopping distance test in normal brake condition at 120km/h TC2  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10347 | A | Force [TT] SBK_BrakeDist = 0.0   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10348 | A | Release [TT] SBK_BrakeDist   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10349 | A | Active cab on TC2  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10350 | A | With the Train Tracer, start to record the variables listed on Preparation topic above.  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10351 | A | Set the Master Controller to "MAX TRACTION" position and accelerate the train up to 120 km/h.  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10352 | A | At 120km/h, keep the Master Controller in "MAX TRACTION" position accelerating the train up to a speed of 123km/h.   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10353 | A | After reached the speed of 123km/h, set the Master Controller to "OFF" position until the Train reduces the speed to $120 \pm 2km/h$ and then set the Master to "MAX SERVICE BRAKE" position until the |  | OK |     | Ntobeko Ndlovu - 421595 | Train |

|       |   |   |  |    |     |                         |       |
|-------|---|---|--|----|-----|-------------------------|-------|
|       |   | train comes to a complete stop.   |  |    |     |                         |       |
| 10354 | A | Stop the Train Tracer recording process.  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10355 | R | Result Max [TT] SBK_BrakeDist : x <= 680  |  | OK | 632 | Ntobeko Ndlovu - 421595 | Train |
| 10356 | A | Check that the train reached a speed of 123km/h within approximately 4 seconds after reaching 120km/h.  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10357 | R | Time to reach 123km/h from 120km/h is not higher than 4 seconds.  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10358 | A | Take a screenshot of the recorded variables from TrainTracer and paste on the Brake Test Results Template (Showing the acceleration from 120 to 123 km/h) |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10359 | A | Use the Deceleration Calculation Template to calculate the deceleration   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10360 | R | The mean deceleration rate must be at least 0,9m/s <sup>2</sup> .   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10361 | A | Remove active cab on TC2  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10362 | I | Stopping distance test in normal brake condition at 100km/h TC1   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10363 | A | Force [TT] SBK_BrakeDist = 0.0  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10364 | A | Release [TT] SBK_BrakeDist  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10365 | A | Active cab in TC1   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10366 | A | Set the Master Controller to "MAX TRACTION" position and accelerate the train up to 100±2 km/h.   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10367 | A | Set the Master Controller to "OFF" position for 5 seconds and then to "MAX SERVICE BRAKE" position until the train comes to a complete stop.              |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10368 | R | Result Max [TT] SBK_BrakeDist : x <= 567  |  | OK | 361 | Ntobeko Ndlovu - 421595 | Train |
| 10369 | A | Take a screenshot of the recorded variables from TrainTracer and paste on the Brake Test Results Template.  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10370 | A | Use the Deceleration Calculation Template to calculate the deceleration   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |

|       |   |  |  |    |     |                         |       |
|-------|---|--|--|----|-----|-------------------------|-------|
| 10371 | A | Remove active cab on TC1   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10372 | I | Stopping distance test in normal brake condition at 100km/h TC2  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10373 | A | Force [TT] SBK_BrakeDist = 0.0   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10374 | A | Release [TT] SBK_BrakeDist   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10375 | A | Active cab in TC2  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10376 | A | Set the Master Controller to "MAX TRACTION" position and accelerate the train up to 100±2 km/h.  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10377 | A | Set the Master Controller to "OFF" position for 5 seconds and then to "MAX SERVICE BRAKE" position until the train comes to a complete stop. |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10378 | R | Result Max [TT] SBK_BrakeDist : x <= 567   |  | OK | 397 | Ntobeko Ndlovu - 421595 | Train |
| 10379 | A | Take a screenshot of the recorded variables from TrainTracer and paste on the Brake Test Results Template.                                   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10380 | A | Use the Deceleration Calculation Template to calculate the deceleration  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10381 | A | Remove active cab on TC2   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10382 | I | Stopping distance test in degraded brake condition at 120km/h TC1  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10383 | A | Active cab in TC1  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10384 | I | Disabling the electrical braking in all motor cars.  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10385 | A | Force [TT] (TBCU1)f55_b_br_auth = 0.0  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10386 | A | Force [TT] (TBCU2)f55_b_br_auth = 0.0  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10387 | A | Force [TT] (TBCU3)f55_b_br_auth = 0.0  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10388 | A | Force [TT] (TBCU4)f55_b_br_auth = 0.0  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10389 | R | Electrical braking is inhibited in all M cars  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10390 | A | Force [TT] SBK_BrakeDist = 0.0   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10391 | A | Release [TT] SBK_BrakeDist   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |

|       |   |  |  |    |     |                         |       |
|-------|---|--|--|----|-----|-------------------------|-------|
| 10392 | A | With the Train Tracer, start to record the variables listed on Preparation topic above.  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10393 | A | Set the Master Controller to "MAX TRACTION" position and accelerate the train up to 120±2 km/h.  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10394 | A | Set the Master Controller to "OFF" position for 5 seconds and then to "MAX SERVICE BRAKE" position until the train comes to a complete stop. |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10395 | A | Stop the Train Tracer recording process.   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10396 | R | Result Max [TT] SBK_BrakeDist : $x \leq 680$   |  | OK | 672 | Ntobeko Ndlovu - 421595 | Train |
| 10397 | A | Take a screenshot of the recorded variables from TrainTracer and paste on the Brake Test Results Template.                                   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10398 | A | Use the Deceleration Calculation Template to calculate the deceleration  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10399 | R | The mean deceleration rate must be at least 0,9m/s <sup>2</sup> .  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10400 | I | Normalising the electrical braking on M cars   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10401 | A | Put the direction selector switch in NEUTRAL position  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10402 | A | Release [TT] (TBCU1)f55_b_br_auth  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10403 | A | Release [TT] (TBCU2)f55_b_br_auth  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10404 | A | Release [TT] (TBCU3)f55_b_br_auth  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10405 | A | Release [TT] (TBCU4)f55_b_br_auth  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10406 | A | Remove active cab on TC1   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10407 | I | Stopping distance test in degraded brake condition at 120km/h TC2  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10408 | A | Active cab on TC2  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10409 | I | Disabling the electrical braking in all motor cars.  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10410 | A | Force [TT] (TBCU1)f55_b_br_auth = 0.0  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |

|       |   |  |    |     |                         |       |
|-------|---|--|----|-----|-------------------------|-------|
| 10411 | A | Force [TT] (TBCU2)f55_b_br_auth = 0.0  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10412 | A | Force [TT] (TBCU3)f55_b_br_auth = 0.0  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10413 | A | Force [TT] (TBCU4)f55_b_br_auth = 0.0  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10414 | R | Electrical braking is inhibited in all M cars  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10415 | A | Force [TT] SBK_BrakeDist = 0.0   | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10416 | A | Release [TT] SBK_BrakeDist   | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10417 | A | With the Train Tracer, start to record the variables listed on Preparation topic above.  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10418 | A | Set the Master Controller to "MAX TRACTION" position and accelerate the train up to 120±2 km/h.  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10419 | A | Set the Master Controller to "OFF" position for 5 seconds and then to "MAX SERVICE BRAKE" position until the train comes to a complete stop. | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10420 | A | Stop the Train Tracer recording process.   | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10421 | R | Result Max [TT] SBK_BrakeDist : $x \leq 680$   | OK | 575 | Ntobeko Ndlovu - 421595 | Train |
| 10422 | A | Take a screenshot of the recorded variables from TrainTracer and paste on the Brake Test Results Template.                                   | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10423 | A | Use the Deceleration Calculation Template to calculate the deceleration  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10424 | R | The mean deceleration rate must be at least 0,9m/s <sup>2</sup> .  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10425 | I | Normalizing the electrical braking on the Train.   | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10426 | A | Put the direction selector switch in NEUTRAL position  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10427 | A | Release [TT] (TBCU1)f55_b_br_auth  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10428 | A | Release [TT] (TBCU2)f55_b_br_auth  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10429 | A | Release [TT] (TBCU3)f55_b_br_auth  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10430 | A | Release [TT] (TBCU4)f55_b_br_auth  | OK |     | Ntobeko Ndlovu - 421595 | Train |

|       |   |   |  |    |     |                         |       |
|-------|---|---|--|----|-----|-------------------------|-------|
| 10431 | A | Remove active cab on TC2  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10432 | I | Stopping distance test in emergency brake condition at 120km/h TC1  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10433 | A | Force [TT] SBK_BrakeDist = 0.0  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10434 | A | Release [TT] SBK_BrakeDist  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10435 | A | With the Train Tracer, start to record the variables listed on Preparation topic above.   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10436 | A | Set the Master Controller to "MAX TRACTION" position and accelerate the train up to 120±2 km/h.   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10437 | A | Set the Master Controller to "OFF" position for 5 seconds and then push the emergency brake mushroom button until the train comes to a complete stop. |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10438 | A | Stop the Train Tracer recording process.  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10439 | I | The stopping distance of the train in emergency brake condition shall not be greater than 480m.   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10440 | R | Result Max [TT] SBK_BrakeDist : $x \leq 480$  |  | OK | 467 | Ntobeko Ndlovu - 421595 | Train |
| 10441 | A | Take a screenshot of the recorded variables from TrainTracer and paste on the Brake Test Results Template   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10442 | A | Use the Deceleration Calculation Template to calculate the deceleration   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10443 | R | The mean deceleration rate must be at least 1,3m/s <sup>2</sup> .   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10444 | A | Normalize the emergency brake mushroom button.  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10445 | A | Reset the emergency brake setting the direction switch (S2.2) to "NEUTRAL" position and then to "FORWARD" position again.                             |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10446 | R | Emergency brake released.   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10447 | A | Remove active cab on TC1  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |

|       |   |   |  |    |     |                         |       |
|-------|---|---|--|----|-----|-------------------------|-------|
| 10448 | I | Stopping distance test in emergency brake condition at 120km/h TC2  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10449 | A | Force [TT] SBK_BrakeDist = 0.0  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10450 | A | Release [TT] SBK_BrakeDist  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10451 | A | Active cab on TC2   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10452 | A | With the Train Tracer, start to record the variables listed on Preparation topic above.   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10453 | A | Set the Master Controller to "MAX TRACTION" position and accelerate the train up to 120±2 km/h.   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10454 | A | Set the Master Controller to "OFF" position for 5 seconds and then push the emergency brake mushroom button until the train comes to a complete stop. |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10455 | A | Stop the Train Tracer recording process.  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10456 | I | The stopping distance of the train in emergency brake condition shall not be greater than 480m.   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10457 | R | Result Max [TT] SBK_BrakeDist : $x \leq 480$  |  | OK | 447 | Ntobeko Ndlovu - 421595 | Train |
| 10458 | A | Take a screenshot of the recorded variables from TrainTracer and paste on the Brake Test Results Template   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10459 | A | Use the Deceleration Calculation Template to calculate the deceleration   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10460 | R | The mean deceleration rate must be at least 1,3m/s <sup>2</sup> .   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10461 | A | Normalize the emergency brake mushroom button.  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10462 | A | Reset the emergency brake setting the direction switch (S2.2) to "NEUTRAL" position and then to "FORWARD" position again.                             |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10463 | R | Emergency brake released.   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10464 | A | Remove active cab on TC2  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |

|       |   |   |  |    |     |                         |       |
|-------|---|---|--|----|-----|-------------------------|-------|
| 10465 | I | Stopping distance test in emergency brake condition at 100km/h TC1  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10466 | A | Force [TT] SBK_BrakeDist = 0.0  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10467 | A | Release [TT] SBK_BrakeDist  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10468 | A | Active cab on TC1   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10469 | A | With the Train Tracer, start to record the variables listed on Preparation topic above.   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10470 | A | Set the Master Controller to "MAX TRACTION" position and accelerate the train up to 100±2 km/h.   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10471 | A | Set the Master Controller to "OFF" position for 5 seconds and then push the emergency brake mushroom button until the train comes to a complete stop. |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10472 | I | The stopping distance of the train in emergency brake condition shall not be greater than 400m.   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10473 | R | Result Max [TT] SBK_BrakeDist : $x \leq 400$  |  | OK | 328 | Ntobeko Ndlovu - 421595 | Train |
| 10474 | A | Take a screenshot of the recorded variables from TrainTracer and paste on the Brake Test Results Template   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10475 | A | Use the Deceleration Calculation Template to calculate the deceleration   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10476 | R | The mean deceleration rate must be at least 1,3m/s <sup>2</sup> .   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10477 | A | Release the emergency brake button 44S1   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10478 | A | Reset the emergency brake by putting the direction switch in NEUTRAL position and again in FORWARD position   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10479 | R | Emergency brake released  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10480 | I | [PRASA-23-Val-3] - Coherence between the speed indicated on DDU screen and the speedometer  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10481 | A | Set the Master Controller to "MAX TRACTION" position and accelerate the train up to 100 km/h.   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |

|       |   |   |  |    |     |                         |       |
|-------|---|---|--|----|-----|-------------------------|-------|
| 10482 | A | Set the Master Controller to "OFF" position stabilizing the Train speed at 100 km/h.  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10483 | A | Compare the speed indicated on DDU screen with the speed indicated on speedometer.  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10484 | R | Speed from DDU<br>Read Undefined Value : x (km/h)   |  | OK | 100 | Ntobeko Ndlovu - 421595 | Train |
| 10485 | R | Speed from Speedometer<br>Read Undefined Value : x (km/h)   |  | OK | 100 | Ntobeko Ndlovu - 421595 | Train |
| 10486 | I | The difference between both speed indication shall not be higher than 3 km/h  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10487 | A | Set the Master Controller to "MAX SERVICE BRAKE" position until the train comes to a complete stop.   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10488 | R | The train slows down and stopped smoothly without jolts.  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10489 | A | Set the master controller to OFF position   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10490 | A | Put direction switch in NEUTRAL position  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10491 | A | Remove active cab on TC1  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10492 | I | Stopping distance test in emergency brake condition at 100km/h TC2  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10493 | A | Force [TT] SBK_BrakeDist = 0.0  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10494 | A | Release [TT] SBK_BrakeDist  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10495 | A | Active cab on TC2   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10496 | A | Set the Master Controller to "MAX TRACTION" position and accelerate the train up to 100±2 km/h.   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10497 | A | Set the Master Controller to "OFF" position for 5 seconds and then push the emergency brake mushroom button until the train comes to a complete stop. |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10498 | R | Result Max [TT] SBK_BrakeDist : x <= 400  |  | OK | 318 | Ntobeko Ndlovu - 421595 | Train |
| 10499 | A | Take a screenshot of the recorded variables from TrainTracer and paste on the Brake Test Results Template   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |

|       |   |   |  |    |     |                         |       |
|-------|---|---|--|----|-----|-------------------------|-------|
| 10500 | A | Use the Deceleration Calculation Template to calculate the deceleration   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10501 | R | The mean deceleration rate must be at least 1,3m/s <sup>2</sup> .   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10502 | A | Release the emergency brake button 44S1   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10503 | A | Reset the emergency brake setting the direction switch (S2.2) to "NEUTRAL" position and then to "FORWARD" position again. |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10504 | R | Emergency brake released.   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10505 | I | [PRASA-23-Val-3] - Coherence between the speed indicated on DDU screen and the speedometer                                |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10506 | A | Set the Master Controller to "MAX TRACTION" position and accelerate the train up to 100 km/h.                             |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10507 | A | Set the Master Controller to "OFF" position stabilizing the Train speed at 100 km/h.                                      |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10508 | A | Compare the speed indicated on DDU screen with the speed indicated on speedometer.  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10509 | R | Speed from DDU<br>Read Undefined Value : x (km/h)   |  | OK | 100 | Ntobeko Ndlovu - 421595 | Train |
| 10510 | R | Speed from Speedometer<br>Read Undefined Value : x (km/h)   |  | OK | 100 | Ntobeko Ndlovu - 421595 | Train |
| 10511 | R | The difference between both speed indication shall not be higher than 3 km/h.   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10512 | A | Set the Master Controller to "MAX SERVICE BRAKE" position until the train comes to a complete stop.                       |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10513 | R | The train slows down and stopped smoothly without jolts.  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10514 | A | Remove the active cab on TC2  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10515 | I | Events Review   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10516 | A | On the DDU Event's screen, check if there are any events loaded   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10517 | R | No Events have been loaded  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |

|       |   |   |  |    |     |                         |       |
|-------|---|---|--|----|-----|-------------------------|-------|
| 10518 | I | If there are any faults which occurred during the test, please create an Event on AutoFIE for further investigation.  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10519 | I | Train Odometer  |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10520 | R | Check the milage on the DDU maintenance screen, the value should be higher than the one recorded at the beginning on the test.<br>Read Undefined Value : x (km) |  | OK | 124 | Ntobeko Ndlovu - 421595 | Train |
| 10521 | I | Powerhour   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |
| 10522 | R | Read Undefined Variable [TT] (MPU1)NET_CntrTMceUptimeValS   |  | OK | 204 | Ntobeko Ndlovu - 421595 | Train |
| 10523 | I | End of Test   |  | OK |     | Ntobeko Ndlovu - 421595 | Train |



Serial Tests Report  
TS223 – ACT  
RTR Acceptance Test Report

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## Section 3 – Report summaries

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### 3.2 Results status

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

### 3.3 Tools used

| Function | Tool name | Tool number | Next Calibration date |
|----------|-----------|-------------|-----------------------|
|          |           |             |                       |

| Vehicle | Equipment | Expected version | Version loaded |
|---------|-----------|------------------|----------------|
| Train   |           |                  |                |