

| PROJECT | CUSTOMER | VEHICLE |
|-----------------|----------|----------------|
| Xtrapolis-PRASA | PRASA | 221 – M4 – VFT |

RTR Vehicle Functional Static Testing TS221 M4 Report
GIB0000006453






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Section 1 – Purpose / Objectives



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Section 3 – Protective Bonding and Return Current

3.3 Instructions list

3.3.1 012_PB-Protective Bonding and Return Current

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

| N° | Type | Instruction | File | Result status | Result value | Operator | Vehicle |
|-------|------|---|---|---------------|--------------|---------------------|---------|
| 10001 | I | Return Circuit: Car Body to Ground | | OK | | Vuma Mlaba - 435642 | M4 |
| 10002 | I | The purpose of this test is to confirm that the car body of each car in the train is connected to ground via the earthing brush which will ensure that current from the overhead wire is returned to the substation without damage to equipment or risk of electric shock | | OK | | Vuma Mlaba - 435642 | M4 |
| 10003 | A | Use the Tool List to record the serial number of the Ohmmeter that will be used in this test | | OK | | Vuma Mlaba - 435642 | M4 |
| 10004 | A | Ensure that the current setpoint is 50A and voltage <50V (applicable for all impedance measurement) on the ohmmeter device to be used for the test. | | OK | | Vuma Mlaba - 435642 | M4 |
| 10005 | I | For all impedance measurements of the car body to ground the positive terminal shall be connected to the car body and the negative terminal to the rail | | OK | | Vuma Mlaba - 435642 | M4 |
| 10006 | I | For all other impedance measurements, the positive terminal shall be connected to the tested subject and the negative terminal to the car body shell. | | OK | | Vuma Mlaba - 435642 | M4 |
| 10007 | A | Visually identify and inspect that the earthing cables of the 1st and 2nd axle of the 1st and 2nd Bogie Frame are properly connected to the axle brushes |  | OK | | Vuma Mlaba - 435642 | M4 |
| 10008 | A | Disconnect from the axle box the earthing cable of the 1st and 2nd axle of the 1st and 2nd Bogie Frame of the M4 car | | OK | | Vuma Mlaba - 435642 | M4 |
| 10009 | R | All the earthing cables of the M4 car are disconnected | | OK | | Vuma Mlaba - 435642 | M4 |
| 10010 | A | Connect the earthing cable of the 1st axle in the 1st Bogie Frame | | OK | | Vuma Mlaba - 435642 | M4 |

| | | | | | | | |
|-------|---|---|--|----|---------|---------------------|----|
| 10011 | R | Only the earthing cable of the 1st axle of the 1st Bogie Frame is connected | | OK | | Vuma Mlaba - 435642 | M4 |
| 10012 | A | Using an ohmmeter measure the impedance between the car body to rail | | OK | | Vuma Mlaba - 435642 | M4 |
| 10013 | R | Impedance Result Max : $x \leq 0.05$ (Ohm) | | OK | 0.00327 | Vuma Mlaba - 435642 | M4 |
| 10014 | A | Disconnect the earthing cable of the 1st axle of the 1st bogie frame | | OK | | Vuma Mlaba - 435642 | M4 |
| 10015 | R | Earthing cable disconnected | | OK | | Vuma Mlaba - 435642 | M4 |
| 10016 | A | Connect the earthing cable of the 2nd axle in the 1st Bogie Frame | | OK | | Vuma Mlaba - 435642 | M4 |
| 10017 | R | Only the earthing cable of the 2nd axle of the 1st Bogie Frame is connected | | OK | | Vuma Mlaba - 435642 | M4 |
| 10018 | A | Using an ohmmeter measure the impedance between the car body to rail | | OK | | Vuma Mlaba - 435642 | M4 |
| 10019 | R | Impedance Result Max : $x \leq 0.05$ (Ohm) | | OK | 0.00356 | Vuma Mlaba - 435642 | M4 |
| 10020 | R | Earthing cable disconnected | | OK | | Vuma Mlaba - 435642 | M4 |
| 10021 | A | Disconnect the earthing cable of the 2nd axle of the 1st bogie frame | | OK | | Vuma Mlaba - 435642 | M4 |
| 10022 | I | Earthing of Equipment on the Underframe | | OK | | Vuma Mlaba - 435642 | M4 |
| 10023 | A | Connect the earthing cable of the 1st axle in the 2nd Bogie Frame | | OK | | Vuma Mlaba - 435642 | M4 |
| 10024 | R | Only the earthing cable of the 1st axle of the 2nd Bogie Frame is connected | | OK | | Vuma Mlaba - 435642 | M4 |
| 10025 | A | Using an ohmmeter measure the impedance between the car body to rail | | OK | | Vuma Mlaba - 435642 | M4 |
| 10026 | R | Impedance Result Max : $x \leq 0.05$ (Ohm) | | OK | 0.00231 | Vuma Mlaba - 435642 | M4 |
| 10027 | A | Disconnect the earthing cable of the 1st axle of the 2nd bogie frame | | OK | | Vuma Mlaba - 435642 | M4 |
| 10028 | R | Earthing cable disconnected | | OK | | Vuma Mlaba - 435642 | M4 |
| 10029 | A | Connect the earthing cable of the 2nd axle in the 2nd Bogie Frame | | OK | | Vuma Mlaba - 435642 | M4 |

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|-------|---|---|--|----|---------|---------------------|----|
| 10030 | R | Only the earthing cable of the 1st axle of the 2nd Bogie Frame is connected | | OK | | Vuma Mlaba - 435642 | M4 |
| 10031 | A | Using an ohmmeter measure the impedance between the car body to rail | | OK | | Vuma Mlaba - 435642 | M4 |
| 10032 | R | Impedance Result Max : $x \leq 0.05$ (Ohm) | | OK | 0.00232 | Vuma Mlaba - 435642 | M4 |
| 10033 | A | Reconnect all earthing cables of the 1st and 2nd axle of the 1st and 2nd Bogie Frame | | OK | | Vuma Mlaba - 435642 | M4 |
| 10034 | R | All earthing cables connected on the 1st and 2nd Bogie Frame | | OK | | Vuma Mlaba - 435642 | M4 |
| 10035 | A | Visually inspect that the earthing cable connecting the Traction Inverter Case to M4 car body is properly connected and related bolts are correctly torqued | | OK | | Vuma Mlaba - 435642 | M4 |
| 10036 | R | Traction Inverter Case visually grounded and torque is correctly marked | | OK | | Vuma Mlaba - 435642 | M4 |
| 10037 | A | Using an ohmmeter measure the impedance between the Traction Inverter Case and the car body | | OK | | Vuma Mlaba - 435642 | M4 |
| 10038 | R | Impedance Result Max : $x \leq 0.05$ (Ohm) | | OK | 0.00341 | Vuma Mlaba - 435642 | M4 |
| 10039 | A | Visually inspect that the earthing cable connecting the Line Inductor Case to M4 car body is properly connected and related bolts are correctly torqued. | | OK | | Vuma Mlaba - 435642 | M4 |
| 10040 | R | Line Inductor Case visually grounded and torque is correctly marked | | OK | | Vuma Mlaba - 435642 | M4 |
| 10041 | A | Using an ohmmeter measure the impedance between the Line Inductor Case and the car body | | OK | | Vuma Mlaba - 435642 | M4 |
| 10042 | R | Impedance Result Max : $x \leq 0.05$ (Ohm) | | OK | 0.00232 | Vuma Mlaba - 435642 | M4 |
| 10043 | A | Visually inspect that the earthing cable connecting the Traction Motors of the 1st and 2nd axle of the 1st Bogie Frame to the car body is properly connected and related bolts are correctly torqued. | | OK | | Vuma Mlaba - 435642 | M4 |
| 10044 | R | Traction Motors visually grounded and torque is correctly marked | | OK | | Vuma Mlaba - 435642 | M4 |

| | | | | | | | |
|-------|---|---|--|----|---------|---------------------|----|
| 10045 | A | Using an ohmmeter measure the impedance between the Traction Motor of the 1st and 2nd axle of the 1st Bogie Frame and the car body | | OK | | Vuma Mlaba - 435642 | M4 |
| 10046 | R | Impedance Result Max : $x \leq 0.05$ (Ohm) | | OK | 0.00236 | Vuma Mlaba - 435642 | M4 |
| 10047 | A | Visually inspect that the earthing cable connecting the Traction Motors of the 1st and 2nd axle of the 2nd Bogie Frame to the car body is properly connected and related bolts are correctly torqued. | | OK | | Vuma Mlaba - 435642 | M4 |
| 10048 | R | Traction Motors visually grounded and torque is correctly marked | | OK | | Vuma Mlaba - 435642 | M4 |
| 10049 | A | Using an ohmmeter measure the impedance between the Traction Motor of the 1st and 2nd axle of the 2nd Bogie Frame and the car body | | OK | | Vuma Mlaba - 435642 | M4 |
| 10050 | R | Impedance Result Max : $x \leq 0.05$ (Ohm) | | OK | 0.00453 | Vuma Mlaba - 435642 | M4 |
| 10051 | I | Earthing of Interior Equipment | | OK | | Vuma Mlaba - 435642 | M4 |
| 10052 | A | Visually inspect that the earthing cable connecting the LV3 cubicle, and the car body is properly connected and related bolts are correctly torqued | | OK | | Vuma Mlaba - 435642 | M4 |
| 10053 | R | LV3 cubicle visually grounded and torque is correctly marked | | OK | | Vuma Mlaba - 435642 | M4 |
| 10054 | A | Using an ohmmeter measure the impedance between the LV3 cubicle and the car body | | OK | | Vuma Mlaba - 435642 | M4 |
| 10055 | R | Impedance Result Max : $x \leq 0.05$ (Ohm) | | OK | 0.00342 | Vuma Mlaba - 435642 | M4 |
| 10056 | A | Visually inspect that the earthing cable connecting the LV6 cubicle, and the car body is properly connected and related bolts are correctly torqued | | OK | | Vuma Mlaba - 435642 | M4 |
| 10057 | R | LV6 cubicle visually grounded and torque is correctly marked | | OK | | Vuma Mlaba - 435642 | M4 |
| 10058 | A | Using an ohmmeter measure the impedance between the LV6 cubicle and the car body | | OK | | Vuma Mlaba - 435642 | M4 |
| 10059 | R | Impedance Result Max : $x \leq 0.05$ (Ohm) | | OK | 0.00254 | Vuma Mlaba - 435642 | M4 |

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|-------|---|---|--|----|---------|---------------------|----|
| 10060 | I | Earthing of Equipment on the Roof | | OK | | Vuma Mlaba - 435642 | M4 |
| 10061 | A | Visually inspect that the earthing cable connecting the 1st Braking Resistor Box to M4 car body is properly connected and related bolts are correctly torqued | | OK | | Vuma Mlaba - 435642 | M4 |
| 10062 | R | 1st Braking Resistor Box visually grounded and torque is correctly marked | | OK | | Vuma Mlaba - 435642 | M4 |
| 10063 | A | Using an ohmmeter measure the impedance between the 1st Braking Resistor Box and the car body | | OK | | Vuma Mlaba - 435642 | M4 |
| 10064 | R | Impedance Result Max : $x \leq 0.05$ (Ohm) | | OK | 0.00242 | Vuma Mlaba - 435642 | M4 |
| 10065 | A | Visually inspect that the earthing cable connecting the Saloon HVAC to M4 car body is properly connected and related bolts are correctly torqued | | OK | | Vuma Mlaba - 435642 | M4 |
| 10066 | R | Saloon HVAC visually grounded and torque is correctly marked | | OK | | Vuma Mlaba - 435642 | M4 |
| 10067 | A | Using an ohmmeter measure the impedance between the Saloon HVAC and the car body | | OK | | Vuma Mlaba - 435642 | M4 |
| 10068 | R | Impedance Result Max : $x \leq 0.05$ (Ohm) | | OK | 0.00237 | Vuma Mlaba - 435642 | M4 |
| 10069 | A | Visually inspect that the earthing cable connecting the 2nd Braking Resistor Box to M4 car body is properly connected and related bolts are correctly torqued | | OK | | Vuma Mlaba - 435642 | M4 |
| 10070 | R | 2nd Braking Resistor Box visually grounded and torque is correctly marked | | OK | | Vuma Mlaba - 435642 | M4 |
| 10071 | A | Using an ohmmeter measure the impedance between the 1st Braking Resistor Box and the car body | | OK | | Vuma Mlaba - 435642 | M4 |
| 10072 | R | Impedance Result Max : $x \leq 0.05$ (Ohm) | | OK | 0.00326 | Vuma Mlaba - 435642 | M4 |



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Section 4 – Reflectometry

4.3 Instructions list

4.3.1 025_NET_054_PIS-Network Cabling Integrity

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

| N° | Type | Instruction | File | Result status | Result value | Operator | Vehicle |
|-------|------|---|---|---------------|--------------|---------------------------------|---------|
| 10001 | I | Network Cabling Integrity Test | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10002 | I | It is necessary to check the network cables to ensure that they have been installed correctly to improve the overall operation of the system. | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10003 | I | The Cable Analyzer Module DSX-5000 will be used to validate cabling | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10004 | I | Register as a new Operator on the DSX-5000. Check on the manual below on how to register as a new Operator |  | OK | | Thandanani Makhanya - 463827 | M4 |
| 10005 | I | When saving the tests results for each line, it should be named by its trainset number (X) and the test code (Indicated in the test step). i.e. TS021_P01 for PACIS and TS021_T01 for TCMS. | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10006 | I | TCMS cabling | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10007 | A | From: [25A10 CRS1 (Local: +LV3; Connector: 25XP10_X3)] to: [25A11 CRS2 (Local: +LV3; Connector: 25XP11_X4)] NOTE: Cable is crossed TSX_M4_T01 | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10008 | A | From: [25A10 CRS1 (Local: +LV3; Connector: 25XP10_X4)] to: [(Local: +END1; Connector: 90XP12.All)] NOTE: Cable is straight TSX_M4_T02 | | OK | | Thandanani Makhanya - 463827 | M4 |

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|-------|---|---|--|----|--|---------------------------------|----|
| 10009 | A | From: [25A14 TBR (Local: +LV3; Connector: 25XP14_ETH0)] to: [(Local: +END1; Connector: 90XR11.All)] NOTE: Cable is crossed TSX_M4_T03 | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10010 | A | From: [25A11 CRS2 (Local: +LV3; Connector: 25XP11_X3)] to: [Inter-car (Local: +END2; Connector: 90XP22.all)] NOTE: Cable is crossed TSX_M4_T04 | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10011 | A | From: [25A14 TBR (Local: +LV3; Connector: 25XP14_ETH1)] to: [Inter-car (Local: +END2; Connector: 90XP22.al)] NOTE: Cable is straight TSX_M4_T05 | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10012 | A | From: [(Local: +END1; Connector: 90XR12.Al)] to: [Inter-car (Local: +END2; Connector: 90XP21.al)] NOTE: Cable is straight TSX_M4_T06 | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10013 | A | From: [(Local: +END1; Connector: 90XR11.Al)] to: [Inter-car (Local: +END2; Connector: 90XP21.all)] NOTE: Cable is straight TSX_M4_T07 | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10014 | I | Pacis cabling | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10015 | A | From: [(Local: +END1; Connector: -90XR11.El)] to: [Inter-car (Local: +END2; Connector: -90XP21.ell)] NOTE: Cable is straight TSX_M4_P01 | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10016 | A | From: [54A10 SWITCH ETHERNET (CRS1) (Local: +LV6; Connector: 54XP10_X7)] to: [(Local: +END1; Connector: -90XR12.El)] NOTE: Cable is crossed TSX_M4_P02 | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10017 | A | From: [54A11 SWITCH ETHERNET (CRS2) (Local: +LV6; Connector: 54XP11_X8)] to: [(Local: +END2; Connector: -90XP22.ell)] | | OK | | Thandanani Makhanya - 463827 | M4 |

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|-------|---|---|--|----|--|---------------------------------|----|
| | | NOTE: Cable is straight TSX_M4_P03 | | | | | |
| 10018 | A | From: [54A11 SWITCH ETHERNET (CRS2) (Local: +LV6; Connector: 54XP11_X7)] to: [54A10 SWITCH ETHERNET (CRS1) (Local: +LV6; Connector: 54XP10_X8)] NOTE: Cable is crossed TSX_M4_P04 | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10019 | A | All cables have been validated on M4 | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10020 | R | Download all the results from Fluke and save them on PC with folder name "M4_TSxx" | | OK | | Ntobeko Ndlovu - 421595 | M4 |
| 10021 | R | | | OK | | Thandanani Makhanya - 463827 | M4 |

Section 5 – Config

5.3 Instructions list

5.3.1 CONFIG-Vehicle Configuration

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

| N° | Type | Instruction | File | Result status | Result value | Operator | Vehicle |
|-------|------|---|---|---------------|--------------|---------------------------------|---------|
| 10001 | I | Configuration Checks | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10002 | A | Check continuity on all pins of End 1 connector 90XP15 & 90XP14 to ground | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10003 | R | There is no continuity | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10004 | A | Check continuity on all pins of End 2 connector 90XP15 & 90XP14 to ground | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10005 | R | There is no continuity | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10006 | I | Fire Detection_67 | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10007 | I | Smoke Detector Address Configuration | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10008 | A | Remove and configure the Smoke Detector 67A2 (+PA1) according to the figure below |  | OK | | Thandanani Makhanya - 463827 | M4 |
| 10009 | A | Reconnect Smoke Detector 67A2 | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10010 | A | Remove and configure the Smoke Detector 67A3 (+PA3) according to the figure below |  | OK | | Thandanani Makhanya - 463827 | M4 |
| 10011 | I | Line Heat Detection | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10012 | R | Measure the resistance between point 1 and point 4 of the connector 67XP3_11 Result Min/Max : 550<= x<= 700 (Ohms) | | OK | 604 | Thandanani Makhanya - 463827 | M4 |
| 10013 | A | Reconnect Smoke Detector 67A3 | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10014 | I | OTDR LOOP | | OK | | Thandanani Makhanya - 463827 | M4 |

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|-------|---|---|--|----|--|---------------------------------|----|
| 10015 | I | Check the continuity between the following points: | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10016 | A | From: [+IV1 (local: +END1 Connector - 90XR13.B (pin1))] to: [local: +END2 Connector - 90XP23.b(pin1)] | | OK | | Thandanani Makhanya - 463827 | M4 |
| 10017 | A | From: [-IV1 (local: +END1 Connector - 90XR13.B (pin2))] to: [local: +END2 Connector - 90XP23.b (pin2)] | | OK | | Thandanani Makhanya - 463827 | M4 |

Section 6 – Traction Motors

6.3 Instructions list

6.3.1 011_TRM-Traction Motors

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

| N° | Type | Instruction | File | Result status | Result value | Operator | Vehicle |
|-------|------|---|---|---------------|--------------|---------------------|---------|
| 10001 | I | Traction Motors (SPP = 11) | | OK | | Vuma Mlaba - 435642 | M4 |
| 10002 | I | Ensure all the CONNECTORS are fully ASSEMBLED before running a continuity test. | | OK | | Vuma Mlaba - 435642 | M4 |
| 10003 | I | The following test is used to confirm the wiring of the traction motors. |  | OK | | Vuma Mlaba - 435642 | M4 |
| 10004 | I | SAFETY NOTICE: It is important to ensure that there is no 400Vac power supply on the vehicle. | | OK | | Vuma Mlaba - 435642 | M4 |
| 10005 | A | Switch OFF the 400Vac power supply at the source and disconnect the supply cables from the vehicle | | OK | | Vuma Mlaba - 435642 | M4 |
| 10006 | R | There is no 400Vac available on the vehicle | | OK | | Vuma Mlaba - 435642 | M4 |
| 10007 | I | Bogie 1 (MB1) | | OK | | Vuma Mlaba - 435642 | M4 |
| 10008 | I | Visual Inspection | | OK | | Vuma Mlaba - 435642 | M4 |
| 10009 | A | For motor 1 and motor 2 connect 11XR1 and 11XR2 and visually inspect that the following cables are connected from - 11XR1 connector to -11M1 motor and - 11XR2 connector to -11M2 motor respectively. NOTE: the cable configuration should be straight, none should cross the other | | OK | | Vuma Mlaba - 435642 | M4 |
| 10010 | I | Motor 2 | | OK | | Vuma Mlaba - 435642 | M4 |
| 10011 | R | [-11XR2 connector (local: UND - 11XP2_2.X1 pin 1)] connected to: [- 11XT2 motor terminals (U) -11M2]. | | OK | | Vuma Mlaba - 435642 | M4 |
| 10012 | A | Cable 11X2_2.X1 pin 1 is connected to 11XT2. | | OK | | Vuma Mlaba - 435642 | M4 |
| 10013 | R | [-11XR2 connector (local: UND - 11XP2_2.X2 pin 1)] connected to: [- | | OK | | Vuma Mlaba - 435642 | M4 |

| | | | | | | | |
|-------|---|---|--|----|--|---------------------|----|
| | | 11XT2 motor terminals (V) -11M2]. | | | | | |
| 10014 | R | [-11XR2 connector (local: UND - 11XP2_2.X3 pin 1)] connected to: [- 11XT2 motor terminals (W) -11M2]. | | OK | | Vuma Mlaba - 435642 | M4 |
| 10015 | R | -11M2 Motor terminals PE connected to - 11GND2. | | OK | | Vuma Mlaba - 435642 | M4 |
| 10016 | I | Motor 1 | | OK | | Vuma Mlaba - 435642 | M4 |
| 10017 | R | [-11XR1 connector (local: UND - 11XP1_2.X1 pin 1)] connected to: [- 11XT1 motor terminals (U) -11M1]. | | OK | | Vuma Mlaba - 435642 | M4 |
| 10018 | R | [-11XR1 connector (local: UND - 11XP1_2.X2 pin 1)] connected to: [- 11XT1 motor terminals (V) -11M1]. | | OK | | Vuma Mlaba - 435642 | M4 |
| 10019 | R | [-11XR1 connector (local: UND - 11XP1_2.X3 pin 1)] connected to: [- 11XT1 motor terminals (W) -11M1]. | | OK | | Vuma Mlaba - 435642 | M4 |
| 10020 | R | -11M1 Motor terminals PE connected to - 11GND. | | OK | | Vuma Mlaba - 435642 | M4 |
| 10021 | I | Bogie 2 (MB2) | | OK | | Vuma Mlaba - 435642 | M4 |
| 10022 | I | Visual Inspection | | OK | | Vuma Mlaba - 435642 | M4 |
| 10023 | A | For motor 3 and motor 4 visually inspect that the following cables are connected from -11XR3 connector to -11M3 motor and -11XR4 connector to -11M4 motor respectively. NOTE: the cable configuration should be straight, none should cross the other | | OK | | Vuma Mlaba - 435642 | M4 |
| 10024 | I | Motor 3 | | OK | | Vuma Mlaba - 435642 | M4 |
| 10025 | R | [-11XR3 connector (local: UND - 11XP3_2.X1 pin 1)] connected to: [- 11XT3 motor terminals (U) -11M3]. | | OK | | Vuma Mlaba - 435642 | M4 |
| 10026 | R | [-11XR3 connector (local: UND - 11XP3_2.X2 pin 1)] connected to: [- 11XT3 motor terminals (V) -11M3]. | | OK | | Vuma Mlaba - 435642 | M4 |
| 10027 | R | [-11XR3 connector (local: UND - 11XP3_2.X3 pin 1)] connected to: [- 11XT3 motor terminals (W) -11M3]. | | OK | | Vuma Mlaba - 435642 | M4 |

| | | | | | | | |
|-------|---|--|--|----|--|---------------------|----|
| 10028 | R | -11M3 Motor terminals PE connected to -11GND3. | | OK | | Vuma Mlaba - 435642 | M4 |
| 10029 | I | Motor 4 | | OK | | Vuma Mlaba - 435642 | M4 |
| 10030 | R | [-11XR4 connector (local: UND - 11XP4_2.X1 pin 1)] connected to: [-11XT4 motor terminals (U) -11M4]. | | OK | | Vuma Mlaba - 435642 | M4 |
| 10031 | R | [-11XR4 connector (local: UND - 11XP4_2.X2 pin 1)] connected to: [-11XT4 motor terminals (V) -11M4]. | | OK | | Vuma Mlaba - 435642 | M4 |
| 10032 | R | [-11XR4 connector (local: UND - 11XP4_2.X3 pin 1)] connected to: [-11XT4 motor terminals (W) -11M4]. | | OK | | Vuma Mlaba - 435642 | M4 |
| 10033 | R | -11M4 Motor terminals PE connected to -11GND. | | OK | | Vuma Mlaba - 435642 | M4 |



Serial Tests Report
TS221 – M4 – VFT
RTR Vehicle Functional Static Testing Report

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Section 5 – Report summaries

5.2 Results status

| Test Instruction Sheet | Compliant | Incomplete | Non-compliant |
|---------------------------------------|-----------|------------|---------------|
| Traction Motors | X | | |
| Reflectometry | X | | |
| Protective Bonding and Return Current | X | | |
| Config | X | | |

5.3 Tools used

| Function | Tool name | Tool number | Next Calibration date |
|-----------------|------------------------|----------------------|-----------------------|
| 012_PB | Megger | Megger | 8/25/2025 |
| 025_NET_054_PIS | Cable Analyser DSX5000 | Fluke machine_Ubunye | 6/23/2024 |
| CONFIG | Multimeter | Multimeter 5 | 8/23/2024 |

| Vehicle | Equipment | Expected version | Version loaded |
|---------|-----------|------------------|----------------|
| M4 | | | |