

| PROJECT | CUSTOMER | VEHICLE |
|-----------------|----------|-----------------|
| Xtrapolis-PRASA | PRASA | 274 – TC1 – VPT |

RTR Vehicle Pre-Testing TS274 TC1 Report
 GIB0000007981



| | CREATED | VERIFIED | APPROVED | DISTRIBUTION |
|------------------|-----------------------|----------------|-----------------|---|
| Name | Tshegofatso SETSHOGWE | Sifiso LUKHELE | Kgomotso NKOANA | Confidentiality Category <i>Restricted</i> <i>Project</i> <i>Normal</i> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> |
| Date | 25/03/2025 | 25/03/2025 | 25/03/2025 | Control Category <i>Controlled</i> <i>Not Controlled</i> <input checked="" type="checkbox"/> <input type="checkbox"/> |
| Signature | | | | Language EN |

This report has been automatically generated from TES version 1

Table of modifications

| Rev | Date | Modifications Content | Writer |
|-----|------------|-----------------------|-----------------------|
| A0 | 25/03/2025 | Creation | Tshegofatso SETSHOGWE |

Internal validations

| | Name | Function | Date | Signature |
|-----------------|-----------------------|---------------------|------------|---|
| Creator | Tshegofatso SETSHOGWE | EPU Manager | 25/03/2025 | X  Tshegofatso SETSHOGWE EPU Manager |
| Verifier | Sifiso LUKHELE | Serial Test Manager | 25/03/2025 | X  Sifiso LUKHELE Serial Test Manager |
| Approver | Kgomotso NKOANA | Test Expert | 25/03/2025 | X  Kgomotso NKOANA Test Expert |

Execution Plan

| | |
|-------------------|------------|
| Start Date | 12/03/2025 |
| End Date | 12/03/2025 |

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Section 1 – Purpose / Objectives

1. Protective Bonding

The objective of this procedure is to verify the return path of the current to the ground.

2. Reflectometry

The objective of this procedure is to verify the integrity of the ethernet cables.

3. Config

The objective of this procedure is to set up car ID for specific systems such as fire and to verify wiring to the speed sensors and OTDR.



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Section 2 – Protective Bonding

2.1 Instructions list

2.1.1 012-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 | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 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 | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10003 | A | The Ohmmeter shall be off | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10004 | A | Use the Tool List to record the serial number of the Ohmmeter that will be used for this test | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10005 | 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 | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10006 | 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 | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10007 | 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 | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10008 | A | Visually identify and inspect that the earthing cables of the 1st axle of 1st bogie frame and the 2nd axle of 2nd bogie frame are properly connected to the axle brushes. |  | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10009 | A | Disconnect from the axle box the earthing cable of the 2nd axle of 2nd bogie frame | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10010 | R | Only the earthing cable of the 1st axle of the 1st bogie frame is connected | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10011 | A | Measure the car body to ground impedance | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |

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|-------|---|--|--|----|----------|--|-----|
| 10012 | R | ImpedanceResult Max : $x \leq 0.05$ (Ohm) | | OK | 0.000342 | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10013 | A | Disconnect the earthing cable of 1st axle of 1st bogie frame | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10014 | A | Connect the earthing cable of the 2nd axle of 2nd bogie frame | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10015 | R | Only the earthing cable of the 2nd axle of the 2nd bogie frame of TC1 car is connected | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10016 | A | Measure the car body to ground impedance | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10017 | R | ImpedanceResult Max : $x \leq 0.05$ (Ohm) | | OK | 0.00652 | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10018 | A | Connect the earthing cable of the 1st axle of 1st bogie frame | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10019 | I | Earthing of Equipment on the Underframe | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10020 | A | Visually inspect that the earthing cable connecting the Auxiliary Converter Case to TC1 car body is properly connected and related bolts are correctly torqued | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10021 | R | Auxiliary Converter visually grounded and torque is correctly marked | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10022 | A | Measure the impedance between the Auxiliary Converter Case and the car body | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10023 | R | ImpedanceResult Max : $x \leq 0.05$ (Ohm) | | OK | 0.000753 | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10024 | A | Visually inspect that the earthing cable connecting the Battery Box to the car body is properly connected and the related bolts are correctly torqued | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10025 | R | Battery Box visually grounded and torque is correctly marked | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |

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| 10026 | A | Measure the impedance between the Battery Box Case and the car body | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10027 | R | ImpedanceResult Max : $x \leq 0.05$ (Ohm) | | OK | 0.000653 | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10028 | A | Visually inspect that the earthing cable connecting the Eurobalise Antenna to the car body is properly connected and the related bolts are correctly torqued | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10029 | R | Eurobalise Antenna visually grounded and torque is correctly marked | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10030 | A | Measure the impedance between the Eurobalise Antenna and the car body | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10031 | R | ImpedanceResult Max : $x \leq 0.05$ (Ohm) | | OK | 0.000842 | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10032 | A | Visually inspect that the earthing cable connecting the LVB/Brake Module to the car body is properly connected and the related bolts are correctly torqued | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10033 | R | LVB/Brake Module visually grounded and torque is correctly marked | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10034 | A | Measure the impedance between the LVB/Brake and the car body | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10035 | R | ImpedanceResult Max : $x \leq 0.05$ (Ohm) | | OK | 0.000432 | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10036 | I | Earthing of Equipment on the Exterior | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10037 | I | Exterior Front | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10038 | A | Visually inspect that the earthing cable connecting the Front Coupler to the car body is properly connected and the related bolts are correctly torqued | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10039 | R | Front Coupler visually grounded and torque is correctly marked | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |

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| 10040 | A | Measure the impedance between the Front Coupler and the car body | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10041 | R | ImpedanceResult Max : $x \leq 0.05$ (Ohm) | | OK | 0.000429 | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10042 | I | Earthing of Equipment on the Roof | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10043 | A | Visually inspect that the earthing cable connecting the Saloon HVAC to the car body is properly connected and the related bolts are correctly torqued | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10044 | R | Saloon HVAC visually grounded and torque is correctly marked | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10045 | A | Measure the impedance between the Saloon HVAC and the car body | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10046 | R | ImpedanceResult Max : $x \leq 0.05$ (Ohm) | | OK | 0.000492 | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10047 | A | Visually inspect that the earthing cable connecting the Cab HVAC to the car body is properly connected and the related bolts are correctly torqued | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10048 | R | Cab HVAC visually grounded and torque is correctly marked | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10049 | A | Measure the impedance between the Cab HVAC and the car body | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10050 | R | ImpedanceResult Max : $x \leq 0.05$ (Ohm) | | OK | 0.000862 | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10051 | I | Earthing of interior equipment | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10052 | I | Cabin | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10053 | A | Visually inspect that the earthing cable connecting LV1 cubicle to the car body is properly connected and the related bolts are correctly torqued | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |

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|-------|---|---|--|----|----------|--|-----|
| 10054 | R | LV1 visually grounded and torque is correctly marked | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10055 | A | Measure the impedance between the LV1 cubicle and the car body | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10056 | R | ImpedanceResult Max : $x \leq 0.05$ (Ohm) | | OK | 0.000643 | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10057 | A | Visually inspect that the earthing cable connecting LV2 cubicle to the car body is properly connected and the related bolts are correctly torqued | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10058 | R | LV2 visually grounded and torque is correctly marked | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10059 | A | Measure the impedance between the LV2 cubicle and the car body | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10060 | R | ImpedanceResult Max : $x \leq 0.05$ (Ohm) | | OK | 0.000932 | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10061 | A | Visually inspect that the earthing cable connecting Under Desk Left cubicle to the car body is properly connected and the related bolts are correctly torqued | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10062 | R | Under Desk Left cabinet visually grounded and torque is correctly marked | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10063 | A | Measure the impedance between the Under Desk Left cabinet and the car body | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10064 | R | ImpedanceResult Max : $x \leq 0.05$ (Ohm) | | OK | 0.000532 | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10065 | A | Visually inspect that the earthing cable connecting Under Desk Middle cabinet to the car body is properly connected and the related bolts are correctly torqued | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10066 | R | Under Desk Middle cabinet visually grounded and torque is correctly marked | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10067 | A | Measure the impedance between the Under Desk Middle cabinet and the car body | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |

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|-------|---|---|--|----|----------|--|-----|
| 10068 | R | ImpedanceResult Max : x <= 0.05 (Ohm) | | OK | 0.000483 | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10069 | A | Measure the impedance between the Master Controller and the car body | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10070 | R | ImpedanceResult Max : x <= 0.05 (Ohm) | | OK | 0.000634 | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10071 | A | Measure the impedance between the Foot Heater and the car body | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10072 | R | ImpedanceResult Max : x <= 0.05 (Ohm) | | OK | 0.000462 | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10073 | I | Saloon | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10074 | A | Visually inspect that the earthing cable connecting LV7 cubicle to the car body is properly connected and the related bolts are correctly torqued | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10075 | R | LV7 visually grounded and torque is correctly marked | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10076 | A | Measure the impedance between the LV7 cubicle and the car body | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10077 | R | ImpedanceResult Max : x <= 0.05 (Ohm) | | OK | 0.000432 | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10078 | I | END OF TEST | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |



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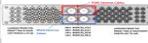
Emission date
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Section 3 – Reflectometry

3.1 Instructions list

3.1.1 025_NET_054_PIS-Network Cabling Integrity Test

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 | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |
| 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 | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |
| 10003 | I | The Cable Analyzer Module DSX-5000 will be used to validate cabling | | OK | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |
| 10004 | I | Register as a new Operator on the DSX-5000. Check on the manual below on how to register as a new Operator. [14-48-12-308038_DSX 5000 User Manual.pdf] |  | OK | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |
| 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_TC1_P01 for PACIS and TS021_TC1_T01 for TCMS. | | OK | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |
| 10006 | I | Use the pictures below for coupler test | | OK | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |
| 10007 | I | Front Coupler |  | OK | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |
| 10008 | I | DB9 pin out |  | OK | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |
| 10009 | I | TCMS cabling | | OK | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |
| 10010 | A | From: [25A15 Train Router Switch (Local: +LV1; Connector: 25XP15_ETH7)] to: [54A13 Train Router Switch (Local: +LV1; Connector: 54XP13_ETHCPU)] NOTE: Cable is crossed TSX_TC1_T01 | | OK | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |
| 10011 | A | From: [25A15 Train Router Switch (Local: +LV1; Connector: 25XP15_ETH4)] to: [25A11 Ethernet Switch (CRS2) (Local: +LV1; Connector: 25XP11_X4)] NOTE: Cable is crossed TSX_TC1_T02 | | OK | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |
| 10012 | A | From: [25A11 Ethernet Switch (CRS2) (Local: +LV1; Connector: 25XP11_X3)] to: [25A12 Switch Ethernet (CRS3) (Local: +LV1; Connector: 25XP12_X4)] | | OK | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |

| | | | | | | | |
|-------|---|--|--|----|--|---|-----|
| | | NOTE: Cable is crossed TSX_TC1_T03 | | | | | |
| 10013 | A | From: [25A12 Ethernet Switch (Local: +LV1; Connector: 25XP12_X8)] to: [25A18 MAINTENANCE INTERFACE (Local: +LV1; Connector: 25XP18_ETH)] NOTE: Cable is crossed TSX_TC1_T04 | | OK | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |
| 10014 | A | From: [25A15 Train Router Switch (Local: +LV1; Connector: 25XP15_ETH1)] to: [25A14 Ethernet Repeater (TBR) (Local: +LV7; Connector: 25XP14_ETH0)] NOTE: Cable is crossed TSX_TC1_T05 | | OK | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |
| 10015 | A | From: [25A15 Train Router Switch (Local: +LV1; Connector: 25XP15_ETH5)] to: [25A10 Ethernet Switch (CRS1) (Local: +LV7; Connector: 25XP10_X3)] NOTE: Cable is crossed TSX_TC1_T06 | | OK | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |
| 10016 | A | From: [25A12 Switch Ethernet (CRS3) (Local: +LV1; Connector: 25XP12_X3)] to: [25A13 Switch Ethernet (CRS4) (Local: +LV7; Connector: 25XP13_X4)] NOTE: Cable is crossed TSX_TC1_T07 | | OK | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |
| 10017 | A | From: [25A15 Train Router Switch (Local: +LV1; Connector: 25XP15_ETH3)] to: [Inter-car (Local: +END2; 90XP11.all)] NOTE: Cable is Straight TSX_TC1_T08 | | OK | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |
| 10018 | A | From: [25A10 Ethernet Switch (CRS1) (Local: +LV7; Connector: 25XP10_X4)] to: [Inter-car (Local: +END2; 90XP11.al)] NOTE: Cable is Straight TSX_TC1_T09 | | OK | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |
| 10019 | A | From: [25A13 Ethernet Switch (Local: +LV7; Connector: 25XP13_X3)] to: [Inter-car (Local: +END2; 90XP12.all)] NOTE: Cable is crossed TSX_TC1_T10 | | OK | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |
| 10020 | A | From: [25A14 TBR (Local: +LV7; Connector: 25XP14_ETH1)] to: [Inter-car (Local: +END2; 90XP12.al)] NOTE: Cable is Straight TSX_TC1_T11 | | OK | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |
| 10021 | A | From: [25A15 Train Router Switch (Local: +LV1; Connector: 25XP15_ETH0)] to: [Coupler 041 (Local: CLP; Connector: | | OK | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |

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|-------|---|--|--|----|--|--|
| | | 90XR120_LC14]) TSX_TC1_T12 NOTE: Cable is crossed NOTE: For this test, use the male coupler connector provided. Please refer to the picture above for the correct location of connector. | | | | |
| 10022 | A | From: [25A15 Train Router Switch (Local: +LV1; Connector: 25XP15_ETH2)] to: [Coupler 141 (Local: +CLP; Connector: 90XR120_RC14)] TSX_TC1_T13 NOTE: Cable is Straight NOTE: For this test use the female coupler connector provided. Please refer to the above picture for correct location for the connector. | | OK | | Mpumelelo Sithole 529980 12.03.2025 TC1 |
| 10023 | A | From: [UHF Ethernet Cable (63XP1_X4) (Local: +LV2)] to: [UHF Hand held Ethernet Cable (Local: UDR - Under Driver Right); (63XP2_X1)] TSX_TC1_T14 NOTE: Cable is straight with 8 wires | | OK | | Mpumelelo Sithole 529980 12.03.2025 TC1 |
| 10024 | I | Pacis cabling | | OK | | Mpumelelo Sithole 529980 12.03.2025 TC1 |
| 10025 | A | From: [TRS 54A13 (Local: +LV1; Connector: 54XP13_ETH7)] to: [Inter-car (Local: +END2; 90XP12.ell)] NOTE: Cable is straight TSX_TC1_P01 | | OK | | Mpumelelo Sithole 529980 12.03.2025 TC1 |
| 10026 | A | From: [CRS1 54A10 (Local: +LV7; Connector: 54XP10_X7)] to: [Inter-car (Local: +END2; 90XP11.ell)] NOTE: Cable is crossed TSX_TC1_P02 | | OK | | Amanda Ntuli 526239 24.03.2025 TC1 |
| 10027 | A | From: [54A13 TRS (Local: +LV1; Connector: 54XP13_ETH6)] to: [54A10 CRS1 (Local: +LV7; Connector: 54XP10_X8)] NOTE: Cable is crossed TSX_TC1_P03 | | OK | | Mpumelelo Sithole 529980 12.03.2025 TC1 |
| 10028 | A | From: [54A42 RACK UMC (EBM) (Local: +LV1; Connector: 54XP42_X2) to: [Coupler 042 (Local: +CLP; Connector: 90XR120_LE12)] TSX_TC1_P04 NOTE: Cable is crossed NOTE: For this test, use the male coupler connector and the DB9 connector provided. Refer to the picture above for the correct location of the connector. | | OK | | Mpumelelo Sithole 529980 12.03.2025 TC1 |

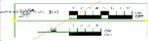
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|-------|---|---|--|----|--|---|-----|
| 10029 | A | From: [54A42 RACK UMC (EBM) (Local: +LV1;Connector: 54XP42_X8) to: [Coupler 142 (Local: +CLP; Connector: 90XR120_RE12)] TSX_TC1_P05 NOTE: Cable is straight NOTE: For this test use the female coupler connector and the DB9 connector provided. Refer to the picture above for the correct location of the connector. | | OK | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |
| 10030 | A | All cables have been validated on TC1 | | OK | | Mpumelelo Sithole 529980 12.03.2025 | TC1 |
| 10031 | R | Download all the results from Fluke and save them on PC with folder name "TC1_TSxx" | | OK | | Ntobeko Ndlovu 421595 25.03.2025 | TC1 |
| 10032 | I | END OF TEST | | OK | | Ntobeko Ndlovu 421595 25.03.2025 | TC1 |

Section 4 – Config

4.1 Instructions list

4.1.1 CONF-Car 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 | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10002 | A | Check continuity between 93XT104_1 pin 50 and Ground point | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10003 | R | There is no continuity | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10004 | I | If there is continuity above, the wire 19203LE is pinched on the compressor isolation cock. | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10005 | A | Check continuity on all pins of connector 90XP15 & 90XP14 to ground | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10006 | R | There is no continuity except pin 62 of connector 90XP15 | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10007 | A | Check continuity on all pins of the coupler to ground. | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10008 | R | There is no continuity | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10009 | I | Smoke Detector Address Configuration | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10010 | A | Remove and configure the Smoke Detector 67A4 in the cabin, according to the figure attached. |  | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |

| | | | | | | | |
|-------|---|---|---|----|-------|--|-----|
| 10011 | A | Reconnect Smoke Detector 67A4 | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10012 | A | Remove and configure the Smoke Detector 67A2 (+PA1) according to the figure attached. |  | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10013 | A | Reconnect Smoke Detector 67A2 | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10014 | A | Remove and configure the Smoke Detector 67A3 (+PA3) according to the figure attached. |  | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10015 | R | Measure the resistance (LHD- Line Heat Detection from Static Converter Box) between point 1 and point 4 of the connector 67XP3_11.Result Min/Max : 550<= x<= 700 (Ohms) | | OK | 585.6 | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10016 | A | Reconnect Smoke Detector 67A3 | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10017 | I | OTDR LOOP | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10018 | I | Check the continuity between the following points: | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10019 | A | From: [61A2 Speed Indicator IN+ (local: +DD4)] to: [Local(+END2) Connector: - 90XP13.b pin1] | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10020 | A | From: [61A2 Speed Indicator OUT- (local: +DD4)] to: [Local(+END2) Connector: - 90XP13.b pin 2] | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |
| 10021 | I | END OF TEST | | OK | | Mbavhalelo Funyufunyu 484649 12.03.2025 | TC1 |

Section 5 – Report summaries

5.1 Results status

| Test Instruction Sheet | Compliant | Incomplete | Non-compliant |
|------------------------|-----------|------------|---------------|
| Protective Bonding | X | | |
| Reflectometry | X | | |
| Config | X | | |

5.2 Tools used

| Function | Tool name | Tool number | Next Calibration date |
|-----------------|------------------------|------------------------|-----------------------|
| 012 | Protective bonding | Megger | 8/25/2025 |
| 025_NET_054_PIS | Cable Analyser DSX5000 | Cable analyser DSX5000 | 4/29/2025 |
| CONF | Multimeter | Multimeter 2 | 9/30/2025 |

| Vehicle | Equipment | Expected version | Version loaded |
|-----------------------------|-----------|------------------|----------------|
| 104770984-104771637-274-256 | | | |