

| PROJECT          | CUSTOMER | VEHICLE         |
|------------------|----------|-----------------|
| X'trapolis-PRASA | PRASA    | 317 – TC1 – VFT |

RTR Vehicle Functional Static Testing TS317 TC1 Report  
GIB0000008971



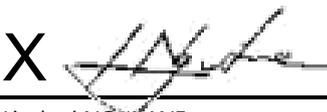
|                  | CREATED             | VERIFIED        | APPROVED        | DISTRIBUTION  |
|------------------|---------------------|-----------------|-----------------|---|
| <b>Name</b>      | Nhlakanipho MASONDO | Lindani NGUBANE | Kgomotso NKOANA | Confidentiality Category<br><i>Restricted</i> <i>Project</i> <i>Normal</i><br><input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> |
| <b>Date</b>      | 15/01/2026          | 15/01/2026      | 15/01/2026      | 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>   |

This report has been automatically generated from TES version 1.

### Table of modifications

| Rev | Date       | Modifications Content | Writer              |
|-----|------------|-----------------------|---------------------|
| A0  | 15/01/2026 | Creation              | Nhlakanipho MASONDO |

### Internal validations

|                 | Name                | Function            | Date       | Signature  |
|-----------------|---------------------|---------------------|------------|--|
| <b>Creator</b>  | Nhlakanipho MASONDO | EPU Manager         | 15/01/2026 | X <br>Nhlakanipho MASONDO<br>EPU Manager       |
| <b>Verifier</b> | Lindani NGUBANE     | Serial Test Manager | 15/01/2026 | X <br>Lindani NGUBANE<br>Serial Test Manager |
| <b>Approver</b> | Kgomotso NKOANA     | Test Expert         | 15/01/2026 | X <br>Kgomotso NKOANA<br>Test Expert         |

### Execution Plan

|                   |            |
|-------------------|------------|
| <b>Start Date</b> | 08/12/2025 |
| <b>End Date</b>   | 11/12/2025 |

## Contents

---

### **Section 1 - Purpose / Objectives**

### **Section 2 – Energy Distribution**

- 2.1 Instructions list
  - 2.1.1 Energy Distribution

### **Section 3 – TCMS Network**

- 3.1 Instructions list
  - 3.1.1 TCMS Network

### **Section 4 – Cabin Control**

- 4.1 Instructions list
  - 4.1.1 Cabin Control

### **Section 5 – Internal Lighting**

- 5.1 Instructions list
  - 5.1.1 Internal Lighting

### **Section 6 – PACIS System**

- 6.1 Instructions list
  - 6.1.1 PACIS System

### **Section 7 – Dead Man**

- 7.1 Instructions list
  - 7.1.1 Dead Man

### **Section 8 – EXTERNAL SIGNALLING**

- 8.1 Instructions list
  - 8.1.1 External Signalling
  - 8.1.2 Warning Hooters

### **Section 9 – Rescue Mode and Emergency Disconnection**

- 9.1 Instructions list
  - 9.1.1 Rescue Mode and Emergency Disconnection

### **Section 10 – Driver Desk Illumination**

- 10.1 Instructions list
  - 10.1.1 Driver Desk Illumination

## **Section 11 – Emergency Brake**

### 11.1 Instructions list

#### 11.1.1 Emergency Brake

## **Section 12 – Service Brake**

### 12.1 Instructions list

#### 12.1.1 Service Brake

## **Section 13 – Holding and Parking Brake**

### 13.1 Instructions list

#### 13.1.1 Holding and Parking Brake

## **Section 14 – Passenger Doors**

### 14.1 Instructions list

#### 14.1.1 Passenger Doors

## **Section 15 – HVAC Air Conditioning**

### 15.1 Instructions list

#### 15.1.1 HVAC\_TK

#### 15.1.2 HVAC\_SME

## **Section 16 – Fire Protection**

### 16.1 Instructions list

#### 16.1.1 Fire Protection

## **Section 17 – Driving Command**

### 17.1 Instructions list

#### 17.1.1 Driving Command

## **Section 18 – Train-Ground Communication**

### 18.1 Instructions list

#### 18.1.1 Train-Ground Communication

#### 18.1.2 ERTMS

## **Section 19 – Vehicle Normalization**

### 19.1 Instructions list

#### 19.1.1 Vehicle Normalization

## **Section 20 - Report summaries**

### 20.1 Results status

### 20.2 Tools used



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|

## Section 1 – Purpose / Objectives

---

### 1. Energy Distribution

Ensure the distribution of 110Vdc and 400Vac through the vehicle from the battery and Auxiliary converter

### 2. TCMS Network

Verify the working of the TCMS network and its core elements, i.e TRS, CRS.

### 3. Cabin Control

Verify the cabin control functions in both normal and backup modes, their commanding of the train lines, and the TCMS response to each function.

### 4. Internal Lighting

Verify the working of all internal lighting functions.

### 5. PACIS System

Verify power supply to all PACIS network equipment.

### 6. Dead Man

Verify the functioning of the dead man system, its associated components e.g. buzzer, and its TCMS responses.

### 7. External Signalling

Ensure all external signalling functions on the TC car are working, this test excludes the pneumatic horn.

### 8. Rescue Mode and Emergency Disconnection

Verify the correct operation of the emergency disconnection function, as well as the correct activation of the Back-Up mode.

### 9. Driver Desk Illumination

Verify the correct operation of all driver desk indicators, as well as auxiliary systems such as the sunblind etc. that assist the driver.

### 10. Emergency Brake

Verify all electrical components of the Emergency braking system.

### 11. Service Brake

Verify all electrical components of the Service brake system.

### 12. Holding and Parking Brake

Verify all electrical components of the Parking/holding brake system.

### 13. Passenger Doors

Ensure proper operation of the train doors.

### 14. HVAC

Verify the voltage distribution to and correct operation of the HVAC system

### 15. Fire Protection

Verify the configuration of the fire detection units, as well as the presence of the safety resistor in the auxiliary converter.

### 16. Driving Command

Ensure the correct responses via train line and TCMS of all driving command signals.

### 17. Train-Ground Communication



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|

Setup the Train-to-ground systems and verify correct installation of the antennas by VSWR test.

18. Vehicle Normalization

Ensure that all connectors, panels, and covers are normalized.



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|



Serial Tests Report  
TS317 – TC1 – VFT  
RTR Vehicle Functional Static Testing Report

Document Reference  
GIB0000008971  
Version: A0

Emission date  
15/01/2026

## Section 2 – Energy Distribution

---

### 2.1 Instructions list

## 2.1.1 Energy Distribution

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

| N°    | Type | Instruction   | File | Result status | Result value | Operator                             | Vehicle |
|-------|------|---|------|---------------|--------------|--------------------------------------|---------|
| 10001 | I    | Energy Distribution (SPP=013/015/018)   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10002 | I    | Initial conditions  |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10003 | I    | Car should be de-prepared with non-active cab   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10004 | I    | Car should be without 400Vac shore supply   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10005 | I    | All the Circuit Breakers should be OPEN   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10006 | I    | Connector XBAT+ Positive and XBAT-2 Negative should not be connected to the battery   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10007 | I    | Diodes  |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10008 | I    | Using a multimeter, check the presence and correct orientation of the diodes by doing the following continuity tests:<br>1.Continuity/Low resistance measured with Positive led of the multimeter on the Anode (L), and the negative on the Cathode (R)<br>2.No Continuity/Open circuit /infinite resistance measured with Negative led of the multimeter on the Anode(L), and the Positive on the Cathode(R) |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10009 | R    | Diode 15V1, between pins 6L and 7R of terminal block 93XT600 is present and correctly oriented  |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10010 | R    | Diode 18V3, between pins 1L and 1R of terminal block 93XT102 is present and correctly oriented  |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10011 | R    | Diode 18V1, between pins 2L and 2R of terminal block 93XT102 is present and correctly oriented  |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10012 | R    | Diode 18V2, between pins 3L and 3R of terminal block 93XT102 is present and correctly oriented  |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10013 | I    | Voltage Isolation   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |

|       |   |  |  |    |  |  |     |
|-------|---|--|--|----|--|--|-----|
| 10014 | A | Open the left side cover of the Static Converter (CVS) and check Visually that the cables are correctly connected to the points XBAT+(BCOF) and XBAT-1/ XBAT-2 (ISO_BCM) |  | OK |  | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10015 | R | Cables are correctly connected in the Power Bus XBAT+ Positive (BCOF) and XBAT-1/ XBAT-2 Negative (ISO_BCM)  |  | OK |  | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10016 | A | Check Resistance (Ohm) between point XBAT+ Positive of the power bus (BCOF) and carbody  |  | OK |  | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10017 | R | Value (Ohm) Should be infinite. There is NO Continuity between point XBAT+ Positive of the power bus (BCOF) and carbody  |  | OK |  | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10018 | A | Check Resistance (Ohm) between point XBAT-1 Negative of the Power Bus (ISO_BCM) and carbody  |  | OK |  | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10019 | R | Value (Ohm) Should be about 0 Ohm. There is Continuity between point XBAT-1 Negative of the Power Bus (ISO_BCM) and carbody  |  | OK |  | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10020 | A | Check Resistance (Ohm) between point XBAT-2 Negative of the Power Bus (ISO_BCM) and carbody  |  | OK |  | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10021 | R | Value (Ohm) Should be about 0 Ohm. There is Continuity between point XBAT-1 Negative of the Power Bus (ISO_BCM) and carbody  |  | OK |  | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10022 | I | Close left side cover of the Static Converter (CVS)  |  | OK |  | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10023 | A | Put Connector XBAT+ Positive and XBAT-2 Negative in the Battery. ENSURE BOTH SIDES OF THE TERMINALS ARE STURDY, CONNECTED CORRECTLY AND FASTENED                         |  | OK |  | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10024 | R | Confirm the presence of battery voltage (above 80Vdc) between Circuit Breaker 15Q2 point 1 and carbody. (Permanent Line)   |  | OK |  | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10025 | A | Close Circuit Breaker 15Q2 (Permanent Line)  |  | OK |  | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10026 | A | Close Circuit Breaker 15Q4 (Permanent Line)  |  | OK |  | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10027 | A | Close Circuit Breaker 15Q1 (Normal Line)   |  | OK |  | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10028 | A | Close Circuit Breaker 15Q3 (Normal Line)   |  | OK |  | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10029 | A | Close Circuit Breaker 13Q1 (230Vac)  |  | OK |  | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |

|       |   |  |  |    |  |                                      |     |
|-------|---|--|--|----|--|--------------------------------------|-----|
| 10030 | A | Close Circuit Breaker 13Q3 (230Vac)  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10031 | A | Close Circuit Breaker 13Q4   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10032 | I | Permanent and Normal Line  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10033 | A | Close Circuit Breaker 20Q1   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10034 | A | Close Circuit Breaker 18Q1   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10035 | A | Close Circuit Breaker 20Q2   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10036 | A | Close Circuit Breaker 18Q2   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10037 | A | Close Circuit Breaker 25Q6   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10038 | A | Close Circuit Breaker 27Q1   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10039 | A | Prior to Switching the car ON and Plugging the shore supply onto the CVS. Open the CVS Agate cover |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10040 | R | The AGATE is OFF   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10041 | I | MCE Software Upload  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10042 | A | Insert a USB programmed with the latest MCE Software into the MCE                                  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10043 | A | Close Circuit Breaker 40Q1   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10044 | A | Wait about 8 minutes until the 6 yellow LEDs are blinking  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10045 | A | Open Circuit Breaker 40Q1, remove the USB and Close Circuit Breaker 40Q1                           |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10046 | I | Low voltage watchdog and battery connection  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10047 | A | Turn the Backup Mode Switch 27S1 to "Back Up" position   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |   |  |    |   |                                      |     |
|-------|---|---|--|----|---|--------------------------------------|-----|
| 10048 | I | Cab Selected on Train Train Line<br>Dev4/1 = END2 90XP14 pin 3            |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10049 | A | Force [NI] Dev4/1 = 1.0   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10050 | I | 110Vdc Permanent Train Line<br>Dev5/40 = END2 90XP14 pin 29               |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10051 | R | Read Defined Variable [NI] Dev5/40 = 1.0                                  |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10052 | I | Cab Selected on Train Train Line<br>Dev4/1 = END2 90XP14 pin 3            |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10053 | A | Force [NI] Dev4/1 = 0.0   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10054 | A | Reset circuit breaker 15Q4  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10055 | R | Check that relay 15K2 is not active                                       |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10056 | I | 110Vdc Permanent Train Line<br>Dev5/40 = END2 90XP14 pin 29               |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10057 | R | Read Defined Variable [NI] Dev5/40 = 0.0                                  |  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10058 | A | Turnkey 30A1.S1 to Active Cabin Position                                  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10059 | R | Relay 15K2 is active  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10060 | I | 110Vdc Permanent Train Line<br>Dev5/40 = END2 90XP14 pin 29               |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10061 | R | Read Defined Variable [NI] Dev5/40 = 1.0                                  |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10062 | A | Turn and Hold the Battery Contactor<br>Switch 18S1 to ON Position         |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10063 | A | Wait only for TCMS to initialise  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10064 | A | Whilst PACIS is still initialising, turn and<br>hold 18S1 to OFF position |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10065 | R | Read Defined Variable [TT]<br>(MPU1)li_nrg_tc1battoffreqr1__1 = 1.0       |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |   |   |    |   |                                      |     |
|-------|---|---|---|----|---|--------------------------------------|-----|
| 10066 | R | Read Defined Variable [TT]<br>(MPU1)li_nrg_tc1battoffreqr2___1 = 1.0  |   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10067 | A | Put Battery Contactor Switch 18S1 to normal position  |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10068 | I | Battery Connection Train Line<br>Dev2/76 = Coupler pin 012<br>Dev2/80 = Coupler pin 112<br>Dev5/79 = END2 90XP14 pin 30   |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10069 | R | Read Defined Variable [NI] Dev2/76 = 1.0  |   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10070 | R | Read Defined Variable [NI] Dev2/80 = 1.0  |   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10071 | R | Read Defined Variable [NI] Dev5/79 = 1.0  |   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10072 | I | Battery Disconnection Train Line<br>Dev2/77 = Coupler pin 027<br>Dev2/40 = Coupler pin 127<br>Dev5/75 = END2 90XP14 pin 31  |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10073 | R | Read Defined Variable [NI] Dev2/77 = 0.0  |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10074 | R | Read Defined Variable [NI] Dev2/40 = 0.0  |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10075 | R | Read Defined Variable [NI] Dev5/75 = 0.0  |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10076 | R | Confirm the presence of battery voltage on the Normal line, between pin 2 of terminal block 93XT600 and ground  |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10077 | I | CVS Software Upload   |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10078 | I | Perform the following steps to prepare for the software upload<br>1. Connect one side of the RS232 crossed cable to the laptop and the other side to the Auxiliary Converter electronic at port RS232<br>2. Configure the RS232 port of the laptop as Com1<br>3. Open the maintenance software FLASH 32 |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10079 | R |   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10080 | A | Click on Settings and replicate the image below.  |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10081 | A |   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |  |   |    |  |                                      |     |
|-------|---|--|---|----|--|--------------------------------------|-----|
| 10082 | A | After configuration above, click Apply                                     |   | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10083 | A | Click on Boot loader and follow the picture below (untick the check box)   |   | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10084 | R |  |    | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10085 | A | After configuration above, click Apply                                     |   | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10086 | A | Click on Flash Memory and follow the picture below                         |   | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10087 | R |  |    | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10088 | A | After configuration above click Apply, then Ok                             |   | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10089 | A | Click on File Open, according to picture below                             |   | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10090 | R |  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10091 | A | Select the File Prasa_3KV_FPGA.S3  |   | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10092 | A |  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10093 | A | Reset the 2 circuit breakers located close to Electronic (AA3S) on the CVS |   | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10094 | A | Timer 10.0 S   |   | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10095 | A | Click on Program, according to picture below                               |   | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10096 | R |  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10097 | R |  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10098 | R | Wait for the upload to complete to 100% , then exit to close the program.  |   | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10099 | I | AC address coding and Shore Supply Mode                                    |   | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |  |  |    |     |                                      |     |
|-------|---|--|--|----|-----|--------------------------------------|-----|
| 10100 | A | Use the AGATE to shut down the train by resetting the circuit breakers CC(AL) and CC(ALS) in the AGATE apartment   |  | OK |     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10101 | A | Remove connector -18XP11_1 from the Auxiliary Converter  |  | OK |     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10102 | A | Check continuity between pins 51 and 63 ; and pins 52 and 64 on connector 18XP11_1   |  | OK |     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10103 | R | Pins 51 and 63 are continues; and pins 52 and 63 are continuous  |  | OK |     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10104 | A | Switch ON the IES Status on the test bench to make available the IES STATUS signal in the Auxiliary Converter  |  | OK |     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10105 | R | Check continuity between point 65 and point 70 (IES STATUS) on connector - 18XP11_1 from the Auxiliary Converter (ACU)   |  | OK |     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10106 | A | Return the connector -18XP11_1 into the Auxiliary Converter  |  | OK |     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10107 | A | Turn Switch "27S1" (Backup Mode Position) to 'Normal Mode'   |  | OK |     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10108 | I | Turn the ACU Isolation Switch 18S3 to "Normal" position  |  | OK |     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10109 | A | Turn Battery Contactor Switch "18S1" to ON Position  |  | OK |     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10110 | I | In the LV Box, check the voltage on point 7 of terminal block 93XT600  |  | OK |     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10111 | R | Voltage on point 7 of terminal block 93XT600   |  | OK | 109 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10112 | I | NOTE: When shore supply is connected to Auxiliary Converter, BE CAREFUL not to touch connector -90XR53.X3/-90XR53.X2/-90XR53.X1 (3000Volts) and connector -90XR52.X1/--90XR52.X2/-90XR52.X3 (400Volts) located in the END 2 Intercar Connector of the car. |  | OK |     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10113 | A | Ensure shore supply power source is off. Input Shore Supply Connector on Auxiliary Converter and switch it on  |  | OK |     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10114 | R | Auxiliary Converter is working   |  | OK |     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10115 | R | In the LV Box, check the voltage on point 7 of terminal block 93XT600, compare with the value read before, and see that the new value is higher than before  |  | OK |     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10116 | A | Perform a phase rotation measurement on Connector 90XR52 between phases  |  | OK |     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |  |    |  |  |                                      |     |
|-------|---|--|----|--|--|--------------------------------------|-----|
|       |   | U(X1),V(X2),W(X3) and ensure the rotation is in the correct direction                            |    |  |  |                                      |     |
| 10117 | R | Phase rotation between U,V,W is correct  | OK |  |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10118 | R | Check 230Vac between points L and N of the plug -13XT2   | OK |  |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10119 | R | Check 230Vac between points L and N of the plug -13XT3   | OK |  |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10120 | A | Remove the external shore supply   | OK |  |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10121 | A | Switch OFF the IES Status on the test bench to normalize the lines of status signal (IES STATUS) | OK |  |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10122 | R | The battery is no longer being charged   | OK |  |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10123 | R | Check 0Vac between points L and N of the plug -13XT2   | OK |  |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10124 | R | Check 0Vac between points L and N of the plug -13XT3   | OK |  |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10125 | I | Battery Disconnection  | OK |  |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10126 | A | Turn Battery Contactor Switch "18S1" to OFF Position   | OK |  |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10127 | R | Battery is still connected to the Permanent Line   | OK |  |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10128 | A | Open the circuit breaker 40Q1  | OK |  |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10129 | A | Turn Switch "27S1" (Backup Mode Position) to 'Back up Mode'                                      | OK |  |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10130 | A | Turn Battery Contactor Switch "18S1" to ON Position  | OK |  |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10131 | A | Turn Driver's Master Key 30A1.S1 to Non-Active Cabin   | OK |  |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10132 | R | Battery is still connected to the Normal Line  | OK |  |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10133 | A | Turn Driver's Master Key 30A1.S1 to Active Cabin Position  | OK |  |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10134 | A | Disconnect wire 18204LD to the CVS at terminal block -93XT104_5 point 10                         | OK |  |  | Carol Gumede<br>425280               | TC1 |

|       |   |  |  |    |   |                                      |     |
|-------|---|--|--|----|---|--------------------------------------|-----|
|       |   |  |  |    |   | 08.12.2025                           |     |
| 10135 | A | Turn and Hold the Battery Contactor Switch "18S1" to OFF Position  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10136 | A | Close the circuit breaker 40Q1   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10137 | I | Battery Disconnection Train Line<br>Dev2/77 = Coupler pin 027<br>Dev2/40 = Coupler pin 127<br>Dev5/75 = END2 90XP14 pin 31 |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10138 | R | Read Defined Variable [NI] Dev2/77 = 1.0   |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10139 | R | Read Defined Variable [NI] Dev2/40 = 1.0   |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10140 | R | Read Defined Variable [NI] Dev5/75 = 1.0   |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10141 | R | The Normal Line is disconnected from the battery   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10142 | I | Battery Connection Train Line<br>Dev2/76 = Coupler pin 012<br>Dev2/80 = Coupler pin 112<br>Dev5/79 = END2 90XP14 pin 30    |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10143 | R | Read Defined Variable [NI] Dev2/76 = 0.0   |  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10144 | R | Read Defined Variable [NI] Dev2/80 = 0.0   |  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10145 | R | Read Defined Variable [NI] Dev5/79 = 0.0   |  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10146 | A | Reconnect wire 18204LD to the CVS at terminal block -93XT104_5 point 10  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10147 | I | Shore Supply Power ON  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10148 | A | Turn the IES STATUS toggle switch on the Testbench into IES1   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10149 | A | Ensure shore supply power source is off. Input Shore Supply Connector on Auxiliary Converter and switch it on              |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10150 | I | End of test  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|

## Section 3 – TCMS Network

---

### 3.1 Instructions list

### 3.1.1 TCMS Network

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

| N°    | Type | Instruction   | File | Result status | Result value | Operator                                 | Vehicle |
|-------|------|---|------|---------------|--------------|--|---------|
| 10001 | I    | TCMS Network (SPP=25)   |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10002 | I    | Initial conditions  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10003 | I    | Backup Mode Switch 27S1 in "Normal" Position  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10004 | I    | Car should be prepared (Battery contactor switch 18S1 in ON position)                           |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10005 | I    | Vehicle test bench should be configured as TC2:<br>1. TC2 Dataplugs<br>2. MCE switch set to TC2 |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10006 | I    | The test bench should be connected to the vehicle   |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10007 | I    | Power supply to the 25A2 BRIOM 32/16 ETH 2  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10008 | A    | Close Circuit Breaker 25Q2  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10009 | R    | BRIOM 25A2 is ON  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10010 | A    | Check visually that ground braid is connected to BRIOM  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10011 | I    | Power supply to the 25A3 BRIOM 32/16 ETH 3  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10012 | A    | Close Circuit Breaker 25Q3  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10013 | R    | BRIOM 25A3 is ON  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10014 | A    | Check visually that ground braid is connected to BRIOM  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10015 | I    | Power supply to the 25A4 BRIOM 32/16 ETH 4  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |

|       |   |  |  |    |  |  |     |
|-------|---|--|--|----|--|--|-----|
| 10016 | A | Close Circuit Breaker 25Q4                             |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10017 | R | BRIOM 25A4 is ON                                       |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10018 | A | Check visually that ground braid is connected to BRIOM |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10019 | I | Power supply to the 25A5 BRIOM 32/16 ETH 5             |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10020 | A | Close Circuit Breaker 25Q5                             |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10021 | R | BRIOM 25A5 is ON                                       |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10022 | A | Check visually that ground braid is connected to BRIOM |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10023 | I | Power supply to the 25A6 BRIOM 32/16 ETH 6             |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10024 | A | Close Circuit Breaker 25Q6                             |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10025 | R | BRIOM 25A6 is ON                                       |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10026 | A | Check visually that ground braid is connected to BRIOM |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10027 | I | Power supply to the 25A7 BRIOM 32/16 ETH 7             |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10028 | A | Close Circuit Breaker 25Q7                             |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10029 | R | BRIOM 25A7 is ON                                       |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10030 | A | Check visually that ground braid is connected to BRIOM |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10031 | I | Power supply to the 25A11 SWITCH ETHERNET (CRS2)       |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10032 | A | Close Circuit Breaker 25Q11                            |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10033 | R | CRS2 25A11 is ON                                       |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |

|       |   |   |  |    |  |  |     |
|-------|---|---|--|----|--|--|-----|
| 10034 | I | Power supply to the 25A12 SWITCH ETHERNET (CRS3)    |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10035 | A | Close Circuit Breaker 25Q12                         |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10036 | R | CRS3 25A12 is ON                                    |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10037 | I | Power supply to the 25A15 TRAIN ROUTER SWITCH (TRS) |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10038 | A | Close Circuit Breaker 25Q15                         |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10039 | R | TRS 25A15 is ON                                     |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10040 | A | Close Circuit Breaker 25Q14                         |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10041 | A | Close Circuit Breaker 25Q13                         |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10042 | A | Close Circuit Breaker 25Q10                         |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10043 | I | Power supply to the 25A13 SWITCH ETHERNET (CRS4)    |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10044 | R | CRS4 25A13 is ON                                    |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10045 | I | Power supply to the 25A10 SWITCH ETHERNET (CRS1)    |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10046 | R | CRS1 25A10 is ON                                    |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10047 | I | Power supply to the 25A14 ETHERNET REPEATER (TBR)   |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10048 | R | TBR 25A17 is ON                                     |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10049 | I | Power supply to the 25A17 DDU ACE                   |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10050 | A | Close Circuit Breaker 25Q17                         |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10051 | R | The DDU is ON                                       |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |

|       |   |  |   |    |  |  |     |
|-------|---|--|---|----|--|--|-----|
| 10052 | I | DDU Software Upload  |   | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10053 | I | Perform the following procedure to upload software on the DDU          |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10054 | I | Ethernet Loop  |   | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10055 | A | Check that the LED on ETH0 of the TBR is flashing                      |   | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10056 | R | The TBR has LED on port ETH0 flashing                                  |   | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10057 | A | For each CRS, check that the LEDs on ports X3 and X4 are flashing      |   | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10058 | R | CRS1 has LEDs on ports X3 and X4 flashing                              |   | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10059 | R | CRS4 has ONLY LED on port X4 flashing                                  |   | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10060 | R | CRS2 has LEDs on ports X3 and X4 flashing                              |   | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10061 | R | CRS3 has LEDs on ports X3 and X4 flashing                              |   | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10062 | A | Check that the TRS has LEDs on ports ETH4 and ETH5 flashing            |   | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10063 | R | The TRS has LEDs on ports ETH4 and ETH5 flashing                       |   | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10064 | R | Check on the DDU that all Router Switches are available on the network |   | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10065 | I | END OF TEST  |   | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|

## Section 4 – Cabin Control

---

### 4.1 Instructions list

#### 4.1.1 Cabin Control

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

| N°    | Type | Instruction   | File | Result status | Result value | Operator                             | Vehicle |
|-------|------|---|------|---------------|--------------|--------------------------------------|---------|
| 10001 | I    | Cabin Control (SPP=020)   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10002 | I    | Initial Conditions  |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10003 | I    | Shore supply is connected and ON  |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10004 | I    | Car should be prepared  |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10005 | I    | Cabin should be active  |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10006 | I    | Use the voltage detector/ magnetic stick to check whether a relay is energised or not |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10007 | I    | Normal Mode - Active Cabin  |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10008 | I    | Cab Active TC1 Train Line<br>Dev5/2 = END2 90XP14 pin 4                               |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10009 | R    | Read Defined Variable [NI] Dev5/2 = 1.0   |      | OK            | 1            | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10010 | I    | Master Key TC1 Train Line<br>Dev5/17 = END2 90XP14 pin 17                             |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10011 | R    | Read Defined Variable [NI] Dev5/17 = 1.0  |      | OK            | 1            | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10012 | R    | Read Defined Variable [TT]<br>(MPU1)li_CAB_Tc1KeyRelayR1 = 0.0                        |      | OK            | 0            | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10013 | R    | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1keyrelayr2 = 0.0                        |      | OK            | 0            | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10014 | R    | Read Defined Variable [TT]<br>(MPU1)li_CAB_Tc1KeyRelayR3 = 0.0                        |      | OK            | 0            | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10015 | R    | Read Defined Variable [TT]<br>(MPU1)li_CAB_Tc1KeyRelayR4 = 0.0                        |      | OK            | 0            | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10016 | R    | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1cabinactiver1 = 0.0                     |      | OK            | 0            | Carol Gumede<br>425280<br>08.12.2025 | TC1     |

|       |   |   |    |   |  |     |
|-------|---|---|----|---|--|-----|
| 10017 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1cabinactiver2 = 1.0 | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10018 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1cabinactiver3 = 0.0 | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10019 | R | Read Defined Variable [TT]<br>(MPU1)Li_CAB_Tc1CabinActiveR4 = 0.0 | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10020 | R | Read Defined Variable [TT]<br>(MPU1)Li_CAB_Tc1CabinActiveR5 = 0.0 | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10021 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1cabinactiveno = 1.0 | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10022 | A | Force [TT]<br>(MPU1)lo_cab_tc1cabdisconnectr1 = 1.0               | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10023 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1cabinactiver1 = 1.0 | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10024 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1cabinactiver2 = 0.0 | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10025 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1cabinactiver3 = 1.0 | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10026 | R | Read Defined Variable [TT]<br>(MPU1)Li_CAB_Tc1CabinActiveR4 = 1.0 | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10027 | R | Read Defined Variable [TT]<br>(MPU1)Li_CAB_Tc1CabinActiveR5 = 1.0 | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10028 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1cabinactiveno = 0.0 | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10029 | I | Cab Active TC1 Train Line<br>Dev5/2 = END2 90XP14 pin 4           | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10030 | R | Read Defined Variable [NI] Dev5/2 = 0.0                           | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10031 | A | Force [TT]<br>(MPU1)lo_cab_tc1cabdisconnectr1 = 0.0               | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10032 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1cabinactiver1 = 0.0 | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10033 | I | Normal Mode - Non-Active Cabin                                    | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10034 | A | Turn Driver's Master Key 30A1.S1 to Non-Active Cabin Position     | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |

|       |   |   |  |    |   |                                      |     |
|-------|---|---|--|----|---|--------------------------------------|-----|
| 10035 | I | Cab Active TC1 Train Line<br>Dev5/2 = END2 90XP14 pin 4           |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10036 | R | Read Defined Variable [NI] Dev5/2 = 0.0                           |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10037 | I | Master Key TC1 Train Line<br>Dev5/17 = END2 90XP14 pin 17         |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10038 | R | Read Defined Variable [NI] Dev5/17 = 0.0                          |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10039 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1masterkey__1 = 0.0  |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10040 | R | Read Defined Variable [TT]<br>(MPU1)Li_CAB_Tc1KeyRelayR1 = 1.0    |  | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10041 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1keyrelayr2 = 1.0    |  | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10042 | R | Read Defined Variable [TT]<br>(MPU1)Li_CAB_Tc1KeyRelayR3 = 1.0    |  | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10043 | R | Read Defined Variable [TT]<br>(MPU1)Li_CAB_Tc1KeyRelayR4 = 1.0    |  | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10044 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1cabinactiver1 = 0.0 |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10045 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1cabinactiver2 = 1.0 |  | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10046 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1cabinactiver3 = 0.0 |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10047 | R | Read Defined Variable [TT]<br>(MPU1)Li_CAB_Tc1CabinActiveR4 = 0.0 |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10048 | R | Read Defined Variable [TT]<br>(MPU1)Li_CAB_Tc1CabinActiveR5 = 0.0 |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10049 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1cabinactiveno = 1.0 |  | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10050 | A | Force [TT]<br>(MPU1)lo_cab_tc1cabdisconnectr2 = 1.0               |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10051 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1cabinactiver1 = 1.0 |  | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10052 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1cabinactiver2 = 0.0 |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |

|       |   |   |    |   |                                      |     |
|-------|---|---|----|---|--------------------------------------|-----|
| 10053 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1cabinactiver3 = 1.0   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10054 | R | Read Defined Variable [TT]<br>(MPU1)Li_CAB_Tc1CabinActiveR4 = 1.0   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10055 | R | Read Defined Variable [TT]<br>(MPU1)Li_CAB_Tc1CabinActiveR5 = 1.0   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10056 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1cabinactiveno = 0.0   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10057 | A | Release [TT]<br>(MPU1)lo_cab_tc1cabdisconnectr1   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10058 | A | Release [TT]<br>(MPU1)lo_cab_tc1cabdisconnectr2   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10059 | I | Other Cab Active  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10060 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1othercabinactive__1<br>= 1.0  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10061 | I | Cab Selected on Train, Train Line<br>Dev4/1 = END2 90XP14 pin 3<br>Dev2/1 = COUPLER pin 040<br>Dev2/2 = COUPLER pin 140 | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10062 | A | Force [NI] Dev4/1 = 1.0   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10063 | R | Read Defined Variable [NI] Dev2/1 = 1.0   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10064 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1othercabinactive__1<br>= 0.0  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10065 | R | Read Defined Variable [NI] Dev2/2 = 1.0   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10066 | I | Cab Selected on Train, Train Line<br>Dev4/1 = END2 90XP14 pin 3<br>Dev2/1 = COUPLER pin 040<br>Dev2/2 = COUPLER pin 140 | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10067 | A | Force [NI] Dev4/1 = 0.0   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10068 | R | Read Defined Variable [NI] Dev2/1 = 0.0   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10069 | R | Read Defined Variable [NI] Dev2/2 = 0.0   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10070 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1othercabinactive__1<br>= 1.0  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |   |  |    |   |                                      |     |
|-------|---|---|--|----|---|--------------------------------------|-----|
| 10071 | I | Backup Mode - Active Cabin                                    |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10072 | A | Turn Switch '27S1' (Backup Mode Position) to 'BACKUP Position |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10073 | A | Turn Driver's Master Key 30A1.S1 to Active Cabin Position     |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10074 | I | Cab Selected on Train, Train Line Dev5/1 = END2 90XP14 pin 3  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10075 | R | Read Defined Variable [NI] Dev5/1 = 1.0                       |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10076 | R | Check Relay "20K1a" is Energized                              |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10077 | R | Check Relay "20K1" is Energized                               |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10078 | R | Check Relay "20K1b" is Energized                              |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10079 | R | Check Relay "20K1c" is Energized                              |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10080 | R | Check Relay "20K2" is Energized                               |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10081 | R | Check Relay "20K12a" is Energized                             |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10082 | R | Check Relay "20K11" is Energized                              |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10083 | R | Check Relay "20K12b" is Energized                             |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10084 | R | Check Relay "20K10b" is Energized                             |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10085 | I | Backup Mode- Non-Active Cabin                                 |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10086 | A | Turn Driver's Master Key 30A1.S1 to Non-Active Cabin Position |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10087 | I | Cab Selected on Train, Train Line Dev5/1 = END2 90XP14 pin 3  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10088 | R | Read Defined Variable [NI] Dev5/1 = 0.0                       |  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |  |  |    |   |                                      |     |
|-------|---|--|--|----|---|--------------------------------------|-----|
| 10089 | R | Check Relay "20K1" is De-energized   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10090 | R | Check Relay "20K1a" is De-energized  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10091 | R | Check Relay "20K1b" is De-energized  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10092 | R | Check Relay "20K1c" is De-energized  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10093 | R | Check Relay "20K2" is De-energized   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10094 | R | Check Relay "20K11" is De-energized  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10095 | R | Check Relay "20K12a" is De-energized   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10096 | R | Check Relay "20K12b" is De-energized   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10097 | R | Check Relay "20K10b" is De-energized   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10098 | I | Automatic Start  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10099 | A | Turn Battery Contactor Switch 18S1" to OFF position                                  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10100 | A | Turn Switch '27S1' (Backup Mode Position) to 'Normal' Position                       |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10101 | A | Turn Driver's Master Key 30A1.S1 to Active Cabin Position                            |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10102 | A | Turn Battery Contactor Switch 18S1" to ON position - Allow time for TCMS to start up |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10103 | A | Close Circuit Breaker 84Q1   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10104 | A | Press and hold the Automatic Start Pushbutton 20S1                                   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10105 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1automaticstartr1 = 1.0                 |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10106 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1automaticstartr2 = 1.0                 |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |  |    |   |                                      |     |
|-------|---|--|----|---|--------------------------------------|-----|
| 10107 | R | Read Defined Variable [TT]<br>(MPU1)lo_cab_tc1automaticstartr1 = 1.0 | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10108 | R | Read Defined Variable [TT]<br>(MPU1)lo_cab_tc1automaticstartr2 = 1.0 | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10109 | R | Check that the pushbutton lamp on 20S1 is ON                         | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10110 | A | Release the Automatic Start Pushbutton 20S1                          | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10111 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1automaticstartr1 = 0.0 | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10112 | R | Read Defined Variable [TT]<br>(MPU1)li_cab_tc1automaticstartr2 = 0.0 | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10113 | R | Read Defined Variable [TT]<br>(MPU1)lo_cab_tc1automaticstartr1 = 0.0 | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10114 | R | Read Defined Variable [TT]<br>(MPU1)lo_cab_tc1automaticstartr2 = 0.0 | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10115 | I | Standby Mode   | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10116 | A | Turn Driver's Master Key 30A1.S1 to Non-Active Cabin Position        | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10117 | A | Press and hold the Standby State pushbutton 20S2                     | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10118 | R | Read Defined Variable [TT]<br>(MPU1)Li_CAB_Tc1ISMR1__1 = 1.0         | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10119 | R | Read Defined Variable [TT]<br>(MPU1)Li_CAB_Tc1ISMR2__1 = 1.0         | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10120 | A | Release the Standby State pushbutton 20S2                            | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10121 | R | Read Defined Variable [TT]<br>(MPU1)Li_CAB_Tc1ISMR1__1 = 0.0         | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10122 | R | Read Defined Variable [TT]<br>(MPU1)Li_CAB_Tc1ISMR2__1 = 0.0         | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10123 | A | Force [TT] (MPU1)lo_cab_tc1ismlamp = 1.0                             | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10124 | R | The Standby State pushbutton lamp 20S2 is ON                         | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |



|       |   |   |  |    |  |                                      |     |
|-------|---|---|--|----|--|--------------------------------------|-----|
| 10125 | A | Release [TT] (MPU1)lo_cab_tc1ismlamp                      |  | OK |  | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10126 | R | The Standby State pushbutton lamp 20S2 is OFF             |  | OK |  | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10127 | A | Turn Driver's Master Key 30A1.S1 to Active Cabin Position |  | OK |  | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10128 | I | END OF TEST   |  | OK |  | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|

## Section 5 – Internal Lighting

---

### 5.1 Instructions list

### 5.1.1 Internal Lighting

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

| N°    | Type | Instruction  | File | Result status | Result value | Operator                             | Vehicle |
|-------|------|--|------|---------------|--------------|--------------------------------------|---------|
| 10001 | I    | Internal Lighting (SPP=52)   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10002 | I    | Initial Conditions   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10003 | I    | Car should be prepared   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10004 | I    | Key 30A1.S1 should be in Active Cabin position                             |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10005 | I    | Circuit Breakers   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10006 | A    | Close Circuit Breaker 52Q1   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10007 | A    | Close Circuit Breaker 52Q2   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10008 | A    | Close Circuit Breaker 52Q3   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10009 | A    | Close Circuit Breaker 52Q4   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10010 | A    | Close Circuit Breaker 52Q5   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10011 | A    | Close Circuit Breaker 52Q6   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10012 | I    | Cab Ceiling Lighting   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10013 | A    | Turn battery contactor switch 18S1 to OFF position                         |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10014 | A    | Wait 3 minutes for cab lights to switch off                                |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10015 | R    | All cabin ceiling lights are OFF (52U40, 52U41,52U42)                      |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10016 | R    | Both cab ceiling light pushbutton lamps are OFF (52S3 Left and 52S4 Right) |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |

|       |   |  |  |    |  |                                      |     |
|-------|---|--|--|----|--|--------------------------------------|-----|
| 10017 | A | Push the cab lighting LEFT side button (52S3)  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10018 | I | Wait 3 minutes for the lights to turn off. Continue with the following steps while waiting |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10019 | R | Cabin ceiling light 52U40 is ON  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10020 | R | Cabin ceiling light 52U41 is ON  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10021 | R | Cabin ceiling light 52U42 is ON  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10022 | R | Left pushbutton lamp 52S3 is ON  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10023 | R | Right pushbutton lamp 52S4 is ON   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10024 | A | Press and hold the cab lighting LEFT side button (52S3)                                    |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10025 | R | The intensity of cabin ceiling light 52U40 decreases                                       |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10026 | R | The intensity of cabin ceiling light 52U41 decreases                                       |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10027 | R | The intensity of cabin ceiling light 52U42 decreases                                       |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10028 | A | Release cab lighting LEFT side button (52S3)   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10029 | I | After the 180s (3 min) timer is expired  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10030 | R | Cabin ceiling light 52U40 is OFF   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10031 | R | Cabin ceiling light 52U41 is OFF   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10032 | R | Cabin ceiling light 52U42 is OFF   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10033 | R | Left pushbutton lamp 52S3 is OFF   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10034 | R | Right pushbutton lamp 52S4 is OFF  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |  |  |    |  |                                      |     |
|-------|---|--|--|----|--|--------------------------------------|-----|
| 10035 | A | Push the cab lighting RIGHT side button (52S4)                               |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10036 | R | Cabin ceiling light 52U40 is ON  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10037 | R | Cabin ceiling light 52U41 is ON  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10038 | R | Cabin ceiling light 52U42 is ON  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10039 | R | Right pushbutton lamp 52S4 is ON   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10040 | A | Wait 3 minutes for the light to switch off                                   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10041 | R | Cabin ceiling light 52U40 is OFF   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10042 | R | Cabin ceiling light 52U41 is OFF   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10043 | R | Cabin ceiling light 52U42 is OFF   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10044 | R | Right pushbutton lamp 52S4 is OFF  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10045 | I | Turn battery contactor switch 18S1 to ON position                            |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10046 | R | In the saloon, all right-side emergency lights are "ON" on all light modules |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10047 | R | In the saloon, all LEFT side emergency lights are "ON" on all light modules  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10048 | R | Both cab ceiling light pushbutton lamps are ON (52S3 Left and 52S4 Right)    |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10049 | A | Press and hold the cab lighting RIGHT side button (52S4)                     |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10050 | R | The intensity of cabin ceiling light 52U40 decreases                         |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10051 | R | The intensity of cabin ceiling light 52U41 decreases                         |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10052 | R | The intensity of cabin ceiling light 52U42 decreases                         |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |  |    |                                      |     |
|-------|---|--|----|--------------------------------------|-----|
| 10053 | A | Release cab lighting RIGHT side button (52S4)  | OK | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10054 | A | Open Circuit Breaker 52Q6  | OK | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10055 | A | Press and hold the Lamp Test pushbutton 84S1   | OK | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10056 | R | Both cab ceiling light pushbutton lamps are ON (52S3 Left and 52S4 Right)            | OK | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10057 | A | Release the Lamp Test pushbutton 84S1  | OK | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10058 | R | Both cab ceiling light pushbutton lamps are OFF (52S3 Left and 52S4 Right)           | OK | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10059 | A | Close Circuit Breaker 52Q6   | OK | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10060 | I | Cleaning Lighting Command  | OK | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10061 | I | Turn battery contactor switch 18S1 to OFF position                                   | OK | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10062 | A | Turn Cleaning Staff Lights Switch 52S6 to ON position                                | OK | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10063 | R | The saloon RIGHT side emergency lights (low intensity) are "ON" on all light modules | OK | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10064 | R | The saloon LEFT side emergency lights (low intensity) are "ON" on all light modules  | OK | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10065 | A | Open Circuit Breaker 52Q5  | OK | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10066 | R | The saloon RIGHT side emergency lights (low intensity) are OFF on all light modules  | OK | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10067 | R | The saloon LEFT side emergency lights (low intensity) are OFF on all light modules   | OK | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10068 | A | Close Circuit Breaker 52Q5   | OK | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10069 | I | Main Lighting Command  | OK | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10070 | A | Turn Cleaning Staff Lights Switch 52S6 to ON position                                | OK | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |  |  |    |  |                                      |     |
|-------|---|--|--|----|--|--------------------------------------|-----|
| 10071 | R | All saloon emergency lights (low intensity) are "ON" on all light modules (Left & right) |  | OK |  | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10072 | I | Turn battery contactor switch 18S1 to ON position - allow time for TCMS to initialize    |  | OK |  | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10073 | A | Force [TT] (MPU1)lo_lgt_tc1mainlgtcmd = 1.0  |  | OK |  | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10074 | R | The saloon RIGHT side main lighting (high intensity) is "ON" on all light modules        |  | OK |  | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10075 | R | The saloon LEFT side main lighting (high intensity) is "ON" on all light modules         |  | OK |  | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10076 | A | Release [TT] (MPU1)lo_lgt_tc1mainlgtcmd  |  | OK |  | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10077 | R | All saloon emergency lights (low intensity) are "ON" on all light modules (Left & Right) |  | OK |  | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10078 | I | END OF TEST  |  | OK |  | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|

## Section 6 – PACIS System

---

### 6.1 Instructions list

### 6.1.1 PACIS System

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

| N°    | Type | Instruction  | File | Result status | Result value | Operator                                 | Vehicle |
|-------|------|--|------|---------------|--------------|--|---------|
| 10001 | I    | PACIS System (SPP=054)                               |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10002 | I    | Initial conditions                                   |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10003 | I    | Car must be prepared - battery contactor 18S1 closed |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10004 | I    | Circuit Breakers                                     |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10005 | A    | Close Circuit Breaker 54Q1                           |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10006 | A    | Close Circuit Breaker 54Q2                           |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10007 | A    | Close Circuit Breaker 54Q3                           |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10008 | A    | Close Circuit Breaker 54Q10                          |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10009 | A    | Close Circuit Breaker 54Q11                          |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10010 | A    | Close Circuit Breaker 54Q13                          |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10011 | A    | Close Circuit Breaker 54Q15                          |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10012 | A    | Close Circuit Breaker 55Q1                           |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10013 | A    | Close Circuit Breaker 55Q2                           |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10014 | A    | Close Circuit Breaker 55Q3                           |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10015 | I    | Train Router Switch 'TRS'                            |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10016 | R    | TRS1 is ON   |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |

|       |   |  |  |    |    |  |     |
|-------|---|--|--|----|----|--|-----|
| 10017 | I | Power Supply to UMC Rack   |  | OK |    | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10018 | R | All cards on the UMC Rack are ON - PS, EBM, DPC-IOC, NVR, Media Server         |  | OK |    | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10019 | I | Driver Control Panel   |  | OK |    | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10020 | R | Driver Control Panel is ON   |  | OK |    | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10021 | I | Ethernet Switch 'CRS1'   |  | OK |    | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10022 | R | CRS1 is ON   |  | OK |    | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10023 | I | DPAL-1   |  | OK |    | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10024 | R | DPAL-1 is ON   |  | OK |    | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10025 | I | DPAL-2   |  | OK |    | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10026 | R | DPAL-2 is ON   |  | OK |    | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10027 | I | Impedance of Loudspeaker   |  | OK |    | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10028 | I | Saloon Speakers Commanded by DPAL-1  |  | OK |    | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10029 | A | Measure the impedance on connector '54XP1_X4' between pins: z32(+) and z30 (-) |  | OK |    | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10030 | R | ImpedanceResult Max : x <= 24 ()   |  | OK | 23 | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10031 | I | Saloon Speakers Commanded by DPAL-2  |  | OK |    | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10032 | A | Measure the impedance on connector '54XP2_X4' between pins: z32(+) and z30 (-) |  | OK |    | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10033 | R | ImpedanceResult Max : x <= 32 ()   |  | OK | 30 | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10034 | I | Front Display 'FRT1'   |  | OK |    | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |

|       |   |  |  |    |  |  |     |
|-------|---|--|--|----|--|--|-----|
| 10035 | R | The PWR (power) LED is "ON" on the Front Display FRT1    |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10036 | I | Lateral Display 'LAT1'                                   |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10037 | R | The PWR (power) LED is "ON" on the Lateral Display LAT1  |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10038 | I | Lateral Display 'LAT2'                                   |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10039 | R | The PWR (power) LED is "ON" on the Lateral Display LAT2  |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10040 | I | Interior Display 'INT1'                                  |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10041 | R | The PWR (power) LED is "ON" on the Interior Display INT1 |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10042 | I | Interior Display 'INT2'                                  |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10043 | R | The PWR (power) LED is "ON" on the Interior Display INT2 |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10044 | I | END OF TEST  |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|



Serial Tests Report  
TS317 – TC1 – VFT  
RTR Vehicle Functional Static Testing Report

Document Reference  
GIB0000008971  
Version: A0

Emission date  
15/01/2026

## Section 7 – Dead Man

---

### 7.1 Instructions list

### 7.1.1 Dead Man

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

| N°    | Type | Instruction   | File | Result status | Result value | Operator                                 | Vehicle |
|-------|------|---|------|---------------|--------------|--|---------|
| 10001 | I    | Dead Man (SPP=60)   |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10002 | I    | Initial conditions  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10003 | I    | TC car is in service and cabin should be active   |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10004 | A    | Position the "Dead Man Override" switch to "Normal" position.                               |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10005 | I    | Circuit Breakers  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10006 | A    | Close Circuit Breaker 60Q1  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10007 | A    | Close Circuit Breaker 30Q3  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10008 | I    | Buzzer 60W1   |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10009 | A    | Force [TT]<br>(MPU1)lo_dsd_tc1dmbuzzerr1 = 1.0  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10010 | R    | The buzzer 60W1 is ON.<br>A noise coming from the buzzer can be clearly heard in the cabin. |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10011 | A    | Release [TT]<br>(MPU1)lo_dsd_tc1dmbuzzerr1  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10012 | R    | The buzzer 60W1 is OFF.<br>No noise coming from buzzer.                                     |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10013 | A    | Force [TT]<br>(MPU1)lo_dsd_tc1dmbuzzerr2 = 1.0  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10014 | R    | The buzzer 60W1 is ON.<br>A noise coming from the buzzer can be clearly heard in the cabin. |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10015 | A    | Release [TT]<br>(MPU1)lo_dsd_tc1dmbuzzerr2  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10016 | R    | The buzzer 60W1 is OFF.<br>No noise coming from buzzer.                                     |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |

|       |   |  |   |    |   |  |     |
|-------|---|--|---|----|---|--|-----|
| 10017 | I | Dead Man Lamp  |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10018 | A | Position the Running Direction switch to "FORWARD"                   |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10019 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1ebdeadmanrelayr1 = 1.0 |   | OK | 1 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10020 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1ebdeadmanrelayr2 = 1.0 |   | OK | 1 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10021 | A | Position the Running Direction switch 30A1.S1 in "Neutral"           |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10022 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1ebdeadmanrelayr1 = 0.0 |   | OK | 0 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10023 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1ebdeadmanrelayr2 = 0.0 |   | OK | 0 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10024 | R | On the alarm module, check the Dead man deactivated symbol is OFF.   |  | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10025 | A | Force [TT]<br>(MPU1)lo_dsd_tc1deadmanlampr1 = 1.0                    |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10026 | R | On the alarm module, check the Dead man deactivated symbol is ON     |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10027 | A | Release [TT]<br>(MPU1)lo_dsd_tc1deadmanlampr1                        |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10028 | R | On the alarm module, check the Dead man deactivated symbol is OFF.   |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10029 | A | Force [TT]<br>(MPU1)lo_dsd_tc1deadmanlampr2 = 1.0                    |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10030 | R | On the alarm module, check the Dead man deactivated symbol is ON     |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10031 | A | Release [TT]<br>(MPU1)lo_dsd_tc1deadmanlampr2                        |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10032 | R | On the alarm module, check the Dead man deactivated symbol is OFF.   |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10033 | I | DSD function   |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10034 | A | Position the Running Direction switch to "FORWARD"                   |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |

|       |   |   |   |    |   |  |     |
|-------|---|---|---|----|---|--|-----|
| 10035 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1ebdeadmanrelay1 = 0.0           |   | OK | 0 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10036 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1ebdeadmanrelay2 = 0.0           |   | OK | 0 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10037 | A | Timer 5.0 S   |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10038 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1ebdeadmanrelay1 = 1.0           |   | OK | 1 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10039 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1ebdeadmanrelay2 = 1.0           |   | OK | 1 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10040 | R | On alarm module, check the Dead Man deactivated symbol is ON                  |  | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10041 | A | Press and hold the dead man button 60S3 on the driver desk                    |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10042 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1ebdeadmanrelay1 = 0.0           |   | OK | 0 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10043 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1deadmanr1 = 1.0                 |   | OK | 1 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10044 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1deadmanr2 = 1.0                 |   | OK | 1 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10045 | R | On alarm module, check the Dead man deactivated symbol is OFF.                |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10046 | A | Release the dead man button 60S3  |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10047 | A | Timer 5.0 S   |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10048 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1ebdeadmanrelay1 = 1.0           |   | OK | 1 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10049 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1deadmanr1 = 0.0                 |   | OK | 0 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10050 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1deadmanr2 = 0.0                 |   | OK | 0 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10051 | R | On alarm module, check the Dead man deactivated symbol is ON                  |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10052 | A | Press and hold the dead man switch, which is positioned on master controller. |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |

|       |   |  |   |    |   |  |     |
|-------|---|--|---|----|---|--|-----|
| 10053 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1ebdeadmanrelayr1 = 0.0   |   | OK | 0 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10054 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1deadmanr1 = 1.0  |   | OK | 1 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10055 | R | On the alarm module, check the Dead man deactivated symbol is OFF.   |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10056 | A | Release the dead man button on the master controller   |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10057 | A | Timer 5.0 S  |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10058 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1ebdeadmanrelayr1 = 1.0   |   | OK | 1 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10059 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1deadmanr1 = 0.0  |   | OK | 0 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10060 | R | On alarm module, check the Dead Man deactivated symbol is ON   |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10061 | I | DSD Override indication  |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10062 | R | On the alarm module, verify that the Dead Man override (60H2) symbol is OFF.   |  | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10063 | A | Press and hold dead man button 60S3  |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10064 | A | Position the "Dead Man Override" switch to "Override" position (do not release the dead man device actuated in the previous step). |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10065 | R | On the alarm module, verify that the Dead Man override (60H2) symbol is ON   |  | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10066 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1ebdeadmanrelayr1 = 1.0   |   | OK | 1 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10067 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1deadmanoverridr1 = 1.0   |   | OK | 1 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10068 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1deadmanoverridr2 = 1.0   |   | OK | 1 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10069 | A | Release the dead man button  |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10070 | A | Position the "Dead Man Override" switch to "Normal" position.  |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |

|       |   |   |   |    |   |  |     |
|-------|---|---|---|----|---|--|-----|
| 10071 | R | On the alarm module, verify that the Dead Man override (60H2) symbol is OFF |  | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10072 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1deadmanoverridr1 = 0.0        |   | OK | 0 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10073 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1deadmanoverridr2 = 0.0        |   | OK | 0 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10074 | R | On alarm module, check the Dead man deactivated (60H1) symbol is ON         |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10075 | A | Position the Running Direction switch 30A1.S1 in "Neutral"                  |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10076 | R | On alarm module, check the Dead man deactivated symbol is OFF               |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10077 | I | END OF TEST   |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|

## Section 8 – EXTERNAL SIGNALLING

---

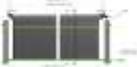
### 8.1 Instructions list

### 8.1.1 External Signalling

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

| N°    | Type | Instruction  | File  | Result status | Result value | Operator                                 | Vehicle |
|-------|------|--|---|---------------|--------------|--|---------|
| 10001 | I    | External Signalling (SPP=70)                                 |   | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10002 | I    | Use the image below for reference throughout the procedure   |  | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10003 | I    | Initial Conditions   |   | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10004 | A    | Turn IES switch on Test bench to ON position                 |   | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10005 | I    | Shore Supply is connected to the car                         |   | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10006 | I    | TC1 car prepared and cab active                              |   | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10007 | A    | Check if the mirrors do not have cracks or is not chipped.   |   | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10008 | I    | Circuit Breakers   |   | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10009 | A    | Close Circuit Breaker 70Q1                                   |   | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10010 | A    | Close Circuit Breaker 70Q2                                   |   | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10011 | A    | Close Circuit Breaker 70Q3                                   |   | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10012 | A    | Close Circuit Breaker 72Q4                                   |   | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10013 | A    | Close Circuit Breaker 75Q1                                   |   | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10014 | A    | Close Circuit Breaker 72Q2                                   |   | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10015 | I    | Left Platform and Head Lights                                |   | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10016 | A    | Check that the following external lights on the LEFT are ON: |   | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |

|       |   |   |  |    |  |  |     |
|-------|---|---|--|----|--|--|-----|
| 10017 | R | Platform lights 70H12 white LEDs                                  |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10018 | R | Platform lights 70H5 while light                                  |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10019 | R | Head lights 70H3 white light                                      |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10020 | I | Right Platform and Head Lights                                    |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10021 | A | Check that the following external lights on the RIGHT are on:     |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10022 | R | Platform lights 70H11 white LEDs                                  |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10023 | R | Platform lights 70H6 while light                                  |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10024 | R | Head lights 70H4 white light                                      |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10025 | I | Back Lights   |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10026 | A | Turnkey 30A1.S1 to Non-Active Cabin Position                      |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10027 | A | Reset Circuit Breaker 20Q2 (On and Off)                           |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10028 | R | All white lights, on the LEFT and Right side are OFF              |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10029 | R | Left red light 70H7 is ON   |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10030 | R | Right red light 70H9 is ON  |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10031 | R | Red LEDs on Platform light 70H11 are ON                           |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10032 | I | Main lights and dimming   |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10033 | A | Switch the External lights switch 70S2 to "Bright Light" position |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10034 | R | The External lights switch 70S2 lamp is ON                        |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |

|       |   |   |   |    |   |   |     |
|-------|---|---|---|----|---|---|-----|
| 10035 | R | Read Defined Variable [TT]<br>(MPU1)li_sgl_tc1headlight1 = 0.0  |   | OK | 0 | Sthabile Dlamini<br>418538<br>08.12.2025    | TC1 |
| 10036 | R | Read Defined Variable [TT]<br>(MPU1)li_sgl_tc1headlight2 = 0.0  |   | OK | 0 | Sthabile Dlamini<br>418538<br>08.12.2025    | TC1 |
| 10037 | R | The headlights 70H3 and 70H4 are in bright light configuration  |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025    | TC1 |
| 10038 | A | Switch the External lights switch 70S2 to "Normal" or "Dimmed" position   |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025    | TC1 |
| 10039 | R | Read Defined Variable [TT]<br>(MPU1)li_sgl_tc1headlight1 = 1.0  |   | OK | 1 | Sthabile Dlamini<br>418538<br>08.12.2025    | TC1 |
| 10040 | R | Read Defined Variable [TT]<br>(MPU1)li_sgl_tc1headlight2 = 1.0  |   | OK | 1 | Sthabile Dlamini<br>418538<br>08.12.2025    | TC1 |
| 10041 | R | The External lights switch lamp 70S2 is OFF   |   | OK |   | Nhlakanipho Masondo<br>447208<br>14.01.2026 | TC1 |
| 10042 | R | The headlights 70H3 and 70H4 are in normal/dimmed configuration   |   | OK |   | Nhlakanipho Masondo<br>447208<br>14.01.2026 | TC1 |
| 10043 | I | Sunshade adjustment settings  |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025    | TC1 |
| 10044 | I | To set the limits, it must be done using the appropriate tool (square torx/ screwdriver). The white nut moves the limit down and the red one moves up.        |  | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025    | TC1 |
| 10045 | A | Look at the picture below for upper limit and the lower limit. The yellow line represents the upper limit, and the green one represents the lower limit.      |  | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025    | TC1 |
| 10046 | A | Rotate the red nut with a square torx either clockwise or ant-clockwise until the upper limit is set to the desired position as shown on the picture above.   |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025    | TC1 |
| 10047 | A | Turn the Sunshade Control Switch 72S3 to position 1 (Up) and maintain it  |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025    | TC1 |
| 10048 | R | The sunshade stops at the upper position that was set above.  |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025    | TC1 |
| 10049 | A | Rotate the white nut with a square torx either clockwise or anticlockwise until the lower limit is set to the desired position as shown on the picture above. |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025    | TC1 |
| 10050 | A | Turn the Sunshade Control Switch 72S3 to position 2 (down) and maintain it  |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025    | TC1 |
| 10051 | R | The sunshade stops at the lower position that was set above.  |   | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025    | TC1 |

|       |   |  |  |    |  |  |     |
|-------|---|--|--|----|--|--|-----|
| 10052 | I | Coupled train  |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10053 | A | Turnkey 30A1.S1 to Active cabin Position               |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10054 | R | All white lights are "ON", and red lights are OFF.     |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10055 | I | Coupling Relay Train Line<br>Dev1/62 = Coupler Pin 103 |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10056 | A | Force [NI] Dev1/62 = 1                                 |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10057 | R | All External lights are "OFF".                         |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10058 | I | Coupling Relay Train Line<br>Dev1/62 = Coupler Pin 103 |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10059 | R | All White lights are "NO", and red Lights are OFF.     |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10060 | A | Force [NI] Dev1/62 = 0                                 |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10061 | I | END OF TEST  |  | OK |  | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |

## 8.1.2 Warning Hooters

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

| N°    | Type | Instruction   | File | Result status | Result value | Operator                             | Vehicle |
|-------|------|---|------|---------------|--------------|--------------------------------------|---------|
| 10001 | I    | Warning Hooters SPP=071   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10002 | I    | Initial Conditions  |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10003 | I    | The air in the main pipe should be at least 4 bars                                    |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10004 | I    | For this test wear earplugs.  |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10005 | I    | Start of Test   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10006 | R    | The pressure setting of point H1.12 must be 4 bar<br>Result Min/Max : 4<= x<= 8 (Bar) |      | OK            | 5            | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10007 | R    | Read Defined Variable [TT]<br>(MPU1)Li_SGL_Tc1WarningHootersR1 = 1.0                  |      | OK            | 1            | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10008 | R    | Read Defined Variable [TT]<br>(MPU1)Li_SGL_Tc1WarningHootersR2 = 1.0                  |      | OK            | 1            | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10009 | A    | Press the foot pedal 57A13.S1 to actuate the horn and maintain it                     |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10010 | R    | Read Defined Variable [TT]<br>(MPU1)Li_SGL_Tc1WarningHootersR1 = 0.0                  |      | OK            | 0            | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10011 | R    | Read Defined Variable [TT]<br>(MPU1)Li_SGL_Tc1WarningHootersR2 = 0.0                  |      | OK            | 0            | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10012 | I    | The pressure setting of point H1.12 remain at 4 bar                                   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10013 | A    | Release the foot heater pedal   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10014 | R    | Horn sound can be heard at 100m distance from the cab                                 |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10015 | A    | Release the foot heater pedal   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10016 | R    | Horn sound stops  |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |

|       |   |  |    |   |                                      |     |
|-------|---|--|----|---|--------------------------------------|-----|
| 10017 | R | Read Defined Variable [TT]<br>(MPU1)Li_SGL_Tc1WarningHootersR1 = 1.0                 | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10018 | R | Read Defined Variable [TT]<br>(MPU1)Li_SGL_Tc1WarningHootersR2 = 1.0                 | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10019 | A | Actuate the low pitch horn by pressing down the valve H1.3.1 under the driver's desk | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10020 | R | The horn sound can be heard in low pitch   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10021 | A | Release the valve H1.3.1   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10022 | R | Horn sound stops   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10023 | I | Electric Horn Test   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10024 | A | Press the button 71S1 and maintain it  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10025 | R | The sound of the whistle can be heard at least 20m from the cab                      | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10026 | R | Read Defined Variable [TT]<br>(MPU1)Li_SGL_Tc1WarningWhistleR1 = 1.0                 | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10027 | R | Read Defined Variable [TT]<br>(MPU1)Li_SGL_Tc1WarningWhistleR2 = 1.0                 | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10028 | A | Release the button 71S1  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10029 | R | Whistle sound stops  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10030 | R | Read Defined Variable [TT]<br>(MPU1)Li_SGL_Tc1WarningWhistleR1 = 0.0                 | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10031 | R | Read Defined Variable [TT]<br>(MPU1)Li_SGL_Tc1WarningWhistleR2 = 0.0                 | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10032 | I | END OF TEST  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|

## Section 9 – Rescue Mode and Emergency Disconnection

---

### 9.1 Instructions list

### 9.1.1 Rescue Mode and Emergency Disconnection

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

| N°    | Type | Instruction   | File | Result status | Result value | Operator                             | Vehicle |
|-------|------|---|------|---------------|--------------|--------------------------------------|---------|
| 10001 | I    | Rescue Mode and Emergency Disconnection (SPP=27)  |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10002 | I    | Initial Conditions  |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10003 | I    | Car is powered OFF  |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10004 | I    | Backup Mode   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10005 | A    | Turn Switch '27S1' (Backup Mode Position) to 'BACKUP Position   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10006 | A    | Turn Driver's Master Key 30A1.S1 to Active Cabin Position   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10007 | A    | Turn Battery contactor Switch 18S1 to ON position   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10008 | I    | Backup Mode Train Lines<br>Dev5/33 = END2 90XP15 pin 23<br>Dev2/67 = Coupler pin 007<br>Dev2/25 = Coupler pin 107 |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10009 | R    | Read Defined Variable [NI] Dev5/33 = 1.0  |      | OK            | 1            | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10010 | R    | Read Defined Variable [NI] Dev2/25 = 1.0  |      | OK            | 1            | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10011 | R    | Read Defined Variable [NI] Dev2/67 = 1.0  |      | OK            | 1            | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10012 | R    | Relay 27K1 is energised   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10013 | R    | Relay 27K2 is De-energised  |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10014 | A    | Timer 30.0 S  |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10015 | R    | Relay 27K2 is De-energised  |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |

|       |   |   |   |    |   |                                      |     |
|-------|---|---|---|----|---|--------------------------------------|-----|
| 10016 | A | Timer 30.0 S  |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10017 | R | Relay 27K2 is energised   |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10018 | I | Check that the Backup mode LED 27H2 is ON   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10019 | A | Turn Driver's Master Key 30A1.S1 to Non-Active Cabin Position   |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10020 | I | Backup Mode Train Lines<br>Dev5/33 = END2 90XP15 pin 23<br>Dev2/67 = Coupler pin 007<br>Dev2/25 = Coupler pin 107 |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10021 | R | Read Defined Variable [NI] Dev5/33 = 0.0  |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10022 | R | Read Defined Variable [NI] Dev2/25 = 0.0  |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10023 | R | Read Defined Variable [NI] Dev2/67 = 0.0  |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10024 | R | Relay 27K1 is De-energised  |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10025 | R | Relay 27K2 is De-energised  |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10026 | A | Turn Driver's Master Key 30A1.S1 to Active Cabin Position   |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10027 | A | Turn Battery contactor Switch 18S1 to OFF position  |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10028 | I | Turn ERTMS Isolation Switch 62S1 to Normal position   |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10029 | A | Turn Switch '27S1' (Backup Mode Position) to Normal Position  |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10030 | A | Turn Battery contactor Switch 18S1 to ON position   |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10031 | A | Check continuity between point 20 on Backup State Switch 27S1 and ground  |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10032 | R | The points are continuous   |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10033 | I | Backup Mode Train Line<br>Dev5/33 = END2 90XP15 pin 23  |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |   |    |   |                                      |     |
|-------|---|---|----|---|--------------------------------------|-----|
| 10034 | R | Read Defined Variable [NI] Dev5/33 = 0.0  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10035 | I | Emergency Disconnection   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10036 | I | Emergency Disconnection Train Lines<br>Dev5/34 = END2 90XP15 pin 24<br>Dev2/79 = Coupler pin 019<br>Dev2/75 = Coupler pin 119 | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10037 | R | Read Defined Variable [NI] Dev5/34 = 1.0  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10038 | R | Read Defined Variable [NI] Dev2/79 = 1.0  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10039 | R | Read Defined Variable [NI] Dev2/75 = 1.0  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10040 | I | Emergency Brake ERTMS 1 Train Line<br>Dev4/88 = END2 90XP14 pin 18  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10041 | A | Force [NI] Dev4/88 = 1.0  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10042 | I | Emergency Disconnection Train Lines<br>Dev5/34 = END2 90XP15 pin 24<br>Dev2/79 = Coupler pin 019<br>Dev2/75 = Coupler pin 119 | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10043 | R | Read Defined Variable [NI] Dev5/34 = 1.0  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10044 | R | Read Defined Variable [NI] Dev2/79 = 1.0  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10045 | R | Read Defined Variable [NI] Dev2/75 = 1.0  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10046 | I | Emergency Brake ERTMS 2 Train Line<br>Dev4/80 = END2 90XP14 pin 20  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10047 | A | Force [NI] Dev4/80 = 1.0  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10048 | I | Emergency Disconnection Train Lines<br>Dev5/34 = END2 90XP15 pin 24<br>Dev2/79 = Coupler pin 019<br>Dev2/75 = Coupler pin 119 | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10049 | R | Read Defined Variable [NI] Dev5/34 = 0.0  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10050 | R | Read Defined Variable [NI] Dev2/79 = 0.0  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10051 | R | Read Defined Variable [NI] Dev2/75 = 0.0  | OK | 0 | Carol Gumede<br>425280               | TC1 |

|       |   |   |  |    |   |                                      |     |
|-------|---|---|--|----|---|--------------------------------------|-----|
|       |   |   |  |    |   | 08.12.2025                           |     |
| 10052 | I | Emergency Brake ERTMS 1 Train Line<br>Dev4/88 = END2 90XP14 pin 18  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10053 | A | Force [NI] Dev4/88 = 0.0  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10054 | I | Emergency Brake ERTMS 2 Train Line<br>Dev4/80 = END2 90XP14 pin 20  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10055 | A | Force [NI] Dev4/80 = 0.0  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10056 | I | Emergency Disconnection Train Lines<br>Dev5/34 = END2 90XP15 pin 24 |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10057 | R | Read Defined Variable [NI] Dev5/34 = 1.0                            |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10058 | I | V<3km/h Train Line<br>Dev4/39 = END2 90XP15 pin 29                  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10059 | A | Force [NI] Dev4/39 = 1.0  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10060 | I | Emergency Disconnection Train Lines<br>Dev5/34 = END2 90XP15 pin 24 |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10061 | R | Read Defined Variable [NI] Dev5/34 = 0.0                            |  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10062 | I | V<3km/h Train Line<br>Dev4/39 = END2 90XP15 pin 29                  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10063 | A | Force [NI] Dev4/39 = 0.0  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10064 | I | Emergency Disconnection Train Lines<br>Dev5/34 = END2 90XP15 pin 24 |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10065 | R | Read Defined Variable [NI] Dev5/34 = 1.0                            |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10066 | A | Place ERTMS Isolation Switch in<br>"Isolation" position             |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10067 | R | Read Defined Variable [TT]<br>(MPU1)li_erm_tc1noemerdiscr1 = 1.0    |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10068 | R | Read Defined Variable [TT]<br>(MPU1)li_erm_tc1noemerdiscr2 = 1.0    |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10069 | I | Emergency Disconnection Train Lines<br>Dev5/34 = END2 90XP15 pin 24 |  | OK |   | Carol Gumede<br>425280               | TC1 |

|       |   |   |  |    |   |                                      |     |
|-------|---|---|--|----|---|--------------------------------------|-----|
|       |   |   |  |    |   | 08.12.2025                           |     |
| 10070 | R | Read Defined Variable [NI] Dev5/34 = 0.0                            |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10071 | A | Push the blue "Emergency Pantograph Down" pushbutton                |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10072 | R | Read Defined Variable [TT]<br>(MPU1)li_erm_tc1noemerdiscr1 = 0.0    |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10073 | R | Read Defined Variable [TT]<br>(MPU1)li_erm_tc1noemerdiscr2 = 0.0    |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10074 | I | Emergency Disconnection Train Lines<br>Dev5/34 = END2 90XP15 pin 24 |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10075 | R | Read Defined Variable [NI] Dev5/34 = 1.0                            |  | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10076 | A | Release the "Emergency Pantograph Down" pushbutton                  |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10077 | R | Read Defined Variable [TT]<br>(MPU1)li_erm_tc1noemerdiscr1 = 1.0    |  | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10078 | R | Read Defined Variable [TT]<br>(MPU1)li_erm_tc1noemerdiscr2 = 1.0    |  | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10079 | I | Emergency Disconnection Train Lines<br>Dev5/34 = END2 90XP15 pin 24 |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10080 | R | Read Defined Variable [NI] Dev5/34 = 0.0                            |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10081 | I | END OF TEST   |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|

## Section 10 – Driver Desk Illumination

---

### 10.1 Instructions list

### 10.1.1 Driver Desk Illumination

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

| N°    | Type | Instruction   | File | Result status | Result value | Operator                                 | Vehicle |
|-------|------|---|------|---------------|--------------|--|---------|
| 10001 | I    | Driver Desk Illumination (SPP=084)  |      | OK            |              | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1     |
| 10002 | I    | Initial Conditions:   |      | OK            |              | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1     |
| 10003 | I    | Car is prepared and cab is active   |      | OK            |              | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1     |
| 10004 | A    | Close Circuit Breaker 81Q1  |      | OK            |              | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1     |
| 10005 | I    | Indicator Modules   |      | OK            |              | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1     |
| 10006 | R    | Check that the Line Indicator Module 81A1 is ON                             |      | OK            |              | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1     |
| 10007 | R    | Check that the Pressure gauge 84P1 is ON                                    |      | OK            |              | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1     |
| 10008 | R    | Check that the light of the Speed Indicator 61A2 is ON                      |      | OK            |              | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1     |
| 10009 | I    | Lamp Test   |      | OK            |              | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1     |
| 10010 | A    | Press and hold the Lamp Test pushbutton 84S1                                |      | OK            |              | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1     |
| 10011 | R    | Check that the White Lamp Test pushbutton Lamp 84S1 is ON                   |      | OK            |              | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1     |
| 10012 | R    | Check that the White Automatic Start pushbutton lamp 20S1 is ON             |      | OK            |              | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1     |
| 10013 | R    | Check that the orange Standby State pushbutton lamp 20S2 is ON              |      | OK            |              | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1     |
| 10014 | R    | Check that the White Pantograph Up/Down pushbutton lamp 21S1 is ON          |      | OK            |              | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1     |
| 10015 | R    | Check that the White Close Main Circuit Breaker pushbutton lamp 22S11 is ON |      | OK            |              | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1     |
| 10016 | R    | Check that the Red Open Main Circuit Breaker pushbutton lamp 22S12 is ON    |      | OK            |              | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1     |

|       |   |  |   |    |  |  |     |
|-------|---|--|---|----|--|--|-----|
| 10017 | R | Check that the White Reduced Power lamp 30S2 is ON                               |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10018 | R | Check that the Red Override Passenger Emergency Alarm pushbutton lamp 44S5 is ON |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10019 | R | Check that the Yellow Door Auth Left pushbutton lamp 50S5 is ON                  |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10020 | R | Check that the Yellow Door Auth Right pushbutton lamp 50S6 is ON                 |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10021 | R | Check that the White Door Open Left pushbutton lamp 50S1 is ON                   |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10022 | R | Check that the White Door Open Right pushbutton lamp 50S2 is ON                  |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10023 | R | Check that the Blue Door Close Left pushbutton lamp 50S3 is ON                   |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10024 | R | Check that the Blue Door Close Right pushbutton lamp 50S4 is ON                  |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10025 | R | Check that the White Cab Lighting Left Side pushbutton lamp 52S3 is ON           |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10026 | R | Check that the White Cab Lighting Right Side pushbutton lamp 52S4 is ON          |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10027 | R | Check that the White Foot Heater pushbutton lamp 57S3 is ON                      |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10028 | R | Check that the Red Front CCTV Event pushbutton lamp 66S1 is ON                   |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10029 | R | Check that the White Windscreen Demister pushbutton lamp 72S2 is ON              |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10030 | I | Use the following image to verify the train status LEDs 84A1                     |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10031 | R | Check that 31H1 is ON  |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10032 | R | Check that 60H1 is ON  |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10033 | R | Check that 18H1 is ON  |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10034 | R | Check that 44H4 is ON  |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |

|       |   |   |   |    |  |  |     |
|-------|---|---|---|----|--|--|-----|
| 10035 | R | Check that 44H1 is ON   |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10036 | R | Check that 51H1 is ON   |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10037 | R | Check that 45H2 is ON   |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10038 | R | Check that 40H2 is ON   |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10039 | R | Check that 40H1 is ON   |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10040 | R | Check that 41H1 is ON   |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10041 | R | Check that 60H2 is ON   |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10042 | R | Check that 27H2 is ON   |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10043 | R | Check that 62H1 is ON   |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10044 | R | Check that 44H5 is ON   |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10045 | R | Check that 31H2 is ON   |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10046 | R | Check that 67H1 is ON   |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10047 | A | Release the Lamp Test pushbutton 84S1   |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10048 | I | Dimmer Switch Adjustment  |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10049 | I | Open the driver desk plate on which the dimmer switch 84S2 is located to access the bottom of the dimmer switch. Use the image below to identify the trimmer screw which is used to adjust the limits of the dimmer       |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10050 | A | Adjust the trimmer (potentiometer) to increase the lower limit of the dimmer- allowing the cab lights to dim to a minimum lighting that is still visible and not zero. Then, reassemble the driver desk plate in location |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10051 | A | Press the Lamp Test pushbutton 84S1 and maintain it   |   | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |

|       |   |  |  |    |  |  |     |
|-------|---|--|--|----|--|--|-----|
| 10052 | A | While pressing 84S1, turn the dimmer switch and observe that the brightness of all the following lamps increases and decreases accordingly |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10053 | R | Check that 61A2 (Speed Indicator) can be dimmed  |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10054 | R | Check that the Line Indicator Module 81A1 can be dimmed  |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10055 | R | Check that the Pressure gauge 84P1 can be dimmed   |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10056 | R | Check that the Train Status LEDs 84A1 can be dimmed  |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10057 | R | Check that 84S1 can be dimmed  |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10058 | R | Check that 20S1 can be dimmed  |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10059 | R | Check that 20S2 can be dimmed  |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10060 | R | Check that 21S1 can be dimmed  |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10061 | R | Check that 22S11 can be dimmed   |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10062 | R | Check that 22S12 can be dimmed   |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10063 | R | Check that 30S2 can be dimmed  |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10064 | R | Check that 44S5 can be dimmed  |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10065 | R | Check that 50S5 can be dimmed  |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10066 | R | Check that 50S6 can be dimmed  |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10067 | R | Check that 50S1 can be dimmed  |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10068 | R | Check that 50S2 can be dimmed  |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10069 | R | Check that 50S3 can be dimmed  |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |

|       |   |                               |  |    |  |  |     |
|-------|---|-------------------------------|--|----|--|--|-----|
| 10070 | R | Check that 50S4 can be dimmed |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10071 | R | Check that 52S3 can be dimmed |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10072 | R | Check that 52S4 can be dimmed |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10073 | R | Check that 57S3 can be dimmed |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10074 | R | Check that 66S1 can be dimmed |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10075 | R | Check that 67S1 can be dimmed |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10076 | R | Check that 72S2 can be dimmed |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |
| 10077 | I | END OF TEST                   |  | OK |  | Dilikani Ngubane<br>526515<br>08.12.2025 | TC1 |



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|

## Section 11 – Emergency Brake

---

### 11.1 Instructions list

### 11.1.1 Emergency Brake

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

| N°    | Type | Instruction   | File  | Result status | Result value | Operator                             | Vehicle |
|-------|------|---|---|---------------|--------------|--------------------------------------|---------|
| 10001 | I    | Emergency Brake (SPP=044)   |   | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10002 | I    | Initial Conditions  |   | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10003 | I    | No air connected to the vehicle OR main pipe pressure below 6Bar  |   | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10004 | I    | No PEAs are activated   |   | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10005 | I    | Battery Contactor Switch 18S1 in ON position  |   | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10006 | A    | Turn Driver's Master Key 30A1.S1 to Non-Active Cabin Position   |   | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10007 | I    | Direction Switch 30A1.S2 in "Neutral" position  |   | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10008 | A    | Open and Close (Reset) Circuit breaker 20Q2   |   | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10009 | I    | Back Up mode switch 27S1 in Normal position   |   | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10010 | I    | Visual Inspection   |   | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10011 | A    | Physically and visually inspect all the Disk Break Units (DBU) and brake pads, to ensure they are securely fitted |  | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10012 | R    | All the brake DBUs are correctly installed, and all the brake pads are correctly installed and locked             |   | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10013 | A    | Check the piping installation   |   | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10014 | R    | All the pipes are installed on the vehicle  |   | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10015 | A    | Check all the Passenger Emergency Alarm handles, and ensure they are connected to their respective connectors     |   | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10016 | R    | All the PEAs are installed and connected  |   | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |

|       |   |  |  |    |   |                                      |     |
|-------|---|--|--|----|---|--------------------------------------|-----|
| 10017 | I | Circuit Breakers   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10018 | A | Close Circuit Breaker 44Q1   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10019 | A | Close Circuit Breaker 44Q2   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10020 | A | Close Circuit Breaker 44Q3   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10021 | A | Close Circuit Breaker 44Q4   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10022 | I | Emergency Brake Loop   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10023 | I | Emergency Brake Loop Train Line<br>Dev2/3 = coupler pin 005<br>Dev2/4 = coupler pin 105<br>Dev5/5 = END2 90XP14 pin 8  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10024 | R | Read Defined Variable [NI] Dev2/3 = 1.0  |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10025 | R | Read Defined Variable [NI] Dev2/4 = 1.0  |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10026 | R | Read Defined Variable [NI] Dev5/5 = 0.0  |  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10027 | A | Close the Isolation cock to the coupler F2.1/1; and connect the air supply to the vehicle coupling flexible hose F3/1. Turn on the air supply and allow the pressure to reach 7Bar. Check the pressure on test point C 1.1 test point: B RTP |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10028 | R | The pressure on test point C 1.1 >=7 Bar   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10029 | I | Emergency Brake Loop Train Line<br>Dev5/5 = END2 90XP14 pin 8  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10030 | R | Read Defined Variable [NI] Dev5/5 = 1.0  |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10031 | A | Push the Emergency Brake Mushroom 44S1   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10032 | I | Emergency Brake Loop Train Line<br>Dev2/4 = coupler pin 105<br>Dev5/5 = END2 90XP14 pin 8  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10033 | R | Read Defined Variable [NI] Dev2/4 = 1.0  |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |   |  |    |   |                                      |     |
|-------|---|---|--|----|---|--------------------------------------|-----|
| 10034 | R | Read Defined Variable [NI] Dev5/5 = 0.0   |  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10035 | A | Release the Emergency Brake Mushroom<br>44S1  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10036 | I | Emergency Brake Loop Train Line<br>Dev5/5 = END2 90XP14 pin 8   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10037 | R | Read Defined Variable [NI] Dev5/5 = 1.0   |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10038 | I | Coupling  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10039 | I | Coupling Relay Train Line<br>Dev1/62 = coupler pin 103  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10040 | A | Force [NI] Dev1/62 = 1.0  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10041 | R | Read Defined Variable [TT]<br>(MPU1)Li_CPM_Tc1CoupDetec1 = 1.0  |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10042 | I | Emergency Brake Loop Train Line<br>Dev2/3 = coupler pin 005<br>Dev2/4 = coupler pin 105<br>Dev5/5 = END2 90XP14 pin 8 |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10043 | R | Read Defined Variable [NI] Dev2/3 = 0.0   |  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10044 | R | Read Defined Variable [NI] Dev2/4 = 0.0   |  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10045 | R | Read Defined Variable [NI] Dev5/5 = 0.0   |  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10046 | I | Coupling Relay Train Line<br>Dev1/62 = coupler pin 103  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10047 | A | Force [NI] Dev1/62 = 0.0  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10048 | R | Read Defined Variable [TT]<br>(MPU1)Li_CPM_Tc1CoupDetec1 = 0.0  |  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10049 | I | Emergency Brake Loop Train Line<br>Dev2/4 = coupler pin 105<br>Dev5/5 = END2 90XP14 pin 8                             |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10050 | R | Read Defined Variable [NI] Dev2/4 = 1.0   |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10051 | R | Read Defined Variable [NI] Dev5/5 = 1.0   |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |  |   |    |   |                                      |     |
|-------|---|--|---|----|---|--------------------------------------|-----|
| 10052 | I | Loop Override  |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10053 | A | Turn Driver's Master Key 30A1.S1 to Active Cabin Position                          |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10054 | A | Force [TT] (BCU2)li_mp_ps_ok = 1.0   |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10055 | R | Read Defined Variable [TT] (MPU1)li_ubk_tc1ebloopoverrider1 = 1.0                  |   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10056 | R | Read Defined Variable [TT] (MPU1)li_ubk_tc1ebloopoverrider2 = 1.0                  |   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10057 | A | Turn the Emergency Braking Loop Override Switch 44S2 to "Override/Bypass" position |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10058 | R | Check that the Emergency Braking Loop Override Lamp 44H5 is ON                     |    | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10059 | I | Emergency Brake Loop Override Train Line Dev5/6 = END2 90XP14 pin 9                |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10060 | R | Read Defined Variable [NI] Dev5/6 = 1.0  |   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10061 | R | Read Defined Variable [TT] (MPU1)li_ubk_tc1ebloopoverrider1 = 0.0                  |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10062 | R | Read Defined Variable [TT] (MPU1)li_ubk_tc1ebloopoverrider2 = 0.0                  |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10063 | A | Return the Emergency Braking Loop Override Switch 44S2 to "Normal" position        |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10064 | R | Check that the Emergency Braking Loop Override Lamp 44H5 is OFF                    |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10065 | I | Emergency Brake Loop Override Train Line Dev5/6 = END2 90XP14 pin 9                |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10066 | R | Read Defined Variable [NI] Dev5/6 = 0.0  |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10067 | R | Read Defined Variable [TT] (MPU1)li_ubk_tc1ebloopoverrider1 = 1.0                  |   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10068 | I | Reset Emergency Brake  |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10069 | R | Read Defined Variable [TT] (MPU1)li_ubk_tc1rearmebrelay1 = 1.0                     |   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

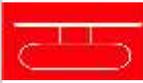
|       |   |   |    |   |                                      |     |
|-------|---|---|----|---|--------------------------------------|-----|
| 10070 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1rearmebrelayr2 = 1.0            | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10071 | I | Turn Direction Switch 30A1.S2 to<br>"Forward" position                        | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10072 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1rearmebrelayr1 = 1.0            | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10073 | I | Emergency Brake Train Line  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10074 | I | Emergency Brake Loop Train Line<br>Dev4/5 = END2 90XP14 pin 8                 | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10075 | A | Force [NI] Dev4/5 = 1.0   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10076 | A | Force [TT]<br>(MPU1)lo_ubk_tc1emergbraker1 = 1.0                              | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10077 | A | Press and hold the Dead Man pushbutton<br>60S3                                | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10078 | R | Read Defined Variable [TT]<br>(MPU1)li_dsd_tc1ebdeadmanrelayr1 =<br>0.0       | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10079 | A | Ensure the Master Controller S3.3 (3.4) is<br>NOT in Emergency Brake position | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10080 | I | Emergency Brake ERTMS1 Train Line<br>Dev4/88 = END2 90XP14 pin 18             | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10081 | A | Force [NI] Dev4/88 = 1.0  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10082 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1emergrelay1 = 0.0               | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10083 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1emergrelay2 = 1.0               | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10084 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1rearmebrelayr1 = 1.0            | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10085 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1rearmebrelayr2 = 1.0            | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10086 | I | Emergency Brake ERTMS2 Train Line<br>Dev4/80 = END2 90XP14 pin 20             | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10087 | A | Force [NI] Dev4/80 = 1.0  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |   |           |    |   |                                      |     |
|-------|---|---|-----------|----|---|--------------------------------------|-----|
| 10088 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1emergrelay1 = 0.0   |           | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10089 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1emergrelay2 = 0.0   |           | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10090 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1rearmebrelay1 = 0.0   |           | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10091 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1rearmebrelay2 = 0.0   |           | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10092 | I | Emergency Brake Train Line<br>Dev2/84 = coupler pin 038<br>Dev2/85 = coupler pin 138<br>Dev5/61 = END2 90XP15 pin 67  |           | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10093 | R | Read Defined Variable [NI] Dev2/84 = 1.0  |           | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10094 | R | Read Defined Variable [NI] Dev2/85 = 1.0  |           | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10095 | R | Read Defined Variable [NI] Dev5/61 = 1.0  |           | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10096 | R | Check that the Emergency Brake Loop<br>Lamp 44H4 is OFF   | <b>EB</b> | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10097 | A | Measure the voltage across Resistor 44R1<br>between pins 8A and 8B of terminal block<br>93XT202                       |           | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10098 | R | Battery Voltage (above 80Vdc) is<br>measured across Resistor 44R1 between<br>pins 8A and 8B of terminal block 93XT202 |           | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10099 | R | Read Defined Variable [TT]<br>(BCU1)LI_NEB = 1.0  |           | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10100 | A | Force [TT]<br>(MPU1)lo_ubk_tc1emergbraker1 = 0.0  |           | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10101 | I | Emergency Brake Train Line<br>Dev2/84 = coupler pin 038<br>Dev2/85 = coupler pin 138<br>Dev5/61 = END2 90XP15 pin 67  |           | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10102 | R | Read Defined Variable [NI] Dev2/84 = 0.0  |           | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10103 | R | Read Defined Variable [NI] Dev2/85 = 0.0  |           | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10104 | R | Read Defined Variable [NI] Dev5/61 = 0.0  |           | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10105 | R | Check that the Emergency Brake Loop<br>Lamp 44H4 is ON  | <b>EB</b> | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |   |  |    |   |                                      |     |
|-------|---|---|--|----|---|--------------------------------------|-----|
| 10106 | A | Force [TT]<br>(MPU1)lo_ubk_tc1emergbraker2 = 1.0                  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10107 | I | Emergency Brake Train Line<br>Dev5/61 = END2 90XP15 pin 67        |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10108 | R | Read Defined Variable [NI] Dev5/61 = 1.0                          |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10109 | A | Release the Dead Man pushbutton 60S3                              |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10110 | I | Emergency Brake ERTMS1 Train Line<br>Dev4/88 = END2 90XP14 pin 18 |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10111 | A | Force [NI] Dev4/88 = 0.0  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10112 | I | Emergency Brake ERTMS2 Train Line<br>Dev4/80 = END2 90XP14 pin 20 |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10113 | A | Force [NI] Dev4/80 = 0.0  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10114 | I | Emergency Brake Train Line<br>Dev5/61 = END2 90XP15 pin 67        |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10115 | R | Read Defined Variable [NI] Dev5/61 = 0.0                          |  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10116 | A | Turn the ERTMS Isolation switch 62S1 to<br>"Isolation" position   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10117 | A | Turn the Dead Man Override switch 60S1<br>to "Override" position  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10118 | I | Emergency Brake Train Line<br>Dev5/61 = END2 90XP15 pin 67        |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10119 | R | Read Defined Variable [NI] Dev5/61 = 1.0                          |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10120 | I | Emergency Brake Pushbutton  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10121 | A | Push the Emergency Brake Mushroom<br>44S1                         |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10122 | I | Emergency Brake Train Line<br>Dev5/61 = END2 90XP15 pin 67        |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10123 | R | Read Defined Variable [NI] Dev5/61 = 0.0                          |  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |  |    |   |                                      |     |
|-------|---|--|----|---|--------------------------------------|-----|
| 10124 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1emgcybrkpbr1 = 1.0                         | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10125 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1emgcybrkpbr2 = 1.0                         | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10126 | A | Check continuity between 93XT104_5 pin<br>36 and 93XT103 pin 28                          | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10127 | A | The points are continuous  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10128 | A | Release the Emergency Brake Mushroom<br>44S1   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10129 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1emgcybrkpbr1 = 0.0                         | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10130 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1emgcybrkpbr2 = 0.0                         | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10131 | A | Force [TT]<br>(MPU1)lo_ubk_tc1emergbraker2 = 0.0   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10132 | A | Return the Dead Man Override switch<br>60S1 to "Normal" position                         | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10133 | A | Return the ERTMS Isolation switch 62S1<br>to "Normal" position                           | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10134 | I | Emergency Brake Loop Train Line<br>Dev4/5 = END2 90XP14 pin 8                            | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10135 | A | Force [NI] Dev4/5 = 0.0  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10136 | A | Turn the Emergency Braking Loop<br>Override Switch 44S2 to<br>"Override/Bypass" position | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10137 | A | Press and hold the Dead Man pushbutton<br>60S3   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10138 | I | Emergency Brake Train Line<br>Dev5/61 = END2 90XP15 pin 67                               | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10139 | R | Read Defined Variable [NI] Dev5/61 = 1.0   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10140 | A | Release the Dead Man pushbutton 60S3   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10141 | A | Return the Emergency Braking Loop<br>Override Switch 44S2 to "Normal"<br>position        | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |   |  |    |   |                                      |     |
|-------|---|---|--|----|---|--------------------------------------|-----|
| 10142 | A | Turn Driver's Master Key 30A1.S1 to Non-Active Cabin Position   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10143 | I | Emergency Brake Train Line<br>Dev4/61 = END2 90XP15 pin 67  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10144 | A | Force [NI] Dev4/61 = 1.0  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10145 | A | Measure the voltage on terminal block<br>93XT104_2 at pin 34, and pin 35  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10146 | R | Battery voltage (above 80Vdc) measured<br>on terminal block 93XT104_2 at pin 34,<br>and pin 35                      |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10147 | I | Emergency Brake Train Line<br>Dev4/61 = END2 90XP15 pin 67  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10148 | A | Force [NI] Dev4/61 = 0.0  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10149 | A | Turn Driver's Master Key 30A1.S1 to<br>Active Cabin Position  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10150 | I | Return the Direction Switch 30A1.S2 to<br>"Neutral" position  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10151 | I | PEA Loop  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10152 | A | Check all the Passenger Emergency Alarm<br>handles, and ensure they are connected to<br>their respective connectors |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10153 | R | All the PEAs are installed and connected  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10154 | A | Open and Close (Reset) Circuit breaker<br>20Q2  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10155 | I | PEA Loop Train Lines<br>Dev2/58 = coupler pin 017<br>Dev2/59 = coupler pin 117<br>Dev5/62 = END2 90XP15 pin 95      |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10156 | R | Read Defined Variable [NI] Dev2/58 = 1.0  |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10157 | R | Read Defined Variable [NI] Dev2/59 = 1.0  |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10158 | R | Read Defined Variable [NI] Dev5/62 = 1.0  |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10159 | A | Turn Driver's Master Key 30A1.S1 to<br>Active Cabin Position  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |  |   |    |   |                                      |     |
|-------|---|--|---|----|---|--------------------------------------|-----|
| 10160 | R | Check that the PEA Lamp 44H1 is ON                           |    | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10161 | I | PEA Loop Train Lines<br>Dev5/62 = END2 90XP15 pin 95         |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10162 | R | Read Defined Variable [NI] Dev5/62 = 0.0                     |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10163 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1pealooop = 1.0 |   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10164 | I | PEA Loop OTDR Train Line<br>Dev5/7 = END2 90XP14 pin 10      |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10165 | R | Read Defined Variable [NI] Dev5/7 = 0.0                      |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10166 | I | PEA Loop Train Lines<br>Dev4/62 = END2 90XP15 pin 95         |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10167 | A | Force [NI] Dev4/62 = 1.0                                     |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10168 | I | PEA Loop Train Lines<br>Dev2/58 = coupler pin 017            |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10169 | R | Read Defined Variable [NI] Dev2/58 = 1.0                     |   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10170 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1pealooop = 0.0 |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10171 | I | PEA Loop OTDR Train Line<br>Dev5/7 = END2 90XP14 pin 10      |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10172 | R | Read Defined Variable [NI] Dev5/7 = 1.0                      |   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10173 | R | Check that the PEA Lamp 44H1 is OFF                          |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10174 | I | PEA Reset  |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10175 | A | Activate the PEA on door 1 (44S11)                           |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10176 | I | PEA Loop Train Lines<br>Dev2/58 = coupler pin 017            |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10177 | R | Read Defined Variable [NI] Dev2/58 = 0.0                     |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |   |    |   |  |     |
|-------|---|---|----|---|--|-----|
| 10178 | R | Read Defined Variable [TT]<br>(MPU1)li_UBK_Tc1StateResetPea = 1.0   | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10179 | A | Turn and hold the PEA Reset Switch 44S6<br>in Reset position        | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10180 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1restpeaswitch = 1.0   | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10181 | R | Read Defined Variable [TT]<br>(MPU1)lo_ubk_tc1resetpea = 1.0        | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10182 | R | Read Defined Variable [TT]<br>(MPU1)li_UBK_Tc1StateResetPea = 0.0   | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10183 | A | Release the PEA Reset Switch 44S6                                   | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10184 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1restpeaswitch = 0.0   | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10185 | A | Timer 5.0 S   | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10186 | R | Read Defined Variable [TT]<br>(MPU1)li_UBK_Tc1StateResetPea = 1.0   | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10187 | R | Read Defined Variable [TT]<br>(MPU1)lo_ubk_tc1resetpea = 0.0        | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10188 | I | PEA Loop Train Lines<br>Dev2/58 = coupler pin 017                   | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10189 | R | Read Defined Variable [NI] Dev2/58 = 1.0                            | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10190 | A | Activate the PEA on door 2 (44S12)                                  | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10191 | I | PEA Loop Train Lines<br>Dev2/58 = coupler pin 017                   | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10192 | R | Read Defined Variable [NI] Dev2/58 = 0.0                            | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10193 | A | Turn the PEA Reset Switch 44S6 to Reset<br>position, and release it | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10194 | I | PEA Loop Train Lines<br>Dev2/58 = coupler pin 017                   | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10195 | R | Read Defined Variable [NI] Dev2/58 = 1.0                            | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |

|       |   |  |  |    |   |                                      |     |
|-------|---|--|--|----|---|--------------------------------------|-----|
| 10196 | A | Activate the PEA on door 3 (44S13)                               |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10197 | I | PEA Loop Train Lines<br>Dev2/58 = coupler pin 017                |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10198 | R | Read Defined Variable [NI] Dev2/58 = 0.0                         |  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10199 | A | Turn the PEA Reset Switch 44S6 to Reset position, and release it |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10200 | I | PEA Loop Train Lines<br>Dev2/58 = coupler pin 017                |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10201 | R | Read Defined Variable [NI] Dev2/58 = 1.0                         |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10202 | A | Activate the PEA on door 4 (44S14)                               |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10203 | I | PEA Loop Train Lines<br>Dev2/58 = coupler pin 017                |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10204 | R | Read Defined Variable [NI] Dev2/58 = 0.0                         |  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10205 | A | Turn the PEA Reset Switch 44S6 to Reset position, and release it |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10206 | I | PEA Loop Train Lines<br>Dev2/58 = coupler pin 017                |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10207 | R | Read Defined Variable [NI] Dev2/58 = 1.0                         |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10208 | A | Activate the PEA on door 5 (44S15)                               |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10209 | I | PEA Loop Train Lines<br>Dev2/58 = coupler pin 017                |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10210 | R | Read Defined Variable [NI] Dev2/58 = 0.0                         |  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10211 | A | Turn the PEA Reset Switch 44S6 to Reset position, and release it |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10212 | I | PEA Loop Train Lines<br>Dev2/58 = coupler pin 017                |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10213 | R | Read Defined Variable [NI] Dev2/58 = 1.0                         |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |   |  |    |   |                                      |     |
|-------|---|---|--|----|---|--------------------------------------|-----|
| 10214 | A | Activate the PEA on door 6 (44S16)                                    |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10215 | I | PEA Loop Train Lines<br>Dev2/58 = coupler pin 017                     |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10216 | R | Read Defined Variable [NI] Dev2/58 = 0.0                              |  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10217 | A | Turn the PEA Reset Switch 44S6 to Reset position, and release it      |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10218 | I | PEA Loop Train Lines<br>Dev2/58 = coupler pin 017                     |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10219 | R | Read Defined Variable [NI] Dev2/58 = 1.0                              |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10220 | I | PEA Loop Train Lines<br>Dev4/64 = END2 90XP15 pin 95                  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10221 | A | Force [NI] Dev4/62 = 0.0  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10222 | I | PEA Override  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10223 | A | Press and hold the Override PEA pushbutton 44S5                       |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10224 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1peaoverridebuttr1 = 1.0 |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10225 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1peaoverridebuttr2 = 1.0 |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10226 | R | Read Defined Variable [TT]<br>(MPU1)lo_ubk_tc1peaoverrider1 = 1.0     |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10227 | R | Read Defined Variable [TT]<br>(MPU1)lo_ubk_tc1peaoverrider2 = 1.0     |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10228 | R | Check that the Override PEA pushbutton lamp 44S5 turns ON             |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10229 | A | Release the Override PEA pushbutton 44S5                              |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10230 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1peaoverridebuttr1 = 0.0 |  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10231 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1peaoverridebuttr2 = 0.0 |  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |   |  |    |  |                                      |     |
|-------|---|---|--|----|--|--------------------------------------|-----|
| 10232 | A | Force [TT]<br>(MPU1)lo_ubk_tc1peaoverrider1 = 0.0             |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10233 | A | Force [TT]<br>(MPU1)lo_ubk_tc1peaoverrider2 = 0.0             |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10234 | R | Check that the Override PEA pushbutton<br>lamp 44S5 turns OFF |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10235 | I | END OF TEST   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|

## Section 12 – Service Brake

---

### 12.1 Instructions list

### 12.1.1 Service Brake

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

| N°    | Type | Instruction  | File | Result status | Result value | Operator                             | Vehicle |
|-------|------|--|------|---------------|--------------|--------------------------------------|---------|
| 10001 | I    | Service Brake (SPP = 040)  |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10002 | I    | Initial Conditions   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10003 | I    | No air supply to the vehicle - pressure in tank <6Bar  |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10004 | I    | All brake panel cocks are in normal position (not isolated)  |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10005 | I    | The Service Brake Isolation Switch 40S2 should be in Normal position   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10006 | I    | Circuit Breakers   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10007 | A    | Close Circuit Breaker 40Q2   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10008 | A    | Close Circuit Breaker 40Q3   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10009 | A    | Close Circuit Breaker 40Q4   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10010 | A    | Close Circuit Breaker 40Q5   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10011 | I    | Brake Air Supply and Brake Application   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10012 | I    | EB Reduced Train Lines<br>Dev2/78 = Coupler pin 031<br>Dev2/81 = Coupler pin 131<br>Dev5/51 = END2 90XP15 pin 60 |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10013 | R    | Read Defined Variable [NI] Dev2/78 = 1.0   |      | OK            | 1            | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10014 | R    | Read Defined Variable [NI] Dev2/81 = 1.0   |      | OK            | 1            | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10015 | R    | Read Defined Variable [NI] Dev5/51 = 1.0   |      | OK            | 1            | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |

|       |   |   |   |    |   |  |     |
|-------|---|---|---|----|---|--|-----|
| 10016 | I | Brake Applied Train Lines<br>Dev2/36 = Coupler pin 010<br>Dev2/37 = Coupler pin 110<br>Dev5/49 = END2 90XP15 pin 50 |   | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10017 | R | Read Defined Variable [NI] Dev2/36 = 0.0  |   | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10018 | R | Read Defined Variable [NI] Dev2/37 = 0.0  |   | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10019 | R | Read Defined Variable [NI] Dev5/49 = 0.0  |   | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10020 | R | Read Defined Variable [TT]<br>(MPU1)li_sbk_tc1brakeairsuppokr1 = 0.0  |   | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10021 | R | Read Defined Variable [TT]<br>(MPU1)li_sbk_tc1brakeairsuppokr2 = 0.0  |   | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10022 | R | Read Defined Variable [TT]<br>(BCU1)LI_BRPS_NOK = 1.0   |   | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10023 | R | Read Defined Variable [TT]<br>(BCU1)LI_BRAKE_NOT_APPLIED = 1.0  |   | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10024 | R | The Reduced Brake Lamp 40H2 on the indicator module 84A1 is ON  |  | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10025 | A | Close/Isolate the coupler Isolation cock F2.1/1   |   | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10026 | A | Open the Isolation cock F2.2/1  |   | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10027 | A | Connect the air supply to the vehicle main pipe coupling flexible hose F3/1, and switch the supply ON               |   | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10028 | I | Take note of any air leaks in the pipes or valves   |   | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10029 | A | Allow the pressure to go above 6 bar. The pressure can be checked at the BRTP test point                            |   | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10030 | R | BRTP pressure is measured >=6 Bar   |   | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10031 | I | EB Reduced Train Lines<br>Dev2/78 = Coupler pin 031<br>Dev2/81 = Coupler pin 131<br>Dev5/51 = END2 90XP15 pin 60    |   | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10032 | R | Read Defined Variable [NI] Dev2/78 = 0.0  |   | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10033 | R | Read Defined Variable [NI] Dev2/81 = 0.0  |   | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |

|       |   |   |   |    |   |                                      |     |
|-------|---|---|---|----|---|--------------------------------------|-----|
| 10034 | R | Read Defined Variable [NI] Dev5/51 = 0.0  |   | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10035 | I | Brake Applied Train Lines<br>Dev2/36 = Coupler pin 010<br>Dev2/37 = Coupler pin 110<br>Dev5/49 = END2 90XP15 pin 50 |   | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10036 | R | Read Defined Variable [NI] Dev2/36 = 1.0  |   | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10037 | R | Read Defined Variable [NI] Dev2/37 = 1.0  |   | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10038 | R | Read Defined Variable [NI] Dev5/49 = 1.0  |   | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10039 | R | Read Defined Variable [TT]<br>(MPU1)li_sbk_tc1brakeairsuppokr1 = 1.0  |   | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10040 | R | Read Defined Variable [TT]<br>(MPU1)li_sbk_tc1brakeairsuppokr2 = 1.0  |   | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10041 | R | Read Defined Variable [TT]<br>(BCU1)LI_BRPS_NOK = 0.0   |   | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10042 | R | Read Defined Variable [TT]<br>(BCU1)LI_BRAKE_NOT_APPLIED = 0.0  |   | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10043 | R | The Reduced Brake Lamp 40H2 on the indicator module 84A1 is OFF   |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10044 | A | Put the Master controller in 100% Traction position   |   | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10045 | I | V>5km/h Train Line<br>Dev4/38 = END2 90XP15 pin 28  |   | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10046 | A | Force [NI] Dev4/38 = 1.0  |   | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10047 | R | Lamp 40H1 on the indicator module 84A1 is ON  |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10048 | A | Return the Master controller to Normal position (Coasting)  |   | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10049 | I | V>5km/h Train Line<br>Dev4/38 = END2 90XP15 pin 28  |   | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10050 | A | Force [NI] Dev4/38 = 0.0  |   | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10051 | R | Lamp 40H1 on the indicator module 84A1 is OFF   |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |

|       |   |  |  |    |   |                                      |     |
|-------|---|--|--|----|---|--------------------------------------|-----|
| 10052 | I | Remote Isolation   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10053 | A | Turn the key 30A1.S1 to non-active cab position  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10054 | R | Read Defined Variable [TT] (BCU1)LI_BRAKE_ISO = 1.0  |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10055 | I | Remote Isolation Train Lines<br>Dev4/50 = END2 90XP15 pin 59<br>Dev2/38 = Coupler pin 025<br>Dev2/39 = Coupler pin 125 |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10056 | A | Force [NI] Dev4/50 = 1.0   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10057 | R | Read Defined Variable [NI] Dev2/38 = 1.0   |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10058 | R | Read Defined Variable [NI] Dev2/39 = 1.0   |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10059 | I | Remote Isolation Train Lines<br>Dev4/50 = END2 90XP15 pin 59<br>Dev2/38 = Coupler pin 025<br>Dev2/39 = Coupler pin 125 |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10060 | A | Force [NI] Dev4/50 = 0.0   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10061 | R | Read Defined Variable [NI] Dev2/38 = 0.0   |  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10062 | R | Read Defined Variable [NI] Dev2/39 = 0.0   |  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10063 | A | Turn the key 30A1.S1 to Active cab position  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10064 | A | Turn the Service Brake Isolation Switch 40S2 to Isolation position   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10065 | R | Read Defined Variable [TT] (MPU1)li_sbk_tc1remoteisoswitchr1 = 1.0   |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10066 | R | Read Defined Variable [TT] (MPU1)li_sbk_tc1remoteisoswitchr2 = 1.0   |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10067 | I | EB Reduced Train Lines<br>Dev5/51 = END2 90XP15 pin 60   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10068 | R | Read Defined Variable [NI] Dev5/51 = 1.0   |  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10069 | A | Force [TT] (MPU1)lo_sbk_tc1isobrake = 1.0  |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |  |    |   |                                      |     |
|-------|---|--|----|---|--------------------------------------|-----|
| 10070 | R | Read Defined Variable [TT]<br>(BCU1)LI_BRAKE_ISO = 0.0   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10071 | I | Remote Isolation Train Lines<br>Dev5/50 = END2 90XP15 pin 59<br>Dev2/39 = Coupler pin 125  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10072 | R | Read Defined Variable [NI] Dev2/39 = 1.0   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10073 | R | Read Defined Variable [NI] Dev5/50 = 0.0   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10074 | R | The Remote Isolation relay valve<br>C1.1_SERC is actuated, and the service<br>brake is isolated (confirm that air is<br>released from the valve) | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10075 | A | Release [TT] (MPU1)lo_sbk_tc1isobrake  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10076 | A | Turn the Service Brake Isolation Switch<br>40S2 to Normal position   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10077 | I | EB Reduced Train Lines<br>Dev5/51 = END2 90XP15 pin 60   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10078 | R | Read Defined Variable [NI] Dev5/51 = 0.0   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10079 | I | Manual Isolation   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10080 | A | Turn the Manual Isolation Cock C1.3.1 to<br>Isolated position  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10081 | I | EB Reduced Train Lines<br>Dev5/51 = END2 90XP15 pin 60   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10082 | R | Read Defined Variable [NI] Dev5/51 = 1.0   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10083 | R | Read Defined Variable [TT]<br>(MPU1)li_sbk_tc1servicebrakedc = 1.0   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10084 | R | Read Defined Variable [TT]<br>(BCU1)LI_SERVICE_BR_DC = 1.0   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10085 | A | Turn the Manual Isolation Cock C1.3.1 to<br>Normal position  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10086 | I | EB Reduced Train Lines<br>Dev5/51 = END2 90XP15 pin 60   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10087 | R | Read Defined Variable [NI] Dev5/51 = 0.0   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |   |  |    |   |                                      |     |
|-------|---|---|--|----|---|--------------------------------------|-----|
| 10088 | R | Read Defined Variable [TT]<br>(MPU1)li_sbk_tc1servicebrakedc = 0.0                    |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10089 | R | Read Defined Variable [TT]<br>(BCU1)LI_SERVICE_BR_DC = 0.0                            |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10090 | I | MCE Fault   |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10091 | A | Force [TT] (BCU1)LO_BRK_FLT = 1.0   |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10092 | R | Read Defined Variable [TT]<br>Li_SBK_Tc1BcuFault_B = 1                                |  | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10093 | A | Force [TT] (BCU1)LO_BRK_FLT = 0.0   |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10094 | R | Read Defined Variable [TT]<br>Li_SBK_Tc1BcuFault_B = 0                                |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10095 | A | Release [TT] (BCU1)LO_BRK_FLT   |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10096 | I | Speed sensor TC1  |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10097 | A | All connectors from speed sensor (one per axle) are connected to its axle in TC1 car. |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10098 | R | Read Defined Variable [TT]<br>(MPU1)bcu1_bcuspdswsp1flt = 0.0                         |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10099 | R | Read Defined Variable [TT]<br>(MPU1)bcu1_bcuspdswsp2flt = 0.0                         |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10100 | R | Read Defined Variable [TT]<br>(MPU1)bcu1_bcuspdswsp3flt = 0.0                         |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10101 | R | Read Defined Variable [TT]<br>(MPU1)bcu1_bcuspdswsp4flt = 0.0                         |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10102 | I | End of test   |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|

## Section 13 – Holding and Parking Brake

---

### 13.1 Instructions list

### 13.1.1 Holding and Parking Brake

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

| N°    | Type | Instruction   | File | Result status | Result value | Operator                             | Vehicle |
|-------|------|---|------|---------------|--------------|--------------------------------------|---------|
| 10001 | I    | Holding and Parking Brake (SPP = 045)   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10002 | I    | Initial Conditions  |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10003 | A    | Using the tools list on the side of your screen, record the serial number of the manometer that will be used during this test |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10004 | I    | Confirm the presence of air supply to the vehicle. The pressure can be checked at test point BRTP > 4.8 Bar                   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10005 | I    | Ensure that the Parking Brake Switch 45S1 is in "Normal" position   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10006 | I    | Parking Brake Pressure Switch   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10007 | A    | Turn the key 30A1.S1 to Active cab position   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10008 | R    | Check that the pressure on test point C1.11/1 is >4.8 Bar<br>Result Min : 4.8<= x ()  |      | OK            | 6.042        | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10009 | R    | Read Defined Variable [TT]<br>(BCU1)LI_PARK_BR_RELEASE = 1.0  |      | OK            | 1            | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10010 | R    | Read Defined Variable [TT]<br>(BCU1)LI_PARK_BR_DC = 0.0   |      | OK            | 0            | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10011 | R    | Read Defined Variable [TT]<br>(MPU1)bcu1_parkbrakerelease = 1.0   |      | OK            | 1            | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10012 | R    | Read Defined Variable [TT]<br>(MPU1)bcu1_parkbrakeisoldc = 0.0  |      | OK            | 0            | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10013 | I    | Parking Brake Applied Train Lines<br>Dev2/74 = Coupler pin 018<br>Dev2/49 = Coupler pin 118<br>Dev5/58 = END2 90XP15 pin 77   |      | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10014 | R    | Read Defined Variable [NI] Dev2/74 = 0.0  |      | OK            | 0            | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10015 | R    | Read Defined Variable [NI] Dev2/49 = 0.0  |      | OK            | 0            | Carol Gumede<br>425280<br>08.12.2025 | TC1     |

|       |   |  |   |    |   |  |     |
|-------|---|--|---|----|---|--|-----|
| 10016 | R | Read Defined Variable [NI] Dev5/58 = 0.0   |   | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10017 | R | Check that the Parking Brake Applied Lamp 45H2 on the indicator module 84A1 is OFF   |    | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10018 | I | Remote Parking Brake Command   |   | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10019 | A | Turn the Parking Brake Switch 45S1 to "Parking Brake" position   |   | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10020 | R | Confirm that the parking brake is applied, and air is released from electro valve C1.5   |   | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10021 | I | Remote Parking Brake Command Train lines<br>Dev2/86 = Coupler pin 030<br>Dev2/87 = Coupler pin 130<br>Dev5/57 = END2 90XP15 pin 68 |   | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10022 | R | Read Defined Variable [NI] Dev2/86 = 1.0   |   | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10023 | R | Read Defined Variable [NI] Dev2/87 = 1.0   |   | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10024 | R | Read Defined Variable [NI] Dev5/57 = 1.0   |   | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10025 | A | Allow the air to reach below 4.8 Bar - verify on test point C1.11/1  |   | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10026 | R | Read Defined Variable [TT]<br>(BCU1)LI_PARK_BR_RELEASE = 0.0   |   | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10027 | R | Read Defined Variable [TT]<br>(MPU1)bcu1_parkbrakerelease = 0.0  |   | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10028 | I | Parking Brake Applied Train Lines<br>Dev2/74 = Coupler pin 018<br>Dev2/49 = Coupler pin 118<br>Dev5/58 = END2 90XP15 pin 77        |   | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10029 | R | Read Defined Variable [NI] Dev2/74 = 1.0   |   | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10030 | R | Read Defined Variable [NI] Dev2/49 = 1.0   |   | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10031 | R | Read Defined Variable [NI] Dev5/58 = 1.0   |   | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10032 | R | Check that the Parking Brake Applied Lamp 45H2 on the indicator module 84A1 turns ON   |  | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10033 | A | Turn the Parking Brake Switch 45S1 to "Normal" position  |   | OK |   | Carol Gumedede<br>425280               | TC1 |

|       |   |  |  |    |   |                                      |     |
|-------|---|--|--|----|---|--------------------------------------|-----|
|       |   |  |  |    |   | 08.12.2025                           |     |
| 10034 | I | Remote Parking Brake Command Train lines<br>Dev2/86 = Coupler pin 030<br>Dev2/87 = Coupler pin 130<br>Dev5/57 = END2 90XP15 pin 68 |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10035 | R | Read Defined Variable [NI] Dev2/86 = 0.0   |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10036 | R | Read Defined Variable [NI] Dev2/87 = 0.0   |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10037 | R | Read Defined Variable [NI] Dev5/57 = 0.0   |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10038 | I | Parking Brake Manual Isolation   |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10039 | A | Turn the Parking Brake Isolation cock C1.3.2 to "Isolated" position  |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10040 | R | Read Defined Variable [TT]<br>(BCU1)LI_PARK_BR_DC = 1.0  |  | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10041 | R | Read Defined Variable [TT]<br>(MPU1)bcu1_parkbrakeisoldc = 1.0   |  | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10042 | R | Read Defined Variable [TT]<br>(MPU1)li_pbk_tc1parkbrakeisol = 1.0  |  | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10043 | I | Parking Brake Applied Train Lines<br>Dev2/74 = Coupler pin 018<br>Dev2/49 = Coupler pin 118<br>Dev5/58 = END2 90XP15 pin 77        |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10044 | R | Read Defined Variable [NI] Dev2/74 = 0.0   |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10045 | R | Read Defined Variable [NI] Dev2/49 = 0.0   |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10046 | R | Read Defined Variable [NI] Dev5/58 = 0.0   |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10047 | A | Return the Parking Brake Isolation cock C1.3.2 to "Normal" position  |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10048 | R | Read Defined Variable [TT]<br>(BCU1)LI_PARK_BR_DC = 0.0  |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10049 | R | Read Defined Variable [TT]<br>(MPU1)bcu1_parkbrakeisoldc = 0.0   |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10050 | R | Read Defined Variable [TT]<br>(MPU1)li_pbk_tc1parkbrakeisol = 0.0  |  | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |



|       |   |  |  |    |   |                                      |     |
|-------|---|--|--|----|---|--------------------------------------|-----|
| 10051 | I | Parking Brake Applied Train Lines<br>Dev2/74 = Coupler pin 018 |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10052 | R | Read Defined Variable [NI] Dev2/74 = 1.0                       |  | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10053 | I | END OF TEST  |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|

## Section 14 – Passenger Doors

---

### 14.1 Instructions list

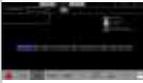
### 14.1.1 Passenger Doors

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

| N°    | Type | Instruction  | File | Result status | Result value | Operator                             | Vehicle |
|-------|------|--|------|---------------|--------------|--------------------------------------|---------|
| 10001 | I    | Passenger Doors (SPP=050)  |      | OK            |              | Carol Gumede<br>425280<br>10.12.2025 | TC1     |
| 10002 | I    | Initial Conditions:  |      | OK            |              | Carol Gumede<br>425280<br>10.12.2025 | TC1     |
| 10003 | A    | Turn Driver's Master Key 30A1.S1 to Active Cabin Position            |      | OK            |              | Carol Gumede<br>425280<br>10.12.2025 | TC1     |
| 10004 | I    | Car Should be Prepared (closed battery contacts)                     |      | OK            |              | Carol Gumede<br>425280<br>10.12.2025 | TC1     |
| 10005 | I    | Cab door windows should be closed                                    |      | OK            |              | Carol Gumede<br>425280<br>10.12.2025 | TC1     |
| 10006 | I    | Cab doors should be closed and unlocked                              |      | OK            |              | Carol Gumede<br>425280<br>10.12.2025 | TC1     |
| 10007 | I    | Cab Door Windows   |      | OK            |              | Carol Gumede<br>425280<br>10.12.2025 | TC1     |
| 10008 | A    | Open and close both the LEFT and RIGHT cab door windows              |      | OK            |              | Carol Gumede<br>425280<br>10.12.2025 | TC1     |
| 10009 | R    | The LEFT cab door window opens and closes correctly                  |      | OK            |              | Carol Gumede<br>425280<br>10.12.2025 | TC1     |
| 10010 | R    | The RIGHT cab door window opens and closes correctly                 |      | OK            |              | Carol Gumede<br>425280<br>10.12.2025 | TC1     |
| 10011 | I    | Cabin Doors  |      | OK            |              | Carol Gumede<br>425280<br>10.12.2025 | TC1     |
| 10012 | A    | Open all 3 cab doors (LEFT, RIGHT, and saloon access) and close them |      | OK            |              | Carol Gumede<br>425280<br>10.12.2025 | TC1     |
| 10013 | R    | The LEFT cab door can open fully and close shut                      |      | OK            |              | Carol Gumede<br>425280<br>10.12.2025 | TC1     |
| 10014 | R    | The RIGHT cab door can open fully and close shut                     |      | OK            |              | Carol Gumede<br>425280<br>10.12.2025 | TC1     |
| 10015 | R    | The saloon access door can open fully and close shut                 |      | OK            |              | Carol Gumede<br>425280<br>10.12.2025 | TC1     |
| 10016 | A    | Lock the 3 doors with their respective keys                          |      | OK            |              | Carol Gumede<br>425280<br>10.12.2025 | TC1     |

|       |   |  |  |    |  |                                      |     |
|-------|---|--|--|----|--|--------------------------------------|-----|
| 10017 | R | The LEFT cab door is locked, the lock is functioning correctly, and the door cannot be opened      |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10018 | R | The RIGHT cab door is locked, the lock is functioning correctly, and the door cannot be opened     |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10019 | R | The Saloon access door is locked, the lock is functioning correctly, and the door cannot be opened |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10020 | A | Unlock the doors with their respective keys  |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10021 | A | Repeat the open, close and lock operations from the outside of the vehicle                         |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10022 | R | Both cab doors can be opened, closed and locked from the outside                                   |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10023 | I | External access locks  |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10024 | I | Ensure Door 1 and Door 2 are closed  |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10025 | A | Insert a square key into the external access lock of Door 1, and unlock the door                   |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10026 | A | The door is unlocked and can be opened freely.   |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10027 | A | Close the door, and lock the external access lock with the square key                              |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10028 | R | The door is locked and can no longer be opened manually  |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10029 | A | Insert a square key into the external access lock of Door 2, and unlock the door                   |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10030 | R | The door is unlocked and can be opened freely  |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10031 | A | Close the door, and lock the external access lock with the square key                              |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10032 | R | The door is locked and can no longer be opened manually  |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10033 | I | Circuit Breakers   |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10034 | A | Close Circuit Breaker 50Q1   |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |

|       |   |                                      |  |    |  |                                      |     |
|-------|---|--------------------------------------|--|----|--|--------------------------------------|-----|
| 10035 | R | DCU 1 is powered ON                  |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10036 | R | Check on the DDU that DCU1 is online |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10037 | A | Close Circuit Breaker 50Q2           |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10038 | R | DCU 2 is powered ON                  |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10039 | R | Check on the DDU that DCU2 is online |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10040 | A | Close Circuit Breaker 50Q3           |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10041 | R | DCU 3 is powered ON                  |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10042 | R | Check on the DDU that DCU3 is online |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10043 | A | Close Circuit Breaker 50Q4           |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10044 | R | DCU 4 is powered ON                  |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10045 | R | Check on the DDU that DCU4 is online |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10046 | A | Close Circuit Breaker 50Q5           |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10047 | R | DCU 5 is powered ON                  |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10048 | R | Check on the DDU that DCU5 is online |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10049 | A | Close Circuit Breaker 50Q6           |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10050 | R | DCU 6 is powered ON                  |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10051 | R | Check on the DDU that DCU6 is online |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10052 | A | Close Circuit Breaker 50Q7           |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |

|       |   |  |   |    |   |                                      |     |
|-------|---|--|---|----|---|--------------------------------------|-----|
| 10053 | I | Car ID Code  |   | OK |   | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10054 | A | Using the Door Status screen on the DDU, check that all the doors on TC1 are available - as in the picture below     |  | OK |   | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10055 | R | All doors are available  |   | OK |   | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10056 | I | Left Side Doors  |   | OK |   | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10057 | I | Ensure that all doors are CLOSED before proceeding to the next steps   |   | OK |   | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10058 | I | Door Authorization   |   | OK |   | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10059 | I | V<3km/h Train Line<br>Dev4/39 = END2 90XP15 pin 29   |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10060 | A | Force [NI] Dev4/39 = 1.0   |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10061 | A | Switch Door Authorization Selector 50S7 to DRIVER  |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10062 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1ertmsauthdoorr1 = 0.0  |   | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10063 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1ertmsauthdoorr2 = 0.0  |   | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10064 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1authdoorpleft = 0.0  |   | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10065 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1doorauthdlefr1 = 1.0   |   | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10066 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1doorauthdlefr2 = 1.0   |   | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10067 | I | Door Auth Left Train Lines<br>Dev2/56 = Coupler pin 009<br>Dev2/57 = Coupler pin 124<br>Dev5/64 = END2 90XP15 pin 85 |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10068 | R | Read Defined Variable [NI] Dev2/56 = 0.0   |   | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10069 | R | Read Defined Variable [NI] Dev2/57 = 0.0   |   | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10070 | R | Read Defined Variable [NI] Dev5/64 = 0.0   |   | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |

|       |   |  |  |    |   |                                      |     |
|-------|---|--|--|----|---|--------------------------------------|-----|
| 10071 | A | Press the Doors LEFT Side Authorization button 50S5  |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10072 | R | Check that the YELLOW LEFT Side Authorization pushbutton lamp 50S5 turns ON  |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10073 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1authdoorpleft = 1.0  |  | OK | 1 | Sicelo Mtolo<br>525130<br>13.01.2026 | TC1 |
| 10074 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1doorauthdlefr1 = 0.0   |  | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10075 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1doorauthdlefr2 = 0.0   |  | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10076 | I | Door Auth Left Train Lines<br>Dev2/56 = Coupler pin 009<br>Dev2/57 = Coupler pin 124<br>Dev5/64 = END2 90XP15 pin 85 |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10077 | R | Read Defined Variable [NI] Dev2/56 = 1.0   |  | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10078 | R | Read Defined Variable [NI] Dev2/57 = 1.0   |  | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10079 | R | Read Defined Variable [NI] Dev5/64 = 1.0   |  | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10080 | A | Turn Driver's Master Key 30A1.S1 to NON-Active Cabin Position  |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10081 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1doorauthdlefr1 = 0.0   |  | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10082 | A | Turn Driver's Master Key 30A1.S1 to Active Cabin Position  |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10083 | I | Door Open  |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10084 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1opendoorplefr1 = 0.0   |  | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10085 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1opendoorplefr2 = 0.0   |  | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10086 | R | Read Defined Variable [TT]<br>(MPU1)lo_dor_tc1opendoorlglefr1 = 0.0  |  | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10087 | R | Read Defined Variable [TT]<br>(MPU1)lo_dor_tc1opendoorlglefr2 = 0.0  |  | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10088 | A | Press and hold the LEFT side Door Open pushbutton 50S1   |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |

|       |   |   |  |    |   |                                      |     |
|-------|---|---|--|----|---|--------------------------------------|-----|
| 10089 | R | Check that the WHITE LEFT Side Door Open pushbutton lamp 50S1 turns ON  |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10090 | R | Check that door 1, 3 and 5 (LEFT SIDE) open   |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10091 | R | Read Defined Variable [TT]<br>(MPU1)lo_dor_tc1opendoorleft = 1.0  |  | OK | 1 | Sicelo Mtolo<br>525130<br>13.01.2026 | TC1 |
| 10092 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1opendoorplefr1 = 1.0  |  | OK | 1 | Sicelo Mtolo<br>525130<br>13.01.2026 | TC1 |
| 10093 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1opendoorplefr2 = 1.0  |  | OK | 1 | Sicelo Mtolo<br>525130<br>13.01.2026 | TC1 |
| 10094 | R | Read Defined Variable [TT]<br>(MPU1)lo_dor_tc1opendoorlgtlefr1 = 1.0  |  | OK | 1 | Sicelo Mtolo<br>525130<br>13.01.2026 | TC1 |
| 10095 | R | Read Defined Variable [TT]<br>(MPU1)lo_dor_tc1opendoorlgtlefr2 = 1.0  |  | OK | 1 | Sicelo Mtolo<br>525130<br>13.01.2026 | TC1 |
| 10096 | A | Release the LEFT side Door Open pushbutton 50S1   |  | OK |   | Sicelo Mtolo<br>525130<br>13.01.2026 | TC1 |
| 10097 | I | Door Closing  |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10098 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1closedoorplefr1 = 0.0   |  | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10099 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1closedoorplefr2 = 0.0   |  | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10100 | R | Read Defined Variable [TT]<br>(MPU1)lo_dor_tc1closedoorlgtlefr1 = 0.0   |  | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10101 | R | Read Defined Variable [TT]<br>(MPU1)lo_dor_tc1closedoorlgtlefr2 = 0.0   |  | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10102 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1closedoorlineleft = 0.0   |  | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10103 | I | Door Close Left Train Lines<br>Dev2/50 = Coupler pin 004<br>Dev2/51 = Coupler pin 137<br>Dev5/60 = END2 90XP15 pin 79 |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10104 | R | Read Defined Variable [NI] Dev2/50 = 0.0  |  | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10105 | R | Read Defined Variable [NI] Dev2/51 = 0.0  |  | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10106 | R | Read Defined Variable [NI] Dev5/60 = 0.0  |  | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |

|       |   |   |  |    |   |                                      |     |
|-------|---|---|--|----|---|--------------------------------------|-----|
| 10107 | A | Press and hold the LEFT side Door Close pushbutton 50S3   |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10108 | R | Check that the BLUE LEFT Side Door Close pushbutton lamp 50S3 turns ON  |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10109 | R | Check that door 1, 3 and 5 (LEFT SIDE) close  |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10110 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1closedoorpbleftr1 = 1.0   |  | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10111 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1closedoorpbleftr2 = 1.0   |  | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10112 | R | Read Defined Variable [TT]<br>(MPU1)lo_dor_tc1closedoorlgtlefr1 = 1.0   |  | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10113 | R | Read Defined Variable [TT]<br>(MPU1)lo_dor_tc1closedoorlgtlefr2 = 1.0   |  | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10114 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1closedoorlineleft = 1.0   |  | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10115 | I | Door Close Left Train Lines<br>Dev2/50 = Coupler pin 004<br>Dev2/51 = Coupler pin 137<br>Dev5/60 = END2 90XP15 pin 79 |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10116 | R | Read Defined Variable [NI] Dev2/50 = 1.0  |  | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10117 | R | Read Defined Variable [NI] Dev2/51 = 1.0  |  | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10118 | R | Read Defined Variable [NI] Dev5/60 = 1.0  |  | OK | 1 | Sicelo Mtolo<br>525130<br>13.01.2026 | TC1 |
| 10119 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1doorauthdlefr1 = 1.0  |  | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10120 | A | Release the LEFT side Door Close pushbutton 50S3  |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10121 | I | Right Side Doors  |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10122 | I | Door Authorization  |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10123 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1authdoorpbright = 0.0   |  | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10124 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1doorauthdright1 = 1.0   |  | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |

|       |   |   |    |   |                                      |     |
|-------|---|---|----|---|--------------------------------------|-----|
| 10125 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1doorauthdrihtr2 = 1.0   | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10126 | I | Door Auth Right Train Lines<br>Dev2/54 = Coupler pin 024<br>Dev2/64 = Coupler pin 109<br>Dev5/56 = END2 90XP15 pin 84 | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10127 | R | Read Defined Variable [NI] Dev2/54 = 0.0  | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10128 | R | Read Defined Variable [NI] Dev2/64 = 0.0  | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10129 | R | Read Defined Variable [NI] Dev5/56 = 0.0  | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10130 | A | Press and hold the Doors RIGHT Side<br>Authorization button 50S6  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10131 | R | Check that the YELLOW RIGHT Side<br>Authorization pushbutton lamp 50S6 turns<br>ON                                    | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10132 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1authdoorpbright = 1.0   | OK | 1 | Sicelo Mtolo<br>525130<br>13.01.2026 | TC1 |
| 10133 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1doorauthdrihtr1 = 0.0   | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10134 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1doorauthdrihtr2 = 0.0   | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10135 | I | Door Auth Right Train Lines<br>Dev2/54 = Coupler pin 024<br>Dev2/64 = Coupler pin 109<br>Dev5/56 = END2 90XP15 pin 84 | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10136 | R | Read Defined Variable [NI] Dev2/54 = 1.0  | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10137 | R | Read Defined Variable [NI] Dev2/64 = 1.0  | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10138 | R | Read Defined Variable [NI] Dev5/56 = 1.0  | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10139 | A | Release the Doors RIGHT Side<br>Authorization button 50S6   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10140 | A | Turn Driver's Master Key 30A1.S1 to<br>NON-Active Cabin Position  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10141 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1doorauthdrihtr1 = 0.0   | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10142 | A | Turn Driver's Master Key 30A1.S1 to<br>Active Cabin Position  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |

|       |   |   |  |    |   |                                      |     |
|-------|---|---|--|----|---|--------------------------------------|-----|
| 10143 | I | Door Open   |  | OK |   | Carol Gumedé<br>425280<br>11.12.2025 | TC1 |
| 10144 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1opendoorpbright1 = 0.0    |  | OK | 0 | Carol Gumedé<br>425280<br>11.12.2025 | TC1 |
| 10145 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1opendoorpbright2 = 0.0    |  | OK | 0 | Carol Gumedé<br>425280<br>11.12.2025 | TC1 |
| 10146 | R | Read Defined Variable [TT]<br>(MPU1)lo_dor_tc1opendoorlgrightr1 = 0.0   |  | OK | 0 | Carol Gumedé<br>425280<br>11.12.2025 | TC1 |
| 10147 | R | Read Defined Variable [TT]<br>(MPU1)lo_dor_tc1opendoorlgrightr2 = 0.0   |  | OK | 0 | Carol Gumedé<br>425280<br>11.12.2025 | TC1 |
| 10148 | A | Press and hold the right-side Door Open pushbutton 50S2                 |  | OK |   | Carol Gumedé<br>425280<br>11.12.2025 | TC1 |
| 10149 | R | Check that the WHITE right-side Door Open pushbutton lamp 50S2 turns ON |  | OK |   | Carol Gumedé<br>425280<br>11.12.2025 | TC1 |
| 10150 | R | Check that door 2, 4 and 6 (RIGHT SIDE) open                            |  | OK |   | Carol Gumedé<br>425280<br>11.12.2025 | TC1 |
| 10151 | R | Read Defined Variable [TT]<br>(MPU1)lo_dor_tc1opendoorright = 1.0       |  | OK | 1 | Carol Gumedé<br>425280<br>11.12.2025 | TC1 |
| 10152 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1opendoorpbright1 = 1.0    |  | OK | 1 | Carol Gumedé<br>425280<br>11.12.2025 | TC1 |
| 10153 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1opendoorpbright2 = 1.0    |  | OK | 1 | Carol Gumedé<br>425280<br>11.12.2025 | TC1 |
| 10154 | R | Read Defined Variable [TT]<br>(MPU1)lo_dor_tc1opendoorlgrightr1 = 1.0   |  | OK | 1 | Carol Gumedé<br>425280<br>11.12.2025 | TC1 |
| 10155 | R | Read Defined Variable [TT]<br>(MPU1)lo_dor_tc1opendoorlgrightr2 = 1.0   |  | OK | 1 | Carol Gumedé<br>425280<br>11.12.2025 | TC1 |
| 10156 | A | Release the right-side Door Open pushbutton 50S2                        |  | OK |   | Carol Gumedé<br>425280<br>11.12.2025 | TC1 |
| 10157 | I | Door Closing  |  | OK |   | Carol Gumedé<br>425280<br>11.12.2025 | TC1 |
| 10158 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1closedoorpbright1 = 0.0   |  | OK | 0 | Carol Gumedé<br>425280<br>11.12.2025 | TC1 |
| 10159 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1closedoorpbright2 = 0.0   |  | OK | 0 | Carol Gumedé<br>425280<br>11.12.2025 | TC1 |
| 10160 | R | Read Defined Variable [TT]<br>(MPU1)lo_dor_tc1closedoorlgrightr1 = 0.0  |  | OK | 0 | Carol Gumedé<br>425280<br>11.12.2025 | TC1 |

|       |   |  |    |   |                                      |     |
|-------|---|--|----|---|--------------------------------------|-----|
| 10161 | R | Read Defined Variable [TT]<br>(MPU1)lo_dor_tc1closedoorlgrightr2 = 0.0   | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10162 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1closedoorlineright = 0.0   | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10163 | I | Door Close Right Train Lines<br>Dev2/52 = Coupler pin 037<br>Dev2/53 = Coupler pin 104<br>Dev5/59 = END2 90XP15 pin 78 | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10164 | R | Read Defined Variable [NI] Dev2/52 = 0.0   | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10165 | R | Read Defined Variable [NI] Dev2/53 = 0.0   | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10166 | R | Read Defined Variable [NI] Dev5/59 = 0.0   | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10167 | A | Press and hold the right-side Door Close pushbutton 50S4   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10168 | R | Check that the BLUE RIGHT Side Door Close pushbutton lamp 50S4 turns ON  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10169 | R | Check that door 2, 4 and 6 (RIGHT SIDE) close  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10170 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1closedoorpbright1 = 1.0  | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10171 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1closedoorpbright2 = 1.0  | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10172 | R | Read Defined Variable [TT]<br>(MPU1)lo_dor_tc1closedoorlgrightr1 = 1.0   | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10173 | R | Read Defined Variable [TT]<br>(MPU1)lo_dor_tc1closedoorlgrightr2 = 1.0   | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10174 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1closedoorlineright = 1.0   | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10175 | I | Door Close Right Train Lines<br>Dev2/52 = Coupler pin 037<br>Dev2/53 = Coupler pin 104<br>Dev5/59 = END2 90XP15 pin 78 | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10176 | R | Read Defined Variable [NI] Dev2/52 = 1.0   | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10177 | R | Read Defined Variable [NI] Dev2/53 = 1.0   | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10178 | R | Read Defined Variable [NI] Dev5/59 = 1.0   | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |

|       |   |   |    |   |                                      |     |
|-------|---|---|----|---|--------------------------------------|-----|
| 10179 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1doorauthrightr1 = 1.0 | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10180 | A | Release the right-side Door Close<br>pushbutton 50S4                | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10181 | I | Closing Conditions  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10182 | A | Press the Doors LEFT Side Authorization<br>button 50S5              | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10183 | I | Door Close Left Train Line<br>Dev5/60 = END2 90XP15 pin 79          | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10184 | R | Read Defined Variable [NI] Dev5/60 = 0.0                            | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10185 | A | Press the Doors right-side Authorization<br>button 50S6             | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10186 | I | Door Close Right Train Lines<br>Dev5/59 = END2 90XP15 pin 78        | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10187 | R | Read Defined Variable [NI] Dev5/59 = 0.0                            | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10188 | A | Press the LEFT side Door Open<br>pushbutton 50S1                    | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10189 | A | Press the right-side Door Open<br>pushbutton 50S2                   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10190 | I | V>5km/h Train Line<br>Dev4/38 = END2 90XP15 pin 28                  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10191 | A | Force [NI] Dev4/38 = 1.0  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10192 | R | Read Defined Variable [TT]<br>(MPU1)li_rec_tc1thresholdfive1 = 1.0  | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10193 | R | Read Defined Variable [TT]<br>(MPU1)li_rec_tc1thresholdfive2 = 1.0  | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10194 | I | Door Close Left Train Line<br>Dev5/60 = END2 90XP15 pin 79          | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10195 | R | Read Defined Variable [NI] Dev5/60 = 1.0                            | OK | 1 | Sicelo Mtolo<br>525130<br>13.01.2026 | TC1 |
| 10196 | I | Door Close Right Train Lines<br>Dev5/59 = END2 90XP15 pin 78        | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |

|       |   |   |    |   |                                      |     |
|-------|---|---|----|---|--------------------------------------|-----|
| 10197 | R | Read Defined Variable [NI] Dev5/59 = 1.0  | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10198 | R | Check that all the Doors Close  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10199 | I | V>5km/h Train Line<br>Dev4/38 = END2 90XP15 pin 28                                | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10200 | A | Force [NI] Dev4/38 = 0.0  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10201 | R | Read Defined Variable [TT]<br>(MPU1)li_rec_tc1thresholdfive1 = 0.0                | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10202 | R | Read Defined Variable [TT]<br>(MPU1)li_rec_tc1thresholdfive2 = 0.0                | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10203 | I | ERTMS Control   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10204 | A | Switch Door Authorization Selector 50S7<br>to ERTMS                               | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10205 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1ertmsauthdoorr1 = 1.0               | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10206 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1ertmsauthdoorr2 = 1.0               | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10207 | I | Left Doors  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10208 | I | ERTMS Auth Left Train Line<br>Dev4/86 = END2 90XP15 pin 44                        | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10209 | A | Force [NI] Dev4/86 = 1.0  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10210 | R | Check that the YELLOW LEFT Side<br>Authorization pushbutton lamp 50S5 turns<br>ON | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10211 | A | Force [TT]<br>(MPU1)lo_dor_tc1distertmsauthleftr1 =<br>1.0                        | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10212 | A | Force [TT]<br>(MPU1)lo_dor_tc1distertmsauthleftr2 =<br>1.0                        | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10213 | A | Force [TT]<br>(MPU1)lo_dor_tc1opendoorleft = 1.0                                  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10214 | R | Check that door 1, 3 and 5 (LEFT SIDE)<br>open                                    | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |

|       |   |  |    |  |                                      |     |
|-------|---|--|----|--|--------------------------------------|-----|
| 10215 | A | Release [TT]<br>(MPU1)lo_dor_tc1opendoorleft                                 | OK |  | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10216 | R | Check that door 1, 3 and 5 (LEFT SIDE) close                                 | OK |  | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10217 | A | Press the LEFT side Door Open pushbutton 50S1                                | OK |  | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10218 | R | Check that door 1, 3 and 5 (LEFT SIDE) open                                  | OK |  | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10219 | I | ERTMS Auth Left Train Line<br>Dev4/86 = END2 90XP15 pin 44                   | OK |  | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10220 | A | Force [NI] Dev4/86 = 0.0   | OK |  | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10221 | A | Press the LEFT side Door Close pushbutton 50S3                               | OK |  | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10222 | R | Check that door 1, 3 and 5 (LEFT SIDE) close                                 | OK |  | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10223 | A | Release [TT]<br>(MPU1)lo_dor_tc1distertmsauthleftr1                          | OK |  | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10224 | A | Release [TT]<br>(MPU1)lo_dor_tc1distertmsauthleftr2                          | OK |  | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10225 | I | Right Doors  | OK |  | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10226 | I | ERTMS Auth Right Train Line<br>Dev4/87 = END2 90XP15 pin 47                  | OK |  | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10227 | A | Force [NI] Dev4/87 = 1.0   | OK |  | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10228 | R | Check that the YELLOW RIGHT Side Authorization pushbutton lamp 50S6 turns ON | OK |  | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10229 | A | Force [TT]<br>(MPU1)lo_dor_tc1distertmsauthright1 = 1.0                      | OK |  | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10230 | A | Force [TT]<br>(MPU1)lo_dor_tc1distertmsauthright2 = 1.0                      | OK |  | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10231 | A | Force [TT]<br>(MPU1)lo_dor_tc1opendoorright = 1.0                            | OK |  | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10232 | R | Check that door 2, 4 and 6 (RIGHT SIDE) open                                 | OK |  | Carol Gumede<br>425280<br>11.12.2025 | TC1 |

|       |   |  |   |    |   |                                      |     |
|-------|---|--|---|----|---|--------------------------------------|-----|
| 10233 | A | Release [TT]<br>(MPU1)lo_dor_tc1opendoorright  |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10234 | R | Check that door 2, 4 and 6 (RIGHT SIDE)<br>close                                       |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10235 | A | Press the RIGHT side Door Open<br>pushbutton 50S2                                      |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10236 | R | Check that door 2, 4 and 6 (RIGHT SIDE)<br>open  |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10237 | I | ERTMS Auth Right Train Line<br>Dev4/87 = END2 90XP15 pin 47                            |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10238 | A | Force [NI] Dev4/87 = 0.0   |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10239 | A | Press the RIGHT side Door Close<br>pushbutton 50S4                                     |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10240 | R | Check that door 2, 4 and 6 (RIGHT SIDE)<br>close                                       |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10241 | A | Release [TT]<br>(MPU1)lo_dor_tc1distertmsauthright1                                    |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10242 | A | Release [TT]<br>(MPU1)lo_dor_tc1distertmsauthright2                                    |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10243 | I | Opening Gap, Safety Loop and Obstacle<br>Detection                                     |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10244 | A | Close Circuit Breaker 51Q1   |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10245 | A | Check that the Door Safety Loop Indicator<br>lamp 51H1 is ON                           |  | OK |   | Sicelo Mtolo<br>525130<br>13.01.2026 | TC1 |
| 10246 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1alldoorsclosedr1 = 1.0                   |   | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10247 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1alldoorsclosedr2 = 1.0                   |   | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10248 | I | Safety Doors Loop Train Line<br>Dev2/60 = Coupler pin 016<br>Dev2/61 = Coupler pin 116 |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10249 | R | Read Defined Variable [NI] Dev2/60 = 0.0   |   | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10250 | R | Read Defined Variable [NI] Dev2/61 = 0.0   |   | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |

|       |   |   |   |    |   |                                      |     |
|-------|---|---|---|----|---|--------------------------------------|-----|
| 10251 | I | Doors Open Train Line<br>Dev2/82 = Coupler pin 029<br>Dev2/83 = Coupler pin 129<br>Dev5/55 = END2 90XP15 pin 66 |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10252 | R | Read Defined Variable [NI] Dev2/82 = 1.0  |   | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10253 | R | Read Defined Variable [NI] Dev2/83 = 1.0  |   | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10254 | R | Read Defined Variable [NI] Dev5/55 = 1.0  |   | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10255 | I | Safety Doors Loop Train Line<br>Dev4/89 = END2 90XP25 pin 96  |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10256 | A | Force [NI] Dev4/89 = 1.0  |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10257 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1alldoorsclosedr1 = 0.0  |   | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10258 | R | Read Defined Variable [TT]<br>(MPU1)li_dor_tc1alldoorsclosedr2 = 0.0  |   | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10259 | I | Safety Doors Loop Train Line<br>Dev2/60 = Coupler pin 016<br>Dev2/61 = Coupler pin 116                          |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10260 | R | Read Defined Variable [NI] Dev2/60 = 1.0  |   | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10261 | R | Read Defined Variable [NI] Dev2/61 = 1.0  |   | OK | 1 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10262 | I | Doors Open Train Line<br>Dev2/82 = Coupler pin 029<br>Dev2/83 = Coupler pin 129<br>Dev5/55 = END2 90XP15 pin 66 |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10263 | R | Read Defined Variable [NI] Dev2/82 = 0.0  |   | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10264 | R | Read Defined Variable [NI] Dev2/83 = 0.0  |   | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10265 | R | Read Defined Variable [NI] Dev5/55 = 0.0  |   | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10266 | A | Check that the Door Safety Loop Indicator lamp 51H1 is OFF  |  | OK |   | Sicelo Mtolo<br>525130<br>13.01.2026 | TC1 |
| 10267 | I | Door 1  |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10268 | I | ERTMS Auth Left Train Line<br>Dev4/86 = END2 90XP15 pin 44  |   | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |

|       |   |  |  |    |      |                                      |     |
|-------|---|--|--|----|------|--------------------------------------|-----|
| 10269 | A | Force [NI] Dev4/86 = 1.0   |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10270 | A | Force [TT]<br>(MPU1)lo_dor_tc1distertmsauthlefr1 = 1.0   |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10271 | A | Force [TT]<br>(MPU1)lo_dor_tc1distertmsauthlefr2 = 1.0   |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10272 | A | Force [TT]<br>(MPU1)lo_dor_tc1opendoorleft = 1.0   |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10273 | R | Check if ALL Left doors opens in 3 sec<br>(+1/-0)  |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10274 | R | Check that the GREEN LEDS on both sides<br>of the door blink while the door opens<br>[Safety Request: Prasa8-05] |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10275 | I | Doors Open Train Line<br>Dev2/82 = Coupler pin 029   |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10276 | R | Read Defined Variable [NI] Dev2/82 = 1.0   |  | OK | 1    | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10277 | I | Door Opening Gap   |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10278 | A | Measure the opening gap of the door.<br>(The measurement must be done at the<br>BOTTOM of the door).             |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10279 | R | Door 1 gapResult Min/Max : 1390.00<=<br>x<= 1410.00 (mm)   |  | OK | 1399 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10280 | A | Measure the opening gap of the door.<br>(The measurement must be done at the<br>TOP of the door).                |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10281 | R | Door 1 gapResult Min/Max : 1390.00<=<br>x<= 1410.00 (mm)   |  | OK | 1404 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10282 | A | Measure the opening gap of the door.<br>(The measurement must be done in the<br>MIDDLE of the door).             |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10283 | R | Door 1 gapResult Min/Max : 1390.00<=<br>x<= 1410.00 (mm)   |  | OK | 1402 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10284 | I | Door 3   |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10285 | I | Door Opening Gap   |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10286 | A | Measure the opening gap of the door.<br>(The measurement must be done at the<br>BOTTOM of the door).             |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |

|       |   |   |    |      |                                      |     |
|-------|---|---|----|------|--------------------------------------|-----|
| 10287 | R | Door 3 gapResult Min/Max : 1390.00<= x<= 1410.00 (mm)   | OK | 1402 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10288 | A | Measure the opening gap of the door. (The measurement must be done at the TOP of the door).               | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10289 | R | Door 3 gapResult Min/Max : 1390.00<= x<= 1410.00 (mm)   | OK | 1405 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10290 | A | Measure the opening gap of the door. (The measurement must be done in the MIDDLE of the door).            | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10291 | R | Door 3 gapResult Min/Max : 1390.00<= x<= 1410.00 (mm)   | OK | 1403 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10292 | I | Door 5  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10293 | I | Door Opening Gap  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10294 | A | Measure the opening gap of the door. (The measurement must be done at the BOTTOM of the door).            | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10295 | R | Door 5 gapResult Min/Max : 1390.00<= x<= 1410.00 (mm)   | OK | 1400 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10296 | A | Measure the opening gap of the door. (The measurement must be done at the TOP of the door).               | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10297 | R | Door 5 gapResult Min/Max : 1390.00<= x<= 1410.00 (mm)   | OK | 1402 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10298 | A | Measure the opening gap of the door. (The measurement must be done in the MIDDLE of the door).            | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10299 | R | Door 5 gapResult Min/Max : 1390.00<= x<= 1410.00 (mm)   | OK | 1400 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10300 | A | Release [TT] (MPU1)lo_dor_tc1opendoorleft   | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10301 | R | Check if ALL left doors closes in 3 sec (+1/-0)   | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10302 | R | Check that the RED leds on both sides of the door blink while the door closes [Safety Request: Prasa8-05] | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10303 | I | Doors Open Train Line Dev2/82 = Coupler pin 029   | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10304 | R | Read Defined Variable [NI] Dev2/82 = 0.0  | OK | 0    | Carol Gumede<br>425280<br>11.12.2025 | TC1 |

|       |   |   |    |      |                                      |     |
|-------|---|---|----|------|--------------------------------------|-----|
| 10305 | I | ERTMS Auth Left Train Line<br>Dev4/86 = END2 90XP15 pin 44  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10306 | A | Force [NI] Dev4/86 = 0.0  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10307 | A | Release [TT]<br>(MPU1)lo_dor_tc1distertmsauthlefr1  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10308 | A | Release [TT]<br>(MPU1)lo_dor_tc1distertmsauthlefr2  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10309 | I | Door 2  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10310 | I | ERTMS Auth Right Train Line<br>Dev4/87 = END2 90XP15 pin 47   | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10311 | A | Force [NI] Dev4/87 = 1.0  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10312 | A | Force [TT]<br>(MPU1)lo_dor_tc1distertmsauthright1 =<br>1.0  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10313 | A | Force [TT]<br>(MPU1)lo_dor_tc1distertmsauthright2 =<br>1.0  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10314 | A | Force [TT]<br>(MPU1)lo_dor_tc1opendoorright = 1.0   | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10315 | R | Check if ALL right doors open in 3 sec<br>(+1/-0)   | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10316 | R | Check that the GREEN LEDS on both sides<br>of the door blink while the door opens.<br>[Safety Request: Prasa8-05] | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10317 | R | Once completely opened, check that the<br>LEDS are steady RED   | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10318 | I | Doors Open Train Line<br>Dev2/82 = Coupler pin 029  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10319 | R | Read Defined Variable [NI] Dev2/82 = 1.0  | OK | 1    | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10320 | I | Door Opening Gap  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10321 | A | Measure the opening gap of the door.<br>(The measurement must be done at the<br>BOTTOM of the door).              | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10322 | R | Door 2 gapResult Min/Max : 1390.00<=<br>x<= 1410.00 (mm)  | OK | 1402 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |

|       |   |   |  |    |      |                                      |     |
|-------|---|---|--|----|------|--------------------------------------|-----|
| 10323 | A | Measure the opening gap of the door.<br>(The measurement must be done at the TOP of the door).    |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10324 | R | Door 2 gapResult Min/Max : 1390.00<= x<= 1410.00 (mm)   |  | OK | 1405 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10325 | A | Measure the opening gap of the door.<br>(The measurement must be done in the MIDDLE of the door). |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10326 | R | Door 2 gapResult Min/Max : 1390.00<= x<= 1410.00 (mm)   |  | OK | 1404 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10327 | I | Door 4  |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10328 | I | Door Opening Gap  |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10329 | A | Measure the opening gap of the door.<br>(The measurement must be done at the BOTTOM of the door). |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10330 | R | Door 4 gapResult Min/Max : 1390.00<= x<= 1410.00 (mm)   |  | OK | 1402 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10331 | A | Measure the opening gap of the door.<br>(The measurement must be done at the TOP of the door).    |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10332 | R | Door 4 gapResult Min/Max : 1390.00<= x<= 1410.00 (mm)   |  | OK | 1403 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10333 | A | Measure the opening gap of the door.<br>(The measurement must be done in the MIDDLE of the door). |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10334 | R | Door 4 gapResult Min/Max : 1390.00<= x<= 1410.00 (mm)   |  | OK | 1402 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10335 | I | Door 6  |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10336 | I | Door Opening Gap  |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10337 | A | Measure the opening gap of the door.<br>(The measurement must be done at the BOTTOM of the door). |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10338 | R | Door 6 gapResult Min/Max : 1390.00<= x<= 1410.00 (mm)   |  | OK | 1402 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10339 | A | Measure the opening gap of the door.<br>(The measurement must be done at the TOP of the door).    |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10340 | R | Door 6 gapResult Min/Max : 1390.00<= x<= 1410.00 (mm)   |  | OK | 1405 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |

|       |   |  |  |    |      |                                      |     |
|-------|---|--|--|----|------|--------------------------------------|-----|
| 10341 | A | Measure the opening gap of the door.<br>(The measurement must be done in the MIDDLE of the door).  |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10342 | R | Door 6 gapResult Min/Max : 1390.00<= x<= 1410.00 (mm)  |  | OK | 1402 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10343 | I | Obstacle Detection   |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10344 | I | ERTMS Auth Left Train Line<br>Dev4/86 = END2 90XP15 pin 44   |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10345 | A | Force [NI] Dev4/86 = 1.0   |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10346 | A | Force [TT]<br>(MPU1)lo_dor_tc1distertmsauthlefr1 = 1.0   |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10347 | A | Force [TT]<br>(MPU1)lo_dor_tc1distertmsauthlefr2 = 1.0   |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10348 | A | Force [TT]<br>(MPU1)lo_dor_tc1opendoorleft = 1.0   |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10349 | A | Position an obstacle on the floor in the centre of each and every door closing line  |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10350 | A | Release [TT]<br>(MPU1)lo_dor_tc1opendoorright  |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10351 | A | Release [TT]<br>(MPU1)lo_dor_tc1opendoorleft   |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10352 | R | All doors will hit the obstacles, reopen and try to close again 3 times.<br>On the third attempt ALL doors will stop and stand ajar - free to be opened manually |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10353 | A | Force [TT]<br>(MPU1)lo_dor_tc1opendoorright = 1.0  |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10354 | A | Force [TT]<br>(MPU1)lo_dor_tc1opendoorleft = 1.0   |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10355 | A | Remove ALL the obstacles   |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10356 | A | Release [TT]<br>(MPU1)lo_dor_tc1opendoorright  |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10357 | A | Release [TT]<br>(MPU1)lo_dor_tc1opendoorleft   |  | OK |      | Carol Gumede<br>425280<br>11.12.2025 | TC1 |

|       |   |   |  |    |   |                                      |     |
|-------|---|---|--|----|---|--------------------------------------|-----|
| 10358 | R | Check if ALL doors close in 3 sec (+1/-0)   |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10359 | R | Check that the RED LEDs on both sides of the door blink while the door closes [Safety Request: Prasa8-05] |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10360 | I | Doors Open Train Line<br>Dev2/82 = Coupler pin 029  |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10361 | R | Read Defined Variable [NI] Dev2/82 = 0.0  |  | OK | 0 | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10362 | I | ERTMS Auth Train Line<br>Dev4/87 = END2 90XP15 pin 47 (Right)<br>Dev4/86 = END2 90XP15 pin 44 (Left)      |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10363 | A | Force [NI] Dev4/86 = 0.0  |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10364 | A | Force [NI] Dev4/87 = 0.0  |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10365 | I | Safety Doors Loop Train Line<br>Dev4/89 = END2 90XP15 pin 96  |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10366 | A | Force [NI] Dev4/89 = 0.0  |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10367 | A | Release [TT]<br>(MPU1)lo_dor_tc1distertmsauthrightr1  |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10368 | A | Release [TT]<br>(MPU1)lo_dor_tc1distertmsauthrightr2  |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10369 | A | Release [TT]<br>(MPU1)lo_dor_tc1distertmsauthleftr1   |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10370 | A | Release [TT]<br>(MPU1)lo_dor_tc1distertmsauthleftr2   |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10371 | I | V<3km/h Train Line<br>Dev4/39 = END2 90XP15 pin 29  |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10372 | A | Force [NI] Dev4/39 = 0.0  |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10373 | A | Switch Door Authorization Selector 50S7 to DRIVER   |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |
| 10374 | I | END OF TEST   |  | OK |   | Carol Gumede<br>425280<br>11.12.2025 | TC1 |



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|

## Section 15 – HVAC Air Conditioning

---

### 15.1 Instructions list

### 15.1.1 HVAC\_TK

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

| N°    | Type | Instruction  | File  | Result status | Result value | Operator | Vehicle |
|-------|------|--|---|---------------|--------------|----------|---------|
| 10001 | I    | HVA_057 Air Conditioning   |   | NE            |              |          | TC1     |
| 10002 | I    | Initial conditions   |   | NE            |              |          | TC1     |
| 10003 | A    | Car Should be Prepared   |   | NE            |              |          | TC1     |
| 10004 | I    | Power Supply   |   | NE            |              |          | TC1     |
| 10005 | A    | Close Circuit Breaker 57Q1   |   | NE            |              |          | TC1     |
| 10006 | A    | Close Circuit Breaker 57Q2   |   | NE            |              |          | TC1     |
| 10007 | I    | HVAC Electronic Power Supply   |   | NE            |              |          | TC1     |
| 10008 | R    | The HVAC electronic is ON  |   | NE            |              |          | TC1     |
| 10009 | I    | Software Upload  |   | NE            |              |          | TC1     |
| 10010 | A    | Close Circuit Breaker F1 on the HVAC Panel   |   | NE            |              |          | TC1     |
| 10011 | A    | Turn the control switch to AUTO position on the HVAC Panel                             |   | NE            |              |          | TC1     |
| 10012 | I    | Follow the procedure in the document below to upload software onto the HVAC electronic |   | NE            |              |          | TC1     |
| 10013 | A    |  |  | NE            |              |          | TC1     |
| 10014 | I    | Checking 400Vac  |   | NE            |              |          | TC1     |
| 10015 | A    | Ensure that the 400Vac Shore Supply is connected to the vehicle, else connect it       |   | NE            |              |          | TC1     |

|       |   |   |   |    |  |     |
|-------|---|---|---|----|--|-----|
| 10016 | A | Disconnect connector 57XP4_X5 and use a multimeter to measure 400Vac between phases a1, a2 and b1                           |   | NE |  | TC1 |
| 10017 | R | 400Vac is measured between each of the phases   |   | NE |  | TC1 |
| 10018 | A | On the same connector, with a phasemeter, check the correct Phase Rotation between L1- Phase a1, L2- Phase a2, L3- Phase b1 |   | NE |  | TC1 |
| 10019 | R | The phase rotation is correct between all three phases  |   | NE |  | TC1 |
| 10020 | A | Normalize connector 57XP4_X5  |   | NE |  | TC1 |
| 10021 | I | HVAC 50% restriction  |   | NE |  | TC1 |
| 10022 | A | Force [TT] NRG_HvacTc150Cmd = 0   |   | NE |  | TC1 |
| 10023 | A | Force [TT] NRG_HvacTc1Cab50Cmd = 0  |   | NE |  | TC1 |
| 10024 | I | HVAC inhib  |   | NE |  | TC1 |
| 10025 | A | Force [TT] (MPU1)lo_hva_tc1hvacinhibr1__1 = 1   |   | NE |  | TC1 |
| 10026 | A | Force [TT] (MPU1)lo_hva_tc1hvacinhibr2__1 = 1   |   | NE |  | TC1 |
| 10027 | R | HVAC unit turns ON and starts to work   |   | NE |  | TC1 |
| 10028 | I | Emergency Ventilation   |   | NE |  | TC1 |
| 10029 | A | Force [TT] (MPU1)lo_hva_tc1emergventil__1 = 1   |   | NE |  | TC1 |
| 10030 | A | All saloon HVAC units are in ventilation mode, not heating/cooling  |   | NE |  | TC1 |
| 10031 | A | Connect the laptop to the HVAC maintenance software using HCU Finder and verify that main mode changed to Emergency         |  | NE |  | TC1 |
| 10032 | A | Release [TT] (MPU1)lo_hva_tc1emergventil__1   |   | NE |  | TC1 |

|       |   |   |   |    |  |  |     |
|-------|---|---|---|----|--|--|-----|
| 10033 | I | Forced Mode (Saloon HVAC)   |   | NE |  |  | TC1 |
| 10034 | I | In the maintenance software, select the 'Forced' tab, and use the "Required working mode" drop down box to force the following modes: |   | NE |  |  | TC1 |
| 10035 | A | For the next sections, walk through the whole car and physically check (feel) that the HVAC is functioning as desired                 |   | NE |  |  | TC1 |
| 10036 | A | Force Ventilation mode on the Saloon HVAC   |   | NE |  |  | TC1 |
| 10037 | I | Ventilation mode  |  | NE |  |  | TC1 |
| 10038 | R | All saloon HVAC units work in Ventilation mode. Not heating/cooling   |   | NE |  |  | TC1 |
| 10039 | I | Cooling Mode  |   | NE |  |  | TC1 |
| 10040 | A | Force Cooling mode on the Saloon HVAC   |   | NE |  |  | TC1 |
| 10041 | R | All saloon HVAC units work in Cooling mode  |   | NE |  |  | TC1 |
| 10042 | I | Heating Mode  |   | NE |  |  | TC1 |
| 10043 | A | Force Heating mode on the Saloon HVAC   |   | NE |  |  | TC1 |
| 10044 | R | All saloon HVAC units work in Heating mode  |   | NE |  |  | TC1 |
| 10045 | I | Automatic Mode  |   | NE |  |  | TC1 |
| 10046 | A | Force Self-Test on the Saloon HVAC  |   | NE |  |  | TC1 |
| 10047 | R | All saloon HVAC units work according to the mode described in the "Actual working mode"   |   | NE |  |  | TC1 |
| 10048 | R | The Exhaust fans are Turned OFF   |   | NE |  |  | TC1 |
| 10049 | I | Cabin Footrest Heater Test  |   | NE |  |  | TC1 |
| 10050 | I | Use the tools list to record the serial number of the Infrared Thermometer that will be used in the next section                      |   | NE |  |  | TC1 |

|       |   |   |   |    |  |     |
|-------|---|---|---|----|--|-----|
| 10051 | A | Close Circuit Breaker 57Q3  |   | NE |  | TC1 |
| 10052 | R | The Foot Heater pushbutton white lamp 57S3 is OFF   |   | NE |  | TC1 |
| 10053 | R | Foot Heater is Off (UDM)  |   | NE |  | TC1 |
| 10054 | A | Press the Foot Heater Pushbutton 57S3   |   | NE |  | TC1 |
| 10055 | R | The Foot Heater pushbutton white lamp 57S3 is ON  |   | NE |  | TC1 |
| 10056 | R | Read Defined Variable [TT]<br>(MPU1)li_hva_tc1footheaterfault__1 = 0  |   | NE |  | TC1 |
| 10057 | R | Foot Heater is ON (allow some time for it to heat up and confirm with Infrared Thermometer that it is heating up)                     |   | NE |  | TC1 |
| 10058 | A | Once verified working, press the Foot Heater Pushbutton 57S3  |   | NE |  | TC1 |
| 10059 | R | The Foot Heater pushbutton white lamp 57S3 is OFF   |   | NE |  | TC1 |
| 10060 | R | Read Defined Variable [TT]<br>(MPU1)li_hva_tc1footheaterfault__1 = 0  |   | NE |  | TC1 |
| 10061 | R | Foot Heater is OFF (allow some time for it to cool down and confirm with Infrared Thermometer that it is cooling down)                |   | NE |  | TC1 |
| 10062 | A | Check that the Footrest can go up by slightly pressing the adjusting pedal.   |   | NE |  | TC1 |
| 10063 | R | The Footrest is adjustable, it can go up.   |   | NE |  | TC1 |
| 10064 | A | Check that the Footrest can go down by pressing the adjusting pedal. Ensure the other foot applies force on the Footrest              |   | NE |  | TC1 |
| 10065 | R | The Footrest is adjustable, it can go down.   |   | NE |  | TC1 |
| 10066 | I | Forced Mode (Cabin HVAC)  |  | NE |  | TC1 |
| 10067 | I | In the maintenance software, select the 'Forced' tab, and use the "Required working mode" drop down box to force the following modes: |   | NE |  | TC1 |
| 10068 | I | Ventilation Mode  |   | NE |  | TC1 |

|       |   |  |   |    |  |  |     |
|-------|---|--|---|----|--|--|-----|
| 10069 | A | Force Ventilation mode on the Cab HVAC   |   | NE |  |  | TC1 |
| 10070 | R | The Cab HVAC works in Ventilation mode.<br>Not heating/cooling   |   | NE |  |  | TC1 |
| 10071 | I | Cooling Mode   |   | NE |  |  | TC1 |
| 10072 | A | Force Cooling mode on the Cab HVAC   |   | NE |  |  | TC1 |
| 10073 | R | The Cab HVAC works in Cooling mode   |   | NE |  |  | TC1 |
| 10074 | I | Heating Mode   |   | NE |  |  | TC1 |
| 10075 | A | Force Heating mode on the Cab HVAC   |   | NE |  |  | TC1 |
| 10076 | R | The Cab HVAC works in Heating mode   |   | NE |  |  | TC1 |
| 10077 | I | Automatic Mode   |   | NE |  |  | TC1 |
| 10078 | A | Force Automatic mode on the Cab HVAC   |   | NE |  |  | TC1 |
| 10079 | R | The Cab HVAC works in Automatic mode -<br>according to the mode described in the<br>"Actual working mode"                |   | NE |  |  | TC1 |
| 10080 | I | HVAC Faults  |   | NE |  |  | TC1 |
| 10081 | A | In the maintenance software, select the<br>"Alarms / Warnings" tab   |   | NE |  |  | TC1 |
| 10082 | A | Ensure there are no active faults on the<br>HVAC   |  | NE |  |  | TC1 |
| 10083 | R | No active faults identified on the HVAC<br>unit  |   | NE |  |  | TC1 |
| 10084 | I | Air Flow Measure   |   | NE |  |  | TC1 |
| 10085 | A | Check that the windshield air outlet is<br>open  |   | NE |  |  | TC1 |
| 10086 | A | On the left side diffuser, put the<br>anemometer in the middle of the air<br>diffuser directly in contact with the grill |   | NE |  |  | TC1 |

|       |   |  |  |    |  |  |     |
|-------|---|--|--|----|--|--|-----|
| 10087 | A | Record average speed over 30 s   |  | NE |  |  | TC1 |
| 10088 | R | Average air speedRead Undefined Value :<br>x ()  |  | NE |  |  | TC1 |
| 10089 | A | On the right diffuser, put the anemometer<br>in the middle of the air diffuser directly in<br>contact with the grill   |  | NE |  |  | TC1 |
| 10090 | A | Record average speed over 30 s   |  | NE |  |  | TC1 |
| 10091 | R | Average air speedRead Undefined Value :<br>x ()  |  | NE |  |  | TC1 |
| 10092 | A | Compare the two recorded air speeds, left<br>and right. The values should be within 15%<br>of each other.<br><br>If the difference is greater than 15%, check<br>if the flexible duct going to the windshield<br>diffuser is not lose or squeezed. |  | NE |  |  | TC1 |
| 10093 | R | The difference between left and right air<br>flow is less than 15%   |  | NE |  |  | TC1 |
| 10094 | A | Release [TT]<br>(MPU1)lo_hva_tc1hvacinhibr1__1   |  | NE |  |  | TC1 |
| 10095 | A | Release [TT]<br>(MPU1)lo_hva_tc1hvacinhibr2__1   |  | NE |  |  | TC1 |
| 10096 | A | Release [TT] NRG_HvacTc150Cmd  |  | NE |  |  | TC1 |
| 10097 | A | Release [TT] NRG_HvacTc1Cab50Cmd   |  | NE |  |  | TC1 |
| 10098 | I | End of Test  |  | NE |  |  | TC1 |

### 15.1.2 HVAC\_SME

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

| N°    | Type | Instruction   | File | Result status | Result value | Operator                             | Vehicle |
|-------|------|---|------|---------------|--------------|--------------------------------------|---------|
| 10001 | I    | HVA_057 Air Conditioning  |      | OK            |              | Carol Gumedé<br>425280<br>10.12.2025 | TC1     |
| 10002 | I    | Initial conditions  |      | OK            |              | Carol Gumedé<br>425280<br>10.12.2025 | TC1     |
| 10003 | A    | Car Should be Prepared with CVS running and 400V ac available in the car  |      | OK            |              | Carol Gumedé<br>425280<br>10.12.2025 | TC1     |
| 10004 | I    | HVAC Electronic Power Supply  |      | OK            |              | Carol Gumedé<br>425280<br>10.12.2025 | TC1     |
| 10005 | A    | Close Circuit Breaker 13Q1 and 13Q5   |      | OK            |              | Carol Gumedé<br>425280<br>10.12.2025 | TC1     |
| 10006 | I    | Checking 400Vac   |      | OK            |              | Carol Gumedé<br>425280<br>10.12.2025 | TC1     |
| 10007 | A    | Close Circuit Breaker 57Q1  |      | OK            |              | Carol Gumedé<br>425280<br>10.12.2025 | TC1     |
| 10008 | A    | Disconnect connector 57XP4_X5 and Measure 400Vac between all 3 phases which are a1, a2 and b1   |      | OK            |              | Carol Gumedé<br>425280<br>10.12.2025 | TC1     |
| 10009 | R    | 400Vac measured between all phases  |      | OK            |              | Carol Gumedé<br>425280<br>10.12.2025 | TC1     |
| 10010 | A    | On same connector 54XP4_X5, with a phasemeter, check the correct Phase Rotation between points a1- Phase L1, a2- Phase L2 and b1- Phase L3. |      | OK            |              | Carol Gumedé<br>425280<br>10.12.2025 | TC1     |
| 10011 | R    | The phase rotation is correct between all three phases  |      | OK            |              | Carol Gumedé<br>425280<br>10.12.2025 | TC1     |
| 10012 | A    | Normalize connector 57XP4_X5  |      | OK            |              | Carol Gumedé<br>425280<br>10.12.2025 | TC1     |
| 10013 | I    | HVAC controller power supply  |      | OK            |              | Carol Gumedé<br>425280<br>10.12.2025 | TC1     |
| 10014 | A    | Close Circuit Breaker 57Q2  |      | OK            |              | Carol Gumedé<br>425280<br>10.12.2025 | TC1     |
| 10015 | A    | Allow the HVAC to initialize and check on the DDU if the HVAC is online   |      | OK            |              | Carol Gumedé<br>425280<br>10.12.2025 | TC1     |

|       |   |  |   |    |  |                                      |     |
|-------|---|--|---|----|--|--------------------------------------|-----|
| 10016 | R | HVAC unit turns ON and starts to work  |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10017 | I | HVAC inhib   |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10018 | A | Force [TT]<br>(MPU1)lo_hva_tc1hvacinhibr1__1 = 1.0   |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10019 | A | Force [TT]<br>(MPU1)lo_hva_tc1hvacinhibr2__1 = 1.0   |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10020 | I | HVAC 50% restriction   |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10021 | A | Force [TT] NRG_HvacTc150Cmd = 0  |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10022 | A | Force [TT] NRG_HvacTc1Cab50Cmd = 0   |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10023 | I | Saloon HVAC  |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10024 | I | HVAC web portal  |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10025 | A | The attached document is a procedure on how to navigate around the maintenance software.   |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10026 | I | Connect the laptop to the HVAC maintenance software using web browser. Enter the following IP address on the web browser 10.136.xxx.27<br>xxx represents the train number<br>Login: maint<br>Password: maint |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10027 | R | On status tab, Active mode is off for both cab and saloon  |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10028 | A | Go to Alarms tab and clear all the alarms for saloon and cabin   |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10029 | I | Full "Self-test" saloon  |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10030 | I | For the following tests make sure on the webHMI tab you change controller to be controlled by webHMI and not MPU   |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10031 | A | Before running the full test, please click on reset test to reset the previous results.  |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10032 | A | Select Full-Test on the Saloon HVAC  |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |

|       |   |   |   |    |  |                                      |     |
|-------|---|---|---|----|--|--------------------------------------|-----|
| 10033 | R | All saloon HVAC units work according to the mode described in the "ACTIVE MODE" on the status tab                                     |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10034 | R | When the test is complete, please check if the status is showing as "TEST PASS" and the test took 3 mins +/- 2 seconds for each mode. |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10035 | I | Forced Mode (Saloon HVAC)   |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10036 | I | During all tests Walk through the whole car and physically check (feel) that the HVAC is functioning as desired                       |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10037 | I | Go to maintenance tab to force the following modes  |  | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10038 | I | Cooling Mode  |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10039 | A | Select forced Cooling mode on the Saloon HVAC and let it run for 5 mins   |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10040 | R | All HVAC units are cooling  |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10041 | I | Heating Mode  |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10042 | A | Select forced Heating mode on the Saloon HVAC and let it run for 5 mins   |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10043 | R | All HVAC units are heating  |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10044 | I | Cabin Footrest Heater Test  |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10045 | I | Use the tools list to record the serial number of the Infrared Thermometer that will be used in the next section                      |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10046 | A | Close Circuit Breaker 57Q3  |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10047 | R | The Foot Heater pushbutton white lamp 57S3 is OFF   |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10048 | R | Foot Heater is Off (UDM)  |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10049 | A | Press the Foot Heater Pushbutton 57S3   |   | OK |  | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10050 | R | The Foot Heater pushbutton white lamp 57S3 is ON  |   | OK |  | Sicelo Mtolo<br>525130<br>13.01.2026 | TC1 |

|       |   |   |   |    |   |                                      |     |
|-------|---|---|---|----|---|--------------------------------------|-----|
| 10051 | R | Read Defined Variable [TT]<br>(MPU1)li_hva_tc1footheaterfault___1 = 0.0   |   | OK | 0 | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10052 | R | Foot Heater is ON (allow some time for it to heat up and confirm with Infrared Thermometer that it is heating up)                     |   | OK |   | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10053 | A | Once verified working, press the Foot Heater Pushbutton 57S3  |   | OK |   | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10054 | R | The Foot Heater pushbutton white lamp 57S3 is OFF   |   | OK |   | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10055 | R | Read Defined Variable [TT]<br>(MPU1)li_hva_tc1footheaterfault___1 = 0.0   |   | OK | 0 | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10056 | R | Foot Heater is OFF (allow some time for it to cool down and confirm with Infrared Thermometer that it is cooling down)                |   | OK |   | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10057 | A | Check that the Footrest can go up by slightly pressing the adjusting pedal.   |   | OK |   | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10058 | R | The Footrest is adjustable; it can go up.   |   | OK |   | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10059 | A | Check that the Footrest can go down by pressing the adjusting pedal. Ensure the other foot applies force on the Footrest              |   | OK |   | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10060 | R | The Footrest is adjustable; it can go down.   |   | OK |   | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10061 | I | Cab Hvac  |   | OK |   | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10062 | I | Full "Self-test" Cab  |   | OK |   | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10063 | A | Before running the full test, please click on reset test to reset the previous results.   |  | OK |   | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10064 | A | Select Full test on the Cab HVAC  |   | OK |   | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10065 | R | The cab HVAC works according to the mode described in the "ACTIVE MODE" on the status tab   |   | OK |   | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10066 | R | When the test is complete, please check if the status is showing as "TEST PASS" and the test took 3 mins +/- 2 seconds for each mode. |   | OK |   | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10067 | I | Forced Mode (Cabin HVAC)  |   | OK |   | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10068 | I | For the coming test, check(feel) that the air coming through the supply air duct in the cabin is as desired "VENT/COOL or HEAT"       |   | OK |   | Carol Gumede<br>425280<br>10.12.2025 | TC1 |

|       |   |   |   |    |     |                                      |     |
|-------|---|---|---|----|-----|--------------------------------------|-----|
| 10069 | I | Go to maintenance tab to force the following modes  |    | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10070 | I | Cooling Mode  |   | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10071 | A | Select forced Cooling mode on the Cabin HVAC and let it run for 5 mins  |   | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10072 | R | All HVAC ducts in the cab are cooling   |   | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10073 | I | Heating Mode  |   | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10074 | R | Select forced heating mode on the Cabin HVAC and let it run for 5 mins  |   | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10075 | R | All HVAC ducts in the cab are heating   |   | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10076 | I | HVAC Faults   |   | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10077 | A | In the maintenance software, select the "Alarms" tab  |   | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10078 | A | Ensure there are no active faults on the HVAC for Cabin and Saloon. Use the highlighted drop down to navigate between saloon and cabin. |  | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10079 | R | No active faults identified on the HVAC unit  |   | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10080 | I | Air Flow Measure  |   | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10081 | A | Turn the cab ventilation control switch 57S1 to high-speed position   |   | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10082 | A | Check that the windshield air outlet is open  |   | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10083 | A | On the left side diffuser, put an anemometer in the middle of the air diffuser directly in contact with the grill                       |   | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10084 | A | Record the average air speed over 30 s  |   | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10085 | R | Average air speedRead Undefined Value : x (m/s)   |   | OK | 1.8 | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10086 | A | On the right-side diffuser, put the anemometer in the middle of air diffuser directly in contact with the grill                         |   | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |

|       |   |  |  |    |     |                                      |     |
|-------|---|--|--|----|-----|--------------------------------------|-----|
| 10087 | A | Record the average air speed over 30s  |  | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10088 | R | Average air speedRead Undefined Value :<br>x (m/s)   |  | OK | 1.8 | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10089 | A | Compare the two recorded air speeds, left<br>and right. the values should be within 15%<br>of each other.<br><br>If the difference is greater than 15%, check<br>that the flexible duct going to windshield<br>diffuser is not squeezed. |  | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10090 | R | Difference between left-right air flow is<br>within 15%  |  | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10091 | A | Turn the Cab Ventilation Control Switch<br>57S1 to OFF position  |  | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10092 | R | Cabin HVAC turned OFF  |  | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10093 | I | Variable release   |  | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10094 | A | Release [TT]<br>(MPU1)lo_hva_tc1hvacinhibr1__1   |  | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10095 | A | Release [TT]<br>(MPU1)lo_hva_tc1hvacinhibr2__1   |  | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10096 | A | Release [TT] NRG_HvacTc150Cmd  |  | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10097 | A | Release [TT] NRG_HvacTc1Cab50Cmd   |  | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |
| 10098 | I | End of test  |  | OK |     | Carol Gumede<br>425280<br>10.12.2025 | TC1 |



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|

## Section 16 – Fire Protection

---

### 16.1 Instructions list

### 16.1.1 Fire Protection

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

| N°    | Type | Instruction   | File | Result status | Result value | Operator                                 | Vehicle |
|-------|------|---|------|---------------|--------------|--|---------|
| 10001 | I    | Fire Protection System (SPP=067)  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10002 | I    | Initial conditions  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10003 | I    | Car Should be Prepared  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10004 | I    | Power Supply  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10005 | A    | Turn Driver's Master Key 30A1.S1 to Active Cabin Position   |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10006 | A    | Close Circuit Breaker 67Q1  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10007 | R    | Check that the Control Fire Detection Unit 67A1 is ON   |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10008 | I    | Fire Detection Control and Reset  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10009 | I    | Fire Detection Train Lines<br>Dev4/76 = END2 90XP14 pin 21<br>Dev2/7 = END1 Coupler pin 008<br>Dev2/33 = END1 Coupler pin 108 |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10010 | A    | Force [NI] Dev4/76 = 1.0  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10011 | R    | Read Defined Variable [NI] Dev2/7 = 1.0   |      | OK            | 1            | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10012 | R    | Read Defined Variable [NI] Dev2/33 = 1.0  |      | OK            | 1            | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10013 | A    | Check on the Alarm Module that the fire alarm 67H1 is illuminated   |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10014 | I    | Fire Detection Train Lines<br>Dev4/76 = END2 90XP14 pin 21<br>Dev2/7 = END1 Coupler pin 008<br>Dev2/33 = END1 Coupler pin 108 |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |
| 10015 | A    | Force [NI] Dev4/76 = 0.0  |      | OK            |              | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1     |

|       |   |  |  |    |   |  |     |
|-------|---|--|--|----|---|--|-----|
| 10016 | R | Read Defined Variable [NI] Dev2/7 = 0.0  |  | OK | 0 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10017 | R | Read Defined Variable [NI] Dev2/33 = 0.0   |  | OK | 0 | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10018 | R | The Fire Alarm Reset Pushbutton lamp 67H1 is OFF   |  | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10019 | I | Control Fire Detection Unit Configuration  |  | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10020 | A | Open Circuit Breaker 67Q1  |  | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10021 | A | Place a bridge piece between:<br>From: [67A1(local: +LV2 connector - 67XP1_C2 (pin 3))] to: [ -67A1 (local: +LV2 connector -67XP1_C2 pin 1)]   |  | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10022 | A | Place a bridge piece between:<br>From: [67A1(local: +LV2 connector - 67XP1_C2 (pin 6))] to: [ -67A1 (local: +LV2 connector -67XP1_C2 pin 4)]   |  | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10023 | A | Check the continuity between the two provided points of the line below   |  | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10024 | A | From: [(local: +END2 connector - 90XP13.b (pin 4))] to: [ (local: +END2 connector -90XP13.a (pin 7))]  |  | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10025 | A | From: [(local: +END2 connector - 90XP13.b (pin 5))] to: [ (local: +END2 connector -90XP13.a (pin 8))]  |  | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10026 | A | Remove a bridge piece between:<br>From: [67A1(local: +LV2 connector - 67XP1_C2 (pin 3+))] to: [ -67A1 (local: +LV2 connector -67XP1_C2 pin 1)] |  | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10027 | A | Remove a bridge piece between:<br>From: [67A1(local: +LV2 connector - 67XP1_C2(pin 6))] to: [ -67A1 (local: +LV2 connector -67XP1_C2 pin 4)]   |  | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |
| 10028 | I | END OF TEST  |  | OK |   | Sthabile Dlamini<br>418538<br>08.12.2025 | TC1 |



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|

## Section 17 – Driving Command

---

### 17.1 Instructions list

### 17.1.1 Driving Command

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

| N°    | Type | Instruction  | File | Result status | Result value | Operator                             | Vehicle |
|-------|------|--|------|---------------|--------------|--------------------------------------|---------|
| 10001 | I    | Driving Command (SPP=30/31)                                    |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10002 | I    | Initial conditions   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10003 | I    | Cabin should be active   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10004 | A    | Ensure all the doors are closed                                |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10005 | A    | Ensure that there is air connected to the main pipe            |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10006 | A    | Force [TT] (BCU2)li_mp_ps_ok = 1.0                             |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10007 | I    | Circuit Breakers   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10008 | A    | Close Circuit Breaker "30Q1"                                   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10009 | A    | Close Circuit Breaker "30Q2"                                   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10010 | A    | Close Circuit Breaker "30Q3"                                   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10011 | A    | Close Circuit Breaker "31Q1"                                   |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10012 | I    | Direction Selector Switch                                      |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10013 | I    | Set the Running Direction Switch 30A1.S2 to "Neutral" position |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10014 | R    | Read Defined Variable [TT] (MPU1)li_drc_tc1dsnozeror1 = 0.0    |      | OK            | 0            | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10015 | R    | Read Defined Variable [TT] (MPU1)li_drc_tc1dsnozeror2 = 0.0    |      | OK            | 0            | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |
| 10016 | I    | Set the Running Direction Switch 30A1.S2 to "Reverse" position |      | OK            |              | Carol Gumedé<br>425280<br>08.12.2025 | TC1     |

|       |   |   |    |   |                                      |     |
|-------|---|---|----|---|--------------------------------------|-----|
| 10017 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dsnozeror1 = 1.0  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10018 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dsnozeror2 = 1.0  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10019 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dsreverser1 = 1.0   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10020 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dsreverser2 = 1.0   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10021 | I | Reverse Train lines<br>Dev2/28 = coupler pin 011<br>Dev2/29 = coupler pin 132<br>Dev5/78 = END2 90XP15 pin 30 | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10022 | R | Read Defined Variable [NI] Dev2/28 = 1.0  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10023 | R | Read Defined Variable [NI] Dev2/29 = 1.0  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10024 | R | Read Defined Variable [NI] Dev5/78 = 1.0  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10025 | I | Set the Running Direction Switch 30A1.S2<br>to "Forward" position   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10026 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dsnozeror1 = 1.0  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10027 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dsreverser1 = 0.0   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10028 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dsreverser2 = 0.0   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10029 | I | Reverse Train lines<br>Dev2/28 = coupler pin 011<br>Dev2/29 = coupler pin 132<br>Dev5/78 = END2 90XP15 pin 30 | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10030 | R | Read Defined Variable [NI] Dev2/28 = 0.0  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10031 | R | Read Defined Variable [NI] Dev2/29 = 0.0  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10032 | R | Read Defined Variable [NI] Dev5/78 = 0.0  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10033 | I | Forward Train lines<br>Dev2/26 = coupler pin 032<br>Dev2/27 = coupler pin 111<br>Dev5/35 = END2 90XP15 pin 25 | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10034 | R | Read Defined Variable [NI] Dev2/26 = 1.0  | OK | 1 | Carol Gumede<br>425280               | TC1 |

|       |   |   |  |    |   |  |     |
|-------|---|---|--|----|---|--|-----|
|       |   |   |  |    |   | 08.12.2025                             |     |
| 10035 | R | Read Defined Variable [NI] Dev2/27 = 1.0  |  | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10036 | R | Read Defined Variable [NI] Dev5/35 = 1.0  |  | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10037 | I | Set the Running Direction Switch 30A1.S2 to "Neutral" position  |  | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10038 | I | Forward Train lines<br>Dev2/26 = coupler pin 032<br>Dev2/27 = coupler pin 111<br>Dev5/35 = END2 90XP15 pin 25 |  | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10039 | R | Read Defined Variable [NI] Dev2/26 = 0.0  |  | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10040 | R | Read Defined Variable [NI] Dev2/27 = 0.0  |  | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10041 | R | Read Defined Variable [NI] Dev5/35 = 0.0  |  | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10042 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dsnozeror1 = 0.0  |  | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10043 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dsreverser1 = 0.0   |  | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10044 | I | Driving Mode  |  | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10045 | A | Turn the Driving Mode Switch 30S1 to "Speed" position   |  | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10046 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dmodebit1r1 = 1.0   |  | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10047 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dmodebit1r2 = 1.0   |  | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10048 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dmodebit2r1 = 1.0   |  | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10049 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dmodebit2r2 = 1.0   |  | OK | 1 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10050 | A | Turn the Driving Mode Switch 30S1 to "Effort" position  |  | OK |   | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |
| 10051 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dmodebit1r1 = 0.0   |  | OK | 0 | Carol Gumedede<br>425280<br>08.12.2025 | TC1 |

|       |   |   |    |   |                                      |     |
|-------|---|---|----|---|--------------------------------------|-----|
| 10052 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dmodebit3r1 = 0.0 | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10053 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dmodebit2r1 = 1.0 | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10054 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dmodebit2r2 = 1.0 | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10055 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dmodebit4r1 = 1.0 | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10056 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dmodebit4r2 = 1.0 | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10057 | A | Turn the Driving Mode Switch 30S1 to<br>"Depot" position        | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10058 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dmodebit1r1 = 1.0 | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10059 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dmodebit1r2 = 1.0 | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10060 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dmodebit2r1 = 0.0 | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10061 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dmodebit3r1 = 0.0 | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10062 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dmodebit4r1 = 1.0 | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10063 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dmodebit4r2 = 1.0 | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10064 | A | Turn the Driving Mode Switch 30S1 to<br>"Couple/Wash" position  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10065 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dmodebit1r1 = 0.0 | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10066 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dmodebit2r1 = 0.0 | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10067 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dmodebit3r1 = 1.0 | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10068 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dmodebit3r2 = 1.0 | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10069 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dmodebit4r1 = 1.0 | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |  |    |   |                                      |     |
|-------|---|--|----|---|--------------------------------------|-----|
| 10070 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1dmodebit4r2 = 1.0    | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10071 | I | Reduced Power  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10072 | A | Press and hold the Reduced Power<br>Pushbutton 30S2                | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10073 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1reducedpowerr1 = 1.0 | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10074 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1reducedpowerr2 = 1.0 | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10075 | A | Release the Reduced Power Pushbutton<br>30S2                       | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10076 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1reducedpowerr1 = 0.0 | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10077 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1reducedpowerr2 = 0.0 | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10078 | A | Force [TT]<br>(MPU1)lo_drc_tc1reducedlampr1 = 1.0                  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10079 | R | Check that the Reduced Power<br>Pushbutton lamp is ON              | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10080 | A | Release [TT]<br>(MPU1)lo_drc_tc1reducedlampr1                      | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10081 | R | Check that the Reduced Power<br>Pushbutton lamp is OFF             | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10082 | A | Force [TT]<br>(MPU1)lo_drc_tc1reducedlampr2 = 1.0                  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10083 | R | Check that the Reduced Power<br>Pushbutton lamp is ON              | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10084 | A | Release [TT]<br>(MPU1)lo_drc_tc1reducedlampr2                      | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10085 | R | Check that the Reduced Power<br>Pushbutton lamp is OFF             | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10086 | I | Master Controller Traction / No Brake                              | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10087 | I | The Master Controller should be in "OFF"<br>position               | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |  |    |      |                                      |     |
|-------|---|--|----|------|--------------------------------------|-----|
| 10088 | R | Read Min/Max [TT]<br>(MPU1)ai_drc_tc1mcpositionch1 :<br>5479<= x <= 6369                                 | OK | 5968 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10089 | R | Read Min/Max [TT]<br>(MPU1)ai_drc_tc1mcpositionch2 :<br>5479<= x <= 6369                                 | OK | 5888 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10090 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1mcnoastr1 = 0.0  | OK | 0    | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10091 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1mcnoastr2 = 0.0  | OK | 0    | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10092 | I | No Brake Train lines<br>Dev2/32 = coupler pin 039<br>Dev2/8 = coupler pin 139<br>Dev5/82 = 90XP15 pin 32 | OK |      | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10093 | R | Read Defined Variable [NI] Dev2/32 = 1.0   | OK | 1    | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10094 | R | Read Defined Variable [NI] Dev5/82 = 1.0   | OK | 1    | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10095 | R | Read Defined Variable [NI] Dev2/8 = 1.0  | OK | 1    | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10096 | R | Read Defined Variable [TT]<br>(MPU1)bcu1_bcutlnobr = 1.0   | OK | 1    | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10097 | I | Ensure that the blue mushroom is released  | OK |      | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10098 | A | Turn Emergency Braking Loop Override Switch 44S2 to BYPASS   | OK |      | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10099 | I | Emergency Brake Train Line<br>Dev 4/61 = 90XP15 pin 67   | OK |      | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10100 | A | Force [NI] Dev4/61 = 1.0   | OK |      | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10101 | R | Read Defined Variable [NI] Dev2/84 = 1.0   | OK | 1    | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10102 | R | Read Defined Variable [NI] Dev2/85 = 1.0   | OK | 1    | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10103 | A | Turn the Traction Interlock Override Switch 31S1 to "Override" position                                  | OK |      | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10104 | R | Check that the indicator lamp 31H1 is ON   | OK |      | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10105 | I | Emergency Brake Train Line<br>Dev 4/61 = 90XP15 pin 67   | OK |      | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |  |  |    |       |                                      |     |
|-------|---|--|--|----|-------|--------------------------------------|-----|
| 10106 | A | Force [NI] Dev4/61 = 0.0   |  | OK |       | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10107 | R | Read Defined Variable [NI] Dev2/84 = 0.0   |  | OK | 0     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10108 | R | Read Defined Variable [NI] Dev2/85 = 0.0   |  | OK | 0     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10109 | A | Check that the indicator lamp 31H1 is OFF  |  | OK |       | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10110 | A | Turn Emergency Braking Loop Override Switch 44S2 to Normal   |  | OK |       | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10111 | A | Place the Master Controller in "100% Traction" position  |  | OK |       | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10112 | R | Read Min/Max [TT]<br>(MPU1)ai_drc_tc1mcpoositionch1 :<br>29183<= x <= 31102                                    |  | OK | 30880 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10113 | R | Read Min/Max [TT]<br>(MPU1)ai_drc_tc1mcpoositionch2 :<br>29183<= x <= 31102                                    |  | OK | 30624 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10114 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1mctractio1 = 1.0   |  | OK | 1     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10115 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1mctractio2 = 1.0   |  | OK | 1     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10116 | I | No Brake Train line<br>Dev5/82 = 90XP15 pin 32   |  | OK |       | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10117 | R | Read Defined Variable [NI] Dev5/82 = 1.0   |  | OK | 1     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10118 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1mcnoastr1 = 1.0  |  | OK | 1     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10119 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1mcnoastr2 = 1.0  |  | OK | 1     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10120 | I | Traction Train lines<br>Dev2/30 = coupler pin 026<br>Dev2/31 = coupler pin 126<br>Dev5/81 = END2 90XP15 pin 31 |  | OK |       | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10121 | R | Read Defined Variable [NI] Dev5/81 = 1.0   |  | OK | 1     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10122 | R | Read Defined Variable [NI] Dev2/30 = 1.0   |  | OK | 1     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10123 | R | Read Defined Variable [NI] Dev2/31 = 1.0   |  | OK | 1     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |  |    |       |                                      |     |
|-------|---|--|----|-------|--------------------------------------|-----|
| 10124 | R | Read Defined Variable [TT]<br>(MPU1)bcu1_bcutlnobr = 1.0   | OK | 1     | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10125 | R | Read Defined Variable [TT]<br>(MPU1)bcu1_bcutltract = 1.0  | OK | 1     | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10126 | A | Place the Master Controller in "100%<br>Service Brake" position  | OK |       | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10127 | R | Read Min/Max [TT]<br>(MPU1)ai_drc_tc1mcpositionch1 :<br>29183<= x <= 31102                                     | OK | 30880 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10128 | R | Read Min/Max [TT]<br>(MPU1)ai_drc_tc1mcpositionch2 :<br>29183<= x <= 31102                                     | OK | 30624 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10129 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1mcbraker1 = 1.0  | OK | 1     | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10130 | I | No Brake Train lines<br>Dev2/32 = coupler pin 039<br>Dev2/8 = coupler pin 139<br>Dev5/82 = 90XP15 pin 32       | OK |       | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10131 | R | Read Defined Variable [NI] Dev2/32 = 0.0   | OK | 0     | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10132 | R | Read Defined Variable [NI] Dev2/8 = 0.0  | OK | 0     | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10133 | R | Read Defined Variable [NI] Dev5/82 = 0.0   | OK | 0     | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10134 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1mcbraker2 = 1.0  | OK | 1     | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10135 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1mctractonr1 = 0.0  | OK | 0     | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10136 | I | Traction Train lines<br>Dev2/30 = coupler pin 026<br>Dev2/31 = coupler pin 126<br>Dev5/81 = END2 90XP15 pin 31 | OK |       | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10137 | R | Read Defined Variable [NI] Dev2/30 = 0.0   | OK | 0     | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10138 | R | Read Defined Variable [NI] Dev2/31 = 0.0   | OK | 0     | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10139 | R | Read Defined Variable [NI] Dev5/81 = 0.0   | OK | 0     | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10140 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1mctractonr2 = 0.0  | OK | 0     | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10141 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1mcnoastr1 = 1.0  | OK | 1     | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |

|       |   |   |    |       |                                      |     |
|-------|---|---|----|-------|--------------------------------------|-----|
| 10142 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1mcemergencybraker1 = 0.0  | OK | 0     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10143 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1mcemergencybraker2 = 0.0  | OK | 0     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10144 | R | Read Defined Variable [TT]<br>(MPU1)bcu1_bcutltract = 0.0               | OK | 0     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10145 | R | Read Defined Variable [TT]<br>(MPU1)bcu1_bcutlnobr = 0.0                | OK | 0     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10146 | A | Place the Master Controller in "Emergency Brake" position               | OK |       | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10147 | R | Read Min/Max [TT]<br>(MPU1)ai_drc_tc1mcpositionch1 : 29183<= x <= 31102 | OK | 30880 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10148 | R | Read Min/Max [TT]<br>(MPU1)ai_drc_tc1mcpositionch2 : 29183<= x <= 31102 | OK | 30624 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10149 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1mcbraker1 = 1.0           | OK | 1     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10150 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1mcbraker2 = 1.0           | OK | 1     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10151 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1mcnoastr1 = 1.0           | OK | 1     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10152 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1mcemergencybraker1 = 1.0  | OK | 1     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10153 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1mcemergencybraker2 = 1.0  | OK | 1     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10154 | A | Place the Master Controller in "OFF" position                           | OK |       | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10155 | R | Read Min/Max [TT]<br>(MPU1)ai_drc_tc1mcpositionch1 : 5479<= x <= 6369   | OK | 5968  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10156 | R | Read Min/Max [TT]<br>(MPU1)ai_drc_tc1mcpositionch2 : 5479<= x <= 6369   | OK | 5888  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10157 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1mcnoastr1 = 0.0           | OK | 0     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10158 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1mcbraker2 = 0.0           | OK | 0     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10159 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1mcbraker1 = 0.0           | OK | 0     | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |  |   |    |   |                                      |     |
|-------|---|--|---|----|---|--------------------------------------|-----|
| 10160 | I | Traction Interlock   |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10161 | I | Traction Interlock Override  |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10162 | I | Traction Interlock Train lines<br>Dev2/34 = coupler pin 006<br>Dev2/35 = coupler pin 106<br>Dev5/83 = END2 90XP15 pin 41 |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10163 | R | Read Defined Variable [NI] Dev2/34 = 1.0   |   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10164 | R | Read Defined Variable [NI] Dev2/35 = 1.0   |   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10165 | R | Read Defined Variable [NI] Dev5/83 = 1.0   |   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10166 | I | Traction Interlock Bypass Train Line<br>Dev5/4 = END2 90XP14 pin 6   |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10167 | R | Read Defined Variable [NI] Dev5/4 = 1.0  |   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10168 | R | Read Defined Variable [TT]<br>(BCU1)LI_NOT_INHIB = 1.0   |   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10169 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1tractintoverrider1 = 1.0   |   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10170 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1tractintoverrider2 = 1.0   |   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10171 | R | Check that the Indicator Lamp 31H2 is ON   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10172 | A | Turn the Traction Interlock Override<br>Switch 31S1 to "Normal" position   |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10173 | I | Traction Interlock Train lines<br>Dev2/34 = coupler pin 006<br>Dev2/35 = coupler pin 106<br>Dev5/83 = END2 90XP15 pin 41 |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10174 | R | Read Defined Variable [NI] Dev2/34 = 0.0   |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10175 | R | Read Defined Variable [NI] Dev2/35 = 0.0   |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10176 | R | Read Defined Variable [NI] Dev5/83 = 0.0   |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10177 | I | Traction Interlock Bypass Train Line<br>Dev5/4 = END2 90XP14 pin 6   |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |  |   |    |   |                                      |     |
|-------|---|--|---|----|---|--------------------------------------|-----|
| 10178 | R | Read Defined Variable [NI] Dev5/4 = 0.0                                |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10179 | R | Read Defined Variable [TT]<br>(BCU1)LI_NOT_INHIB = 0.0                 |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10180 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1tractintoverrider1 = 0.0 |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10181 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1tractintoverrider2 = 0.0 |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10182 | R | Check that the Indicator Lamp 31H2 is OFF                              |  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10183 | I | Traction Interlock Relay   |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10184 | A | Open Circuit Breaker "30Q1"  |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10185 | A | Open Circuit Breaker "30Q2"  |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10186 | I | Safety Doors Loop Train Line<br>Dev4/89 = END2 90XP15 pin 96           |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10187 | A | Force [NI] Dev4/89 = 1.0   |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10188 | I | Set the Running Direction Switch 30A1.S2<br>to "Forward" position      |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10189 | A | Force [TT]<br>(MPU1)lo_drc_tc1tractionloopr1 = 1.0                     |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10190 | I | Emergency Brake Loop Train Line<br>Dev4/5 = END2 90XP14 pin 9          |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10191 | A | Force [NI] Dev4/5 = 1.0  |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10192 | A | Force [TT]<br>(MPU1)lo_ubk_tc1emergbraker1 = 1.0                       |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10193 | A | Turn the Dead Man Override Switch 60S1<br>to "Override" position       |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10194 | A | Turn the ERTMS Isolation switch 62S1 to<br>"Isolation" position        |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10195 | I | Traction Interlock Train lines<br>Dev5/83 = END2 90XP15 pin 41         |   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |  |    |    |   |                                      |     |
|-------|---|--|----|----|---|--------------------------------------|-----|
| 10196 | R | Read Defined Variable [NI] Dev5/83 = 1.0                             |    | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10197 | R | Read Defined Variable [TT]<br>(MPU1)li_ubk_tc1emergrelay1 = 0.0      |    | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10198 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1tractionauthorr1 = 0.0 |    | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10199 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1tractionauthorr2 = 0.0 |    | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10200 | R | Check that the indicator lamp 31H1 is ON                             | TA | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10201 | A | Press and activate the mushroom switch 44S1                          |    | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10202 | R | Check that the indicator lamp 31H1 is OFF                            |    | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10203 | A | Release the mushroom switch 44S1                                     |    | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10204 | R | Check that the indicator lamp 31H1 is ON                             | TA | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10205 | A | Place the Master Controller in "100% Traction" position              |    | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10206 | I | Traction Train lines<br>Dev5/81 = END2 90XP15 pin 31                 |    | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10207 | R | Read Defined Variable [NI] Dev5/81 = 1.0                             |    | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10208 | A | Place the Master Controller in "Neutral" position                    |    | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10209 | A | Close Circuit Breaker "30Q1"   |    | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10210 | A | Close Circuit Breaker "30Q2"   |    | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10211 | I | Set the Running Direction Switch 30A1.S2 to "Neutral" position       |    | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10212 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1tractionauthorr1 = 1.0 |    | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10213 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1tractionauthorr2 = 1.0 |    | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |  |           |    |   |                                      |     |
|-------|---|--|-----------|----|---|--------------------------------------|-----|
| 10214 | I | Traction Interlock Train lines<br>Dev5/83 = END2 90XP15 pin 41       |           | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10215 | R | Read Defined Variable [NI] Dev5/83 = 0.0                             |           | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10216 | R | Check Indicator Lamp 31H1 is OFF                                     | <b>TA</b> | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10217 | A | Release [TT]<br>(MPU1)lo_drc_tc1tractionloopr1                       |           | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10218 | A | Force [TT]<br>(MPU1)lo_drc_tc1tractionloopr2 = 1.0                   |           | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10219 | I | Set the Running Direction Switch 30A1.S2<br>to "Reverse" position    |           | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10220 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1tractionauthorr1 = 0.0 |           | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10221 | R | Check Indicator Lamp 31H1 is ON                                      | <b>TA</b> | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10222 | I | Traction Authorization at V>5km/h                                    |           | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10223 | I | Safety Doors Loop Train Line<br>Dev4/89 = END2 90XP15 pin 96         |           | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10224 | A | Force [NI] Dev4/89 = 0.0   |           | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10225 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1tractionauthorr1 = 1.0 |           | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10226 | I | V>5km/h Train Line<br>Dev4/38 = END2 90XP15 pin 28                   |           | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10227 | A | Force [NI] Dev4/38 = 1.0   |           | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10228 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1tractionauthorr1 = 0.0 |           | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10229 | I | PEA Loop Train Line<br>Dev4/62 = END2 90XP15 pin 95                  |           | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10230 | A | Force [NI] Dev4/62 = 1.0   |           | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10231 | R | Read Defined Variable [TT]<br>(MPU1)li_drc_tc1tractionauthorr1 = 1.0 |           | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |

|       |   |  |  |    |  |                                      |     |
|-------|---|--|--|----|--|--------------------------------------|-----|
| 10232 | I | PEA Loop Train Line<br>Dev4/62 = END2 90XP15 pin 95              |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10233 | A | Force [NI] Dev4/62 = 0.0   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10234 | I | V>5km/h Train Line<br>Dev4/38 = END2 90XP15 pin 28               |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10235 | A | Force [NI] Dev4/38 = 0.0   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10236 | I | Emergency Brake Loop Train Line<br>Dev4/5 = END2 90XP14 pin 8    |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10237 | A | Force [NI] Dev4/5 = 0.0  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10238 | A | Release [TT]<br>(MPU1)lo_ubk_tc1emergbraker1                     |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10239 | A | Release [TT]<br>(MPU1)lo_drc_tc1tractionloopr2                   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10240 | I | Set the Running Direction Switch 30A1.S2<br>to "Normal" position |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10241 | A | Turn the Dead Man Override Switch 60S1<br>to "Normal" position   |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10242 | A | Turn the ERTMS Isolation switch 62S1 to<br>"Normal" position     |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10243 | I | END OF TEST  |  | OK |  | Carol Gumede<br>425280<br>08.12.2025 | TC1 |



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|

## Section 18 – Train-Ground Communication

---

### 18.1 Instructions list

### 18.1.1 Train-Ground Communication

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

| N°    | Type | Instruction   | File | Result status | Result value | Operator                                 | Vehicle |
|-------|------|---|------|---------------|--------------|--|---------|
| 10001 | I    | Train-Ground Communication (SPP=063; 065)   |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10002 | A    | Turn Driver Key 30A1.S1 to Active Cab position  |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10003 | I    | UHF Radio   |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10004 | I    | Using the tool list on the side of your screen, note the serial number of the antenna cable tester used in this procedure           |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10005 | I    | Antenna Cable   |      | OK            |              | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1     |
| 10006 | A    | Using the Antenna cable tester, recall a set for the UHF Radio antenna cable  |      | OK            |              | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1     |
| 10007 | A    | Ensure the frequency range is 450MHz - 470MHz; Connect the UHF antenna cable to the measuring cable and note the resulting waveform |      | OK            |              | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1     |
| 10008 | R    | The maximum peak of the waveform is =Result Max : $x \leq 1.5 ()$   |      | OK            | 1.15         | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1     |
| 10009 | A    | Save the waveform result with the following name:<br>TS#(#-Train number)_TC1_UHF  |      | OK            |              | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1     |
| 10010 | A    | Normalize UHF antenna cable   |      | OK            |              | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1     |
| 10011 | I    | Power Supply  |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10012 | A    | Close Circuit Breaker 63Q2  |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10013 | R    | Check that the UHF Radio is ON  |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10014 | R    | Check that the UHF hand-held is ON  |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |
| 10015 | A    | press the volume buttons '+' and '-' on the top of the radio, and endure that the sound level increases and decreases accordingly   |      | OK            |              | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1     |

|       |   |  |  |    |  |  |     |
|-------|---|--|--|----|--|--|-----|
| 10016 | A | Open Circuit Breaker 63Q2  |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10017 | R | Check that the UHF Radio is OFF  |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10018 | A | Close Circuit Breaker 63Q1   |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10019 | A | Turn the UHF Radio Emergency Supply switch 63S1 to the "Emergency" position, and release it  |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10020 | R | Check that the UHF Radio is ON   |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10021 | I | After 10 minutes, the UHF Radio should go OFF. Proceed to the next set of steps and validate the next line after 10 minutes. When the Radio goes off, Close 63Q2 to switch on the radio, then continue with the test |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10022 | R | After 10 minutes the UHF Radio turns OFF   |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10023 | I | GSMR Radio   |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10024 | I | Power Supply GSM_RADIO   |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10025 | A | Close Circuit Breaker 65Q2   |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10026 | R | Check that the GSM Radio is ON   |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10027 | A | Open Circuit Breaker 65Q2  |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10028 | R | Check that the GSM Radio is OFF  |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10029 | A | Close Circuit Breaker 65Q1   |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10030 | A | Turn the GSM Radio Emergency Supply switch 65S1 to the "Emergency" position, and release it  |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10031 | R | Check that the GSM Radio is ON   |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10032 | I | After 10 minutes, the GSM Radio should go OFF. Proceed to the next set of steps and validate the next line after 10 minutes.   |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |

|       |   |  |  |    |      |  |     |
|-------|---|--|--|----|------|--|-----|
| 10033 | R | After 10 minutes the GSM Radio turns OFF   |  | OK |      | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10034 | I | Antenna Cable  |  | OK |      | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10035 | A | Using the Antenna cable tester, recall a set for the GSM Radio antenna cable   |  | OK |      | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10036 | A | Ensure the frequency range is 876MHz - 960MHz; Connect the GSMR antenna cable to the measuring cable and note the resulting waveform |  | OK |      | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10037 | R | The maximum peak of the waveform is =Result Max : x <= 2 ()  |  | OK | 1.42 | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10038 | A | Save the waveform result with the following name:<br>TS#(#-Train number)_TC1_ GSMR   |  | OK |      | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10039 | A | Normalize GSMR antenna cable   |  | OK |      | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10040 | I | HMI Power On   |  | OK |      | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10041 | I | Proceed with the following steps after the Radio has turned OFF  |  | OK |      | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10042 | A | Close Circuit Breaker 65Q2 - allow time for the Radio to turn ON   |  | OK |      | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10043 | A | Turn Driver Key 30A1.S1 to Non-Active Cab position   |  | OK |      | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10044 | A | Reset (Off then On) Circuit Breaker 20Q2   |  | OK |      | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10045 | R | The GSMR HMI Screen turns OFF  |  | OK |      | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10046 | A | Turn the GSM Radio Emergency Supply switch 65S1 to the "Emergency" position, and release it  |  | OK |      | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10047 | R | The GSMR HMI Screen turns ON   |  | OK |      | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10048 | A | Open Circuit Breaker 65Q1  |  | OK |      | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10049 | A | Turn Driver Key 30A1.S1 to Active Cab position   |  | OK |      | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10050 | R | The GSMR turns ON  |  | OK |      | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |

|       |   |  |  |    |  |  |     |
|-------|---|--|--|----|--|--|-----|
| 10051 | A | Close Circuit Breaker 65Q1   |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10052 | I | Handset and loud-speaker volume  |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10053 | A | Pick up the GSM-R handset.<br>On the GSM-R, press the "11" key   |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10054 | R | On the GSM-R MMI, volume symbol<br>flashes above the "11" key.   |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10055 | A | Adjust the volume using the arrow<br>upward (louder) or arrow downward<br>(quieter)                          |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10056 | R | The sound change is audible (in the<br>handset and visible on MMI) immediately                               |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10057 | A | On the GSM-R, press the "11" key.  |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10058 | R | On the GSM-R MMI, volume symbol is no<br>longer flashing above the "11" key.                                 |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10059 | A | Hang up the GSM-R handset.<br>On GSM-R M, Press the "11" key.  |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10060 | R | On the GSM-R MMI, volume symbol<br>flashes above the "11" key.   |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10061 | A | Adjust the volume using the arrow<br>upward (louder) or arrow downward<br>(quieter)                          |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10062 | R | The sound change is audible (in the<br>loudspeaker located in the ceiling and<br>visible on MMI) immediately |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10063 | A | On the GSM-R, press the "11" key.  |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10064 | R | On the GSM-R M, volume symbol is no<br>longer flashing above the "11" key.                                   |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |
| 10065 | I | END OF TEST  |  | OK |  | Sthabile Dlamini<br>418538<br>09.12.2025 | TC1 |

### 18.1.2 ERTMS

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

| N°    | Type | Instruction  | File  | Result status | Result value | Operator                             | Vehicle |
|-------|------|--|---|---------------|--------------|--------------------------------------|---------|
| 10001 | I    | ERTMS (SPP = 062)  |   | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10002 | I    | Ensure Circuit Breaker 62Q1 is OPEN  |   | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10003 | I    | DMI Power Supply   |   | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10004 | A    | Use the following procedure to perform Electrical Check on the DMI power supply <a href="#">[17-35-42-280823_Electrical Check for TC1.pdf]</a> |    | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10005 | A    | Close Circuit Breaker 62Q1   |   | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10006 | R    | The ERTMS Display Unit (MMI) is powered ON   |   | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10007 | A    | Place the ERTMS Isolation Switch 62S1 in Isolation position  |   | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10008 | R    | The ERTMS Display Unit (MMI) is powered OFF  |   | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10009 | I    | DMI Software Upload  |   | OK            |              | Sicelo Mtolo<br>525130<br>13.01.2026 | TC1     |
| 10010 | A    | Use the following procedure to upload the DMI software: <a href="#">[17-38-29-280824_DMI Software Upload Procedure.pdf]</a>                    |  | OK            |              | Sicelo Mtolo<br>525130<br>13.01.2026 | TC1     |
| 10011 | I    | Emergency Brake By ERTMS   |   | OK            |              | Sicelo Mtolo<br>525130<br>13.01.2026 | TC1     |
| 10012 | I    | Emergency Brake ERTMS Train lines Dev4/88 =END2 Emergency Brake ERTMS 1  |   | OK            |              | Sicelo Mtolo<br>525130<br>13.01.2026 | TC1     |
| 10013 | A    | Force [NI] Dev4/88 = 1.0   |   | OK            |              | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10014 | R    | Read Defined Variable [TT] (MPU1)li_ets_tc1ertmsebk1r1 = 0.0   |   | OK            | 0            | Carol Gumede<br>425280<br>08.12.2025 | TC1     |
| 10015 | R    | Read Defined Variable [TT] (MPU1)li_ets_tc1ertmsebk1r2 = 0.0   |   | OK            | 0            | Carol Gumede<br>425280<br>08.12.2025 | TC1     |

|       |   |   |    |   |                                      |     |
|-------|---|---|----|---|--------------------------------------|-----|
| 10016 | R | Read Defined Variable [TT]<br>(MPU1)li_ets_tc1ertmsebk2r1 = 1.0               | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10017 | R | Read Defined Variable [TT]<br>(MPU1)li_ets_tc1ertmsebk2r2 = 1.0               | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10018 | I | Emergency Brake ERTMS Train lines<br>Dev4/80 =END2 Emergency Brake<br>ERTMS 2 | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10019 | A | Force [NI] Dev4/80 = 1.0  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10020 | R | Read Defined Variable [TT]<br>(MPU1)li_ets_tc1ertmsebk1r1 = 0.0               | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10021 | R | Read Defined Variable [TT]<br>(MPU1)li_ets_tc1ertmsebk1r2 = 0.0               | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10022 | R | Read Defined Variable [TT]<br>(MPU1)li_ets_tc1ertmsebk2r1 = 0.0               | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10023 | R | Read Defined Variable [TT]<br>(MPU1)li_ets_tc1ertmsebk2r2 = 0.0               | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10024 | I | Emergency Brake ERTMS Train lines<br>Dev4/88 =END2 Emergency Brake<br>ERTMS 1 | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10025 | A | Force [NI] Dev4/88 = 0.0  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10026 | R | Read Defined Variable [TT]<br>(MPU1)li_ets_tc1ertmsebk1r1 = 1.0               | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10027 | R | Read Defined Variable [TT]<br>(MPU1)li_ets_tc1ertmsebk1r2 = 1.0               | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10028 | R | Read Defined Variable [TT]<br>(MPU1)li_ets_tc1ertmsebk2r1 = 0.0               | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10029 | R | Read Defined Variable [TT]<br>(MPU1)li_ets_tc1ertmsebk2r2 = 0.0               | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10030 | I | Emergency Brake ERTMS Train lines<br>Dev4/80 =END2 Emergency Brake<br>ERTMS 2 | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10031 | A | Force [NI] Dev4/80 = 0.0  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10032 | R | Read Defined Variable [TT]<br>(MPU1)li_ets_tc1ertmsebk1r1 = 1.0               | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10033 | R | Read Defined Variable [TT]<br>(MPU1)li_ets_tc1ertmsebk1r2 = 1.0               | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |

|       |   |   |    |   |                                      |     |
|-------|---|---|----|---|--------------------------------------|-----|
| 10034 | R | Read Defined Variable [TT]<br>(MPU1)li_ets_tc1ertmsebk2r1 = 1.0   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10035 | R | Read Defined Variable [TT]<br>(MPU1)li_ets_tc1ertmsebk2r2 = 1.0   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10036 | I | ERTMS Bypass/Reset  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10037 | I | ERTMS Bypass Train Lines<br>Dev2/5 = coupler pin 036<br>Dev2/6 = coupler pin 136<br>Dev5/37 = END2 train line | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10038 | R | Read Defined Variable [NI] Dev2/5 = 1.0   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10039 | R | Read Defined Variable [NI] Dev2/6 = 1.0   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10040 | R | Read Defined Variable [NI] Dev5/37 = 1.0  | OK | 1 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10041 | A | Turn the cab key 30A1.S1 to non-active cab  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10042 | I | ERTMS Bypass Train Lines<br>Dev2/5 = coupler pin 036<br>Dev2/6 = coupler pin 136<br>Dev5/37 = END2 train line | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10043 | R | Read Defined Variable [NI] Dev2/5 = 0.0   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10044 | R | Read Defined Variable [NI] Dev2/6 = 0.0   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10045 | R | Read Defined Variable [NI] Dev5/37 = 0.0  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10046 | A | Turn cab key 30A1.S1 to active cab position   | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10047 | I | Place the ERTMS switch 62S1 to Normal position  | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10048 | I | ERTMS Bypass Train Lines<br>Dev2/5 = coupler pin 036<br>Dev2/6 = coupler pin 136<br>Dev5/37 = END2 train line | OK |   | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10049 | R | Read Defined Variable [NI] Dev2/5 = 0.0   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10050 | R | Read Defined Variable [NI] Dev5/37 = 0.0  | OK | 0 | Carol Gumede<br>425280<br>08.12.2025 | TC1 |
| 10051 | R | Read Defined Variable [TT]<br>(MPU1)li_ets_tc1ertmsbypassr1 = 0.0   | OK | 0 | Carol Gumede<br>425280               | TC1 |

|       |   |   |   |    |   |                                      |     |
|-------|---|---|---|----|---|--------------------------------------|-----|
|       |   |   |   |    |   | 08.12.2025                           |     |
| 10052 | R | Read Defined Variable [TT]<br>(MPU1)li_ets_tc1ertmsbypassr2 = 0.0   |   | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10053 | R | The indicator Lamp 62H1 is OFF  |    | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10054 | A | Place the ERTMS isolation switch 62S1 in isolation position   |   | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10055 | I | ERTMS Bypass Train Lines<br>Dev2/5 = coupler pin 036<br>Dev2/6 = coupler pin 136<br>Dev5/37 = END2 train line |   | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10056 | R | Read Defined Variable [NI] Dev2/5 = 1.0   |   | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10057 | R | Read Defined Variable [NI] Dev2/6 = 1.0   |   | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10058 | R | Read Defined Variable [NI] Dev5/37 = 1.0  |   | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10059 | R | Read Defined Variable [TT]<br>(MPU1)li_ets_tc1ertmsbypassr2 = 1.0   |   | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10060 | R | Read Defined Variable [TT]<br>(MPU1)li_ets_tc1ertmsbypassr1 = 1.0   |   | OK | 1 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10061 | R | The indicator Lamp 62H1 is ON   |  | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10062 | I | Place the ERTMS switch 62S1 to Normal position  |   | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10063 | A | Force [TT] (MPU1)lo_ets_tc1rstertmsr2 = 1.0   |   | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10064 | A | Force [TT] (MPU1)lo_ets_tc1rstertmsr1 = 0.0   |   | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10065 | I | ERTMS Bypass Train Lines<br>Dev2/5 = coupler pin 036<br>Dev2/6 = coupler pin 136<br>Dev5/37 = END2 train line |   | OK |   | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10066 | R | Read Defined Variable [NI] Dev2/5 = 0.0   |   | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10067 | R | Read Defined Variable [NI] Dev2/6 = 0.0   |   | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |
| 10068 | R | Read Defined Variable [NI] Dev5/37 = 0.0  |   | OK | 0 | Carol Gumedé<br>425280<br>08.12.2025 | TC1 |

|       |   |   |   |    |   |  |     |
|-------|---|---|---|----|---|--|-----|
| 10069 | A | Force [TT] (MPU1)lo_ets_tc1rstertmsr2 = 0.0   |   | OK |   | Carol Gumede<br>425280<br>08.12.2025     | TC1 |
| 10070 | A | Force [TT] (MPU1)lo_ets_tc1rstertmsr1 = 1.0   |   | OK |   | Carol Gumede<br>425280<br>08.12.2025     | TC1 |
| 10071 | I | ERTMS Bypass Train Lines<br>Dev2/5 = coupler pin 036<br>Dev2/6 = coupler pin 136<br>Dev5/37 = END2 train line |   | OK |   | Carol Gumede<br>425280<br>08.12.2025     | TC1 |
| 10072 | R | Read Defined Variable [NI] Dev2/5 = 0.0   |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025     | TC1 |
| 10073 | R | Read Defined Variable [NI] Dev2/6 = 0.0   |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025     | TC1 |
| 10074 | R | Read Defined Variable [NI] Dev5/37 = 0.0  |   | OK | 0 | Carol Gumede<br>425280<br>08.12.2025     | TC1 |
| 10075 | A | Force [TT] (MPU1)lo_ets_tc1rstertmsr2 = 1.0   |   | OK |   | Carol Gumede<br>425280<br>08.12.2025     | TC1 |
| 10076 | A | Force [TT] (MPU1)lo_ets_tc1rstertmsr1 = 1.0   |   | OK |   | Carol Gumede<br>425280<br>08.12.2025     | TC1 |
| 10077 | R | Read Defined Variable [NI] Dev2/5 = 1.0   |   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025     | TC1 |
| 10078 | R | Read Defined Variable [NI] Dev2/6 = 1.0   |   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025     | TC1 |
| 10079 | R | Read Defined Variable [NI] Dev5/37 = 1.0  |   | OK | 1 | Carol Gumede<br>425280<br>08.12.2025     | TC1 |
| 10080 | R | The indicator Lamp 62H1 is ON   |  | OK |   | Carol Gumede<br>425280<br>08.12.2025     | TC1 |
| 10081 | A | Force [TT] (MPU1)lo_ets_tc1rstertmsr2 = 0.0   |   | OK |   | Carol Gumede<br>425280<br>08.12.2025     | TC1 |
| 10082 | A | Force [TT] (MPU1)lo_ets_tc1rstertmsr1 = 0.0   |   | OK |   | Carol Gumede<br>425280<br>08.12.2025     | TC1 |
| 10083 | I | Eurobalise Antenna Cable  |   | OK |   | Carol Gumede<br>425280<br>08.12.2025     | TC1 |
| 10084 | I | Use the multimeter for continuity test  |   | OK |   | Dilikani Ngubane<br>526515<br>11.12.2025 | TC1 |
| 10085 | A | Refer to the picture below to test the Eurobalise antenna cables.   |  | OK |   | Dilikani Ngubane<br>526515<br>11.12.2025 | TC1 |
| 10086 | R | ALL the points are continuous from the antenna to End 2.  |   | OK |   | Dilikani Ngubane<br>526515<br>11.12.2025 | TC1 |



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|

|       |   |             |  |    |  |  |     |
|-------|---|-------------|--|----|--|--|-----|
| 10087 | I | END OF TEST |  | OK |  | Dilikani Ngubane<br>526515<br>11.12.2025 | TC1 |
|-------|---|-------------|--|----|--|--|-----|



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|

## Section 19 – Vehicle Normalization

---

### 19.1 Instructions list

### 19.1.1 Vehicle Normalization

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

| N°    | Type | Instruction   | File | Result status | Result value | Operator                                 | Vehicle |
|-------|------|---|------|---------------|--------------|--|---------|
| 10001 | I    | Initial Conditions  |      | OK            |              | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1     |
| 10002 | I    | The VFT procedures are all completed  |      | OK            |              | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1     |
| 10003 | I    | Vehicle Normalization Check   |      | OK            |              | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1     |
| 10004 | R    | On LV1 all Circuit Breakers are installed and secured                                       |      | OK            |              | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1     |
| 10005 | R    | On LV1 all Switches and Buttons are installed properly                                      |      | OK            |              | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1     |
| 10006 | R    | On LV1 all Relays and Timers are installed and secured                                      |      | OK            |              | Sicelo Mtolo<br>525130<br>13.01.2026     | TC1     |
| 10007 | R    | On LV1 all Dataplugs are installed, tightened and earth braids are fastened                 |      | OK            |              | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1     |
| 10008 | R    | On LV1 BRIOMs are properly installed  |      | OK            |              | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1     |
| 10009 | R    | On LV1 all UMC Rack cards are installed properly  |      | OK            |              | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1     |
| 10010 | R    | On LV1 all Connectors are tightened   |      | OK            |              | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1     |
| 10011 | R    | On LV1 there are no missing components, device, wiring or connectors.                       |      | OK            |              | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1     |
| 10012 | R    | On LV2 the MCE is installed and properly tightened  |      | OK            |              | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1     |
| 10013 | R    | On LV2 the GSMR-Radio is installed and properly tightened, and its connectors are tightened |      | OK            |              | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1     |
| 10014 | R    | On LV2 the UHF-Radio is installed and properly tightened, and its connectors are tightened  |      | OK            |              | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1     |
| 10015 | R    | On LV2 the FDCU is installed and properly tightened and its connectors are tightened        |      | OK            |              | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1     |
| 10016 | R    | On LV2 all Circuit Breakers are installed and secured                                       |      | OK            |              | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1     |

|       |   |  |   |    |  |  |     |
|-------|---|--|---|----|--|--|-----|
| 10017 | R | On LV2 all Connectors are tightened  |   | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10018 | R | On LV2 there are no missing components, device, wiring or connectors.                            |   | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10019 | A | On the Driver's Desk, all Switches and Buttons are installed properly. Refer to the image below. |  | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10020 | R | On the Driver's Desk, DDU is installed and properly tightened                                    |   | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10021 | R | On the Driver's Desk, ERTMS HMI is installed and properly tightened                              |   | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10022 | R | On the Driver's Desk, GSMR HMI and Handset are installed and properly tightened                  |   | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10023 | R | On the Driver's Desk, Speedometer is installed and properly tightened                            |   | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10024 | R | On the Driver's Desk, Pressure Gauge is installed and properly tightened                         |   | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10025 | R | On the Driver's Desk, Alarm Module is installed and properly tightened                           |   | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10026 | R | On the Driver's Desk, Voltage/Traction Indicator is installed and properly tightened             |   | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10027 | R | On the Driver's Desk, Master Controller is installed and properly tightened                      |   | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10028 | R | On the UDM, all connectors are tightened   |   | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10029 | R | On the UDR, Wiper Controller is properly installed   |   | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10030 | R | On the UDL, BRIOMs are properly installed  |   | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10031 | R | CPM is properly installed and secured  |   | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10032 | R | Driver Foot Heater is properly installed   |   | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10033 | R | On the Cab Ceiling, Lights are all properly installed  |   | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10034 | R | On the Cab Ceiling, Speakers are all properly installed  |   | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |

|       |   |   |  |    |  |  |     |
|-------|---|---|--|----|--|--|-----|
| 10035 | R | On the Cab Ceiling, Fire Detector is properly installed and secured                               |  | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10036 | R | On the Cab Ceiling, Frontal Camera is properly installed  |  | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10037 | R | All DCUs are properly installed and secured   |  | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10038 | R | All Internal Displays are properly installed and secured  |  | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10039 | R | All Light Covers are properly installed   |  | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10040 | R | All Saloon Cameras are properly installed   |  | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10041 | R | All PEAs and PEIs are properly installed  |  | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10042 | R | On LV7 all Dataplugs are installed, tightened and earth braids are fastened                       |  | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10043 | R | On HC Cubicle the Controller is installed and properly tightened and its connectors are tightened |  | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10044 | R | On the LVB, all Relays and Timers are installed and properly tightened                            |  | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10045 | R | On the LVB, all Circuit Breakers are installed and properly tightened                             |  | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10046 | R | On the Underframe, CVS Agate is installed and properly tightened                                  |  | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10047 | R | On the Underframe, Speed Sensors are installed and properly tightened                             |  | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10048 | R | On the Underframe, Battery Box cables are properly connected                                      |  | OK |  | Dilikani Ngubane<br>526515<br>10.12.2025 | TC1 |
| 10049 | R | ALL underframe covers are normalised  |  | OK |  | Sicelo Mtolo<br>525130<br>13.01.2026     | TC1 |
| 10050 | R | On END1 the Octopus cables are disconnected from the coupler and properly stored.                 |  | OK |  | Sicelo Mtolo<br>525130<br>13.01.2026     | TC1 |
| 10051 | R | On END2 the Octopus cables are disconnected from the car and properly stored.                     |  | OK |  | Sicelo Mtolo<br>525130<br>13.01.2026     | TC1 |
| 10052 | R | The Test Bench is switched OFF and Octopus is disconnected and properly stored                    |  | OK |  | Sicelo Mtolo<br>525130<br>13.01.2026     | TC1 |



|       |   |                                 |  |    |  |                                     |     |
|-------|---|---------------------------------|--|----|--|-------------------------------------|-----|
| 10053 | R | ALL P.Os of this car are closed |  | OK |  | Sicelo Mtol<br>525130<br>13.01.2026 | TC1 |
| 10054 | I | End Of Test                     |  | OK |  | Sicelo Mtol<br>525130<br>13.01.2026 | TC1 |



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|

## Section 20 – Report summaries

### 20.1 Results status

| Test Instruction Sheet                  | Compliant | Incomplete | Non-compliant |
|---|-----------|------------|---------------|
| Energy Distribution                     | X         |            |               |
| TCMS Network                            | X         |            |               |
| Cabin Control                           | X         |            |               |
| Internal Lighting                       | X         |            |               |
| PACIS System                            | X         |            |               |
| Dead Man                                | X         |            |               |
| EXTERNAL SIGNALLING                     | X         |            |               |
| Rescue Mode and Emergency Disconnection | X         |            |               |
| Driver Desk Illumination                | X         |            |               |
| Emergency Brake                         | X         |            |               |
| Service Brake                           | X         |            |               |
| Holding and Parking Brake               | X         |            |               |
| Passenger Doors                         | X         |            |               |
| HVAC Air Conditioning                   | X         |            |               |
| Fire Protection                         | X         |            |               |
| Driving Command                         | X         |            |               |
| Train-Ground Communication              | X         |            |               |
| Vehicle Normalization                   | X         |            |               |

### 20.2 Tools used

| Function    | Tool name  | Tool number  | Next Calibration date |
|-------------|------------|--------------|-----------------------|
| 040_SBK     | Manometer  | Manometer    | 8/31/2026             |
| 045_PBK     | Manometer  | Manometer    | 8/31/2026             |
| 057_HVA_SME | Anemometer | Anemometer 1 | 10/31/2026            |



|  |  |                             |
|--|--|-----------------------------|
| Serial Tests Report<br>TS317 – TC1 – VFT<br>RTR Vehicle Functional Static Testing Report | Document Reference<br>GIB0000008971<br>Version: A0 | Emission date<br>15/01/2026 |
|--|--|-----------------------------|

|             |                |                |            |
|-------------|----------------|----------------|------------|
| 057_HVA_SME | Phasemeter     | Phasemeter     | 11/30/2026 |
| 062_ETC     | Multimeter     | Multimeter 2   | 9/30/2026  |
| 063_065_COM | GSM-R - tester | Radio Analyser | 11/10/2026 |