

# X'TRAPOLIS MEGA

## SUMMARY REPORT

Photo-not-contractual

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RELEASED

**X'TRAPOLIS MEGA**

Application: **PRASA**

Technical Modifications

Geometric tolerances

A4

N

A1

Closure of High Speed Testing and UHF radio functional tests

A0

Creation

Index

Revision Notification no.

Prepared

20/03/2024

K. NKOANA

Checked

20/03/2024

N. NDOVELA

Approved

20/03/2024

M. SIBIYA

Date

Name

en

Summary Report of open items from  
TS210 Routine and Acceptance  
Testing

GIBELQ

GIB0000006230

Rev.:  
A1

1/10

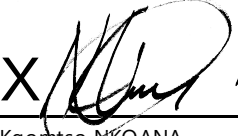
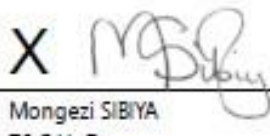
## Table of Modifications

| Rev | Date       | Modifications Content                                                                                                     | Writer          |
|-----|------------|---------------------------------------------------------------------------------------------------------------------------|-----------------|
| A0  | 07/03/2024 | Creation                                                                                                                  | Kgomotso NKOANA |
| A1  | 20/03/2024 | Closure of High Speed 120km/h Acceptance Test on the Customer Mainline (DeWildt) and Closure of UHF Radio functional test | Kgomotso NKOANA |

|                                                                                     |                             |             |                                                                           |                 |
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## Internal Validation

|          | Name                 | Function                       | Date       | Signature                                                                                                                                |
|----------|----------------------|--------------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Writer   | Kgomotso<br>NKOANA   | Test Expert                    | 20/03/2024 | <br>X<br>Kgomotso NKOANA<br>Test Expert                |
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| Approver | Mongezi<br>SIBIYA    | T&C HoD                        | 20/03/2024 | <br>X<br>Mongezi SIBIYA<br>T&C HoD                   |

|                                                                                     |               |       |                                                                           |                 |
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## 1 INTRODUCTION

For the PRASA project Gibela has implemented an exhaustive test program to perform the static routine testing at vehicle and train level including the dynamic routine test schedules. After the handover of each car from production to testing, the train is progressively coupled to formulate a six-car trainset. In parallel to the coupling activities Vehicle Functional Stating Testing is performed individually on the six cars. Static testing is continued to Train Functional Level.

After the static tests have been performed, the Dynamic Test is done on a 1.2 km test track in the Dunnottar Dynamic Test Track to verify all the safety functions of the train up to 60 km/h. The train is then transported to Wolmerton Depot for the final high speed acceptance test and handover to the customer.

## 2 SCOPE

The purpose of this document is to summarize the test results of the different test schedules.

The complete test report for each test schedule including all the test steps with respect to the pass/fail criteria will be submitted.

## 3 TEST CONDITIONS

### Vehicles Tested

TS210 is composed of vehicles:

- TC1# 01 20 210 1
- M4 # 01 20 210 2
- M1 # 01 20 210 3
- M2 # 01 20 210 4
- M3 # 01 20 210 5
- TC2 # 01 20 210 6

### Test Schedule

The tests were performed following the Routine Test Schedules

- |                                                 |                      |
|-------------------------------------------------|----------------------|
| ➤ Vehicle Pre- Testing TC1 (VPT)                | GIB0000001465 rev D2 |
| ➤ Vehicle Pre- Testing TC2 (VPT)                | GIB0000001465 rev D2 |
| ➤ Vehicle Pre- Testing M1 (VPT)                 | GIB0000001465 rev D2 |
| ➤ Vehicle Pre- Testing M2 (VPT)                 | GIB0000001465 rev D2 |
| ➤ Vehicle Pre- Testing M3 (VPT)                 | GIB0000001465 rev D2 |
| ➤ Vehicle Pre- Testing M4 (VPT)                 | GIB0000001465 rev D2 |
| ➤ Vehicle Functional Testing TC1 (VFT)          | GIB0000001462 rev D2 |
| ➤ Vehicle Functional Testing TC2 (VFT)          | GIB0000001463 rev D1 |
| ➤ Vehicle Functional Testing M1 (VFT)           | GIB0000001464 rev D2 |
| ➤ Vehicle Functional Testing M2 (VFT)           | GIB0000001465 rev D2 |
| ➤ Vehicle Functional Testing M3 (VFT)           | GIB0000001466 rev D1 |
| ➤ Vehicle Functional Testing M4 (VFT)           | GIB0000001467 rev D1 |
| ➤ Train Functional Routine Static Testing (TFS) | GIB0000001241 rev D0 |
| ➤ Train Functional Dynamic Testing (TFD)        | GIB0000001029 rev D2 |
| ➤ Acceptance Test on Customer Track (ACT)       | GIB0000000293 rev D0 |

### General test conditions

|                                                                                     |               |       |                                                                           |                 |
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No specific ambient conditions were mandatory during testing.

**Static and Dynamic Test location**

The tests were conducted at the Gibela Dunnottar factory in South Africa

|                                                                                     |               |       |                                                                           |                 |
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## Test participants

| Last Name  | First Name  | Company | Occupation          |
|------------|-------------|---------|---------------------|
| MABUNDA    | Neliswa     | Gibela  | EPU Manager         |
| LUKHELE    | Sifiso      | Gibela  | Serial Test Manager |
| NKOANA     | Kgomotso    | Gibela  | Test Expert         |
| NGUBANE    | Lindani     | Gibela  | EPU Manager         |
| MOCWAGOLE  | Kealeboga   | Gibela  | EPU Manager         |
| MERAPE     | Mavis       | Gibela  | EPU Manager         |
| ZULU       | Vusumuzi    | Gibela  | EPU Manager         |
| MAKOLA     | Hilda       | Gibela  | Test Technician     |
| ZULU       | Nokukhanya  | Gibela  | Test Technician     |
| XULU       | Sithembile  | Gibela  | Test Technician     |
| MATSHAVA   | Junior      | Gibela  | Test Technician     |
| SHINGA     | Sthabile    | Gibela  | Test Technician     |
| MABUNDZANE | Nick        | Gibela  | Test Technician     |
| GUMEDE     | Carol       | Gibela  | Test Technician     |
| MTHEMBU    | Mvelo       | Gibela  | Test Technician     |
| MILANI     | Philemon    | Gibela  | Test Technician     |
| KHOSA      | Tshembhani  | Gibela  | Test Technician     |
| TSELA      | Impi        | Gibela  | Test Technician     |
| MAKAYA     | Linda       | Gibela  | Test Technician     |
| FUNYUFUNYU | Mbavhalelo  | Gibela  | Test Technician     |
| CHIRWA     | NQOBILE     | Gibela  | Test Technician     |
| SIBANYONI  | Sizwe       | Gibela  | Test Technician     |
| MAKHANYA   | Thandanani  | Gibela  | Test Technician     |
| SEKGOLOLO  | Alleta      | Gibela  | Test Technician     |
| MKHONTO    | Simphiwe    | Gibela  | Test Technician     |
| MASONDO    | Nhlakanipho | Gibela  | Test Technician     |
| MLABA      | Vuma        | Gibela  | Test Technician     |
| SIGUDLA    | Walter      | Gibela  | Test Technician     |

## Routine test Period

The routine test was performed from the 27<sup>rd</sup> of February 2024 until the 07<sup>th</sup> of March 2024 in Dunnottar.

|                                                                                     |               |       |                                                                           |                 |
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Acceptance Test location

High-Speed Acceptance Test on the Customer Main Line (De-Wildt),The dynamic performance to be validated to a maximum speed of 120km/h inclusive, ensuring compliance to service, emergency and degraded mode braking performance.

Acceptance Test participants

| Last Name | First Name | Company        | Position               |
|-----------|------------|----------------|------------------------|
| VEZI      | Khehla     | PRASA          | Quality Technician     |
| RAMONYAI  | SEKWATI    | Gibela - TSSSA | Maintenance Technician |
|           |            |                |                        |
|           |            |                |                        |
|           |            |                |                        |
|           |            |                |                        |

Acceptance Test period

The routine test was performed on the 20<sup>th</sup> March 2024 in Wolmerton, Customer Main Line (De-Wildt).

|                                                                                     |               |       |                                                                           |                 |
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## 4 TEST RESULTS

### Vehicle Pre-Testing

|                                          |                      |
|------------------------------------------|----------------------|
| RTR Vehicle Pre-Testing TS210 TC1 Report | GIB0000006225 rev A0 |
| RTR Vehicle Pre-Testing TS210 TC2 Report | GIB0000006226 rev A0 |
| RTR Vehicle Pre-Testing TS210 M1 Report  | GIB0000006221 rev A0 |
| RTR Vehicle Pre-Testing TS210 M2 Report  | GIB0000006222 rev A0 |
| RTR Vehicle Pre-Testing TS210 M3 Report  | GIB0000006223 rev A0 |
| RTR Vehicle Pre-Testing TS210 M4 Report  | GIB0000006224 rev A0 |

All test steps were performed and passed successfully

### Vehicle Functional Testing

|                                                        |                      |
|--------------------------------------------------------|----------------------|
| RTR Vehicle Functional Static Testing TS210 TC1 Report | GIB0000006219rev A0  |
| RTR Vehicle Functional Static Testing TS210 TC2 Report | GIB0000006220 rev A0 |
| RTR Vehicle Functional Static Testing TS210 M1 Report  | GIB0000006215 rev A0 |
| RTR Vehicle Functional Static Testing TS210 M2 Report  | GIB0000006216 rev A0 |
| RTR Vehicle Functional Static Testing TS210 M3 Report  | GIB0000006217 rev A0 |
| RTR Vehicle Functional Static Testing TS210 M4 Report  | GIB0000006218 rev A0 |

All test steps were performed and passed successfully

|                                                                                     |               |       |                                                                           |                 |
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## Train Functional Static Testing

RTR Train Functional Static Testing TS210 Report GIB0000006227 rev A0

All test steps were performed and passed successfully with an exception of Train ground communication, the confirmation of train connectivity to Train tracer CFM. The Netbox sim card is not issued.

## Train Functional Dynamic Testing

RTR Train Functional Dynamic Testing TS210 Report GIB0000006228 rev A0

All test steps were performed and passed successfully

## Acceptance Test on Customer Track

RTR TS210 Acceptance Test on Customer Track test report GIB0000006229 rev A0

All routine (works) tests have been performed and completed successfully.

|                                                                                     |               |       |                                                                           |                 |
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## 5 CONCLUSION AND RECOMMENDATION

All routine (works) tests have been performed and completed successfully except for

1. GSMR – Not commissioned due to damaged PRASA infrastructure.

The Acceptance Test on customer track that covers the high speed 120km/h and UHF radio functional tests have been performed in Wolmerton.

|                                                                                     |                             |             |                                                                           |                 |
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