

**MANUFACTURER**            **ALSTOM Ubunye**  
 Marievale Road, Vosterkroon, Nigel, 1490  
**CUSTOMER**                 **Gibela**  
**CONTRACT**  
**PROJECT**                    **PRASA**

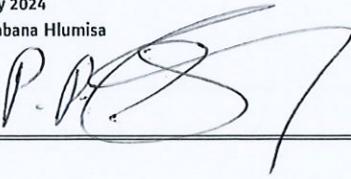
| MANUFACTURER'S DELIVERY DOCUMENT |                          |
|----------------------------------|--------------------------|
| <b>PRODUCT TYPE</b>              | TRAILER BOGIE type TBEXT |
|                                  | DTR0009706803            |
| <b>SERIAL NUMBER</b>             | TBEXT - 612              |

**CONTENTS**

|   |          |                                     |
|---|----------|-------------------------------------|
| - Compliance certificate.....               | Page 1/2 | <input checked="" type="checkbox"/> |
| - List of deviations and missing parts..... | Page 2/2 | <input checked="" type="checkbox"/> |
| - Products traceability.....                | 1 page   | <input checked="" type="checkbox"/> |
| - Load test report.....                     | 1 page   | <input checked="" type="checkbox"/> |

**COMPLIANCE CERTIFICATE**

We hereby declare, barring exceptions, reservations, or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completions of testing and verification, they completely satisfy all specified requirements and applicable standards and regulations.

| CONSTRUCTOR APPROVAL |  |
|----------------------|--|
| <b>DATE</b>          | 17 May 2024  |
| <b>NAME</b>          | Kwababana Hlumisa  |
| <b>VISA</b>          |  |

**I - Deviation / Derogation**

**II - Bogie configuration**

B Bogie index



ALSTOM UBUNYE

# PRODUCTS TRACEABILITY

| Products Designation                | Product Reference | Serial Number | Batch or Date Manufactured | Supplier        |
|-------------------------------------|-------------------|---------------|----------------------------|-----------------|
| Trailer Bogie TBEXT                 | DTR0009706803     | 612           |                            | Alstom - Ubunye |
| Trailer Bogie Frame                 | AR00000176083     | 893           |                            | Alstom - Ubunye |
| Wheelset (Front)                    | AR000000177020    | 1653          |                            | Alstom - Ubunye |
| Axle                                | AR00000174678     | 108019        | 01232169                   | Jinxi           |
| Wheel (Right)                       | AR00000174670     | 142           | 10.23                      | Bonatrans       |
| Wheel (Left)                        | AR000000174670    | 138           | 10.23                      | Bonatrans       |
| Wheelset (Rear)                     | AR00000185203     | 1654          |                            | Alstom - Ubunye |
| Axle                                | AR00000174678     | 108054        | 01232169                   | Jinxi           |
| Wheel (Right)                       | AR00000174670     | 117           | 07.23                      | Bonatrans       |
| Wheel (Left)                        | AR00000174670     | 119           | 07.23                      | Bonatrans       |
| Pneumatic suspension (Right)        | AR00000176127     | 2401039       |                            | TMT             |
| Pneumatic suspension (Left)         | AR00000176127     | 2312144       |                            | TMT             |
| Brake unit with PB (Right rear)     | AR00000174544     | 1722          | 05.24                      | Wabtec          |
| Brake unit without PB (Right front) | AR00000175185     | 5348          | 05.24                      | Wabtec          |
| Brake unit without PB (Left Front)  | AR00000175185     | 5349          | 05.24                      | Wabtec          |
| Brake unit without PB (left rear)   | AR00000175185     | 5338          | 05.24                      | Wabtec          |
|                                     |                   |               |                            |                 |
|                                     |                   |               |                            |                 |
|                                     |                   |               |                            |                 |

# PRESSING REPORT

DATE  
5/16/2024

RESPONSIBLE VALIDATION

PRASA

LOAD TEST : TBEXT

INSTRUCTION SHEET:

PROJECT:

FAMILY:

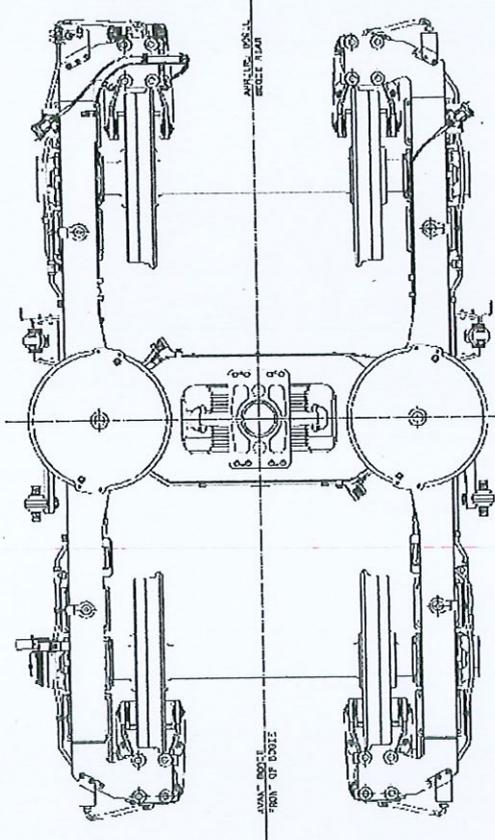
|                             | THEORETICAL |       | MEASURED |
|-----------------------------|-------------|-------|----------|
|                             | MIN         | MAX   |          |
| WHEEL DIAMETER [mm]         | MIN         | MAX   | 38.55 ✓  |
|                             | 33.00       | 39.00 |          |
| GAP PRIMARY SUSPENSION [mm] | MIN         | MAX   | 38.55 ✓  |
|                             | 33.00       | 39.00 |          |
| SHIM THICK [mm]             | Q4          |       | 5504     |
| WEIGHT ON WHEEL [Kg]        | Q4          |       |          |

| SECONDARY SUSPENSION ✓ |                 |                     |                  |
|------------------------|-----------------|---------------------|------------------|
| MEASURED [mm]          | SHIM THICK [mm] | DIM. WITH SHIM [mm] | THEORETICAL [mm] |
| 586.36                 | +               | 4.00 =              | 590.36           |
|                        |                 |                     | MIN 590.00       |
|                        |                 |                     | MAX 592.50       |

|                 |         |
|-----------------|---------|
| RIGHT JACK LOAD | 8453 Kg |
|-----------------|---------|

|                              |           |
|------------------------------|-----------|
| BOGIE SERIAL N°              | 612       |
| BOGIE TYPE                   | TBEXT     |
| BOGIE WEIGHT UNDER LOAD [Kg] | 21912     |
| COMPLETE BOGIE WEIGHT [Kg]   | 4665      |
| OPERATOR                     | EDWARD    |
| DATE                         | 5/16/2024 |

OPERATOR STAMP  
**BFI-21**



|                |         |
|----------------|---------|
| LEFT JACK LOAD | 8453 Kg |
|----------------|---------|

|                             | THEORETICAL |       | MEASURED |
|-----------------------------|-------------|-------|----------|
|                             | MIN         | MAX   |          |
| WHEEL DIAMETER [mm]         | MIN         | MAX   | 37.93 ✓  |
|                             | 33.00       | 39.00 |          |
| GAP PRIMARY SUSPENSION [mm] | MIN         | MAX   | 5535     |
|                             | 33.00       | 39.00 |          |
| SHIM THICK [mm]             | Q1          |       | 5535     |
| WEIGHT ON WHEEL [Kg]        | Q1          |       |          |

| SECONDARY SUSPENSION ✓ |                 |                     |                  |
|------------------------|-----------------|---------------------|------------------|
| MEASURED [mm]          | SHIM THICK [mm] | DIM. WITH SHIM [mm] | THEORETICAL [mm] |
| 586.19                 | +               | 4.00 =              | 590.19           |
|                        |                 |                     | MIN 590.00       |
|                        |                 |                     | MAX 592.50       |

|  |      |           |          |
|--|------|-----------|----------|
| DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm] | 0.17 | MIN -1.00 | MAX 1.00 |
|--|------|-----------|----------|

|  | THEORETICAL |      | MEASURED |
|--|-------------|------|----------|
|  | MIN         | MAX  |          |
| LOAD DIFFERENCE ON FRONT AXLE [%]            | MIN         | MAX  | 0.91 ✓   |
|  | 0.00        | 0.00 |          |
| LOAD DIFFERENCE ON REAR AXLE [%]             | MIN         | MAX  | -0.60 ✓  |
|  | 0.00        | 0.00 |          |
| LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%] | MIN         | MAX  | 0.13 ✓   |
|  | 0.00        | 0.00 |          |
| LOAD DIFFERENCE ON RAILS [%]                 | MIN         | MAX  | 0.16 ✓   |
|  | 0.00        | 0.00 |          |
| LOAD DIFFERENCE ON DIAGONAL WHEELS [%]       | MIN         | MAX  | -0.76 ✓  |
|  | 0.00        | 0.00 |          |

|                             | THEORETICAL |       | MEASURED |
|-----------------------------|-------------|-------|----------|
|                             | MIN         | MAX   |          |
| WHEEL DIAMETER [mm]         | MIN         | MAX   | 37.50 ✓  |
|                             | 33.00       | 39.00 |          |
| GAP PRIMARY SUSPENSION [mm] | MIN         | MAX   | 5438     |
|                             | 33.00       | 39.00 |          |
| SHIM THICK [mm]             | Q3          |       | 5438     |
| WEIGHT ON WHEEL [Kg]        | Q3          |       |          |

**MANUFACTURER** ALSTOM Ubunye  
 Marievale Road, Vosterkroon, Nigel, 1490  
**CUSTOMER** Gibela  
**CONTRACT**  
**PROJECT** PRASA

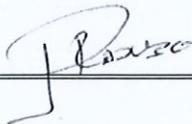
| MANUFACTURER'S DELIVERY DOCUMENT |                     |
|----------------------------------|---------------------|
| PRODUCT TYPE                     | TRAILER BOGIE TBINT |
|                                  | DTR0009706802       |
| SERIAL NUMBER                    | TBINT 620           |

**CONTENTS**

|   |          |                                     |
|---|----------|-------------------------------------|
| - Compliance certificate.....               | Page 1/2 | <input checked="" type="checkbox"/> |
| - List of deviations and missing parts..... | Page 2/2 | <input checked="" type="checkbox"/> |
| - Products traceability.....                | 1 page   | <input checked="" type="checkbox"/> |
| - Load test report.....                     | 1 page   | <input checked="" type="checkbox"/> |
| - Motor certificate.....                    | 8 pages  | <input checked="" type="checkbox"/> |

**COMPLIANCE CERTIFICATE**

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| CONSTRUCTOR APPROVAL |   |
|----------------------|---|
| DATE                 | 22 May 2024   |
| NAME                 | Kwababana Hlumisa   |
| VISA                 |  |

**I - Deviation / Derogation**

**II - Bogie configuration**

B Bogie index



ALSTOM UBUNYE

# PRODUCTS TRACEABILITY

| Products Designation                | Product Reference | Serial Number | Batch or Date Manufactured | Supplier        |
|-------------------------------------|-------------------|---------------|----------------------------|-----------------|
| Trailer Bogie TBINT                 | DTR0009706802     | 620           |                            | Alstom - Abunye |
| Trailer Bogie Frame                 | AR00000176083     | 7891          |                            | Alstom - Ubunye |
| Wheelset (Front)                    | AR000000177020    | 701655        |                            | Alstom - Ubunye |
| Axle                                | AR00000174678     | 101441        | D1230044                   | Jinxi           |
| Wheel (Right)                       | AR00000174670     | 133           | 07-23                      | Bonatrans       |
| Wheel (Left)                        | AR000000174670    | 134           | 07-23                      | Bonatrans       |
| Wheelset (Rear)                     | AR00000185203     | 701656        |                            | Alstom Ubunye   |
| Axle                                | AR00000174678     | 102144        | D1230038                   | Jinxi           |
| Wheel (Right)                       | AR00000174670     | 029           | 10-23                      | Bonatrans       |
| Wheel (Left)                        | AR00000174670     | 030           | 10-23                      | Bonatrans       |
| Pneumatic suspension (Right)        | AR00000176127     | 2312050       |                            | TMT             |
| Pneumatic suspension (Left)         | AR00000176127     | 2312053       |                            | TMT             |
| Brake unit with PB (Right rear)     | AR00000174544     | 1700          | 05-24                      | WABTEC          |
| Brake unit without PB (Right front) | AR00000175185     | 5319          | 05-24                      | WABTEC          |
| Brake unit without PB (Left Front)  | AR00000175185     | 5322          | 05-24                      | WABTEC          |
| Brake unit without PB (left rear)   | AR00000175185     | 5321          | 05-24                      | WABTEC          |
|                                     |                   |               |                            |                 |
|                                     |                   |               |                            |                 |
|                                     |                   |               |                            |                 |

# PRESSING REPORT

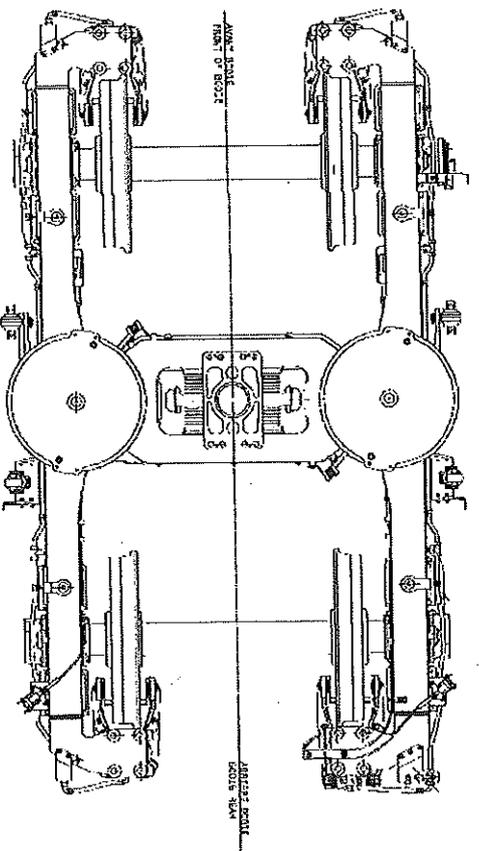
|                   |                        |                    |
|-------------------|------------------------|--------------------|
| DATE<br>5/21/2024 | RESPONSIBLE VALIDATION | PRASA              |
| DATE VALIDATION   |                        | INSTRUCTION SHEET: |
|                   |                        | FAMILY:            |
|                   |                        | LOAD TEST : TBINT  |
|                   |                        | PROJECT: PRASA     |

|                             | THEORETICAL | MEASURED         |
|-----------------------------|-------------|------------------|
| WHEEL DIAMETER [mm]         | MIN<br>MAX  |                  |
| GAP PRIMARY SUSPENSION [mm] | MIN<br>MAX  | 34.50<br>39.96 ✓ |
| SHIM THICK [mm]             |             |                  |
| WEIGHT ON WHEEL [kg]        | Q2          | 4489             |

| SECONDARY SUSPENSION |                 |                     |                  |
|----------------------|-----------------|---------------------|------------------|
| MEASURED [mm]        | SHIM THICK [mm] | DIM. WITH SHIM [mm] | THEORETICAL [mm] |
| 589.79               | +               | 0.00                | = 589.79         |
|                      |                 |                     | MIN 587.50       |
|                      |                 |                     | MAX 590.00       |

RIGHT JACK LOAD  
6695 Kg

|                             | THEORETICAL | MEASURED         |
|-----------------------------|-------------|------------------|
| WHEEL DIAMETER [mm]         | MIN<br>MAX  |                  |
| GAP PRIMARY SUSPENSION [mm] | MIN<br>MAX  | 34.50<br>39.40 ✓ |
| SHIM THICK [mm]             |             |                  |
| WEIGHT ON WHEEL [kg]        | Q4          | 4656             |



|                              |           |
|------------------------------|-----------|
| BOGIE SERIAL N°              | 620       |
| BOGIE TYPE                   | TBINT     |
| BOGIE WEIGHT UNDER LOAD [kg] | 18321     |
| COMPLETE BOGIE WEIGHT [kg]   | 4601      |
| OPERATOR                     | EDWARD    |
| DATE                         | 5/21/2024 |
| OPERATOR STAMP               |           |

BF1-21

LEFT JACK LOAD  
6695 Kg

|                             | THEORETICAL | MEASURED         |
|-----------------------------|-------------|------------------|
| WHEEL DIAMETER [mm]         | MIN<br>MAX  |                  |
| GAP PRIMARY SUSPENSION [mm] | MIN<br>MAX  | 34.50<br>40.00 ✓ |
| SHIM THICK [mm]             |             |                  |
| WEIGHT ON WHEEL [kg]        | Q1          | 4643             |

| SECONDARY SUSPENSION |                 |                     |                  |
|----------------------|-----------------|---------------------|------------------|
| MEASURED [mm]        | SHIM THICK [mm] | DIM. WITH SHIM [mm] | THEORETICAL [mm] |
| 589.95               | +               | 0.00                | = 589.95         |
|                      |                 |                     | MIN 587.50       |
|                      |                 |                     | MAX 590.00       |

| DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm] |      |                  |  |
|--|------|------------------|--|
|  |      | THEORETICAL [mm] |  |
|  |      | MIN -1.00        |  |
|  |      | MAX 1.00         |  |
|  | 0.84 |                  |  |

|  | THEORETICAL | MEASURED      |
|--|-------------|---------------|
| LOAD DIFFERENCE ON FRONT AXLE [%]            | MIN<br>MAX  | -2.00<br>2.00 |
| LOAD DIFFERENCE ON REAR AXLE [%]             | MIN<br>MAX  | -2.00<br>2.00 |
| LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%] | MIN<br>MAX  | -2.00<br>2.00 |
| LOAD DIFFERENCE ON RAILS [%]                 | MIN<br>MAX  | -2.00<br>2.00 |
| LOAD DIFFERENCE ON DIAGONAL WHEELS [%]       | MIN<br>MAX  | -2.00<br>2.00 |
|  |             | 0.16 ✓        |
|  |             | -1.52 ✓       |

|                             | THEORETICAL | MEASURED         |
|-----------------------------|-------------|------------------|
| WHEEL DIAMETER [mm]         | MIN<br>MAX  |                  |
| GAP PRIMARY SUSPENSION [mm] | MIN<br>MAX  | 34.50<br>39.21 ✓ |
| SHIM THICK [mm]             |             |                  |
| WEIGHT ON WHEEL [kg]        | Q3          | 4532             |