



ALSTOM UBUNYE

MANUFACTURER ALSTOM Ubunye
Marievale Road, Vosterkroon, Nigel, 1490

CUSTOMER Gibela

CONTRACT

PROJECT PRASA

MANUFACTURER'S DELIVERY DOCUMENT

PRODUCT TYPE TRAILER BOGIE type TBINT

DTR0009706802

SERIAL NUMBER TBINT - 632


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|---|----------|-------------------------------------|
| - 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

| | |
|------|--|
| DATE | 01 July 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 | 632 | | Alstom - Ubunye |
| Trailer Bogie Frame | AR00000176083 | T0 913 | | Poland -MZ |
| Wheelset (Front) | AR000000177020 | T0 1709 | | Alstom - Ubunye |
| Axle | AR000000174678 | 101478 | 1230044 | Jinxi |
| Wheel (Right) | AR000000174670 | 035 | 07.23 | Bonatrans |
| Wheel (Left) | AR0000000174670 | 058 | 07.23 | Bonatrans |
| Wheelset (Rear) | AR000000185203 | T0 1710 | | Alstom - Ubunye |
| Axle | AR000000174678 | 101484 | 1230044 | Jinxi |
| Wheel (Right) | AR000000174670 | 056 | 07.23 | Bonatrans |
| Wheel (Left) | AR000000174670 | 053 | 07.23 | Bonatrans |
| Pneumatic suspension (Right) | AR000000176127 | 2404026 | | TMT |
| Pneumatic suspension (Left) | AR000000176127 | 2404002 | | TMT |
| Brake unit with PB (Right rear) | AR000000174544 | 1847 | 06.24 | Wabtec |
| Brake unit without PB (Right front) | AR000000175185 | 5568 | 06.24 | Wabtec |
| Brake unit without PB (Left Front) | AR000000175185 | 5566 | 06.24 | Wabtec |
| Brake unit without PB (left rear) | AR000000175185 | 5567 | 06.24 | Wabtec |
| | | | | |
| | | | | |
| | | | | |

PRESSING REPORT

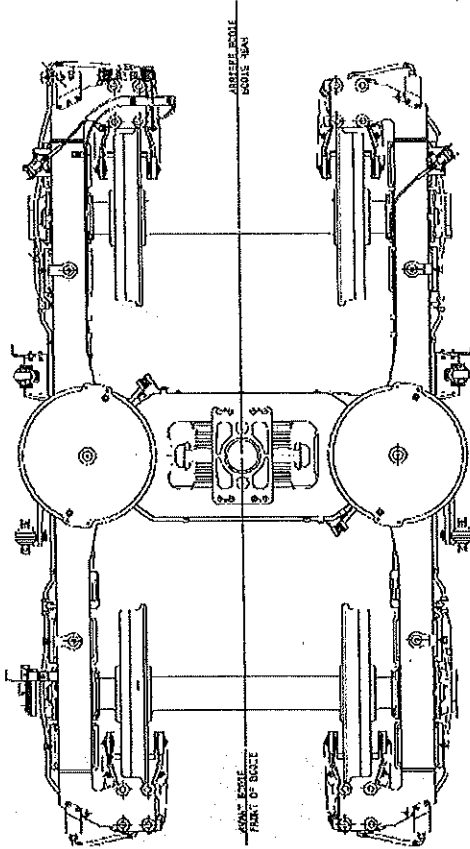
| | | |
|------------------------|--------------------|-------------------|
| DATE 6/20/2024 | PRASA | LOAD TEST : TBINT |
| RESPONSABLE VALIDATION | INSTRUCTION SHEET: | PROJECT: PRASA |
| | FAMILY: | |

| | THEORETICAL | | MEASURED |
|-----------------------------|-------------|-----------|----------|
| | MIN | MAX | |
| WHEEL DIAMETER [mm] | | | |
| GAP PRIMARY SUSPENSION [mm] | MIN 34.50 | MAX 40.50 | 39.07 ✓ |
| SHIM THICK [mm] | | | |
| WEIGHT ON WHEEL [Kg] | Q4 | | 4590 |

| SECONDARY SUSPENSION | | | |
|----------------------|-----------------|---------------------|--------------------------|
| MEASURED [mm] | SHIM THICK [mm] | DIM. WITH SHIM [mm] | THEORETICAL [mm] |
| 589.13 | + | 0.00 | MIN 587.50 MAX 590.00 |

| |
|-----------------|
| RIGHT JACK LOAD |
| 6695 Kg |

| | |
|------------------------------|-----------|
| BOGIE SERIAL N° | 632 |
| BOGIE TYPE | TBINT |
| BOGIE WEIGHT UNDER LOAD [Kg] | 18374 |
| COMPLETE BOGIE WEIGHT [Kg] | 4685 |
| OPERATOR | EDWARD |
| DATE | 6/20/2024 |



| | THEORETICAL | | MEASURED |
|--|-------------|------|----------|
| | MIN | MAX | |
| LOAD DIFFERENCE ON FRONT AXLE [%] | -2.00 | 2.00 | 0.56 ✓ |
| LOAD DIFFERENCE ON REAR AXLE [%] | -2.00 | 2.00 | 0.30 ✓ |
| LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%] | -2.00 | 2.00 | -0.22 ✓ |
| LOAD DIFFERENCE ON RAILS [%] | -2.00 | 2.00 | 0.43 ✓ |
| LOAD DIFFERENCE ON DIAGONAL WHEELS [%] | -2.00 | 2.00 | -0.13 ✓ |

| |
|----------------|
| OPERATOR STAMP |
| BFI-21 |

| |
|----------------|
| LEFT JACK LOAD |
| 6695 Kg |

| SECONDARY SUSPENSION | | | |
|----------------------|-----------------|---------------------|--------------------------|
| MEASURED [mm] | SHIM THICK [mm] | DIM. WITH SHIM [mm] | THEORETICAL [mm] |
| 589.97 | + | 0.00 | MIN 587.50 MAX 590.00 |

| | THEORETICAL | | MEASURED |
|-----------------------------|-------------|-----------|----------|
| | MIN | MAX | |
| WHEEL DIAMETER [mm] | | | |
| GAP PRIMARY SUSPENSION [mm] | MIN 34.50 | MAX 40.50 | 38.86 ✓ |
| SHIM THICK [mm] | | | |
| WEIGHT ON WHEEL [Kg] | Q1 | | 4609 |

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

| | THEORETICAL | | MEASURED |
|-----------------------------|-------------|-----------|----------|
| | MIN | MAX | |
| WHEEL DIAMETER [mm] | | | |
| GAP PRIMARY SUSPENSION [mm] | MIN 34.50 | MAX 40.50 | 38.50 ✓ |
| SHIM THICK [mm] | | | |
| WEIGHT ON WHEEL [Kg] | Q3 | | 4618 |



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

MANUFACTURER'S DELIVERY DOCUMENT

PRODUCT TYPE **TRAILER BOGIE T BEXT**
DTR0009706803
SERIAL NUMBER **TBEXT 625**

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| - 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

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 | |
|----------------------|-------------------|
| DATE | 19 June 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 TBEXT | DTR0009706803 | 625 | | Alstom - Abunye |
| Trailer Bogie Frame | AR000000176083 | T0 917 | | Alstom - Ubunye |
| Wheelset (Front) | AR0000000177020 | T0 1707 | | Alstom - Ubunye |
| Axle | AR000000174678 | 108045 | D1232169 | Jinxi |
| Wheel (Right) | AR000000174670 | 149 | 10-23 | Bonatrans |
| Wheel (Left) | AR0000000174670 | 151 | 10-23 | Bonatrans |
| Wheelset (Rear) | AR000000185203 | T0 1708 | | Alstom Ubunye |
| Axle | AR000000174678 | 101501 | D1230046 | Jinxi |
| Wheel (Right) | AR000000174670 | 147 | 07-23 | Bonatrans |
| Wheel (Left) | AR000000174670 | 149 | 07-23 | Bonatrans |
| Pneumatic suspension (Right) | AR000000176127 | 2403039 | | TMT |
| Pneumatic suspension (Left) | AR000000176127 | 2403040 | | TMT |
| Brake unit with PB (Right rear) | AR000000174544 | 1857 | 06-24 | Wabtec |
| Brake unit without PB (Right front) | AR000000175185 | 5590 | 06-24 | Wabtec |
| Brake unit without PB (Left Front) | AR000000175185 | 5587 | 06-24 | Wabtec |
| Brake unit without PB (left rear) | AR000000175185 | 5586 | 06-24 | Wabtec |
| | | | | |
| | | | | |
| | | | | |

DATE
6/18/2024

PRESSING REPORT

RESPONSABLE VALIDATION

PRASA

INSTRUCTION SHEET:

LOAD TEST : TBEXT

FAMILY:

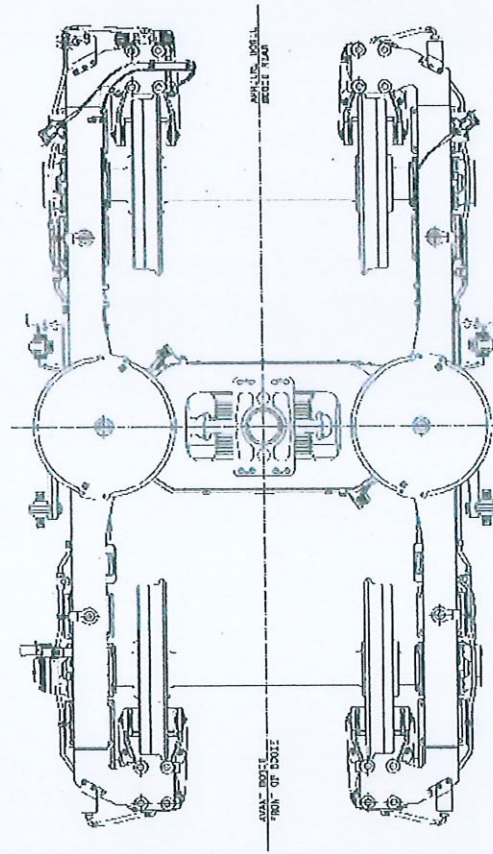
PROJECT:

| WHEEL DIAMETER [mm] | THEORETICAL | | MEASURED |
|--------------------------------|-------------|-----|----------|
| | MIN | MAX | |
| WHEEL DIAMETER [mm] | MIN | MAX | |
| GAP PRIMARY SUSPENSION [mm] | MIN | MAX | 36.37 ✓ |
| SHIM THICK [mm] | | | |
| WEIGHT ON WHEEL [Kg] | Q2 | | 5475 |

| SECONDARY SUSPENSION | | | |
|----------------------|-----------------|---------------------|--------------------------|
| MEASURED [mm] | SHIM THICK [mm] | DIM. WITH SHIM [mm] | THEORETICAL [mm] |
| 585.00 | + | 5.00 | MIN 590.00 MAX 592.50 |

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

| | |
|---------------------------------|-----------|
| BOGIE SERIAL N° | 625 |
| BOGIE TYPE | TBEXT |
| BOGIE WEIGHT UNDER LOAD [Kg] | 21935 |
| COMPLETE BOGIE WEIGHT [Kg] | 4675 |
| OPERATOR | EDWARD |
| DATE | 6/18/2024 |
| OPERATOR STAMP | BFI-21 |



| LOAD DIFFERENCE ON FRONT AXLE [%] | THEORETICAL | | MEASURED |
|---|-------------|-----|----------|
| | MIN | MAX | |
| LOAD DIFFERENCE ON FRONT AXLE [%] | MIN | MAX | 1.13 ✓ |
| LOAD DIFFERENCE ON REAR AXLE [%] | MIN | MAX | -1.31 ✓ |
| LOAD DIFFERENCE ON FRONT AXLE AND REAR AXLE [%] | MIN | MAX | 0.52 ✓ |
| LOAD DIFFERENCE ON RAILS [%] | MIN | MAX | -0.09 ✓ |
| LOAD DIFFERENCE ON DIAGONAL WHEELS [%] | MIN | MAX | -1.22 ✓ |

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

| WHEEL DIAMETER [mm] | THEORETICAL | | MEASURED |
|--------------------------------|-------------|-----|----------|
| | MIN | MAX | |
| WHEEL DIAMETER [mm] | MIN | MAX | |
| GAP PRIMARY SUSPENSION [mm] | MIN | MAX | 36.40 ✓ |
| SHIM THICK [mm] | | | |
| WEIGHT ON WHEEL [Kg] | Q1 | | 5600 |

| SECONDARY SUSPENSION | | | |
|----------------------|-----------------|---------------------|--------------------------|
| MEASURED [mm] | SHIM THICK [mm] | DIM. WITH SHIM [mm] | THEORETICAL [mm] |
| 586.06 | + | 4.00 | MIN 590.06 MAX 592.50 |

| DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm] | | THEORETICAL [mm] |
|--|--|-----------------------|
| -0.06 | | |
| | | MIN -1.00 MAX 1.00 |

| WHEEL DIAMETER [mm] | THEORETICAL | | MEASURED |
|--------------------------------|-------------|-----|----------|
| | MIN | MAX | |
| WHEEL DIAMETER [mm] | MIN | MAX | |
| GAP PRIMARY SUSPENSION [mm] | MIN | MAX | 35.56 ✓ |
| SHIM THICK [mm] | | | |
| WEIGHT ON WHEEL [Kg] | Q3 | | 5408 |