

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

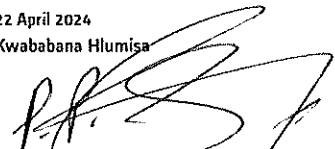
| MANUFACTURER'S DELIVERY DOCUMENT | |
|---|--------------------------|
| PRODUCT TYPE | TRAILER BOGIE type TBEXT |
| | DTR0009706803 |
| SERIAL NUMBER | TBEXT - 604 |

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 | |
|-----------------------------|--|
| DATE | 22 April 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 | 604 | | Alstom - Abunye |
| Trailer Bogie Frame | AR00000176083 | T0 874 | | Alstom - Ubunye |
| Wheelset (Front) | AR000000177020 | T0 1621 | | Alstom - Ubunye |
| Axle | AR00000174678 | 114498 | 12176733 | Jinxi |
| Wheel (Right) | AR00000174670 | 147 | 12.23 | Bonatrans |
| Wheel (Left) | AR000000174670 | 144 | 12.23 | Bonatrans |
| Wheelset (Rear) | AR00000185203 | T0 1622 | | Alstom Ubunye |
| Axle | AR00000174678 | 114487 | 12176733 | Jinxi |
| Wheel (Right) | AR00000174670 | 066 | 10.23 | Bonatrans |
| Wheel (Left) | AR00000174670 | 132 | 12.23 | Bonatrans |
| Pneumatic suspension (Right) | AR00000176127 | 2311111 | | TMT |
| Pneumatic suspension (Left) | AR00000176127 | 2312037 | | TMT |
| Brake unit with PB (Right rear) | AR00000174544 | 1727 | 04.24 | Wabtec |
| Brake unit without PB (Right front) | AR00000175185 | 5200 | 04.24 | Wabtec |
| Brake unit without PB (Left Front) | AR00000175185 | 5207 | 04.24 | Wabtec |
| Brake unit without PB (left rear) | AR00000175185 | 5208 | 04.24 | Wabtec |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

PRESSING REPORT

DATE
4/19/2024

DATE VALIDATION

RESPONSABLE VAUDATION

PRASA

INSTRUCTION SHEET:

FAMILY:

LOAD TEST : TBEXT

PROJECT:

| | THEORETICAL | MEASURED |
|-----------------------------|------------------------|----------|
| WHEEL DIAMETER [mm] | MIN MAX | |
| GAP PRIMARY SUSPENSION [mm] | MIN 33.00 MAX 39.00 | 38.61 ✓ |
| SHIM THICK [mm] | | |
| WEIGHT ON WHEEL [KG] | Q2 | 5368 |

| SECONDARY SUSPENSION | | | |
|----------------------|-----------------|---------------------|------------------|
| MEASURED [mm] | SHIM THICK [mm] | DIM. WITH SHIM [mm] | THEORETICAL [mm] |
| 589.79 | + | 1.00 | = 590.79 |
| | | | MIN 590.00 |
| | | | MAX 592.50 |

RIGHT JACK LOAD

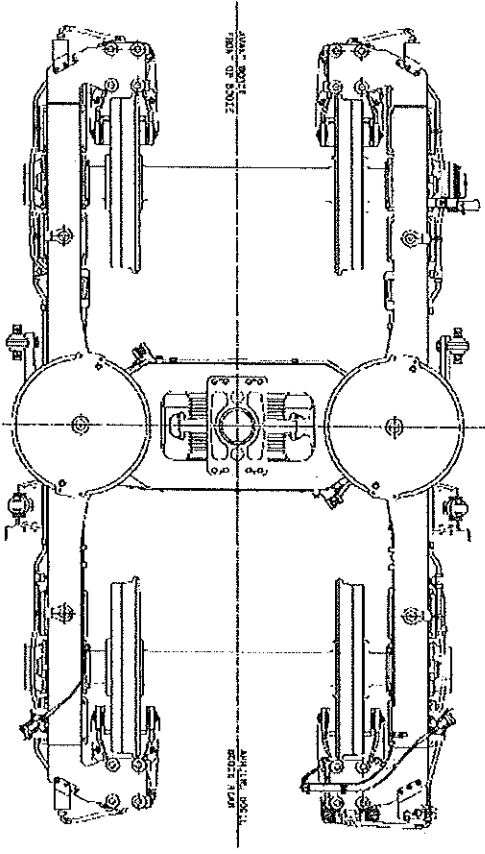
8453 Kg

| | THEORETICAL | MEASURED |
|-----------------------------|------------------------|----------|
| WHEEL DIAMETER [mm] | MIN MAX | |
| GAP PRIMARY SUSPENSION [mm] | MIN 33.00 MAX 39.00 | 38.40 ✓ |
| SHIM THICK [mm] | | |
| WEIGHT ON WHEEL [KG] | Q4 | 5551 |

| | |
|------------------------------|-----------|
| BOGIE SERIAL N° | 604 |
| BOGIE TYPE | TBEXT |
| BOGIE WEIGHT UNDER LOAD [KG] | 21908 |
| COMPLETE BOGIE WEIGHT [KG] | 4666 |
| OPERATOR | DATE |
| BAFANA | 4/19/2024 |

OPERATOR STAMP

D. BAFANA



LEFT JACK LOAD

8454 Kg

| | THEORETICAL | MEASURED |
|-----------------------------|------------------------|----------|
| WHEEL DIAMETER [mm] | MIN MAX | |
| GAP PRIMARY SUSPENSION [mm] | MIN 33.00 MAX 39.00 | 37.60 ✓ |
| SHIM THICK [mm] | | |
| WEIGHT ON WHEEL [KG] | Q1 | 5586 |

| SECONDARY SUSPENSION | | | |
|----------------------|-----------------|---------------------|------------------|
| MEASURED [mm] | SHIM THICK [mm] | DIM. WITH SHIM [mm] | THEORETICAL [mm] |
| 589.20 | + | 1.00 | = 590.20 |
| | | | MIN 590.00 |
| | | | MAX 592.50 |

| | THEORETICAL | MEASURED |
|-----------------------------|------------------------|----------|
| WHEEL DIAMETER [mm] | MIN MAX | |
| GAP PRIMARY SUSPENSION [mm] | MIN 33.00 MAX 39.00 | 37.57 ✓ |
| SHIM THICK [mm] | | |
| WEIGHT ON WHEEL [KG] | Q3 | 5387 |

| | THEORETICAL | MEASURED |
|--|----------------------|----------|
| LOAD DIFFERENCE ON FRONT AXLE [%] | MIN 0.00 MAX 0.00 | 1.99 ✓ |
| LOAD DIFFERENCE ON REAR AXLE [%] | MIN 0.00 MAX 0.00 | -1.50 ✓ |
| LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%] | MIN 0.00 MAX 0.00 | 0.07 ✓ |
| LOAD DIFFERENCE ON RAILS [%] | MIN 0.00 MAX 0.00 | 0.25 ✓ |
| LOAD DIFFERENCE ON DIAGONAL WHEELS [%] | MIN 0.00 MAX 0.00 | -1.74 ✓ |

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

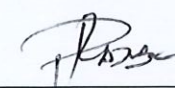
| MANUFACTURER'S DELIVERY DOCUMENT | |
|----------------------------------|---------------------|
| PRODUCT TYPE | TRAILER BOGIE TBINT |
| | DTR0009706802 |
| SERIAL NUMBER | TBINT 612 |

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"/> |
| - 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 | 25 April 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 | 612 | | Alstom - Abunye |
| Trailer Bogie Frame | AR00000176083 | 1881 | | Alstom - Ubunye |
| Wheelset (Front) | AR000000177020 | 701631 | | Alstom - Ubunye |
| Axle | AR00000174678 | 114889 | 12176732 | Jinxi |
| Wheel (Right) | AR00000174670 | 157 | 11-23 | Bonatrans |
| Wheel (Left) | AR000000174670 | 028 | 11-23 | Bonatrans |
| Wheelset (Rear) | AR00000185203 | 701632 | | Alstom Ubunye |
| Axle | AR00000174678 | 114906 | 12176732 | Jinxi |
| Wheel (Right) | AR00000174670 | 156 | 11-23 | Bonatrans |
| Wheel (Left) | AR00000174670 | 107 | 11-23 | Bonatrans |
| Pneumatic suspension (Right) | AR00000176127 | 2307044 | | TMT |
| Pneumatic suspension (Left) | AR00000176127 | 2308017 | | TMT |
| Brake unit with PB (Right rear) | AR00000174544 | 1739 | 04-24 | WABTEC |
| Brake unit without PB (Right front) | AR00000175185 | 5235 | 04-24 | WABTEC |
| Brake unit without PB (Left Front) | AR00000175185 | 5241 | 04-24 | WABTEC |
| Brake unit without PB (left rear) | AR00000175185 | 5240 | 04-24 | WABTEC |
| | | | | |
| | | | | |
| | | | | |

PRESSING REPORT

DATE
4/25/2024

RESPONSIBLE VALIDATION

PRASA

INSTRUCTION SHEET:

FAMILY:

LOAD TEST : TBINT

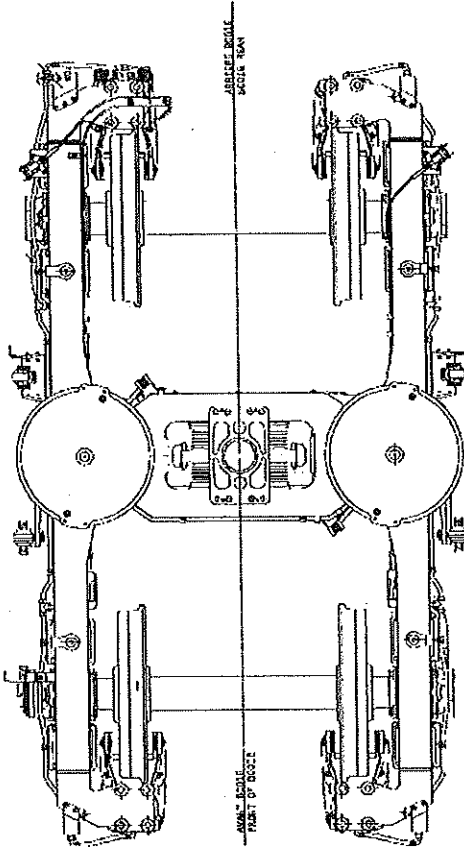
PROJECT: PRASA

| WHEEL DIAMETER [mm] | THEORETICAL | | MEASURED |
|-----------------------------|-------------|-------|----------|
| | MIN | MAX | |
| 34.50 | 34.50 | 34.50 | 37.20 |
| GAP PRIMARY SUSPENSION [mm] | 40.50 | 40.50 | 4556 |
| SHIM THICK [mm] | Q2 | | |
| WEIGHT ON WHEEL [Kg] | Q2 | | 4556 |

| MEASURED [mm] | SHIM THICK [mm] | + | 0.00 | = | 588.61 | SECONDARY SUSPENSION | |
|---------------|-----------------|---|------|---|--------|----------------------|------------------|
| | | | | | | DIM. WITH SHIM [mm] | THEORETICAL [mm] |
| 588.61 | | | | | | MIN | 587.50 |
| | | | | | | MAX | 590.00 |

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

| | |
|------------------------------|-----------|
| BOGIE SERIAL N° | 612 |
| BOGIE TYPE | TBINT |
| BOGIE WEIGHT UNDER LOAD [Kg] | 13346 |
| COMPLETE BOGIE WEIGHT [Kg] | 4600 |
| OPERATOR | BAFANA |
| DATE | 4/25/2024 |
| OPERATOR STAMP | DC-371-G |



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

| WHEEL DIAMETER [mm] | THEORETICAL | | MEASURED |
|-----------------------------|-------------|-------|----------|
| | MIN | MAX | |
| 34.50 | 34.50 | 34.50 | 37.60 |
| GAP PRIMARY SUSPENSION [mm] | 40.50 | 40.50 | 4587 |
| SHIM THICK [mm] | Q1 | | |
| WEIGHT ON WHEEL [Kg] | Q1 | | 4587 |

| MEASURED [mm] | SHIM THICK [mm] | + | 0.00 | = | 588.63 | SECONDARY SUSPENSION | |
|---------------|-----------------|---|------|---|--------|----------------------|------------------|
| | | | | | | DIM. WITH SHIM [mm] | THEORETICAL [mm] |
| 588.63 | | | | | | MIN | 587.50 |
| | | | | | | MAX | 590.00 |

| | |
|--|-----------|
| DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm] | -0.02 |
| THEORETICAL [mm] | MIN -1.00 |
| | MAX 1.00 |

| WHEEL DIAMETER [mm] | THEORETICAL | | MEASURED |
|-----------------------------|-------------|-------|----------|
| | MIN | MAX | |
| 34.50 | 34.50 | 34.50 | 37.30 |
| GAP PRIMARY SUSPENSION [mm] | 40.50 | 40.50 | 4589 |
| SHIM THICK [mm] | Q4 | | |
| WEIGHT ON WHEEL [Kg] | Q4 | | 4589 |

| LOAD DIFFERENCE ON FRONT AXLE [%] | THEORETICAL | | MEASURED |
|--|-------------|-------|----------|
| | MIN | MAX | |
| -2.00 | -2.00 | -2.00 | 0.34 |
| LOAD DIFFERENCE ON REAR AXLE [%] | 2.00 | 2.00 | 0.27 |
| LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%] | -2.00 | -2.00 | -0.33 |
| LOAD DIFFERENCE ON RAILS [%] | 2.00 | 2.00 | 0.31 |
| LOAD DIFFERENCE ON DIAGONAL WHEELS [%] | -2.00 | -2.00 | -0.03 |

| WHEEL DIAMETER [mm] | THEORETICAL | | MEASURED |
|-----------------------------|-------------|-------|----------|
| | MIN | MAX | |
| 34.50 | 34.50 | 34.50 | 36.51 |
| GAP PRIMARY SUSPENSION [mm] | 40.50 | 40.50 | 4614 |
| SHIM THICK [mm] | Q3 | | |
| WEIGHT ON WHEEL [Kg] | Q3 | | 4614 |