



ALSTOM UBUNYE

MANUFACTURER ALSTOM Ubunye
Marievale Road, Vosterkroon, Nigel, 1490

CUSTOMER Gibela

CONTRACT

PROJECT PRASA

MANUFACTURER'S DELIVERY DOCUMENT

PRODUCT TYPE MOTOR BOGIE type MB1
DTR0009706804

SERIAL NUMBER MB1 - 1485

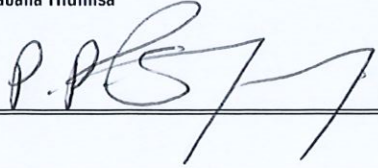
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- List of deviations and missing parts.....	Page 2/2	<input checked="" type="checkbox"/>
- Products traceability.....	1 page	<input checked="" type="checkbox"/>
- Load test report.....	1 page	<input checked="" type="checkbox"/>
- Motor certificate.....	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	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
Motor Bogie MB1	DTR0009706804	1485		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	1851		Alstom - Ubunye
Wheelset (Front)	AR000000177020	3419		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	3418		NGC
Wheel (Right)	AR00000174670	112	11.23	Bonatrans
Wheel (Left)	AR000000174670	070	11.23	Bonatrans
Wheelset (Rear)	AR00000178600	3420		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	3402		NGC
Wheel (Right)	AR00000174670	052	03.24	Bonatrans
Wheel (Left)	AR00000174670	053	03.24	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2401007		Hutchinson
Pneumatic suspension (Left)	AR00000176127	3403003		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1864	06.24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	5619	06.24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	5626	06.24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	5621	06.24	WEBTEC
Motor (front)	AR00000168516	21846		GIBELA
Motor (Rear)	AR00000168516	21807		GIBELA

DATE VALIDATION

RESPONSABLE VALIDATION

PRAJA

INSTRUCTION SHEET:

FAMILY:

LOAD TEST : MOTOR BOGIE

PROJECT:

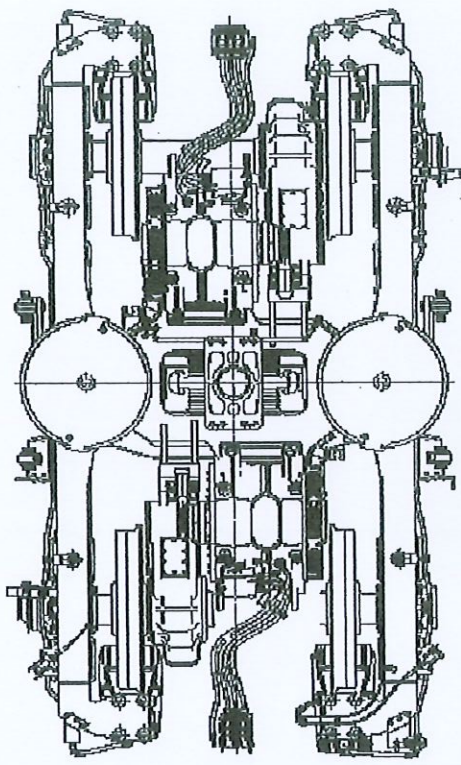
	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	34.60 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q2	5598

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM[mm]	THEORETICAL [mm]
584.63	+	1.00 =	585.63 MIN 587.50 MAX

RIGHT JACK LOAD	
7376	Kg

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	34.80 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q4	5545

BOGIE SERIAL N°	MB1-1485
BOGIE TYPE	M/B
BOGIE WEIGHT UNDER LOAD [Kg]	22384
COMPLETE BOGIE WEIGHT [Kg]	7300
OPERATOR	DATE
BAFANA	6/29/2024



	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00	-0.24 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00	1.11 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00	-0.21 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00	0.44 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00	0.68 ✓

OPERATOR STAMP	
DC-BFI-6	

LEFT JACK LOAD	
7375	Kg

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	34.90 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q1	5571

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.33	+	0.00 =	586.33 MIN 587.50 MAX
DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]			THEORETICAL [mm]
-0.70			MIN -1.00 MAX 1.00

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	34.00 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q3	5670



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21846
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	77554729	
Status:	QC PASS	
Derogations / Concession / Waiver N °:	7072	
Customer modification:	N/A	
Missing parts:	N/A	

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 completion of testing and verification, they completely satisfy all specified requirements, and applicable standards and regulations.

Date: 2024/07/01

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____



Gibela Rail
02 Shosholozwa Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

Property of GIBELA RAIL, cannot be distributed or reproduced without authorization



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N * 21807

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 77446439

Status: QC PASS

Derogations / Concession / Waiver N * : 7072

Customer modification: N/A

Missing parts: N/A

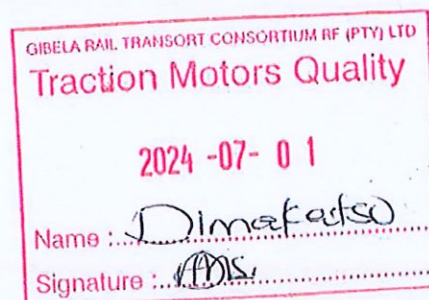
We hereby declare, barring exceptions, reservations or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements, and applicable standards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

Date: 2024/07/01

Function: Final Inspection

Perfomed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____



Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

Property of GIBELA RAIL, cannot be distributed or reproduced without authorization

21807

ALSTOM

GIBEL

FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA

Référence: TROS 916.216

Révision: 2

Documents de référence: AT00000325953 - AT00000325990

Assembly before test

Date: 07/06/24
Name: XOLANI

Assembly after test

Date: 07/06/24
Name: SHEPARD, PIET

ROTOR S/N 8U9C0282-110	STATOR S/N CIT3-1833	07/06/24 piet	
<p>Bearing lubrication - Security operation Incorrect lubrication can lead to engine failure with a safety risk in service SRIL TROS 965.289</p>			
<p>INSULATED CERAMIC BEARING DRIVE END - Security operation Incorrect assembly can lead to engine failure with a safety risk in service SRIL TROS 965.289 FAG: NU 214-E-XL-M1-P6-F1-H257A-J20AB-C4 or NU-214-E-M1-P6-F1-H257A-J20AA-C4 SKF: NU-214-ECM/C4-VA9091 (cross out the references that have not been fitted)</p>			
<p>N°: Romania 0097 09/23 SN214-1369794</p>			
<p>S2 Radial play after assembly (0,042 / 0,114): 0,07mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S4 LUBRICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min:144g - Max:149g</p> <p>Measured quantity: 148g</p> <p>Filter 1 (Name and signature): [Signature]</p> <p>Filter 2 (Name and signature): [Signature]</p> <p>Quality validation: Dime</p>	
<p>S1 INSULATED CERAMIC BEARING OPPOSITE DRIVE END side - Security operation Incorrect assembly can lead to engine failure with a safety risk in service SRIL TROS 965.289 FAG: 6214-M-P6-J20AB-H257A-C4 or 6214-M-P6-J20AA-H257-C4 SKF 6214-M/C4-VL 0241 (cross out the references that have not been fitted)</p>			
<p>Serial N°: Austria 094 W</p>			
<p>S1 Radial play after assembly (0,021 / 0,067): 0,06mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S3 LUBRICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min:159g - Max:164g</p> <p>Measured quantity: 162g</p> <p>Filter 1 (Name and signature): [Signature]</p> <p>Filter 2 (Name and signature): [Signature]</p> <p>Quality validation: Dime</p>	
<p>Reference appareil: AMXG20</p>			
<p>FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA</p>		<p>TROS 916.216 2 Page 1</p>	

ALSTOM

GIBEL

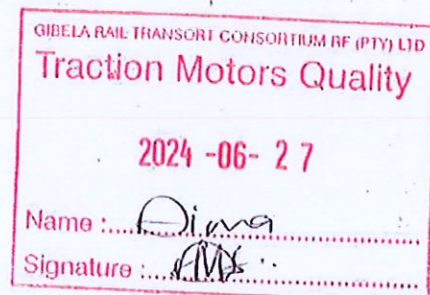
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA

Record the value of the Insulation resistance of the bearings to TROS 915.069 (> 50 kΩ) 55,2 MΩ		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
OPERATOR		Quality verification
Out of round at the end of the shaft drive end, 0,05 max Value 0,01mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max: 0,04mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2):	<input type="checkbox"/> OK <input type="checkbox"/> NOK	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	<input type="checkbox"/> OK <input type="checkbox"/> NOK	<input type="checkbox"/> OK <input type="checkbox"/> NOK

Missing speed sensor Deviation #: 70.70

Prep. & Final Assembly									
OPERATOR				Quality verification					
<input checked="" type="checkbox"/> F1	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK	search reference (in the event of future failure of the motorised screw driver)	QC 1 X 61 Nm	<input type="checkbox"/> OK	<input type="checkbox"/> NOK		
<input checked="" type="checkbox"/> F2	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK	search reference (in the event of future failure of the motorised screw driver)	QC 1 X 61 Nm	<input type="checkbox"/> OK	<input type="checkbox"/> NOK		
<input checked="" type="checkbox"/> F3	Torque tightening to 4 x 44 Nm: Fold locking plate	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK	search reference (in the event of future failure of the motorised screw driver)	QC 1 X 37 Nm	<input type="checkbox"/> OK	<input type="checkbox"/> NOK		
<input checked="" type="checkbox"/> F4	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK	search reference (in the event of future failure of the motorised screw driver)	QC 1 X 18 Nm	<input type="checkbox"/> OK	<input type="checkbox"/> NOK		
<input checked="" type="checkbox"/> F5	Torque tightening to 6 x 22 Nm:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK	search reference (in the event of future failure of the motorised screw driver)	QC 1 X 18 Nm	<input type="checkbox"/> OK	<input type="checkbox"/> NOK		
Finishing									
<input checked="" type="checkbox"/> F1	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK	search reference (in the event of future failure of the motorised screw driver)	QC 1 X 22 Nm	<input type="checkbox"/> OK	<input type="checkbox"/> NOK		
Grease protection transport									
<input checked="" type="checkbox"/> S3	18g (0/+4.5) CC	Mesured quantity:	18g			<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK		
<input checked="" type="checkbox"/> S4	18g (0/+4.5) CC	Mesured quantity:	18g			<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK		
Final inspection following the check-list DTR0000452909 and DTR0000452910 (in the case of 100% inspection of the production)						<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK		
					Final Inspection Quality Insp Name and Signature:		Comments		
					Dima <i>[Signature]</i>				
OBSERVATIONS									

FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA	TROS 916.216	2	Page
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21846

ALSTOM

GIBELG

FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA

Référence: TROS 916.216

Révision: 2

Documents de référence: AT00000325953 - AT00000325990

Assembly before test

Date: 18-06-24

Name: [Signature]

Assembly after test

Date: 19-06-24

Name: [Signature]

ROTOR S/N <u>Sn 72282-023</u>	STATOR S/N <u>91B-1827</u>		
<p>Bearing lubrication - Security operation Incorrect lubrication can lead to engine failure with a safety risk in service SRIL TROS 965.289</p>			
<p>INSULATED CERAMIC BEARING DRIVE END - Security operation Incorrect assembly can lead to engine failure with a safety risk in service SRIL TROS 965.289 <u>FAG: NU 214-E-XL-M1-P6-F1-H257A-J20AB-C4 or NU 214-E-M1-P6-F1-H257A-J20AA-C4-</u> <u>SKF: NU 214 ECM/C4 VA3091</u> (cross out the references that have not been fitted)</p>			
N°: <u>AUSTRIA 347 W</u>			
<p>S2 Radial play after assembly (0,042 / 0,114): <u>0,06</u></p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Mln: 144g - Max: 149g Mesured quantity: <u>148g</u></p> <p>Filter 1 (Name and signature) <u>[Signature]</u> Filter 2 (Name and signature) <u>[Signature]</u></p> <p>Quality validation: <u>Dima</u></p>	
<p>S1 INSULATED CERAMIC BEARING OPPOSITE DRIVE END side - Security operation Incorrect assembly can lead to engine failure with a safety risk in service SRIL TROS 965.289 <u>FAG: 6214-M-P6-J20AB-H257A-C4 or 6214-M-P6-J20AA-H257-C4-</u> <u>SKF 6214-M/C4-VL 0241</u> (cross out the references that have not been fitted)</p>			
Serial N°: <u>AUSTRIA 094 W</u>			
<p>S1 Radial play after assembly (0,021 / 0,067): <u>0,05</u></p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Mln: 159g - Max: 164g Mesured quantity: <u>162g</u></p> <p>Filter 1 (Name and signature) <u>[Signature]</u> Filter 2 (Name and signature) <u>[Signature]</u></p> <p>Quality validation: <u>Dima</u></p>	
Référence appareil: <u>Amx 620</u>			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216 2 Page 1	

ALSTOM

GIBELG

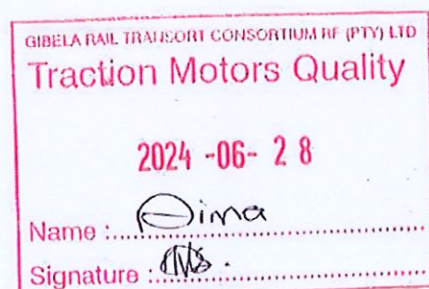
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA

Record the value of the Insulation resistance of the bearings to TROS 915.069 (> 50 kΩ) <u>4,095 Ω</u>		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	
OPERATOR		Quality verification	
Out of round at the end of the shaft drive end, 0,05 max Value <u>0,01</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>Amx 620</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max: <u>0,04</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>Amx 620</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2):	<input type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	<input type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK

Missing speed sensor Deviation # : 7072

Prep. & Final Assembly							
OPERATOR			Quality verification				
<input checked="" type="checkbox"/> F1	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	watch reference (in the event of failure / absence of the motorised screwdriver) D7862128	QC 1 X 61 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/> NOK
<input checked="" type="checkbox"/> F2	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	watch reference (in the event of failure / absence of the motorised screwdriver) D7862128	QC 1 X 61 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/> NOK
<input checked="" type="checkbox"/> F3	Torque tightening to 4 x 44 Nm: Fold locking plate	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	watch reference (in the event of failure / absence of the motorised screwdriver) D7862128	QC 1 X 37 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/> NOK
<input checked="" type="checkbox"/> F4	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	watch reference (in the event of failure / absence of the motorised screwdriver) D7862128	QC 1 X 18 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/> NOK
<input checked="" type="checkbox"/> F5	Torque tightening to 6 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	watch reference (in the event of failure / absence of the motorised screwdriver) D7862128	QC 1 X 18 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/> NOK
Finishing							
<input checked="" type="checkbox"/> F1	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	watch reference (in the event of failure / absence of the motorised screwdriver) D7862128	QC 1 X 22 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/> NOK
Grease protection transport							
<input checked="" type="checkbox"/> S3	18g (0/+4.5) CC	Mesured quantity: 18g			<input checked="" type="checkbox"/>	OK	<input type="checkbox"/> NOK
<input checked="" type="checkbox"/> S4	18g (0/+4.5) CC	Mesured quantity: 18g			<input checked="" type="checkbox"/>	OK	<input type="checkbox"/> NOK
Final Inspection following the check-list DTR0000452909 and DTR0000452910 (in the case of 100% inspection of the production)					<input checked="" type="checkbox"/>	OK	<input type="checkbox"/> NOK
				Final Inspection	Comments		
				Quality Insp Name and Signature:			
				Dima			
OBSERVATIONS							

FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA	TROS 916.216	2	Page
			2





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

MANUFACTURER'S DELIVERY DOCUMENT

PRODUCT TYPE **MOTOR BOGIE MB2**
DTR0009706805
SERIAL NUMBER **MB2 624**


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	29 June 2024
NAME	Kwababana Hlumisa
VISA	

	DELIVERY STATUS	PRASA MB2 624
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I - Deviation / Derogation

II - Bogie configuration

B Bogie index

B		2/2
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**ALSTOM UBUNYE****PRODUCTS TRACEABILITY**

Products Designation	Product Reference	Serial Number	Batch or Date Manufactured	Supplier
Motor Bogie MB2	DTR0009706805	M 624		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M 1844		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M 03411		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3461		NGC
Wheel (Right)	AR00000174670	020	03-24	Bonatrans
Wheel (Left)	AR000000174670	019	03-24	Bonatrans
Wheelset (Rear)	AR00000178600	M 03412		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3459		NGC
Wheel (Right)	AR00000174670	020	03-24	Bonatrans
Wheel (Left)	AR00000174670	021	03-24	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2402023		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2402038		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1875	06-24	Wabtec
Brake unit without PB (Right front)	AR00000175185	5646	06-24	Wabtec
Brake unit without PB (Left Front)	AR00000175185	5627	06-24	Wabtec
Brake unit without PB (left rear)	AR00000175185	5641	06-24	Wabtec
Motor (front)	AR00000168516	21502		Alstom Ornans
Motor (Rear)	AR00000168516	21831		Alstom Ornans

6/27/2024

DATE VALIDATION

RESPONSABLE VALIDATION

PRASA

INSTRUCTION SHEET:

FAMILY:

PRESSING REPORT

LOAD TEST : MOTOR BOGIE

PROJECT:

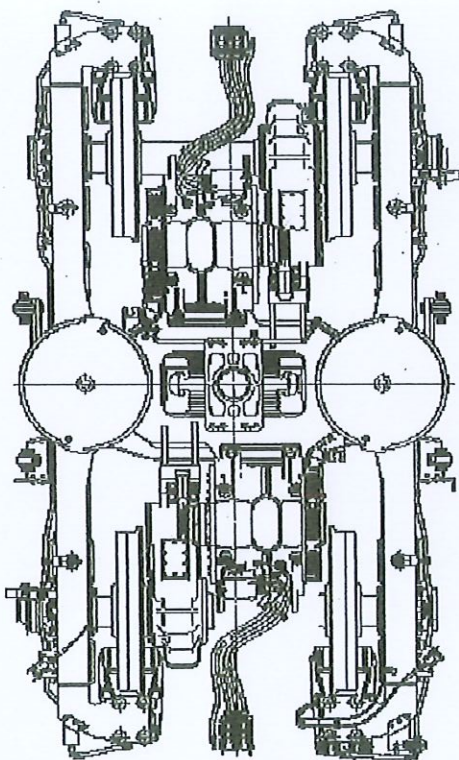
	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	36.50 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [kg]	Q2	5597

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM[mm]	THEORETICAL [mm]
586.82	+	0.00	MIN 585.00 MAX 587.50

RIGHT JACK LOAD	
7376	Kg

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	36.32 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [kg]	Q4	5578

BOGIE SERIAL N°	MB2-624
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [kg]	22426
COMPLETE BOGIE WEIGHT [kg]	7392
OPERATOR	DATE
BAFANA	6/27/2024



	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00	-0.16 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00	0.84 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00	-0.33 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00	0.34 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00	0.50 ✓

OPERATOR STAMP

DC-BFI-6

LEFT JACK LOAD

7377 Kg

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	36.60 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [kg]	Q1	5579

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
587.29	+	0.00	MIN 585.00 MAX 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]	✓	THEORETICAL [mm]
-0.47		MIN -1.00 MAX 1.00

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	36.00 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [kg]	Q3	5672



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21831

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 77541115

Status: QC PASS

Derogations / Concession / Waiver N °: 7072

Customer modification: N/A

Missing parts: N/A

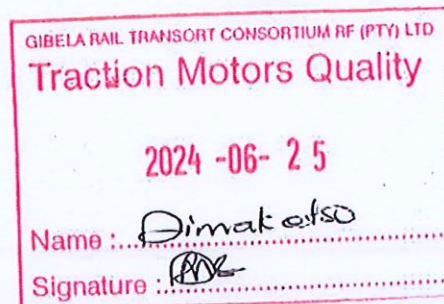
We hereby declare, barring exceptions, reservations or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements, and applicable standards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

Date: 2024/06/25

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____



Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

Property of GIBELA RAIL, cannot be distributed or reproduced without authorization

21831

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FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA

Référence: TROS 916.216

Révision: 2

Documents de référence: AT00000325953 - AT00000325990

Assembly before test

Date: 14/06/24
Name: XOLANT

Assembly after test

Date: 24/06/24
Name: XOLANT, JACQUES P. THOMAS

ROTOR S/N 8U69685-003		STATOR S/N GHS-1834	
<p>Bearing lubrication - Security operation Incorrect lubrication can lead to engine failure with a safety risk in service SRIL TROS 965.289</p>			
<p>INSULATED CERAMIC BEARING DRIVE END - Security operation Incorrect assembly can lead to engine failure with a safety risk in service SRIL TROS 965.289 FAG: NU-214-E-XL-M1-P6-F1-H257A-J20AB-C4 or NU-214-E-M1-P6-F1-H257A-J20AA-C4-- SKE: NU 214 ECM/C4 VA3091 (cross out the references that have not been fitted)</p>			
N°: AUSTRIA 349 W			
<p>S2 Radial play after assembly (0,042 / 0,114): 0,07mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 144g - Max: 49g</p> <p>Filter 1 (Name and signature): </p> <p>Filter 2 (Name and signature): </p> <p>Measured quantity: </p> <p>Quality validation: Dima</p>	
<p>S1 INSULATED CERAMIC BEARING OPPOSITE DRIVE END side - Security operation Incorrect assembly can lead to engine failure with a safety risk in service SRIL TROS 965.289 FAG: 6214-M-P6-J20AB-H257A-C4 or 6214-M-P6-J20AA-H257-C4- SKE 6214-M/C4-VL 0241 (cross out the references that have not been fitted)</p>			
Serial N°: AUSTRIA 015 W			
<p>S1 Radial play after assembly (0,021 / 0,067): 0,05mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 159g - Max: 164g</p> <p>Filter 1 (Name and signature): </p> <p>Filter 2 (Name and signature): </p> <p>Measured quantity: </p> <p>Quality verification: Dima</p>	
Référence appareil: AMXG800			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216 2 Page 1	

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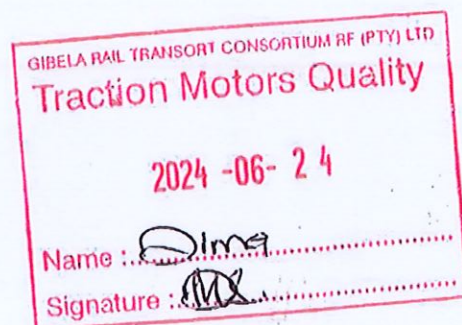
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA

Record the value of the Insulation resistance of the bearings to TROS 915.069 (> 50 kΩ) 162MΩ		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	
OPERATOR		Quality verification	
Out of round at the end of the shaft drive end, 0,05 max Value: 0,04mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number AMXG800	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max: 0,06mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number AMXG800	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2):	<input type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	<input type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK

Mikro- und Feinbearbeitung

Prep. & Final Assembly									
OPERATOR				Quality verification					
F1	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the wrench reference of the matched screwdriver)	QC 1 X 61 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK				
F2	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the wrench reference of the matched screwdriver)	QC 1 X 61 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK				
F3	Torque tightening to 4 x 44 Nm: Fold locking plate	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the wrench reference of the matched screwdriver)	QC 1 X 37 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK				
F4	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the wrench reference of the matched screwdriver)	QC 1 X 18 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK				
F5	Torque tightening to 6 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the wrench reference of the matched screwdriver)	QC 1 X 18 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK				
Finishing									
F1	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the wrench reference of the matched screwdriver)	QC 1 X 22 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK				
Grease protection transport									
S3	18g (0/+4.5) CC	Mesured quantity: 18g		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK					
S4	18g (0/+4.5) CC	Mesured quantity: 18g		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK					
Final inspection following the check-list DTR0000452909 and DTR0000452910 (in the case of 100% inspection of the production)					<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK				
				Final Inspection	Comments				
				Quality Insp Name and Signature:					
				Dima					
OBSERVATIONS									

FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA	TROS 916.216	2	Page 2
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CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21802

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 77419368

Status: QC PASS

Derogations / Concession / Waiver N °: 7072

Customer modification: N/A

Missing parts: N/A

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 completion of testing and verification, they completely satisfy all specified requirements, and applicable standards and regulations.

Date: 2024/06/25

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____



Gibela Rail
02 Shosholozu Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

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21802

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FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA

Référence: TROS 916.216

Révision: 2

Documents de référence: AT00000325953 - AT00000325990

Assembly before test

Date:

Name:

3/05/24
Xouani

Assembly after test

Date:

Name:

02/06/24
Xouani, Mounir, Eric

ROTOR S/N		STATOR S/N	
5469683-020		GUB-1805	
<p>Bearing lubrication - Security operation</p> <p>Incorrect lubrication can lead to engine failure with a safety risk in service</p> <p>SRIL TROS 965.289</p>			
<p>INSULATED CERAMIC BEARING DRIVE END - Security operation</p> <p>Incorrect assembly can lead to engine failure with a safety risk in service</p> <p>SRIL TROS 965.289</p> <p>FAG: NU 214-E-XL-M1-P6-F1-H257A-J20AB-C4 or NU 214-E-M1-P6-F1-H257A-J20AA-C4</p> <p>SKE: NU-214-ECM/C4-VA3091</p> <p>(cross out the references that have not been fitted)</p>			
N°: <u>Romania 0097 09/23 SN 428-1369-194</u>			
<p>S2 Radial play after assembly (0,042 / 0,114): <u>0,06mm</u></p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOX</p>		<p>S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 144g - Max: 149g</p> <p>Measured quantity: <u> </u></p> <p>Filter 1 (Name and signature): <u> </u></p> <p>Filter 2 (Name and signature): <u> </u></p> <p>Quality validation: <u> </u></p>	
<p>S1 INSULATED CERAMIC BEARING OPPOSITE DRIVE END side - Security operation</p> <p>Incorrect assembly can lead to engine failure with a safety risk in service</p> <p>SRIL TROS 965.289</p> <p>FAG: 6214-M-P6-J20AB-H257A-C4 or 6214-M-P6-J20AA-H257-C4</p> <p>SKE 6214-M/C4-VL 0241</p> <p>(cross out the references that have not been fitted)</p>			
Serial N°: <u>Austria 095W</u>			
<p>S1 Radial play after assembly (0,021 / 0,067): <u>0,04mm</u></p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOX</p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 159g - Max: 164g</p> <p>Measured quantity: <u> </u></p> <p>Filter 1 (Name and signature): <u> </u></p> <p>Filter 2 (Name and signature): <u> </u></p> <p>Quality validation: <u> </u></p>	
<p>Référence appareil: <u>AmxG200</u></p>			
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FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA

Record the value of the insulation resistance of the bearings to TROS 915.069 (> 50 kΩ) <u>10,7MΩ</u>		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
OPERATOR		Quality verification
Out of round at the end of the shaft drive end, 0,05 max Value <u>0,02mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOX	Device serial number <u>AmxG200</u>
Out of round on toothed wheel 0,1 max: <u>0,02mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOX	Device serial number <u>AmxG200</u>
sensor / toothed wheel play 0,7 (+/- 0,2):	<input type="checkbox"/> OK <input type="checkbox"/> NOX	Device serial number
Sensor reference: DTR0000512252/DSD1830.19Q14HW	<input type="checkbox"/> OK <input type="checkbox"/> NOX	Device serial number

Missing speed sensor Deviation #: 7072

Prep. & Final Assembly									
OPERATOR				Quality verification					
<input checked="" type="checkbox"/> F1	Torque tightening to 8 x 76 Nm:		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	QC 1 X 61 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK				
<input checked="" type="checkbox"/> F2	Torque tightening to 8 x 76 Nm:		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	QC 1 X 61 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK				
<input checked="" type="checkbox"/> F3	Torque tightening to 4 x 44 Nm:		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	QC 1 X 37 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK				
	Fold locking plate								
<input checked="" type="checkbox"/> F4	Torque tightening to 4 x 22 Nm:		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	QC 1 X 18 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK				
<input checked="" type="checkbox"/> F5	Torque tightening to 6 x 22 Nm:		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	QC 1 X 18 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK				
Finishing									
<input checked="" type="checkbox"/> F1	Torque tightening to 4 x 22 Nm:		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	QC 1 X 22 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK				
Grease protection transport									
<input checked="" type="checkbox"/> S3	18g (0/+4.5) CC	Mesured quantity: 18g		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK					
<input checked="" type="checkbox"/> S4	18g (0/+4.5) CC	Mesured quantity: 18g		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK					
Final inspection following the check-list DTR0000452909 and DTR0000452910 (In the case of 100% inspection of the production)					<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK				
				Final Inspection Quality Insp Name and Signature: <i>Dima</i>		Comments			
OBSERVATIONS									

FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA	TROS 916.216	2	Page
			2

