



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 - 1445**

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	28 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
Motor Bogie MB1	DTR0009706804	1445		Alstom - Ubunye
Motor Bogie Frame	AR000000176080	1800		Alstom - Ubunye
Wheelset (Front)	AR0000000177020	3309		Alstom - Ubunye
Axle with fitted gearbox	AR000000177072	3081		NGC
Wheel (Right)	AR000000174670	032	07.23	Bonatrans
Wheel (Left)	AR0000000174670	033	07.23	Bonatrans
Wheelset (Rear)	AR000000178600	3810		Alstom - Ubunye
Axle with fitted gearbox	AR000000177072	3182		NGC
Wheel (Right)	AR000000174670	043	07.23	Bonatrans
Wheel (Left)	AR000000174670	093	07.23	Bonatrans
Pneumatic suspension (Right)	AR000000176127	2402043		Hutchinson
Pneumatic suspension (Left)	AR000000176127	2402044		Hutchinson
Brake unit with PB (Right rear)	AR000000174544	1803	05.24	WEBTEC
Brake unit without PB (Right front)	AR000000175185	5445	05.24	WEBTEC
Brake unit without PB (Left Front)	AR000000175185	5447	05.24	WEBTEC
Brake unit without PB (left rear)	AR000000175185	5443	05.24	WEBTEC
Motor (front)	AR000000168516	21621		GIBELA
Motor (Rear)	AR000000168516	21498		GIBELA

PRESSING REPORT

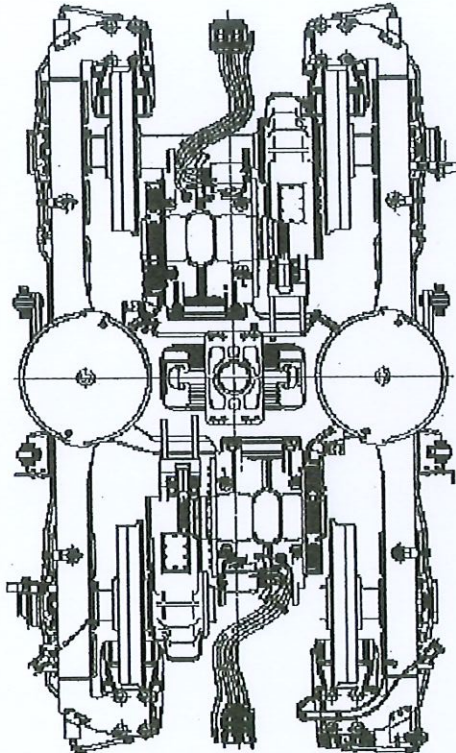
DATE 5/28/2024	RESPONSABLE VALIDATION	PRASA INSTRUCION SHEET:	LOAD TEST : MOTOR BOGIE
DATE VALIDATION		FAMILY:	PROJECT:

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN MAX	36.87 39.00
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q2	5611

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
585.85	+ 1.00	= 586.85	MIN MAX 585.00 587.50

RIGHT JACK LOAD
7376 Kg

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN MAX	37.78 39.00
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q4	5596



	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN MAX	-0.47 0.00
LOAD DIFFERENCE ON REAR AXLE [%]	MIN MAX	1.17 0.00
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN MAX	-0.15 0.00
LOAD DIFFERENCE ON RAILS [%]	MIN MAX	0.00 0.35
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN MAX	0.00 0.82

OPERATOR STAMP

BF-21

LEFT JACK LOAD
7376 Kg

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN MAX	37.00 39.00
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q1	5559

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
587.49	+ 0.00	= 587.49	MIN MAX 585.00 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]	Q	THEORETICAL [mm]
-0.64		MIN MAX -1.00 1.00

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN MAX	36.63 39.00
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q3	5667



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21621

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 77028297

Status: QC PASS

Derogations / Concession / Waiver N °: N/A

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: 2024/05/12

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 * 21498

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76718967

Status: QC PASS

Derogations / Concession / Waiver N * : N/A

Customer modification: N/A

Missing parts: N/A

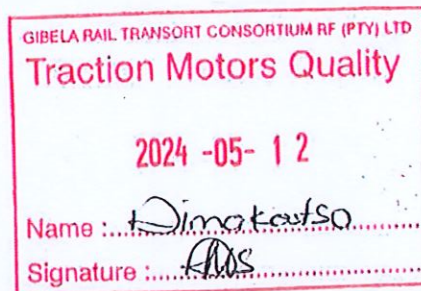
We hereby declare, barring exceptions, reservations or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements, and applicable standards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

Date: 2024/05/12

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____



Gibela Rail
02 Shosholara 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

ALSTOM

GIBELD

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: 03/04/24

Name: XOLANT

Assembly after test

Date: 12/05/24

Name: XOLANT, GODFREY, P. / PRASA

ROTOR S/N		STATOR S/N	
MCP23-11-105		GTR-1609	
<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>SKF: NU 214-ECM/C4-VA9091-</p> <p>(cross out the references that have not been fitted)</p>			
N°: ROMANIA: 0097 09/23 SN 308 - 1369794			
<p>S2 Radial play after assembly (0,042 / 0,114): 0,06mm</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: 159g</p> <p>Measured quantity: <input type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Filter 1 (Name and signature): <i>[Signature]</i></p> <p>Filter 2 (Name and signature): <i>[Signature]</i></p> <p>Quality validation: <i>[Signature]</i></p>	
<p>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>SKF: 6214-M/C4-VL-0241</p> <p>(cross out the references that have not been fitted)</p>			
Serial N°: GERMANY: 0200 X116 - 0718 04/23 SN 0073			
<p>S1 Radial play after assembly (0,021 / 0,067): 0,04mm</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>Measured quantity: <input type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Filter 1 (Name and signature): <i>[Signature]</i></p> <p>Filter 2 (Name and signature): <i>[Signature]</i></p> <p>Quality validation: <i>[Signature]</i></p>	
Référence appareil: AMXG200			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216 2 Page 1	

ALSTOM

GIBELD

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)		7,05 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	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
Value: 0mm		AMXG200		
Out of round on toothed wheel 0,1 max:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
0,05mm		AMXG200		
sensor / toothed wheel play 0,7 (+/- 0,2):	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
0,7mm		GTR-1609		
Sensor reference: DTR0000512252/DSD1830.19Q14HW	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
		8232100-0811		

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)	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)	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)	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)	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)	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)	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
--	--------------	---	-----------

GISELA RAIL TRANSPORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality

 2024 -05- 1 2

 Name : *Dima*
 Signature : *[Signature]*

MOT 21498

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:

Name:

16/02/24
Godfrey & Xolani

Assembly after test

Date:

Name:

11/05/24
Godfrey Xolani Thomas

ROTOR S/N MCR22-11-153		STATOR S/N GIB-1506	
<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-VA3091 (cross out the references that have not been fitted)</p>			
N°: ROMANIA:- 0097 09/23 SN23-1369794			
<p>S2 Radial play after assembly (0,042 / 0,114) : 0,06mm</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:149g</p> <p>Filter 1(Name and signature)</p> <p>Filter 2(Name and signature)</p> <p>Mesured quantity:</p> <p>Quality validation</p> <p>Quality Insp. Name and signature</p>	
<p>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-VL0241 (cross out the references that have not been fitted)</p>			
Serial N°: GERMANY:- 0300 X 116 - 1020 04/23 SN0312			
<p>S1 Radial play after assembly (0,021 / 0,067) : 0,04mm</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>Mesured quantity:</p> <p>Quality verification</p> <p>Quality Insp. Name and signature</p>	
Référence appareil ATZP14			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216	
		Page 1	

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)

353M52



OK



NOK

OPERATOR

Quality verification

Out of round at the end of the shaft drive end, 0,05 max Value <u>0,01 mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>AJ2P14</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max: <u>0,04 mm</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>AJ2P14</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2): <u>0,75 mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>GTBFL001</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>6231603926</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
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	wrench reference (in the event of loss or absence of the measured screwdriver) <u>NCCS087</u>	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	wrench reference (in the event of loss or absence of the measured screwdriver) <u>NCCS087</u>	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	wrench reference (in the event of loss or absence of the measured screwdriver) <u>NCCS087</u>	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	wrench reference (in the event of loss or absence of the measured screwdriver) <u>NCCS087</u>	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	wrench reference (in the event of loss or absence of the measured screwdriver) <u>NCCS087</u>	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	wrench reference (in the event of loss or absence of the measured screwdriver) <u>NCCS087</u>	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: <u>18g</u>		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
<input checked="" type="checkbox"/> S4 18g (0/+4.5) CC	Mesured quantity: <u>18g</u>		<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: <u>Gasane</u>	
OBSERVATIONS			

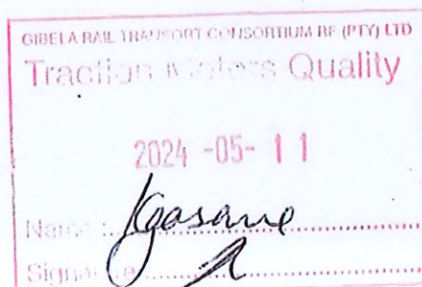
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA

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 611**

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	30 May 2024
NAME	Kwababana Hlumisa
VISA	



DELIVERY STATUS

PRASA
MB2 611

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 MB2	DTR0009706805	611		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M1786		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M03313		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K2944		NGC
Wheel (Right)	AR00000174670	081	07-23	Bonatrans
Wheel (Left)	AR000000174670	083	07-23	Bonatrans
Wheelset (Rear)	AR00000178600	M03314		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K2959		NGC
Wheel (Right)	AR00000174670	152	10-23	Bonatrans
Wheel (Left)	AR00000174670	154	10-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2402005		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2402032		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1810	05-24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	5438	05-24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	5439	05-24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	5436	05-24	WEBTEC
Motor (front)	AR00000168516	21654		GIBELA
Motor (Rear)	AR00000168516	21626		GIBELA

QC: 018
Revision: 1.0

PRESSING REPORT

DATE 5/28/2024	RESPONSABLE VALIDATION	PRASA INSTRUMENT	LOAD TEST : MOTOR BOGIE
DATE VALIDATION		INSTRUCTION SHEET:	
		FAMILY:	PROJECT:

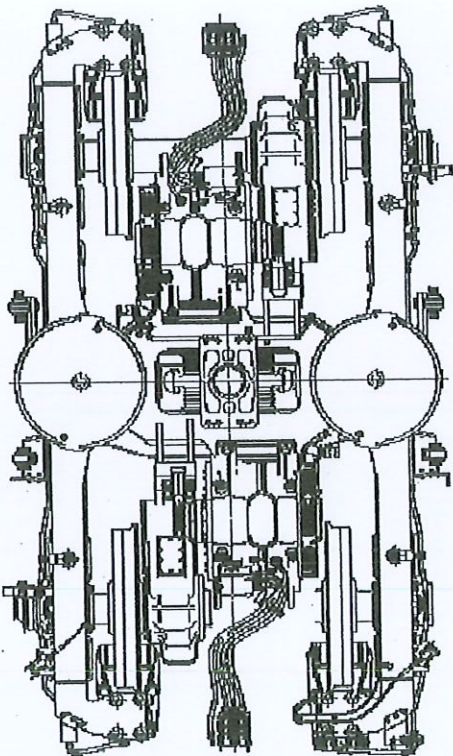
	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 37.30
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q2	5601

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
587.41	+	0.00	= 587.41
			MIN MAX
			585.00 587.50

RIGHT JACK LOAD
7376 Kg

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 37.71
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q4	5531

BOGIE SERIAL N°	MB2-611
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22366
COMPLETE BOGIE WEIGHT [Kg]	7273
OPERATOR	DATE
BAFANA	5/28/2024



	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN MAX	0.00 -0.44
LOAD DIFFERENCE ON REAR AXLE [%]	MIN MAX	0.00 1.34
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN MAX	0.00 -0.26
LOAD DIFFERENCE ON RAILS [%]	MIN MAX	0.00 0.45
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN MAX	0.00 0.89

OPERATOR STAMP
DO-003

LEFT JACK LOAD
7375 Kg

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 37.00
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q1	5552

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
585.73	+	1.00	= 586.73
			MIN MAX
			585.00 587.50
DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]			0.68
			MIN MAX
			-1.00 1.00

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 36.70
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q3	5681



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21626

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 77075657

Status: QC PASS

Derogations / Concession / Waiver N °: N/A

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: 2024/05/12

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

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

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: 18/09/24

Name: XOLANT

Assembly after test

Date: 18/09/24

Name: XOLANT, GODEFREY THOMAS

ROTOR S/N		STATOR S/N	
MCR23-11-11		GFB-1647	
<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>SKF: NU 214-ECM/C4-VA3091</p> <p>(cross out the references that have not been filled)</p>			
<p>N°: ROMANIA: 0097 09/23 SN 357-1369794</p>			
<p>S2</p> <p>Radial play after assembly (0,042 / 0,114): 0,07mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S4</p> <p>LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Mln: 144g - Max: 149g</p> <p>Measured quantity: <input type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Filter 1 (Name and signature): <i>[Signature]</i></p> <p>Filter 2 (Name and signature): <i>[Signature]</i></p> <p>Quality validation: <i>[Signature]</i></p>	
<p>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>SKF: 6214-M/C4-VL 0241</p> <p>(cross out the references that have not been filled)</p>			
<p>Serial N°: GERMANY: 0200 X116 -0725 04/23 SN 0089</p>			
<p>S1</p> <p>Radial play after assembly (0,021 / 0,067): 0,05mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S3</p> <p>LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Mln: 159g - Max: 164g</p> <p>Measured quantity: <input type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Filter 1 (Name and signature): <i>[Signature]</i></p> <p>Filter 2 (Name and signature): <i>[Signature]</i></p> <p>Quality validation: <i>[Signature]</i></p>	
<p>Référence appareil: AMXG80</p>			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216 2 Page 1	

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)		10,4 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	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
Value: 0,01mm		AMXG80		
Out of round on toothed wheel 0,1 max:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
0,01mm		AMXG80		
sensor / toothed wheel play 0,7 (+/- 0,2):	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
0,8mm		GFB-1647		
Sensor reference: DTR0000512252/DSD1830.19Q14HW	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
		52321000796		

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	match reference (in the event of future absence of the motorised screwdriver)	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	match reference (in the event of future absence of the motorised screwdriver)	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	match reference (in the event of future absence of the motorised screwdriver)	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	match reference (in the event of future absence of the motorised screwdriver)	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	match reference (in the event of future absence of the motorised screwdriver)	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	match reference (in the event of future absence of the motorised screwdriver)	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
--	--------------	---	-----------





CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21654

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 77147312

Status: QC PASS

Derogations / Concession / Waiver N °: N/A

Customer modification: N/A

Missing parts: N/A

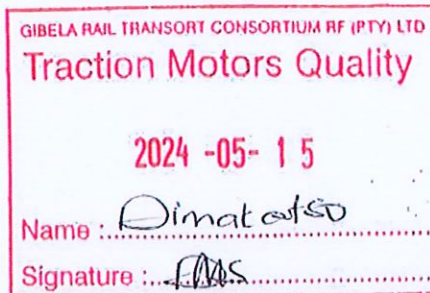
We hereby declare, barring exceptions, reservations or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements, and applicable standards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

Date: 2024/05/15

Function: Final Inspection

Perfomed 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

ALSTOM

21654

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

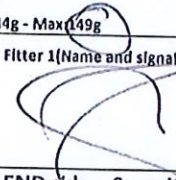
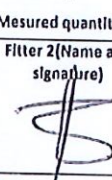
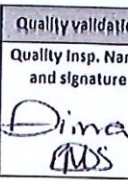
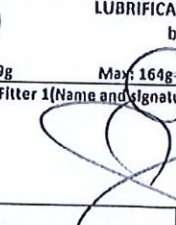
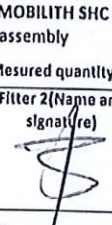

Date: 18/04/24

Name: XOLARI

Assembly after test

Date: 14/05/24

Name: Godfrey Xolari & Thomas

ROTOR S/N MCP23-11-019	STATOR S/N G113-1669		
<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-EGM/C4-VA3091 (cross out the references that have not been fitted)</p>			
N°: Romania 0097 09/23 SN82-1369794			
<p>S2 Radial play after assembly (0,042 / 0,114): 0,08mm</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: 149g</p> <p>Measured quantity: <input type="text"/></p> <p>Filter 1 (Name and signature): </p> <p>Filter 2 (Name and signature): </p> <p>Quality validation: </p>	
<p>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-VL0241 (cross out the references that have not been fitted)</p>			
Serial N°: Germany 0000 1116-0906 04/23 SN0185			
<p>S1 Radial play after assembly (0,021 / 0,067): 0,09mm</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>Measured quantity: <input type="text"/></p> <p>Filter 1 (Name and signature): </p> <p>Filter 2 (Name and signature): </p> <p>Quality validation: </p>	
<p>Référence appareil: AMXG20</p>			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216 2 Page 1	

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) 13,2 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: 0mm	<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: 0,09mm	<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): 0,75mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<input type="checkbox"/> OK <input type="checkbox"/> NOK

Prep. & Final Assembly									
OPERATOR				Quality verification					
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				
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				
F3	Torque tightening to 4 x 44 Nm: Fold locking plate		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	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	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	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	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 CMS					
OBSERVATIONS									

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

GIBELA RAIL TRANSPORT CONSORTIUM RF (PTY) LTD

Traction Motors Quality

2024 -05- 15

Name : Dima

Signature : CMS