

MANUFACTURER **ALSTOM** Ubunye
 Marievale Road, Vosterkroon, Nigel, 1490

CUSTOMER **Gibela**

CONTRACT

PROJECT **PRASA**

MANUFACTURER'S DELIVERY DOCUMENT

PRODUCT TYPE **MOTOR BOGIE MB1**

DTR0009706804

SERIAL NUMBER **MB1 1347**

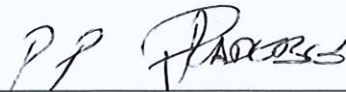
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COMPLIANCE CERTIFICATE

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	27 February 2024
NAME	Kwababana Hlumisa
VISA	



ALSTOM UBUNYE

PRODUCTS TRACEABILITY

Products Designation	Product Reference	Serial Number	Batch or Date Manufactured	Supplier
Motor Bogie MB1	DTR0009706804	1347		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	1658		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M03055		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K2951		NGC
Wheel (Right)	AR00000174670	121	11-22	Bonatrans
Wheel (Left)	AR000000174670	073	07-23	Bonatrans
Wheelset (Rear)	AR00000178600	M3056		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K2927		NGC
Wheel (Right)	AR00000174670	014	04-23	Bonatrans
Wheel (Left)	AR00000174670	044	11-22	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2401120		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2301078		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1603	02-24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	4848	02-24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	4841	02-24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	4825	02-24	WEBTEC
Motor (front)	AR00000168516	21470		GIBELA
Motor (Rear)	AR00000168516	21232		GIBELA

QC: 018
Revision: 1.0

PRESSING REPORT

DATE VALIDATION

RESPONSABLE VALIDATION

PRASA

INSTRUCTION SHEET:

FAMILY:

LOAD TEST : MOTOR BOGIE

PROJECT:

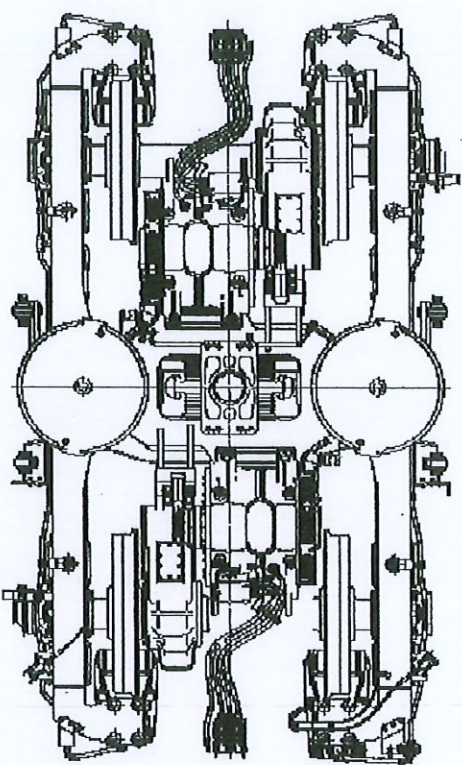
	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.10 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q2	5620

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM[mm]	THEORETICAL [mm]
587.26	+	0.00	= 587.26
			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	37.29 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q4	5542

BOGIE SERIAL N°	MB1-1347
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22374
COMPLETE BOGIE WEIGHT [Kg]	7291
OPERATOR	DATE
BAFANA	2/27/2024



	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00	-0.62 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00	1.07 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00	-0.15 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00	0.23 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00	0.84 ✓

OPERATOR STAMP

DC-3FI-6










LEFT JACK LOAD
7376 Kg

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.22	+	1.00	= 587.22
			MIN 585.00 MAX 587.50

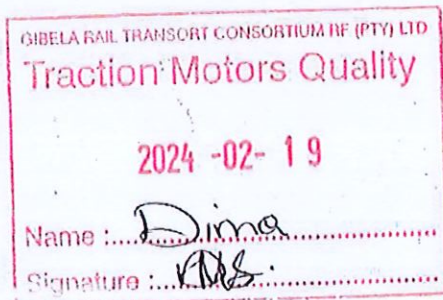
	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	36.91 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q1	5551

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

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	36.89 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q3	5662

Sensor reference: DTR0000512252/DSD1830.19Q14HW		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK <u>805218</u>		<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	wrench reference (in the event of failure / absence of the motorised screwdriver) = <u>NC05357</u>	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 motorised screwdriver) = <u>NC05357</u>	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 motorised screwdriver) = <u>NC05357</u>	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 motorised screwdriver) = <u>NC05357</u>	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 motorised screwdriver) = <u>NC05357</u>	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 motorised screwdriver) = <u>NC05357</u>	QC 1 X 22 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Grease protection transport					
 S3	18g (0/+4.5) CC Mesured quantity: <u>18g</u>			<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	
 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>Dima</u> 		
OBSERVATIONS					

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ALSTOM

21470

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: 31/01/24
Name: JOHANNI

Assembly after test

Date: 20/02/24
Name: Geoffrey Xelavik & Thomas

ROTOR S/N MCR22-11-136	STATOR S/N GIB-1475		
<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>			
<p>N°: ROMANIA:- 0097 09/23 SN/23-1369794</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 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 144g - Max: 149g Measured quantity: <input type="text"/></p> <p>Filter 1 (Name and signature) <input type="text"/> Filter 2 (Name and signature) <input type="text"/></p> <p>Quality validation: <input type="text"/> Quality Insp. Name and signature: <input type="text"/></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-VL-0241 (cross out the references that have not been fitted)</p>			
<p>Serial N°: GERMANY:- X272 1301 19/23 SN 0090</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 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 159g Max: 164g Measured quantity: <input type="text"/></p> <p>Filter 1 (Name and signature) <input type="text"/> Filter 2 (Name and signature) <input type="text"/></p> <p>Quality validation: <input type="text"/> Quality Insp. Name and signature: <input type="text"/></p>		
<p>Référence appareil: AJ2714</p>			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216	Page 1

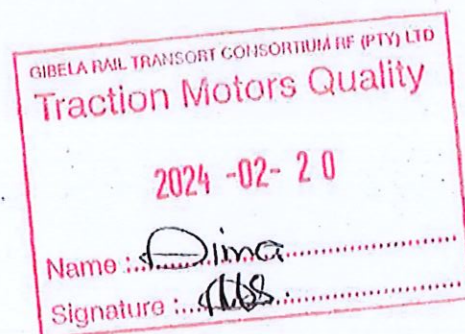
ALSTOM

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)		7,04 GΩ	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
OPERATOR		Quality verification	
Out of round at the end of the shaft drive end 0,08mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: AJ2714	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max: 0,07mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: AJ2714	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,6mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: GIB-1475	<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>5004 CC/5 3/4</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	<small>wrench reference (in the event of failure / absence of the motorized screwdriver)</small> <u>NC00387</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	<small>wrench reference (in the event of failure / absence of the motorized screwdriver)</small> <u>NC00387</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	<small>wrench reference (in the event of failure / absence of the motorized screwdriver)</small> <u>NC00387</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	<small>wrench reference (in the event of failure / absence of the motorized screwdriver)</small> <u>NC00387</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	<small>wrench reference (in the event of failure / absence of the motorized screwdriver)</small> <u>NC00387</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	<small>wrench reference (in the event of failure / absence of the motorized screwdriver)</small> <u>NC00387</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 Quality Insp Name and Signature:		Comments	
				<u>Dima</u>			
OBSERVATIONS							
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA				TROS 916.216		Page 2	





CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21232

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76030851

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: 2024/02/21

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____

GIBELA RAIL TRANSPORT CONSORTIUM RF (PTY) LTD

Traction Motors Quality

2024 -02- 21

Name : Dimakatso

Signature : [Signature]

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

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21232

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: 8/3/10/23

Name: JOEANT

Assembly after test

Date: 14/02/24

Name: Godfrey

ROTOR S/N MEROO-6-053	STATOR S/N C1113-1212		
<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>			
<p>N°: ROMANIA - 0097 05/23 SN57-1085722</p>			
<p>S2 Radial play after assembly (0,042 / 0,114): 0,06 mm</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="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 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°: GERMANY - 0200 X020-0742 01/23 SN0486</p>			
<p>S1 Radial play after assembly (0,021 / 0,067): 0,06 mm</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 verification: <i>[Signature]</i></p>	
<p>Reference appareil: AMX6714</p>			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216	2
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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)		4,69 GΩ	<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	AMX6714	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	AMX6714	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2):	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	C1113-1201	<input type="checkbox"/> OK <input type="checkbox"/> NOK



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21470

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76634796

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: 2024/02/21

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

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 577**

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

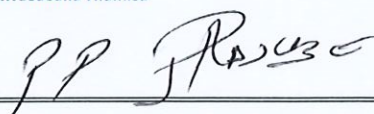
We hereby declare, barring exceptions, reservations, or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completions of testing and verification, they completely satisfy all specified requirements and applicable standards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

CONSTRUCTOR APPROVAL

DATE
NAME

24 February 2024
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 MB2	DTR0009706805	577		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M1650		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M03041		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3128		NGC
Wheel (Right)	AR00000174670	106	07-23	Bonatrans
Wheel (Left)	AR000000174670	119	07-23	Bonatrans
Wheelset (Rear)	AR00000178600	M03042		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3112		NGC
Wheel (Right)	AR00000174670	120	07-23	Bonatrans
Wheel (Left)	AR00000174670	007	07-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2310102		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2401049		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1599	02-24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	4833	02-24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	4827	02-24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	4830	02-24	WEBTEC
Motor (front)	AR00000168516	21325		GIBELA
Motor (Rear)	AR00000168516	21200		GIBELA

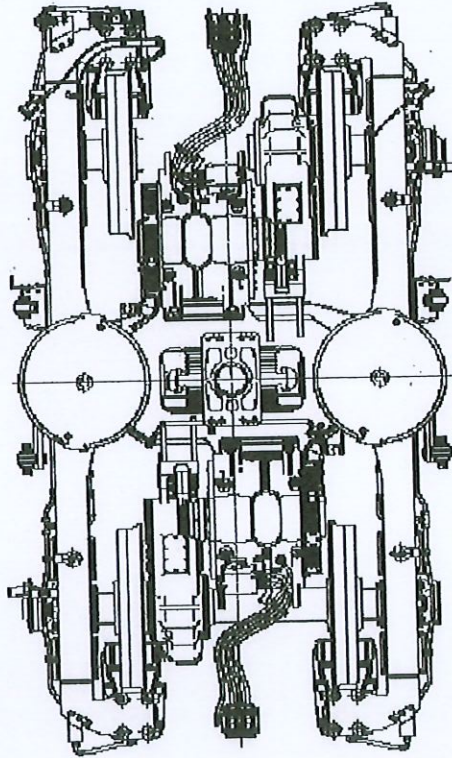
QC: 018
Revision: 1.0

PRESSING REPORT

DATE 2/24/2024	RESPONSABLE VALIDATION	PRASA	LOAD TEST : MOTOR BOGIE
DATE VALIDATION		INSTRUCTION SHEET:	PROJECT:
		FAMILY:	

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
587.43	+	0.00	MIN 585.00
			MAX 587.50

RIGHT JACK LOAD
7376 Kg



BOGIE SERIAL N°	MB2-577
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22367
COMPLETE BOGIE WEIGHT [Kg]	7272
OPERATOR	DATE
BAFANA	2/24/2024

OPERATOR STAMP
DC-BFI-6

THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN	38.29
	MAX	
GAP PRIMARY SUSPENSION [mm]	MIN	33.00
	MAX	
SHIM THICK [mm]	MIN	39.00
	MAX	
WEIGHT ON WHEEL [Kg]		5582

THEORETICAL		MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN	0.00
	MAX	
LOAD DIFFERENCE ON REAR AXLE [%]	MIN	0.00
	MAX	
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN	0.00
	MAX	
LOAD DIFFERENCE ON RAILS [%]	MIN	0.00
	MAX	
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN	0.00
	MAX	

LEFT JACK LOAD
7376 Kg

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.77	+	0.00	MIN 585.00
			MAX 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]		0.66
THEORETICAL [mm]		MIN -1.00
		MAX 1.00

THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN	38.09
	MAX	
GAP PRIMARY SUSPENSION [mm]	MIN	33.00
	MAX	
SHIM THICK [mm]	MIN	39.00
	MAX	
WEIGHT ON WHEEL [Kg]		5576

THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN	38.30
	MAX	
GAP PRIMARY SUSPENSION [mm]	MIN	33.00
	MAX	
SHIM THICK [mm]	MIN	39.00
	MAX	
WEIGHT ON WHEEL [Kg]		5672



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21325

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76219178

Status: QC PASS

Derogations / Concession / Waiver N °: N/A

Customer modification: N/A

Missing parts: N/A

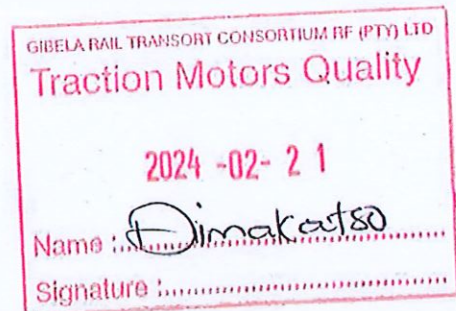
We hereby declare, barring exceptions, reservations or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements, and applicable standards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

Date: 2024/02/21

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

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MOT 21325

ALSTOM

GIBELQ

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: 22/11/2023

Name: Scigues

Assembly after test

Date: 17/02/24

Name: XOLANIL, GODFREY & THOMAS

ROTOR S/N MCR22-11-048		STATOR S/N GIB-1285	
<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°: ROMANIA : 0097 05/23 SN 453 -1085122			
<p>S2 Radial play after assembly (0,042 / 0,114):</p> <p>0,08mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min:144g - Max:149g Measured quantity: <input type="text"/></p> <p>Filter 1 (Name and signature) <input type="text"/> Filter 2 (Name and signature) <input type="text"/></p> <p>Quality validation: <input type="text"/></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 SKE-6214-M/C4-VL0241 (cross out the references that have not been fitted)</p>			
Serial N°: GERMANY : 0200 X019-0931 01/23 SN 0213			
<p>S1 Radial play after assembly (0,021 / 0,067):</p> <p>0,06mm <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 Measured quantity: <input type="text"/></p> <p>Filter 1 (Name and signature) <input type="text"/> Filter 2 (Name and signature) <input type="text"/></p> <p>Quality validation: <input type="text"/></p>	
Référence appareil: AS2EP14			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216	
		Page 1	

ALSTOM

GIBELQ

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)

112MΩ



OK



NOK

OPERATOR				Quality verification			
301mm	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 A52EP14	<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	Device serial number A52EP14	<input type="checkbox"/> OK <input type="checkbox"/> NOK			
	sensor / toothed wheel play 0,7 (+/- 0,2): 0,7mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number C1BFLC02	<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 S2243008201	<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	wrench reference (in the event of failure / absence of the motorized 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 motorized 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 motorized 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 motorized 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 motorized 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 motorized screwdriver)	QC 1 X 22 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
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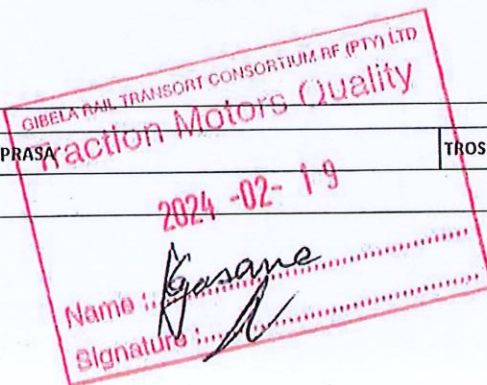
Grease protection transport

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) ☒ OK ☐ NOK

Final inspection	Comments
Quality Insp Name and Signature: Kasane	M/A
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 ° 21200

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 75985823

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: 2023/12/11

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

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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: 14/10/23

Name: *Ma*

Assembly after test

Date: 24/12/23

Name: *Geoffrey & Kolari*

ROTOR S/N <i>Me102-10-050</i>	STATOR S/N <i>S1B -1204</i>		
<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>			
<p>N°: <i>ROMANIA: 0097 12/22 SN136 -5977246</i></p>			
<p>S2 Radial play after assembly (0,042 / 0,114): <i>0,06</i></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: <i>8</i></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>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°: <i>GERMANY: 0200 X019-0802 01/23 SN0063</i></p>			
<p>S1 Radial play after assembly (0,021 / 0,067): <i>0,05</i></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: <i>8</i></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 <i>914190001</i></p>			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216	2
			Page 1

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)		<i>1,5262</i>	<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 <i>91518001</i>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <i>91518001</i>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2):	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <i>151008</i>	<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>52254005262</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
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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 failure / absence of the motorised screwdriver) <u>NDOS 285</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 failure / absence of the motorised screwdriver) <u>NDOS 285</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 failure / absence of the motorised screwdriver) <u>NDOS 285</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 failure / absence of the motorised screwdriver) <u>NDOS 285</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 failure / absence of the motorised screwdriver) <u>NDOS 285</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 failure / absence of the motorised screwdriver) <u>NDOS 285</u>	QC 1 X 22 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
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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

Quality Insp Name and Signature:

Comments

OBSERVATIONS

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

TROS 916.216

2

Page

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