

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 1429**

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"/>

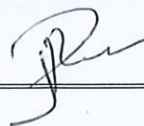
COMPLIANCE CERTIFICATE

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
VISA

16 May 2024
Kwababana Hlumisa



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	1429		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M1767		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M03271		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K2912		NGC
Wheel (Right)	AR00000174670	024	10-23	Bonatrans
Wheel (Left)	AR000000174670	064	10-23	Bonatrans
Wheelset (Rear)	AR00000178600	M03272		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K2895		NGC
Wheel (Right)	AR00000174670	137	10-23	Bonatrans
Wheel (Left)	AR00000174670	141	10-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2312141		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2401103		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1778	05-24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	5356	05-24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	5357	05-24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	5358	05-24	WEBTEC
Motor (front)	AR00000168516	21492		GIBELA
Motor (Rear)	AR00000168516	21556		GIBELA

THEORETICAL	MEASURED
-------------	----------

WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]		5560

SECONDARY SUSPENSION

MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
585.60	+	1.00	= 586.60
			MIN 585.00 MAX 587.50

RIGHT JACK LOAD

7376 Kg

THEORETICAL	MEASURED
-------------	----------

WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]		5585

BOGIE SERIAL N° MB1-1429

BOGIE TYPE MB

BOGIE WEIGHT UNDER LOAD [Kg] 22372

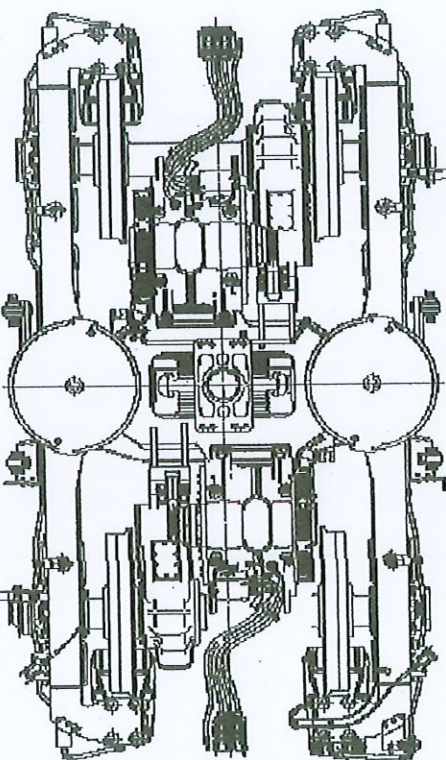
COMPLETE BOGIE WEIGHT [Kg] 7270

OPERATOR DATE

BAFANA 5/15/2024

OPERATOR STAMP

DC-3-F1-6



LEFT JACK LOAD

7376 Kg

SECONDARY SUSPENSION

MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.74	+	0.00	= 586.74
			MIN 585.00 MAX 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]

-0.14	MIN -1.00 MAX 1.00
-------	-----------------------

THEORETICAL	MEASURED
-------------	----------

WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]		5621

THEORETICAL	MEASURED
-------------	----------

LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00	0.42
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00	0.32
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00	-0.17
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00	0.37
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00	-0.05

21492

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

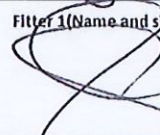
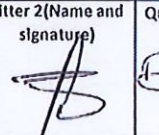
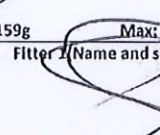
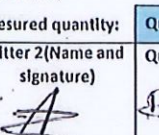
Date: 15/02/24

Name: Godfrey

Assembly after test

Date: 08/05/2024

Name: Jacques & Thompson

ROTOR S/N		STATOR S/N	
MCR23-10-07S		G1B-1503	
<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 VA3001</p> <p>(cross out the references that have not been fitted)</p>			
N°: ROMANIA: 0097 09/23 8N34-1369794			
<p>Radial play after assembly (0,042 / 0,114): 0,05mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>LUBRICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 144g - Max: 149g</p> <p>Measured quantity: <input type="text"/></p> <p>Quality validation</p> <p>Filter 1 (Name and signature): </p> <p>Filter 2 (Name and signature): </p> <p>Quality Insp. Name and signature: Ding</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 X272-1259 09/23 8N0084			
<p>Radial play after assembly (0,021 / 0,067): 0,05mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>LUBRICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 159g - Max: 164g</p> <p>Measured quantity: <input type="text"/></p> <p>Quality verification</p> <p>Filter 1 (Name and signature): </p> <p>Filter 2 (Name and signature): </p> <p>Quality Insp. Name and signature: Ding</p>	
Référence appareil: AMX614			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216 2	
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ALSTOM

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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)	7.89 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 Value <u>0,01 mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>AMXG14</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max: <u>0,06 mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>AMXG14</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2): <u>0,06 mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>GIBELCO</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>S2A41003 5 F3</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	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: 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	
<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: <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)

☒ OK ☐ NOK

Final Inspection

Quality Insp Name and Signature:

Dima ADS

Comments

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- 0 2

Name: Dima

Signature: ADS



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors ,6 ECA 3022 B

Serial Number: N ° 21492

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76700060

Status: QC PASS

Derogations / Concession / Waiver N °: N/A

Customer modification: N/A

Missing parts: N/A

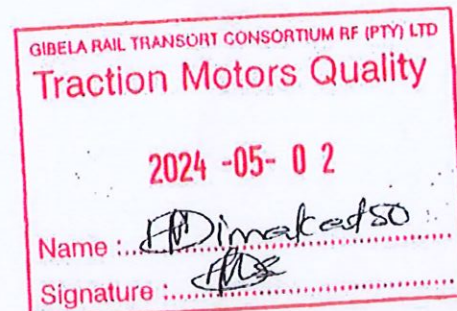
We hereby declare, barring exceptions, reservations or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements, and applicable standards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

Date: 2024/05/02

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____



Gibela Rail
02 Shosholora Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

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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

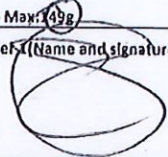
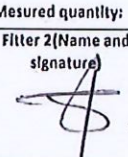
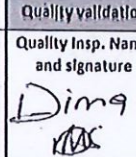
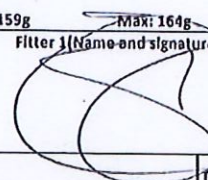
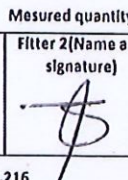
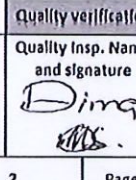
Date: 06/03/24

Name: XOLANT

Assembly after test

Date: 06/05/24

Name: Goeffroy & Xolanti

ROTOR S/N	STATOR S/N
MCR03-10-085	GIB-1579
<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 10/23 SN211-1988233	
<p>Radial play after assembly (0,042 / 0,114): 0,06 mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>	<p>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) </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 SKE: 6214-M/C4-VL-0241 (cross out the references that have not been fitted)</p>	
Serial N°: Germany 0200 XIIb-0805 04/23 SN0141	
<p>Radial play after assembly (0,021 / 0,067): 0,05 mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>	<p>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) </p> <p>Filter 2 (Name and signature) </p> <p>Quality validation: </p>
<p>Référence appareil: AJZP14</p>	
<p>FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA</p> <p>TROS 916.216 2 Page 1</p>	

ALSTOM

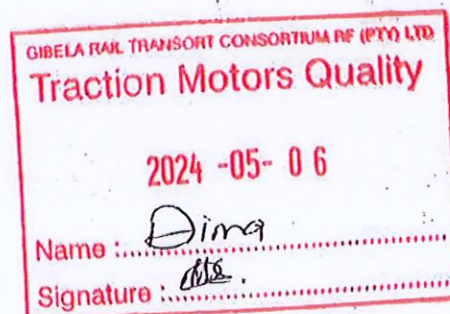
GIBEL

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)	9,57 MΩ	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
OPERATOR		
Out of round at the end of the shaft drive end, 0,05 max Value 0 mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: AJZP14
Out of round on toothed wheel 0,1 max: 0,03 mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: AJZP14
sensor / toothed wheel play 0,7 (+/- 0,2): 0,7 mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: GIBEL001
Sensor reference: DTR0000512252/DSD1830.19Q14HW	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: 32252005534

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: 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	
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<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		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





CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21556

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76871884

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: 2024/05/06

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

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

MANUFACTURER'S DELIVERY DOCUMENT

PRODUCT TYPE MOTOR BOGIE type MB2
 DTR0009706805
SERIAL NUMBER MB2 - 605

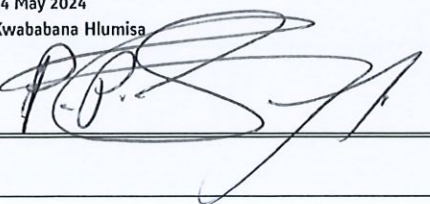
CONTENTS

- 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	14 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 MB2	DTR0009706805	605		Alstom - Ubunye
Motor Bogie Frame	AR000000176080	1758		Alstom - Ubunye
Wheelset (Front)	AR0000000177020	3264		Alstom - Ubunye
Axle with fitted gearbox	AR000000177072	3232		NGC
Wheel (Right)	AR000000174670	075	10.23	Bonatrans
Wheel (Left)	AR0000000174670	064	10.23	Bonatrans
Wheelset (Rear)	AR000000178600	3259		Alstom - Ubunye
Axle with fitted gearbox	AR000000177072	3208		NGC
Wheel (Right)	AR000000174670	032	07.23	Bonatrans
Wheel (Left)	AR000000174670	036	07.23	Bonatrans
Pneumatic suspension (Right)	AR000000176127	2402009		Hutchinson
Pneumatic suspension (Left)	AR000000176127	24101040		Hutchinson
Brake unit with PB (Right rear)	AR000000174544	1773	05.24	WEBTEC
Brake unit without PB (Right front)	AR000000175185	5317	05.24	WEBTEC
Brake unit without PB (Left Front)	AR000000175185	5318	05.24	WEBTEC
Brake unit without PB (left rear)	AR000000175185	5315	05.24	WEBTEC
Motor (front)	AR000000168516	21610		GIBELA
Motor (Rear)	AR000000168516	21542		GIBELA

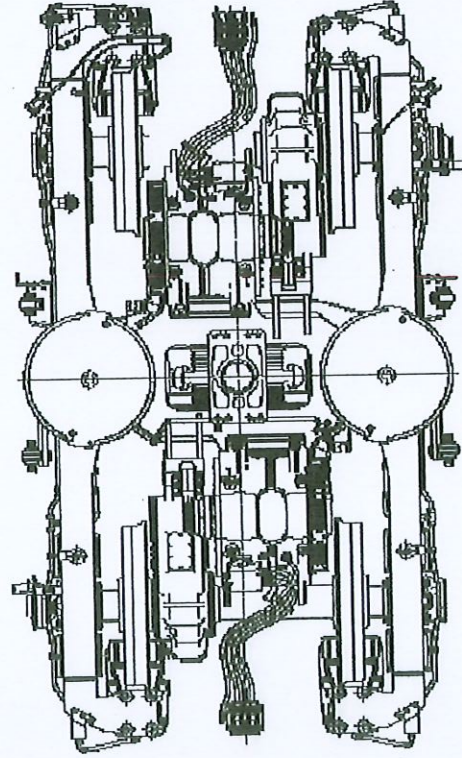
PRESSING REPORT

DATE VALIDATION		PRASA		LOAD TEST : MOTOR BOGIE	
RESPONSABLE VALIDATION		INSTRUCTION SHEET:		PROJECT:	
		FAMILY:			

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	MIN 33.00	MAX 39.00	37.71
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5601

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	Kg
7376	



BOGIE SERIAL N°	MB2-602
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22370
COMPLETE BOGIE WEIGHT [Kg]	7285
OPERATOR	BAFANA
DATE	5/3/2024

OPERATOR STAMP
DC-571-6

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	MIN 33.00	MAX 39.00	37.53
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5615

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.73	+	0.00	MIN 585.00 MAX 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]	0.70
THEORETICAL [mm]	MIN -1.00 MAX 1.00

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	MIN 33.00	MAX 39.00	37.60
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5593

21610

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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: 06/03/2024

Name: Seignures

Assembly after test

Date: 09/05/2024

Name: XOUANT

ROTOR S/N MCR03-11-013		STATOR S/N GIB-1623	
<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 SN48 -1369794			
<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>S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min:144g - Max:199g Mesured quantity: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Filter 1 (Name and signature) <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Filter 2 (Name and signature) <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Quality validation: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</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>			
Serial N°: GERMANY: 0200 X116-0716 04/23 SN0069			
<p>S1 Radial play after assembly (0,021 / 0,067):</p> <p>0,05mm <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 Mesured quantity: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Filter 1 (Name and signature) <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Filter 2 (Name and signature) <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Quality validation: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>	
Référence appareil: AMX920			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216	
		Page 1	

ALSTOM

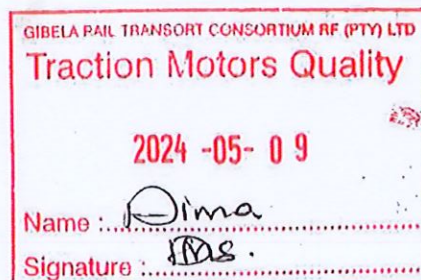
GIBEL

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)		300 G.2		<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	AMX920	<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	AMX920	<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	GIBEL	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
Sensor reference: DTR000512252/OSD1830.19Q14HW	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	GIBEL	<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	verify reference (in the event of failure / absence of the motorised part)	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	verify reference (in the event of failure / absence of the motorised part)	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	verify reference (in the event of failure / absence of the motorised part)	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	verify reference (in the event of failure / absence of the motorised part)	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	verify reference (in the event of failure / absence of the motorised part)	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	verify reference (in the event of failure / absence of the motorised part)	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 PRS				
OBSERVATIONS											

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



ALSTOM

GIBELIN

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: 04/03/24

Name: Godfrey

Assembly after test

Date: 06/05/24

Name: Godfrey Xolani

ROTOR S/N MCR23-10-015		STATOR S/N GIB-1544	
<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 11/23 SN888-188829			
<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>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min 144g - Max: 149g Measured quantity:</p> <p>Filter 1 (Name and signature) Filter 2 (Name and signature)</p> <p>Quality validation Quality Insp. Name and signature Dima</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>			
Serial N°: Germany 0200 X116-0956 04/23 SN0256			
<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>S2 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min 159g Max: 164g Measured quantity:</p> <p>Filter 1 (Name and signature) Filter 2 (Name and signature)</p> <p>Quality verification Quality Insp. Name and signature Dima</p>	
Référence appareil AMXG14			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216 Page 1	

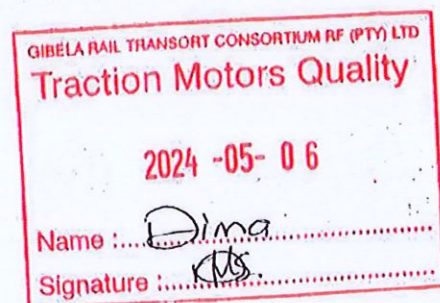
ALSTOM

GIBELIN

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)		2.60 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 mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number AMXG14	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
Out of round on toothed wheel 0,1 max: 0,07 mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number AMXG14	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
sensor / toothed wheel play 0,7 (+/- 0,2): 0,6 mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number GIBELIN	<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 52314-006655	<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) 12862188	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) 62862188	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) 02511039	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) 10082608	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) 10082608	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) 10082608	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						
				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: center;">Final inspection</th> <th style="text-align: center;">Comments</th> </tr> <tr> <td> Quality Insp Name and Signature: Dima </td> <td></td> </tr> </table>			Final inspection	Comments	Quality Insp Name and Signature: Dima	
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				





CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21542

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76851195

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: 2024/05/06

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

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CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21542

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76851195

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: 2024/05/06

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

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