



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 1444**

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- 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	1444		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M1778		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M03307		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3136		NGC
Wheel (Right)	AR00000174670	099	10-23	Bonatrans
Wheel (Left)	AR000000174670	098	10-23	Bonatrans
Wheelset (Rear)	AR00000178600	M03308		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3126		NGC
Wheel (Right)	AR00000174670	143	07-23	Bonatrans
Wheel (Left)	AR00000174670	141	07-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2401024		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2312179		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1798	05-24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	5416	05-24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	5424	05-24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	5413	05-24	WEBTEC
Motor (front)	AR00000168516	21648		GIBELA
Motor (Rear)	AR00000168516	21581		GIBELA

PRESSING REPORT

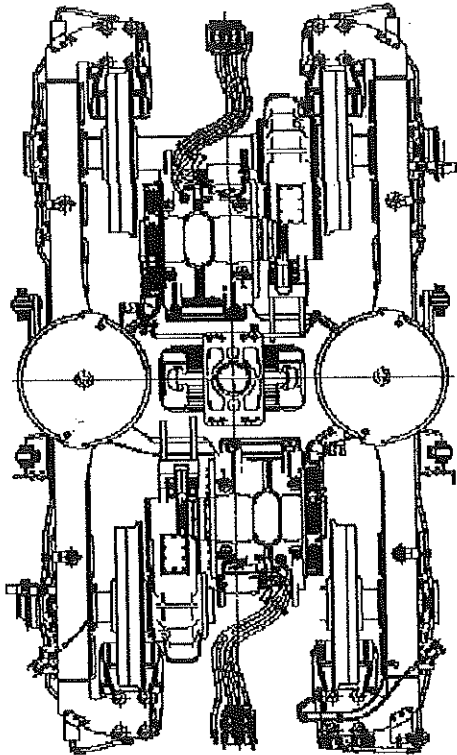
DATE 5/27/2024	RESPONSABLE VALIDATION	PRASA INSTRUCTION SHEET:	LOAD TEST : MOTOR BOGIE
DATE VALIDATION		FAMILY:	PROJECT:

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.70 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q2	5611

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
584.71	+	2.00	= 586.71
			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	38.09 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q4	5644



	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00	-0.47 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00	1.08 ✓
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	0.31 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00	0.77 ✓

OPERATOR STAMP

LEFT JACK LOAD
7376 Kg

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.80	+	0.00	= 586.80
			MIN 585.00 MAX 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]	✓	THEORETICAL [mm]
-0.09		MIN -1.00 MAX 1.00

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	38.10 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q1	5559

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.20 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q3	5665



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21581

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76927400

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 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

MOT 21581

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: 15/03/24

Name: XOUANT

Assembly after test

Date: 11/08/24

Name: Goelney Kolan' Nongy

ROTOR S/N		STATOR S/N	
MCR00-11-178		GTFB-1601	
<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 fitted)</p>			
N°:			
ROMANIA: 0097 10/23 SN219-1988233			
<p>Radial play after assembly (0,042 / 0,114): 0,09mm</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:</p> <p>Filter 1 (Name and signature):</p> <p>Filter 2 (Name and signature):</p> <p>Quality validation:</p> <p>Quality Insp. Name and signature:</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-VL0241</p> <p>(cross out the references that have not been fitted)</p>			
Serial N°:			
GERMANY: 0200 X116-0937 04/23 SN0216			
<p>Radial play after assembly (0,021 / 0,067): 0,06mm</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:</p> <p>Filter 1 (Name and signature):</p> <p>Filter 2 (Name and signature):</p> <p>Quality verification:</p> <p>Quality Insp. Name and signature:</p>	
Référence appareil			
AJ2P14			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216	
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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)		2,41 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	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
Value 0,01mm		AJ2P14		
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	
0,06mm		AJ2P14		
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		GTFB-1601		
Sensor reference: DTR0000512252/DS01830.19Q14HW	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
		80050005441		

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:	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:					
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

2024-05-11

Name:

Signature:

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

2024-05-11

Name:

Signature:



CERTIFICATION OF CONFORMITY

Inspection certificate according to EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21648

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 77125898

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: 2024/05/18

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature ADS



Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

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21648

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

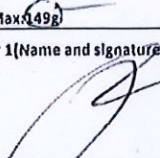
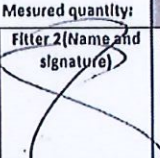
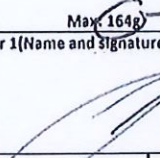
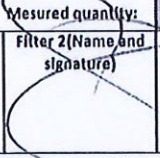
Date: 18/04/2024

Name: Jacques

Assembly after test

Date: 17/05/24

Name: Nolane, Godfrey, Thomas

ROTOR S/N		STATOR S/N	
MCP23-11-054		CIB-1651	
Bearing lubrication - Security operation Incorrect lubrication can lead to engine failure with a safety risk in service SRIL TROS 965.289			
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-EGM/C4-VA3091 (cross out the references that have not been fitted)			
N°: Romaniq 0097 09/23 SN75-1369794			
S2 Radial play after assembly (0,042 / 0,114): 0,07mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK		S4 LUBRICATION WITH MOBILITH SHC 100 before cover assembly Min:144g - Max:149g Measured quantity: Filter 1 (Name and signature)  Filter 2 (Name and signature)  Quality validation Quality Insp. Name and signature Dina FRS	
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)			
Serial N°: Germania 0000 1116-0808 04/23 SN0150			
S1 Radial play after assembly (0,021 / 0,067): 0,06mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK AMXG20		S3 LUBRICATION WITH MOBILITH SHC 100 before cover assembly Min:159g Max:164g Measured quantity: Filter 1 (Name and signature)  Filter 2 (Name and signature)  Quality verification Quality Insp. Name and signature Dina KMS	
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216 2	
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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)		<input type="checkbox"/> OK	<input type="checkbox"/> NOK
OPERATOR		Quality verification	
Out of round at the end of the shaft drive end, 0,05 max Value: 0,04mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number AMXG20	<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 AMXG20	<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 GIBEL002	<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 52316013793	<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	interch reference (in the event of failure / absence of the motorised 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	interch reference (in the event of failure / absence of the motorised 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	interch reference (in the event of failure / absence of the motorised 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	interch reference (in the event of failure / absence of the motorised 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	interch 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									
F1	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	interch 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									
S3	18g (0/+4.5) CC	Mesured quantity: 18g			<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK				
S4	18g (0/+4.5) CC	Mesured quantity: 18g			<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK				
Final inspection following the check-list DTR0000452909 and DTR0000452910 (in the case of 100% inspection of the production)					<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK				
				Final inspection	Comments				
				Quality Insp Name and Signature:					
				Dima					
OBSERVATIONS									

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

TROS 916.216

2

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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 610**

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	22 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	610		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M1779		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M03299		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3407		NGC
Wheel (Right)	AR00000174670	021	10-23	Bonatrans
Wheel (Left)	AR000000174670	087	10-23	Bonatrans
Wheelset (Rear)	AR00000178600	M03300		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3149		NGC
Wheel (Right)	AR00000174670	155	10-23	Bonatrans
Wheel (Left)	AR00000174670	133	10-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2312123		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2311070		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1786	05-24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	5379	05-24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	5377	05-24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	5405	05-24	WEBTEC
Motor (front)	AR00000168516	21728		GIBELA
Motor (Rear)	AR00000168516	21724		GIBELA

PRESSING REPORT

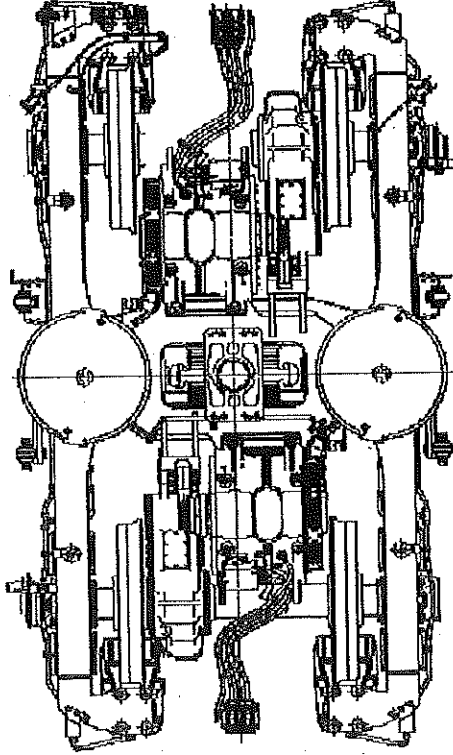
DATE 5/22/2024	RESPONSIBLE VALIDATION
PRASA	
LOAD TEST : MOTOR BOGIE	
INSTRUCTION SHEET:	
PROJECT:	
FAMILY:	

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	MIN 33.00	MAX 39.00	36.90
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5523

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
			MIN MAX
587.34	+	0.00	587.34 587.50

RIGHT JACK LOAD
7374 Kg

BOGIE SERIAL N°	M82-610
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22361
COMPLETE BOGIE WEIGHT [Kg]	7280
OPERATOR	BAFANA
DATE	5/22/2024



	THEORETICAL		MEASURED
	MIN	MAX	
LOAD DIFFERENCE ON FRONT AXLE [%]	0.00	0.00	-0.41
LOAD DIFFERENCE ON REAR AXLE [%]	0.00	0.00	1.40
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	0.00	0.00	-0.20
LOAD DIFFERENCE ON RAILS [%]	0.00	0.00	0.50
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	0.00	0.00	0.91

OPERATOR STAMP
DC-3716

LEFT JACK LOAD
7377 Kg

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	MIN 33.00	MAX 39.00	36.09
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5680

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
			MIN MAX
587.47	+	0.00	587.47 587.50
DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]			THEORETICAL [mm]
-0.13			MIN -1.00
			MAX 1.00

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	MIN 33.00	MAX 39.00	36.20
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5556



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21728

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 77314183

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: 2024/05/17

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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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: 13/05/2024

Name: Jacques

Assembly after test:

Date: 16/05/24

Name: XOLANT & THOMAS

ROTOR S/N		STATOR S/N	
MCR23-11-098		GIB-1742	
<p>Bearing lubrication - Security operation</p> <p>Incorrect lubrication can lead to engine failure with a safety risk in service</p> <p>SRIL TROS 965.289</p>			
<p>INSULATED CERAMIC BEARING DRIVE END - Security operation</p> <p>Incorrect assembly can lead to engine failure with a safety risk in service</p> <p>SRIL TROS 965.289</p> <p>FAG: NU 214-E-XL-M1-P6-F1-H257A-J20AB-C4 or NU 214-E-M1-P6-F1-H257A-J20AA-C4</p> <p>SKE: NU 214 ECM/C4-VA3091</p> <p>(cross out the references that have not been fitted)</p>			
N°: Romania 0097 09/23 SN457-1369794			
<p>S2 Radial play after assembly (0,042 / 0,114):</p> <p>0,07mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Mln: 144g - Max: 149g</p> <p>Mesured quantity: <input checked="" 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>SKE 6214-M/C4-VL 0241</p> <p>(cross out the references that have not been fitted)</p>			
Serial N°: Austria 094W			
<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>Reference apparatus: AMX920</p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Mln: 159g - Max: 164g</p> <p>Mesured quantity: <input checked="" 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>	
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216 2	
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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)		3,24 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	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Value: 0,01mm		AMX920	
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
0,06mm		AMX920	
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		CIT-51001	
Sensor reference: DTR000512252/DSD1830.19Q14HW	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK
		80370001078	

Prep. & Final Assembly									
OPERATOR				Quality verification					
F1	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/>	OK <input type="checkbox"/> NOK <input type="checkbox"/>	search reference for the event of failure / absence of the motorized screwdriver)	QC 1 X 61 Nm	<input type="checkbox"/>	OK <input type="checkbox"/>	NOK <input type="checkbox"/>	
F2	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/>	OK <input type="checkbox"/> NOK <input type="checkbox"/>	search reference for the event of failure / absence of the motorized screwdriver)	QC 1 X 61 Nm	<input type="checkbox"/>	OK <input type="checkbox"/>	NOK <input type="checkbox"/>	
F3	Torque tightening to 4 x 44 Nm: Fold locking plate	<input checked="" type="checkbox"/>	OK <input type="checkbox"/> NOK <input type="checkbox"/>	search reference for the event of failure / absence of the motorized screwdriver)	QC 1 X 37 Nm	<input type="checkbox"/>	OK <input type="checkbox"/>	NOK <input type="checkbox"/>	
F4	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/>	OK <input type="checkbox"/> NOK <input type="checkbox"/>	search reference for the event of failure / absence of the motorized screwdriver)	QC 1 X 18 Nm	<input type="checkbox"/>	OK <input type="checkbox"/>	NOK <input type="checkbox"/>	
F5	Torque tightening to 6 x 22 Nm:	<input checked="" type="checkbox"/>	OK <input type="checkbox"/> NOK <input type="checkbox"/>	search reference for the event of failure / absence of the motorized screwdriver)	QC 1 X 18 Nm	<input type="checkbox"/>	OK <input type="checkbox"/>	NOK <input type="checkbox"/>	
Finishing									
F1	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/>	OK <input type="checkbox"/> NOK <input type="checkbox"/>	search reference for the event of failure / absence of the motorized screwdriver)	QC 1 X 22 Nm	<input type="checkbox"/>	OK <input type="checkbox"/>	NOK <input type="checkbox"/>	
Grease protection transport									
S3	18g (0/+4.5) CC	Mesured quantity: 18g				<input checked="" type="checkbox"/>	OK <input type="checkbox"/>	NOK <input type="checkbox"/>	
S4	18g (0/+4.5) CC	Mesured quantity: 18g				<input checked="" type="checkbox"/>	OK <input type="checkbox"/>	NOK <input type="checkbox"/>	
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 RAS									
OBSERVATIONS									

FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA	TROS 916.216	2	Page
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GIBELA RAIL TRANSPORT CONSORTIUM RF (PTY) LTD

Traction Motors Quality

2024 -05- 17

Name : ...Dima...

Signature : ...RAS...



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21724

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 77293076

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: 2024/05/17

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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21724

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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: 13/05/24
Name: Godfrey

Assembly after test

Date: 14/05/24
Name: Godfrey Kolari Thomas

ROTOR S/N mcr23-11-089		STATOR S/N GJB-1737	
<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>			
<p>N°: Romania 0097 09/23 SN383-1369794</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>Mn:144g - Max:149g Measured quantity: Quality validation</p> <p>Filter 1 (Name and signature) Filter 2 (Name and signature) Quality Insp. Name and signature Dina</p>	
<p>S1 INSULATED CERAMIC BEARING OPPOSITE DRIVE END side - Security operation Incorrect assembly can lead to engine failure with a safety risk in service SRIL TROS 965.289 FAG: 6214-M-P6-J20AB-H257A-C4 or 6214-M-P6-J20AA-H257-C4 SKF 6214-M/C4-VL 0241 (cross out the references that have not been fitted)</p>			
<p>Serial N°: Austria 095 W</p>			
<p>S1 Radial play after assembly (0,021 / 0,067): 0,05mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Mn:159g - Max:164g Measured quantity: Quality verification</p> <p>Filter 1 (Name and signature) Filter 2 (Name and signature) Quality Insp. Name and signature Dina</p>	
<p>Référence appareil: AMXG720</p>			
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FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA

Record the value of the insulation resistance of the bearings to TROS 915.069 (> 50 kΩ) 13,4 M.Ω		<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: 0,03mm	<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): 0,8mm	<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			
<input checked="" type="checkbox"/> F1	Torque tightening to 8 x 76 Nm:		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<small>attach reference for the event of failure / absence of the motorised screwdriver</small> <i>QC 1 X 61 Nm</i>		<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>attach reference for the event of failure / absence of the motorised screwdriver</small> <i>QC 1 X 61 Nm</i>		<input type="checkbox"/> OK <input type="checkbox"/> NOK			
<input checked="" type="checkbox"/> F3	Torque tightening to 4 x 44 Nm:		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<small>attach reference for the event of failure / absence of the motorised screwdriver</small> <i>QC 1 X 37 Nm</i>		<input type="checkbox"/> OK <input type="checkbox"/> NOK			
	Fold locking plate					<input checked="" 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>attach reference for the event of failure / absence of the motorised screwdriver</small> <i>QC 1 X 18 Nm</i>		<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>attach reference for the event of failure / absence of the motorised screwdriver</small> <i>QC 1 X 18 Nm</i>		<input checked="" 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>attach reference for the event of failure / absence of the motorised screwdriver</small> <i>QC 1 X 22 Nm</i>		<input type="checkbox"/> OK <input type="checkbox"/> NOK			
Grease protection transport									
<input checked="" type="checkbox"/> S3	18g (0/+4.5) CC	Mesured quantity:	<i>18g</i>			<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK			
<input checked="" type="checkbox"/> S4	18g (0/+4.5) CC	Mesured quantity:	<i>18g</i>			<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 ADS.</i>		Comments			
OBSERVATIONS									

FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA	TROS 916.216	2	Page
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GIBELA RAIL TRANSPORT CONSORTIUM RF (PTY) LTD

Traction Motors Quality

2024 -05- 17

Name : *Dima*

Signature : *ADS.*