

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


MANUFACTURER'S DELIVERY DOCUMENT	
<b>PRODUCT TYPE</b>	MOTOR BOGIE MB1  DTR0009706804
<b>SERIAL NUMBER</b>	MB1 1416

**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	
<b>DATE</b>	06 May 2024
<b>NAME</b>	Kwababana Hlumisa
<b>VISA</b>	

**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	1416		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M01751		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M03237		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3309		NGC
Wheel (Right)	AR00000174670	138	12-23	Bonatrans
Wheel (Left)	AR000000174670	141	12-24	Bonatrans
Wheelset (Rear)	AR00000178600	M03238		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3343		NGC
Wheel (Right)	AR00000174670	140	12-23	Bonatrans
Wheel (Left)	AR00000174670	063	10-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2312048		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2311106		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1754	04-24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	5282	04-24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	5286	04-24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	5283	04-24	WEBTEC
Motor (front)	AR00000168516	21541		GIBELA
Motor (Rear)	AR00000168516	21500		GIBELA

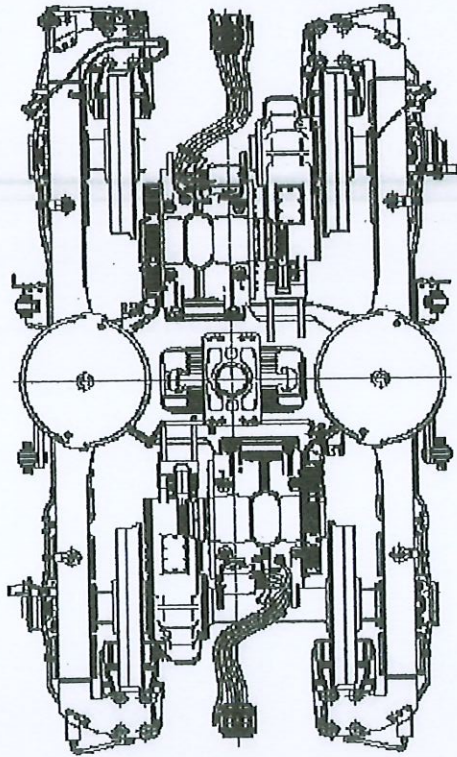
# PRESSING REPORT

DATE 5/6/2024	RESPONSIBLE VALIDATION
PRASA	LOAD TEST: MOTOR BOGIE
INSTRUCTION SHEET:	PROJECT:
FAMILY:	

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

SECONDARY SUSPENSION		THEORETICAL [mm]
MEASURED [mm]	SHIM THICK [mm]	MIN
584.70	+ 1.00 =	585.00
		MAX
		587.50

RIGHT JACK LOAD	7376 Kg
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LEFT JACK LOAD	7376 Kg
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BOGIE SERIAL N°	MB1-1416
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [kg]	22388
COMPLETE BOGIE WEIGHT [kg]	7303
OPERATOR	SAFANA
DATE	5/6/2024

OPERATOR STAMP	DC-371-6
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	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN	0.00
	MAX	0.45
LOAD DIFFERENCE ON REAR AXLE [%]	MIN	0.00
	MAX	0.11
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN	0.00
	MAX	-0.18
LOAD DIFFERENCE ON RAILS [%]	MIN	0.00
	MAX	0.28
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN	0.00
	MAX	-0.17

SECONDARY SUSPENSION		THEORETICAL [mm]
MEASURED [mm]	SHIM THICK [mm]	MIN
586.17	+ 0.00 =	585.00
		MAX
		587.50

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

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN	
	MAX	
GAP PRIMARY SUSPENSION [mm]	MIN	33.00
	MAX	39.00
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q1	5612

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN	
	MAX	
GAP PRIMARY SUSPENSION [mm]	MIN	33.00
	MAX	39.00
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q3	5613



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: 04/05/04  
 Name: KOLANT

Assembly after test  
 Date: 18/03/04  
 Name: YOUNE & GODFREY

2154

ROTOR S/N <b>MGD25-10-068</b>		STATOR S/N <b>GTHB-1557</b>	
<b>Bearing lubrication - Security operation</b> Incorrect lubrication can lead to engine failure with a safety risk in service SRIL TROS 965 289			
(S2) <b>INSULATED CERAMIC BEARING DRIVE END - Security operation</b> Incorrect assembly can lead to engine failure with a safety risk in service SRIL TROS 965 289 <b>FAG: NU 214-E-XL-M1-P6-F1-H257A-J20AB-C4 or NU 214-E-M1-P6-F1-H257A-J20AA-C4</b> <b>SKE: NU 214-ECM/C4-VA3091</b> (cross out the references that have not been fitted)			
N°: <b>ROMANIA: 0097 11/23 84861 -1888219</b>			
(S2) Radial play after assembly ( 0,042 / 0,114 ): <b>0,07mm</b> <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK		(S2) LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly Min 144g - Max 149g Filter 1 (Name and signature) <b>[Signature]</b> Filter 2 (Name and signature) <b>[Signature]</b> Measured quantity: <b>[Signature]</b> Quality validation: <b>Dima ADS</b>	
(S1) <b>INSULATED CERAMIC BEARING OPPOSITE DRIVE END side - Security operation</b> Incorrect assembly can lead to engine failure with a safety risk in service SRIL TROS 965 289 <b>FAG: 6214-M-P6-J20AB-H257A-C4 or 6214-M-P6-J20AA-H257-C4</b> <b>SKE: 6214-M/C4-VE0241</b> (cross out the references that have not been fitted)			
Serial N°: <b>GERMANY: 0200 X 272 -1001 09/23 SH0011</b>			
(S1) Radial play after assembly ( 0,021 / 0,067 ): <b>0,04mm</b> <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK		(S1) LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly Min 159g Max: 164g Filter 1 (Name and signature) <b>[Signature]</b> Filter 2 (Name and signature) <b>[Signature]</b> Measured quantity: <b>[Signature]</b> Quality validation: <b>Dima ADS</b>	
Référence appareil <b>AJEPIC</b>			
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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) <b>13,2MΩ</b>		<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK
OPERATOR		Quality verification	
Out of round at the end of the shaft drive end <b>0,05mm</b>	<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: <b>0,02mm</b>	<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 ): <b>0,7mm</b>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<input type="checkbox"/> OK	<input type="checkbox"/> NOK

Sensor reference: DTR0000512252/DSD1830.19Q14HW  OK  NOK 3031400546  OK  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
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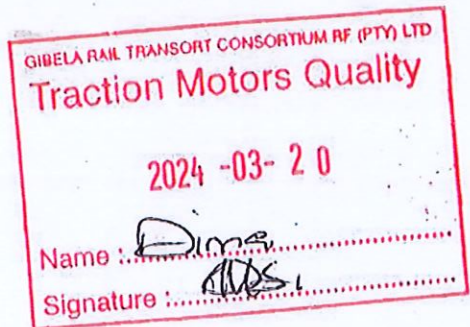
**Grease protection transport**

<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)  OK  NOK

Final Inspection	Comments
Quality Insp Name and Signature: <i>Dima ADS</i>	

**OBSERVATIONS**





21500

ALSTOM

GIBELCO

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: 11/02/24

Name: Godfrey & Xolani

Assembly after test

Date: 11/04/2024

Name: Jacques & Xolani & Thomas

ROTOR S/N MCR22-11-172		STATOR S/N GIB-1510	
<p><b>Bearing lubrication - Security operation</b> Incorrect lubrication can lead to engine failure with a safety risk in service SRIL TROS 965.289</p>			
<p><b>INSULATED CERAMIC BEARING DRIVE END -- Security operation</b> 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 8N74-1369794			
<p><b>S2</b> Radial play after assembly (0,042 / 0,114): 0,07 mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p><b>S4</b> LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min:144g - Max:149g</p> <p>Measured quantity: <u>                    </u></p> <p>Filter 1 (Name and signature) <u>                    </u></p> <p>Filter 2 (Name and signature) <u>                    </u></p> <p>Quality validation</p> <p>Quality Insp. Name and signature <u>Dina</u></p>	
<p><b>S1</b> 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 X272-1232 09/23 8N0034			
<p><b>S1</b> Radial play after assembly (0,021 / 0,067): 0,06 mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p><b>S3</b> LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min:159g Max: 164g</p> <p>Measured quantity: <u>                    </u></p> <p>Filter 1 (Name and signature) <u>                    </u></p> <p>Filter 2 (Name and signature) <u>                    </u></p> <p>Quality verification</p> <p>Quality Insp. Name and signature <u>Dina</u></p>	
Référence appareil: AMX G14			
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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)

441 MΩ

OK  NOK

OPERATOR	Quality verification
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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>0,07 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>0,6 mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>G1BFL001</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>S2317000241</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK

**Prep. & Final Assembly**

OPERATOR		Quality verification			
<input checked="" type="checkbox"/> F1	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure/absence of the motorised screwdriver) <u>D3862188</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>D3862188</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>D2511039</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>N005269</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>N005269</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>N055269</u>	QC 1 X 22 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
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**Grease protection transport**

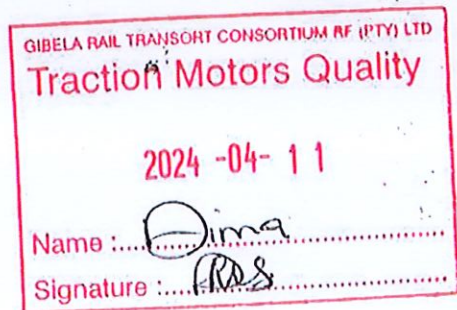
<input checked="" type="checkbox"/> S3	18g (0/+4.5) CC	Mesured quantity: <u>18g</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
<input checked="" type="checkbox"/> S4	18g (0/+4.5) CC	Mesured quantity: <u>18g</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK

Final inspection following the check-list DTR0000452909 and DTR0000452910 (in the case of 100% inspection of the production)  OK  NOK

Final inspection	Comments
Quality Insp Name and Signature: <u>Dima PDS</u>	

**OBSERVATIONS**

FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA	TROS 916.216	2	Page
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**MANUFACTURER**            **ALSTOM** Ubunye  
 Marievale Road, Vosterkroon, Nigel, 1490

**CUSTOMER**                **Gibela**

**CONTRACT**

**PROJECT**                    **PRASA**

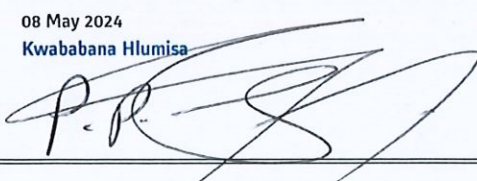
<b>MANUFACTURER'S DELIVERY DOCUMENT</b>	
<b>PRODUCT TYPE</b>	<b>MOTOR BOGIE type MB1</b>
	<b>DTR0009706804</b>
<b>SERIAL NUMBER</b>	<b>MB1 - 1420</b>

**CONTENTS**

- Compliance certificate.....	Page 1/2	<input checked="" type="checkbox"/>
- List of deviations and missing parts.....	Page 2/2	<input checked="" type="checkbox"/>
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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.

<b>CONSTRUCTOR APPROVAL</b>	
<b>DATE</b>	08 May 2024
<b>NAME</b>	<b>Kwababana Hlumisa</b>
<b>VISA</b>	

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	1420		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	1717		Alstom - Ubunye
Wheelset (Front)	AR000000177020	3245		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	3311		NGC
Wheel (Right)	AR00000174670	017	11.23	Bonatrans
Wheel (Left)	AR000000174670	060	11.23	Bonatrans
Wheelset (Rear)	AR00000178600	3246		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	3345		NGC
Wheel (Right)	AR00000174670	134	12.23	Bonatrans
Wheel (Left)	AR00000174670	019	12.23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2312027		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2312117		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1747	04.24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	5262	04.24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	5265	04.24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	5266	04.24	WEBTEC
Motor (front)	AR00000168516	21440		GIBELA
Motor (Rear)	AR00000168516	21480		GIBELA

# PRESSING REPORT

DATE: 5/7/2024

RESPONSABLE VALIDATION

PRASA

INSTRUCTION SHEET:

FAMILY:

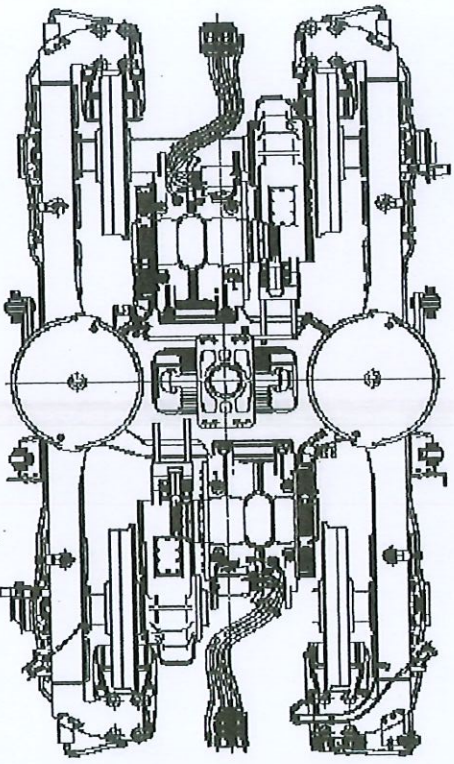
LOAD TEST : MOTOR BOGIE

PROJECT:

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	38.44 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [KG]	Q2	5555

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.54	+	0.00	MIN 585.00 MAX 587.50

RIGHT JACK LOAD  
7377 KG



BOGIE SERIAL N°	MB1-1420
BOGIE TYPE	MS
BOGIE WEIGHT UNDER LOAD [KG]	22366
COMPLETE BOGIE WEIGHT [KG]	7273
OPERATOR	DATE
EDWARD	5/7/2024

OPERATOR STAMP  
**BFI-21**

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	38.37 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [KG]	Q1	5597

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.54	+	0.00	MIN 585.00 MAX 587.50

LEFT JACK LOAD  
7376 KG

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm] ✓			
MEASURED	+	=	THEORETICAL [mm]
0.32			MIN -1.00 MAX 1.00

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	38.62 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [KG]	Q4	5571

	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00	0.38 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00	0.64 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00	-0.28 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00	0.51 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00	0.13 ✓

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.73 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [KG]	Q3	5643



2488

ALSTOM

GIBELCO

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

Référence: TROS 916.216 Révislon: 2

Documents de référence: AT00000325953 - AT00000325990

Assembly before test  
Date: 13/02/24  
Name: XOLANI

Assembly after test  
Date: 10/04/2024  
Name: Jacques Xolani & Tommas

ROTOR S/N MCR03-10-087		STATOR S/N GTH3-1493	
<p><b>Bearing lubrication - Security operation</b> Incorrect lubrication can lead to engine failure with a safety risk in service SRIL TROS 965 289</p>			
<p><b>INSULATED CERAMIC BEARING DRIVE END - Security operation</b> 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 <del>SKF-NU 214-ECM/C4-VA3091</del> (cross out the references that have not been fitted)</p>			
<p>N°: ROMANIA: - 0097 09/23 SN204-1369794</p>			
<p><b>S2</b> Radial play after assembly (0,042 / 0,114): 0,07mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p><b>S4</b> 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): [Signature]</p> <p>Filter 2 (Name and signature): [Signature]</p> <p>Quality validation: [Signature]</p>	
<p><b>S1</b> 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 <del>SKF 6214-M/C4-VL0241</del> (cross out the references that have not been fitted)</p>			
<p>Serial N°: GERMANY: - 0200 X272-1257 09/23 SN0045</p>			
<p><b>S1</b> Radial play after assembly (0,021 / 0,067): 0,04mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p><b>S3</b> 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): [Signature]</p> <p>Filter 2 (Name and signature): [Signature]</p> <p>Quality validation: [Signature]</p>	
<p>Référence appareil: AJZP14</p>			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216	
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		Page 1	

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

Record the value of the Insulation resistance of the bearings to TROS 915.069 (> 50 kΩ)		9,52 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: 0,03mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number AJZP14	<input type="checkbox"/> OK <input type="checkbox"/> NOK	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max: 0,06mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number AJZP14	<input type="checkbox"/> OK <input type="checkbox"/> NOK	<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 GTH3001	<input type="checkbox"/> OK <input type="checkbox"/> NOK	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Sensor reference: DTR000512252/DSD1830.19Q14HW	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number S23700134	<input type="checkbox"/> OK <input type="checkbox"/> NOK	<input type="checkbox"/> OK <input type="checkbox"/> NOK

Prep. & Final Assembly							
OPERATOR				Quality verification			
F1	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	QC 1 X 61 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
F2	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	QC 1 X 61 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
F3	Torque tightening to 4 x 44 Nm: Fold locking plate	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	QC 1 X 37 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
F4	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	QC 1 X 18 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
F5	Torque tightening to 6 x 22 Nm:	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	QC 1 X 18 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
<b>Finishing</b>							
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
<b>Grease protection transport</b>							
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
<b>Final Inspection</b>						<b>Comments</b>	
Quality Insp Name and Signature:							
Dima <i>[Signature]</i>							
<b>OBSERVATIONS</b>							
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						Page	2

GIBELA RAIL TRANSPORT CONSORTIUM RF (PTY) LTD  
**Traction Motors Quality**  
  
 2024-04-10  
  
 Name : *Dima*  
 Signature : *[Signature]*



## CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B  
Serial Number: N ° 21440  
Client / Customer: ALSTOM UBUNYE (PTY) LTD  
Project: PRASA  
P O Number: 76576930  
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: 2024/04/17  
Function: Final Inspection  
Performed and signed off by: Name \_\_\_\_\_ Dimakatso Mohoalali  
Signature \_\_\_\_\_ *AMS*



Gibela Rail  
02 Shosholozza 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 Révisión: 2

Documents de référence: AT00000325953 - AT00000325990

Assembly before test  
Date: 25/01/2024  
Name: Jacques

Assembly after test  
Date: 10/04/2024  
Name: Jacques + Tammas + Kolani

ROTOR S/N MCB22-11-018		STATOR S/N CTB-1440	
<p><b>Bearing lubrication - Security operation</b> Incorrect lubrication can lead to engine failure with a safety risk in service SRIL TROS 965.289</p>			
<p><b>INSULATED CERAMIC BEARING DRIVE END - Security operation</b> 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 <del>NU 214-E-M1-P6-F1-H257A-J20AA-C4</del> SKE: <del>NU 214-EGM/C4-VA3091</del> (cross out the references that have not been fitted)</p>			
<p>N° ROMANIA: 0097 09/23 SN328 - 1369794</p>			
<p><b>S2</b> Radial play after assembly ( 0,042 / 0,114 ):</p> <p>0,08mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p><b>S3</b> LUBRICATION 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 ADS</p>	
<p><b>INSULATED CERAMIC BEARING OPPOSITE DRIVE END side - Security operation</b> 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 <del>6214-M-P6-J20AA-H257-C4</del> SKE: <del>6214-M/C4-VL0241</del> (cross out the references that have not been fitted)</p>			
<p>Serial N°: GERMANY: 0200 1272-1307 09/23 SN0091</p>			
<p><b>S1</b> Radial play after assembly ( 0,021 / 0,067 ):</p> <p>0,05mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Reference: ASEP14</p>		<p><b>S3</b> LUBRICATION 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 ADS</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)		2,14 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	A SEP 14	
Out of round on toothed wheel 0,1 max: 0,06mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	A SEP 14	
sensor / toothed wheel play 0,7 (+/- 0,2): 0,7mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	CTB FLOOD	

Sensor reference: DTR0000512252/DSD1830.19Q14HW  OK  NOK 3225200542 Device serial number  OK  NOK

**Prep. & Final Assembly**

OPERATOR			Quality verification			
<input checked="" type="checkbox"/> F1	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of false / absence of the motorised screwdriver)	QC 1 X 61 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
<input checked="" type="checkbox"/> F2	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of false / absence of the motorised screwdriver)	QC 1 X 61 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
<input checked="" type="checkbox"/> F3	Torque tightening to 4 x 44 Nm: Fold locking plate	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of false / absence of the motorised screwdriver)	QC 1 X 37 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
<input checked="" type="checkbox"/> F4	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of false / absence of the motorised screwdriver)	QC 1 X 18 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
<input checked="" type="checkbox"/> F5	Torque tightening to 6 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of false / absence of the motorised screwdriver)	QC 1 X 18 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK	

**Finishing**

<input checked="" type="checkbox"/> F1	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of false / absence of the motorised screwdriver)	QC 1 X 22 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
----------------------------------------	---------------------------------	---------------------------------------------------------------------	---------------------------------------------------------------------------------	--------------	----------------------------------------------------------	--

**Grease protection transport**

<input checked="" type="checkbox"/> S3	18g (0/+4.5) CC	Mesured quantity: <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	Comments
Quality Insp Name and Signature: <u>Dima</u> <u>MDS</u>	

**OBSERVATIONS**

GIBÉLA RAIL TRANSPORT CONSORTIUM HF (PTY) LTD  
**Traction Motors Quality**  
 2024 -04- 10  
 Name : Dima  
 Signature : MDS