

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

CUSTOMER **Gibela**

CONTRACT

PROJECT **PRASA**

MANUFACTURER'S DELIVERY DOCUMENT

PRODUCT TYPE **MOTOR BOGIE type MB1**

DTR0009706804

SERIAL NUMBER **MB1 - 1306**

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- 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	31 January 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	1306		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M 1595		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M 2942		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 2876		NGC
Wheel (Right)	AR00000174670	038	11/23	Bonatrans
Wheel (Left)	AR000000174670	007	11/23	Bonatrans
Wheelset (Rear)	AR00000178600	M 2941		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3017		NGC
Wheel (Right)	AR00000174670	105	11/22	Bonatrans
Wheel (Left)	AR00000174670	104	11/22	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2309161		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2309179		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1522	11/23	Wabtec
Brake unit without PB (Right front)	AR00000175185	4591	11/23	Wabtec
Brake unit without PB (Left Front)	AR00000175185	4592	11/23	Wabtec
Brake unit without PB (left rear)	AR00000175185	4589	11/23	Wabtec
Motor (front)	AR00000168516	21224		Alstom Ornans
Motor (Rear)	AR00000168516	21345		Alstom Ornans

QC: 018
Revision: 1.0



ALSTOM UBUNYE

PRODUCTS TRACEABILITY

PRESSING REPORT

DATE
1/27/2024

DATE VALIDATION

RESPONSABLE VALIDATION

PRASA ALSTOM UBUUNYE

INSTRUCTION SHEET:

FAMILY:

LOAD TEST : MOTOR BOGIE

PROJECT:

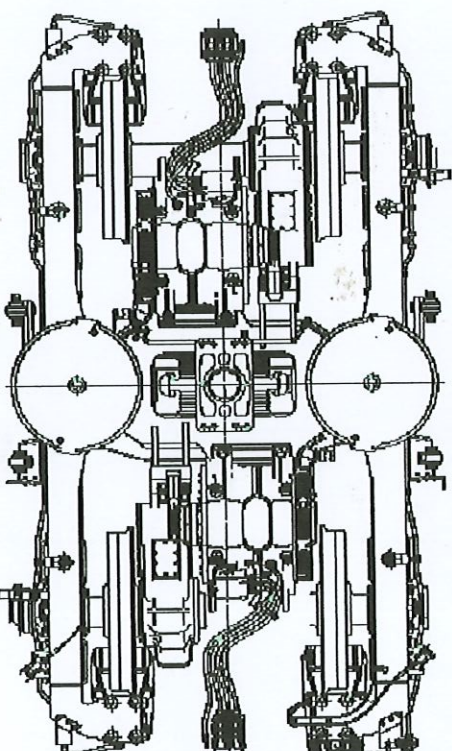
	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	38.69 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q2	5581

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
584.48	+	3.00	= 587.48
			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	38.71 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q4	5591

BOGIE SERIAL N°	MB1-1306
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22372
COMPLETE BOGIE WEIGHT [Kg]	7294
OPERATOR	DATE
EDWARD	1/27/2024



	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00	0.07 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00	0.17 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00	-0.14 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00	0.12 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00	0.05 ✓

OPERATOR STAMP
BF1-21

LEFT JACK LOAD
7376 Kg

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	38.75 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q1	5589

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
587.38	+	0.00	= 587.38
			MIN 585.00 MAX 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm] ✓			
			THEORETICAL [mm]
			MIN -1.00 MAX 1.00
	0.10		

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	38.31 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q3	5610



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21345

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76236847

Status: QC PASS

Derogations / Concession / Waiver N °: N/A

Customer modification: N/A

Missing parts: N/A

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

Date: 2023/12/11

Function: Final Inspection

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

21345

ALSTOM

GIBELTA

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: 28/11/2023
 Name: Sagun

Assembly after test
 Date: 06/12/23
 Name: XOLANT JACQUES

ROTOR S/N MCR22-10-117	STATOR S/N CIB-1359												
<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>													
<p>N°: ROMANIA : 0097 09/22 SN 120 - 1369794</p>													
<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> <table border="1"> <tr> <td>Min:144g - Max:149g</td> <td>Mesured quantity:</td> <td>Quality validation</td> </tr> <tr> <td>Fitter 1 (Name and signature)</td> <td>Fitter 2 (Name and signature)</td> <td>Quality Insp. Name and signature</td> </tr> <tr> <td colspan="2"></td> <td>Dima</td> </tr> </table>		Min:144g - Max:149g	Mesured quantity:	Quality validation	Fitter 1 (Name and signature)	Fitter 2 (Name and signature)	Quality Insp. Name and signature			Dima	
Min:144g - Max:149g	Mesured quantity:	Quality validation											
Fitter 1 (Name and signature)	Fitter 2 (Name and signature)	Quality Insp. Name and signature											
		Dima											
<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°: GERMANY : 0200 X116-0752 04/23 SN 0132</p>													
<p>S3 Radial play after assembly (0,021 / 0,067):</p> <p>0,06mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Reference applied</p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <table border="1"> <tr> <td>Min:159g</td> <td>Max:164g</td> <td>Mesured quantity:</td> <td>Quality validation</td> </tr> <tr> <td>Fitter 1 (Name and signature)</td> <td>Fitter 2 (Name and signature)</td> <td>Quality Insp. Name and signature</td> </tr> <tr> <td colspan="2"></td> <td>Dima</td> </tr> </table>		Min:159g	Max:164g	Mesured quantity:	Quality validation	Fitter 1 (Name and signature)	Fitter 2 (Name and signature)	Quality Insp. Name and signature			Dima
Min:159g	Max:164g	Mesured quantity:	Quality validation										
Fitter 1 (Name and signature)	Fitter 2 (Name and signature)	Quality Insp. Name and signature											
		Dima											
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216	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)

2,409.52

☒

OK

☐

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: <u>AS-2P14</u>	<input type="checkbox"/> OK	<input type="checkbox"/> NOK		
Out of round on toothed wheel 0,1 max: <u>0,06mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: <u>AS-2P14</u>	<input type="checkbox"/> OK	<input type="checkbox"/> NOK		
sensor / toothed wheel play 0,7 (+/- 0,2): <u>0,8mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: <u>GTBFL002</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>G0234001413</u>	<input type="checkbox"/> OK	<input type="checkbox"/> NOK		

Prep. & Final Assembly

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

Finishing

F1 Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the motorized screwdriver): <u>QC 1 X 22 Nm</u>	<input type="checkbox"/> OK	<input type="checkbox"/> NOK
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Grease protection transport

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

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

☒ OK ☐ NOK

Final inspection

Quality Insp Name and Signature:

Dima
ADLS

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

2023 -12- 07

Name: Dima

Signature: ADLS



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21224

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76004374

Status: QC PASS

Derogations / Concession / Waiver N °: N/A

Customer modification: N/A


Missing parts: N/A

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

Date: 2023/12/11

Function: Final Inspection

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

21224

ALSTOM

GIBELCA

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: 06/10/2023

Name: Sergio

Assembly after test

Date: 04/12/2023

Name: Sergio + Zulu + Yolani

ROTOR S/N MCR22-b-052		STATOR S/N CTB-1235	
<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 05/23 SN 104-1085122			
<p>S2 Radial play after assembly (0,042 / 0,114): 0,09mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S4 LUBRICATION WITH MOBILITH SHC 100 before cover assembly Min: 144g - Max: 149g Fitter 1 (Name and signature): [Signature] Fitter 2 (Name and signature): [Signature] Mesured quantity: [Signature] Quality validation: Dima [Signature]</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>			
Serial N°: GERMANY: 0000 X019-0942 01/23 SN 0243			
<p>S1 Radial play after assembly (0,021 / 0,067): 0,06mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK Reference: [Signature]</p>		<p>S3 LUBRICATION WITH MOBILITH SHC 100 before cover assembly Min: 159g - Max: 164g Fitter 1 (Name and signature): [Signature] Fitter 2 (Name and signature): [Signature] Mesured quantity: [Signature] Quality verification: Dima [Signature]</p>	
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216 2 Page 1	

ALSTOM

GIBELCA

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) 5,3395c		<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: 0,01mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<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	<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	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK

Sensor reference: DTR0000512252/DSD1830.19Q14HW

Device serial number: 92312003652

☒ OK ☐ NOK

Prep. & Final Assembly

OPERATOR		Quality verification	
F1	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	QC 1 X 61 Nm <input type="checkbox"/> OK <input type="checkbox"/> NOK
F2	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	QC 1 X 61 Nm <input type="checkbox"/> OK <input type="checkbox"/> NOK
F3	Torque tightening to 4 x 44 Nm: Fold locking plate	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	QC 1 X 37 Nm <input type="checkbox"/> OK <input type="checkbox"/> NOK
F4	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	QC 1 X 18 Nm <input type="checkbox"/> OK <input type="checkbox"/> NOK
F5	Torque tightening to 6 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	QC 1 X 18 Nm <input type="checkbox"/> OK <input type="checkbox"/> NOK

Finishing

F1	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	QC 1 X 22 Nm <input type="checkbox"/> OK <input type="checkbox"/> NOK
----	---------------------------------	---	---

Grease protection transport

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

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

☒ OK ☐ NOK

Final inspection

Quality Insp Name and Signature:

Dima
EAS

Comments

OBSERVATIONS

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

TROS 916.216

2

GIBELA RAIL TRANSPORT CONSORTIUM HF (PT) LTD
Traction Motors Quality

2023 -12- 06

Name: Dima
Signature: EAS

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 1305\2**

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	03 April 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	1305		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M1598		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M02934		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	L3018		NGC
Wheel (Right)	AR00000174670	038	11-22	Bonatrans
Wheel (Left)	AR000000174670	063	11-22	Bonatrans
Wheelset (Rear)	AR00000178600	M02933		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	L3024		NGC
Wheel (Right)	AR00000174670	058	11-22	Bonatrans
Wheel (Left)	AR00000174670	114	11-22	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2309196		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2309160		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1534	11-23	WEBTEC
Brake unit without PB (Right front)	AR00000175185	4608	11-23	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	4633	11-23	WEBTEC
Brake unit without PB (left rear)	AR00000175185	4605	11-23	WEBTEC
Motor (front)	AR00000168516	21356		GIBELA
Motor (Rear)	AR00000168516	21370		GIBELA

PRESSING REPORT



PRASA ALSTOM UBUNYE

RESPONSABLE VALIDATION

LOAD TEST : MOTOR BOGIE

INSTRUCTION SHEET:

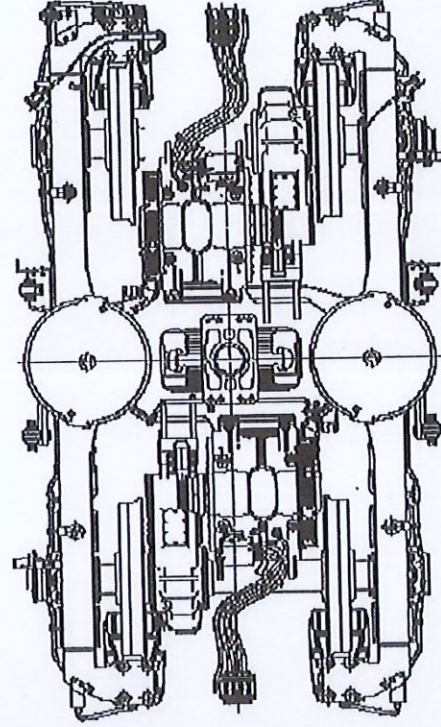
PROJECT:

FAMILY:

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	MIN 33.00	MAX 39.00	35.09 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5559

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
585.92	+	0.00 =	585.92 MIN 585.00 MAX 587.50

RIGHT JACK LOAD	Kg
7376	



BOGIE SERIAL N°	M82-1305
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22371
COMPLETE BOGIE WEIGHT [Kg]	7298
OPERATOR	BAFANA
DATE	1/29/2024

OPERATOR STAMP	DC-BFI-6
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LEFT JACK LOAD	Kg
7376	

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.89	+	0.00 =	586.89 MIN 585.00 MAX 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]	✓	THEORETICAL [mm]
-0.97		MIN -1.00 MAX 1.00

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	MIN 33.00	MAX 39.00	37.30 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5656

THEORETICAL		MEASURED
MIN	MAX	
WHEEL DIAMETER [mm]		
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.79 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q1	5612



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21370

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76311308

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: 2024/01/24

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature AMS



Gibela Rail
02 Shosholozwa Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

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MOT 21370 21370

ALSTOM

GIBELG

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

Référence: TROS 916.216

Révision: 2

Documents de référence: AT00000325953 - AT00000325990

Assembly before test

Date: 06/10/23

Name: XUANI

Assembly after test

Date: 10/01/2024

Name: Jacques + Zully + Thomas

ROTOR S/N MCR23-10-086		STATOR S/N CTB-1381	
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- SKF-NU 214-EGM/C4-VA309T (cross out the references that have not been fitted)			
N°: Romania : 0097 09/23 SN438 -1369794			
S2 Radial play after assembly (0,042 / 0,114): 0,06mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK		LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly Measured quantity: Filter 1 (Name and signature) Filter 2 (Name and signature) Quality validation Quality Insp. Name and signature	
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)			
Serial N°: Germany : 0300 X116-6735. 04/23 SN0095			
S1 Radial play after assembly (0,021 / 0,067): 0,05mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK		LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly Measured quantity: Filter 1 (Name and signature) Filter 2 (Name and signature) Quality verification Quality Insp. Name and signature	
Référence appareil ASEPIS		TROS 916.216	
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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) 6,25 GΩ		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
OPERATOR		
Out of round at the end of the shaft drive end 0,04mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	ASEPIS
Out of round on toothed wheel 0,1 max: 0,08mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	ASEPIS
sensor / toothed wheel play 0,7 (+/- 0,2): 0,68mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	CTB-1381

Sensor reference: DTR0000512252/DSD1830.19Q14HW	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: <u>85-31-1000151</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
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Prep. & Final Assembly

OPERATOR							Quality verification	
F1 Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	<small>attach reference (in the event of failure / absence of the material)</small>	<u>NCC0581</u>	QC 1 X 61 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
F2 Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	<small>attach reference (in the event of failure / absence of the material)</small>	<u>NCC0581</u>	QC 1 X 61 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
F3 Torque tightening to 4 x 44 Nm: Fold locking plate	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	<small>attach reference (in the event of failure / absence of the material)</small>	<u>NCC0581</u>	QC 1 X 37 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
F4 Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	<small>attach reference (in the event of failure / absence of the material)</small>	<u>NCC0581</u>	QC 1 X 18 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
F5 Torque tightening to 6 x 22 Nm:	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	<small>attach reference (in the event of failure / absence of the material)</small>	<u>NCC0581</u>	QC 1 X 18 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK

Finishing

F1 Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	<small>attach reference (in the event of failure / absence of the material)</small>	<u>NCC0581</u>	QC 1 X 22 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
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Grease protection transport

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

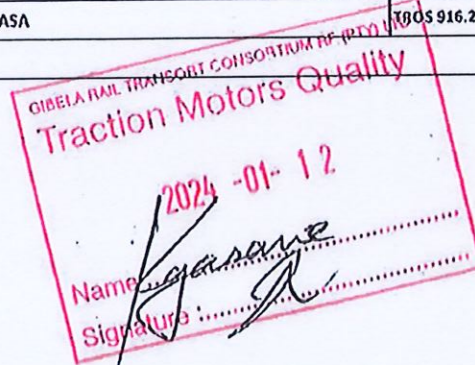
Final inspection following the check-list DTR0000452909 and DTR0000452910 (In the case of 100% inspection of the production)

☒ OK
☐ NOK

Final Inspection	Comments
Quality Insp Name and Signature: <div style="text-align: center; font-family: cursive; font-size: 1.2em;">Kasane</div>	

OBSERVATIONS

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CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21356
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76274086	
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:	2024/01/26
Function:	Final Inspection
Performed and signed off by:	Name _____ Dimakatso Mohoalali
	Signature _____ <i>RMS</i>



Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

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21356

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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: 30/11/2023

Name: S. G. J. M.

Assembly after test

Date: 02/01/2024

Name: X. J. M. J. M.

ROTOR S/N MCE22-10-119		STATOR S/N GIB-1357	
<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 VA909Y (cross out the references that have not been fitted)</p>			
N°: Romma : 0097 09/23 SN 286-1369794			
<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: 149g Mesured quantity: <input type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Filter 1 (Name and signature) <i>[Signature]</i> Filter 2 (Name and signature) <i>[Signature]</i></p> <p>Quality validation: <i>Dima</i> <i>RB8</i></p>	
<p>INSULATED CERAMIC BEARING OPPOSITE DRIVE END side - Security operation Incorrect assembly can lead to engine failure with a safety risk in service SRIL TROS 965.289 FAG : 6214-M-P6-J20AB-H257A-C4 or 6214-M-P6-J20AA-H257-C4 SKF 6214-M/C4-VL 0241 (cross out the references that have not been fitted)</p>			
Serial N°: Germany : 0300 X116-0658 04/23 SN 0031			
<p>S1 Radial play after assembly (0,021 / 0,067):</p> <p>0,01mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Reference appareil: <i>AS 2014</i></p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 159g Max: 164g Mesured quantity: <input type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Filter 1 (Name and signature) <i>[Signature]</i> Filter 2 (Name and signature) <i>[Signature]</i></p> <p>Quality verification: <i>Dima</i> <i>RB8</i></p>	
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GIBELQ

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

Record the value of the Insulation resistance of the bearings to TROS 915.069 (> 50 kΩ)		281 MΩ <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	
OPERATOR		Quality verification	
Out of round at the end of the shaft drive end 0,05 max: <i>0,01mm</i>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<i>AS 2014</i>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max: <i>0,03mm</i>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<i>AS 2014</i>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2): <i>0,7mm</i>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<i>GIBELQ</i>	<input type="checkbox"/> OK <input type="checkbox"/> NOK

Sensor reference: DTR0000512252/DSD1830.19Q14HW

<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number 52317000678	<input type="checkbox"/> OK <input type="checkbox"/> NOK
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Prep. & Final Assembly

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

Finishing

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

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

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

☒ OK ☐ NOK

Final inspection

Quality Insp Name and Signature:

Dima RDS

Comments

OBSERVATIONS

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

TROS 916.216

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

2024 -01- 24

Name : Dima

Signature : RDS