



ALSTOM UBUNYE

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 - 1375


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COMPLIANCE CERTIFICATE

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

CONSTRUCTOR APPROVAL

DATE	20 March 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	M 1375		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M 1694		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M 3127		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3105		NGC
Wheel (Right)	AR00000174670	005	11-23	Bonatrans
Wheel (Left)	AR000000174670	014	12-23	Bonatrans
Wheelset (Rear)	AR00000178600	M 3128		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 2955		NGC
Wheel (Right)	AR00000174670	005	12-23	Bonatrans
Wheel (Left)	AR00000174670	021	12-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2311072		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2311141		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1659	03-24	Wabtec
Brake unit without PB (Right front)	AR00000175185	5005	03-24	Wabtec
Brake unit without PB (Left Front)	AR00000175185	5002	03-24	Wabtec
Brake unit without PB (left rear)	AR00000175185	5003	03-24	Wabtec
Motor (front)	AR00000168516	21355		Alstom Ornans
Motor (Rear)	AR00000168516	21306		Alstom Ornans

PRESSING REPORT

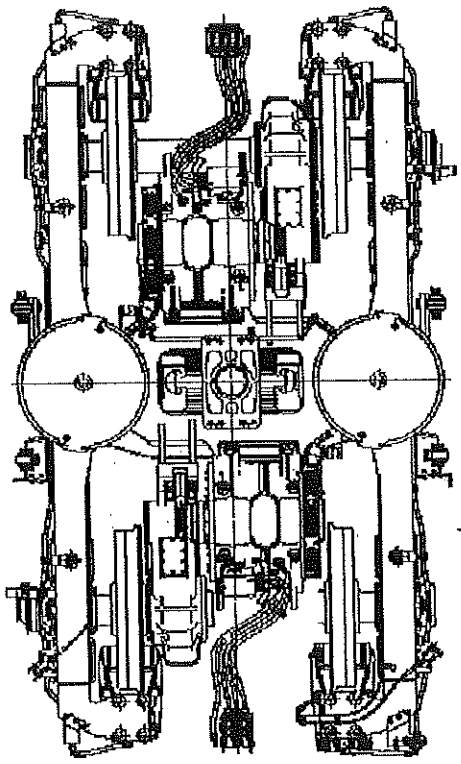
DATE 3/20/2024	RESPONSABLE VALIDATION	PRASA INSTRUCTION SHEET:	LOAD TEST : MOTOR BOGIE
DATE VALIDATION		FAMILY:	PROJECT:

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.38 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q2	5571

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
587.45	+	0.00	= 587.45
			MIN 585.00 MAX 587.50

RIGHT JACK LOAD
7376 Kg

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.44 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q4	5612



	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00	0.10 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00	-0.24 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00	-0.20 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00	-0.07 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00	-0.17 ✓

OPERATOR STAMP

BF-I-21

LEFT JACK LOAD
7376 Kg

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
587.22	+	0.00	= 587.22
			MIN 585.00 MAX 587.50

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

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.60 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q1	5582

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.42 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q3	5585

21355

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GIBEL

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

Référence: TROS 916.216

Révision: 2

Documents de référence: AT00000325953 - AT00000325990

Assembly before test

Date: 09/11/23

Name: XOLANT

Assembly after test

Date: 03/01/24

Name: XOLANT, GODFREY, THOMAS

ROTOR S/N MCP02-11-115		STATOR S/N GEB-1349	
<p>Bearing lubrication - Security operation Incorrect lubrication can lead to engine failure with a safety risk in service SRIL TROS 965.289</p>			
<p>INSULATED CERAMIC BEARING DRIVE END - Security operation Incorrect assembly can lead to engine failure with a safety risk in service SRIL TROS 965.289 FAG: NU 214-E-XL-M1-P6-F1-H257A-J20AB-C4 or NU 214-E-M1-P6-F1-H257A-J20AA-C4 SKF: NU 214-ECM/C4-VA3091 (cross out the references that have not been fitted)</p>			
N°: Romania: 0097 09/23 SN302-1369794			
<p>S2 Radial play after assembly (0,042 / 0,114): 0,06mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 144g - Max: 149g</p> <p>Measured quantity: <input type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Fitter 1 (Name and signature): <i>[Signature]</i></p> <p>Fitter 2 (Name and signature): <i>[Signature]</i></p> <p>Quality validation: <i>[Signature]</i></p>	
<p>INSULATED CERAMIC BEARING OPPOSITE DRIVE END side - Security operation Incorrect assembly can lead to engine failure with a safety risk in service SRIL TROS 965.289 FAG: 6214-M-P6-J20AB-H257A-C4 or 6214-M-P6-J20AA-H257-C4 SKF: 6214-M/C4-VL0241 (cross out the references that have not been fitted)</p>			
Serial N°: GERMANY: 0200 X116-0816 04/23 SN0167			
<p>S1 Radial play after assembly (0,021 / 0,067): 0,04mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 159g - Max: 164g</p> <p>Measured quantity: <input type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Fitter 1 (Name and signature): <i>[Signature]</i></p> <p>Fitter 2 (Name and signature): <i>[Signature]</i></p> <p>Quality verification: <i>[Signature]</i></p>	
Référence appareil: AMXG14			
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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) 2,05 GΩ		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
OPERATOR		Quality verification
Out of round at the end of the shaft drive end 0,05 mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max: 0,04 mm	<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): 0,8 mm	<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		Revise serial number: <u>50311000104</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 motorized screwdriver) <u>NCC 5081</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 motorized screwdriver) <u>NCC 5081</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 motorized screwdriver) <u>NCC 5081</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 motorized screwdriver) <u>NCC 5081</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 motorized screwdriver) <u>NCC 5081</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 motorized screwdriver) <u>NCC 5081</u>	QC 1 X 22 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK		
Grease protection transport							
<input checked="" type="checkbox"/> S3	18g (0/+4.5) CC	Mesured quantity: <u>18g</u>		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK			
<input checked="" type="checkbox"/> S4	18g (0/+4.5) CC	Mesured quantity: <u>18g</u>		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK			
Final inspection following the check-list DTR0000452909 and DTR0000452910 (in the case of 100% inspection of the production)					<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK		
				Final Inspection	Comments		
				Quality Insp Name and Signature: <u>Dima M.S.</u>			
OBSERVATIONS							

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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: 18/11/03

Name: XOLANI

Assembly after test

Date: 19/02/04

Name: XOLANI

ROTOR S/N		STATOR S/N	
MCP22-11-125		GIB3-1302	
<p>Bearing lubrication - Security operation Incorrect lubrication can lead to engine failure with a safety risk in service SRIL TROS 965.289</p>			
<p>INSULATED CERAMIC BEARING DRIVE END - Security operation Incorrect assembly can lead to engine failure with a safety risk in service SRIL TROS 965.289 FAG-NU 214-E-XL-M1-P6-F1-H257A-J20AB-C4 or NU 214-E-M1-P6-F1-H257A-J20AA-C4 SKE: NU 214 ECM/C4 VA3091 (cross out the references that have not been fitted)</p>			
N°:			
AUSTRIA : 237 W			
<p>S2 Radial play after assembly (0,042 / 0,114): 0,07mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min:144g - Max:149g</p> <p>Measured quantity: <input type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Quality validation: <input type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Quality Insp. Name and signature: Dime</p>	
<p>INSULATED CERAMIC BEARING OPPOSITE DRIVE END side - Security operation Incorrect assembly can lead to engine failure with a safety risk in service SRIL TROS 965.289 FAG-6214-M-P6-J20AB-H257A-C4 or 6214-M-P6-J20AA-H257-C4 SKE 6214-M/C4-VL 0241 (cross out the references that have not been fitted)</p>			
Serial N°:			
AUSTRIA : 094W			
<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>Min:159g - Max:164g</p> <p>Measured quantity: <input type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Quality validation: <input type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Quality Insp. Name and signature: Dime</p>	
Référence appareil			
AMX44			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216 2 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)		1,75 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	AMX44		<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	AMX44		<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2):	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	GIB3-1302		<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>63202601371</u>		<input type="checkbox"/> OK <input type="checkbox"/> NOK	
Prep. & Final Assembly							
OPERATOR				Quality verification			
F1	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the motorised screwdriver) <u>NCC05087</u>	QC 1 X 61 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK		
F2	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the motorised screwdriver) <u>NCC05087</u>	QC 1 X 61 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK		
F3	Torque tightening to 4 x 44 Nm: Fold locking plate	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the motorised screwdriver) <u>NCC05087</u>	QC 1 X 37 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK		
F4	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the motorised screwdriver) <u>NCC05087</u>	QC 1 X 18 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK		
F5	Torque tightening to 6 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the motorised screwdriver) <u>NCC05087</u>	QC 1 X 18 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK		
Finishing							
F1	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the motorised screwdriver) <u>NCC05087</u>	QC 1 X 22 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK		
Grease protection transport							
S3	18g (0/+4.5) CC	Mesured quantity: <u>18g</u>		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK			
S4	18g (0/+4.5) CC	Mesured quantity: <u>18g</u>		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK			
Final inspection following the check-list DTR0000452909 and DTR0000452910 (in the case of 100% inspection of the production)						<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	
				Final Inspection	Comments		
				Quality Insp Name and Signature: <u>Dima</u>			
OBSERVATIONS							

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 -02- 19

Name : Dima

Signature : [Signature]



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N° 21306

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76183349

Status: QC PASS

Derogations / Concession / Waiver N°: N/A

Customer modification: N/A

Missing parts: N/A

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

Date: 2024/02/21

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____



Gibela Rail
02 Shosholozà 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



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N * 21355

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76254819

Status: QC PASS

Derogations / Concession / Waiver N * : N/A

Customer modification: N/A

Missing parts: N/A

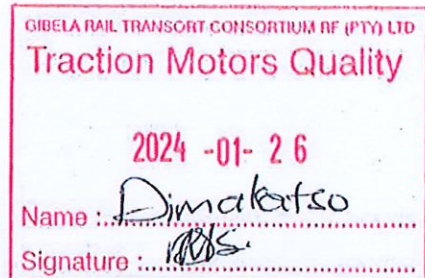
We hereby declare, barring exceptions, reservations or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements, and applicable standards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

Date: 2024/01/26

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____



Gibela Rail
02 Shosholozu Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

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ALSTOM UBUNYE

MANUFACTURER ALSTOM Ubunye
Marievale Road, Vosterkroon, Nigel, 1490

CUSTOMER Gibela

CONTRACT

PROJECT PRASA

MANUFACTURER'S DELIVERY DOCUMENT

PRODUCT TYPE MOTOR BOGIE type MB2

DTR0009706805

SERIAL NUMBER MB2 - 588

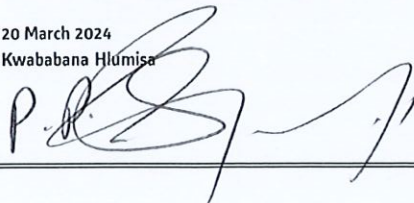
CONTENTS

- 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	20 March 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	588		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M 1695		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M 03121		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3074		NGC
Wheel (Right)	AR00000174670	065	11-22	Bonatrans
Wheel (Left)	AR000000174670	048	02-23	Bonatrans
Wheelset (Rear)	AR00000178600	M 03122		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3083		NGC
Wheel (Right)	AR00000174670	082	02-23	Bonatrans
Wheel (Left)	AR00000174670	053	02-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2312006		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2310208		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1647	03-24	Wabtec
Brake unit without PB (Right front)	AR00000175185	4965	03-24	Wabtec
Brake unit without PB (Left Front)	AR00000175185	4968	03-24	Wabtec
Brake unit without PB (left rear)	AR00000175185	4966	03-24	Wabtec
Motor. (front)	AR00000168516	21463		Alstom - Gibela
Motor (Rear)	AR00000168516	21324		Alstom - Gibela

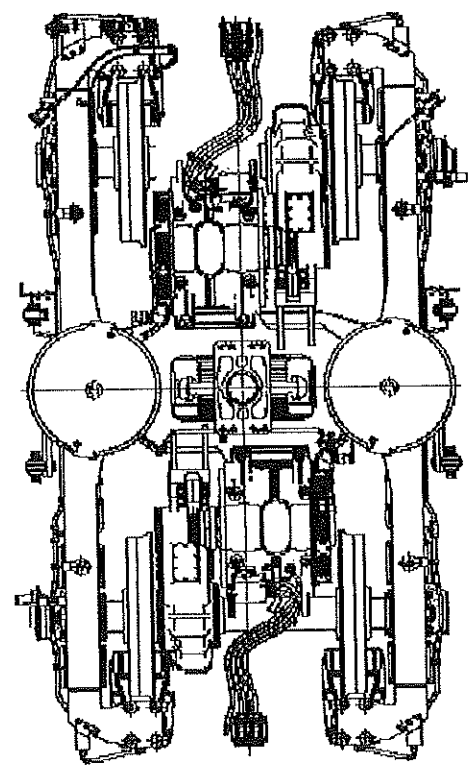
PRESSING REPORT

DATE 3/19/2024	RESPONSABLE VALIDATION	PRASA	LOAD TEST: MOTOR BOGIE
DATE VALIDATION		INSTRUCTION SHEET:	
		FAMILY:	PROJECT:

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	33.00	39.00	38.40
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5580

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
585.86	1.00	586.86	585.00
			587.50

RIGHT JACK LOAD	7375 Kg
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BOGIE SERIAL N°	MB2-588
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22387
COMPLETE BOGIE WEIGHT [Kg]	7294
OPERATOR	BAFANA
DATE	3/19/2024

OPERATOR STAMP	DC-3FL-6
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LEFT JACK LOAD	7376 Kg
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SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.87	0.00	586.87	585.00
			587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]	-0.01
THEORETICAL [mm]	MIN 1.00 MAX 1.00

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	33.00	39.00	38.70
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5590

	THEORETICAL		MEASURED
	MIN	MAX	
LOAD DIFFERENCE ON FRONT AXLE [%]	0.00	0.00	0.00
LOAD DIFFERENCE ON REAR AXLE [%]	0.00	0.00	0.53
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	0.00	0.00	-0.21
LOAD DIFFERENCE ON RAILS [%]	0.00	0.00	0.31
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	0.00	0.00	0.23

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	33.00	39.00	38.81
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q2		5613

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: 30/01/2024

Name: S. GREGES

Assembly after test

Date: 10/02/24

Name: NOLANI, GODFREY THOMAS

ROTOR S/N MCR22-11-180		STATOR S/N CIB-1474	
<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-EGM/C4-VA3091</p> <p>(cross out the references that have not been fitted)</p>			
N°: ROMANIA: 0097 09/23 SN 129-1369794			
<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>S3 LUBRICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 144g - Max: 149g Measured quantity: <input type="text"/></p> <p>Filter 1 (Name and signature) <input type="text"/> Filter 2 (Name and signature) <input type="text"/></p> <p>Quality validation: <input type="text"/></p> <p>Quality Insp. Name and signature: <input type="text"/></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°: GERMANY: 0300 X272-1259 09/23 SN 0085			
<p>S1 Radial play after assembly (0,021 / 0,067):</p> <p>0,06mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Référence: <input type="text"/></p>		<p>S3 LUBRICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 159g - Max: 164g Measured quantity: <input type="text"/></p> <p>Filter 1 (Name and signature) <input type="text"/> Filter 2 (Name and signature) <input type="text"/></p> <p>Quality validation: <input type="text"/></p> <p>Quality Insp. Name and signature: <input type="text"/></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): 1,09 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: 0,08mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: <input type="text"/>	<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="text"/>	<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: <input type="text"/>	<input type="checkbox"/> OK <input type="checkbox"/> NOK

Sensor reference: DTR0000512252/DSD1830.19Q14HW

☒ OK
 ☐ NOK
 522505518

☐ 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	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:

Bahle ent

Comments

OBSERVATIONS

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

TROS 916.216

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GIBELA RAIL TRANSPORT CONSORTIUM AF (PTA) LTD

Traction Motors Quality

2024 -02- 16

Name :

Signature :

21324

ALSTOM

GIBELCO

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

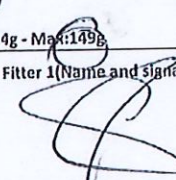
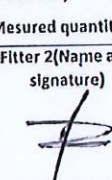
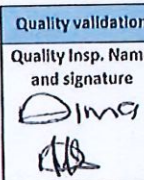
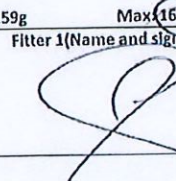
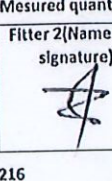
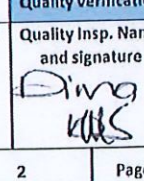
Référence: TROS 916.216

Révision: 2

Documents de référence: AT00000325953 - AT00000325990

Assembly before test
Date: 05/11/23
Name: XOLANT

Assembly after test
Date: 19/02/24
Name: XOLANT

ROTOR S/N		STATOR S/N	
MCR22-10-002		GIB-1338	
<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°: Romitrig: 0097 09/23 - SN 310 - 1369714			
<p>S2 Radial play after assembly (0,042 / 0,114): 0,08mm</p> <p><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>Measured quantity: <input type="text"/></p> <p>Filter 1 (Name and signature) </p> <p>Filter 2 (Name and signature) </p> <p>Quality validation: </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: 0200 X019 - 0858 01/23 SN 0181			
<p>S1 Radial play after assembly (0,021 / 0,067): 0,09mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Mln: 159g Max: 164g</p> <p>Measured quantity: <input type="text"/></p> <p>Filter 1 (Name and signature) </p> <p>Filter 2 (Name and signature) </p> <p>Quality validation: </p>	
<p>Reference appareil: AMX614</p>		<p>TROS 916.216 2</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) 21,3 MΩ ☒ 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 <input type="checkbox"/>	Device serial number: AMX0174	<input type="checkbox"/>	OK <input type="checkbox"/>	NOK <input type="checkbox"/>
Out of round on toothed wheel 0,1 max: 0,05 mm	<input checked="" type="checkbox"/>	OK <input type="checkbox"/>	NOK <input type="checkbox"/>	Device serial number: AMX0174	<input type="checkbox"/>	OK <input type="checkbox"/>	NOK <input type="checkbox"/>
sensor / toothed wheel play 0,7 (+/- 0,2): 0,175 mm	<input checked="" type="checkbox"/>	OK <input type="checkbox"/>	NOK <input type="checkbox"/>	Device serial number: C112EL001	<input type="checkbox"/>	OK <input type="checkbox"/>	NOK <input type="checkbox"/>
Sensor reference: DTR0000512252/DSD1830.19Q14HW	<input checked="" type="checkbox"/>	OK <input type="checkbox"/>	NOK <input type="checkbox"/>	Device serial number: 650463006186	<input type="checkbox"/>	OK <input type="checkbox"/>	NOK <input type="checkbox"/>

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"/>	wrench reference (in the event of failure / absence of the materialized surindit): NCCS587	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"/>	wrench reference (in the event of failure / absence of the materialized surindit): NCCS587	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"/>	wrench reference (in the event of failure / absence of the materialized surindit): NCCS581	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"/>	wrench reference (in the event of failure / absence of the materialized surindit): NCCS588	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"/>	wrench reference (in the event of failure / absence of the materialized surindit): NCCS588	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"/>	wrench reference (in the event of failure / absence of the materialized surindit): NCCS587	QC 1 X 22 Nm	<input type="checkbox"/>	OK <input type="checkbox"/>	NOK <input type="checkbox"/>
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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 <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) ☒ OK ☐ NOK

Final Inspection

Quality Insp Name and Signature:

Dima EKS

Comments

OBSERVATIONS

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

TROS 916.216

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Page

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GIBELA RAIL TRANSPORT CONSORTIUM RF (PTY) LTD

Traction Motors Quality

2024 -02- 19

Name : Dima

Signature : EKS



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21324

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76219176

Status: QC PASS

Derogations / Concession / Waiver N °: N/A

Customer modification: N/A

Missing parts: N/A

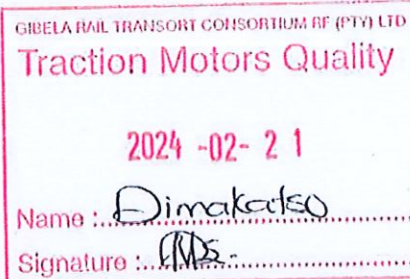
We hereby declare, barring exceptions, reservations or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements, and applicable standards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

Date: 2024/02/21

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____



Gibela Rail
02 Shosholozwa Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

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CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N * 21463

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76634789

Status: QC PASS

Derogations / Concession / Waiver N * : N/A

Customer modification: N/A

Missing parts: N/A

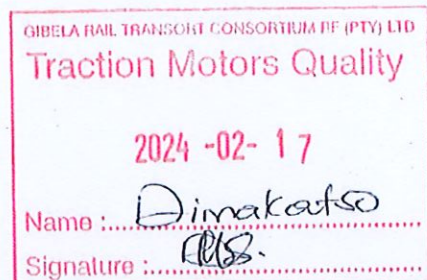
We hereby declare, barring exceptions, reservations or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements, and applicable standards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

Date: 2024/02/17

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____



Gibela Rail
02 Shosholozu Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

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