



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 - 1480

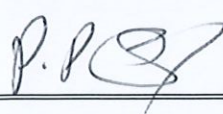
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COMPLIANCE CERTIFICATE

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 27 June 2024
NAME Kwababana Hlumisa
VISA 

I - Deviation / Derogation

II - Bogie configuration

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ALSTOM UBUNYE

PRODUCTS TRACEABILITY

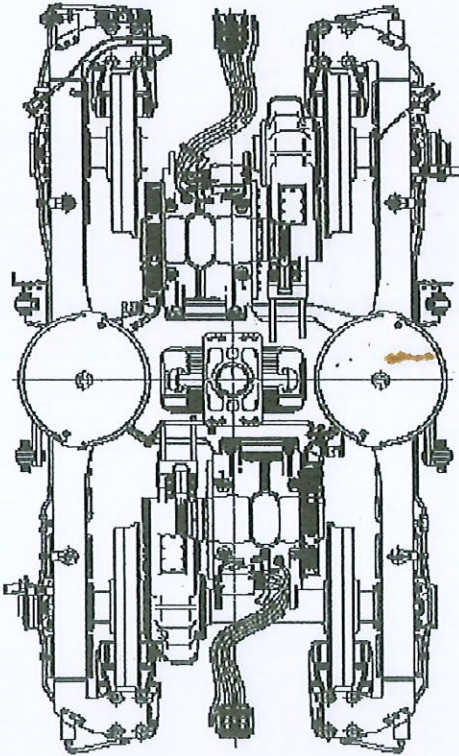
Products Designation	Product Reference	Serial Number	Batch or Date Manufactured	Supplier
Motor Bogie MB1	DTR0009706804	1480		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	1822		Alstom - Ubunye
Wheelset (Front)	AR000000177020	3405		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	3426		NGC
Wheel (Right)	AR00000174670	115	03.24	Bonatrans
Wheel (Left)	AR000000174670	126	03.24	Bonatrans
Wheelset (Rear)	AR00000178600	3406		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	3450		NGC
Wheel (Right)	AR00000174670	116	03.24	Bonatrans
Wheel (Left)	AR00000174670	121	03.24	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2403026		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2404025		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1879	06.24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	5660	06.24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	5661	06.24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	5659	06.24	WEBTEC
Motor (front)	AR00000168516	21677		GIBELA
Motor (Rear)	AR00000168516	21762		GIBELA

PRESSING REPORT

DATE 6/26/2024	RESPONSABLE VALIDATION	PRASA	LOAD TEST : MOTOR BOGIE
DATE VALIDATION		INSTRUCTION SHEET:	PROJECT:
		FAMILY:	

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

RIGHT JACK LOAD	Kg
7374	



LEFT JACK LOAD	Kg
7376	

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
585.41	+	1.00	=
		586.41	MIN 585.00
			MAX 587.50

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

THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	36.62
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q2	5611

BOGIE SERIAL N°	MB1-1480
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22386
COMPLETE BOGIE WEIGHT [Kg]	7290
OPERATOR	EDWARD
DATE	6/26/2024

OPERATOR STAMP	BFI-21
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THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	36.30
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q1	5558

THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	36.51
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q4	5598

THEORETICAL		MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00	-0.47
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00	1.10
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00	-0.67
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00	0.32
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00	0.79

THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	36.20
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q3	5722



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N * 21677

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 77174160

Status: QC PASS

Derogations / Concession / Waiver N * : 7072

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: 2024/06/25

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



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N * 21762

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 77353819

Status: QC PASS

Derogations / Concession / Waiver N * : 7072

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: 2024/06/25

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____



Gibela Rail
02 Shosholozza 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

21762

ALSTOM

GIBELD

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:

Name:

Assembly after test

Date:

Name:

ROTOR S/N SUP00002-004		STATOR S/N GIB-1796	
<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>			
<p>N°: ROMANIA: -0097 09/23 8N 190 -1369734</p>			
<p>S2 Radial play after assembly (0,042 / 0,114): 0,07mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 144g - Max: 149g</p> <p>Measured quantity: 149g</p> <p>Filter 1 (Name and signature): [Signature]</p> <p>Filter 2 (Name and signature): [Signature]</p> <p>Quality validation: [Signature]</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>			
<p>Serial N°: AUSTRIA 094W</p>			
<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: 164g</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: AMXG50</p>		<p>FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA</p>	
<p>TROS 916.216</p>		<p>Page 1</p>	

ALSTOM

GIBELD

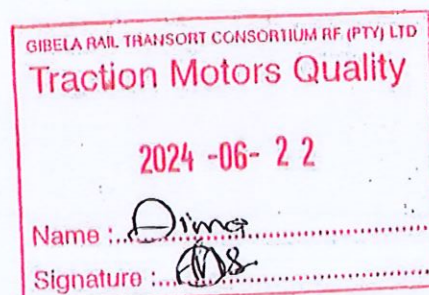
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA

Record the value of the Insulation resistance of the bearings to TROS 915.069 (> 50 kΩ)		125 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 Value: 0,03mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number AMXG00	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
Out of round on toothed wheel 0,1 max: 907mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number AMXG50	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
sensor / toothed wheel play 0,7 (+/- 0,2):	<input type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
Sensor reference: DTR0000512252/DSD1830.19Q14HW	<input type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK	

Missing speed sensor Deviation #: 7072

Prep. & Final Assembly											
OPERATOR				Quality verification							
F1	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	match reference (in the event of phase / absence of the motor and search for it)	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	match reference (in the event of phase / absence of the motor and search for it)	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	match reference (in the event of phase / absence of the motor and search for it)	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	match reference (in the event of phase / absence of the motor and search for it)	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	match reference (in the event of phase / absence of the motor and search for it)	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	match reference (in the event of phase / absence of the motor and search for it)	QC 1 X 22 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/>	NOK
Grease protection transport											
S3	18g (0/+4.5) CC	Mesured quantity:	18g					<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK
S4	18g (0/+4.5) CC	Mesured quantity:	18g					<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK
Final inspection following the check-list DTR0000452909 and DTR0000452910 (in the case of 100% inspection of the production)								<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK
							Final inspection	Comments			
							Quality Insp Name and Signature:	<div style="font-family: cursive; font-size: 1.2em;">Dima</div>			
OBSERVATIONS											

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21677

ALSTOM

GIBELQ

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:

Name:

24/04/24
Godfrey

Assembly after test

Date:

Name:

27/06/24
Younis, Thonne & Zama

ROTOR S/N S4900282-084		STATOR S/N GIB-1613	
<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>			
<p>N°: ROMANIA: 0097 09/23 8N445 -1569794</p>			
<p>S2 Radial play after assembly (0,042 / 0,114): 0,05mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S4 LUBRICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 144g - Max: 149g</p> <p>Measured quantity: 148g</p> <p>Filter 1 (Name and signature): [Signature]</p> <p>Filter 2 (Name and signature): [Signature]</p> <p>Quality validation: Dime</p>	
<p>S1 INSULATED CERAMIC BEARING OPPOSITE DRIVE END side - Security operation Incorrect assembly can lead to engine failure with a safety risk in service SRIL TROS 965.289 FAG: 6214-M-P6-J20AB-H257A-C4 or 6214-M-P6-J20AA-H257-C4 SKF 6214-M/C4-VL 0241 (cross out the references that have not been fitted)</p>			
<p>Serial N°: GERMANY 0200 X020-0618 01/23 5N0382</p>			
<p>S1 Radial play after assembly (0,021 / 0,067): 0,05mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S3 LUBRICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 159g - Max: 164g</p> <p>Measured quantity: 164g</p> <p>Filter 1 (Name and signature): [Signature]</p> <p>Filter 2 (Name and signature): [Signature]</p> <p>Quality validation: Dime</p>	
<p>Référence appareil: AJZP14</p>			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216 2 Page 1	

ALSTOM

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)		9.38 GΩ		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
OPERATOR		Quality verification		
Out of round at the end of the shaft drive end, 0,05 max Value: 0,01mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number AJZP14	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
Out of round on toothed wheel 0,1 max: 0,07mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number AJZP14	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
sensor / toothed wheel play 0,7 (+/- 0,2):	<input type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
Sensor reference: DTR0000512252/DSD1830.19Q14HW	<input type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK	

Missing speed sensor Declaration #: 7072

Prep. & Final Assembly											
OPERATOR				Quality verification							
F1	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	search reference in the event of failure / absence of the motorised strandher	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	search reference in the event of failure / absence of the motorised strandher	QC 1 X 61 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/>	NOK
F3	Torque tightening to 4 x 44 Nm:	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	search reference in the event of failure / absence of the motorised strandher	QC 1 X 37 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/>	NOK
	Fold locking plate					search reference in the event of failure / absence of the motorised strandher					
F4	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	search reference in the event of failure / absence of the motorised strandher	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	search reference in the event of failure / absence of the motorised strandher	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	search reference in the event of failure / absence of the motorised strandher	QC 1 X 22 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/>	NOK
Grease protection transport											
S3	18g (0/+4.5) CC	Mesured quantity: 18g						<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK
S4	18g (0/+4.5) CC	Mesured quantity: 18g						<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK
Final inspection following the check-list DTR0000452909 and DTR0000452910 (in the case of 100% inspection of the production)								<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK
							Final Inspection	Comments			
							Quality Insp Name and Signature:				
							Dima				
OBSERVATIONS											

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

MANUFACTURER'S DELIVERY DOCUMENT

PRODUCT TYPE MOTOR BOGIE MB1
 DTR0009706804
SERIAL NUMBER MB1 1481

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	27 June 2024
NAME	Kwababana Hlumisa
VISA	

ALSTOM TRANSPORT	DELIVERY STATUS	PRASA MB1 1481
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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	1481		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	1829		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M03407		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3449		NGC
Wheel (Right)	AR00000174670	090	03-24	Bonatrans
Wheel (Left)	AR000000174670	089	03-24	Bonatrans
Wheelset (Rear)	AR00000178600	M03408		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3458		NGC
Wheel (Right)	AR00000174670	041	03-24	Bonatrans
Wheel (Left)	AR00000174670	042	03-24	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2402028		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2401014		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1871	06-24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	5636	06-24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	5631	06-24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	56		WEBTEC
Motor (front)	AR00000168516	21679		GIBELA
Motor (Rear)	AR00000168516	21682		GIBELA

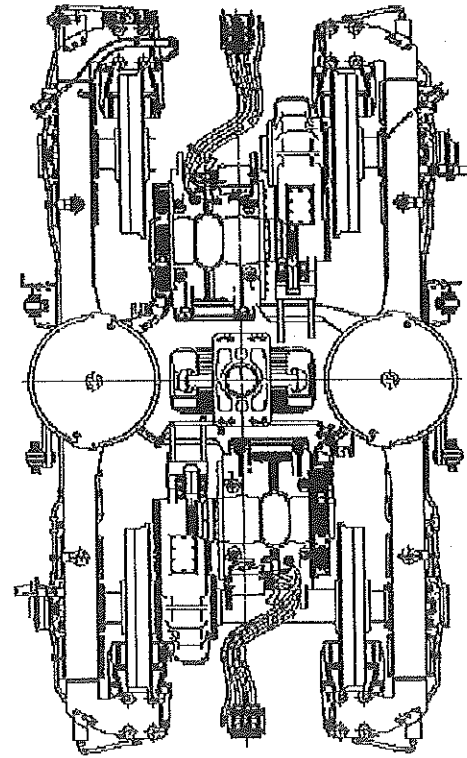
PRESSING REPORT

DATE VALIDATION	PRASA	LOAD TEST : MOTOR BOGIE
6/26/2024	INSTRUCTION SHEET:	
RESPONSABLE VALIDATION	FAMILY:	PROJECT:

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	MIN 33.00	MAX 39.00	36.70 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [kg]		Q4	5528

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM[mm]	THEORETICAL [mm]
585.44	+	0.00	585.44
			MIN 585.00
			MAX 587.50

RIGHT JACK LOAD
7376 kg



BOGIE SERIAL N°	MB1-1481
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [kg]	22371
COMPLETE BOGIE WEIGHT [kg]	7284
OPERATOR	BAFANA
DATE	6/26/2024

OPERATOR STAMP
DC-3F16

LEFT JACK LOAD
7377 kg

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	MIN 33.00	MAX 39.00	35.90 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [kg]		Q3	5684

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.32	+	0.00	586.32
			MIN 585.00
			MAX 587.50

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

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	MIN 33.00	MAX 39.00	36.50 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [kg]		Q1	5558



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21679

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 77466186

Status: QC PASS

Derogations / Concession / Waiver N °: 7072

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: 2024/06/25

Function: Final Inspection

Perfomed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____



Gibela Rail
02 Shosholozza Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

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21682

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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: 28-04-2024

Name: *[Signature]*

Assembly after test

Date: 28/06/24

Name: *XOANT, THOMAS [Signature]*

ROTOR S/N <i>S469683-36</i>		STATOR S/N <i>S18-1684</i>	
<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°: <i>ROMANIA: 0097 09/23 SH430-1369794</i>			
<p>Radial play after assembly (0,042/0,114): <i>0,06</i></p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 144g - Max: 149g</p> <p>Measured quantity: <i>[Signature]</i></p> <p>Filter 1 (Name and signature) <i>[Signature]</i></p> <p>Filter 2 (Name and signature) <i>[Signature]</i></p> <p>Quality validation: <i>Dima [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 SKE-6214-M/C4-VL 0241 (cross out the references that have not been fitted)</p>			
Serial N°: <i>GERMANY: 0200 X116-0742 04/23 SH0110</i>			
<p>Radial play after assembly (0,021/0,067): <i>0,05</i></p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 159g - Max: 164g</p> <p>Measured quantity: <i>[Signature]</i></p> <p>Filter 1 (Name and signature) <i>[Signature]</i></p> <p>Filter 2 (Name and signature) <i>[Signature]</i></p> <p>Quality validation: <i>Dima [Signature]</i></p>	
Référence appareil: <i>Amx 520</i>			
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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)		<i>8,298-2</i>		<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 <i>0,01</i>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <i>Amx 520</i>	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
Out of round on toothed wheel 0,1 max: <i>0,06</i>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <i>Amx 520</i>	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
sensor / toothed wheel play 0,7 (+/- 0,2):	<input type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
Sensor reference: DTR0000512252/OSD1830.19Q14HW	<input type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK	

Missing speed sensor Deviation #: 7072

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 <input type="checkbox"/>	wrench reference (in the event of failure / absence of the motorized screwdriver) <i>N065727</i>	QC 1 X 61 Nm	<input type="checkbox"/>	OK <input type="checkbox"/> NOK <input type="checkbox"/>		
<input checked="" 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 motorized screwdriver) <i>N065727</i>	QC 1 X 61 Nm	<input type="checkbox"/>	OK <input type="checkbox"/> NOK <input type="checkbox"/>		
<input checked="" 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 motorized screwdriver) <i>N065727</i>	QC 1 X 37 Nm	<input type="checkbox"/>	OK <input type="checkbox"/> NOK <input type="checkbox"/>		
<input checked="" 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 motorized screwdriver) <i>N065727</i>	QC 1 X 18 Nm	<input type="checkbox"/>	OK <input type="checkbox"/> NOK <input type="checkbox"/>		
<input checked="" 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 motorized screwdriver) <i>N065727</i>	QC 1 X 18 Nm	<input type="checkbox"/>	OK <input type="checkbox"/> NOK <input type="checkbox"/>		
Finishing									
<input checked="" type="checkbox"/> 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 motorized screwdriver) <i>N065727</i>	QC 1 X 22 Nm	<input type="checkbox"/>	OK <input type="checkbox"/> NOK <input type="checkbox"/>		
Grease protection transport									
<input checked="" type="checkbox"/> S3	18g (0/+4.5) CC	Mesured quantity: <i>16g</i>				<input checked="" type="checkbox"/>	OK <input type="checkbox"/> NOK <input type="checkbox"/>		
<input checked="" type="checkbox"/> S4	18g (0/+4.5) CC	Mesured quantity: <i>16g</i>				<input checked="" type="checkbox"/>	OK <input type="checkbox"/> NOK <input type="checkbox"/>		
Final inspection following the check-list DTR0000452909 and DTR0000452910 (In the case of 100% inspection of the production)						<input checked="" type="checkbox"/>	OK <input type="checkbox"/> NOK <input type="checkbox"/>		
				<div style="border: 1px solid black; padding: 5px;"> Final inspection Quality Insp Name and Signature: <i>Dima</i> </div>		<div style="border: 1px solid black; padding: 5px;"> Comments </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 * 21682

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 77174164

Status: QC PASS

Derogations / Concession / Waiver N * : 7072

Customer modification: N/A

Missing parts: N/A

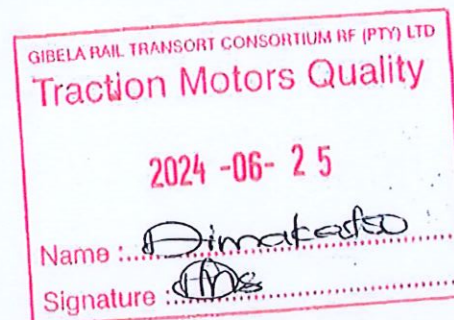
We hereby declare, barring exceptions, reservations or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements , and applicable standards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

Date: 2024/06/25

Function: Final Inspection

Perfomed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____



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

Révision: 2

Documents de référence: AT00000325953 - AT00000325990

Assembly before test

Date: 16/03/24

Name: XOLANT

Assembly after test

Date: 03/05/24

Name: XOLANT, JACQUES THOMAS

ROTOR S/N MCR03-11-071	STATOR S/N CLTB-1594		
<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>			
<p>N°: ROMANIA: 0097 10/23 SN 276-1988233</p>			
<p>Radial play after assembly (0,042 / 0,114): 0,07mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly Min: 144g - Max: 149g Measured quantity: Filter 1 (Name and signature) Filter 2 (Name and signature) Quality validation: Quality Insp. Name and signature: Dima</p>	
<p>INSULATED CERAMIC BEARING OPPOSITE DRIVE END side - Security operation Incorrect assembly can lead to engine failure with a safety risk in service SRIL TROS 965.289 FAG: 6214-M-P6-J20AB-H257A-C4 or 6214-M-P6-J20AA-H257-C4- SKF: 6214-M/C4-VL 0241 (cross out the references that have not been fitted)</p>			
<p>Serial N°: GERMANY: 0200 X116-0653 04/23 SN 0020</p>			
<p>Radial play after assembly (0,021 / 0,067): 0,04mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly Min: 159g - Max: 164g Measured quantity: Filter 1 (Name and signature) Filter 2 (Name and signature) Quality validation: Quality Insp. Name and signature: Dima</p>	
<p>Référence appareil: ATEP14</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)		103 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 Value: 0,01mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number ATEP14	<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 A 329214	<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 C03B1001	<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 82317000730	<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	interch reference in the event of failure / absence of the motorized 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	interch reference in the event of failure / absence of the motorized 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	interch reference in the event of failure / absence of the motorized 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	interch reference in the event of failure / absence of the motorized 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	interch 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									
<input checked="" type="checkbox"/> F1	Torque tightening to 4 x 22 Nm:			<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	interch reference in the event of failure / absence of the motorized 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:	18g	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK					
<input checked="" type="checkbox"/> S4	18g (0/+4.5) CC	Mesured quantity:	18g	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK					
Final inspection following the check-list DTR0000452909 and DTR0000452910 (in the case of 100% inspection of the production)							<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK		
					Final Inspection Quality Insp Name and Signature:		Comments		
					Dima				
OBSERVATIONS									

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