

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 - 1396**

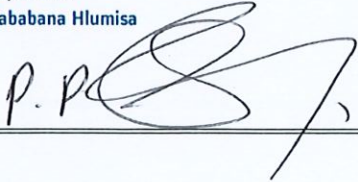
CONTENTS

- 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	11 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	M 1396		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M 1728		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M 3179		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3213		NGC
Wheel (Right)	AR00000174670	025	11.23	Bonatrans
Wheel (Left)	AR000000174670	021	11.23	Bonatrans
Wheelset (Rear)	AR00000178600	M 3180		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3191		NGC
Wheel (Right)	AR00000174670	020	11.23	Bonatrans
Wheel (Left)	AR00000174670	019	11.23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2310132		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2308157		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1704	04.24	Wabtec
Brake unit without PB (Right front)	AR00000175185	5132	04.24	Wabtec
Brake unit without PB (Left Front)	AR00000175185	5133	04.24	Wabtec
Brake unit without PB (left rear)	AR00000175185	5134	04.24	Wabtec
Motor (front)	AR00000168516	21473		Alstom Ornans
Motor (Rear)	AR00000168516	21563		Alstom Ornans

PRESSING REPORT

DATE VALIDATION

PRASA

INSTRUCTION SHEET:

FAMILY:

LOAD TEST : MOTOR BOGIE

PROJECT:

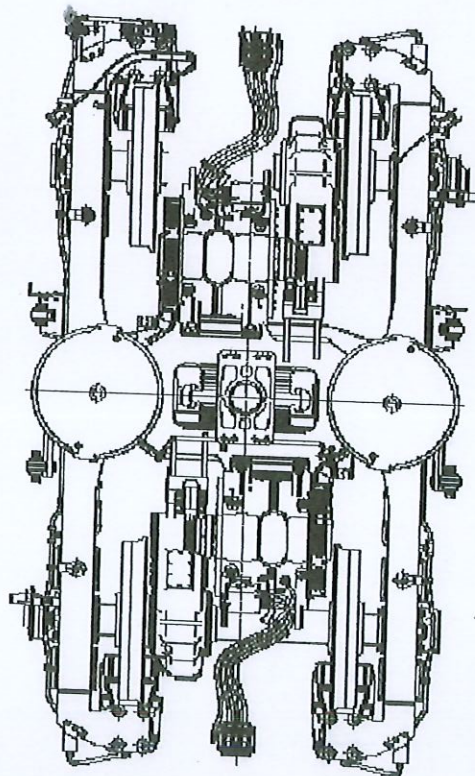
	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	33.00	39.00	37.29
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]		Q2	5607

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
585.14	+	1.00	=
		586.14	MIN 585.00
			MAX 587.50

RIGHT JACK LOAD	7375	Kg
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BOGIE SERIAL N°	MB1-1396
BOGIE TYPE	M/B
BOGIE WEIGHT UNDER LOAD [Kg]	22389
COMPLETE BOGIE WEIGHT [Kg]	7290
OPERATOR	BAFANA
DATE	4/10/2024

OPERATOR STAMP	DC-BFI-6
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LEFT JACK LOAD	7376	Kg
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	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	33.00	39.00	37.60
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]		Q1	5560

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.97	+	0.00	=
		586.97	MIN 585.00
			MAX 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]		
	-0.83	
		THEORETICAL [mm]
		MIN -1.00
		MAX 1.00

	THEORETICAL		MEASURED
	MIN	MAX	
LOAD DIFFERENCE ON FRONT AXLE [%]	0.00	0.00	-0.42
LOAD DIFFERENCE ON REAR AXLE [%]	0.00	0.00	1.35
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	0.00	0.00	-0.25
LOAD DIFFERENCE ON RAILS [%]	0.00	0.00	0.46
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	0.00	0.00	0.88

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	33.00	39.00	37.10
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]		Q3	5687



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N° 21473

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76659597

Status: QC PASS

Derogations / Concession / Waiver N°: N/A

Customer modification: N/A

Missing parts: N/A

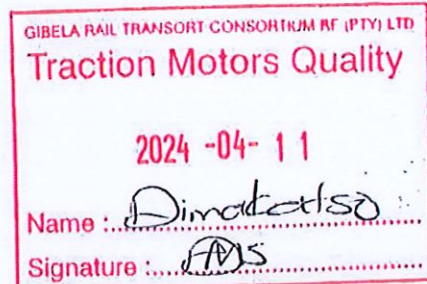
We hereby declare, barring exceptions, reservations or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements, and applicable standards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

Date: 2024/04/11

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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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: 06/02/2024

Name: Jacques

Assembly after test

Date: 18/03/2024

Name: Saïghes & Xolani Tammingas

ROTOR S/N MCR22-11-100	STATOR S/N CIB-1484		
<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°: Romanica 0097 09/23 SN188-1369794			
<p>S2 Radial play after assembly (0,042 / 0,114): 0,09mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly Min: 144g - Max: 49g Filter 1 (Name and signature) <i>[Signature]</i> Filter 2 (Name and signature) <i>[Signature]</i> Measured quantity: <i>[Signature]</i> Quality validation: <i>[Signature]</i></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 XIII-0947 04/23 SN0257			
<p>S1 Radial play after assembly (0,021 / 0,067): 0,06mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK Reference appareil: <i>[Signature]</i></p>		<p>S9 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly Min: 159g Max: 69g Filter 1 (Name and signature) <i>[Signature]</i> Filter 2 (Name and signature) <i>[Signature]</i> Measured quantity: <i>[Signature]</i> Quality verification: <i>[Signature]</i></p>	
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216	Page 2
			Page 1

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)		2,56 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:	<i>[Signature]</i> <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device number	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max:	<i>[Signature]</i> <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device number	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2):	0,75mm <i>[Signature]</i> <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	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: 52241008423	<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 motorised screwdriver)	QC 1 X 61 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
F2	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the motorised screwdriver)	QC 1 X 61 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
F3	Torque tightening to 4 x 44 Nm: Fold locking plate	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the motorised screwdriver)	QC 1 X 37 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
F4	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the motorised screwdriver)	QC 1 X 18 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
F5	Torque tightening to 6 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the motorised screwdriver)	QC 1 X 18 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK

Finishing

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

Grease protection transport

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

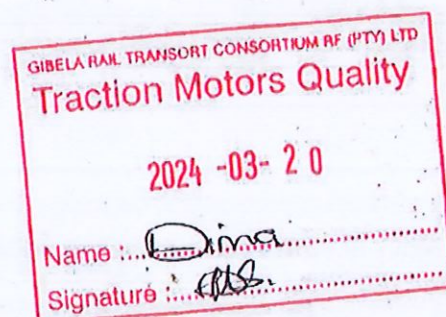
Final inspection following the check-list DTR0000452909 and DTR0000452910 (in the case of 100% inspection of the production)

☒ OK ☐ 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 2
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CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21563

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76892092

Status: QC PASS

Derogations / Concession / Waiver N °: N/A

Customer modification: N/A

Missing parts: N/A

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

Date: 2024/04/11

Function: Final Inspection

Perfomed 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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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:

12/03/24

Name:

Godfrey & Xolani









Assembly after test

Date:

04/04/24

Name:

Xolani & Thomas

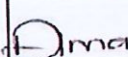

ROTOR S/N		STATOR S/N	
MCR23-11-031		GIB-1541	
<p>Bearing lubrication - Security operation Incorrect lubrication can lead to engine failure with a safety risk in service SRIL TROS 965 289</p>			
<p>INSULATED CERAMIC BEARING DRIVE END - Security operation Incorrect assembly can lead to engine failure 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/CA VA3094 (cross out the references that have not been fitted)</p>			
N°: ROMANIA 0097 10/23 SN 2015-1988233			
<p>Radial play after assembly (0,042 / 0,114): 0,08mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly Min: 144g - Max: 149g Filter 1 (Name and signature)  Filter 2 (Name and signature)  Measured quantity:  Quality validation: </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°: GERMANY: 0200 X116-0938 04/23 SN 0219			
<p>Radial play after assembly (0,021 / 0,067): 0,05mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly Min: 159g - Max: 164g Filter 1 (Name and signature)  Filter 2 (Name and signature)  Measured quantity:  Quality validation: </p>	
Référence appareil: AMXG14			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216 2 Page 1	

ALSTOM

GIBEL

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

Record the value of the Insulation resistance of the bearings to TROS 915.069 (> 50 kΩ)		718 MSZ		<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 AMXG14	<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 AMXG14	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
sensor / toothed wheel play 0,7 (+/- 0,2): 0,8mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number GIBFL001	<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 52316013431	<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	QC 1 X 61 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/>	NOK	
<input checked="" type="checkbox"/> F2	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK	QC 1 X 61 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/>	NOK	
<input checked="" type="checkbox"/> F3	Torque tightening to 4 x 44 Nm: Fold locking plate	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK	QC 1 X 37 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/>	NOK	
<input checked="" type="checkbox"/> F4	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK	QC 1 X 18 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/>	NOK	
<input checked="" type="checkbox"/> F5	Torque tightening to 6 x 22 Nm:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK	QC 1 X 18 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/>	NOK	
Finishing									
<input checked="" type="checkbox"/> F3	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK	QC 1 X 22 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/>	NOK	
Grease protection transport									
<input checked="" type="checkbox"/> S3	18g (0/+4.5) CC	Mesured quantity:	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK			
<input checked="" type="checkbox"/> S4	18g (0/+4.5) CC	Mesured quantity:	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK			
Final inspection following the check-list DTR0000452909 and DTR0000452910 (In the case of 100% inspection of the production)				<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK		
				Final Inspection		Comments			
				Quality Insp Name and Signature:					
				 					
OBSERVATIONS									

FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA	TROS 916.216	2	Page
			2

GIBELA RAIL TRANSPORT CONSORTIUM RF (PTY) LTD

Traction Motors Quality

2024 -04- 08

Name : Dima

Signature : EMB

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 - 594

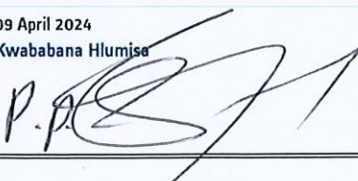
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CONSTRUCTOR APPROVAL

DATE	09 April 2024
NAME	Kwababana Hlumisa
VISA	

I - Deviation / Derogation

II - Bogie configuration

B Bogie index

Products Designation	Product Reference	Serial Number	Batch or Date Manufactured	Supplier
Motor Bogie MB2	DTR0009706805	594		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M 1723		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M 3171		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3106		NGC
Wheel (Right)	AR00000174670	008	12.23	Bonatrans
Wheel (Left)	AR000000174670	031	12.23	Bonatrans
Wheelset (Rear)	AR00000178600	M 3172		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3095		NGC
Wheel (Right)	AR00000174670	032	12.23	Bonatrans
Wheel (Left)	AR00000174670	009	12.23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2312015		Hutchinson
Pneumatic suspension (Left)	AR00000176127	231160		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1696	04.24	Wabtec
Brake unit without PB (Right front)	AR00000175185	5114	04.24	Wabtec
Brake unit without PB (Left Front)	AR00000175185	5111	04.24	Wabtec
Brake unit without PB (left rear)	AR00000175185	5115	04.24	Wabtec
Motor (front)	AR00000168516	21419		Alstom - Gibela
Motor (Rear)	AR00000168516	21526		Alstom - Gibela

PRESSING REPORT

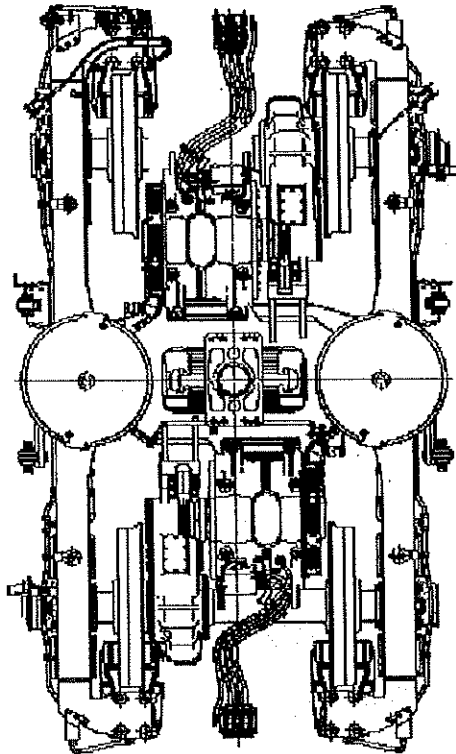
DATE 4/9/2024	RESPONSABLE VALIDATION		PRASA		LOAD TEST : MOTOR BOGIE	
DATE VALIDATION		INSTRUCTION SHEET:		PROJECT:		
		FAMILY:				

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	MIN 33.00	MAX 39.00	36.49
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5601

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.79	+	0.00	586.79
			MIN 585.00
			MAX 587.50

RIGHT JACK LOAD	
7376	Kg

BOGIE SERIAL N°	MB2-594
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22398
COMPLETE BOGIE WEIGHT [Kg]	7297
OPERATOR	BAFANA
DATE	4/9/2024



OPERATOR STAMP	
DC-BFI-6	

LEFT JACK LOAD	
7376	Kg

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	MIN 33.00	MAX 39.00	36.39
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5621

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
587.12	+	0.00	587.12
			MIN 585.00
			MAX 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]			
-0.33		MIN	-1.00
		MAX	1.00

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	MIN 33.00	MAX 39.00	36.29
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5542



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21526

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76793310

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: 2024/03/14

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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21526

ALSTOM

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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: 28/02/04

Name: XOLANT

Assembly after test

Date: 05/03/04

Name: XOLANT, GODFREY BIKOMA

ROTOR S/N		STATOR S/N			
MC023-10-000		GTF3-1531			
<p>Bearing lubrication - Security operation</p> <p>Incorrect lubrication can lead to engine failure with a safety risk in service</p> <p>SRIL TROS 965.289</p>					
<p>INSULATED CERAMIC BEARING DRIVE END - Security operation</p> <p>Incorrect assembly can lead to engine failure with a safety risk in service</p> <p>SRIL TROS 965.289</p> <p>FAG: NU 214-E-XL-M1-P6-F1-H257A-J20AB-C4 or NU 214-E-M1-P6-F1-H257A-J20AA-C4</p> <p>SKF: NU 214-EGM/C4-VA3091</p> <p>(cross out the references that have not been fitted)</p>					
<p>N°: ROMANIA 0097 10/03 GNS8 - 1988033</p>					
<p>S2 Radial play after assembly (0,042 / 0,114): 0,08 mm</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:</p> <p>Filter 1 (Name and signature): <i>[Signature]</i></p> <p>Filter 2 (Name and signature): <i>[Signature]</i></p> <p>Quality validation</p> <p>Quality Insp. Name and signature: <i>Dima</i></p>			
<p>S1 INSULATED CERAMIC BEARING OPPOSITE DRIVE END side - Security operation</p> <p>Incorrect assembly can lead to engine failure with a safety risk in service</p> <p>SRIL TROS 965.289</p> <p>FAG: 6214-M-P6-J20AB-H257A-C4 or 6214-M-P6-J20AA-H257-C4</p> <p>SKF 6214-M/C4-VL 0241</p> <p>(cross out the references that have not been fitted)</p>					
<p>Serial N°: GERMANY 0000 X270 - 1244 09/03 SN0002</p>					
<p>S1 Radial play after assembly (0,021 / 0,067): 0,05 mm</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:</p> <p>Filter 1 (Name and signature): <i>[Signature]</i></p> <p>Filter 2 (Name and signature): <i>[Signature]</i></p> <p>Quality verification</p> <p>Quality Insp. Name and signature: <i>Dima</i></p>			
<p>Reference appareil: ATEP14</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)

11,2 MΩ



OK



NOK

OPERATOR

Quality verification

Out of round at the end of the shaft drive end, 0,05 max Value <u>0,01mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>AJ2P14</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max: <u>0,04mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>CU3P1001</u>	<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 checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>SQ31001019</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	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
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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

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

2024 -03- 14

Name : Dima

Signature : [Signature]



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N° 21419

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76545471

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: 2024/03/11

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

21419

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

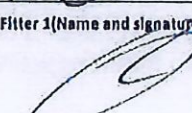
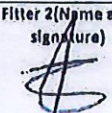
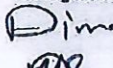
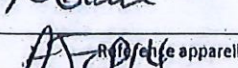
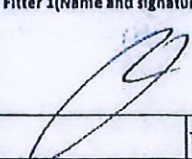
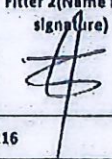
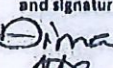
Date: 19/01/2024

Name: Jacques

Assembly after test

Date: 05/03/2024

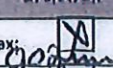
Name: Jacques

ROTOR S/N MCB23-10-039		STATOR S/N CIB-1417	
<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°: Romania: - 00917 09/23 SN282-1369794			
<p>Radial play after assembly (0,042 / 0,114): 0,07mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>LUBRICATION WITH MOBILITH SHC 100 before cover assembly Min: 144g - Max: 149g Measured quantity: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK Filter 1 (Name and signature)  Filter 2 (Name and signature)  Quality validation: 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- SKE-6214-M/C4-VL-0242 (cross out the references that have not been fitted)</p>			
Serial N°: Germany: - 0200 X116-0147 04/23 SN0121			
<p>Radial play after assembly (0,021 / 0,067): 0,06mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK Reference appareil: </p>		<p>LUBRICATION WITH MOBILITH SHC 100 before cover assembly Min: 159g - Max: 164g Measured quantity: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK Filter 1 (Name and signature)  Filter 2 (Name and signature)  Quality validation: Dima </p>	
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216 2 Page 1	

ALSTOM

GIBELCO

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)		72 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:  <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: AD414	<input type="checkbox"/> OK <input type="checkbox"/> NOK	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max: 0,06mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: AS414	<input type="checkbox"/> OK <input type="checkbox"/> NOK	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,75mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: CIBFL002	<input 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	Device serial number S221200103	<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)

<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK

Final Inspection

Quality Insp Name and Signature:

Dima

Comments

OBSERVATIONS

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

TROS 916.216

2

Page

2

