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 - 1367**

CONTENTS

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	16 March 2024
NAME	Kwababana Hlumisa
VISA	P.P

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 1867		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M 1689		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M 3111		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3270		NGC
Wheel (Right)	AR00000174670	036	11.23	Bonatrans
Wheel (Left)	AR000000174670	023	11.23	Bonatrans
Wheelset (Rear)	AR00000178600	M 3112		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3278		NGC
Wheel (Right)	AR00000174670	148	11.23	Bonatrans
Wheel (Left)	AR00000174670	150	11.23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2308132		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2309028		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1656	03.24	Wabtec
Brake unit without PB (Right front)	AR00000175185	4981	03.24	Wabtec
Brake unit without PB (Left Front)	AR00000175185	4982	03.24	Wabtec
Brake unit without PB (left rear)	AR00000175185	4988	03.24	Wabtec
Motor (front)	AR00000168516	21385		Alstom Ornans
Motor (Rear)	AR00000168516	21342		Alstom Ornans

PRESSING REPORT

DATE	
3/14/2024	
DATE VALIDATION	RESPONSABLE VALIDATION

PRASA

INSTRUCTION SHEET:	LOAD TEST : MOTOR BOGIE
FAMILY:	PROJECT:

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00	38.99 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q2		5610

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

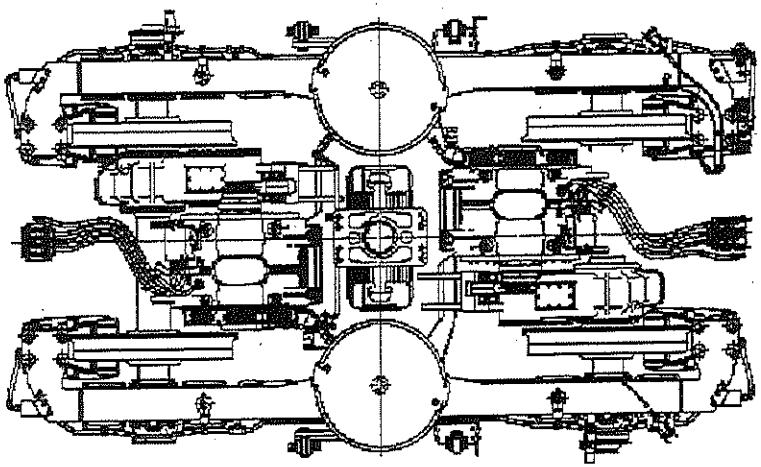
RIGHT JACK LOAD	
7376	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00	38.94 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5522

BOGIE SERIAL N°	MB1-1367
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22310
COMPLETE BOGIE WEIGHT [Kg]	7216

OPERATOR	DATE
EDWARD	3/14/2024

OPERATOR STAMP
BFI-21



	THEORETICAL		MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN MAX	0.00 0.00	-0.78 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN MAX	0.00 0.00	1.19 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN MAX	0.00 0.00	-0.20 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN MAX	0.00 0.00	0.21 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN MAX	0.00 0.00	0.99 ✓

LEFT JACK LOAD	
7376	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00	39.00 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5523

SECONDARY SUSPENSION ✓					
MEASURED [mm]	SHIM THICK [mm]		DIM. WITH SHIM [mm]	THEORETICAL [mm]	
586.99	+	0.00	= 586.99	MIN	585.00
				MAX	587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm] ✓	THEORETICAL [mm]	
-0.19	MIN	-1.00
	MAX	1.00

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00	38.36 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5655

2385

ALSTOM

GIBELG

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

Référence: TROS 916.216 Révision: 2

Documents de référence: AT00000325953 - AT00000325990

Assembly before test
Date: 07/12/2023
Name: Jacques

Assembly after test
Date: 24/02/24
Name: IONUT & THOMAS

ROTOR S/N	STATOR S/N	
MCR22-11-204	GEB-1399	

Bearing lubrification - Security operation

Incorrect lubrication can lead to engine failure with a safety risk in service

SRIL TROS 965.289

INSULATED CERAMIC BEARING DRIVE END – Security operation

S2

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)

N°:
ROMANIA :- 0917 09/23 SN330-1369794

S2 Radial play after assembly (0,042 / 0,114):

0,07 mm ☒ OK ☐ NOK

S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly

Min:144g - Max:149g Mesured quantity: G

Fitter 1(Name and signature)	Fitter 2(Name and signature)	Quality validation Quality Insp. Name and signature
		Dima

INSULATED CERAMIC BEARING OPPOSITE DRIVE END side – Security operation

S1

Incorrect assembly can lead to engine failure with a safety risk in service

SRIL TROS 965.289

FAG : 6214-M-P6-J20AB-H257A-C4 or ~~6214-M-P6-J20AA-H257-C4~~

SKF ~~6214-M/C4-VL 0241~~

(cross out the references that have not been fitted)

Serial N°:
GERMANY :- 0200 X116-0815 04/23 SN0164

S1 Radial play after assembly (0,021 / 0,067):

0,06 mm ☒ OK ☐ NOK

Référence appareil: A52P14

S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly

Min:159g Max:164g Mesured quantity: G

Fitter 1(Name and signature)	Fitter 2(Name and signature)	Quality verification Quality Insp. Name and signature
		Dima

ALSTOM

GIBELG

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) 1,49 GΩ ☒ OK ☐ NOK

OPERATOR			Quality verification	
Out of round at the end of the shaft drive end 0,05 max: 0,01 mm	☒ OK ☐ NOK	Device serial number: A52P14	☐ OK	☐ NOK
Out of round on toothed wheel 0,1 max: 0,05 mm	☒ OK ☐ NOK	Device serial number: A52P14	☐ OK	☐ NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,7 mm	☒ OK ☐ NOK	Device serial number: GEB-1399	☐ OK	☐ NOK

Sensor reference: DTR0000512252/DSD1830.19Q14HW	[X] OK [ ] NOK	Device serial number: S2314 00651		[ ] OK	[ ] NOK

Prep. & Final Assembly

OPERATOR				Quality verification		
F1	Torque tightening to 8 x 76 Nm:	[X] OK [ ] NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) D3260188	QC 1 X 61 Nm	[ ] OK	[ ] NOK
F2	Torque tightening to 8 x 76 Nm:	[X] OK [ ] NOK	wrench reference (in the event of failure / absence of the motorized screwdriver)	QC 1 X 61 Nm	[ ] OK	[ ] NOK
F3	Torque tightening to 4 x 44 Nm: Fold locking plate	[X] OK [ ] NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) D3511851	QC 1 X 37 Nm	[ ] OK	[ ] NOK
F4	Torque tightening to 4 x 22 Nm:	[X] OK [ ] NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) N3017101	QC 1 X 18 Nm	[ ] OK	[ ] NOK
F5	Torque tightening to 6 x 22 Nm:	[X] OK [ ] NOK	wrench reference (in the event of failure / absence of the motorized screwdriver)	QC 1 X 18 Nm	[ ] OK	[ ] NOK

Finishing

F1	Torque tightening to 4 x 22 Nm:	[X] OK [ ] NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) NC05837	QC 1 X 22 Nm	[ ] OK	[ ] NOK

Grease protection transport

S3	18g (0/+4.5) CC	Mesured quantity: 18g		[X] OK	[ ] NOK
S4	18g (0/+4.5) CC	Mesured quantity: 18g		[X] OK	[ ] NOK

Final inspection following the check-list DTR0000452909 and DTR0000452910 (In the case of 100% inspection of the production)	[X] OK	[ ] NOK

	Final inspection	Comments
	Quality insp Name and Signature: Dima [signature]	

OBSERVATIONS

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -03- 01
Name : Dima
Signature : [signature]

21342

ALSTOM GIBELA

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: 27/11/23
Name: Xolani

Assembly after test
Date: 10/12/2024
Name: Jacques + Xolani + Zulu + Tommas

ROTOR S/N	STATOR S/N	
MCP22-11-071	GIIB-1342	

Bearing lubrification - Security operation
Incorrect lubrication can lead to engine failure with a safety risk in service
SRIL TROS 965.289

S2 **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)

N°: ROMANIA : 0097 05/23 SN221 -1085122

S2 Radial play after assembly (0,042 / 0,114): 0,07mm
[X] OK [ ] NOK

S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly
Min:144g - Max:149g (circled) Mesured quantity: Quality validation

Fitter 1(Name and signature)	Fitter 2(Name and signature)	Quality Insp. Name and signature
[signature]	[signature]	Dima TRDS

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)

Serial N°: GERMANY 0200 X116-0705 04/23 SN0044

S1 Radial play after assembly (0,021 / 0,067): 0,05mm
[X] OK [ ] NOK

S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly
Min:159g Max:164g (circled) Mesured quantity: Quality verification

Fitter 1(Name and signature)	Fitter 2(Name and signature)	Quality Insp. Name and signature
[signature]	[signature]	Dima TRDS

Référence appareil: AEMX9919

ALSTOM GIBELA

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) 1,09GΩ [X] OK [ ] NOK

OPERATOR				Quality verification	
Out of round at the end of the shaft drive end 0,05 max: 0 mm	X OK	NOK	Device serial number: AMXG114	OK	NOK
Out of round on toothed wheel 0,1 max: 0,05 mm	X OK	NOK	Device serial number: AMXG114	OK	NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,8 mm	X OK	NOK	Device serial number: CTBH001	OK	NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	X OK	NOK	SD3140CCK001	OK	NOK

Prep. & Final Assembly

OPERATOR					Quality verification	
F1 Torque tightening to 8 x 76 Nm:	X OK	NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) N00S081	QC 1 X 61 Nm	OK	NOK
F2 Torque tightening to 8 x 76 Nm:	X OK	NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) N00S081	QC 1 X 61 Nm	OK	NOK
F3 Torque tightening to 4 x 44 Nm: Fold locking plate	X OK	NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) N00S081	QC 1 X 37 Nm	OK	NOK
F4 Torque tightening to 4 x 22 Nm:	X OK	NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) N00S083	QC 1 X 18 Nm	OK	NOK
F5 Torque tightening to 6 x 22 Nm:	X OK	NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) N00S083	QC 1 X 18 Nm	OK	NOK

Finishing

F1 Torque tightening to 4 x 22 Nm:	X OK	NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) N00S061	QC 1 X 22 Nm	OK	NOK

Grease protection transport

S3 18g (0/+4.5) CC	Mesured quantity:	18g	X OK	NOK
S4 18g (0/+4.5) CC	Mesured quantity:	18g	X OK	NOK

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

Final Inspection	Comments
Quality Insp Name and Signature: Dima [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 -01- 13
Name : Dima
Signature : [signature]

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21385
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76328974	
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: 2024/03/01

Function: Final Inspection

Perfomed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -03- 01
Name : Dimakatso
Signature :

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21342
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76236844	
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: 2024/01/23

Function: Final Inspection

Perfomed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -01- 23
Name : Dimakatso
Signature : DMS

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

GIBELA RAIL	Compiled by M Kola	Date: 22/2/2022

ALSTOM UBUNYE

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 1368

CONTENTS

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	16 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	1368		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M1686		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M03113		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	3078		NGC
Wheel (Right)	AR00000174670	001	11-23	Bonatrans
Wheel (Left)	AR000000174670	191	12-23	Bonatrans
Wheelset (Rear)	AR00000178600	M03114		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	3094		NGC
Wheel (Right)	AR00000174670	155	11-23	Bonatrans
Wheel (Left)	AR00000174670	146	11-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2310223		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2312107		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1655	03-24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	4984	03-24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	4985	03-24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	4986	03-24	WEBTEC
Motor (front)	AR00000168516	21512		GIBELA
Motor (Rear)	AR00000168516	21396		GIBELA

PRESSING REPORT

DATE	
3/16/2024	
DATE VALIDATION	RESPONSABLE VALIDATION

PRASA ALST MUBUNE

INSTRUCTION SHEET:	LOAD TEST : MOTOR BOGIE
FAMILY:	PROJECT:

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00		37.11 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q2		5608

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM[mm]	THEORETICAL [mm]
586.50	+ 0.00	= 586.50	MIN 585.00 MAX 587.50

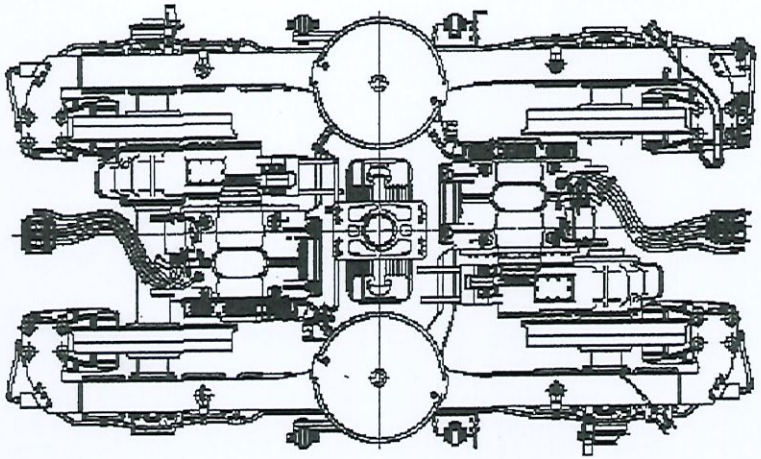
RIGHT JACK LOAD	
7376	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00		37.82 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5558

BOGIE SERIAL N°	MB1-1368
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22335
COMPLETE BOGIE WEIGHT [Kg]	7250

OPERATOR	DATE
EDWARD	3/16/2024

OPERATOR STAMP
BFI-21



	THEORETICAL		MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00		-0.62 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00		0.65 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00		-0.19 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00		0.02 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00		0.64 ✓

LEFT JACK LOAD	
7376	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00		37.01 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5539

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.81	+ 0.00	= 586.81	MIN 585.00 MAX 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm] ✓	THEORETICAL [mm]
-0.31	MIN -1.00 MAX 1.00

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00		36.81 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5631

21396

ALSTOM GIBELA

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

Référence: TROS 916.216 Révision: 2

Documents de référence: AT00000325953 - AT00000325990

Assembly before test
Date: 11/12/2023
Name: Jacques

Assembly after test
Date: 23/02/24
Name: Nolane Thomas

ROTOR S/N	STATOR S/N	
MC022-11-027	CFB-1414	

Bearing lubrification - Security operation
Incorrect lubrication can lead to engine failure with a safety risk in service
SRIL TROS 965.289

S2 **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)

N°: Romania :- 0097 04/23 SN346 – 1369794

S2 Radial play after assembly (0,042 / 0,114):	S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly		
0,08mm [X] OK [ ] NOK	Min:144g - Max:149g	Mesured quantity:	Quality validation
	Fitter 1(Name and signature) [signature]	Fitter 2(Name and signature) [signature]	Quality Insp. Name and signature: Dimi HDS

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)

Serial N°: GERMANY :- 0200 X116-0741 04/23 SN0108

S1 Radial play after assembly (0,021 / 0,067):	S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly		
0,06mm [X] OK [ ] NOK	Min:159g Max:164g	Mesured quantity:	Quality verification
Référence appareil: AS CP14	Fitter 1(Name and signature) [signature]	Fitter 2(Name and signature) [signature]	Quality Insp. Name and signature: Dimq HDS

ALSTOM GIBELA

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)	715MΩ	[X] OK	[ ] NOK			
OPERATOR				Quality verification		
Out of round at the end of the shaft drive end 0,05 max: 0,01mm	[X] OK	[ ] NOK	Device serial number: AS CP14	[ ] OK	[ ] NOK	
Out of round on toothed wheel 0,1 max: 0,08mm	[X] OK	[ ] NOK	Device serial number: AS CP14	[ ] OK	[ ] NOK	
sensor / toothed wheel play 0,7 (+/- 0,2): 0,75mm	[X] OK	[ ] NOK	Device serial number: CFBFL002	[ ] OK	[ ] NOK	

Sensor reference: DTR0000512252/DSD1830.19Q14HW	X OK ☐ NOK	Device serial number 3231000199	☐ OK	☐ NOK

Prep. & Final Assembly

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

Finishing

F1 Torque tightening to 4 x 22 Nm:	X OK ☐ NOK	wrench reference (in the event of failure / absence of the motorized screwdriver)	QC 1 X 22 Nm	☐ OK ☐ NOK

Grease protection transport

S3 18g (0/+4.5) CC	Mesured quantity: 18g		X OK	☐ NOK
S4 18g (0/+4.5) CC	Mesured quantity: 18g		X OK	☐ NOK

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

Final Inspection	Comments
Quality Insp Name and Signature: Dima	

OBSERVATIONS

GIBELA RAIL TRANSORT CONSORTIUM NP (PTY) LTD
Traction Motors Quality
2024 -02- 24
Name : Dima
Signature :

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21396
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76336940	
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: 2024/03/01

Function: Final Inspection

Perfomed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -03- 01
Name : Dimakatso
Signature :

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

2512

ALSTOM

GIBELO

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: 22/02/2024
Name: Jacques

Assembly after test
Date: 26-02-24
Name: Godfrey

ROTOR S/N	STATOR S/N	
MCR03-10040	GIB-1528	

Bearing lubrification - Security operation

Incorrect lubrication can lead to engine failure with a safety risk in service

SRIL TROS 965.289

INSULATED CERAMIC BEARING DRIVE END – Security operation

S2

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)

N°: Romania 0097 09/23 SN77-1389794

S2 Radial play after assembly (0,042 / 0,114):

0,08mm ☒ OK ☐ NOK

S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly

Min:144g - Max:149g Mesured quantity:

Fitter 1(Name and signature)	Fitter 2(Name and signature)	Quality validation Quality Insp. Name and signature
		Dima RMS

INSULATED CERAMIC BEARING OPPOSITE DRIVE END side – Security operation

S1

Incorrect assembly can lead to engine failure with a safety risk in service

SRIL TROS 965.289

FAG : 6214-M-P6-J20AB-H257A-C4 or ~~6214-M-P6-J20AA-H257-C4~~

SKF ~~6214-M/C4-VL-0241~~

(cross out the references that have not been fitted)

Serial N°: Germany 0200 X116-1009 04/23 SN0286

S1 Radial play after assembly (0,021 / 0,067):

0,04mm ☒ OK ☐ NOK

Référence appareil

S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly

Min:159g Max:164g Mesured quantity:

Fitter 1(Name and signature)	Fitter 2(Name and signature)	Quality verification Quality Insp. Name and signature
		Dima RMS

ALSTOM

GIBELO

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 ☒ OK ☐ NOK

OPERATOR	Quality verification

Out of round at the end of the shaft drive end, 0,05 max Value 0,01mm	[X] OK	[ ] NOK	Device serial number AJ 9121	[ ] OK	[ ] NOK
Out of round on toothed wheel 0,1 max: 0,05mm	[X] OK	[ ] NOK	Device serial number AJ 9124	[ ] OK	[ ] NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,75mm	[X] OK	[ ] NOK	Device serial number GJBFL002	[ ] OK	[ ] NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	[X] OK	[ ] NOK	Device serial number 6221600 1506	[ ] OK	[ ] NOK

Prep. & Final Assembly

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

Finishing

F1 Torque tightening to 4 x 22 Nm:	[X] OK	[ ] NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) N005274	QC 1 X 22 Nm	[ ] OK	[ ] NOK

Grease protection transport

S3 18g (0/+4.5) CC	Mesured quantity:	18g	[X] OK	[ ] NOK
S4 18g (0/+4.5) CC	Mesured quantity:	18g	[X] OK	[ ] NOK

Final inspection following the check-list DTR0000452909 and DTR0000452910 (In the case of 100% inspection of the production) [X] OK [ ] NOK

Final inspection	Comments
Quality Insp Name and Signature: Dima [signature]	

OBSERVATIONS

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -02- 29
Name : Dima
Signature : [signature]

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21512
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76765628	
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: 2024/03/01

Function: Final Inspection

Perfomed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -03- 01
Name : Dimakatso
Signature :

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590