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 1371

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	18 March 2024
NAME	Kwababana Hlumisa
VISA	P.P

ALSTOM UBUNYE

PRODUCTS TRACEABILITY

Products Designation	Product Reference	Serial Number	Batch or Date Manufactured	Supplier
Motor Bogie MB1	DTR0009706804	1371		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M1688		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M03119		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3063		NGC
Wheel (Right)	AR00000174670	145	11-23	Bonatrans
Wheel (Left)	AR000000174670	013	12-23	Bonatrans
Wheelset (Rear)	AR00000178600	M03120		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3108		NGC
Wheel (Right)	AR00000174670	007	12-23	Bonatrans
Wheel (Left)	AR00000174670	098	02-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2312004		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2310183		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1667	03-24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	5017	03-24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	5019	03-24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	5024	03-24	WEBTEC
Motor (front)	AR00000168516	21290		GIBELA
Motor (Rear)	AR00000168516	21425		GIBELA

PRESSING REPORT

DATE	
3/16/2024	
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	38.27 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q2		5597

SECONDARY SUSPENSION ✓					
MEASURED [mm]	SHIM THICK [mm]		DIM. WITH SHIM[mm]	THEORETICAL [mm]	
587.41	+	0.00	= 587.41	MIN	585.00
				MAX	587.50

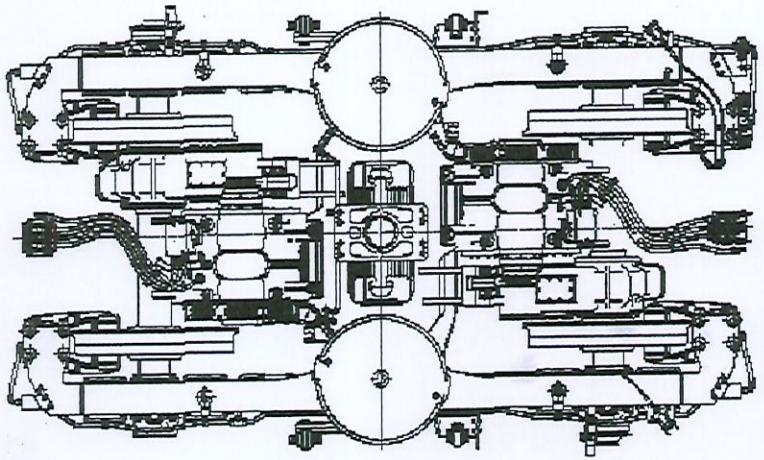
RIGHT JACK LOAD	
7376	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00	38.40 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5526

BOGIE SERIAL N°	MB1-1371
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22322
COMPLETE BOGIE WEIGHT [Kg]	7236

OPERATOR	DATE
EDWARD	3/16/2024

OPERATOR STAMP
BFI-21



	THEORETICAL		MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN MAX	0.00 0.00	-0.56 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN MAX	0.00 0.00	1.23 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN MAX	0.00 0.00	-0.26 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN MAX	0.00 0.00	0.34 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN MAX	0.00 0.00	0.90 ✓

LEFT JACK LOAD	
7376	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00	38.21 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5535

SECONDARY SUSPENSION ✓					
MEASURED [mm]	SHIM THICK [mm]		DIM. WITH SHIM [mm]	THEORETICAL [mm]	
587.42	+	0.00	= 587.42	MIN	585.00
				MAX	587.50

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

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00	38.02 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5664

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21425
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76555231	
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.

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -02- 21
Name :...Dimakatso.....
Signature :.....

Date: 2024/02/21

Function: Final Inspection

Perfomed 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

21425

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: 20/01/24
Name: XOLANI

Assembly after test
Date: 13/02/24
Name: Godfrey & Thomas

ROTOR S/N	STATOR S/N	
MCB23-10-035	GIB-1431	

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 09/23 6N438-1369749

S2 Radial play after assembly (0,042 / 0,114): 0,06mm

[X] OK [ ] NOK

S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly

Min:144g - Max:149g	Mesured quantity:	Quality validation
Fitter 1(Name and signature)	Fitter 2(Name and signature)	Quality Insp. Name and signature
[signature]	[signature]	Dima [signature]

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 X116-0644 04/23 3NC003

S1 Radial play after assembly (0,021 / 0,067): 0,06mm

[X] OK [ ] NOK

Référence appareil: AJZP14

S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly

Min:159g Max: 164g	Mesured quantity:	Quality verification
Fitter 1(Name and signature)	Fitter 2(Name and signature)	Quality Insp. Name and signature
[signature]	[signature]	Dima [signature]

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)	5,68GΩ	[X] OK	[ ] NOK			
OPERATOR				**Quality verification**		
Out of round at the end of the shaft drive end 0,05 max: 0,02mm	[X] OK	[ ] NOK	Device serial number: AJZP14	[ ] OK	[ ] NOK	
Out of round on toothed wheel 0,1 max: 0,04mm	[X] OK	[ ] NOK	Device serial number: AJZP14	[ ] OK	[ ] NOK	
sensor / toothed wheel play 0,7 (+/- 0,2): 0,65mm	[X] OK	[ ] NOK	Device serial number: GIBFL001	[ ] OK	[ ] NOK	

Sensor reference: DTR0000512252/DSD1830.19Q14HW	[X] OK	[ ] NOK	Device serial number: 3024-501-5800		[ ] 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) NCCS087	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) NCCS087	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) NCCS081	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) NCCS085	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) NCCS086	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) NCCS087	QC 1 X 22 Nm	[ ] OK	[ ] NOK

Grease protection transport

S3 18g (0/+4.5) CC	Mesured quantity:	18 g	[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- 19
Name : Dima
Signature : [signature]

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21290
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	7614927C	
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

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

31290

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: 14/11/2023
Name: Jacques

Assembly after test
Date: 24/08/24
Name: ADRIANE & THOMAS

ROTOR S/N	STATOR S/N	
MCR22-9-070	GIB-1290	

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°: AUSTRIA 237 W

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

0,08mm [X] OK [ ] NOK

S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly

Min:144g - Max:149g

Mesured quantity:	Quality validation
Fitter 1(Name and signature)	Fitter 2(Name and signature) / Quality Insp. Name and signature
	Dina VMS

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°: AUSTRIA 094W

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

0,06mm [X] OK [ ] NOK

Référence appareil: AJ 0914

S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly

Min:159g Max: 164g

Mesured quantity:	Quality verification
Fitter 1(Name and signature)	Fitter 2(Name and signature) / Quality Insp. Name and signature
	Dina VMS

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) 130 MΩ [X] OK [ ] NOK

OPERATOR			Quality verification	
Out of round at the end of the shaft drive end 0,05 max:	[X] OK [ ] NOK	Device serial number: AJ 0914	[ ] OK	[ ] NOK
Out of round on toothed wheel 0,1 max: 0,05mm	[X] OK [ ] NOK	Device serial number: AJ 0914	[ ] OK	[ ] NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,75mm	[X] OK [ ] NOK	Device serial number: GIBFL002	[ ] OK	[ ] NOK

3,01mm

Sensor reference: DTR0000512252/DSD1830.19Q14HW	[X] OK	[ ] NOK	Device serial number S2 0413008395		[ ]	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 / observe 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 / observe 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 / observe of the motorized screwdriver)	0025110919	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 / observe 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 / observe of the motorized screwdriver)	10062019	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 / observe of the motorized screwdriver)	NCC05577	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- 26
Name : Dima
Signature : [signature]

ALSTOM UBUNYE

MANUFACTURER	**ALSTOM Ubunye** Marievale Road, Vosterkroon, Nigel, 1490
CUSTOMER	**Gibela**
CONTRACT	
PROJECT	**PRASA**

MANUFACTURER'S DELIVERY DOCUMENT

PRODUCT TYPE	**MOTOR BOGIE type MB2**
	DTR0009706805
SERIAL NUMBER	**MB2 - 586**

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 MB2	DTR0009706805	586		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M 1687		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M 3107		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 32.98		NGC
Wheel (Right)	AR00000174670	149	11.23	Bonatrans
Wheel (Left)	AR000000174670	033	10.23	Bonatrans
Wheelset (Rear)	AR00000178600	M 3108		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 2898		NGC
Wheel (Right)	AR00000174670	016	10.23	Bonatrans
Wheel (Left)	AR00000174670	~~038~~ 038	10.23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2310221		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2310188		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1648	03.24	Wabtec
Brake unit without PB (Right front)	AR00000175185	4967	03.24	Wabtec
Brake unit without PB (Left Front)	AR00000175185	4963	03.24	Wabtec
Brake unit without PB (left rear)	AR00000175185	4964	03.24	Wabtec
Motor (front)	AR00000168516	21398		Alstom - Gibela
Motor (Rear)	AR00000168516	21509		Alstom - Gibela

DATE	
3/15/2024	
DATE VALIDATION	RESPONSABLE VALIDATION

PRESSING REPORT

PRASA

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

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN		
	MAX		
GAP PRIMARY SUSPENSION [mm]	MIN	33.00	37.68 ✓
	MAX	39.00	
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q2		5593

SECONDARY SUSPENSION ✓					
MEASURED [mm]	SHIM THICK [mm]		DIM. WITH SHIM[mm]	THEORETICAL [mm]	
586.03	+	0.00	= 586.03	MIN	585.00
				MAX	587.50

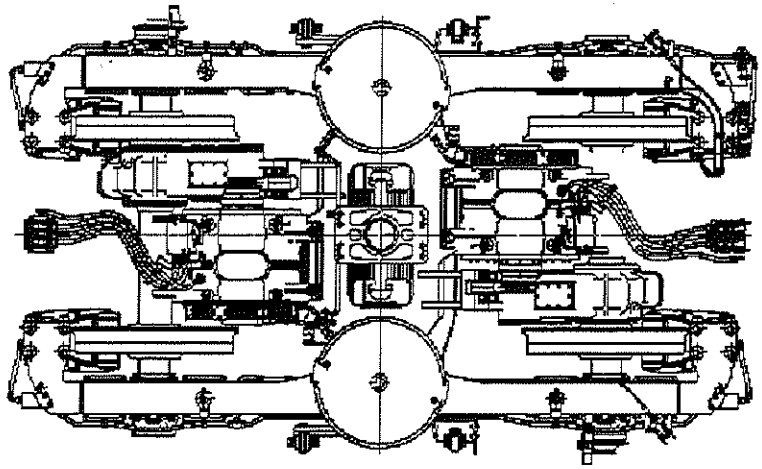
RIGHT JACK LOAD	
7376	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN		
	MAX		
GAP PRIMARY SUSPENSION [mm]	MIN	33.00	37.70 ✓
	MAX	39.00	
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5558

BOGIE SERIAL N°	MB2-586
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22332
COMPLETE BOGIE WEIGHT [Kg]	7234

OPERATOR	DATE
BAFANA	3/15/2024

OPERATOR STAMP
DC-3FI-3



	THEORETICAL		MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN	0.00	-0.39 ✓
	MAX	0.00	
LOAD DIFFERENCE ON REAR AXLE [%]	MIN	0.00	0.66 ✓
	MAX	0.00	
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN	0.00	-0.21 ✓
	MAX	0.00	
LOAD DIFFERENCE ON RAILS [%]	MIN	0.00	0.13 ✓
	MAX	0.00	
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN	0.00	0.53 ✓
	MAX	0.00	

LEFT JACK LOAD	
7376	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN		
	MAX		
GAP PRIMARY SUSPENSION [mm]	MIN	33.00	37.59 ✓
	MAX	39.00	
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5549

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

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm] ✓	THEORETICAL [mm]	
-0.77	MIN	-1.00
	MAX	1.00

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN		
	MAX		
GAP PRIMARY SUSPENSION [mm]	MIN	33.00	36.80 ✓
	MAX	39.00	
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5632

21509

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: 21-02-24
Name: Godfrey & Xolani

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

ROTOR S/N	STATOR S/N	
MCR23-10-045	GTB-1511	

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 SN218-1369794

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 Mesured quantity:

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 X116-1010 04/23 SN02-88

S1 Radial play after assembly (0,021 / 0,067): 0,06mm

[X] OK [ ] NOK

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

Référence appareil: AMX414

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) 1,259Ω [X] OK [ ] NOK

OPERATOR	Quality verification

Out of round at the end of the shaft drive end, 0,05 max Value 0,01mm	☒ OK ☐ NOK	Device serial number AMX414	☐ OK	☐ NOK
Out of round on toothed wheel 0,1 max: 0,07mm	☒ OK ☐ NOK	Device serial number AMX414	☐ OK	☐ NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,6mm	☒ OK ☐ NOK	Device serial number	☐ OK	☐ NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	☒ OK ☐ NOK	Device serial number 5324200852-12	☐ OK	☐ NOK

Prep. & Final Assembly

OPERATOR			wrench reference (in the event of failure / absence of the motorized screwdriver)	Quality verification		
F1	Torque tightening to 8 x 76 Nm:	☒ OK ☐ NOK	N0052871	QC 1 X 61 Nm	☐ OK	☐ NOK
F2	Torque tightening to 8 x 76 Nm:	☒ OK ☐ NOK	N0052871	QC 1 X 61 Nm	☐ OK	☐ NOK
F3	Torque tightening to 4 x 44 Nm: Fold locking plate	☒ OK ☐ NOK	N0052871	QC 1 X 37 Nm	☐ OK	☐ NOK
F4	Torque tightening to 4 x 22 Nm:	☒ OK ☐ NOK	N0053085	QC 1 X 18 Nm	☐ OK	☐ NOK
F5	Torque tightening to 6 x 22 Nm:	☒ OK ☐ NOK	N0053088	QC 1 X 18 Nm	☐ OK	☐ NOK

Finishing

F1'	Torque tightening to 4 x 22 Nm:	☒ OK ☐ NOK	N0052777	QC 1 X 22 Nm	☐ OK	☐ NOK

Grease protection transport

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

GIBELA RAIL TRANSPORT CONSORTIUM (PTY) LTD
Traction Motors Quality
2024 -02- 26
Name : Dima
Signature :

21398

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: 12/12/23
Name: XOLANI

Assembly after test
Date: 04/02/24
Name: XOLANI / THOMAS

ROTOR S/N	STATOR S/N	
MCR22-10-138	GEES-1372	

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

INSULATED CERAMIC BEARING DRIVE END – Security operation
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 SN262-1369794

S2 Radial play after assembly (0,042 / 0,114): 0,06 mm
[X] OK [ ] NOK

S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly
Min:144g - Max:149g

Mesured quantity:	Quality validation
Fitter 1(Name and signature)	Fitter 2(Name and signature) / 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 X116-0650 04/23 SN0015

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

S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly
Min:159g Max:164g

Mesured quantity:	Quality verification
Fitter 1(Name and signature)	Fitter 2(Name and signature) / Quality Insp. Name and signature
	Dima

Référence appareil: AJ2P14

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) 1,782 GΩ [X] OK [ ] NOK

OPERATOR				Quality verification	
Out of round at the end of the shaft drive end 0,03 max: 0,01 mm	[X] OK	[ ] NOK	Device serial number: AJ2P14	[ ] OK	[ ] NOK
Out of round on toothed wheel 0,1 max: 0,04 mm	[X] OK	[ ] NOK	Device serial number: AJ2P14	[ ] OK	[ ] NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,7 mm	[X] OK	[ ] NOK	Device serial number: GEES1001	[ ] OK	[ ] NOK

Sensor reference: DTR0000512252/DSD1830.19Q14HW	X OK	NOK	Device serial number: 8523170000P1/4	☐ 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) NC050871	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) NC050871	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) NC050081	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) NC050008	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) NC050008	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) NC050871	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)	✓ OK	☐ NOK

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

OBSERVATIONS

GIBELA RAIL TRANSPORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -02- 24
Name : Dima
Signature : [signature]

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21398
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76348005	
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 °	21509
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76765624	
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- 0 1
Name : Dimakatso
Signature

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590