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 1369

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	1369		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M1699		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M03103		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	3301		NGC
Wheel (Right)	AR00000174670	070	10-23	Bonatrans
Wheel (Left)	AR000000174670	069	10-23	Bonatrans
Wheelset (Rear)	AR00000178600	M03104		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	3060		NGC
Wheel (Right)	AR00000174670	006	10-23	Bonatrans
Wheel (Left)	AR00000174670	017	10-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2311042		Hutchinson
Pneumatic suspension (Left).	AR00000176127	2310226		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1658	03-24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	4997	03-24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	4993	03-24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	4998	03-24	WEBTEC
Motor (front)	AR00000168516	21364		GIBELA
Motor (Rear)	AR00000168516	21301		GIBELA

PRESSING REPORT

DATE	
3/15/2024	
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	37.44 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q2		5587

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM[mm]	THEORETICAL [mm]
587.25	+ 0.00	= 587.25	MIN 585.00 MAX 587.50

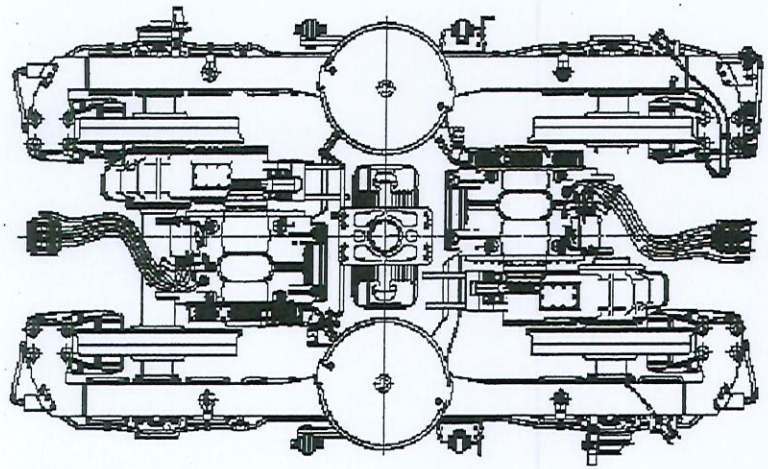
RIGHT JACK LOAD	
7376	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00	37.77 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5593

BOGIE SERIAL N°	MB1-1369
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22323
COMPLETE BOGIE WEIGHT [Kg]	7242

OPERATOR	DATE
EDWARD	3/15/2024

OPERATOR STAMP
BFI-21



	THEORETICAL		MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN MAX	0.00 0.00	-0.22 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN MAX	0.00 0.00	-0.12 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN MAX	0.00 0.00	-0.10 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN MAX	0.00 0.00	-0.17 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN MAX	0.00 0.00	0.05 ✓

LEFT JACK LOAD	
7376	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00	37.08 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5563

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
587.44	+ 0.00	= 587.44	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	37.15 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5580

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21301
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76158985	
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 : MS

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

21301

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: 17/11/2023
Name: Jacques

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

ROTOR S/N	STATOR S/N	
MCL22-11-103	QIB-1316	

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
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): 0,07mm ☒ 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 DINO

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°: AUSTRIA : 094W

S1 Radial play after assembly (0,021 / 0,067): 0,05mm ☒ OK ☐ NOK

Référence appareil AS-2914

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 DINO

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) 104MΩ ☒ OK ☐ NOK

OPERATOR			Quality verification	
Out of round at the end of the shaft drive end 0,05 max: 0,04mm	☒ OK ☐ NOK	Device serial number AS-2914	☐ OK	☐ NOK
Out of round on toothed wheel 0,1 max: 0,06mm	☒ OK ☐ NOK	Device serial number AS-2914	☐ OK	☐ NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,8mm	☒ OK ☐ NOK	Device serial number CIBFL002	☐ OK	☐ NOK

Sensor reference: DTR0000512252/DSD1830.19Q14HW	☒ OK ☐ NOK	Device serial number S23120038449	☐ OK	☐ NOK

Prep. & Final Assembly

	OPERATOR			Quality verification		
F1	Torque tightening to 8 x 76 Nm:	☒ 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:	☒ 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	☒ 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:	☒ 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:	☒ 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:	☒ 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				☒ 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 TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -02- 24
Name : ....
Signature : Dima

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

21364

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: 05/12/23
Name: XOLANI

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

ROTOR S/N	STATOR S/N	
MER22-4-174	CTIB-1354	

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
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 SN253 -136979 4

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
		DIMO KMS

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 X116-1007 04/23 SN0282

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
			DIMO KMS

Référence appareil: AMXC14

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) 8,14 GΩ [X] OK [ ] NOK

OPERATOR				Quality verification	
Out of round at the end of the shaft drive end 0,05 max: 0,03 mm	[X] OK	[ ] NOK	Device serial number: AMXC14	[ ] OK	[ ] NOK
Out of round on toothed wheel 0,1 max: 0,04 mm	[X] OK	[ ] NOK	Device serial number: AMXC14	[ ] OK	[ ] NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,7 mm	[X] OK	[ ] NOK	Device serial number: CTIB-C001	[ ] OK	[ ] NOK

Sensor reference: DTR0000512252/DSD1830.19Q14HW	☒ OK ☐ NOK	Device serial number: SS3/9006600		☐ OK	☐ NOK	

Prep. & Final Assembly

	OPERATOR				Quality verification		
F1	Torque tightening to 8 x 76 Nm:	☒ OK ☐ NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) NC05087	QC 1 X 61 Nm	☐ OK	☐ NOK
F2	Torque tightening to 8 x 76 Nm:	☒ OK ☐ NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) NC05087	QC 1 X 61 Nm	☐ OK	☐ NOK
F3	Torque tightening to 4 x 44 Nm: Fold locking plate	☒ OK ☐ NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) NC05081	QC 1 X 37 Nm	☐ OK	☐ NOK
F4	Torque tightening to 4 x 22 Nm:	☒ OK ☐ NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) NC05068	QC 1 X 18 Nm	☐ OK	☐ NOK
F5	Torque tightening to 6 x 22 Nm:	☒ OK ☐ NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) NC05068	QC 1 X 18 Nm	☐ OK	☐ NOK

Finishing

F1	Torque tightening to 4 x 22 Nm:	☒ OK ☐ NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) NC05077	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 [signature]	

OBSERVATIONS

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

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21364
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76302397	
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

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 1370

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	

ALSTOM UBUNYE

PRODUCTS TRACEABILITY

Products Designation	Product Reference	Serial Number	Batch or Date Manufactured	Supplier
Motor Bogie MB1	DTR0009706804	1370		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M1691		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M03109		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3244		NGC
Wheel (Right)	AR00000174670	041	10-23	Bonatrans
Wheel (Left)	AR000000174670	147	11-23	Bonatrans
Wheelset (Rear)	AR00000178600	M03110		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K2901		NGC
Wheel (Right)	AR00000174670	143	11-23	Bonatrans
Wheel (Left)	AR00000174670	141	11-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2311091		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2310155		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1650	03-24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	4971	03-24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	4969	03-24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	4970	03-24	WEBTEC
Motor (front)	AR00000168516	21303		GIBELA
Motor (Rear)	AR00000168516	21335		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 33.00 MAX 39.00		36.76 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q2		5585

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM[mm]	THEORETICAL [mm]
584.23	+ 3.00	= 587.23	MIN 585.00 MAX 587.50

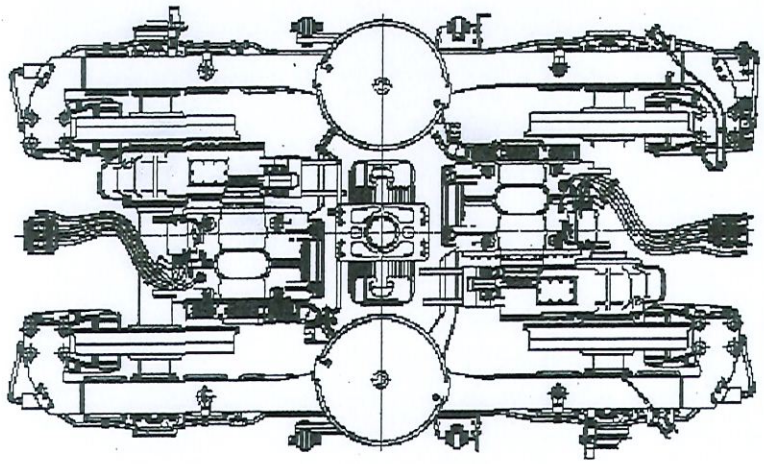
RIGHT JACK LOAD
7376 Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00		36.88 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5526

BOGIE SERIAL N°	MB1-1370
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22336
COMPLETE BOGIE WEIGHT [Kg]	7252

OPERATOR	DATE
EDWARD	3/16/2024

OPERATOR STAMP
BFI-21



	THEORETICAL		MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00		-0.31 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00		1.32 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00		-0.29 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00		0.51 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00		0.81 ✓

LEFT JACK LOAD
7376 Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00		36.63 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5551

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
587.43	+ 0.00	= 587.43	MIN 585.00 MAX 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm] ✓	THEORETICAL [mm]
-0.20	MIN -1.00 MAX 1.00

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00		36.15 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5674

21335

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: 25/11/23
Name: XOLANI

Assembly after test
Date: 15/01/24
Name: XOLANI & MOHAMED

ROTOR S/N	STATOR S/N	
MCR02-10-0304	CHIS-1345	

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~~
~~SKE: NU 214 ECM/C4 VA3091~~
(cross out the references that have not been fitted)

N°: Roulement : 0097 09/23 SN263-1369794

(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
		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 X020-0837 01/23 SN0600

(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 | Mesured quantity: | Quality verification

Fitter 1(Name and signature)	Fitter 2(Name and signature)	Quality Insp. Name and signature
		DIMA

Référence appareil: AMXG14

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) 3,49GΩ [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 AMXG14		OK		NOK
Out of round on toothed wheel 0,1 max: 0,02mm	X	OK		NOK	Device serial number AMXG14		OK		NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,7mm	X	OK		NOK	Device serial number CJIBFL001		OK		NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	X	OK		NOK	Device serial number 602-34-00501		OK		NOK

Prep. & Final Assembly

	OPERATOR				wrench reference	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) N00S087	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) N00S087	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) N00S08	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) N00S008	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) N00S077	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 TRANSPORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -01- 15
Name : Dima
Signature : [signature]

GIBELA

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21335
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76236798	
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: 2024/01/17

Function: Final Inspection

Perfomed and signed off by: Name_____. Dimakatso Mohoalali

Signature_____

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -01- 17
Name :Dimakatso.....
Signature :.....

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

MOT 21303

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: 17/11/23
Name: XOLANI

Assembly after test
Date: 19/02/24
Name: XOLANI, THOMAS & GODFREY

ROTOR S/N	STATOR S/N	
MCR22-9-109	GIB-1299	

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°: AUSTRIA : 257W

(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:	Quality validation
Fitter 1(Name and signature)	Fitter 2(Name and signature)	Quality Insp. Name and signature
[signature]	[signature]	[signature]

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): 0,03mm
[X] OK [ ] NOK

Référence appareil: AMXG14

(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]	[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) 5,87MΩ				[X] OK	[ ] NOK
OPERATOR				Quality verification	
Out of round at the end of the shaft drive end 0,05 max: 0mm	[X] OK	[ ] NOK	Device serial number AMXG14	[ ] OK	[ ] NOK
Out of round on toothed wheel 0,1 max: 0,04mm	[X] OK	[ ] NOK	Device serial number AMXG14	[ ] OK	[ ] NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,8mm	[X] OK	[ ] NOK	GIBFC002	[ ] OK	[ ] NOK

Sensor reference: DTR0000512252/DSD1830.19Q14HW	X	OK		NOK	Device serial number: S00CF1008163		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) NCC5087	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) NCC5087	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) NCC5081	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) NCC5502	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) NCC5088	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) NCC5017	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: Ngasane	N/A

OBSERVATIONS

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -02- 19
Name : Ngasane
Signature :

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21303
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76183298	
Status:	QC PASS	
Derogations / Concession / Waiver N °:	N/A	
Customer modification:	N/A	
Missing parts:	N/A	

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

Date: 2024/02/21

Function: Final Inspection

Perfomed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -02- 2 1
Name : Dimakatso
Signature :

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

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