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 - 1373

CONTENTS

- Compliance certificate..... Page 1/2 [X]
- List of deviations and missing parts..... Page 2/2 [X]
- Products traceability..... 1 page [X]
- Load test report..... 1 page [X]
- Motor certificate..... 8 pages [X]

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	19 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	1373		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	1700		Alstom - Ubunye
Wheelset (Front)	AR000000177020	3115		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	3064		NGC
Wheel (Right)	AR00000174670	179	12.23	Bonatrans
Wheel (Left)	AR000000174670	176	12.23	Bonatrans
Wheelset (Rear)	AR00000178600	3118		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	3072		NGC
Wheel (Right)	AR00000174670	140	11.23	Bonatrans
Wheel (Left)	AR00000174670	016		Bonatrans
Pneumatic suspension (Right)	AR00000176127	2310217		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2341137		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1663	03.24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	5012	03.24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	5011	03.24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	5013	03.24	WEBTEC
Motor (front)	AR00000168516	20958		GIBELA
Motor (Rear)	AR00000168516	20537		GIBELA

DATE	
3/18/2024	
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 MAX 39.00		37.89 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q2		5603

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM[mm]	THEORETICAL [mm]
586.91	+ 0.00	= 586.91	MIN 585.00 MAX 587.50

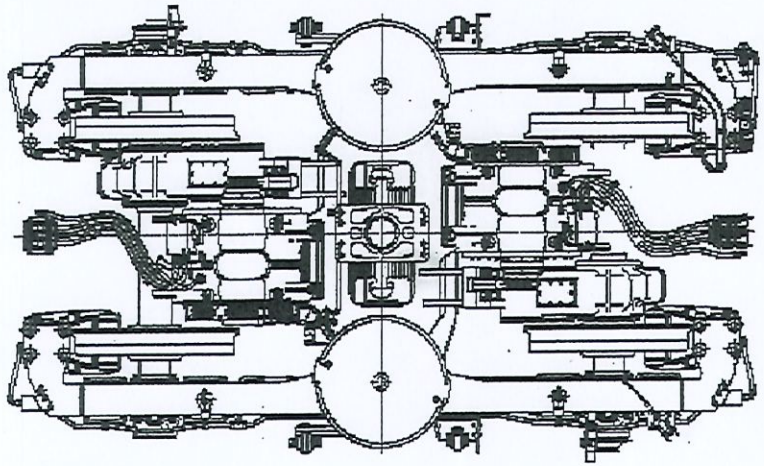
RIGHT JACK LOAD
7376 Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00		38.10 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5572

BOGIE SERIAL N°	MB1-1373
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22330
COMPLETE BOGIE WEIGHT [Kg]	7240

OPERATOR	DATE
BAFANA	3/18/2024

OPERATOR STAMP
DC-BFI-6



LEFT JACK LOAD
7376 Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00		37.88 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5548

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.08	+ 0.00	= 586.08	MIN 585.00 MAX 587.50

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

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00		38.09 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5607

	THEORETICAL		MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00		-0.49 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00		0.31 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00		-0.13 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00		-0.09 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00		0.40 ✓

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors 6 ECA 3022 B
Serial Number:	N ° 20537
Client / Customer:	ALSTOM UBUNYE (PTY) LTD
Project:	PRASA
P O Number:	74715457
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: 6/3/2023

Function: Final Inspection

Perfomed and signed off by: Name____ Buhle Masuku

Signature_____

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

MOT 20537

ALSTOM

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: 31/01/2023
Name: Jacquoo

Assembly after test
Date: 06/02/2023
Name: Jacquoo

ROTOR S/N	STATOR S/N	
MCE22-8-041	CIB-0536	

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 11/22 SN66-5747155

S2 Radial play after assembly (0,042 / 0,114): 0,09 — ☒ 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
		Roxane

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 W312-0727 11.22 SN0037

S1 Radial play after assembly (0,021 / 0,067): 0,05 — ☒ 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
		Roxane

Référence appareil: ANV208

ALSTOM

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) 2,5/952	☒ OK	☐ NOK
OPERATOR	Quality verification	
Out of round at the end of the shaft drive end 0,05 max: ☒ OK ☐ NOK ANV208 (Device serial number)	☒ OK	☐ NOK

6,02 —

Sensor reference: DTR0000512252/DSD1830.19Q14HW	☒ OK ☐ NOK	Device serial number 32214097307	☐ 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	N005083	QC 1 X 61 Nm	☐ OK	☐ NOK
F2	Torque tightening to 8 x 76 Nm:	☒ OK ☐ NOK	N005083	QC 1 X 61 Nm	☐ OK	☐ NOK
F3	Torque tightening to 4 x 44 Nm: Fold locking plate	☒ OK ☐ NOK	N005328 DS1105	QC 1 X 37 Nm	☐ OK	☐ NOK
F4	Torque tightening to 4 x 22 Nm:	☒ OK ☐ NOK	N005081	QC 1 X 18 Nm	☐ OK	☐ NOK
F5	Torque tightening to 6 x 22 Nm:	☒ OK ☐ NOK	N005081	QC 1 X 18 Nm	☐ OK	☐ NOK

Finishing

F1	Torque tightening to 4 x 22 Nm:	☒ OK ☐ NOK	N005461	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: Graziano R	

OBSERVATIONS

GIBELA RAIL TRANSORT CONSORTIUM NF (PTY) LTD
Traction Motors Quality
2024 -01- 11
Name: Graziano R
Signature:

CERTIFICATION OF CONFORMITY

GIBELA

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	20958
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	75412968	
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 -01- 17
Name : Dimakatso
Signature :

Date: 2024/01/17

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

MOT 20958

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: 26/06/2023
Name: Jacques

Assembly after test
Date: 04/07/2023
Name: Jacques & Wandile

ROTOR S/N	STATOR S/N	
MCR22-8-102	GIB-0960	

Bearing lubrication - 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 11/22 5M175-574715S

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) [signature]	Fitter 2(Name and signature) [signature]	Quality Insp. Name and signature [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°: 200 X024-1045 01/23 SW070S
Germany ~~0097 11/22 5M175~~ 574715S

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:	Quality verification
Référence appareil: AS GPIS	Fitter 1(Name and signature) [signature]	Fitter 2(Name and signature) [signature]	Quality Insp. Name and 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)	3,13 GΩ	[X] OK [ ] NOK		
OPERATOR			Quality verification	
Out of round at the end of the shaft drive end 0,05 max: 0,02	[X] OK [ ] NOK	Device serial number: AS GPIS	[ ] OK	[ ] NOK
Out of round on toothed wheel 0,1 max: 0,09mm	[X] OK [ ] NOK	Device serial number: AS GPIS	[ ] OK	[ ] NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,75mm	[X] OK [ ] NOK	Device serial number	[ ] OK	[ ] NOK

Out of round on toothed wheel 0,1 max: 0,05	X	OK		NOK	Device serial number: AXW205	X	OK		NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,85	X	OK		NOK	Device serial number: N/A	X	OK		NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	X	OK		NOK	Device serial number: 521456105 58	X	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 recorded screwdriver) N025083	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 recorded screwdriver) N025083	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 motorised screwdriver) D007977	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 recorded screwdriver) N025084	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 recorded screwdriver) N025085	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 recorded screwdriver) N025169	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: Karame N	

OBSERVATIONS

ALSTOM UBUNYE

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

MANUFACTURER'S DELIVERY DOCUMENT

PRODUCT TYPE	MOTOR BOGIE MB2
	DTR0009706805
SERIAL NUMBER	MB2 585

CONTENTS

- Compliance certificate	Page 1/2	X
- List of deviations and missing parts	Page 2/2	X
- Products traceability	1 page	X
- Load test report	1 page	X
- Motor certificate	8 pages	X

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	15 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	585		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M 1692		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M 3105		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3057		NGC
Wheel (Right)	AR00000174670	118	07.23	Bonatrans
Wheel (Left)	AR000000174670	104	07.23	Bonatrans
Wheelset (Rear)	AR00000178600	M 3106		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3227		NGC
Wheel (Right)	AR00000174670	068	10.23	Bonatrans
Wheel (Left)	AR00000174670	113	10.23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2309030		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2309032		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1681	03.24	Wabtec
Brake unit without PB (Right front)	AR00000175185	4978	03.24	Wabtec
Brake unit without PB (Left Front)	AR00000175185	4975	03.24	Wabtec
Brake unit without PB (left rear)	AR00000175185	4980	03.24	Wabtec
Motor (front)	AR00000168516	21287		Alstom - Gibela
Motor (Rear)	AR00000168516	21353		Alstom - Gibela

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	38.56 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q2		5577

SECONDARY SUSPENSION ✓					
MEASURED [mm]	SHIM THICK [mm]		DIM. WITH SHIM[mm]	THEORETICAL [mm]	
587.10	+	0.00	= 587.10	MIN	585.00
				MAX	587.50

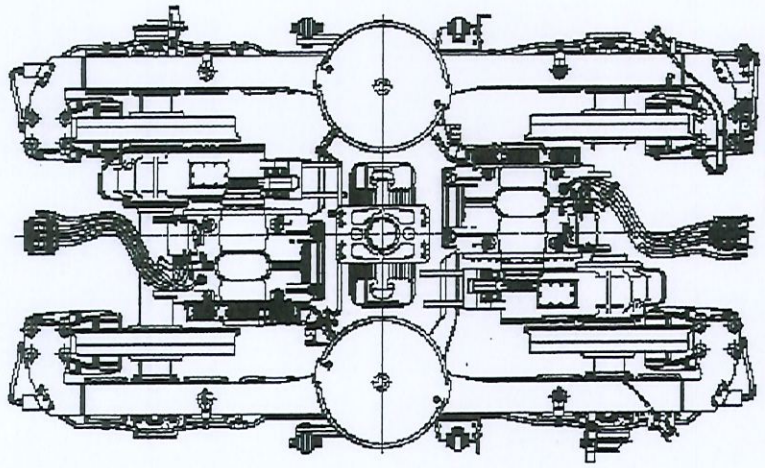
RIGHT JACK LOAD	
7376	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00	38.86 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5558

BOGIE SERIAL N°	MB2-585
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22325
COMPLETE BOGIE WEIGHT [Kg]	7239

OPERATOR	DATE
EDWARD	3/14/2024

OPERATOR STAMP
BFI-21



	THEORETICAL		MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN MAX	0.00 0.00	-0.15 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN MAX	0.00 0.00	0.64 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN MAX	0.00 0.00	-0.23 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN MAX	0.00 0.00	0.25 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN MAX	0.00 0.00	0.40 ✓

LEFT JACK LOAD	
7377	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00	38.71 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5560

SECONDARY SUSPENSION ✓					
MEASURED [mm]	SHIM THICK [mm]		DIM. WITH SHIM [mm]	THEORETICAL [mm]	
587.47	+	0.00	= 587.47	MIN	585.00
				MAX	587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm] ✓	THEORETICAL [mm]	
-0.37	MIN	-1.00
	MAX	1.00

	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]	Q3		5630

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21353
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76254817	
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 :

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

91353

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: 29/11/23
Name: XOLANT

Assembly after test
Date: 13/01/24
Name: XOLANT & SURPRISE

ROTOR S/N	STATOR S/N	
MCB22-10-120	CTIB-1269	

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 SNB73 - 136979C4

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

☒ 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 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 0020 X116 - 0720 04/23 SN0076

S1 Radial play after assembly (0,021 / 0,067): 0,05 mm

☒ 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 RMS.

Référence appareil: AMXC114

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) 4,13 GΩ ☒ OK ☐ NOK

OPERATOR				Quality verification	
Out of round at the end of the shaft drive end 0,05 max: 0 mm	☒ OK	☐ NOK	Device serial number: AMXC114	☐ OK	☐ NOK
Out of round on toothed wheel 0,1 max: 0,06 mm	☒ OK	☐ NOK	Device serial number: AMXC114	☐ OK	☐ NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,7 mm	☒ OK	☐ NOK	Device serial number: CTIS-0021	☐ OK	☐ NOK

Sensor reference: DTR0000512252/DSD1830.19Q14HW	X OK	NOK	Device serial number: SQ-31-4000054	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) NC00587	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) NC00587	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) NC00581	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) NC00582	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) NC00582	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) NC00577	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- 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 °	21287
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76133592	
Status:	QC PASS	
Derogations / Concession / Waiver N °:	DR-GIB-044	
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 TRANSPORT 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

21087

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: 13/11/2023
Name: Siaqiloo

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

ROTOR S/N	STATOR S/N	
MCR22-10-140	GIB-1296	

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°: AUSTRIA : 237 W

S2 Radial play after assembly (0,042 / 0,114):	S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly		
0,07 mm [X] OK [ ] NOK	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°: AUSTRIA : 094W

S1 Radial play after assembly (0,021 / 0,067):	S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly		
0,05 mm [X] OK [ ] NOK	Min:159g Max:166g / Mesured quantity:		Quality verification
	Fitter 1(Name and signature)	Fitter 2(Name and signature)	Quality Insp. Name and signature
Référence appareil: AS 2914	[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)	146 MΩ		[X] OK	[ ] NOK
OPERATOR			Quality verification	
0,01 mm Out of round at the end of the shaft drive end 0,05 max:	[X] OK [ ] NOK	Device serial number AS 2914	[ ] OK	[ ] NOK
Out of round on toothed wheel 0,1 max: 0,04 mm	[X] OK [ ] NOK	Device serial number AS 2914	[ ] OK	[ ] NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,7 mm	[X] OK [ ] NOK	Device serial number GIBFL002	[ ] OK	[ ] NOK

Sensor reference: DTR0000512252/DSD1830.19Q14HW	☒ OK ☐ NOK	Device serial number S22430081 69	☐ 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	DSD1830.19Q14HW	QC 1 X 61 Nm	☐	OK	☐	NOK
F2	Torque tightening to 8 x 76 Nm:	☒ OK ☐ NOK	DSD1830.19Q14HW	QC 1 X 61 Nm	☐	OK	☐	NOK
F3	Torque tightening to 4 x 44 Nm: Fold locking plate	☒ OK ☐ NOK	DDS1104	QC 1 X 37 Nm	☐	OK	☐	NOK
F4	Torque tightening to 4 x 22 Nm:	☒ OK ☐ NOK	DSD1830.19Q14HW	QC 1 X 18 Nm	☐	OK	☐	NOK
F5	Torque tightening to 6 x 22 Nm:	☒ OK ☐ NOK	DSD1830.19Q14HW	QC 1 X 18 Nm	☐	OK	☐	NOK

Finishing

F1	Torque tightening to 4 x 22 Nm:	☒ OK ☐ NOK	NCD8021T	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: Dina	

OBSERVATIONS

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