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 1361

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	07 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	1361		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	1662		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M03085		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3241		NGC
Wheel (Right)	AR00000174670	107	02-23	Bonatrans
Wheel (Left)	AR000000174670	101	02-23	Bonatrans
Wheelset (Rear)	AR00000178600	M3086		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3269		NGC
Wheel (Right)	AR00000174670	033	02-23	Bonatrans
Wheel (Left)	AR00000174670	070	02-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2309071		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2309049		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1633	02-24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	4924	02-24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	4925	02-24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	4918	02-24	WEBTEC
Motor (front)	AR00000168516	21387		GIBELA
Motor (Rear)	AR00000168516	21329		GIBELA

PRESSING REPORT

DATE	
3/6/2024	
DATE VALIDATION	RESPONSABLE VALIDATION

PRASA ALST MIDDLE

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	38.76 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q2	5629

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM[mm]	THEORETICAL [mm]
585.06	+ 2.00	= 587.06	MIN 585.00 MAX 587.50

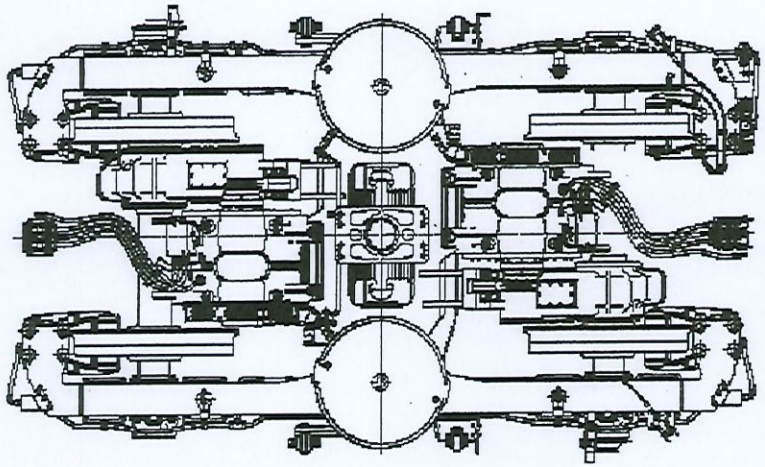
RIGHT JACK LOAD
7373 Kg

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	38.87 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q4	5521

BOGIE SERIAL N°	MB1-1361
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22363
COMPLETE BOGIE WEIGHT [Kg]	7285

OPERATOR	DATE
NICO	3/6/2024

OPERATOR STAMP
DC-BFI-6



	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00	-0.98 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00	1.53 ✓
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	0.28 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00	1.26 ✓

LEFT JACK LOAD
7376 Kg

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	38.43 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q1	5520

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
587.20	+ 0.00	= 587.20	MIN 585.00 MAX 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm] ✓	THEORETICAL [mm]
-0.14	MIN -1.00 MAX 1.00

	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]	Q3	5693

CERTIFICATION OF CONFORMITY

GIBELA

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21387
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76336931	
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 : RMS

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

21387

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: 09/12/23
Name: XOLANI

Assembly after test
Date: 16/01/24
Name: XOLANI & THOMAS

ROTOR S/N	STATOR S/N	
MCR22-11-020	CIB-1404	

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 SN261 - B69794

S2 Radial play after assembly (0,042 / 0,114): 0,07 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 : 0300 X116-0737 04/23 SN0099

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) 2,29 GΩ [X] OK [ ] NOK

OPERATOR				Quality verification	
Out of round at the end of the shaft drive end 0,09 max: 0,04 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): 0,8 mm	[X] OK	[ ] NOK	Device serial number: GTSF1000 1	[ ] OK	[ ] NOK

Sensor reference: DTR0000512252/DSD1830.19Q14HW	[X] OK [ ] NOK	Device serial number: S03/11C0065859	[ ] 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) NCC05087	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) NCC05087	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) NCC05081	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) NCC05088	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) NCC05086	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) NCC05077	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 -02- 21
Name : Dima
Signature : [signature]

CERTIFICATION OF CONFORMITY

GIBELA

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21329
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76228321	
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

~~21403~~
21329

GIBELA RAIL TRACTION CONSORTIUM GIE
Traction Motors Quality
2024 -02- 19
Name : Dima
Signature : RMS.

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: 03/11/23
Name: YOUANI

Assembly after test
Date: 14/02/24
Name: Godfrey & Thomas

ROTOR S/N	STATOR S/N	
MCR00-10-098	GIB-13~~48~~	

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 09/23 SN130 – 1369794

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

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

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
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 0000 X024-1135 01/23 SN0748

S1 Radial play after assembly (0,021 / 0,067): 0,06mm
[X] OK [ ] NOK

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

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

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) 3,37GΩ [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 AMXC714	OK	NOK
Out of round on toothed wheel 0,1 max: 0,04mm	X OK	NOK	Device serial number AMXC714	OK	NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,75mm	X OK	NOK	Device serial number CTEBFL001	OK	NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	X OK	NOK	Device serial number 802318003171	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 motorised 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 motorised 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 motorised screwdriver) N00S808	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 motorised screwdriver) N00S808	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 motorised 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 TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -02- 19
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 MB1
	DTR0009706804
SERIAL NUMBER	MB1 1362

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	08 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	1362		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	1680		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M03093		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3102		NGC
Wheel (Right)	AR00000174670	107	10-23	Bonatrans
Wheel (Left)	AR000000174670	103	10-23	Bonatrans
Wheelset (Rear)	AR00000178600	M3094		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3283		NGC
Wheel (Right)	AR00000174670	022	10-23	Bonatrans
Wheel (Left)	AR00000174670	026	10-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2312105		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2312165		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1641	02-24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	4947	02-24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	4950	02-24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	4949	02-24	WEBTEC
Motor (front)	AR00000168516	21283		GIBELA
Motor (Rear)	AR00000168516	21294		GIBELA

ALSTOM UBUNYE

PRODUCTS TRACEABILITY

QC: 018
Revision: 1.0

DATE		PRESSING REPORT	
3/7/2024			
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		38.40 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q2		5573

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM[mm]	THEORETICAL [mm]
586.27	+ 0.00	= 586.27	MIN 585.00 MAX 587.50

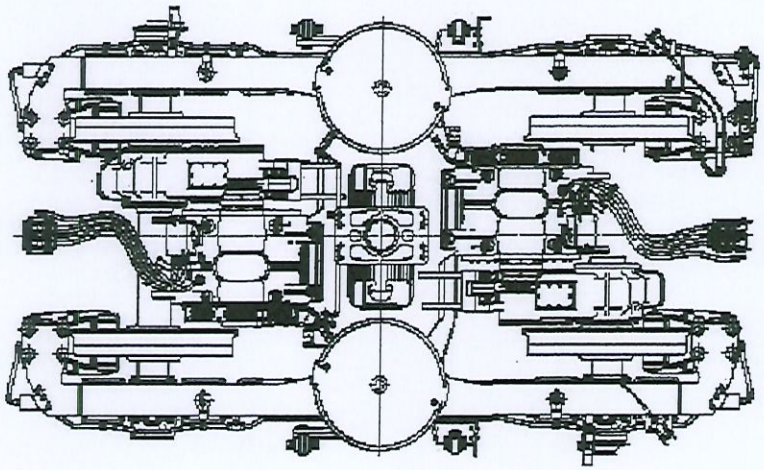
RIGHT JACK LOAD
7376 Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00		38.56 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5575

BOGIE SERIAL N°	MB1-1362
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22355
COMPLETE BOGIE WEIGHT [Kg]	7264

OPERATOR	DATE
BAFANA	3/7/2024

OPERATOR STAMP
DC-BFI-6



	THEORETICAL		MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00		0.02 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00		0.51 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00		-0.26 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00		0.26 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00		0.25 ✓

LEFT JACK LOAD
7377 Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00		38.51 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5575

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
587.22	+ 0.00	= 587.22	MIN 585.00 MAX 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm] ✓	THEORETICAL [mm]
-0.95	MIN -1.00 MAX 1.00

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00		37.91 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5632

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21283
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76105449	
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

21294

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: 18/11/2023
Name: Jacques

Assembly after test
Date: 29/02/24
Name: Xolani Thomas

ROTOR S/N	STATOR S/N	
MCR22-10-060	GEB-1312	

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 :- 237W

(S2) Radial play after assembly (0,042 / 0,114):	(S4) LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly		
	Min:144g - Max:149g 149	Mesured quantity:	Quality validation
0,08mm [X] OK [ ] NOK	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		
	Min:159g Max: 164g 160	Mesured quantity:	Quality verification
0,05mm [X] OK [ ] NOK	Fitter 1(Name and signature)	Fitter 2(Name and signature)	Quality Insp. Name and signature
Référence appareil: AJ CP14	[signature]	[signature]	Dima [signature]

FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216	2	Page 1

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) 203MΩ	[X] OK	[ ] NOK		
OPERATOR			Quality verification	
0,01mm Out of round at the end of the shaft drive end 0,05 max:	[X] OK [ ] NOK	Device serial number AJ CP14	[ ] OK	[ ] NOK
Out of round on toothed wheel 0,1 max: 0,05mm	[X] OK [ ] NOK	Device serial number AJ CP14	[ ] OK	[ ] NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,67mm	[ ] OK [ ] NOK	Device serial number GIBFL002	[ ] OK	[ ] NOK

Sensor reference: DTR0000512252/DSD1830.19Q14HW	☒ OK ☐ NOK	Device serial number 9243008118	☐ 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	[illegible]	QC 1 X 61 Nm	☐ OK	☐ NOK
F2	Torque tightening to 8 x 76 Nm:	☒ OK	☐ NOK	[illegible]	QC 1 X 61 Nm	☐ OK	☐ NOK
F3	Torque tightening to 4 x 44 Nm: Fold locking plate	☒ OK	☐ NOK	[illegible]	QC 1 X 37 Nm	☐ OK	☐ NOK
F4	Torque tightening to 4 x 22 Nm:	☒ OK	☐ NOK	[illegible]	QC 1 X 18 Nm	☐ OK	☐ NOK
F5	Torque tightening to 6 x 22 Nm:	☒ OK	☐ NOK	[illegible]	QC 1 X 18 Nm	☐ OK	☐ NOK

Finishing

F1	Torque tightening to 4 x 22 Nm:	☒ OK	☐ NOK	[illegible]	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 RMS.	

OBSERVATIONS

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -02- 28
Name : Dima
Signature : RMS

21294

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: 18/11/2023
Name: Jacques

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

ROTOR S/N	STATOR S/N	
MCR22-10-060	GIB-1312	

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 :- 237W

S2 Radial play after assembly (0,042 / 0,114): 0,08 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

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): 0,05 mm ☒ OK ☐ NOK

Référence appareil: AJ 094

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

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) 203MΩ ☒ 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: AJ 094	☐ OK	☐ NOK
Out of round on toothed wheel 0,1 max: 0,05 mm	☒ OK	☐ NOK	Device serial number: AJ 094	☐ OK	☐ NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,07 mm	☐ OK	☐ NOK	Device serial number: AJ 094	☐ OK	☐ NOK

GIBFLOOR

21283

ALSTOM

GIBELI

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: 20/11/23
Name: XOLANI

Assembly after test
Date: 23/02/24
Name: XOLANI & THOMAS

ROTOR S/N	STATOR S/N	
MCR02-10-054	GIB-1293	

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 : 937 W

S2 Radial play after assembly (0,042 / 0,114): 0,09mm

[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°:
AUSTRIA : 094W

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

[X] OK [ ] NOK

Référence appareil: AMXG74

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

ALSTOM

GIBELI

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) 1,84GΩ [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: AMXG74	[ ] OK	[ ] NOK
Out of round on toothed wheel 0,1 max: 0,08mm	[X] OK	[ ] NOK	Device serial number: AMXG74	[ ] OK	[ ] NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,85mm	[X] OK	[ ] NOK	Device serial number: GIBFL002	[ ] OK	[ ] NOK

Sensor reference: DTR0000512252/DSD1830.19Q14HW	[X] OK [ ] NOK	Device serial number 5082340055557		[ ] 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) NC05857	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) NC05857	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) NC05081	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) NC05886	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) NC05086	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) NC05817	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) LT.
Traction Motors Quality
2024-02-24
Name : Dima
Signature : [signature]

21283

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: 10/11/23
Name: XOLANI

Assembly after test
Date: 23/02/24
Name: XOLANI & THOMAS

ROTOR S/N	STATOR S/N	
MCR02-10-0514	GIB-1293	

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 : 937 W

S2 Radial play after assembly (0,042 / 0,114): 0,09mm

[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

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): 0,05mm

[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

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) 1,84GΩ [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 AMXG14		[ ] OK	[ ] NOK
Out of round on toothed wheel 0,1 max: 0,08mm	[X] OK [ ] NOK	Device serial number AMXG14		[ ] OK	[ ] NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,85mm	[X] OK [ ] NOK	Device serial number GIB5F002		[ ] OK	[ ] NOK

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21294
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76158659	
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

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