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 - 1406

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	22 April 2024
NAME	Kwabahana 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	M 1406		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M 1741		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M 3209		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3267		NGC
Wheel (Right)	AR00000174670	148	12.23	Bonatrans
Wheel (Left)	AR000000174670	150	12.23	Bonatrans
Wheelset (Rear)	AR00000178600	M 3210		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3293		NGC
Wheel (Right)	AR00000174670	145	12.23	Bonatrans
Wheel (Left)	AR00000174670	045	10.23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2311107		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2311117		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1724	04.24	Wabtec
Brake unit without PB (Right front)	AR00000175185	5198	04.24	Wabtec
Brake unit without PB (Left Front)	AR00000175185	5195	04.24	Wabtec
Brake unit without PB (left rear)	AR00000175185	5202	04.24	Wabtec
Motor (front)	AR00000168516	21524		Alstom Ornans
Motor (Rear)	AR00000168516	21587		Alstom Ornans

PRESSING REPORT

DATE	
4/19/2024	
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	38.84 ✓
	MAX	39.00	
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q2		5510

SECONDARY SUSPENSION ✓					
MEASURED [mm]	SHIM THICK [mm]		DIM. WITH SHIM[mm]	THEORETICAL [mm]	
586.68	+	0.00	= 586.68	MIN	585.00
				MAX	587.50

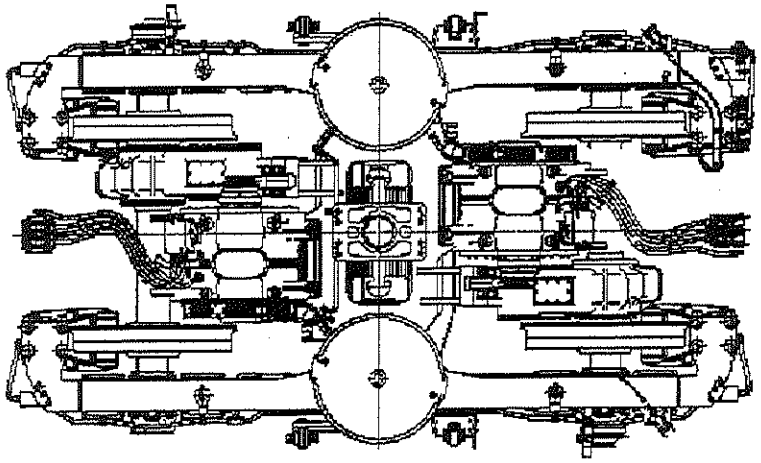
RIGHT JACK LOAD	
7376	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN		
	MAX		
GAP PRIMARY SUSPENSION [mm]	MIN	33.00	38.70 ✓
	MAX	39.00	
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5659

BOGIE SERIAL N°	MB1-1406
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22383
COMPLETE BOGIE WEIGHT [Kg]	7284

OPERATOR	DATE
BAFANA	4/19/2024

OPERATOR STAMP
DC-BFI-6



LEFT JACK LOAD	
7376	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN		
	MAX		
GAP PRIMARY SUSPENSION [mm]	MIN	33.00	38.21 ✓
	MAX	39.00	
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5653

SECONDARY SUSPENSION ✓					
MEASURED [mm]	SHIM THICK [mm]		DIM. WITH SHIM [mm]	THEORETICAL [mm]	
586.76	+	0.00	= 586.76	MIN	585.00
				MAX	587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm] ✓	THEORETICAL [mm]	
-0.08	MIN	-1.00
	MAX	1.00

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN		
	MAX		
GAP PRIMARY SUSPENSION [mm]	MIN	33.00	38.30 ✓
	MAX	39.00	
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5563

	THEORETICAL		MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN	0.00	1.28 ✓
	MAX	0.00	
LOAD DIFFERENCE ON REAR AXLE [%]	MIN	0.00	-0.86 ✓
	MAX	0.00	
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN	0.00	-0.26 ✓
	MAX	0.00	
LOAD DIFFERENCE ON RAILS [%]	MIN	0.00	0.21 ✓
	MAX	0.00	
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN	0.00	-1.07 ✓
	MAX	0.00	

CERTIFICATION OF CONFORMITY

GIBELA

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21524
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76793308	
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: 2024/04/17

Function: Final Inspection

Perfomed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -04- 17
Name : Dimakatso
Signature :

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

21524

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: 28/03/24
Name: Xolani

Assembly after test
Date: 10/04/2024
Name: Jacques & Xolani & Tommas

ROTOR S/N	STATOR S/N	
MCR03-10-093	GIB-1535	

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°: Roman14 0097 10/23 SN27 - 1988233

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
	Dima 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 X116-0955 04/23 SN0255

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 KMS.

Référence appareil: AJ2P/4

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) 10,8MΩ [X] OK [ ] NOK

OPERATOR	Quality verification

Out of round at the end of the shaft drive end, 0,05 max Value 0mm	X	OK	NOK	Device serial number ATZP14		OK NOK
Out of round on toothed wheel 0,1 max: 0,08mm	X	OK	NOK	Device serial number ATZP14		OK NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,85mm	X	OK	NOK	Device serial number GTFB1001		OK NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	X	OK	NOK	Device serial number S231CC0915		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) NCC587	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) NCC587	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) NCC588	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) NCC588	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) NCC588	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) NCC588	QC 1 X 22 Nm	OK NOK

Grease protection transport

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

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

Final Inspection	Comments
Quality Insp Name and Signature: Dima	

OBSERVATIONS

GIBELA RAIL TRANSOIRT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -04- 11
Name : Dima
Signature :

CERTIFICATION OF CONFORMITY

GIBELA

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21587
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76940753	
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: 2024/04/11

Function: Final Inspection

Perfomed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -04- 11
Name : Dimakatso
Signature :

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

MOT 01587

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: 16-03-2024
Name: Richard

Assembly after test
Date: 6/04/24
Name: Xolani & Thomas

ROTOR S/N	STATOR S/N	
MCR23-11-066	81B-1606	

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 SN94-139794

S2 Radial play after assembly (0,042 / 0,114): 0,05
[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]

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 X116-0936 04/23 SN0215

S1 Radial play after assembly (0,021 / 0,067): 0,06
[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
[signature]	[signature]	[signature]

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) 1,21G Ω [X] OK [ ] NOK

OPERATOR				Quality verification	
Out of round at the end of the shaft drive end, 0,05 max Value 0,01	[X] OK	[ ] NOK	Device serial number AJ2P14	[ ] OK	[ ] NOK
Out of round on toothed wheel 0,1 max: 0,06	[X] OK	[ ] NOK	Device serial number AJ2P14	[ ] OK	[ ] NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,8	[X] OK	[ ] NOK	Device serial number FS/003	[ ] OK	[ ] NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	[X] OK	[ ] NOK	Device serial number 523170 00336	[ ] 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) D786288	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) D786288	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) D257/039	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) NCC5267	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) NCC5251	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) NCC5277	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	

OBSERVATIONS

GIBELA RAIL TRANSPORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -04- 07
Name : Ngasane
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 1407

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	22 April 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	1407		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M1743		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M03211		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3181		NGC
Wheel (Right)	AR00000174670	051	10-23	Bonatrans
Wheel (Left)	AR000000174670	041	10-23	Bonatrans
Wheelset (Rear)	AR00000178600	M03212		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3189		NGC
Wheel (Right)	AR00000174670	076	10-23	Bonatrans
Wheel (Left)	AR00000174670	125	10-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2311135		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2311076		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1731	04-24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	5216	04-24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	5215	04-24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	5217	04-24	WEBTEC
Motor (front)	AR00000168516	21437		GIBELA
Motor (Rear)	AR00000168516	21510		GIBELA

PRESSING REPORT

DATE	
4/22/2024	

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	38.67 ✓
	MAX	39.00	
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q2		5616

SECONDARY SUSPENSION ✓					
MEASURED [mm]	SHIM THICK [mm]		DIM. WITH SHIM[mm]	THEORETICAL [mm]	
586.82	+	0.00	= 586.82	MIN	585.00
				MAX	587.50

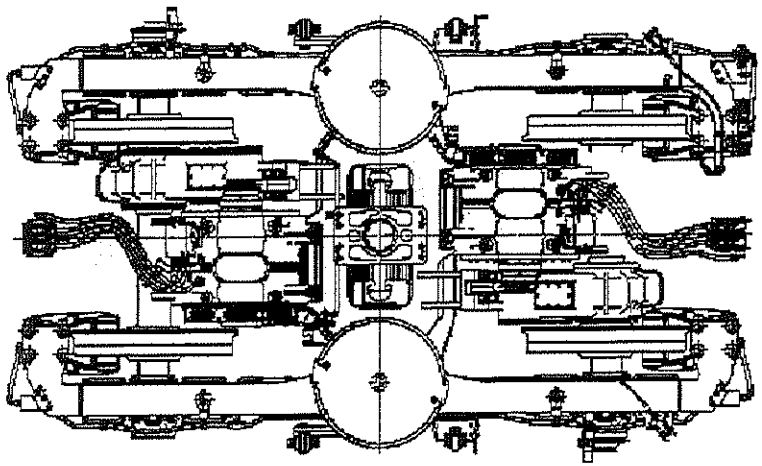
RIGHT JACK LOAD	
7376	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN		
	MAX		
GAP PRIMARY SUSPENSION [mm]	MIN	33.00	38.61 ✓
	MAX	39.00	
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5534

BOGIE SERIAL N°	MB1-1407
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22389
COMPLETE BOGIE WEIGHT [Kg]	7294

OPERATOR	DATE
BAFANA	4/22/2024

OPERATOR STAMP
BFI-21



	THEORETICAL		MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN	0.00	-0.58 ✓
	MAX	0.00	
LOAD DIFFERENCE ON REAR AXLE [%]	MIN	0.00	1.37 ✓
	MAX	0.00	
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN	0.00	-0.25 ✓
	MAX	0.00	
LOAD DIFFERENCE ON RAILS [%]	MIN	0.00	0.40 ✓
	MAX	0.00	
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN	0.00	0.98 ✓
	MAX	0.00	

LEFT JACK LOAD	
7376	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN		
	MAX		
GAP PRIMARY SUSPENSION [mm]	MIN	33.00	38.80 ✓
	MAX	39.00	
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5551

SECONDARY SUSPENSION ✓					
MEASURED [mm]	SHIM THICK [mm]		DIM. WITH SHIM [mm]	THEORETICAL [mm]	
586.98	+	0.00	= 586.98	MIN	585.00
				MAX	587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm] ✓	THEORETICAL [mm]	
-0.16	MIN	-1.00
	MAX	1.00

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN		
	MAX		
GAP PRIMARY SUSPENSION [mm]	MIN	33.00	38.40 ✓
	MAX	39.00	
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5688

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21510
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76765625	
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: 2024/04/17

Function: Final Inspection

Perfomed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -04- 17
Name : Dimakatso
Signature : KMS

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

2150

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: 31/03/24
Name: Geoffrey & Xolani

Assembly after test
Date: 11/04/2024
Name: Jacques & Xolani & Tommas

ROTOR S/N	STATOR S/N	
MCR22-11-074	GTB-1513	

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 SN163-1369794

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

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 X116-1018 04/23 SN0305

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

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) 3.40GΩ ☒ OK ☐ NOK

OPERATOR	Quality verification

Out of round at the end of the shaft drive end, 0,05 max Value 0,01 mm	X	OK	NOK	Device serial number AMXG14		OK	NOK
Out of round on toothed wheel 0,1 max: 0,06mm	X	OK	NOK	Device serial number AMXG14		OK	NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,7 mm	X	OK	NOK	Device serial number GIBELA01		OK	NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	X	OK	NOK	Device serial number 5224700 8299		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) D2869186	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) D2869185	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) D2511039	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) N0058301	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) N0058301	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) N0058301	QC 1 X 22 Nm	OK	NOK

Grease protection transport

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

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

Final Inspection	Comments
Quality Insp Name and Signature: Dima	

OBSERVATIONS

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -04- 11
Name : Dima
Signature :

CERTIFICATION OF CONFORMITY

GIBELA

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21437
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76568551	
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: 2024/04/17

Function: Final Inspection

Perfomed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -04- 17
Name :... Dimakatso .....
Signature :... DMS .....

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

21437

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: 24/01/24
Name: Godfrey

Assembly after test
Date: 10/04/2024
Name: Jacques + Yolani & Tommas

ROTOR S/N	STATOR S/N	
MCR22-10-139	GIB-1439	

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 SN 280 - 13697944

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
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 X272-1243 09/23 SN0059

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

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) 7.56GΩ [X] OK [ ] NOK

OPERATOR				Quality verification	
Out of round at the end of the shaft drive end 0,05 max: 0,06mm	[X] OK [ ] NOK	Device serial number GIBFL-002		[ ] OK	[ ] NOK
Out of round on toothed wheel 0,1 max: 0,07mm	[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 GIBFL-002		[ ] OK	[ ] NOK

Sensor reference: DTR0000512252/DSD1830.19Q14HW	[✓] OK	[ ] NOK	Device serial number 52316013591	[ ] OK	[ ] NOK	

Prep. & Final Assembly

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

Finishing

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

Grease protection transport

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

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

Final inspection	Comments
Quality Insp Name and Signature: Dima	

OBSERVATIONS

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

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -04- 10
Name : Dima
Signature :