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 - 1460

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	11 June 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	M 1460		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M 1797		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M 3349		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3416		NGC
Wheel (Right)	AR00000174670	041	10.23	Bonatrans
Wheel (Left)	AR000000174670	043	10.23	Bonatrans
Wheelset (Rear)	AR00000178600	M 3350		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3578		NGC
Wheel (Right)	AR00000174670	148	03.24	Bonatrans
Wheel (Left)	AR00000174670	147	03.24	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2311126		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2312062		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1834	06.24	Wabtec
Brake unit without PB (Right front)	AR00000175185	5527	06.24	Wabtec
Brake unit without PB (Left Front)	AR00000175185	5526	06.24	Wabtec
Brake unit without PB (left rear)	AR00000175185	5521	06.24	Wabtec
Motor (front)	AR00000168516	21702		Alstom Ornans
Motor (Rear)	AR00000168516	21735		Alstom Ornans

PRESSING REPORT

DATE		
6/10/2024		
DATE VALIDATION	RESPONSABLE VALIDATION	PRASA
		INSTRUCTION SHEET:
		FAMILY:

LOAD TEST : MOTOR BOGIE

PROJECT:

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.01 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q2	5611

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM[mm]	THEORETICAL [mm]
585.81	+ 1.00	= 586.81	MIN 585.00 MAX 587.50

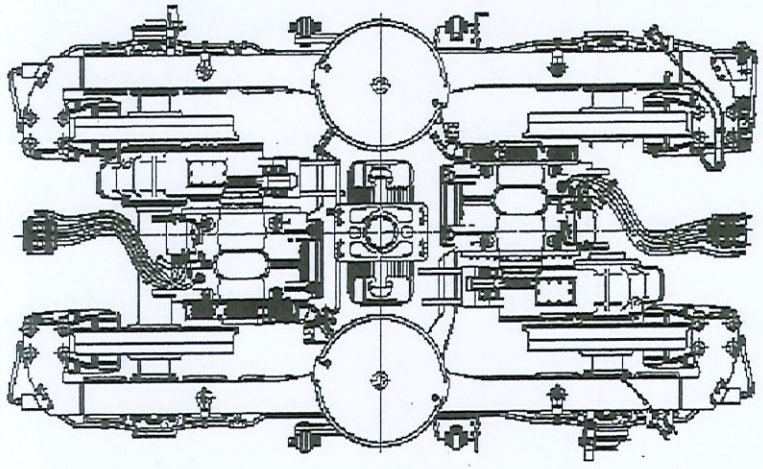
RIGHT JACK LOAD
7376 Kg

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.30 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q4	5518

BOGIE SERIAL N°	MB1-1460
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22385
COMPLETE BOGIE WEIGHT [Kg]	7284

OPERATOR	DATE
BAFANA	6/10/2024

OPERATOR STAMP
DC-BFI-6



	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00	-0.47 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00	1.60 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00	-0.21 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00	0.57 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00	1.04 ✓

LEFT JACK LOAD
7376 Kg

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	36.80 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q1	5559

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.96	+ 0.00	= 586.96	MIN 585.00 MAX 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm] ✓	THEORETICAL [mm]
-0.15	MIN -1.00 MAX 1.00

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	36.90 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q3	5698

CERTIFICATION OF CONFORMITY

GIBELA

Inpection certificate according EN 10204-3.1

Product:	Traction Motors 6 ECA 3022 B
Serial Number:	N ° 21735
Client / Customer:	ALSTOM UBUNYE (PTY) LTD
Project:	PRASA
P O Number:	77314184
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: 2024/05/27

Function: Final Inspection

Perfomed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -05- 2 7
Name : Dimakatso
Signature :

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

21735

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: 15/05/24
Name: XOLANI

Assembly after test
Date: 24/05/24
Name: Godfrey & Xolani

ROTOR S/N	STATOR S/N	
MCRR3-11-086	GIB-176/-	

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 8N383 1369794

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

S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly
Min:144g - Max:149g | Mesured quantity: | Quality validation
Filter 1(Name and signature) | Filter 2(Name and signature) | Quality Insp. Name and signature: Dinq

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 - 094 W

S1 Radial play after assembly (0,021 / 0,067): 0,04 mm
[X] OK [ ] NOK

S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly
Min:159g Max: 164g | Mesured quantity: | Quality verification
Filter 1(Name and signature) | Filter 2(Name and signature) | Quality Insp. Name and signature: Dinq

Référence appareil: AMXG00

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)	19 MΩ	[X] 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: AMXG00	[ ] OK	[ ] NOK
Out of round on toothed wheel 0,1 max: 0,04 mm	[X] OK [ ] NOK	Device serial number: AMXG00	[ ] OK	[ ] NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,7 mm	[X] OK [ ] NOK	Device serial number: GTBFL002	[ ] OK	[ ] NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	[X] OK [ ] NOK	Device serial number: 5232002561	[ ] 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) NCC00087	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) NCC00087	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) NCC0081	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) NCC0083	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) NCC0083	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) N005274	QC 1 X 22 Nm	☐	OK	☐	NOK

Grease protection transport

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

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

Final Inspection	Comments
Quality Insp Name and Signature: Dima [signature]	

OBSERVATIONS

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -05- 24
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 °	21702
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	77225685	
Status:	QC PASS	
Derogations / Concession / Waiver N °:	7072	
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: 2024/06/03

Function: Final Inspection

Perfomed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -06- 03
Name :... Dimakatso
Signature :.....

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

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

21702

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:
Name:

Assembly after test
Date: 01/06/24
Name: Xolani, Godfrey, Thomas & Frank

ROTOR S/N	STATOR S/N	
8U69683-OSC	GIB-1713	

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 8N72-1369794

S2 Radial play after assembly (0,042 / 0,114): 0,09mm	S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly		
[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°: GERMANY:-0200 X116-0745 04/23 8N0117

S1 Radial play after assembly (0,021 / 0,067): 0,04mm	S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly		
[X] OK [ ] NOK	Min:159g - Max: 164g	Mesured quantity:	Quality verification
Référence appareil: AMXG00	Fitter 1(Name and signature)	Fitter 2(Name and signature)	Quality Insp. Name and signature
	[signature]	[signature]	Dima [signature]

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

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) 9,69MΩ [X] OK [ ] NOK

OPERATOR			Quality verification	
Out of round at the end of the shaft drive end, 0,05 max Value 0,01mm	[X] OK [ ] NOK	Device serial number AMXG00	[ ] OK	[ ] NOK
Out of round on toothed wheel 0,1 max: 0,04mm	[X] OK [ ] NOK	Device serial number AMXG00	[ ] OK	[ ] NOK
sensor / toothed wheel play 0,7 (+/- 0,2):	[ ] OK [ ] NOK	Device serial number	[ ] OK	[ ] NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	[ ] OK [ ] NOK	Device serial number	[ ] OK	[ ] NOK

Missing speed sensor Deviation #: 7072

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 operation) NCCS58	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 operation) NCCS57	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 recorded operation) NCCS31	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 operation) NCCS28	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 operation) NCCS29	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 operation) NCCS-77	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 -06- 01
Name : Dima
Signature :

ALSTOM UBUNYE

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

MANUFACTURER'S DELIVERY DOCUMENT

PRODUCT TYPE	MOTOR BOGIE type MB2
	DTR0009706805
SERIAL NUMBER	MB2 - 615

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	13 June 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	615		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	1805		Alstom - Ubunye
Wheelset (Front)	AR000000177020	3345		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	3412		NGC
Wheel (Right)	AR00000174670	031	03.24	Bonatrans
Wheel (Left)	AR000000174670	034	10.23	Bonatrans
Wheelset (Rear)	AR00000178600	3346		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	3380		NGC
Wheel (Right)	AR00000174670	009	10.23	Bonatrans
Wheel (Left)	AR00000174670	034	03.24	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2406022		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2403032		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1821	05.24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	5485	05.24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	5487	05.24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	5488	05.24	WEBTEC
Motor (front)	AR00000168516	21711		GIBELA
Motor (Rear)	AR00000168516	21755		GIBELA

PRESSING REPORT

DATE	
6/8/2024	

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	35.40 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q2	5585

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM[mm]	THEORETICAL [mm]
584.37	+ 1.00	= 585.37	MIN 585.00 MAX 587.50

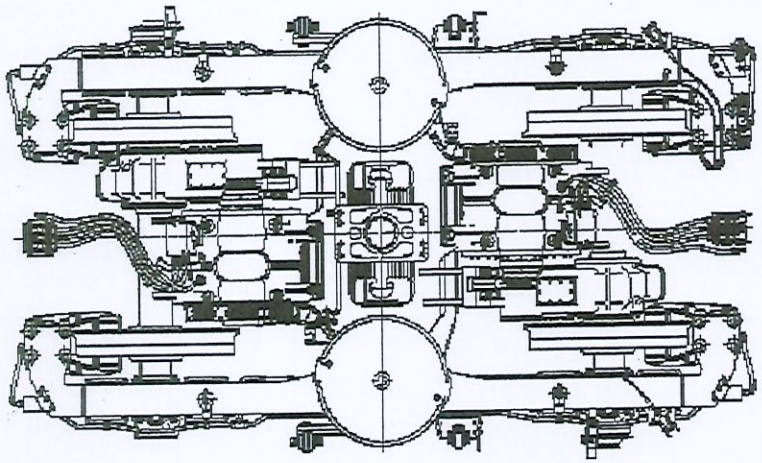
RIGHT JACK LOAD
7376 Kg

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	36.50 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q4	5603

BOGIE SERIAL N°	MB2-615
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22386
COMPLETE BOGIE WEIGHT [Kg]	7295

OPERATOR	DATE
BAFANA	6/8/2024

OPERATOR STAMP
DC-BFI-6



LEFT JACK LOAD
7375 Kg

	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00	0.08 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00	0.00 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00	-0.12 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00	0.04 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00	-0.04 ✓

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	35.37 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q1	5594

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
585.64	+ 0.00	= 585.64	MIN 585.00 MAX 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm] ✓	THEORETICAL [mm]
-0.27	MIN -1.00 MAX 1.00

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	35.40 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q3	5603

2711

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: 07/05/24
Name: Godfrey

Assembly after test
Date: 01/06/24
Name: NOLANI, THOMAS, GODFREY, CAMA

ROTOR S/N	STATOR S/N	
SU900282-108	GIB - 1720	

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

INSULATED CERAMIC BEARING DRIVE END – Security operation
S2
Incorrect assembly can lead to engine failure with a safety risk in service
SRIL TROS 965.289
FAG : ~~NU-214-E-XL-M1-P6-F1-H257A-J20AB-C4~~ or ~~NU 214-E-M1-P6-F1-H257A-J20AA-C4~~
SKF: NU 214 ECM/C4 VA3091
(cross out the references that have not been fitted)

N°: Austria 237 W

S2 Radial play after assembly (0,042 / 0,114): 906mm
[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 095W

S1 Radial play after assembly (0,021 / 0,067): 0,04mm
[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

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) 8.90GΩ [X] OK [ ] NOK

OPERATOR			Quality verification	
Out of round at the end of the shaft drive end, 0,05 max Value 0,01mm	[X] OK [ ] NOK	Device serial number: AJ2P14	[ ] OK	[ ] NOK
Out of round on toothed wheel 0,1 max: 0,04mm	[X] OK [ ] NOK	Device serial number: AJ2P14	[ ] OK	[ ] NOK
sensor / toothed wheel play 0,7 (+/- 0,2):	[ ] OK [ ] NOK	Device serial number:	[ ] OK	[ ] NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	[ ] OK [ ] NOK	Device serial number:	[ ] OK	[ ] NOK

Missing speed sensor Deviation #: 7072

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) N005287	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) N005287	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) N005281	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) N005288	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) N005288	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) N005277	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 MS.	

OBSERVATIONS

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -06- 03
Name : Dima
Signature : MS.

21755

ALSTOM

GIBELA

FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA

Référence: TROS 916.216 Révision: 2

Documents de référence: AT00000325953 - AT00000325990

Assembly before test
Date: 20/05/2024
Name: Jacques

Assembly after test
Date: 21/06/24
Name: LOUANI, GODFREY, THOMAS & ZAMA

ROTOR S/N	STATOR S/N	
SM900782-006	CIB-1772	

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 SH168-13697-94

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

☒ 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:- 095W

S1 Radial play after assembly (0,021 / 0,067): 905mm

☒ OK ☐ NOK

Référence appareil: AMX9120

S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly

Min:159g Max:169g

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) 2,81 GΩ ☒ OK ☐ NOK

OPERATOR			Quality verification
Out of round at the end of the shaft drive end, 0,05 max Value 0,01mm	☒ OK ☐ NOK	Device serial number AMX9120	☐ OK ☐ NOK
Out of round on toothed wheel 0,1 max: 0,04 mm	☒ OK ☐ NOK	Device serial number AMX9120	☐ OK ☐ NOK
sensor / toothed wheel play 0,7 (+/- 0,2):	☐ OK ☐ NOK	Device serial number	☐ OK ☐ NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	☐ OK ☐ NOK	Device serial number	☐ OK ☐ NOK

Missing speed sensor Deviation #: 7072

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) X OK ☐ NOK

Final Inspection	Comments
Quality Insp Name and Signature: Dima	

OBSERVATIONS

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -06- 03
Name : Dima
Signature :

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21711
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	77236530	
Status:	QC PASS	
Derogations / Concession / Waiver N °:	7072	
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: 2024/06/03

Function: Final Inspection

Perfomed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -06- 03
Name : Dimakatso
Signature :

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

GIBELA

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors 6 ECA 3022 B
Serial Number:	N ° 21755
Client / Customer:	ALSTOM UBUNYE (PTY) LTD
Project:	PRASA
P O Number:	77342381
Status:	QC PASS
Derogations / Concession / Waiver N °:	7072
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: 2024/06/03

Function: Final Inspection

Perfomed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -06- 0 3
Name :.....Dimakatso.....
Signature :.....

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590