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 - 1393

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 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	M 1393		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M 1726		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M 3175		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 2977		NGC
Wheel (Right)	AR00000174670	104	11.23	Bonatrans
Wheel (Left)	AR000000174670	096	11.23	Bonatrans
Wheelset (Rear)	AR00000178600	M 3176		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 2960		NGC
Wheel (Right)	AR00000174670	122	11.23	Bonatrans
Wheel (Left)	AR00000174670	124	11.23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2311021		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2310156		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1691	03.24	Wabtec
Brake unit without PB (Right front)	AR00000175185	5100	03.24	Wabtec
Brake unit without PB (Left Front)	AR00000175185	5101	03.24	Wabtec
Brake unit without PB (left rear)	AR00000175185	5102	03.24	Wabtec
Motor (front)	AR00000168516	21503		Alstom Ornans
Motor (Rear)	AR00000168516	21576		Alstom Ornans

PRESSING REPORT

DATE	
4/9/2024	
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	36.79 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q2		5619

SECONDARY SUSPENSION ✓					
MEASURED [mm]	SHIM THICK [mm]		DIM. WITH SHIM[mm]	THEORETICAL [mm]	
585.27	+	2.00	= 587.27	MIN	585.00
				MAX	587.50

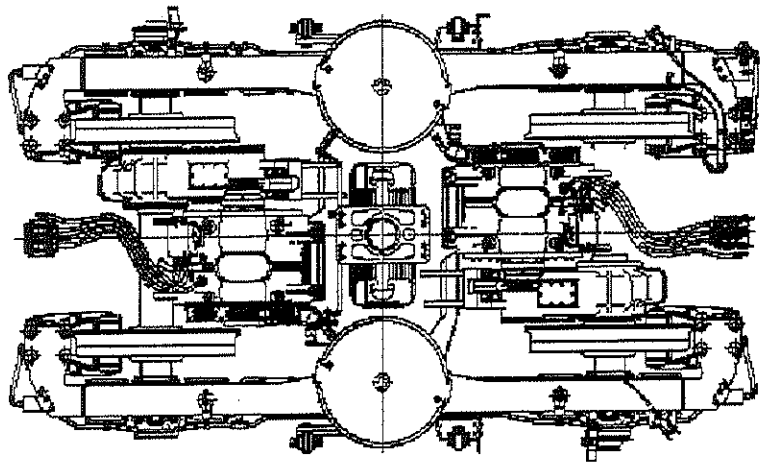
RIGHT JACK LOAD	
7375	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00	37.81 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5537

BOGIE SERIAL N°	MB1-1393
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22386
COMPLETE BOGIE WEIGHT [Kg]	7278

OPERATOR	DATE
EDWARD	4/9/2024

OPERATOR STAMP
BFI-21



	THEORETICAL		MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN MAX	0.00 0.00	-0.57 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN MAX	0.00 0.00	1.24 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN MAX	0.00 0.00	-0.17 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN MAX	0.00 0.00	0.34 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN MAX	0.00 0.00	0.91 ✓

LEFT JACK LOAD	
7375	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00	37.46 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5555

SECONDARY SUSPENSION ✓					
MEASURED [mm]	SHIM THICK [mm]		DIM. WITH SHIM [mm]	THEORETICAL [mm]	
587.07	+	0.00	= 587.07	MIN	585.00
				MAX	587.50

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

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00	36.92 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5676

CERTIFICATION OF CONFORMITY

GIBELA

Inpection certificate according EN 10204-3.1

Product:	Traction Motors 6 ECA 3022 B
Serial Number:	N ° 21576
Client / Customer:	ALSTOM UBUNYE (PTY) LTD
Project:	PRASA
P O Number:	76927337
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

21485

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: 12/03/24
Name: XOLANI

Assembly after test
Date: 19/03/24
Name: Godfrey & Xolani

ROTOR S/N	STATOR S/N
NCR23-11-012	CLI5-1500

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 SN30-1369794

(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 KDS

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 X116-0911 04/23 SN0194

(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 KDS

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): 10,5 MΩ [X] OK [ ] NOK

OPERATOR		Device serial number	Quality verification
Out of round at the end of the shaft drive end, 0,05 max Value 0,01mm	[X] OK [ ] NOK	AJ2P14	[ ] OK [ ] NOK
Out of round on toothed wheel 0,1 max: 0,01mm	[X] OK [ ] NOK	AJ2P14	[ ] OK [ ] NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,78mm	[X] OK [ ] NOK	CLI5-LCO1	[ ] OK [ ] NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	[X] OK [ ] NOK	8231CC0314	[ ] 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) NCC5067	QC 1 X 61 Nm	[ ] OK	[ ] NOK
F2 Torque tightening to 8 x 76 Nm:	[X] OK	[ ] NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) NCC5087	QC 1 X 61 Nm	[ ] OK	[ ] NOK
F3 Torque tightening to 4 x 44 Nm: Fold locking plate	[X] OK	[ ] NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) NCC5081	QC 1 X 37 Nm	[ ] OK	[ ] NOK
F4 Torque tightening to 4 x 22 Nm:	[X] OK	[ ] NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) NCC5808	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) NCC5068	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) N0055?74	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: Oma [signature]	

OBSERVATIONS

GIBELA RAIL TRANSPORT CONSORTIUM (PTY) LTD
Traction Motors Quality
2024 -03- 20
Name : Oma
Signature : [signature]

CERTIFICATION OF CONFORMITY

GIBELA

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21503
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76747438	
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: 2024/03/14

Function: Final Inspection

Perfomed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -03- 14
Name : Dimakatso
Signature :

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

21503

ALSTOM

GIBELA

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

Référence: TROS 916.216 Révision: 2

Documents de référence: AT00000325953 - AT00000325990

Assembly before test
Date: 17/02/24
Name: XOLANI

Assembly after test
Date: 12/03/24
Name: Godfrey & Xolani

ROTOR S/N	STATOR S/N	
MCR22-11-079	GIB-1512	

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 8N55-1369794

S2 Radial play after assembly (0,042 / 0,114): 0,07mm	S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly		
	Min:144g - Max:149g	Mesured quantity:	Quality validation
[X] OK [ ] NOK	Fitter 1(Name and signature) [signature]	Fitter 2(Name and signature) [signature]	Quality Insp. Name and 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 X272-1300 09/23 8N0087

S1 Radial play after assembly (0,021 / 0,067): 0,06mm	S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly		
	Min:159g Max:164g	Mesured quantity:	Quality verification
[X] OK [ ] NOK	Fitter 1(Name and signature) [signature]	Fitter 2(Name and signature) [signature]	Quality Insp. Name and signature Dima [signature]
Référence appareil AJZP14			

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) 18,3MΩ	[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 AJZP14	[ ] OK [ ] NOK	
Out of round on toothed wheel 0,1 max: 0,03mm	[X] OK [ ] NOK	Device serial number AJZP14	[ ] OK [ ] NOK	
sensor / toothed wheel play 0,7 (+/- 0,2): 0,7mm	[X] OK [ ] NOK	Device serial number G1B3F100	[ ] OK [ ] NOK	
Sensor reference: DTR0000512252/DSD1830.19Q14HW	[X] OK [ ] NOK	Device serial number 3031/1000068	[ ] 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) NC00067	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) NC05087	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) 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 motorised screwdriver) NC05068	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) NC05068	QC 1 X 18 Nm	[ ] OK [ ] NOK

Finishing

T1 Torque tightening to 4 x 22 Nm:	[X] OK [ ] NOK	wrench reference (in the event of failure / absence of the motorised screwdriver) W005277	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 -03- 14
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 MB2
	DTR0009706805
SERIAL NUMBER	MB2 593

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	08 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 MB2	DTR0009706805	593		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M 1714		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M 03169		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 2943		NGC
Wheel (Right)	AR00000174670	156	12-23	Bonatrans
Wheel (Left)	AR000000174670	152	12-23	Bonatrans
Wheelset (Rear)	AR00000178600	M 03170		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 2975		NGC
Wheel (Right)	AR00000174670	171	12-23	Bonatrans
Wheel (Left)	AR00000174670	161	12-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2310150		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2401108		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1698	04-24	Wabtec
Brake unit without PB (Right front)	AR00000175185	5108	04-24	Wabtec
Brake unit without PB (Left Front)	AR00000175185	5107	04-24	Wabtec
Brake unit without PB (left rear)	AR00000175185	5109	04-24	Wabtec
Motor (front)	AR00000168516	21516		Alstom - Gibela
Motor (Rear)	AR00000168516	21482		Alstom - Gibela

PRESSING REPORT

DATE	
4/8/2024	
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		36.85 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q2		5657

SECONDARY SUSPENSION ✓					
MEASURED [mm]	SHIM THICK [mm]		DIM. WITH SHIM[mm]	THEORETICAL [mm]	
586.26	+ 1.00	=	587.26	MIN	585.00
				MAX	587.50

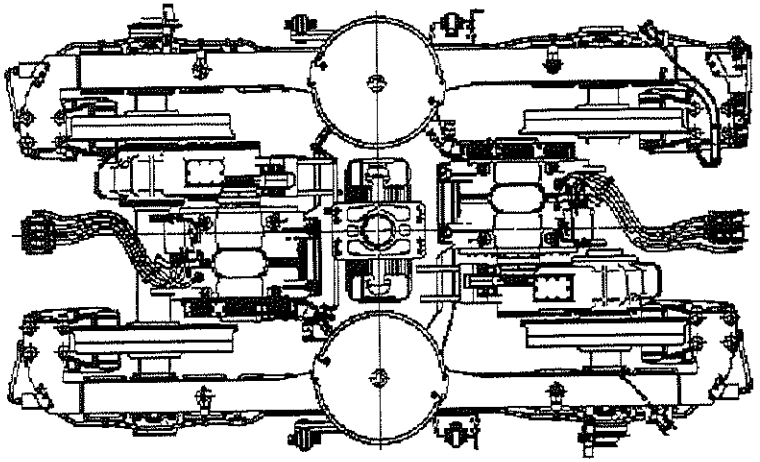
RIGHT JACK LOAD	
7376	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00		37.14 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5588

BOGIE SERIAL N°	MB2-593
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22380
COMPLETE BOGIE WEIGHT [Kg]	7302

OPERATOR	DATE
EDWARD	4/8/2024

OPERATOR STAMP
BFI-21



	THEORETICAL		MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00		-1.27 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00		0.29 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00		-0.16 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00		-0.49 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00		0.78 ✓

LEFT JACK LOAD	
7376	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00		36.92 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5515

SECONDARY SUSPENSION ✓					
MEASURED [mm]	SHIM THICK [mm]		DIM. WITH SHIM [mm]	THEORETICAL [mm]	
587.28	+ 0.00	=	587.28	MIN	585.00
				MAX	587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm] ✓	THEORETICAL [mm]	
-0.02	MIN	-1.00
	MAX	1.00

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00		36.05 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5620

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21516
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76765639	
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: 2024/03/14

Function: Final Inspection

Perfomed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -03- 14
Name : Dimakatso
Signature :

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

2516

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: 23-02-24
Name: Godfrey & Xolani

Assembly after test
Date: 14/03/24
Name: XOLANI & GODFREY

ROTOR S/N	STATOR S/N	
MCR23-10-010	GIB-1522	

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 8M65-1369794

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°: GERMANY:- 0200 X116-0956 04/23 8N0257

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
	Dima

Référence appareil: AMX414

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)	1.75 GΩ	☐ OK	☐ NOK
OPERATOR		Quality verification	

Out of round at the end of the shaft drive end, 0,05 max Value 0,02 MM	X	OK ☐ NOK	Device serial number AMXG14	☐	OK ☐ NOK
Out of round on toothed wheel 0,1 max: 0,07 MM	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 GIBFL001	☐	OK ☐ NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	X	OK ☐ NOK	Device serial number 5231400666 39	☐	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) NC05987	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) NC05987	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) NC05868	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) NC05365	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) NC05877	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 -03- 14
Name : Dima
Signature :

CERTIFICATION OF CONFORMITY

GIBELA

Inpection certificate according EN 10204-3.1

Product:	Traction Motors 6 ECA 3022 B
Serial Number:	N ° 21482
Client / Customer:	ALSTOM UBUNYE (PTY) LTD
Project:	PRASA
P O Number:	76672181
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: 2024/03/11

Function: Final Inspection

Perfomed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -03- 1 1
Name : Dimakatso
Signature :

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

31482

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: 08/02/2024
Name: Jacques

Assembly after test
Date: 01/03/24
Name: YOUENT, GODFREY & THOMAS

ROTOR S/N	STATOR S/N
MCR23-10-070	GFB-1496

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~~ ~~6KF: NU 214 ECM/C4 VA3091~~
(cross out the references that have not been fitted)

N°: ROMANIA 0297 09/23 SN51 - 1369794

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

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 VL0241~~
(cross out the references that have not been fitted)

Serial N°: GERMANY - 0900 X772-1230 09/23 SN0027

S1 Radial play after assembly (0,021 / 0,067):
0,06mm ☒ OK ☐ NOK

Référence appareil

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 KALS

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)	289MΩ	☒ OK	☐ NOK

OPERATOR			Device serial number	Quality verification	
Out of round at the end of the shaft drive end, 0,05 max Value 0,01 mm	☒ OK	☐ NOK		☐ OK	☐ NOK
Out of round on toothed wheel 0,1 max: 0,06mm	☒ OK	☐ NOK		☐ OK	☐ NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,75mm	☒ OK	☐ NOK	GFBFL000	☐ OK	☐ NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	☒ OK	☐ NOK	3284-1008322	☐ 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) NCC55-17	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: Dina AMS	

OBSERVATIONS

GIBELA RAIL TRANSPORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -03- 04
Name : Dina
Signature : AMS