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 - 1487**

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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	05 July 2024
NAME	Kwababana Hlumisa
VISA	

ALSTOM UBUNYE

PRODUCTS TRACEABILITY

Products Designation	Product Reference	Serial Number	Batch or Date Manufactured	Supplier
Motor Bogie MB1	DTR0009706804	1487		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	1819		Alstom - Ubunye
Wheelset (Front)	AR000000177020	3423		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	3452		NGC
Wheel (Right)	AR00000174670	015	03.24	Bonatrans
Wheel (Left)	AR000000174670	014	03.24	Bonatrans
Wheelset (Rear)	AR00000178600	3424		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	3468		NGC
Wheel (Right)	AR00000174670	008	03.24	Bonatrans
Wheel (Left)	AR00000174670	007	03.24	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2402034		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2401013		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1878	06.24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	5654	06.24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	5648	06.24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	5651	06.24	WEBTEC
Motor (front)	AR00000168516	21780		GIBELA
Motor (Rear)	AR00000168516	21766		GIBELA

PRESSING REPORT

DATE	
7/1/2024	
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	36.20 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q2		5595

SECONDARY SUSPENSION ✓					
MEASURED [mm]	SHIM THICK [mm]		DIM. WITH SHIM[mm]	THEORETICAL [mm]	
585.13	+	1.00	= 586.13	MIN	585.00
				MAX	587.50

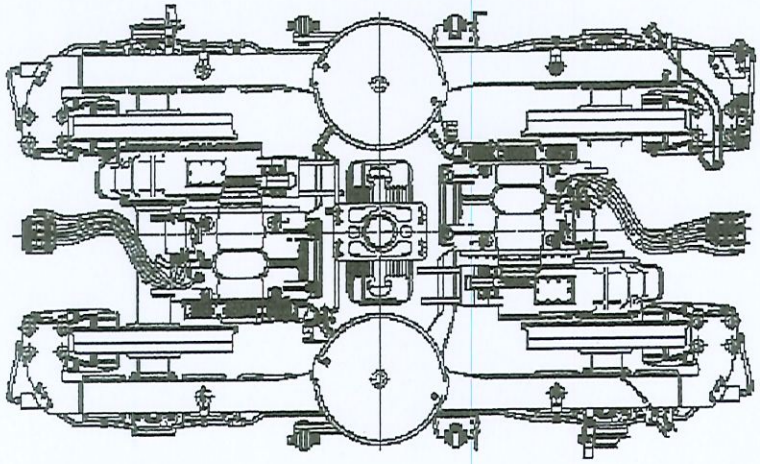
RIGHT JACK LOAD	
7376	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00	35.90 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5584

BOGIE SERIAL N°	MB1-1487
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22414
COMPLETE BOGIE WEIGHT [Kg]	7388

OPERATOR	DATE
BAFANA	7/1/2024

OPERATOR STAMP
DC-BFI-6



LEFT JACK LOAD	
7375	Kg

	THEORETICAL		MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN MAX	0.00 0.00	-0.10 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN MAX	0.00 0.00	0.58 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN MAX	0.00 0.00	-0.24 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN MAX	0.00 0.00	0.24 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN MAX	0.00 0.00	0.34 ✓

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00	35.20 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5584

SECONDARY SUSPENSION ✓					
MEASURED [mm]	SHIM THICK [mm]		DIM. WITH SHIM [mm]	THEORETICAL [mm]	
586.47	+	0.00	= 586.47	MIN	585.00
				MAX	587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm] ✓	THEORETICAL [mm]	
-0.34	MIN	-1.00
	MAX	1.00

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00	36.00 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5649

21766

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: 23/05/24
Name: Godfrey

Assembly after test
Date: 26/06/24
Name: XOLANI & SURPRISE

ROTOR S/N	STATOR S/N	
5u900282-022	GIB – 1681	

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 SH/369 – 1369794

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 CRDS

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 095 W

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 CRDS

Référence appareil: AUZP14

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)	9.57 GΩ	[X] OK	[ ] NOK
OPERATOR		Quality verification	

Out of round at the end of the shaft drive end, 0,05 max Value 0,011mm	X	OK	NOK	Device serial number AJZP14	OK NOK
Out of round on toothed wheel 0,1 max: 0,07mm	X	OK	NOK	Device serial number AJZP14	OK NOK
sensor / toothed wheel play 0,7 (+/- 0,2): t		OK	NOK	Device serial number	OK NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW		OK	NOK	Device serial number	OK NOK

Missing speed sensor Deviation N°: 7012

Prep. & Final Assembly

	OPERATOR			wrench reference (in the event of failure/absence of the motorized wrench)	Quality verification		
F1	Torque tightening to 8 x 76 Nm:	X	OK NOK	D2862188	QC 1 X 61 Nm	OK	NOK
F2	Torque tightening to 8 x 76 Nm:	X	OK NOK		QC 1 X 61 Nm	OK	NOK
F3	Torque tightening to 4 x 44 Nm: Fold locking plate	X	OK NOK	D25710389	QC 1 X 37 Nm	OK	NOK
F4	Torque tightening to 4 x 22 Nm:	X	OK NOK	N005969	QC 1 X 18 Nm	OK	NOK
F5	Torque tightening to 6 x 22 Nm:	X	OK NOK		QC 1 X 18 Nm	OK	NOK

Finishing

F1	Torque tightening to 4 x 22 Nm:	X	OK NOK	NCC5077	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

21780

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: 27/05/24
Name: Andrei

Assembly after test
Date: 26/06/24
Name: IOANI & SURPRISE

ROTOR S/N	STATOR S/N	
MU23-11-099	GIB - 1798	

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 SN431 – 1369794

S2 Radial play after assembly (0,042 / 0,114): 0,07mm
[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°: ALSTOM 0034 W

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: A52P14

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): 871 MΩ [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: A52P14	[ ] OK [ ] NOK
Out of round on toothed wheel 0,1 max: 0,05mm	[X] OK [ ] NOK	Device serial number: A52P14	[ ] OK [ ] NOK
sensor / toothed wheel play 0,7 (+/- 0,2): ~~0,06mm~~	[ ] 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 TRANSCAT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -06- 26
Name : Dima
Signature : DMS

CERTIFICATION OF CONFORMITY

GIBELA

Inpection certificate according EN 10204-3.1

Product:	Traction Motors 6 ECA 3022 B
Serial Number:	N ° 21766
Client / Customer:	ALSTOM UBUNYE (PTY) LTD
Project:	PRASA
P O Number:	77370754
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: 2024/06/27

Function: Final Inspection

Perfomed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -06- 27
Name : Dimakatso
Signature :

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors 6 ECA 3022 B
Serial Number:	N ° 21780
Client / Customer:	ALSTOM UBUNYE (PTY) LTD
Project:	PRASA
P O Number:	77360210
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: 2024/06/27

Function: Final Inspection

Perfomed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____ DMS

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -06- 27
Name : Dimakatso
Signature : DMS

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

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 1490

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- 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	04 July 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	1490		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M1848		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M03430		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3408		NGC
Wheel (Right)	AR00000174670	023	03-24	Bonatrans
Wheel (Left)	AR000000174670	022	03-24	Bonatrans
Wheelset (Rear)	AR00000178600	M03429		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3470		NGC
Wheel (Right)	AR00000174670	124	03-24	Bonatrans
Wheel (Left)	AR00000174670	125	03-24	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2401018		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2401015		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1886	06-24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	5671	06-24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	5665	06-24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	5666	06-24	WEBTEC
Motor (front)	AR00000168516	21794		GIBELA
Motor (Rear)	AR00000168516	21759		GIBELA

PRESSING REPORT

DATE	
7/2/2024	
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	35.30 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q2		5624

SECONDARY SUSPENSION ✓				
MEASURED [mm]	SHIM THICK [mm]		DIM. WITH SHIM[mm]	THEORETICAL [mm]
585.56	+ 0.00	=	585.56	MIN 585.00 MAX 587.50

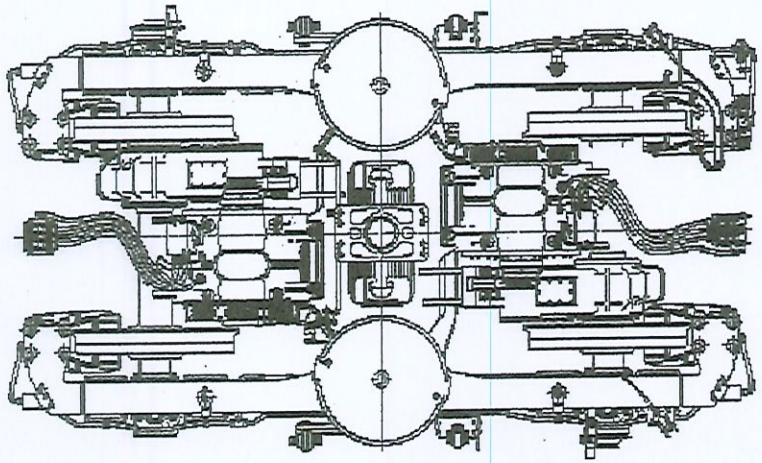
RIGHT JACK LOAD	
7376	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00	35.90 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5537

BOGIE SERIAL N°	MB1-1490
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22388
COMPLETE BOGIE WEIGHT [Kg]	7301

OPERATOR	DATE
BAFANA	7/2/2024

OPERATOR STAMP
DC-BFI-6



DC-BFI-6

	THEORETICAL		MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN MAX	0.00 0.00	-0.63 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN MAX	0.00 0.00	1.22 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN MAX	0.00 0.00	-0.15 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN MAX	0.00 0.00	0.30 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN MAX	0.00 0.00	0.92 ✓

LEFT JACK LOAD	
7376	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00	35.30 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5554

SECONDARY SUSPENSION ✓				
MEASURED [mm]	SHIM THICK [mm]		DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.23	+ 0.00	=	586.23	MIN 585.00 MAX 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm] ✓	THEORETICAL [mm]
-0.67	MIN -1.00 MAX 1.00

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN MAX	33.00 39.00	34.00 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5674

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors 6 ECA 3022 B
Serial Number:	N ° 21759
Client / Customer:	ALSTOM UBUNYE (PTY) LTD
Project:	PRASA
P O Number:	77353816
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: 2024/07/01

Function: Final Inspection

Perfomed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -07- 0 1
Name Dimakatso
Signature

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

21759

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: 21/05/24
Name: X OLANT

Assembly after test
Date: 07/06/24
Name: PET SUPRISE SHE PERDS

ROTOR S/N	STATOR S/N	
SU900080-078	CHB-1778	

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 SN360-1369794

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 AMS

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:- 0014W

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

[X] OK [ ] NOK

Référence appareil: AMXG80

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 AMS

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) 66,3MΩ [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: AMXG80	[ ] OK [ ] NOK
Out of round on toothed wheel 0,1 max: 0,05mm	[X] OK [ ] NOK	Device serial number: AMXG80	[ ] 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:	[Y] OK [ ] NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) N0005387	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) N0005387	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) N0005381	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) N0005405	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) N0005405	QC 1 X 18 Nm	[ ] OK	[ ] NOK
Finishing						
F1	Torque tightening to 4 x 22 Nm:	[ ] OK [ ] NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) N0032717	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 (PTY) LTD
Traction Motors Quality
2024 -06- 27
Name : Dima
Signature : DMS

GIBELA

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21794
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	77419362	
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: 2024/07/01

Function: Final Inspection

Perfomed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -07- 0 1
Name : Dimakatso
Signature : DMS

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

21794

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: 30/05/24
Name: Molane

Assembly after test
Date: 27/06/24
Name: Piet, Shepers

ROTOR S/N	STATOR S/N	
8469683-006	GIB-18/9	

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 SN131-1369794

(S2) Radial play after assembly (0,042 / 0,114): 0,07mm
[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]	Dima [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 094 W

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

Référence appareil: AMXG00

(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]	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) 6,70 MΩ [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: 0,07mm	[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 motorized screwdriver) N000587	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) N000587	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) N000565	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) N000568	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) N000568	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) N000577	QC 1 X 22 Nm	☐ OK	☐ NOK

Grease protection transport

S3	18g (0/+4.5) CC	Mesured quantity: 16g		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- 27
Name : Dima
Signature :