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 1411

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	24 April 2024
NAME	Kwabebana 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	1411		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M1745		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M03224		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3290		NGC
Wheel (Right)	AR00000174670	021	12-23	Bonatrans
Wheel (Left)	AR000000174670	097	10-23	Bonatrans
Wheelset (Rear)	AR00000178600	M03223		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3231		NGC
Wheel (Right)	AR00000174670	110	10-23	Bonatrans
Wheel (Left)	AR00000174670	065	10-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2308118		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2308128		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1738	04-24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	5237	04-24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	5238	04-24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	5239	04-24	WEBTEC
Motor (front)	AR00000168516	21441		GIBELA
Motor (Rear)	AR00000168516	21551		GIBELA

PRESSING REPORT

DATE	
4/24/2024	

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	37.44 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q2	5686

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM[mm]	THEORETICAL [mm]
587.14	+ 0.00	= 587.14	MIN 585.00 MAX 587.50

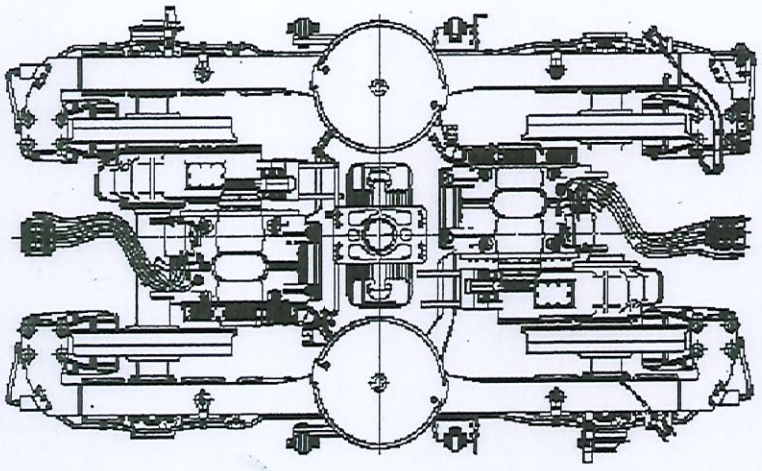
RIGHT JACK LOAD
7376 Kg

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	38.45 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q4	5517

BOGIE SERIAL N°	MB1-1411
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22365
COMPLETE BOGIE WEIGHT [Kg]	7282

OPERATOR	DATE
EDWARD	4/24/2024

OPERATOR STAMP
BFI-21



	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00	-1.84 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00	1.48 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00	-0.15 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00	-0.18 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00	1.66 ✓

LEFT JACK LOAD
7377 Kg

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.65 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q1	5480

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]
-0.14	MIN -1.00 MAX 1.00

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.51 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q3	5683

CERTIFICATION OF CONFORMITY

GIBELA

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21551
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76862728	
Status:	QC PASS	
Derogations / Concession / Waiver N °:	N/A	
Customer modification:	N/A	
Missing parts:	N/A	

We hereby declare, barring exceptions, reservations or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements , and applicable standards and regulations.

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -04- 15
Name : Dimakatso
Signature :

Date: 2024/04/15

Function: Final Inspection

Perfomed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

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

9155

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: 06/03/24
Name: Godfrey

Assembly after test
Date: 09/04/24
Name: THOMAS XOLANI & JAQUE

ROTOR S/N	STATOR S/N
MCR23-10-054	GIB-1562

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/C4VA3091~~

(cross out the references that have not been fitted)

N°: Romania 0897 10/23 SN218 – 1988233

(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

Fitter 1(Name and signature)	Mesured quantity: Fitter 2(Name and signature)	Quality validation: Quality Insp. Name and signature
		Dino

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 X116-0644 04/23 SN0001

(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

Fitter 1(Name and signature)	Mesured quantity: Fitter 2(Name and signature)	Quality verification: Quality Insp. Name and signature
		Dino

Référence apparell AMXG14

ALSTOM

GIBELA

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

Record the value of the insulation resistance of the bearings to TROS 915.069 (> 50 kΩ) 2.026 52 [X] 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: 0,05mm	[X] OK [ ] NOK — Device serial number: AMXG14	[ ] OK [ ] NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,08mm	[X] OK [ ] NOK — Device serial number: GIBFL001	[ ] OK [ ] NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	[X] OK [ ] NOK — Device serial number: 5231000589	[ ] OK [ ] NOK

Prep. & Final Assembly

OPERATOR				Quality verification				
F1 Torque tightening to 8 x 76 Nm:	☒ OK	☐ NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) D2562188	QC 1 X 61 Nm	☐	OK	☐	NOK
F2 Torque tightening to 8 x 76 Nm:	☒ OK	☐ NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) D2562188	QC 1 X 61 Nm	☐	OK	☐	NOK
F3 Torque tightening to 4 x 44 Nm: Fold locking plate	☒ 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:	☒ OK	☐ NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) N005269	QC 1 X 18 Nm	☐	OK	☐	NOK
F5 Torque tightening to 6 x 22 Nm:	☒ OK	☐ NOK	wrench reference (in the event of failure / absence of the motorized screwdriver) N005269	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) N005261	QC 1 X 22 Nm	☐	OK	☐	NOK

Grease protection transport

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

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

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

OBSERVATIONS

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024-04-09
Name: Dira
Signature: [signature]

GIBELA

CERTIFICATION OF CONFORMITY

Inpection certificate according EN 10204-3.1

Product:	Traction Motors 6 ECA 3022 B
Serial Number:	N ° 21441
Client / Customer:	ALSTOM UBUNYE (PTY) LTD
Project:	PRASA
P O Number:	76576931
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

21441

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: 25/01/24
Name: JOVANE

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

ROTOR S/N	STATOR S/N	
MCR22-11-070	GIB-1451	

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 SN348 - 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-VL0241~~
(cross out the references that have not been fitted)

Serial N°: GERMANY : 0200 x272 - 1339 09/23 SN0051

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 apparell: ASCP14

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) 2,73GΩ [X] OK [ ] NOK

OPERATOR				Quality verification	
Out of round at the end of the shaft drive end 0,05 max: 0,01mm	[X] OK [ ] NOK	Device serial number: ASCP14		[ ] OK	[ ] NOK
Out of round on toothed wheel 0,1 max: 0,05mm	[X] OK [ ] NOK	Device serial number: ASCP14		[ ] OK	[ ] NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,85mm	[X] OK [ ] NOK	Device serial number: GIB-1451		[ ] OK	[ ] NOK

Sensor reference: DTR0000512252/DSD1830.19Q14HW	[X] OK [ ] NOK	Device serial number: 9225 | E01 3387	[ ] 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) NCCSD87	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) NCCSD87	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) NCCSD81	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) NCCSD8K	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) NCCSD8K	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) NCCSD87	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 TRANSPORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024-04-11
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 MB1**
	DTR0009706804
SERIAL NUMBER	**MB1 - 1412**

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	25 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 1412		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M 1742		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M 3229		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3224		NGC
Wheel (Right)	AR00000174670	153	11.23	Bonatrans
Wheel (Left)	AR000000174670	123	11.23	Bonatrans
Wheelset (Rear)	AR00000178600	M 3230		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3285		NGC
Wheel (Right)	AR00000174670	057	11.23	Bonatrans
Wheel (Left)	AR00000174670	055	11.23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2308119		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2308129		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1737	04.24	Wabtec
Brake unit without PB (Right front)	AR00000175185	5234	04.24	Wabtec
Brake unit without PB (Left Front)	AR00000175185	5236	04.24	Wabtec
Brake unit without PB (left rear)	AR00000175185	5233	04.24	Wabtec
Motor (front)	AR00000168516	21568		Alstom Ornans
Motor (Rear)	AR00000168516	21584		Alstom Ornans

PRESSING REPORT

DATE	
4/24/2024	
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		37.94 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q2		5587

SECONDARY SUSPENSION ✓					
MEASURED [mm]	SHIM THICK [mm]		DIM. WITH SHIM[mm]	THEORETICAL [mm]	
586.65	+ 0.00	=	586.65	MIN	585.00
				MAX	587.50

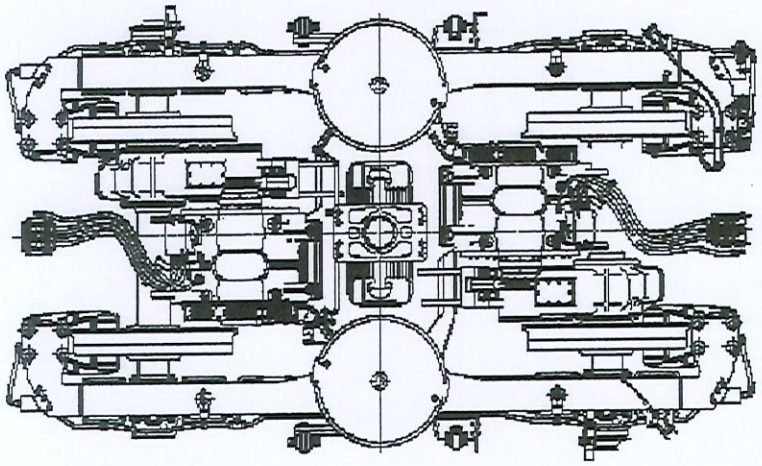
RIGHT JACK LOAD	
7375	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00		38.08 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5539

BOGIE SERIAL N°	MB1-1412
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22358
COMPLETE BOGIE WEIGHT [Kg]	7264

OPERATOR	DATE
EDWARD	4/24/2024

OPERATOR STAMP
BFI-21



	THEORETICAL		MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00		-0.19 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00		1.13 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00		-0.23 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00		0.47 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00		0.66 ✓

LEFT JACK LOAD	
7376	Kg

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00		38.10 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5566

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]	
-0.31	MIN	-1.00
	MAX	1.00

	THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN MAX		
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00		37.56 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5666

CERTIFICATION OF CONFORMITY

GIBELA

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21584
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76932754	
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: 2024/04/15

Function: Final Inspection

Perfomed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____

GIBELA RAIL TRANSORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -04- 15
Name : Dimakatso
Signature :

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

MOT 21584

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: 15/03/24
Name: YOLANT

Assembly after test
Date: 06/04/24
Name: YOLANDE, AUBREY & THOMAS

ROTOR S/N	STATOR S/N	
MCR23-11-084	GIIB-1597	

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 10/23 8Y26 - 1988233

(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
[signature]	[signature]	[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 - 0742 04/23 8N0112

(S1) Radial play after assembly (0,021 / 0,067): 0,04mm
☒ OK ☐ NOK

Référence appareil: AJZP14

(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]

ALSTOM

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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) 7,39 MΩ ☒ 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 AJZP14	☐ OK	☐ NOK
Out of round on toothed wheel 0,1 max: 0,04mm	☒ OK	☐ NOK	Device serial number AJZP14	☐ OK	☐ NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,7mm	☒ OK	☐ NOK	Device serial number CTEBF0001	☐ OK	☐ NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	☒ OK	☐ NOK	Device serial number 80024100013	☐ 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) NC0S081	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) NC0S087	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) NC0S081	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) NC0S0K	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) NC0S0	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) NC0S077	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: Koasane [signature]	

OBSERVATIONS

Name plate to be changed from 21585 to 21584

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

GIBELA RAIL TRANSPORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024-04-07
Name: Koasane
Signature: [signature]

CERTIFICATION OF CONFORMITY

GIBELA

Inpection certificate according EN 10204-3.1

Product:	Traction Motors	6 ECA 3022 B
Serial Number:	N °	21568
Client / Customer:	ALSTOM UBUNYE (PTY) LTD	
Project:	PRASA	
P O Number:	76892097	
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 21568

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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: 17/03/24
Name: XOULNI

Assembly after test
Date: 06/04/24
Name: THOMAS & XOLANI & AUBREY

ROTOR S/N	STATOR S/N
MCR23-11-040	CTR-1585

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 10/23 SN 287 1988233

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

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 - 1006 04/23 SN 0279

S1 Radial play after assembly (0,021 / 0,067): 0,05mm
[X] OK [ ] NOK

S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly

Min:159g Max: 164g	Mesured quantity:	Quality verification
Fitter 1(Name and signature)	Fitter 2(Name and signature)	Quality Insp. Name and signature

Référence appareil: 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) 17,5 MΩ [X] OK [ ] NOK

OPERATOR			Quality verification
Out of round at the end of the shaft drive end, 0,05 max Value 0,04mm	[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): 0,7mm	[X] OK [ ] NOK	Device serial number CTR-1585	[ ] OK [ ] NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	[X] OK [ ] NOK	Device serial number 5231601378S	[ ] 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) NCC0087	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) NCC0087	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) NCC0091	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) NCC0085	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) NCC0086	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) NCC0274	QC 1 X 22 Nm	☐ OK	☐ NOK

Grease protection transport

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

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

Final Inspection	Comments
Quality Insp Name and Signature: Kgasane M	

OBSERVATIONS

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