



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 - 1482

CONTENTS

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- List of deviations and missing parts.....	Page 2/2	<input checked="" type="checkbox"/>
- Products traceability.....	1 page	<input checked="" type="checkbox"/>
- Load test report.....	1 page	<input checked="" type="checkbox"/>
- Motor certificate.....	8 pages	<input checked="" type="checkbox"/>

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	28 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	1482		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	1833		Alstom - Ubunye
Wheelset (Front)	AR000000177020	3415		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	3441		NGC
Wheel (Right)	AR00000174670	061	03.24	Bonatrans
Wheel (Left)	AR000000174670	058	03.24	Bonatrans
Wheelset (Rear)	AR00000178600	3416		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	3446		NGC
Wheel (Right)	AR00000174670	054	03.24	Bonatrans
Wheel (Left)	AR00000174670	035	03.24	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2403029		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2403031		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1828	06.24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	5503	06.24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	5513	06.24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	5512	06.24	WEBTEC
Motor (front)	AR00000168516	21817		GIBELA
Motor (Rear)	AR00000168516	21798		GIBELA

UNIT
6/28/2024

DATE VALIDATION

RESPONSABLE VALIDATION

PRASA

INSTRUCTION SHEET:

FAMILY:

PRESSING REPORT

LOAD TEST : MOTOR BOGIE

PROJECT:

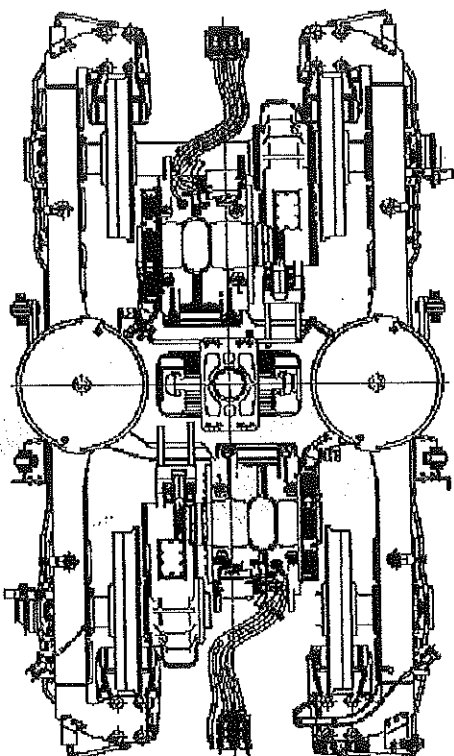
	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	35.88 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q2	5641

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
584.59	+	1.00	= 585.59
			MIN 585.00 MAX 587.50

RIGHT JACK LOAD	
7374	Kg

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	35.67 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q4	5520

BOGIE SERIAL N°	MB1-1482
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22396
COMPLETE BOGIE WEIGHT [Kg]	7330
OPERATOR	DATE
EDWARD	6/28/2024



	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00	-1.04 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00	1.69 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00	-0.29 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00	0.33 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00	1.37 ✓

OPERATOR STAMP

BF1-21

LEFT JACK LOAD	
7376	Kg

	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]	Q1	5525

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
584.12	+	1.00	= 585.12
			MIN 585.00 MAX 587.50
DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]			✓
0.47			MIN -1.00 MAX 1.00

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	34.39 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q3	5710



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N° 21817

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 77478441

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: 2024/06/25

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____

GIBELA RAIL TRANSPORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -06- 25
Name : <u>Dimakatso</u>
Signature : <u>[Signature]</u>

Gibela Rail
02 Shosholozwa Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

Property of GIBELA RAIL, cannot be distributed or reproduced without authorization



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21798

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 77419364

Status: QC PASS

Derogations / Concession / Waiver N °: 7072

Customer modification: N/A

Missing parts: N/A

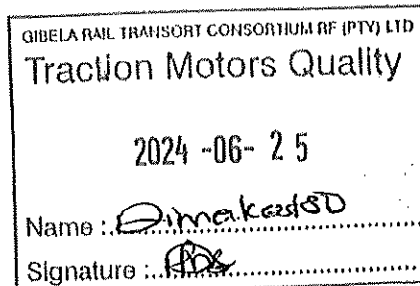
We hereby declare, barring exceptions, reservations or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements, and applicable standards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

Date: 2024/06/25

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____



Gibela Rail
02 Shosholozza Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

Property of GIBELA RAIL, cannot be distributed or reproduced without authorization

21798

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:

30/05/04
XOLANT

Assembly after test

Date:

Name:

30/05/04
XOLANT & NEMU3

ROTOR S/N BU900280-000		STATOR S/N CTIS-1801	
<p>Bearing Lubrication - Security operation Incorrect lubrication can lead to engine failure with a safety risk in service SRIL TROS 965.289</p>			
<p>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-J17A-C4 SKF: NU 214 ECM/C4-VA3091 (cross out the references that have not been fitted)</p>			
<p>N°: Romania 0097 09/03 SNO36-13697961</p>			
<p>S2 Radial play after assembly (0,042 / 0,114): 0,06mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S3 LUBRICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 144g - Max: 149g</p> <p>Filter 1 (Name and signature): </p> <p>Filter 2 (Name and signature): </p> <p>Mesured quantity: </p> <p>Quality validation: </p>	
<p>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)</p>			
<p>Serial N°: Austria 094W</p>			
<p>S1 Radial play after assembly (0,021 / 0,067): 0,06mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S3 LUBRICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 159g - Max: 164g</p> <p>Filter 1 (Name and signature): </p> <p>Filter 2 (Name and signature): </p> <p>Mesured quantity: </p> <p>Quality validation: </p>	
<p>Reference apparatus: AMXG00</p>			
<p>FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA</p>		<p>TROS 916.216 2 Page 1</p>	

ALSTOM

GIBELA

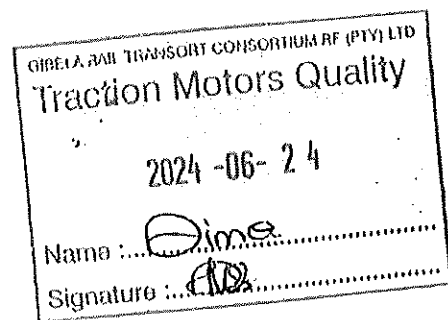
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA

Record the value of the Insulation resistance of the bearings to TROS 915.069 (> 50 kΩ)		83,6 MΩ		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
OPERATOR		QUALITY VERIFICATION		
Out of round at the end of the shaft drive end, 0,05 max Value 0,01mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number AMXG00	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
Out of round on toothed wheel 0,1 max: 0,01mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number AMXG00	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
sensor / toothed wheel play 0,7 (+/- 0,2):	<input type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
Sensor reference: DTR0000512252/OSD1830.19Q14HW	<input type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK	

Missing speed sensor Deviation #: 7072

Prep. & Final Assembly									
OPERATOR				Quality verification					
<input checked="" type="checkbox"/> F1	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK	search reference (in the event of failure / absence of the motorised axle)	QC 1 X 61 Nm	<input type="checkbox"/> OK	<input type="checkbox"/> NOK		
<input checked="" type="checkbox"/> F2	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK	search reference (in the event of failure / absence of the motorised axle)	QC 1 X 61 Nm	<input type="checkbox"/> OK	<input type="checkbox"/> NOK		
<input checked="" type="checkbox"/> F3	Torque tightening to 4 x 44 Nm: Fold locking plate	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK	search reference (in the event of failure / absence of the motorised axle)	QC 1 X 37 Nm	<input type="checkbox"/> OK	<input type="checkbox"/> NOK		
<input checked="" type="checkbox"/> F4	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK	search reference (in the event of failure / absence of the motorised axle)	QC 1 X 18 Nm	<input type="checkbox"/> OK	<input type="checkbox"/> NOK		
<input checked="" type="checkbox"/> F5	Torque tightening to 6 x 22 Nm:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK	search reference (in the event of failure / absence of the motorised axle)	QC 1 X 18 Nm	<input type="checkbox"/> OK	<input type="checkbox"/> NOK		
Finishing									
<input checked="" type="checkbox"/> F1	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK	search reference (in the event of failure / absence of the motorised axle)	QC 1 X 22 Nm	<input type="checkbox"/> OK	<input type="checkbox"/> NOK		
Grease protection transport									
<input checked="" type="checkbox"/> S3	18g (0/+4.5) CC	Measured quantity:	18g			<input type="checkbox"/> OK	<input type="checkbox"/> NOK		
<input checked="" type="checkbox"/> S4	18g (0/+4.5) CC	Measured quantity:	18g			<input type="checkbox"/> OK	<input type="checkbox"/> NOK		
Final inspection following the check-list DTR0000452909 and DTR0000452910 (in the case of 100% inspection of the production) <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK									
				Final Inspection Quality Insp Name and Signature:		Comments			
				Dima					
OBSERVATIONS									

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



ALSTOM

MOT 21817

GIBEL

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: 11/04/2004

Name: SAGNES

Assembly after test

Date: 02/06/2004

Name: ROBERT, Thomas ERIC

ROTOR S/N SL9C0282-02		STATOR S/N GIB-1830	
<p>Bearing lubrication - Security operation Incorrect lubrication can lead to engine failure with a safety risk in service SRIL TROS 965.289</p>			
<p>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)</p>			
N°: AUSTRIA 349 W			
<p>Radial play after assembly (0,042 / 0,114): 0,08 mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 144g - Max: 149g</p> <p>Filter 1 (Name and signature): <i>[Signature]</i></p> <p>Filter 2 (Name and signature): <i>[Signature]</i></p> <p>Measured quantity: <i>[Signature]</i></p> <p>Quality Insp. Name and signature: <i>[Signature]</i></p>	
<p>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)</p>			
Serial N°: AUSTRIA 094 W			
<p>Radial play after assembly (0,021 / 0,067): 0,05 mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 159g - Max: 164g</p> <p>Filter 1 (Name and signature): <i>[Signature]</i></p> <p>Filter 2 (Name and signature): <i>[Signature]</i></p> <p>Measured quantity: <i>[Signature]</i></p> <p>Quality Insp. Name and signature: <i>[Signature]</i></p>	
Reference number: AMX900			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216	
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ALSTOM

GIBEL

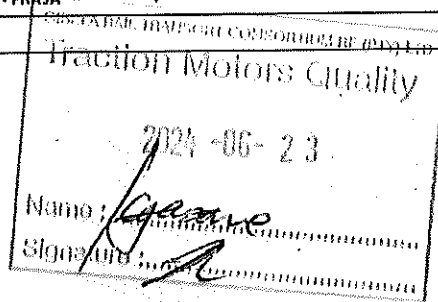
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA

Record the value of the insulation resistance of the bearings to TROS 915.069 (> 50 kΩ)		1,62952		<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK
OPERATOR		Quality verification			
Out of round at the end of the shaft drive end, 0,05 max	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	AMX900	<input type="checkbox"/> OK	<input type="checkbox"/> NOK
Value: 0,07 mm		Device serial number	AMX900	<input type="checkbox"/> OK	<input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number		<input type="checkbox"/> OK	<input type="checkbox"/> NOK
0,06 mm		Device serial number		<input type="checkbox"/> OK	<input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (± 0,2):	<input type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number		<input type="checkbox"/> OK	<input type="checkbox"/> NOK
Sensor reference: DTR0000512252/OSD1830.19Q14HW	<input type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number		<input type="checkbox"/> OK	<input type="checkbox"/> NOK

Missing speed sensor Deviation #: 7072

Prep. & Final Assembly									
OPERATOR				Quality verification					
F1	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/>	<input type="checkbox"/> OK <input type="checkbox"/> NOK	watch reference for the event of failure / absence of the indicated threshold	QC 1 X 61 Nm	<input type="checkbox"/>	<input type="checkbox"/> OK <input type="checkbox"/> NOK		
F2	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/>	<input type="checkbox"/> OK <input type="checkbox"/> NOK	watch reference for the event of failure / absence of the indicated threshold	QC 1 X 61 Nm	<input type="checkbox"/>	<input type="checkbox"/> OK <input type="checkbox"/> NOK		
F3	Torque tightening to 4 x 44 Nm: Fold locking plate	<input checked="" type="checkbox"/>	<input type="checkbox"/> OK <input type="checkbox"/> NOK	watch reference for the event of failure / absence of the indicated threshold	QC 1 X 37 Nm	<input type="checkbox"/>	<input type="checkbox"/> OK <input type="checkbox"/> NOK		
F4	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/>	<input type="checkbox"/> OK <input type="checkbox"/> NOK	watch reference for the event of failure / absence of the indicated threshold	QC 1 X 18 Nm	<input type="checkbox"/>	<input type="checkbox"/> OK <input type="checkbox"/> NOK		
F5	Torque tightening to 6 x 22 Nm:	<input checked="" type="checkbox"/>	<input type="checkbox"/> OK <input type="checkbox"/> NOK	watch reference for the event of failure / absence of the indicated threshold	QC 1 X 18 Nm	<input type="checkbox"/>	<input type="checkbox"/> OK <input type="checkbox"/> NOK		
Finishing									
F1	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/>	<input type="checkbox"/> OK <input type="checkbox"/> NOK	watch reference for the event of failure / absence of the indicated threshold	QC 1 X 22 Nm	<input type="checkbox"/>	<input type="checkbox"/> OK <input type="checkbox"/> NOK		
Grease protection transport									
S3	18g (0/+4.5) CC	Mesured quantity:	18g			<input checked="" type="checkbox"/>	<input type="checkbox"/> OK <input type="checkbox"/> NOK		
S4	18g (0/+4.5) CC	Mesured quantity:	18g			<input checked="" type="checkbox"/>	<input type="checkbox"/> OK <input type="checkbox"/> NOK		
Final inspection following the check-list DTR0000452909 and DTR0000452910 (in the case of 100% inspection of the production)						<input checked="" type="checkbox"/>	<input type="checkbox"/> OK <input type="checkbox"/> NOK		
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> Final inspection Quality Insp Name and Signature: <i>Jessamine N</i> </div> <div style="margin-left: 20px;"> Comments <i>Final sign-off to be fitted at M02</i> </div>									
OBSERVATIONS									

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





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 - 1483


CONTENTS

- Compliance certificate.....	Page 1/2	<input checked="" type="checkbox"/>
- List of deviations and missing parts.....	Page 2/2	<input checked="" type="checkbox"/>
- Products traceability.....	1 page	<input checked="" type="checkbox"/>
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- Motor certificate.....	8 pages	<input checked="" type="checkbox"/>

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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	28 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	1483		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	1832		Alstom - Ubunye
Wheelset (Front)	AR000000177020	3413		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	3429		NGC
Wheel (Right)	AR00000174670	051	03.24	Bonatrans
Wheel (Left)	AR000000174670	050	03.24	Bonatrans
Wheelset (Rear)	AR00000178600	3414		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	3463		NGC
Wheel (Right)	AR00000174670	024	03.24	Bonatrans
Wheel (Left)	AR00000174670	023	03.24	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2403025		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2312176		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1853	06.24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	5607	06.24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	5618	06.24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	5600	06.24	WEBTEC
Motor (front)	AR00000168516	21853		GIBELA
Motor (Rear)	AR00000168516	21820		GIBELA

QC: 018
Revision: 1.0

PRESSING REPORT

DATE VALIDATION		RESPONSABLE VALIDATION		PRASA	
6/28/2024				INSTRUCTION SHEET:	
				LOAD TEST : MOTOR BOGIE	
				PROJECT:	
				FAMILY:	

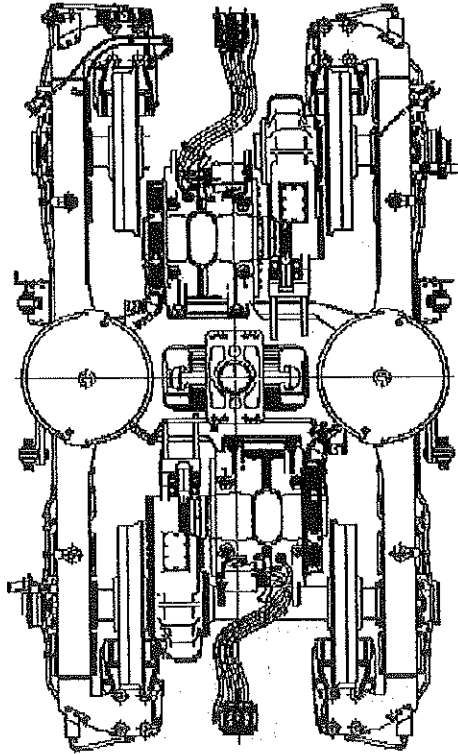
	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	MIN 33.00	MAX 39.00	34.86
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5562

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
585.66	+	0.00 =	MIN 585.66 MAX 587.50

RIGHT JACK LOAD
7377 Kg

BOGIE SERIAL N°	MB1-1483
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22406
COMPLETE BOGIE WEIGHT [Kg]	7305
OPERATOR	EDWARD
DATE	6/28/2024

OPERATOR STAMP
BFI-21



	THEORETICAL		MEASURED
	MIN	MAX	
LOAD DIFFERENCE ON FRONT AXLE [%]	0.00	0.00	-0.38
LOAD DIFFERENCE ON REAR AXLE [%]	0.00	0.00	0.90
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	0.00	0.00	-0.20
LOAD DIFFERENCE ON RAILS [%]	0.00	0.00	0.26
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	0.00	0.00	0.64

LEFT JACK LOAD
7377 Kg

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
584.75	+	1.00 =	MIN 585.75 MAX 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]	
-0.09	THEORETICAL [mm]
	MIN -1.00 MAX 1.00

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	MIN 33.00	MAX 39.00	34.37
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5663

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	MIN 33.00	MAX 39.00	35.27
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5569



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21853

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 77596285

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: 2024/06/25

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature 

GIBELA RAIL TRANSPORT CONSORTIUM RF (PTY) LTD	
Traction Motors Quality	
2024 -06- 2 5	
Name : 	
Signature : 	

Gibela Rail
02 Shosholozwa Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

Property of GIBELA RAIL, cannot be distributed or reproduced without authorization



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21820

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 77521646

Status: QC PASS

Derogations / Concession / Waiver N °: 7072

Customer modification: N/A

Missing parts: N/A

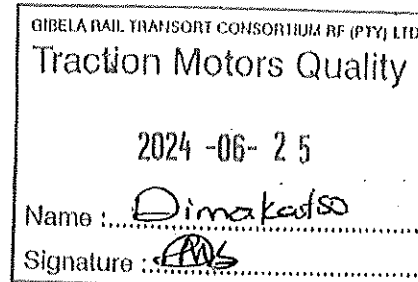
We hereby declare, barring exceptions, reservations or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements, and applicable standards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

Date: 2024/06/25

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____



Gibela Rail
02 Shosholozwa Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

Property of GIBELA RAIL, cannot be distributed or reproduced without authorization

21853

ALSTOM

GISEL

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: 22/06/2024

Name: Jacques

Assembly after test

Date: 22/06/24

Name: Tom, Edick & Aubrey

ROTOR S/N 6469683-058		STATOR S/N CIB-1873							
<p>Bearing lubrication - Security operation Incorrect lubrication can lead to engine failure with a safety risk in service SRIL TROS 965.289</p>									
<p>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)</p>									
N°: AUSTRIA 292 W									
<p>S2 Radial play after assembly (0,042 / 0,114): 0,09mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S3 LUBRICATION WITH MOBILITH SHC 100 before cover assembly</p> <table border="1"> <tr> <td>Min: 144g - Max: 149g</td> <td>Measured quantity:</td> <td>Quality verification</td> </tr> <tr> <td>Filter 1 (Name and signature)</td> <td>Filter 2 (Name and signature)</td> <td>Quality Insp. Name and signature</td> </tr> </table>		Min: 144g - Max: 149g	Measured quantity:	Quality verification	Filter 1 (Name and signature)	Filter 2 (Name and signature)	Quality Insp. Name and signature
Min: 144g - Max: 149g	Measured quantity:	Quality verification							
Filter 1 (Name and signature)	Filter 2 (Name and signature)	Quality Insp. Name and signature							
<p>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)</p>									
Serial N°: GERMANY 0200 K353 - 1320 12/23 SN338									
<p>S1 Radial play after assembly (0,021 / 0,067): 0,05mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S3 LUBRICATION WITH MOBILITH SHC 100 before cover assembly</p> <table border="1"> <tr> <td>Min: 159g - Max: 164g</td> <td>Measured quantity:</td> <td>Quality verification</td> </tr> <tr> <td>Filter 1 (Name and signature)</td> <td>Filter 2 (Name and signature)</td> <td>Quality Insp. Name and signature</td> </tr> </table>		Min: 159g - Max: 164g	Measured quantity:	Quality verification	Filter 1 (Name and signature)	Filter 2 (Name and signature)	Quality Insp. Name and signature
Min: 159g - Max: 164g	Measured quantity:	Quality verification							
Filter 1 (Name and signature)	Filter 2 (Name and signature)	Quality Insp. Name and signature							
Reference number: AMK 920									
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216							
		Page 1							

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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)		3,719/2		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
OPERATOR		Quality verification		
Out of round at the end of the shaft drive end, 0,05 max Value: 0,01mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	AMK 920	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
Out of round on toothed wheel 0,1 max: 0,06mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	AMK 920	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
sensor / toothed wheel play 0,7 (+/- 0,2):	<input type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
Sensor reference: DTR0000512252/DSD1830.19Q14HW	<input type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK	

Missing speed sensor Deviation #: 7072

Prep. & Final Assembly										
OPERATOR				Quality verification						
F1	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	QC 1 X 61 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/>	NOK
F2	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	QC 1 X 61 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/>	NOK
F3	Torque tightening to 4 x 44 Nm: Fold locking plate	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	QC 1 X 37 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/>	NOK
F4	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	QC 1 X 18 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/>	NOK
F5	Torque tightening to 6 x 22 Nm:	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	QC 1 X 18 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/>	NOK
Finishing										
F6	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	QC 1 X 22 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/>	NOK
Grease protection transport										
S3	18g (0/+4.5) CC	Mesured quantity: 18g			<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK		
S4	18g (0/+4.5) CC	Mesured quantity: 18g			<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK		
Final Inspection following the check-list DTR0000452909 and DTR0000452910 (in the case of 100% inspection of the production)										
						<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	
						Final Inspection Quality Insp Name and Signature: <i>Gasane</i>		Comments: <i>Forged sensor to be fitted at MOD</i>		
OBSERVATIONS										

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

Traction Motors Quality	
2024-06-23	
Name : <i>Gasane</i>	
Signature : <i>Gasane</i>	

MOT 21820

ALSTOM

GIBEL

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: 12/06/24

Name: XOLANI

Assembly after test

Date: 08/06/24

Name: XOLANI, THOMAS, ZAMA PTETC

ROTOR S/N BLU69683-057		STATOR S/N C713-1851	
<p>Bearing lubrication - Security operation Incorrect lubrication can lead to engine failure with a safety risk in service SRIL TROS 965.289</p>			
<p>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)</p>			
N°: AUSTRIA 349W			
<p>S2 Radial play after assembly (0,042 / 0,114): 0,07mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S3 LUBRICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Mini 144g - Maxi 149g</p> <p>Measured quantity: 149g</p> <p>Filter 1 (Name and signature): [Signature]</p> <p>Filter 2 (Name and signature): [Signature]</p> <p>Quality validation: [Signature]</p>	
<p>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)</p>			
Serial N°: AUSTRIA 095W			
<p>S1 Radial play after assembly (0,021 / 0,067): 0,05mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S3 LUBRICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Mini 159g - Maxi 169g</p> <p>Measured quantity: 169g</p> <p>Filter 1 (Name and signature): [Signature]</p> <p>Filter 2 (Name and signature): [Signature]</p> <p>Quality validation: [Signature]</p>	
Reference approval: AMXGND			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216	
		Page 1	

ALSTOM

GIBEL

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) 168 MΩ		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	
OPERATOR		Quality verification	
Out of round at the end of the shaft drive end, 0,05 max Value 0mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number AMXGND	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max: 0,03mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number AMXGND	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Sensor / toothed wheel play 0,7 (+/- 0,2): 1	<input type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Sensor reference: DTR0000512252/OSD1830.19Q14HW	<input type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK

Missing speed sensor Deviation #: 7072

Prep. & Final Assembly									
OPERATOR				Quality verification					
F1	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	NCC0587	QC 1 X 61 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK				
F2	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	NCC0587	QC 1 X 61 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK				
F3	Torque tightening to 4 x 44 Nm: Fold locking plate	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	NCC0587	QC 1 X 37 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK				
F4	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	NCC0587	QC 1 X 18 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK				
F5	Torque tightening to 6 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	NCC0587	QC 1 X 18 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK				
Finishing									
F1	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	NCC0587	QC 1 X 22 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK				
Grease protection transport									
S3	18g (0/+4.5) CC	Measured quantity: 18g				<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK			
S4	18g (0/+4.5) CC	Measured quantity: 18g				<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK			
Final inspection following the check-list DTR0000452909 and DTR0000452910 (in the case of 100% inspection of the production)						<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK			
				Final inspection Quality Insp Name and Signature:	Comments Speed sensor to be fitted later MCR				
OBSERVATIONS									

FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA	TROS 916.216	2	Page 2
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TRAFIL MOTOR COMPANY (PTY) LTD

Trafil Motors Quality

2024-06-23

Name: Gasane

Signature: [Signature]