



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

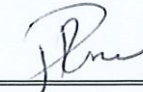
SERIAL NUMBER MB1 1435

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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	20 May 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	1435		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M1766		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M03287		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3265		NGC
Wheel (Right)	AR00000174670	022	10-23	Bonatrans
Wheel (Left)	AR000000174670	093	10-23	Bonatrans
Wheelset (Rear)	AR00000178600	M03288		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3209		NGC
Wheel (Right)	AR00000174670	053	10-23	Bonatrans
Wheel (Left)	AR00000174670	031	10-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2401027		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2401038		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1783	05-24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	5374	05-24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	5373	05-24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	5375	05-24	WEBTEC
Motor (front)	AR00000168516	21631		GIBELA
Motor (Rear)	AR00000168516	21628		GIBELA

PRESSING REPORT

DATE
5/20/2024

RESPONSABLE VALIDATION

PRASA

LOAD TEST : MOTOR BOGIE

INSTRUCTION SHEET:

FAMILY:

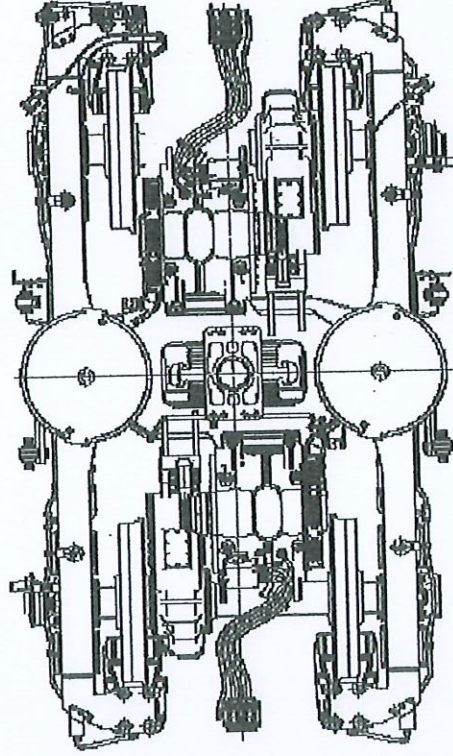
PROJECT:

WHEEL DIAMETER [mm]	THEORETICAL		MEASURED
	MIN	MAX	
33.00	33.00	33.00	35.77
39.00	39.00	39.00	
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]			
Q4			
5567			

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
587.20	+	0.00	587.20
			587.50

RIGHT JACK LOAD	
7375	Kg

BOGIE SERIAL N°	MB1-1435
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22372
COMPLETE BOGIE WEIGHT [Kg]	7304
OPERATOR	DATE
SAFANA	5/20/2024



	THEORETICAL		MEASURED
	MIN	MAX	
LOAD DIFFERENCE ON FRONT AXLE [%]	0.00	0.00	-0.59
LOAD DIFFERENCE ON REAR AXLE [%]	0.00	0.00	0.66
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	0.00	0.00	-0.20
LOAD DIFFERENCE ON RAILS [%]	0.00	0.00	0.04
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	0.00	0.00	0.63

OPERATOR STAMP	
DC-BFI-6	

LEFT JACK LOAD	
7377	Kg

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
587.42	+	0.00	587.42
			587.50
DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]			
-0.22			
THEORETICAL [mm]			
MIN			
MAX			
-1.00			
1.00			

WHEEL DIAMETER [mm]	THEORETICAL		MEASURED
	MIN	MAX	
33.00	33.00	33.00	35.70
39.00	39.00	39.00	
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]			
Q1			
5549			

WHEEL DIAMETER [mm]	THEORETICAL		MEASURED
	MIN	MAX	
33.00	33.00	33.00	35.80
39.00	39.00	39.00	
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]			
Q3			
5641			



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21631

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 77075742

Status: QC PASS

Derogations / Concession / Waiver N °: N/A

Customer modification: N/A

Missing parts: N/A

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

Date: 2024/05/12

Function: Final Inspection

Performed 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

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

21631

GIBEL

ALSTOM

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: 13/04/24

Name: Xolani

Assembly after test

Date: 12/05/24

Name: Godfrey Xolani & Thomas

ROTOR S/N		STATOR S/N	
MCP23-11-006		GIB-1657	
<p>Bearing lubrication - Security operation</p> <p>Incorrect lubrication can lead to engine failure with a safety risk in service</p> <p>SRIL TROS 965.289</p>			
<p>INSULATED CERAMIC BEARING DRIVE END - Security operation</p> <p>Incorrect assembly can lead to engine failure with a safety risk in service</p> <p>SRIL TROS 965.289</p> <p>FAG: NU 214-E-XL-M1-P6-F1-H257A-J20AB-C4 or NU-214-E-M1-P6-F1-H257A-J20AA-C4</p> <p>SKF: NU-214-ECM/C4 VA3091</p> <p>(cross out the references that have not been fitted)</p>			
N°: ROMANIA: 0097 09/23 SN 353 -13 69794			
<p>Radial play after assembly (0,042 / 0,114): 0,06 mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>LUBRICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Mesured quantity: <input type="checkbox"/> Quality validation</p> <p>Min: 144g - Max: 169g</p> <p>Filter 1 (Name and signature) <input type="checkbox"/> Quality Insp. Name and signature</p> <p>Filter 2 (Name and signature) <input type="checkbox"/> Quality Insp. Name and signature</p>	
<p>INSULATED CERAMIC BEARING OPPOSITE DRIVE END side - Security operation</p> <p>Incorrect assembly can lead to engine failure with a safety risk in service</p> <p>SRIL TROS 965.289</p> <p>FAG: 6214-M-P6-J20AB-H257A-C4 or 6214-M-P6-J20AA-H257-C4</p> <p>SKF 6214-M/C4-VL-0241</p> <p>(cross out the references that have not been fitted)</p>			
Serial N°: GERMANY: 0200 X116 0748 04/23 SN 0123			
<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>LUBRICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Mesured quantity: <input type="checkbox"/> Quality verification</p> <p>Min: 159g Max: 164g</p> <p>Filter 1 (Name and signature) <input type="checkbox"/> Quality Insp. Name and signature</p> <p>Filter 2 (Name and signature) <input type="checkbox"/> Quality Insp. Name and signature</p>	
Référence appareil: AMXG20			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216 2 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) 14,2 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 0,01 mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max: 0,09 mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,85 mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<input type="checkbox"/> OK <input type="checkbox"/> NOK

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	<small>check reference for the event of failure / absence of the following procedure</small> NCC 5087	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	<small>check reference for the event of failure / absence of the following procedure</small> NCC 5087	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:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK	<small>check reference for the event of failure / absence of the motorised screw driver</small> NCC 5081	QC 1 X 37 Nm	<input type="checkbox"/>	OK	<input type="checkbox"/>	NOK
	Fold locking plate								
<input checked="" type="checkbox"/> F4	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK	<small>check reference for the event of failure / absence of the following procedure</small> NCC 5087	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	<small>check reference for the event of failure / absence of the following procedure</small> NCC 5087	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	<small>check reference for the event of failure / absence of the following procedure</small> NCC 5087	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	Mesured quantity:	18g			<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK
<input checked="" type="checkbox"/> 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	Comments			
					Quality Insp Name and Signature:				
					Dima <i>[Signature]</i>				
OBSERVATIONS									

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

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21628

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 77075659

Status: QC PASS

Derogations / Concession / Waiver N °: N/A

Customer modification: N/A

Missing parts: N/A

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

Date: 2024/05/13

Function: Final Inspection

Performed 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

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21628

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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: 12/09/2021

Name: XOUNE

Assembly after test

Date: 12/09/2021

Name: Geoffrey Xolani Thomas

ROTOR S/N MCR23-11-115		STATOR S/N CIBS-1648	
<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>			
<p>N°: ROMANIA: 0097 09/23 SN/00-1369794</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>S4 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>Mesured quantity: <i>[Signature]</i></p> <p>Quality validation: <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>			
<p>Serial N°: GERMANY: 0200 X116-0809 04/23 SN0151</p>			
<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 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>Mesured quantity: <i>[Signature]</i></p> <p>Quality validation: <i>[Signature]</i></p>	
<p>Référence appareil: AMXG20</p>		<p>TROS 916.216 2 Page 1</p>	

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) 11,1 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 type="checkbox"/> OK <input type="checkbox"/> NOK	<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	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,75mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<input type="checkbox"/> OK <input type="checkbox"/> NOK

Prep. & Final Assembly											
OPERATOR				Quality verification							
F1	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK	wrench reference (in the event of future absence of the motorized screwdriver)	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	wrench reference (in the event of future absence of the motorized screwdriver)	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 type="checkbox"/>	OK	<input type="checkbox"/>	NOK	wrench reference (in the event of future absence of the motorized screwdriver)	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	wrench reference (in the event of future absence of the motorized screwdriver)	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	wrench reference (in the event of future absence of the motorized screwdriver)	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	wrench reference (in the event of future absence of the motorized screwdriver)	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	Comments			
							Quality Insp Name and Signature: Dima RMD				
OBSERVATIONS											

FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA	TRO5 916.216	2	Page 2
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GIBELA RAJL TRANSPORT CONSORTIUM RF (PTY) LTD

Traction Motors Quality

2024 -05- 12

Name : Dima

Signature : RMD

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 - 1432

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"/>
- 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	17 May 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	1432		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	1770		Alstom - Ubunye
Wheelset (Front)	AR000000177020	3277		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	2873		NGC
Wheel (Right)	AR00000174670	087	07.23	Bonatrans
Wheel (Left)	AR000000174670	090	07.23	Bonatrans
Wheelset (Rear)	AR00000178600	3278		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	2872		NGC
Wheel (Right)	AR00000174670	136	07.23	Bonatrans
Wheel (Left)	AR00000174670	157	07.23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2401124		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2401101		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1775	05.24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	5346	05.24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	5332	05.24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	5351	05.24	WEBTEC
Motor (front)	AR00000168516	21578		GIBELA
Motor (Rear)	AR00000168516	21525		GIBELA

PRESSING REPORT

DATE 5/16/2024 RESPONSABLE VALIDATION PRASA PROJECT: MOTOR BOGIE

DATE VALIDATION INSTRUCTION SHEET: FAMILY:

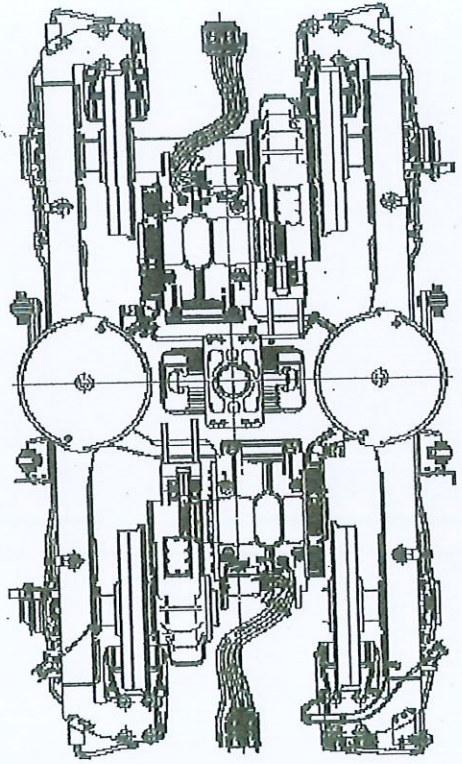
	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	38.08 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [kg]	Q2	5502

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.46	+	0.00	= 586.46
			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	38.41 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [kg]	Q4	5651

BOGIE SERIAL N°	MB1-1432
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [kg]	22371
COMPLETE BOGIE WEIGHT [kg]	7268
OPERATOR SAFANA	DATE 5/16/2024



	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00	1.46 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00	-0.87 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00	-0.17 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00	0.30 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00	-1.16 ✓

OPERATOR STAMP	DC-BFI-6
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DC-BFI-6

LEFT JACK LOAD	
7377	KG

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.80 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [kg]	Q1	5665

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.90	+	0.00	= 586.90
			MIN 585.00 MAX 587.50

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.90 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [kg]	Q3	5554

21525

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: 28/02/2004

Name: Jacques

Assembly after test

Date: 06/05/04

Name: Geoffrey & Xolani

ROTOR S/N MCRB-10-048		STATOR S/N CTB-1548	
<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°: Romania: 0097 10/23 SN200-1988233			
<p>S2 Radial play after assembly (0,042 / 0,114):</p> <p>0,08mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S4 LUBRICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min:144g - Max:149g Measured quantity:</p> <p>Filter 1 (Name and signature) <i>[Signature]</i> Filter 2 (Name and signature) <i>[Signature]</i></p> <p>Quality validation 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°: Germany: 0200 X293-0604 10/23 SN0113			
<p>S1 Radial play after assembly (0,021 / 0,067):</p> <p>0,05mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p><i>[Signature]</i> Reference approval</p>		<p>S3 LUBRICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min:159g Max:164g Measured quantity:</p> <p>Filter 1 (Name and signature) <i>[Signature]</i> Filter 2 (Name and signature) <i>[Signature]</i></p> <p>Quality verification Quality Insp. Name and signature <i>[Signature]</i></p>	
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216 2	
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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)

1,09952



OK



NOK

OPERATOR

Quality verification

Out of round at the end of the shaft drive end, 0,05 max Value <u>0,01 mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>AS 474</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max: <u>0,05 mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>AS 474</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2): <u>0,75 mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>C12BFL002</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Sensor reference: DTR0000512252/DS01830.19Q14HW	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>S2316013583</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK

Prep. & Final Assembly

OPERATOR				Quality verification	
F1	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the master tool)	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	wrench reference (in the event of failure / absence of the master tool)	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	wrench reference (in the event of failure / absence of the master tool)	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	wrench reference (in the event of failure / absence of the master tool)	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	wrench reference (in the event of failure / absence of the master tool)	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	wrench reference (in the event of failure / absence of the master tool)	QC 1 X 22 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
----	---------------------------------	---	---	--------------	--

Grease protection transport

S3	18g (0/+4.5) CC	Mesured quantity: <u>18g</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
S4	18g (0/+4.5) CC	Mesured quantity: <u>18g</u>	<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) ☒ OK ☐ NOK

Final inspection

Quality Insp Name and Signature:

Dima AMS

Comments

OBSERVATIONS

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

TROS 916.216

2

Page

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GIBELA RAIL TRANSPORT CONSORTIUM RF (PTY) LTD

Traction Motors Quality

2024 -05- 07

Name : Dima

Signature : AMS

21578

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GIBELG

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:

14/03/24
Godfrey

Name:

Assembly after test

Date:

Name:

09/08/24
XOLANI THOMAS









ROTOR S/N MCR22-11-203	STATOR S/N GIB-1600		
<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 filled)</p>			
<p>N°: ROMANIA - 0097 10/23 SN54-1988233</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 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 144g - Max: 149g Measured quantity:</p> <p>Filter 1 (Name and signature) Filter 2 (Name and signature)</p> <p>Quality validation Quality Insp. Name and signature Dima</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 filled)</p>			
<p>Serial N°: GERMANY - 0200 X116 - 0942 04/23 SN0228</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 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 159g Max: 164g Measured quantity:</p> <p>Filter 1 (Name and signature) Filter 2 (Name and signature)</p> <p>Quality validation Quality Insp. Name and signature Dima</p>	
<p>Référence appareil AMXG14</p>			
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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)		1,97 GΩ		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
OPERATOR			Quality validation	
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 AMXG14	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
Out of round on toothed wheel 0,1 max: 0,07mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number AMXG14	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
sensor / toothed wheel play 0,7 (+/- 0,2): 0,8mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number GIBEL002	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
Sensor reference: DTR0000512252/DSD1830.19Q14HW	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number S2311000647	<input type="checkbox"/> OK <input type="checkbox"/> NOK	

Prep. & Final Assembly									
OPERATOR				Quality verification					
	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	
	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	
	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	
	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	
	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									
	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									
	18g (0/+4.5) CC	Mesured quantity:	18g		<input checked="" type="checkbox"/>	OK	<input type="checkbox"/> NOK		
	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:		Comments		
					Dima				
OBSERVATIONS									

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





CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21525

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76793307

Status: QC PASS

Derogations / Concession / Waiver N °: N/A

Customer modification: N/A

Missing parts: N/A

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

Date: 2024/05/07

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

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CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21578

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76927339

Status: QC PASS

Derogations / Concession / Waiver N °: N/A

Customer modification: N/A

Missing parts: N/A

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

Date: 2024/05/09

Function: Final Inspection

Perfomed 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

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