



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

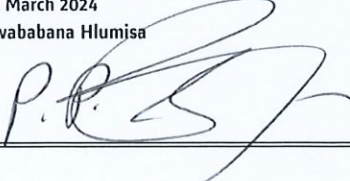
SERIAL NUMBER MB1 - 1366

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- 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	11 March 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 1366		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M 1678		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M 3101		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3167		NGC
Wheel (Right)	AR00000174670	096	10-23	Bonatrans
Wheel (Left)	AR000000174670	016	10-23	Bonatrans
Wheelset (Rear)	AR00000178600	M 3102		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3099		NGC
Wheel (Right)	AR00000174670	018	10-23	Bonatrans
Wheel (Left)	AR00000174670	039	10-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2308107		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2309100		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1644	02-24	Wabtec
Brake unit without PB (Right front)	AR00000175185	4953	02-24	Wabtec
Brake unit without PB (Left Front)	AR00000175185	4954	02-24	Wabtec
Brake unit without PB (left rear)	AR00000175185	4952	02-24	Wabtec
Motor (front)	AR00000168516	21281		Alstom Ornans
Motor (Rear)	AR00000168516	21321		Alstom Ornans

PRESSING REPORT

DATE
3/11/2024

RESPONSABLE VALIDATION

PRASA

INSTRUCTION SHEET:

FAMILY:

LOAD TEST : MOTOR BOGIE

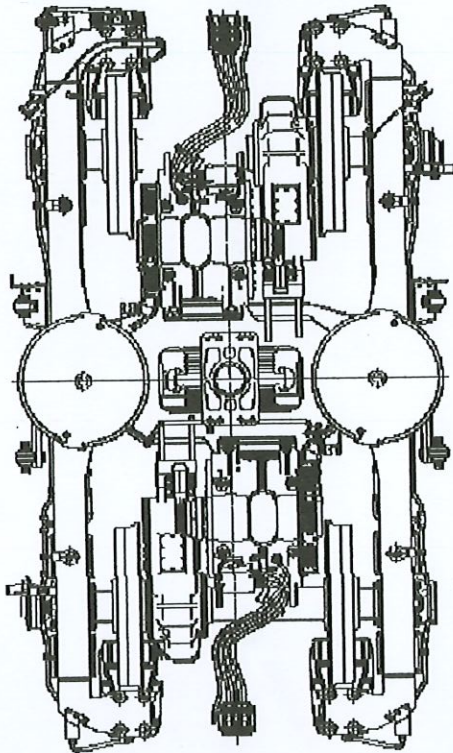
PROJECT:

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	33.00	39.00	37.50 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q2		5651

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
585.98	+	1.00	=
			586.98
			MIN 585.00
			MAX 587.50

RIGHT JACK LOAD	Kg
7376	

BOGIE SERIAL N°	MB1-1366
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22366
COMPLETE BOGIE WEIGHT [Kg]	7274
OPERATOR	DATE
SAFANA	3/11/2024



OPERATOR STAMP
DC-3FI-6

LEFT JACK LOAD	Kg
7376	

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	33.00	39.00	37.61 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5508

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]	
		MIN	-1.00
		MAX	1.00

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	33.00	39.00	37.11 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5545

	THEORETICAL		MEASURED
	MIN	MAX	
LOAD DIFFERENCE ON FRONT AXLE [%]	0.00	0.00	-1.28 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	0.00	0.00	1.04 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	0.00	0.00	-0.21 ✓
LOAD DIFFERENCE ON RAILS [%]	0.00	0.00	-0.12 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	0.00	0.00	1.16 ✓

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	33.00	39.00	37.09 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5662

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GIBELCO

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

Référence: TROS 916.216

Révision: 2

Documents de référence: AT00000325953 - AT00000325990

Assembly before test

Date: 23/10/23

Name: Jacques

Assembly after test

Date: 24/10/24

Name: Xolani B Thomas

ROTOR S/N MCR22-11-120		STATOR S/N GTB-1287	
<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 : 237 W			
<p>S2 Radial play after assembly (0,042 / 0,114):</p> <p>0,07mm <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>Measured quantity: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Fitter 1 (Name and signature) <i>[Signature]</i></p> <p>Fitter 2 (Name and signature) <i>[Signature]</i></p> <p>Quality validation: Dima <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>S1 Radial play after assembly (0,021 / 0,067):</p> <p>0,05mm <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>Measured quantity: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Fitter 1 (Name and signature) <i>[Signature]</i></p> <p>Fitter 2 (Name and signature) <i>[Signature]</i></p> <p>Quality verification: Dima <i>[Signature]</i></p>	
<p>Reference appareil: <i>[Signature]</i></p>		<p>TROS 916.216</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)		111 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:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<i>[Signature]</i>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max: 0,04mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<i>[Signature]</i>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,7mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<i>[Signature]</i>	<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 <u>52234005531</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
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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	wrench reference (in the event of failure / absence of the motorized screwdriver)	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	wrench reference (in the event of failure / absence of the motorized screwdriver)	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	wrench reference (in the event of failure / absence of the motorized screwdriver)	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	wrench reference (in the event of failure / absence of the motorized screwdriver)	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	wrench reference (in the event of failure / absence of the motorized screwdriver)	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	wrench reference (in the event of failure / absence of the motorized screwdriver)	QC 1 X 22 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
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Grease protection transport

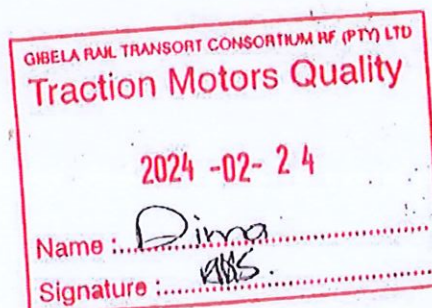
<input checked="" type="checkbox"/> S3	18g (0/+4.5) CC	Mesured quantity: <u>18g</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
<input checked="" type="checkbox"/> S4	18g (0/+4.5) CC	Mesured quantity: <u>18g</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK

Final inspection following the check-list DTR0000452909 and DTR0000452910 (In the case of 100% inspection of the production)	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
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Final Inspection	Comments
Quality Insp Name and Signature: <u>Dima RBS</u>	

OBSERVATIONS

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21321

ALSTOM

GIBELQ

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: 22/11/2023

Name: Jacques

Assembly after test

Date: 22/02/24

Name: ROANE THOMAS

ROTOR S/N MCD22-11-108	STATOR S/N CIB-1326		
<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-EGM/C4-VA3091 (cross out the references that have not been fitted)</p>			
N°: ROMANIA - 0097 05/23 SN471 - 1085122			
<p>S2 Radial play after assembly (0,042 / 0,114): 0,08mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly Min:144g - Max:149g Measured quantity: <input type="text"/> Filter 1 (Name and signature) <input type="text"/> Filter 2 (Name and signature) <input type="text"/> Quality validation: <input type="text"/> Quality Insp. Name and signature: Dima ADS</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°: GERMANY - 0200 X074-1044 01/23 SN0702			
<p>S3 Radial play after assembly (0,021 / 0,067): 0,05mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK AS 2014</p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly Min:159g Max:164g Measured quantity: <input type="text"/> Filter 1 (Name and signature) <input type="text"/> Filter 2 (Name and signature) <input type="text"/> Quality verification: <input type="text"/> Quality Insp. Name and signature: Dima ADS</p>	
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216	Page 1

ALSTOM

GIBELQ

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)

220MΩ



OK



NOK

0,09mm

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: 1752214	<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: C1PFL002	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
sensor / toothed wheel play 0,7 (+/- 0,2): 0,7mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: 1752214	<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: 2312003761	<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	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

F1 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
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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) ☒ OK ☐ NOK

Final inspection	Comments
Quality Insp Name and Signature: Dima	

OBSERVATIONS

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

Traction Motors Quality

2024 -02- 24

Name: Dima

Signature: [Signature]



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21281

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76105448

Status: QC PASS

Derogations / Concession / Waiver N °: N/A

Customer modification: N/A


Missing parts: N/A

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

Date: 2024/03/01

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



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N * 21321

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76213860

Status: QC PASS

Derogations / Concession / Waiver N * : N/A

Customer modification: N/A

Missing parts: N/A

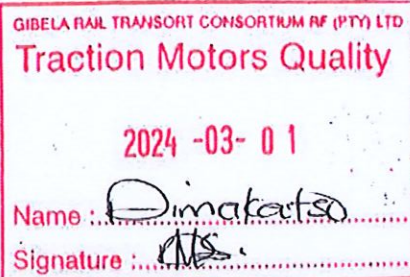
We hereby declare, barring exceptions, reservations or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements, and applicable standards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

Date: 2024/03/01

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____



Gibela Rail
02 Shosholozu 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

MANUFACTURER ALSTOM Ubunye
 Marievale Road, Vosterkroon, Nigel, 1490

CUSTOMER Gibela

CONTRACT

PROJECT PRASA

MANUFACTURER'S DELIVERY DOCUMENT

PRODUCT TYPE MOTOR BOGIE type MB2

DTR0009706805

SERIAL NUMBER MB2 - 582

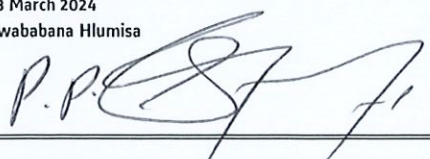
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- Compliance certificate.....	Page 1/2	<input checked="" type="checkbox"/>
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- Load test report.....	1 page	<input checked="" type="checkbox"/>
- Motor certificate.....	8 pages	<input checked="" type="checkbox"/>

COMPLIANCE CERTIFICATE

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CONSTRUCTOR APPROVAL

DATE	13 March 2024
NAME	Kwababana Hlumisa
VISA	

I - Deviation / Derogation

II - Bogie configuration

B Bogie index



ALSTOM UBUNYE

PRODUCTS TRACEABILITY

Products Designation	Product Reference	Serial Number	Batch or Date Manufactured	Supplier
Motor Bogie MB2	DTR0009706805	582		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M 1671		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M 3075		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3069		NGC
Wheel (Right)	AR00000174670	113	04.23	Bonatrans
Wheel (Left)	AR000000174670	083	04.23	Bonatrans
Wheelset (Rear)	AR00000178600	M 3076		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3101		NGC
Wheel (Right)	AR00000174670	126	04.23	Bonatrans
Wheel (Left)	AR00000174670	115	04.23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2310205		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2310120		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1625	02.24	Wabtec
Brake unit without PB (Right front)	AR00000175185	4905	02.24	Wabtec
Brake unit without PB (Left Front)	AR00000175185	4904	02.24	Wabtec
Brake unit without PB (left rear)	AR00000175185	4903	02.24	Wabtec
Motor (front)	AR00000168516	21317		Alstom - Gibela
Motor (Rear)	AR00000168516	21292		Alstom - Gibela

DATE VALIDATION	RESPONSABLE VALIDATION
3/5/2024	

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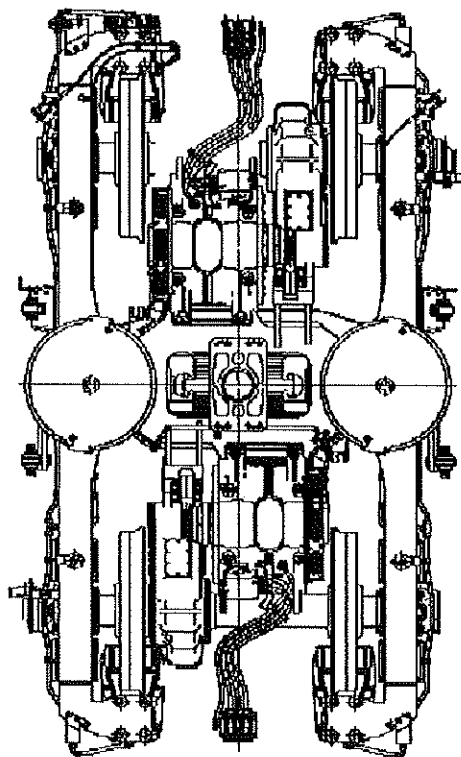
LOAD TEST :	MOTOR BOGIE
PROJECT:	

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.79 2
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q2	5573

SECONDARY SUSPENSION		DIM. WITH SHIM [mm]	THEORETICAL [mm]
MEASURED [mm]	SHIM THICK [mm]		
586.41	+ 1.00	= 587.41	MIN 585.00 MAX 587.50

RIGHT JACK LOAD	
7377	Kg

BOGIE SERIAL N°	MB2-582
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22350
COMPLETE BOGIE WEIGHT [Kg]	7285
OPERATOR EDWARD	DATE 3/5/2024



	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00	0.04 ↙
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00	1.39 ↙
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00	-0.21 ↙
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00	0.72 ↙
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00	0.68 ↙

OPERATOR STAMP	BFI-21
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LEFT JACK LOAD	
7376	Kg

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN MAX	37.60 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q1	5578

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
587.08	+	0.00	MIN
			587.08
			MAX
			587.50

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

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN MAX	37.28 39.00
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q3	5677



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21292

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76149274

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: 2024/01/26

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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21317

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GIBELCO

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

Référence: TROS 916.216

Révision: 2

Documents de référence: AT00000325953 - AT00000325990

Assembly before test

Date: 21/11/23

Name: XOLANI

Assembly after test

Date: 02/01/24

Name: XOLANI

ROTOR S/N		STATOR S/N	
MCB22-11-057		GILB-1337	
<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-E1-H257A-J20AA-C4</p> <p>SKE: NU 214 ECM/C4 VA3091</p> <p>(cross out the references that have not been fitted)</p>			
N°: ROMANIA : 0097 05/23 SN 472 - 1085122			
<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>Mln:144g - Max:149g</p> <p>Measured quantity: <input type="text"/></p> <p>Quality validation</p> <p>Quality Insp. Name and signature: Dima</p>	
<p>S1 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>SKE 6214-M/C4-VL 0241</p> <p>(cross out the references that have not been fitted)</p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Mln:159g - Max:164g</p> <p>Measured quantity: <input type="text"/></p> <p>Quality verification</p> <p>Quality Insp. Name and signature: Dima</p>	
Serial N°: GERMANY : 0200 X019-0930 01/23 SN 0209			
<p>S1 Radial play after assembly (0,021 / 0,067): 0,04mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Mln:159g - Max:164g</p> <p>Measured quantity: <input type="text"/></p> <p>Quality verification</p> <p>Quality Insp. Name and signature: Dima</p>	
Référence appareil: AMX614			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216 2 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)

3,509Ω

☒ OK☐ NOK

OPERATOR				Quality verification			
Out of round at the end of the shaft drive end (0,5 max):	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> OK	<input type="checkbox"/> NOK	Device serial number	AMXG114	<input type="checkbox"/>	OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max:	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> OK	<input type="checkbox"/> NOK	Device serial number	AMXG114	<input type="checkbox"/>	OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2):	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> OK	<input type="checkbox"/> NOK	Device serial number	C7B-FLECC	<input type="checkbox"/>	OK <input type="checkbox"/> NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> OK	<input type="checkbox"/> NOK	Device serial number	00243013451	<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"/> Y	<input type="checkbox"/> OK	<input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the motorised 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"/> Y	<input type="checkbox"/> OK	<input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the motorised 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 checked="" type="checkbox"/> Y	<input type="checkbox"/> OK	<input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the motorised 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"/> Y	<input type="checkbox"/> OK	<input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the motorised 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"/> Y	<input type="checkbox"/> OK	<input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the motorised 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"/> Y	<input type="checkbox"/> OK	<input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the motorised screwdriver)	QC 1 X 22 Nm	<input type="checkbox"/>	OK <input type="checkbox"/> NOK
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Grease protection transport

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

Final Inspection

Quality Insp Name and Signature:

Dima RBS

Comments

OBSERVATIONS

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

TROS 916.216

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GIBELA RAIL TRANSPORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality

2024 -01- 23

Name : Dima

Signature : RBS

ALSTOM

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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: 18/11/2023

Name: Jacques

Assembly after test

Date: 17/01/24

Name: XOLANT, GODFROY THOMAS

ROTOR S/N MCR22-10-052		STATOR S/N GIB-1314	
<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 : 237 W			
<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>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 FMS</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>S1 Radial play after assembly (0,021 / 0,067):</p> <p>0,06mm <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: 166g Measured quantity:</p> <p>Filter 1 (Name and signature) Filter 2 (Name and signature)</p> <p>Quality verification Quality Insp. Name and signature Dima FMS</p>	
Réf. pièce appareil: AS 2014			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216 2 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)

230 MΩ

☒ OK ☐ 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	AS 2014	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
Out of round on toothed wheel 0,1 max: 0,02mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	AS 2014	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
sensor / toothed wheel play 0,7 (+/- 0,2): 0,7mm	<input type="checkbox"/> OK <input type="checkbox"/> NOK	GIBFL002	<input type="checkbox"/> OK <input type="checkbox"/> NOK	

0,01mm

Sensor reference: DTR0000512252/DSD1830.19Q14HW	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number S2243008193	<input type="checkbox"/> OK <input type="checkbox"/> NOK
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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	wrench reference (in the event of false / absence of the motorized screwdriver)	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	wrench reference (in the event of false / absence of the motorized screwdriver)	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	wrench reference (in the event of false / absence of the motorized screwdriver)	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	wrench reference (in the event of false / absence of the motorized screwdriver)	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	wrench reference (in the event of false / absence of the motorized screwdriver)	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	wrench reference (in the event of false / absence of the motorized screwdriver)	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 checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
<input checked="" type="checkbox"/> 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:

Dima

Comments

OBSERVATIONS

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

TROS 916.216

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GIBELA RAIL TRANSPORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality

2024 -01- 24

Name : *Dima*

Signature : *KMS*



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21317

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76201812

Status: QC PASS

Derogations / Concession / Waiver N °: N/A

Customer modification: N/A

Missing parts: N/A

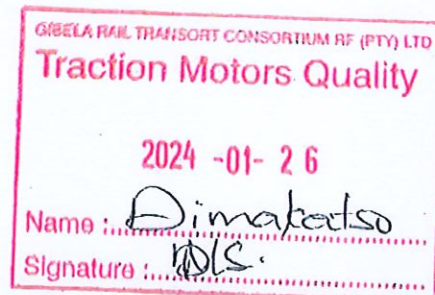
We hereby declare, barring exceptions, reservations or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements, and applicable standards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

Date: 2024/01/26

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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