



MANUFACTURER **ALSTOM** Ubunye
Marievale Road, Vosterkroon, Nigel, 1490

CUSTOMER **Gibela**

CONTRACT

PROJECT **PRASA**

MANUFACTURER'S DELIVERY DOCUMENT

PRODUCT TYPE **MOTOR BOGIE MB1**

DTR0009606804

SERIAL NUMBER **MB1 1326**

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- 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	08 February 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	1326		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M1633		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M02999		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K2845		NGC
Wheel (Right)	AR00000174670	141	02-23	Bonatrans
Wheel (Left)	AR000000174670	113	02-23	Bonatrans
Wheelset (Rear)	AR00000178600	M03000		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K2836		NGC
Wheel (Right)	AR00000174670	051	11-22	Bonatrans
Wheel (Left)	AR00000174670	124	02-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2308108		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2310031		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1561	12-23	Webtec
Brake unit without PB (Right front)	AR00000175185	4707	12-223	Webtec
Brake unit without PB (Left Front)	AR00000175185	4697	12-23	Webtec
Brake unit without PB (left rear)	AR00000175185	4704	12-23	Webtec
Motor (front)	AR00000168516	21455		GIBELA
Motor (Rear)	AR00000168516	21350		GIBELA

QC: 018
Revision: 1.0

PRESSING REPORT

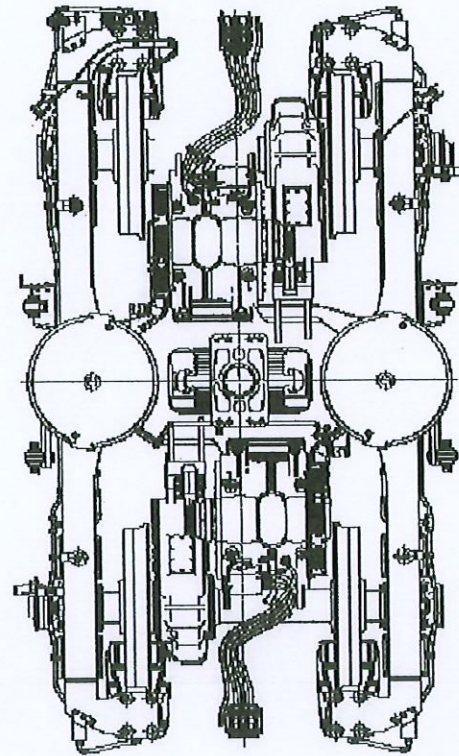
DATE 2/8/2024	RESPONSABLE VALIDATION
PRASA ALSTOM URBAIN	
INSTRUCTION SHEET:	
FAMILY:	

LOAD TEST : MOTOR BOGIE
PROJECT:

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	MIN 33.00	MAX 39.00	38.49 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5565

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
587.20	+	0.00	MIN 585.00 MAX 587.50

RIGHT JACK LOAD	7376 Kg
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BOGIE SERIAL N°	MB1-1326
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22335
COMPLETE BOGIE WEIGHT [Kg]	7269
OPERATOR	EDWARD
DATE	2/8/2024

OPERATOR STAMP	BFI-21
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	THEORETICAL		MEASURED
	MIN	MAX	
LOAD DIFFERENCE ON FRONT AXLE [%]	0.00	0.00	0.24 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	0.00	0.00	0.58 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	0.00	0.00	-0.24 ✓
LOAD DIFFERENCE ON RAILS [%]	0.00	0.00	0.41 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	0.00	0.00	0.17 ✓

LEFT JACK LOAD	7376 Kg
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SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.69	+	0.00	MIN 585.00 MAX 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]	0.51	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	37.71 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5584

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	MIN 33.00	MAX 39.00	37.23 ✓
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5630



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21350

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76254815

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: 2024/02/05

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

21350

ALSTOM

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: 29/11/2023

Name: Sagues

Assembly after test

Date: 03/02/24

Name: Godfrey Voleni & Thomas

ROTOR S/N MCE22-10-075	STATOR S/N GIB-1363		
<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 SKE-NU 214-ECM/C4-VA3091 (cross out the references that have not been fitted)</p>			
N°: ROMANIA : 0097 05/23 SN445 -1085122			
<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>Mln:144g - Max:199g Measured quantity: Quality validation</p> <p>Fitter 1(Name and signature) Fitter 2(Name and signature) Quality Insp. Name and signature</p> <p><i>[Signature]</i> <i>[Signature]</i> 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 SKE-6214-M/C4-VL-0241 (cross out the references that have not been fitted)</p>			
Serial N°: GERMANY : 0200 X116-0646 04/23 SN0007			
<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>Reference appeared</p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Mln:159g Max:164g Measured quantity: Quality verification</p> <p>Fitter 1(Name and signature) Fitter 2(Name and signature) Quality Insp. Name and signature</p> <p><i>[Signature]</i> <i>[Signature]</i> Dima</p>	
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216	2
		Page 1	

ALSTOM

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

Record the value of the Insulation resistance of the bearings to TROS 915.069 (> 50 kΩ)		2,45 022 <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	<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	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2):	<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 <div style="display: inline-block; border: 1px solid black; padding: 2px; margin-left: 10px;"> Revisé serial number 6231 1000663 </div>		<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	<small>wrench reference (in the event of failure / absence of the motorised screwdriver)</small> 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	<small>wrench reference (in the event of failure / absence of the motorised screwdriver)</small> 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	<small>wrench reference (in the event of failure / absence of the motorised screwdriver)</small> 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	<small>wrench reference (in the event of failure / absence of the motorised screwdriver)</small> 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	<small>wrench reference (in the event of failure / absence of the motorised screwdriver)</small> 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	<small>wrench reference (in the event of failure / absence of the motorised screwdriver)</small> 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	Comments	
			Quality Insp Name and Signature: <div style="text-align: center; font-family: cursive;">Dima</div>		
OBSERVATIONS					

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

TROS 916.216

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CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21455

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76618056

Status: QC PASS

Derogations / Concession / Waiver N °: N/A

Customer modification: N/A


Missing parts: N/A

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Date: 2024/02/05

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____ 



Gibela Rail
02 Shosholozwa Avenue
M07 Traction Motor
1590

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: 29/01/2024

Name: S. C. G. L. O. S.

Assembly after test

Date: 02/02/24

Name: Geoffrey Xolunri & Thomas

ROTOR S/N MCR22-11-060	STATOR S/N CIB-1465		
<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 09/23 SN268-1369794			
<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 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 KDS</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 X272-1230 09/23 SN0005			
<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>Reference: ASEP14</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 verification: Quality Insp. Name and signature: Dima KDS</p>	
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216	2
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ALSTOM

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

Record the value of the Insulation resistance of the bearings to TROS 915.069 (> 50 kΩ)		1,06C52	<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: ASEP14	<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: ASEP14	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2):	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: CIBFL002	<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 5231000991	<input type="checkbox"/> OK <input type="checkbox"/> NOK
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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 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"/> 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"/> 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"/> 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"/> 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"/> 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
----	---------------------------------	---	---	--------------	--

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	

OBSERVATIONS

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

TROS 916.216

2

Page

2

GIDEA RAIL TRANSPORT CONSORTIUM RF (PTY) LTD
Traction Motors Quality
2024 -02- 03
Name : Dima
Signature : [Signature]



MANUFACTURER **ALSTOM** Ubunye
Marievale Road, Vosterkroon, Nigel, 1490

CUSTOMER **Gibela**

CONTRACT

PROJECT **PRASA**

MANUFACTURER'S DELIVERY DOCUMENT

PRODUCT TYPE **MOTOR BOGIE MB1**

DTR0009606804

SERIAL NUMBER **MB1 1328**

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	08 February 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	1328		Alstom - Ubunye
Motor Bogie Frame	AR000000176080	M1632		Alstom - Ubunye
Wheelset (Front)	AR0000000177020	M02997		Alstom - Ubunye
Axle with fitted gearbox	AR000000177072	K2838		NGC
Wheel (Right)	AR000000174670	116	07-23	Bonatrans
Wheel (Left)	AR0000000174670	079	07-23	Bonatrans
Wheelset (Rear)	AR000000178600	M02998		Alstom - Ubunye
Axle with fitted gearbox	AR000000177072	K2843		NGC
Wheel (Right)	AR000000174670	009	07-23	Bonatrans
Wheel (Left)	AR000000174670	007	07-23	Bonatrans
Pneumatic suspension (Right)	AR000000176127	2310149		Hutchinson
Pneumatic suspension (Left)	AR000000176127	2310103		Hutchinson
Brake unit with PB (Right rear)	AR000000174544	960	08-2023	POLI
Brake unit without PB (Right front)	AR000000175185	2861	08-2023	POLI
Brake unit without PB (Left Front)	AR000000175185	2860	08-2023	POLI
Brake unit without PB (left rear)	AR000000175185	2859	08-2023	POLI
Motor (front)	AR000000168516	21406		GIBELA
Motor (Rear)	AR000000168516	21456		GIBELA

QC: 018
Revision: 1.0

PRESSING REPORT



PRASA ALSTOM UBUNYE
INSTRUCTION SHEET:

FAMILY:

LOAD TEST : MOTOR BOGIE

PROJECT:

DATE
2/8/2024

DATE VALIDATION

RESPONSABLE VALIDATION

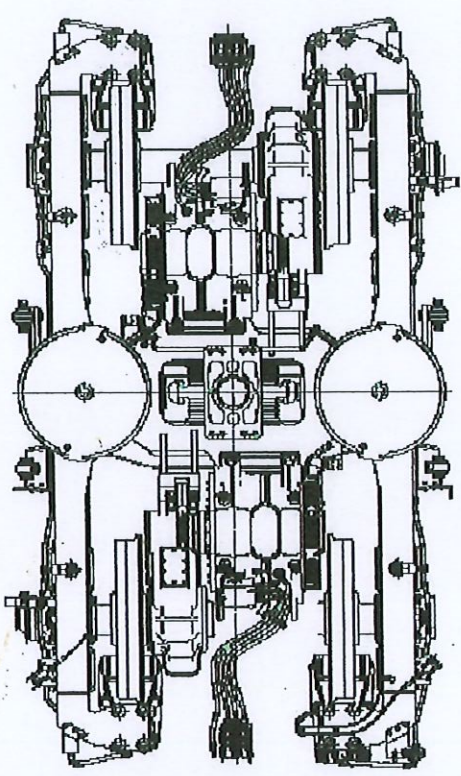
	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	38.98 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q2	5529

SECONDARY SUSPENSION. ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.07	+	1.00 =	587.07
			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	39.00 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q4	5534

BOGIE SERIAL N°	MB1-1328
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22352
COMPLETE BOGIE WEIGHT [Kg]	7273
OPERATOR	DATE
EDWARD	2/8/2024



	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00	0.91 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00	1.10 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00	-0.14 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00	1.01 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00	0.09 ✓

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	38.39 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q1	5631

SECONDARY SUSPENSION. ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
587.08	+	0.00 =	587.08
			MIN 585.00 MAX 587.50
DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]			THEORETICAL [mm]
-0.01			MIN -1.00 MAX 1.00

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	38.45 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q3	5657



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21220

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 75999544

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: 2023/12/11

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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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: 19/10/2023

Name: Jacques

Assembly after test

Date: 04/12/2023

Name: Jacques

ROTOR S/N MCP22-10-001		STATOR S/N GIB-1216	
<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 05/23 SN17 - 1085122			
<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 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>Filter 1 (Name and signature): <i>[Signature]</i></p> <p>Filter 2 (Name and signature): <i>[Signature]</i></p> <p>Quality validation: 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 fitted)</p>			
Serial N°: GERMANY: - 0200 x 020 - 0833 01/23 SN0591			
<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>AMXG14</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>Filter 1 (Name and signature): <i>[Signature]</i></p> <p>Filter 2 (Name and signature): <i>[Signature]</i></p> <p>Quality validation: Dima</p>	
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Record the value of the insulation resistance of the bearings to TROS 915.069 (> 50 kΩ) 241 GΩ <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	AMXG14	<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	AMXG14	<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	GIBELG	<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 32043008785	<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 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"/> 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"/> 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"/> 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"/> 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"/> 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	
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: Dima F.RAS.		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

2023 -12- 0 6

Name : **Dima**
Signature : **INDS.**



CERTIFICATION OF CONFORMITY

Inspection certificate according to EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21204

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 75985828

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: 2023/12/11

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature Dimakatso



Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

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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: 16/10/23

Name: XOLANI

Assembly after test

Date: 02/12/2023

Name: Sengiso Zulu + Xolani

ROTOR S/N MCR22-10-062		STATOR S/N CT13-1203	
<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 05/23 S160-1085122			
<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>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>Fitter 1 (Name and signature) <i>[Signature]</i></p> <p>Fitter 2 (Name and signature) <i>Dimalaka Dima</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°: GERMANY :- 0200 X 019-0731 01/23 S10002			
<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>Mln:159g Max:164g</p> <p>Measured quantity: <input type="text"/></p> <p>Quality verification</p> <p>Fitter 1 (Name and signature) <i>[Signature]</i></p> <p>Fitter 2 (Name and signature) <i>Dimalaka Dima</i></p> <p>Quality Insp. Name and signature <i>[Signature]</i></p>	
Référence appareil CT131203			
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Record the value of the Insulation resistance of the bearings to TROS 915.069 (> 50 kΩ)		6,616.2		<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:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<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	
sensor / toothed wheel play 0,7 (+/- 0,2):	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<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>000410057</u>		<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	wrench reference (in the event of failure / absence of the tightened screw)	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 tightened screw)	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 tightened screw)	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 tightened screw)	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 tightened screw)	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 tightened screw)	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: <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
			Final Inspection Quality Insp Name and Signature: <u>Dima</u> <u>KMS</u>		Comments		
OBSERVATIONS							

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

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