



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

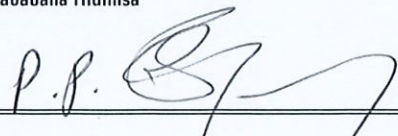
SERIAL NUMBER MB1 - 1447

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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	06 June 2024
NAME	Kwababana Hlumisa
VISA	

I - Deviation / Derogation

II - Bogie configuration

B Bogie index

**ALSTOM UBUNYE****PRODUCTS TRACEABILITY**

Products Designation	Product Reference	Serial Number	Batch or Date Manufactured	Supplier
Motor Bogie MB1	DTR0009706804	M 1447		Alstom - Ubunye
Motor Bogie Frame	AR000000176080	M 1794		Alstom - Ubunye
Wheelset (Front)	AR0000000177020	M 3321		Alstom - Ubunye
Axle with fitted gearbox	AR000000177072	K 3125		NGC
Wheel (Right)	AR000000174670	097	07.23	Bonatrans
Wheel (Left)	AR0000000174670	125	10.23	Bonatrans
Wheelset (Rear)	AR000000178600	M 3232		Alstom - Ubunye
Axle with fitted gearbox	AR000000177072	K 3077		NGC
Wheel (Right)	AR000000174670	097	07.23	Bonatrans
Wheel (Left)	AR000000174670	095	07.23	Bonatrans
Pneumatic suspension (Right)	AR000000176127	23/2058		Hutchinson
Pneumatic suspension (Left)	AR000000176127	23/1058		Hutchinson
Brake unit with PB (Right rear)	AR000000174544	1806	05.24	Wabtec
Brake unit without PB (Right front)	AR000000175185	5459	05.24	Wabtec
Brake unit without PB (Left Front)	AR000000175185	5455	05.24	Wabtec
Brake unit without PB (left rear)	AR000000175185	5460	05.24	Wabtec
Motor (front)	AR000000168516	21615		Alstom Ornans
Motor (Rear)	AR000000168516	21651		Alstom Ornans

DATE 5/31/2024

RESPONSABLE VALIDATION

PRASA

1. C. D. HOFF
2. J. C. HOFF

PROJECT:

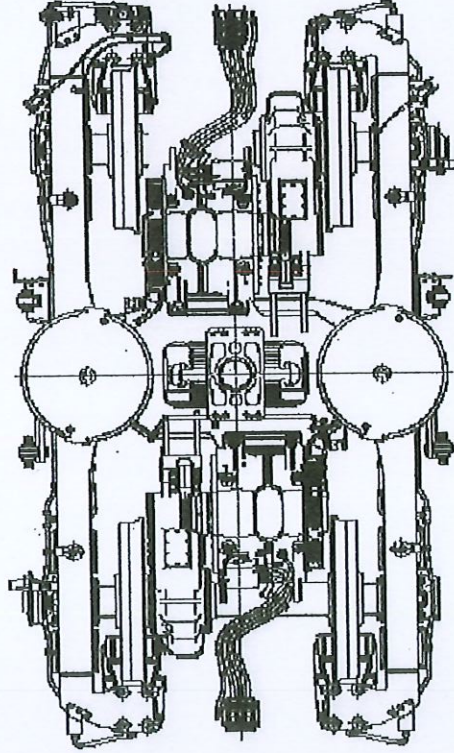
	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	35.37
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q4	5583

SECONDARY SUSPENSION				\varnothing
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM[mm]	THEORETICAL [mm]	
584.15	+	2.00	=	586.15
				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	35.17
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q2	5534

BOGIE SERIAL N°	MB1-1447
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22370
COMPLETE BOGIE WEIGHT [Kg]	7283
OPERATOR	DATE
EDWARD	5/31/2024



	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00	0.90 \nearrow
	MAX 0.00	
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00	0.31 \nearrow
	MAX 0.00	
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00	-0.14 \nearrow
	MAX 0.00	
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00	0.61 \nearrow
	MAX 0.00	
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00	-0.30 \nearrow
	MAX 0.00	

LEFT JACK LOAD	
7376	Kg

SECONDARY SUSPENSION				ϕ
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]		THEORETICAL [mm]
586.46	+	0.00	=	586.46
				MIN 585.00
				MAX 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]	THEORETICAL [mm]
-0.31	MIN
	MAX

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	34.93 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q3	5618

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN MAX	35.02 35.02
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q1	5635

ALSTOM

21615

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: 28/03/2024

Name: Saicqwa

Assembly after test

Date: 24/05/24

Name: Goodfrey & Xolani









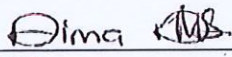
ROTOR S/N MCB23-11-106		STATOR S/N CTB-1618	
<p>Bearing lubrication - Security operation Incorrect lubrication can lead to engine failure with a safety risk in service SRIL TROS 965.289</p>			
<p>INSULATED CERAMIC BEARING DRIVE END - Security operation Incorrect assembly can lead to engine failure with 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 359 - 1369794</p>			
<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: 498g</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>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>			
<p>Serial N°: GERMANY: - 0200 X116 - 0817 04/23 SN 0168</p>			
<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>AMXG180</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>	
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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)		945 MΩ <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	
OPERATOR		Quality verification	
Out of round at the end of the shaft drive end, 0,05 max Value: 0,01mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: AMXG180	<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	Device serial number: AMXG180	<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	Device serial number: CTB-1618	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Sensor reference: DTR0000512252/DS0141HW	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: 0231700328	<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	switch reference (in the event of failure / absence of the motor) (to be checked)	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	switch reference (in the event of failure / absence of the motor) (to be checked)	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	switch reference (in the event of failure / absence of the motor) (to be checked)	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	switch reference (in the event of failure / absence of the motor) (to be checked)	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	switch reference (in the event of failure / absence of the motor) (to be checked)	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	switch reference (in the event of failure / absence of the motor) (to be checked)	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		
									
OBSERVATIONS									

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21651

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:

Name:

18/04/24
XOANT

Assembly after test

Date:

Name:

16/05/24
XOANT / J. MONS

ROTOR S/N MCR23-11-C08	STATOR S/N GILTS-1649		
<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-VA9091 (cross out the references that have not been fitted)</p>			
<p>N°: Romania 0097 09/23 SN 191 - 1369794</p>			
<p>S2 Radial play after assembly (0,042 / 0,114): 0,07mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 144g - Max: 149g</p> <p>Filter 1 (Name and signature): </p> <p>Filter 2 (Name and signature): </p> <p>Mesured quantity: </p> <p>Quality validation: </p>	
<p>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>			
<p>Serial N°: Germany 0200 X116-0153 04/23 SN 0052</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): </p> <p>Filter 2 (Name and signature): </p> <p>Mesured quantity: </p> <p>Quality validation: </p>	
<p>Reference appareil: AMXG100</p>			
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ALSTOM

GIBEL

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

Record the value of the Insulation resistance of the bearings to TROS 915.069 (> 50 kΩ) 16,7MΩ		<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: 0,02mm	<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: 0,07mm	<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): 0,8mm	<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 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 future 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 future 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 future 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 future 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 future 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							KMS					
OBSERVATIONS												

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

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21615

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76977408

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: 2024/05/27

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 ° 21651

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 77126041

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: 2024/05/18

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____



Gibela Rail
02 Shosholozana 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 MB1**
DTR0009706804
SERIAL NUMBER **MB1 1450**

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	03 June 2024
NAME	Kwababana Hlumisa
VISA	

ALSTOM TRANSPORT	DELIVERY STATUS	PRASA MB1 1450
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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 1450		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M 1802		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M 03325		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3063		NGC
Wheel (Right)	AR00000174670	162	07-23	Bonatrans
Wheel (Left)	AR000000174670	160	07-23	Bonatrans
Wheelset (Rear)	AR00000178600	M 03326		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3079		NGC
Wheel (Right)	AR00000174670	151	07-23	Bonatrans
Wheel (Left)	AR00000174670	154	07-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2403047		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2404021		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	994	05-2024	Wabtec <i>Poli</i>
Brake unit without PB (Right front)	AR00000175185	2927	05-2024	Wabtec <i>Poli</i>
Brake unit without PB (Left Front)	AR00000175185	2926	05-2024	Wabtec <i>Poli</i>
Brake unit without PB (left rear)	AR00000175185	2925	05-2024	Wabtec <i>Poli</i>
Motor (front)	AR00000168516	21638		Alstom Ornans
Motor (Rear)	AR00000168516	21655		Alstom Ornans

PRESSING REPORT

DATE
6/3/2024

DATE VALIDATION

RESPONSABLE VALIDATION

PRASA
INSTRUCTION SHEET:

FAMILY:

LOAD TEST : MOTOR BOGIE

PROJECT:

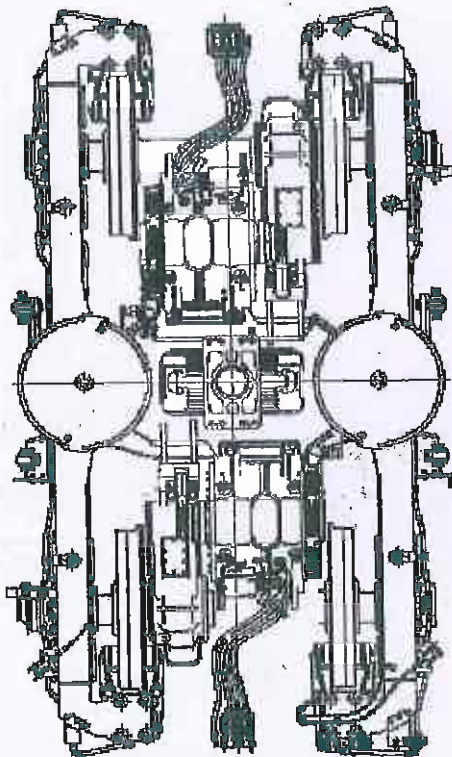
	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 38.00	35.60 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q2	5591

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.47	+	0.00	= 586.47
			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	36.30 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q4	5586

BOGIE SERIAL N°	MEL-1450
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22400
COMPLETE BOGIE WEIGHT [Kg]	7315
OPERATOR	DATE
BAFANA	6/3/2024



	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00	0.01 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00	0.39 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00	-0.15 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00	0.20 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00	0.19 ✓

OPERATOR STAMP

DC-371-6

LEFT JACK LOAD	
7376	Kg

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	35.90 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q1	5592

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.40	+	0.00	= 586.40
			MIN 585.00 MAX 587.50
DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]			THEORETICAL [mm]
0.07			MIN -1.00 MAX 1.00

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	35.60 ✓
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 ° 21638

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 77020329

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

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21638

ALSTOM

GISELA

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

Référence: TROS 916.216

Révision: 2

Documents de référence: AT00000325953 - AT00000325990

Assembly before test

Date: 15/04/2024

Name: Jacques

Assembly after test

Date: 12/08/2024

Name: Tom, XOLANI & GOSTREY

ROTOR S/N MCPD3-11-059		STATOR S/N GIB-1662	
<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-VA3001 (cross out the references that have not been fitted)</p>			
N°: ROMANIA: 0097 09/23 SN 61-1369794			
<p>S2 Radial play after assembly (0,042 / 0,114):</p> <p>0,09mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S9 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 144g - Max: 449g Measured quantity: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Filter 1 (Name and signature) <i>[Signature]</i> Filter 2 (Name and signature) <i>[Signature]</i> Quality Insp. Name and signature <i>Dina EDS</i></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: 0097 09/23 SN 61-1369794			
<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 spare: AMX 100</p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 159g - Max: 169g Measured quantity: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Filter 1 (Name and signature) <i>[Signature]</i> Filter 2 (Name and signature) <i>[Signature]</i> Quality Insp. Name and signature <i>Dina EDS</i></p>	
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)		2,839 <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	
OPERATOR		Quality verification	
Out of round at the end of the shaft drive end, 0,05 max Value 0,01mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	AMX 100	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max: 0,05mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	AMX 100	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,15mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	GIB 1662	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Sensor reference: DTR0000512252/DSD1830.19Q14HW	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	52321003008	<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	check reference (in the event of failure / 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	check reference (in the event of failure / 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 checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	check reference (in the event of failure / 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	check reference (in the event of failure / 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	check 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									
F1	Torque tightening to 4 x 22 Nm:		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	check reference (in the event of failure / 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 18g				<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK		
S4	18g (0/+4.5) CC	Mesured quantity:					<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			
<small>Quality Insp Name and Signature:</small> <div style="text-align: right; font-family: cursive;">Dima</div>									
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° 21655

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 77147318

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: 2024/05/16

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____



Gibela Rail
02 Shosholozo 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: 19/09/2024

Name: XOLANT

Assembly after test

Date: 19/09/2024

Name: Jacques

ROTOR S/N		STATOR S/N	
MUR3-11-009		GIB-1678	
<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-EGM/C4-VA3091 (cross out the references that have not been fitted)</p>			
N°: Romania 0097 09/23 SN78-1369794			
<p>S2 Radial play after assembly (0,042 / 0,114): 0,08mm</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>Measured quantity: <input 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: <i>Dima</i></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 SKE: 6214-M/C4-VL0241 (cross out the references that have not been fitted)</p>			
Serial N°: Germany 0200 X116-0738 04/23 SNO102			
<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>Min: 159g - Max: 164g</p> <p>Measured quantity: <input 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: <i>Dima</i></p>	
Reference appareil: AMXG100			
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ALSTOM

GIBELU

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)		25,7 M.Ω		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
OPERATION		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	
Value: 0,01mm		AMXG100		
Out of round on toothed wheel 0,1 max:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
0,02mm		AMXG100		
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	
0,8mm		GIBELU 1		
Sensor reference: DTR0000512252/DSD1830.19Q14HW	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
		60304003059		

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
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:						Dima [Signature]				
OBSERVATIONS										

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

