



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 - 1350**

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COMPLIANCE CERTIFICATE

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

CONSTRUCTOR APPROVAL

DATE	28 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	M1350		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M16663		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M3061		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K2934		NGC
Wheel (Right)	AR00000174670	004	07-23	Bonatrans
Wheel (Left)	AR000000174670	051	07-23	Bonatrans
Wheelset (Rear)	AR00000178600	M3062		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K2896		NGC
Wheel (Right)	AR00000174670	059	07-23	Bonatrans
Wheel (Left)	AR00000174670	015	07-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2311153		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2312066		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1612	02-24	Wabtec
Brake unit without PB (Right front)	AR00000175185	4886	02-24	Wabtec
Brake unit without PB (Left Front)	AR00000175185	4878	02-24	Wabtec
Brake unit without PB (left rear)	AR00000175185	4875	02-24	Wabtec
Motor (front)	AR00000168516	20485		Alstom Ornans
Motor (Rear)	AR00000168516	21433		Alstom Ornans

PRESSING REPORT

DATE 2/28/2024	RESPONSABLE VALIDATION	PRASA	LOAD TEST : MOTOR BOGIE
DATE VALIDATION		INSTRUCTION SHEET:	PROJECT:
		FAMILY:	

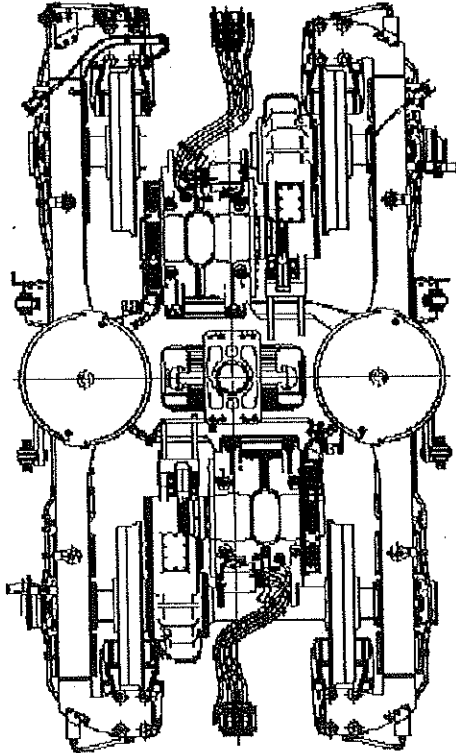
	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	33.00	39.00	37.78
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5551

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.94	+	0.00	MIN 585.00 MAX 587.50

RIGHT JACK LOAD	Kg
7376	

BOGIE SERIAL N°	MB1-1350
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22354
COMPLETE BOGIE WEIGHT [Kg]	7274
OPERATOR	BAFANA
DATE	2/28/2024

OPERATOR STAMP
DC-3FI-6



	THEORETICAL		MEASURED
	MIN	MAX	
LOAD DIFFERENCE ON FRONT AXLE [%]	0.00	0.00	-0.23
LOAD DIFFERENCE ON REAR AXLE [%]	0.00	0.00	0.85
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	0.00	0.00	-0.18
LOAD DIFFERENCE ON RAILS [%]	0.00	0.00	0.31
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	0.00	0.00	0.54

LEFT JACK LOAD	Kg
7375	

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
587.09	+	0.00	MIN 585.00 MAX 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]		THEORETICAL [mm]
-0.15		MIN -1.00 MAX 1.00

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	33.00	39.00	37.91
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5565

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]			
GAP PRIMARY SUSPENSION [mm]	33.00	39.00	37.50
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5646

MOT 21433

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: 04/01/04

Name: ROMANI

Assembly after test

Date: 01/2/24

Name: Geoffrey Xolweni & Thomas

ROTOR S/N		STATOR S/N	
MCR50-11-033		GTL3-1447	
<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-VA3001 (cross out the references that have not been fitted)</p>			
N°: ROMANI: 0097 09/23 SN 224 - 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>S3 LUBRICATION 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>[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 SKE 6214-M/C4-JL 0241 (cross out the references that have not been fitted)</p>			
Serial N°: GERMANY: 0200 X272-1258 09/23 - SN 0082			
<p>S1 Radial play after assembly (0,021 / 0,067): 0,05mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S3 LUBRICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>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>[Signature]</i></p>	
Référence appareil: AJEP14			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216	
		Page 1	

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GIBEL

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

Record the value of the Insulation resistance of the bearings to TROS 915.069 (> 50 kΩ)		11,5 MΩ		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
OPERATOR		Quality verification		
Out of round at the end of the shaft drive end 0,07mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	AJEP14		
Out of round on toothed wheel 0,1 max: 0,05mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	AJEP14		
sensor / toothed wheel play 0,7 (+/- 0,2): 0,7mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	GTL3-1447		

Sensor reference: DTR0000512252/DSD1830.19Q14HW

☒ OK ☐ NOK 880-36007380

☐ OK ☐ 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 motorized screwdriver)	QC 1 X 61 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
F2	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of 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	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
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
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

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

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

Quality Insp Name and Signature:

Comments

OBSERVATIONS

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

TROS 916.216

2

Page

2

GIBELA RAIL TRANSPORT CONSORTIUM RE (PTY) LTD

Traction Motors Quality

2024-02-01

Name: Gasore

Signature: Gasore



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21433

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76568545

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

Perfomed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____ *DM*



Gibela Rail
02 Shosholozwa Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

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MOT 20485

ALSTOM

GIBELG

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

Référence: TROS 916.216

Révision: 2

Documents de référence: AT00000325953 - AT00000325990

Assembly before test

Date: 23/01/2003

Name: J. J. J.

Assembly after test

Date: 11/02/03

Name: XOUTNI

ROTOR S/N MCR2240-125		STATOR S/N GIB-0476	
<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 11/22 SN 70-5747153			
<p>S2 Radial play after assembly (0,042 / 0,114):</p> <p>0,08 <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</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-VL0241 (cross out the references that have not been fitted)</p>			
Serial N°: Germany 0200 W312-0744 11.22 SN 6057			
<p>S1 Radial play after assembly (0,021 / 0,067):</p> <p>0,05 <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Reference appareil: AXU28</p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 159g Max: 164g Measured quantity:</p> <p>Filter 1 (Name and signature) Filter 2 (Name and signature)</p> <p>Quality validation: Quality Insp. Name and signature</p>	
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216	
		Page 1	

ALSTOM

GIBELG

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)		2,62 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	Out of round at the end of the shaft drive end 0,05 max:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK

0,02 mm

Out of round on toothed wheel 0,1 max: <u>0,04</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>ANUK28</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2): <u>0,85</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>MA</u>	<input checked="" 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>52148007901</u>	<input checked="" 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: <u>18g</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
S4 18g (0/+4.5) CC	Mesured quantity: <u>18g</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK

Final inspection following the check-list DTR0000452909 and DTR0000452910 (in the case of 100% inspection of the production)

<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK

Final inspection
Quality Insp Name and Signature: <u>Kasane J</u>

Comments

OBSERVATIONS



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 20485

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 74649384

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: 6/3/2023

Function: Final Inspection

Performed and signed off by: Name_____ Buhle Masuku

Signature_____ 

Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

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

CUSTOMER **Gibela**

CONTRACT

PROJECT **PRASA**

MANUFACTURER'S DELIVERY DOCUMENT

PRODUCT TYPE **MOTOR BOGIE MB2**

DTR0009706805

SERIAL NUMBER **MB2 580**

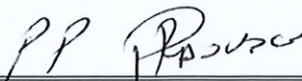
CONTENTS

- 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	28 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 MB2	DTR0009706805	580		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M1649		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M03059		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K2949		NGC
Wheel (Right)	AR00000174670	039	04-23	Bonatrans
Wheel (Left)	AR000000174670	061	04-23	Bonatrans
Wheelset (Rear)	AR00000178600	M03060		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K2888		NGC
Wheel (Right)	AR00000174670	061	07-23	Bonatrans
Wheel (Left)	AR00000174670	006	07-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2311156		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2312110		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1614	02-24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	4869	02-24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	4876	02-24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	4861	02-24	WEBTEC
Motor (front)	AR00000168516	21446		GIBELA
Motor (Rear)	AR00000168516	21459		GIBELA

PRESSING REPORT

DATE	2/28/2024
DATE VALIDATION	
RESPONSABLE VALIDATION	

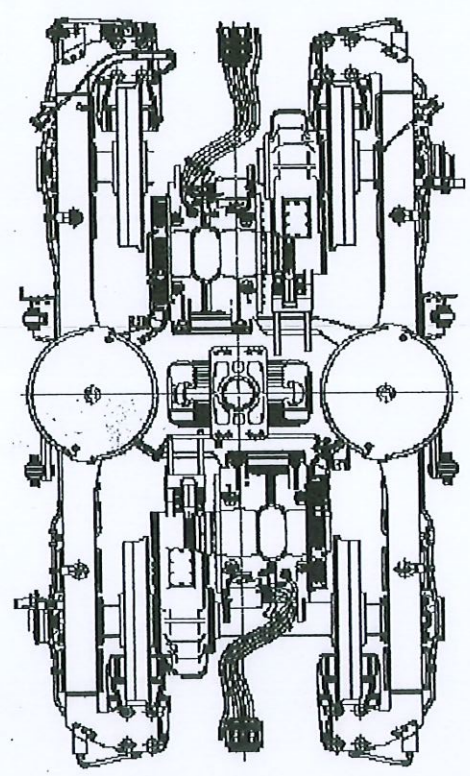
PRASA	LOAD TEST : MOTOR BOGIE
INSTRUCTION SHEET:	
FAMILY:	PROJECT:

THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN	
	MAX	
GAP PRIMARY SUSPENSION [mm]	MIN	33.00
	MAX	39.00
SHIM THICK [mm]		38.29
WEIGHT ON WHEEL [Kg]	Q2	5612

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.99	+	0.00	586.99
			MIN 585.00
			MAX 587.50

RIGHT JACK LOAD	7376 Kg
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BOGIE SERIAL N°	MB2-580
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [kg]	22358
COMPLETE BOGIE WEIGHT [kg]	7270
OPERATOR	BAFANA
DATE	2/28/2024



OPERATOR STAMP	DC-3FI-6
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THEORETICAL		MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN	0.00
	MAX	0.00
LOAD DIFFERENCE ON REAR AXLE [%]	MIN	0.00
	MAX	0.00
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN	0.00
	MAX	0.00
LOAD DIFFERENCE ON RAILS [%]	MIN	0.00
	MAX	0.00
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN	0.00
	MAX	0.00

LEFT JACK LOAD	7376 Kg
----------------	---------

THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN	
	MAX	
GAP PRIMARY SUSPENSION [mm]	MIN	33.00
	MAX	39.00
SHIM THICK [mm]		37.59
WEIGHT ON WHEEL [Kg]	Q1	5547

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
587.40	+	0.00	587.40
			MIN 585.00
			MAX 587.50
DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]			
			MIN -1.00
			MAX 1.00

THEORETICAL		MEASURED
WHEEL DIAMETER [mm]	MIN	
	MAX	
GAP PRIMARY SUSPENSION [mm]	MIN	33.00
	MAX	39.00
SHIM THICK [mm]		37.92
WEIGHT ON WHEEL [Kg]	Q3	5657



CERTIFICATION OF CONFORMITY

Inspection certificate according to EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N° 21446

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76596279

Status: QC PASS

Derogations / Concession / Waiver N°: N/A

Customer modification: N/A


Missing parts: N/A

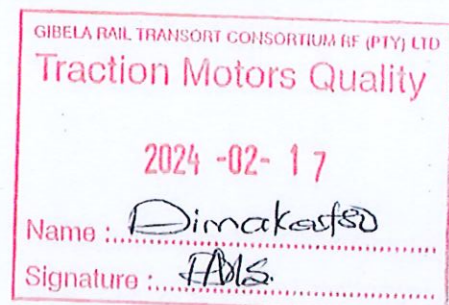
We hereby declare, barring exceptions, reservations or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements, and applicable standards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

Date: 2024/02/17

Function: Final Inspection

Performed and signed off by: Name_____ Dimakatso Mohoalali

Signature_____ 



Gibela Rail
02 Shosholozza Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

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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: 26/01/04

Name: XOLANI

Assembly after test

Date: 10/02/04

Name: Geoffrey Xolani & Thomas

ROTOR S/N MCR00-11-034		STATOR S/N GIB-1454	
<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 8N295 - 139794			
<p>S2 Radial play after assembly (0,042 / 0,114): 0,06mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 144g - Max: 149g</p> <p>Mesured quantity: <input type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Filter 1 (Name and signature): [Signature]</p> <p>Filter 2 (Name and signature): [Signature]</p> <p>Quality validation: [Signature]</p>	
<p>S1 INSULATED CERAMIC BEARING OPPOSITE DRIVE END side - Security operation Incorrect assembly can lead to engine failure with a safety risk in service SRIL TROS 965.289 FAG: 6214-M-P6-J20AB-H257A-C4 or 6214-M-P6-J20AA-H257-C4 SKF 6214-M/C4-VL 0241 (cross out the references that have not been fitted)</p>			
Serial N°: GERMANY: - 0200 X272 - 1244 09/23 8N0061			
<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>Mesured quantity: <input type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Filter 1 (Name and signature): [Signature]</p> <p>Filter 2 (Name and signature): [Signature]</p> <p>Quality verification: [Signature]</p>	
Référence appareil: AJ2P14			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216 2 Page 1	

ALSTOM

GIBELCO

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) 3,66 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: 0,05mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	AJ2P14 <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	AJ2P14 <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	GIBELCO <input type="checkbox"/> OK <input type="checkbox"/> NOK

Sensor reference: DTR0000512252/DSD1830.19Q14HW

☒ OK ☐ NOK 9231000019 Device serial number☐ OK ☐ NOK

Prep. & Final Assembly

OPERATOR			Quality verification			
<input checked="" type="checkbox"/> F1	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<small>wrench reference (in the event of failure / absence of the inspected screwdriver)</small> <u>NCCS 287</u>	QC 1 X 61 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
<input checked="" type="checkbox"/> F2	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<small>wrench reference (in the event of failure / absence of the inspected screwdriver)</small> <u>NCCS 287</u>	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	<small>wrench reference (in the event of failure / absence of the inspected screwdriver)</small> <u>NCCS 281</u>	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	<small>wrench reference (in the event of failure / absence of the inspected screwdriver)</small> <u>NCCS 288</u>	QC 1 X 18 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
<input checked="" type="checkbox"/> F5	Torque tightening to 6 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<small>wrench reference (in the event of failure / absence of the inspected screwdriver)</small> <u>NCCS 288</u>	QC 1 X 18 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK	

Finishing

<input checked="" type="checkbox"/> F1	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<small>wrench reference (in the event of failure / absence of the inspected screwdriver)</small> <u>NCCS 288</u>	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: <u>18g</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
<input checked="" type="checkbox"/> S4	18g (0/+4.5) CC	Measured quantity: <u>18g</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK

Final inspection following the check-list DTR0000452909 and DTR0000452910 (In the case of 100% inspection of the production)

☒ OK ☐ NOK

Final Inspection

Quality Insp Name and Signature:

Buhle

Comments

OBSERVATIONS

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

TROS 916.216

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GIBELA RAIL TRANSPORT CONSORTIUM (PTY) LTD

Traction Motors Quality

2024 -02- 16

Name : BuhleSignature : [Signature]



CERTIFICATION OF CONFORMITY

Inspection certificate according to EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N° 21459

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76618080

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: 2024/02/17

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____



Gibela Rail
02 Shosholozza Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

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21459

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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: 09/01/2024

Name: Sigues & Xolani

Assembly after test

Date: 10/02/24

Name: Geoffrey Xolani & Thomas

ROTOR S/N		STATOR S/N	
MCR22-11-110		CTB-1473	
Bearing lubrication - Security operation Incorrect lubrication can lead to engine failure with a safety risk in service SRIL TROS 965.289			
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)			
N°: Romania : 0097 09/23 SN304-1369794			
S2 Radial play after assembly (0,042 / 0,114): 0,07mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK		S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly Min: 144g - Max: 169g Mesured quantity: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK Filter 1 (Name and signature) <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK Filter 2 (Name and signature) <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK Quality validation: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	
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-VL 0241 (cross out the references that have not been fitted)			
Serial N°: Germany : 0200 X272-1238 09/23 SN00049			
S1 Radial play after assembly (0,021 / 0,067): 0,06mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK Référence Appareil: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK		S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly Min: 159g - Max: 164g Mesured quantity: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK Filter 1 (Name and signature) <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK Filter 2 (Name and signature) <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK Quality verification: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	
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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)		6,47 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	Device serial number	<input checked="" 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 checked="" 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 checked="" type="checkbox"/> OK <input type="checkbox"/> NOK

Sensor reference: DTR0000512252/DSD1830.19Q14HW ☒ OK ☐ NOK Device serial number: 3231 1000140 ☐ OK ☐ 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	
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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) ☒ OK ☐ NOK

Final Inspection

Quality Insp Name and Signature:

Buhle

Comments

OBSERVATIONS

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

TROS 916.216

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