

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 1387**

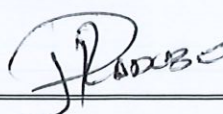
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COMPLIANCE CERTIFICATE

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	08 April 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	1387		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M1720		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M03161		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3230		NGC
Wheel (Right)	AR00000174670	104	11-22	Bonatrans
Wheel (Left)	AR000000174670	119	10-23	Bonatrans
Wheelset (Rear)	AR00000178600	M03162		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3080		NGC
Wheel (Right)	AR00000174670	132	11-22	Bonatrans
Wheel (Left)	AR00000174670	109	07-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2308089		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2308151		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1681	03-24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	5057	03-24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	5070	03-24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	5069	03-24	WEBTEC
Motor (front)	AR00000168516	21531		GIBELA
Motor (Rear)	AR00000168516	21527		GIBELA

PRESSING REPORT

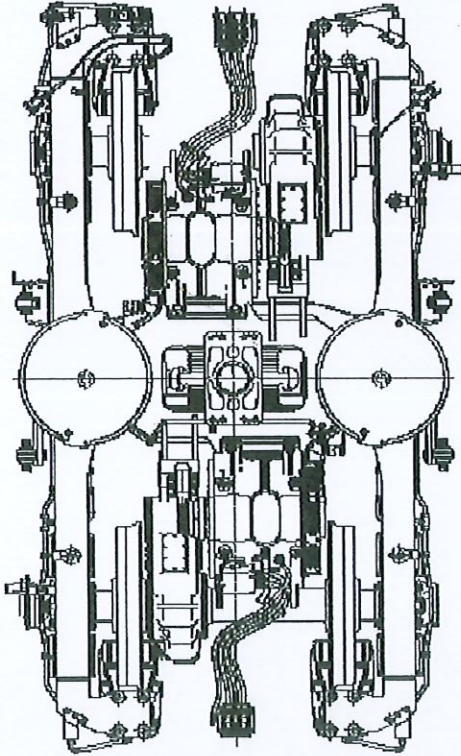
DATE 4/4/2024	RESPONSABLE VALIDATION	PRASA	LOAD TEST : MOTOR BOGIE
DATE VALIDATION		INSTRUCTION SHEET:	PROJECT:
		FAMILY:	

SECONDARY SUSPENSION		THEORETICAL	MEASURED
WHEEL DIAMETER [mm]		MIN MAX	
GAP PRIMARY SUSPENSION [mm]		MIN MAX	37.29
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q4		5518

SECONDARY SUSPENSION		THEORETICAL [mm]
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]
585.95	+	1.00 = 586.95
		MIN 585.00 MAX 587.50

RIGHT JACK LOAD
7376 Kg

BOGIE SERIAL N°	MB1-1387
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22363
COMPLETE BOGIE WEIGHT [Kg]	7283
OPERATOR	DATE
SAFANA	4/4/2024



SECONDARY SUSPENSION		THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]		MIN 0.00 MAX 0.00	-1.07
LOAD DIFFERENCE ON REAR AXLE [%]		MIN 0.00 MAX 0.00	1.52
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]		MIN 0.00 MAX 0.00	-0.22
LOAD DIFFERENCE ON RAILS [%]		MIN 0.00 MAX 0.00	0.23
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]		MIN 0.00 MAX 0.00	1.29

OPERATOR STAMP
DC-BFI-6

LEFT JACK LOAD
7376 Kg

SECONDARY SUSPENSION		THEORETICAL	MEASURED
WHEEL DIAMETER [mm]		MIN MAX	
GAP PRIMARY SUSPENSION [mm]		MIN 33.00 MAX 39.00	36.50
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q3		5688

SECONDARY SUSPENSION		THEORETICAL [mm]
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]
587.45	+	0.00 = 587.45
		MIN 585.00 MAX 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]		THEORETICAL [mm]
-0.50		MIN -1.00 MAX 1.00

SECONDARY SUSPENSION		THEORETICAL	MEASURED
WHEEL DIAMETER [mm]		MIN MAX	
GAP PRIMARY SUSPENSION [mm]		MIN 33.00 MAX 39.00	36.79
SHIM THICK [mm]			
WEIGHT ON WHEEL [Kg]	Q1		5519



CERTIFICATION OF CONFORMITY

Inspection certificate according to EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21531

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76832899

Status: QC PASS

Derogations / Concession / Waiver N °: N/A

Customer modification: N/A

Missing parts: N/A

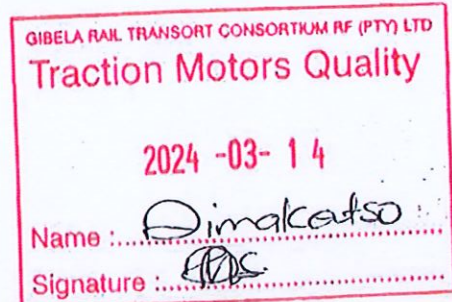
We hereby declare, barring exceptions, reservations or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements, and applicable standards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

Date: 2024/03/14

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____



Gibela Rail
02 Shosholoza Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

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

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:

02/03/24
Xolani

Assembly after test

Date:

Name:

02/03/24
Godfrey Xolani & Thomas

ROTOR S/N MCR00-10-000		STATOR S/N GAB-1531	
<p>Bearing lubrication - Security operation Incorrect lubrication can lead to engine failure with a safety risk in service SRIL TROS 965 289</p>			
<p>INSULATED CERAMIC BEARING DRIVE END - Security operation Incorrect assembly can lead to engine failure with a safety risk in service SRIL TROS 965 289 FAG: NU 214-E-XL-M1-P6-F1-H257A-J20AB-C4 or NU-214-E-M1-P6-F1-H257A-J20AA-C4 SKF: NU 214 ECM/C4-VA3091 (cross out the references that have not been fitted)</p>			
N°: ROMANIA:- 0097 10/23 SN 210 - 1988233			
<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: Dima <i>[Signature]</i></p>	
<p>INSULATED CERAMIC BEARING OPPOSITE DRIVE END side - Security operation Incorrect assembly can lead to engine failure with a safety risk in service SRIL TROS 965 289 FAG: 6214-M-P6-J20AB-H257A-C4 or 6214-M-P6-J20AA-H257-C4 SKF 6214-M/C4-VL 0241 (cross out the references that have not been fitted)</p>			
Serial N°: GERMANY:- 0200 X272-1234 09/23 SN 0040			
<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>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: Dima <i>[Signature]</i></p>	
Référence appareil: ATEPIG			
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)		16,1 M.Ω		<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: ATEPIG	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
Out of round on toothed wheel 0,1 max: 0,02mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: ATEPIG	<input type="checkbox"/> OK <input type="checkbox"/> NOK	
sensor / toothed wheel play 0,7 (+/- 0,2): 0,8mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: GIESCOO	<input type="checkbox"/> OK <input type="checkbox"/> NOK	

Sensor reference: DTR0000512252/DSD1830.19Q14HW



OK

NOK

David's serial number
80311000890

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
F2	Torque tightening to 8 x 76 Nm:	<input checked="" 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
F4	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/>	OK	<input type="checkbox"/>	NOK
F5	Torque tightening to 6 x 22 Nm:	<input checked="" 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
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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:

Dima

Comments

OBSERVATIONS

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

TROS 916.216

2

Page

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GIBELA RAIL TRANSPORT CONSORTIUM RF (PTY) LTD

Traction Motors Quality

2024 -03- 14

Name : Dima

Signature : Dima



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21527

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76793309

Status: QC PASS

Derogations / Concession / Waiver N °: N/A

Customer modification: N/A

Missing parts: N/A

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

Date: 2024/03/14

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

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

21527

ALSTOM

GIBEL

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

Référence: TROS 916.216

Révision: 2

Documents de référence: AT00000325953 - AT00000325990

Assembly before test

Date:

28/02/2024

Name:

Jacques

Assembly after test

Date:

12/03/24

Name:

Gardner & Xolani

ROTOR S/N MCR03-10-011		STATOR S/N CIB-1550	
<p>Bearing lubrication - Security operation Incorrect lubrication can lead to engine failure with a safety risk in service SRIL TROS 965.289</p>			
<p>INSULATED CERAMIC BEARING DRIVE END - Security operation Incorrect assembly can lead to engine failure with a safety risk in service SRIL TROS 965.289 FAG: NU 214-E-XL-M1-P6-F1-H257A-J20AB-C4 or NU 214-E-M1-P6-F1-H257A-J20AA-C4 SKF-NU 214-ECM/C4-VA3091 (cross out the references that have not been fitted)</p>			
N°: ROMANIA 0097 10/02/23 SN 302 - 1988033			
<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 type="text"/></p> <p>Filter 1 (Name and signature): </p> <p>Filter 2 (Name and signature): </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>			
Serial N°: GERMANY 0000 X116-1000 04/02/23 SN 0000			
<p>S1 Radial play after assembly (0,021 / 0,067):</p> <p>0,06mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 159g Max: 164g</p> <p>Measured quantity: <input type="text"/></p> <p>Filter 1 (Name and signature): </p> <p>Filter 2 (Name and signature): </p> <p>Quality verification: </p>	
Référence appareil: ASEP14			
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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)

3,3392



OK



NOK

OPERATOR

Quality verification

Out of round at the end of the shaft drive end, 0,05 max Value <u>0,01 mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>152174</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max: <u>0,04 mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>152174</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2): <u>0,7 mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>CABELECOO</u>	<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>S231 1000873</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK

Prep. & Final Assembly

OPERATOR				Quality verification	
F1	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the 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: <u>18g</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
S4	18g (0/+4.5) CC	Mesured quantity: <u>18g</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK

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

Final inspection

Quality Insp Name and Signature:

Dima

Comments

OBSERVATIONS

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

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

2024 -03- 14

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**

DTR0009706804

SERIAL NUMBER **MB1 1397**

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"/>
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- Motor certificate.....	8 pages	<input checked="" type="checkbox"/>

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

CONSTRUCTOR APPROVAL	
DATE	11 April 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 1397		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M 1718		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M 03183		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3216		NGC
Wheel (Right)	AR00000174670	129	12-23	Bonatrans
Wheel (Left)	AR000000174670	151	12-23	Bonatrans
Wheelset (Rear)	AR00000178600	M 03184		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K 3211		NGC
Wheel (Right)	AR00000174670	107	11-23	Bonatrans
Wheel (Left)	AR00000174670	105	11-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2311004		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2310038		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1708	04-24	Wabtec
Brake unit without PB (Right front)	AR00000175185	5153	04-24	Wabtec
Brake unit without PB (Left Front)	AR00000175185	5151	04-24	Wabtec
Brake unit without PB (left rear)	AR00000175185	5152	04-24	Wabtec
Motor (front)	AR00000168516	21548		Alstom Ornans
Motor (Rear)	AR00000168516	21547		Alstom Ornans

DATE
4/11/2024

DATE VALIDATION

RESPONSABLE VALIDATION

PRASA
INSTRUCTION SHEET:
FAMILY:

PRESSING REPORT

LOAD TEST : MOTOR BOGIE

PROJECT:

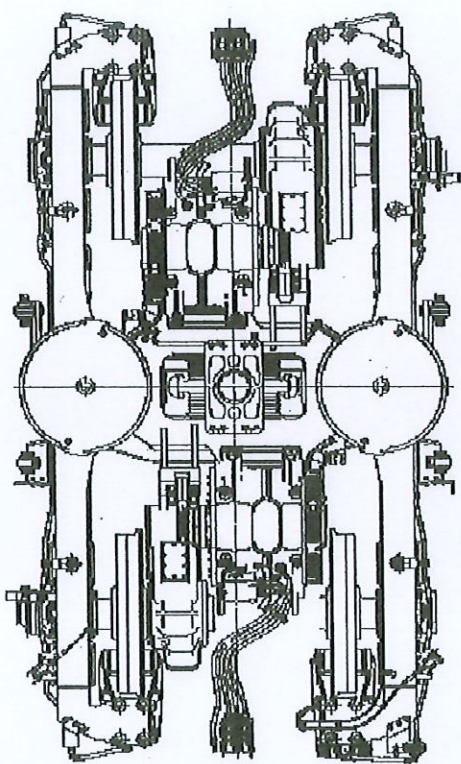
	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.90 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [kg]	Q2	5687

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
587.29	+	0.00	= 587.29
			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	37.29 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [kg]	Q4	5538

BOGIE SERIAL N°	MB1-1397
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [kg]	22383
COMPLETE BOGIE WEIGHT [kg]	7288
OPERATOR	DATE
BAFANA	4/11/2024



	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00	-1.96 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00	1.27 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00	-0.28 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00	-0.34 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00	1.61 ✓

OPERATOR STAMP	DC-371-6
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LEFT JACK LOAD
7377 Kg

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.70 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [kg]	Q1	5468

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.89	+	0.00	= 586.89
			MIN 585.00 MAX 587.50
DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]			0.40
			MIN -1.00 MAX 1.00

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	36.80 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [kg]	Q3	5680



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21548

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76851221

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: 2024/04/11

Function: Final Inspection

Perfomed 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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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: 05/03/2024

Name: Jacques

Assembly after test

Date: 19/03/24

Name: LOUINI

ROTOR S/N	STATOR S/N		
MCPD3-10-002	CTFB-1542		
<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 10/23 SH 240 - 1988233			
<p>Radial play after assembly (0,042 / 0,114): 0,07mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>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: 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 X 116 - 09.50 04/23 SH 02.45			
<p>Radial play after assembly (0,021 / 0,067): 0,06mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Référence appareil: AS 0174</p>		<p>LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min 159g - Max 166g</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: Dima</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)	3,6/G.2	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
OPERATOR		Quality verification
Out of round at the end of the shaft drive end 0,06mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: A-TEP/14
Out of round on toothed wheel 0,1 max: 0,05mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: A-SC/14
sensor / toothed wheel play 0,7 (+/- 0,2): 0,75mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number: CTBFL001

Sensor reference: DTR0000512252/DSD1830.19Q14HW



OK

NOK

Device serial number
5231400511

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	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	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	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	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	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	QC 1 X 22 Nm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	
--	---------------------------------	---	--------------	---	--

Grease protection transport

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

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



OK



NOK

Final Inspection

Quality Insp Name and Signature:

Dima

Comments

OBSERVATIONS

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

TROS 916.216

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

2024 -03- 20

Name : Dima

Signature : Dima



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21547

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76851222

Status: QC PASS

Derogations / Concession / Waiver N °: N/A

Customer modification: N/A

Missing parts: N/A

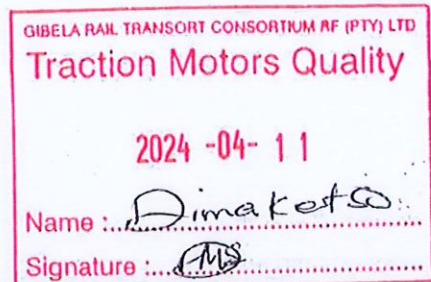
We hereby declare, barring exceptions, reservations or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements, and applicable standards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

Date: 2024/04/11

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____



Gibela Rail
02 Shosholota 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: 05/03/24

Name: Godfrey

Assembly after test

Date: 18/03/24

Name: XOLANI GODFREY

ROTOR S/N MCR23-10-007	STATOR S/N GIB-1536		
<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/14-VA3091 (cross out the references that have not been fitted)</p>			
N°: ROMANIA: 0097 10/23 5498 - 1988233			
<p>Radial play after assembly (0,042 / 0,114): 0,07mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min 144g - Max: 149g Measured quantity: <input type="text"/></p> <p>Filter 1 (Name and signature) <input type="text"/> Filter 2 (Name and signature) <input type="text"/></p> <p>Quality Insp. Name and signature <input type="text"/></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 X116-0959 04/23 540264			
<p>Radial play after assembly (0,021 / 0,067): 0,05mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min 159g Max: 164g Measured quantity: <input type="text"/></p> <p>Filter 1 (Name and signature) <input type="text"/> Filter 2 (Name and signature) <input type="text"/></p> <p>Quality Insp. Name and signature <input type="text"/></p>	
Référence appareil AMXG14			
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Record the value of the Insulation resistance of the bearings to TROS 915.069 (> 50 kΩ)		966 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: 0,01	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number AMXG14	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max: 0,06mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number AMXG14	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,7mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number GIBEL001	<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 52317000671	<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 wrench) 02864188	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 wrench) 02864188	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) 02511039	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 wrench) 02864188	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 wrench) 02864188	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 wrench) 02864188	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		RDS	
OBSERVATIONS						
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