



ALSTOM UBUNYE

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 1435

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- Load test report.....	1 page	<input checked="" type="checkbox"/>
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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	20 May 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	1435		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M1766		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M03287		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3265		NGC
Wheel (Right)	AR00000174670	022	10-23	Bonatrans
Wheel (Left)	AR000000174670	093	10-23	Bonatrans
Wheelset (Rear)	AR00000178600	M03288		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3209		NGC
Wheel (Right)	AR00000174670	053	10-23	Bonatrans
Wheel (Left)	AR00000174670	031	10-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2401027		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2401038		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1783	05-24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	5374	05-24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	5373	05-24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	5375	05-24	WEBTEC
Motor (front)	AR00000168516	21631		GIBELA
Motor (Rear)	AR00000168516	21628		GIBELA

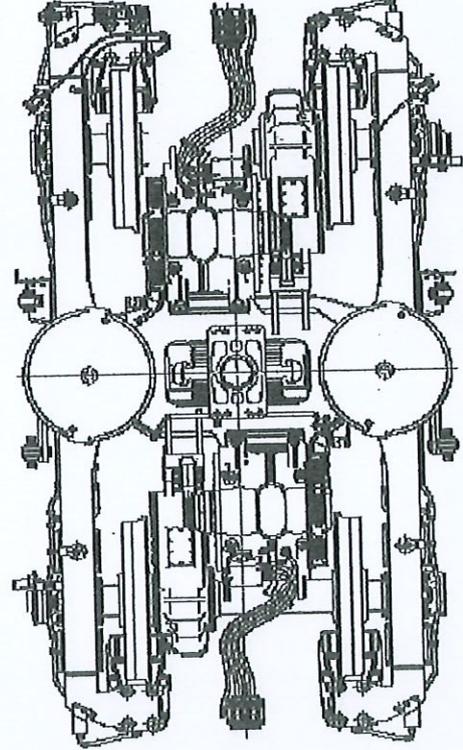
PRESSING REPORT

DATE 5/20/2024	RESPONSIBLE VALIDATION	PRASA	LOAD TEST : MOTOR BOGIE
		INSTRUCTION SHEET:	PROJECT:
		FAMILY:	

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]	33.00	39.00	35.77 ✓
GAP PRIMARY SUSPENSION [mm]	33.00	39.00	
SHIM THICK [mm]		Q4	5567
WEIGHT ON WHEEL [Kg]			

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

RIGHT JACK LOAD	7375	Kg
-----------------	------	----



LEFT JACK LOAD	7377	Kg
----------------	------	----

BOGIE SERIAL N°	MB1-1435
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [kg]	22372
COMPLETE BOGIE WEIGHT [kg]	7304
OPERATOR	DATE
SAFANA	5/20/2024

OPERATOR STAMP	DC-BFI-6
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	THEORETICAL		MEASURED
	MIN	MAX	
LOAD DIFFERENCE ON FRONT AXLE [%]	0.00	0.00	-0.59 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	0.00	0.00	0.66 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	0.00	0.00	-0.20 ✓
LOAD DIFFERENCE ON RAILS [%]	0.00	0.00	0.04 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	0.00	0.00	0.63 ✓

SECONDARY SUSPENSION			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
			MIN
587.42	+	0.00	587.42
			587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]	✓	
	-0.22	
	MIN	MAX
	-1.00	1.00

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]	33.00	39.00	35.80 ✓
GAP PRIMARY SUSPENSION [mm]	33.00	39.00	
SHIM THICK [mm]		Q3	5641
WEIGHT ON WHEEL [Kg]			

	THEORETICAL		MEASURED
	MIN	MAX	
WHEEL DIAMETER [mm]	33.00	39.00	35.70 ✓
GAP PRIMARY SUSPENSION [mm]	33.00	39.00	
SHIM THICK [mm]		Q1	5549
WEIGHT ON WHEEL [Kg]			

21631

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: 13/04/24
Name: XOLANI

Assembly after test
Date: 12/05/24
Name: Godfrey Xolani & Thomas

ROTOR S/N MCP23-11-006		STATOR S/N GIB-1657	
<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 353 -13 89794</p>			
<p>Radial play after assembly (0,042 / 0,114): 0,06 mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>LUBRICATION WITH MOBILITH SHC 100 before cover assembly Min: 144g - Max: 149g Filter 1 (Name and signature) Filter 2 (Name and signature) Measured quantity: Quality validation: Quality Insp. Name and signature: Dima</p>	
<p>INSULATED CERAMIC BEARING OPPOSITE DRIVE END side - Security operation Incorrect assembly can lead to engine failure with a safety risk in service SRIL TROS 965.289 FAG: 6214-M-P6-J20AB-H257A-C4 or 6214-M-P6-J20AA-H257-C4 SKF 6214-M/C4-VL-0241 (cross out the references that have not been fitted)</p>			
<p>Serial N°: GERMANY: 0200 X116 0748 04/23 SN 0123</p>			
<p>Radial play after assembly (0,021 / 0,067): 0,05 mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>LUBRICATION WITH MOBILITH SHC 100 before cover assembly Min: 159g Max: 164g Filter 1 (Name and signature) Filter 2 (Name and signature) Measured quantity: Quality validation: Quality Insp. Name and signature: Dima</p>	
<p>Référence appareil: AMXG20</p>		<p>TROS 916.216 2 Page 1</p>	

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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) 14,2 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: 0,01 mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number AMXG20	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max: 0,09 mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number AMXG20	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,85 mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number GIB-1657	<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 6031003843	<input type="checkbox"/> OK <input type="checkbox"/> NOK

Prep. & Final Assembly

OPERATOR		Quality verification			
<input checked="" type="checkbox"/> F1	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOK	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"/> F17	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

<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	Comments
Quality Insp Name and Signature: <i>Dima</i>	

OBSERVATIONS





CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B
Serial Number: N ° 21628
Client / Customer: ALSTOM UBUNYE (PTY) LTD
Project: PRASA
P O Number: 77075659
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: 2024/05/13
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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ALSTOM

GIBELTA

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: 12/09/2014
Name: XOUNE

Assembly after test

Date: 12/09/2014
Name: Geoffrey Kolani Thomas

ROTOR S/N MCR23-11-115		STATOR S/N CETS-1648	
<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 SN100-1369794			
<p>S2 Radial play after assembly (0,042 / 0,114): 0,06mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly Min: 144g - Max: 149g Filter 1 (Name and signature) [Signature] Filter 2 (Name and signature) [Signature] Mesured quantity: [Signature] Quality validation: Dima [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-VL-0241- (cross out the references that have not been fitted)</p>			
Serial N°: GERMANY: 0200 X116-0809 04/23 SNO151			
<p>S1 Radial play after assembly (0,021 / 0,067): 0,05mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly Min: 159g Max: 164g Filter 1 (Name and signature) [Signature] Filter 2 (Name and signature) [Signature] Mesured quantity: [Signature] Quality verification: Dima [Signature]</p>	
Référence appareil: AMXG20			
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GIBELTA

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) 11,1 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 type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number AMXG20	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max: 0,03mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number AMXG20	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2): 0,95mm	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number GIBELTA	<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 30.316015751	<input type="checkbox"/> OK <input type="checkbox"/> NOK

Prep. & Final Assembly

OPERATOR				Quality verification			
<input checked="" type="checkbox"/> F1	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/>	OK <input type="checkbox"/> NOK	<small>wrench reference in the event of future absence of the motorized screwdriver</small> NECESSARY	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 future absence of the motorized screwdriver</small> NECESSARY	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 type="checkbox"/>	OK <input type="checkbox"/> NOK	<small>wrench reference in the event of future absence of the motorized screwdriver</small> NECESSARY	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 future absence of the motorized screwdriver</small> NECESSARY	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 future absence of the motorized screwdriver</small> NECESSARY	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 future absence of the motorized screwdriver</small> NECESSARY	QC 1 X 22 Nm	<input type="checkbox"/>	OK <input type="checkbox"/> NOK
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Grease protection transport

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

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

Final Inspection	Comments
Quality Insp Name and Signature: <i>Dimitris EMS</i>	

OBSERVATIONS

MANUFACTURER ALSTOM Ubunye
 Marievale Road, Vosterkroon, Nigel, 1490

CUSTOMER Gibela

CONTRACT

PROJECT PRASA

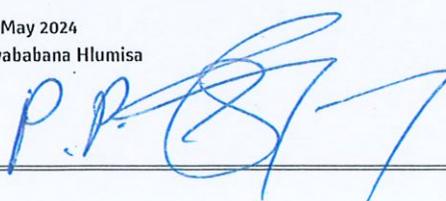
MANUFACTURER'S DELIVERY DOCUMENT	
PRODUCT TYPE	MOTOR BOGIE type MB1
	DTR0009706804
SERIAL NUMBER	MB1 - 1432

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	17 May 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	1432		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	1770		Alstom - Ubunye
Wheelset (Front)	AR000000177020	3277		Alstom - Ubunye
Axle with fitted gearbox	AR000000177072	2873		NGC
Wheel (Right)	AR000000174670	087	07.23	Bonatrans
Wheel (Left)	AR0000000174670	090	07.23	Bonatrans
Wheelset (Rear)	AR000000178600	3278		Alstom - Ubunye
Axle with fitted gearbox	AR000000177072	2872		NGC
Wheel (Right)	AR000000174670	136	07.23	Bonatrans
Wheel (Left)	AR000000174670	157	07.23	Bonatrans
Pneumatic suspension (Right)	AR000000176127	2401124		Hutchinson
Pneumatic suspension (Left)	AR000000176127	2401101		Hutchinson
Brake unit with PB (Right rear)	AR000000174544	1775	05.24	WEBTEC
Brake unit without PB (Right front)	AR000000175185	5346	05.24	WEBTEC
Brake unit without PB (Left Front)	AR000000175185	5332	05.24	WEBTEC
Brake unit without PB (left rear)	AR000000175185	5351	05.24	WEBTEC
Motor (front)	AR000000168516	21578		GIBELA
Motor (Rear)	AR000000168516	21525		GIBELA

PRESSING REPORT

DATE
5/16/2024

RESPONSIBLE VALIDATION

P.R.A.S.A.
INSTRUCTION SHEET:
FAMILY:

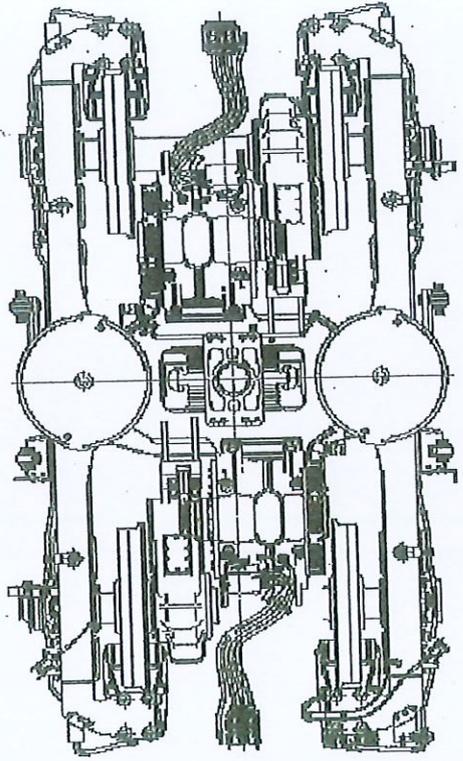
LOAD TEST : MOTOR BOGIE

PROJECT:

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	38.08 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [kg]	Q2	5502

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

RIGHT JACK LOAD
7376 KG



	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00	1.46 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00	-0.87 ✓
LOAD DIFFERENCE FRONT AXLE AND REAR AXLE [%]	MIN 0.00 MAX 0.00	-0.17 ✓
LOAD DIFFERENCE ON RAILS [%]	MIN 0.00 MAX 0.00	0.30 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00	-1.16 ✓

BOGIE SERIAL N°	MB1-1432
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [kg]	22371
COMPLETE BOGIE WEIGHT [kg]	7268
OPERATOR	DATE
SAFANA	5/16/2024

OPERATOR STAMP
DC-BFI-6

LEFT JACK LOAD
7377 KG

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.80 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [kg]	Q1	5665

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.90	+	0.00 =	586.90
			MIN 585.00 MAX 587.50
DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]			THEORETICAL [mm]
-0.44			MIN -1.00 MAX 1.00

	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]	Q3	5554

21525



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: 28/02/2004

Name: Jacques

Assembly after test

Date: 06/05/04

Name: Geoffrey & Yolani

<p>ROTOR S/N</p> <p>MCR03-10-048</p>		<p>STATOR S/N</p> <p>CTB-1548</p>	
<p>Bearing lubrication - Security operation</p> <p>Incorrect lubrication can lead to engine failure with a safety risk in service</p> <p>SRIL TROS 965.289</p>			
<p>INSULATED CERAMIC BEARING DRIVE END - Security operation</p> <p>Incorrect assembly can lead to engine failure with a safety risk in service</p> <p>SRIL TROS 965.289</p> <p>FAG : NU 214-E-XL-M1-P6-F1-H257A-J20AB-C4 or NU 214-E-M1-P6-F1-H257A-J20AA-C4</p> <p>SKF-NU 214-ECM/C4-VA3091</p> <p>(cross out the references that have not been fitted)</p>			
<p>N°: Romania : 0097 10/23 SN200 - 1988233</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:149g</p> <p>Measured quantity:</p> <p>Filter 1(Name and signature): <i>[Signature]</i></p> <p>Filter 2(Name and signature): <i>[Signature]</i></p> <p>Quality validation</p> <p>Quality Insp. Name and signature: <i>[Signature]</i></p>	
<p>INSULATED CERAMIC BEARING OPPOSITE DRIVE END side - Security operation</p> <p>Incorrect assembly can lead to engine failure with a safety risk in service</p> <p>SRIL TROS 965.289</p> <p>FAG : 6214-M-P6-J20AB-H257A-C4 or 6214-M-P6-J20AA-H257-C4</p> <p>SKF-6214-M/C4-VL 0241</p> <p>(cross out the references that have not been fitted)</p>			
<p>Serial N°: Germany :- 0200 X293-0604 10/23 SN0113</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>reference apparel: <i>[Signature]</i></p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min:159g Max:164g</p> <p>Measured quantity:</p> <p>Filter 1(Name and signature): <i>[Signature]</i></p> <p>Filter 2(Name and signature): <i>[Signature]</i></p> <p>Quality verification</p> <p>Quality Insp. Name and signature: <i>[Signature]</i></p>	
<p>FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA</p>		<p>TROS 916.216 2</p>	
		<p>Page 1</p>	



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

Record the value of the Insulation resistance of the bearings to TROS 915.069 (> 50 kΩ)	1,09952	<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 <u>0,01mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>AS 474</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max: <u>0,05mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>AS 474</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2): <u>0,75mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>CIBFLOO</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Sensor reference: DTR0000512252/DS01830.19Q14HW	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>S2316013583</u>	<input type="checkbox"/> OK <input type="checkbox"/> NOK

Prep. & Final Assembly

OPERATOR		Quality verification			
<input checked="" type="checkbox"/> F1	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the associated wrench)	QC 1 X 61 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
<input checked="" type="checkbox"/> F2	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the associated wrench)	QC 1 X 61 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
<input checked="" type="checkbox"/> F3	Torque tightening to 4 x 44 Nm: Fold locking plate	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the associated wrench)	QC 1 X 37 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
<input checked="" type="checkbox"/> F4	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the associated wrench)	QC 1 X 18 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
<input checked="" type="checkbox"/> F5	Torque tightening to 6 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the associated wrench)	QC 1 X 18 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK

Finishing

<input checked="" type="checkbox"/> F1	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	wrench reference (in the event of failure / absence of the associated wrench)	QC 1 X 22 Nm	<input type="checkbox"/> OK <input type="checkbox"/> NOK
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Grease protection transport

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

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

Final inspection
Quality Insp Name and Signature:
Dima AMS

Comments

OBSERVATIONS

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

2024 -05- 07

Name : Dima
Signature : AMS

21578

ALSTOM

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

Référence: TROS 916.216

Révision: 2

Documents de référence: AT00000325953 - AT00000325990

Assembly before test
Date: 14/03/24
Name: Godfrey

Assembly after test
Date: 09/05/24
Name: XOLANI THOMAS

ROTOR S/N MCE22-11-203	STATOR S/N GIB-1600		
<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 SN54-1988233			
<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>Measured quantity:</p>		<p>Quality validation</p> <p>Quality Insp. Name and signature Dima</p>
	Filter 1 (Name and signature)	Filter 2 (Name and signature)	
<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 - 0942 04/23 8N0228			
<p>S1 Radial play after assembly (0,021 / 0,067): 0,06mm</p> <p><input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>	<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min: 159g Max: 166g</p> <p>Measured quantity:</p>		<p>Quality validation</p> <p>Quality Insp. Name and signature Dima</p>
	Filter 1 (Name and signature)	Filter 2 (Name and signature)	
<p>Référence appareil: AMXG14</p>			
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216	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)	1,97 GΩ	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
OPERATOR		Quality validation
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: AMXG14	<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 Device serial number: AMXG14	<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: GIBFL002	<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: S2311000647	<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 false absence of the required screwdriver)	D250-188	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 false absence of the required screwdriver)	D250-188	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 false absence of the required screwdriver)	D2511039	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 false absence of the required screwdriver)	D250-188	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 false absence of the required screwdriver)	D250-188	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 false absence of the required screwdriver)	D250-188	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 <i>[Signature]</i>					
OBSERVATIONS												

GIBÉLA RAIL TRANSPORT CONSORTIUM RF (PTY) LTD

Traction Motors Quality

2024 -05- 09

Name : *Dima*

Signature : *[Signature]*

