



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 - 1355

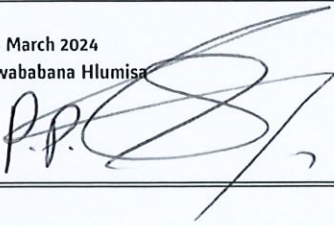
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- Compliance certificate.....	Page 1/2	<input checked="" type="checkbox"/>
- List of deviations and missing parts.....	Page 2/2	<input checked="" type="checkbox"/>
- Products traceability.....	1 page	<input checked="" type="checkbox"/>
- Load test 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	04 March 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	M1355		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	M1669		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M3069		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3113		NGC
Wheel (Right)	AR00000174670	117	04-23	Bonatrans
Wheel (Left)	AR000000174670	066	04-23	Bonatrans
Wheelset (Rear)	AR00000178600	M3072		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K2892		NGC
Wheel (Right)	AR00000174670	084	04-23	Bonatrans
Wheel (Left)	AR00000174670	086	04-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2309131		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2309126		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1619	02-24	Wabtec
Brake unit without PB (Right front)	AR00000175185	4872	02-24	Wabtec
Brake unit without PB (Left Front)	AR00000175185	4884	02-24	Wabtec
Brake unit without PB (left rear)	AR00000175185	4882	02-24	Wabtec
Motor (front)	AR00000168516	21170		Alstom Ornans
Motor (Rear)	AR00000168516	21401		Alstom Ornans

PRESSING REPORT

3/4/2024

DATE VALIDATION

RESPONSABLE VALIDATION

PRASA

INSTRUCTION SHEET:

FAMILY:

LOAD TEST : MOTOR BOGIE

PROJECT:

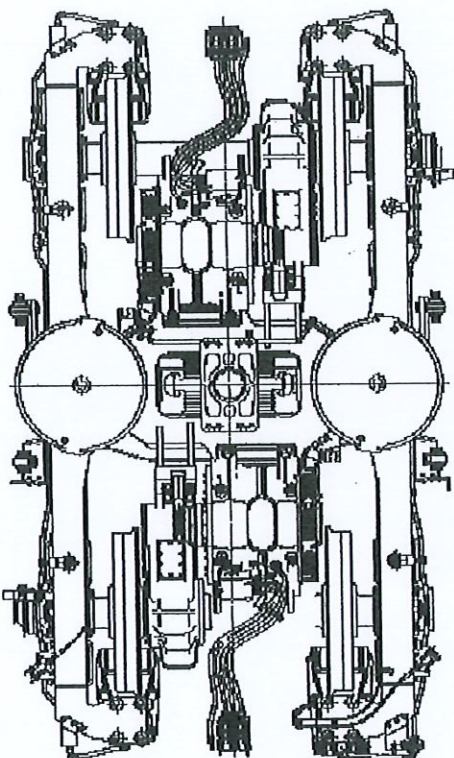
	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.79 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q2	5569

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.38	+	0.00 =	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	37.79 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q4	5538

BOGIE SERIAL N°	MBL-1355
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22348
COMPLETE BOGIE WEIGHT [Kg]	7280
OPERATOR	DATE
BAFANA	3/4/2024



	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00	0.15 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00	1.04 ✓
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	0.60 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00	0.44 ✓

OPERATOR STAMP	
DC-3FI-6	

LEFT JACK LOAD	
7376	Kg

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
587.34	+	0.00 =	MIN 585.00 MAX 587.50

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm] ✓		THEORETICAL [mm]
-0.96		MIN -1.00 MAX 1.00

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	38.48 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q1	5586

	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]	Q3	5654

Sensor reference: DTR0000512252/DSD1830.19Q14HW

☒ OK ☐ NOK 9231-2003-193

☐ 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	QC 1 X 61 Nm
F2	Torque tightening to 8 x 76 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	QC 1 X 61 Nm
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
F4	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	QC 1 X 18 Nm
F5	Torque tightening to 6 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	QC 1 X 18 Nm

Finishing

F1	Torque tightening to 4 x 22 Nm:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	QC 1 X 22 Nm
----	---------------------------------	---	--------------

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

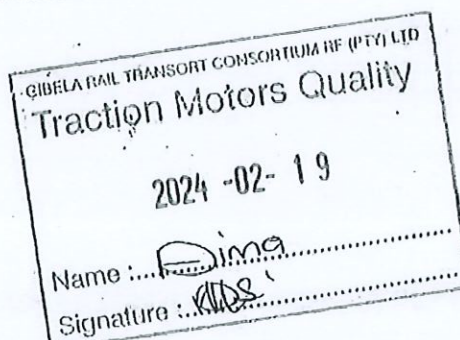
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA

TROS 916.216

2

Page

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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

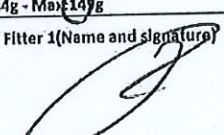

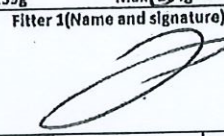
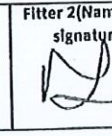
Date:

Name:

Assembly after test

Date:

Name:

ROTOR S/N MCE22-11-118		STATOR S/N GIB-1407	
<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 09/23 SN252-1369794			
<p>S2 Radial play after assembly (0,042 / 0,114):</p> <p>0,08mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p>		<p>S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Mesured quantity: Min:144g - Max:147g</p> <p>Filter 1 (Name and signature): </p> <p>Filter 2 (Name and signature): </p> <p>Quality validation: Quality Insp. Name and signature Dima KRS</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-VE0241 (cross out the references that have not been fitted)</p>			
Serial N°: GERMANY : 0200 X116-0746 04/23 SN0119			
<p>S1 Radial play after assembly (0,021 / 0,067):</p> <p>0,06mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK</p> <p>Reference: ASCP14</p>		<p>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Mesured quantity: Min:159g Max:164g</p> <p>Filter 1 (Name and signature): </p> <p>Filter 2 (Name and signature): </p> <p>Quality validation: Quality Insp. Name and signature Dima KRS</p>	
FINAL ASSEMBLY REPORT FOR THE MOTOR 6 ECA 3022 B - PRASA		TROS 916.216 2 Page 1	

ALSTOM

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

Record the value of the insulation resistance of the bearings to TROS 915.069 (> 50 kΩ)		321952 <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:	0,01mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	ASCP14	<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	ASCP14	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2):	0,75mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	GIBELG	<input type="checkbox"/> OK <input type="checkbox"/> NOK



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21170

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 75872744

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: 2024/02/21

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature _____

GIBELA RAIL TRANSPORT CONSORTIUM RE (PTY) LTD
Traction Motors Quality
2024 -02- 21
Name : <u>Dimakatso</u>
Signature : <u>[Signature]</u>

Gibela Rail
02 Shosholora 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

[illegible]



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 21401

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 76358922

Status: QC PASS

Derogations / Concession / Waiver N °: N/A

Customer modification: N/A


Missing parts: N/A

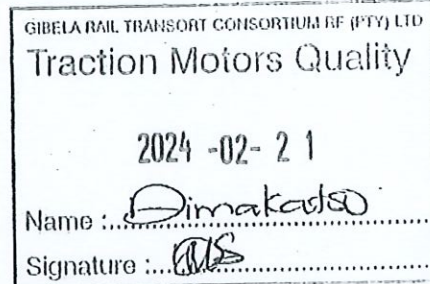
We hereby declare, barring exceptions, reservations or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements, and applicable standards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

Date: 2024/02/21

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature  _____



Gibela Rail
02 Shosholozwa Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

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

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 1358**

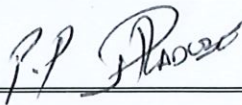
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- List of deviations and missing parts.....	Page 2/2	<input checked="" type="checkbox"/>
- Products traceability.....	1 page	<input checked="" type="checkbox"/>
- Load test report.....	1 page	<input checked="" type="checkbox"/>
- Motor certificate.....	8 pages	<input checked="" type="checkbox"/>

COMPLIANCE CERTIFICATE

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

CONSTRUCTOR APPROVAL

DATE	05 March 2024
NAME	Kwababana Hlumisa
VISA	



ALSTOM UBUNYE

PRODUCTS TRACEABILITY

Products Designation	Product Reference	Serial Number	Batch or Date Manufactured	Supplier
Motor Bogie MB1	DTR0009706804	1358		Alstom - Ubunye
Motor Bogie Frame	AR00000176080	1684		Alstom - Ubunye
Wheelset (Front)	AR000000177020	M03081		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3163		NGC
Wheel (Right)	AR00000174670	039	02-23	Bonatrans
Wheel (Left)	AR000000174670	105	02-23	Bonatrans
Wheelset (Rear)	AR00000178600	M3082		Alstom - Ubunye
Axle with fitted gearbox	AR00000177072	K3107		NGC
Wheel (Right)	AR00000174670	061	02-23	Bonatrans
Wheel (Left)	AR00000174670	047	02-23	Bonatrans
Pneumatic suspension (Right)	AR00000176127	2310119		Hutchinson
Pneumatic suspension (Left)	AR00000176127	2310123		Hutchinson
Brake unit with PB (Right rear)	AR00000174544	1632	02-24	WEBTEC
Brake unit without PB (Right front)	AR00000175185	4917	02-24	WEBTEC
Brake unit without PB (Left Front)	AR00000175185	4923	02-24	WEBTEC
Brake unit without PB (left rear)	AR00000175185	4913	02-24	WEBTEC
Motor (front)	AR00000168516	20532		GIBELA
Motor (Rear)	AR00000168516	20949		GIBELA

DATE
3/5/2024

DATE VALIDATION

RESPONSABLE VALIDATION

PRESSING REPORT

PRASA
INSTRUCTION SHEET:
FAMILY:

LOAD TEST : MOTOR BOGIE
PROJECT:

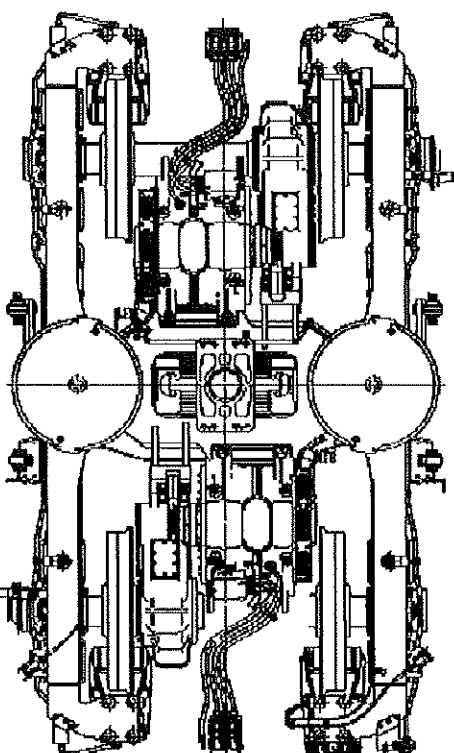
	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.96 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q2	5584

SECONDARY SUSPENSION ✓			
MEASURED [mm]	SHIM THICK [mm]	DIM. WITH SHIM [mm]	THEORETICAL [mm]
586.02	+	1.00	= 587.02
			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	38.17 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q4	5558

BOGIE SERIAL N°	MB1-1358
BOGIE TYPE	MB
BOGIE WEIGHT UNDER LOAD [Kg]	22356
COMPLETE BOGIE WEIGHT [Kg]	7268
OPERATOR	DATE
EDWARD	3/5/2024



	THEORETICAL	MEASURED
LOAD DIFFERENCE ON FRONT AXLE [%]	MIN 0.00 MAX 0.00	-0.08 ✓
LOAD DIFFERENCE ON REAR AXLE [%]	MIN 0.00 MAX 0.00	0.71 ✓
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	0.32 ✓
LOAD DIFFERENCE ON DIAGONAL WHEELS [%]	MIN 0.00 MAX 0.00	0.40 ✓

OPERATOR STAMP
BF1-21

LEFT JACK LOAD
7376 Kg

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

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.84 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q1	5575

DIFFERENCE IN RIGHT AND LEFT SUSPENSION HEIGHTS [mm]	✓	THEORETICAL [mm]
-0.38		MIN -1.00 MAX 1.00

	THEORETICAL	MEASURED
WHEEL DIAMETER [mm]	MIN MAX	
GAP PRIMARY SUSPENSION [mm]	MIN 33.00 MAX 39.00	37.11 ✓
SHIM THICK [mm]		
WEIGHT ON WHEEL [Kg]	Q3	5638



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 20532

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 74698874

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

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

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MOT 20532

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: 07/11/2000

Name: J. G. P. 00

Assembly after test

Date: 08/10/02

Name: XOLANT

ROTOR S/N MCR22-04-129		STATOR S/N GEB-0347	
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°: Romana 0097 08/22 SN187-5506244			
S2 Radial play after assembly (0,042 / 0,114): 0,08mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK		S4 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly Min: 149g - Max: 149g Mesured quantity: Filter 1 (Name and signature): Filter 2 (Name and signature): Quality validation: Quality Insp. Name and signature:	
INSULATED CERAMIC BEARING OPPOSITE DRIVE END side - Security operation Incorrect assembly can lead to engine failure with a safety risk in service SRIL TROS 965.289 FAG : 6214-M-P6-J20AB-H257A-C4 or 6214-M-P6-J20AA-H257-C4- SKE-6214-M/C4-VL0241 (cross out the references that have not been fitted)			
Serial N°: Germany 0200 W279-0842 10/22 SN0114			
S1 Radial play after assembly (0,021 / 0,067): 0,05mm <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK		S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly Min: 159g - Max: 164g Mesured quantity: Filter 1 (Name and signature): Filter 2 (Name and signature): Quality validation: Quality Insp. Name and signature:	
Reference appareil: AXVX28			
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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) 781 mΩ <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	
OPERATOR: AXVX28	
Out of round at the end of the shaft drive end 0,05 max: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	
Quality verification: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	

0,01mm

X

Out of round on toothed wheel 0,1 max: <u>0,8mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	<u>ANV 23</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2): <u>0,8mm</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number <u>N/A</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>S2017004953</u>	<input checked="" 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 for the event of failure / absence of the material (see drawing) <u>N053083</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	wrench reference for the event of failure / absence of the material (see drawing) <u>N053083</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	wrench reference for the event of failure / absence of the material (see drawing) <u>0007777</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	wrench reference for the event of failure / absence of the material (see drawing) <u>N053081</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	wrench reference for the event of failure / absence of the material (see drawing) <u>N053081</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	wrench reference for the event of failure / absence of the material (see drawing) <u>N053081</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	Mesured quantity: <u>18g</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
<input checked="" type="checkbox"/> S4	18g (0/+4.5) CC	Mesured quantity: <u>18g</u>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK

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

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

Final Inspection	Comments
Quality Insp Name and Signature: <u>Kaseme</u>	
OBSERVATIONS	



CERTIFICATION OF CONFORMITY

Inspection certificate according EN 10204-3.1

Product: Traction Motors 6 ECA 3022 B

Serial Number: N ° 20949

Client / Customer: ALSTOM UBUNYE (PTY) LTD

Project: PRASA

P O Number: 75337928

Status: QC PASS

Derogations / Concession / Waiver N °: N/A

Customer modification: N/A

Missing parts: N/A

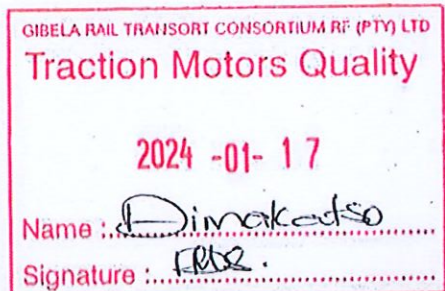
We hereby declare, barring exceptions, reservations or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements, and applicable standards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

Date: 2024/01/17

Function: Final Inspection

Performed and signed off by: Name _____ Dimakatso Mohoalali

Signature EMS



Gibela Rail
02 Shosholozwa Avenue
M07 Traction Motor
1590

GIBELA RAIL

Compiled by M Kola

Date: 22/2/2022

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MOT 20949

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: 23/06/2023

Name: Jacques

Assembly after test

Date: 10/01/24

Name: YOLANE & GODFREY

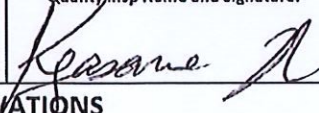
ROTOR S/N Su72282-067		STATOR S/N GIB-0955	
<p>Bearing lubrication - Security operation Incorrect lubrication can lead to engine failure with a safety risk in service SRIL TROS 965.289</p>			
<p>INSULATED CERAMIC BEARING DRIVE END -- Security operation Incorrect assembly can lead to engine failure with 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 11/22 SN147 - 5747155			
<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>S3 LUBRIFICATION WITH MOBILITH SHC 100 before cover assembly</p> <p>Min:144g - Max:149g Measured quantity: Quality validation</p> <p>Fitter 1(Name and signature) Fitter 2(Name and signature) 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 SKE-6214-M/C4-VL-0241 (cross out the references that have not been fitted)</p>			
Serial N°: Germany 0200 X024-1029 01/23 SN0649			
<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 Measured quantity: Quality verification</p> <p>Fitter 1(Name and signature) Fitter 2(Name and signature) Quality Insp. Name and signature</p>	
<p>Reference appareil ASCPIS</p>			
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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)		2,11 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	ASCPIS	<input type="checkbox"/> OK <input type="checkbox"/> NOK
Out of round on toothed wheel 0,1 max:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	ASCPIS	<input type="checkbox"/> OK <input type="checkbox"/> NOK
sensor / toothed wheel play 0,7 (+/- 0,2):	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK	Device serial number	<input type="checkbox"/> OK <input type="checkbox"/> NOK

Sensor reference: DTR0000512252/DSD1830.19Q14HW		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK S2218012641 <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
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: 			
OBSERVATIONS			

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