



ANNEX A

TECHNICAL SPECIFICATION 07/TENG/2017

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Mario Emilio Framil Cabizuca, Maj
Chief of BACW Biddings and Contracts Department

Nazareno Correia Peregrino, Lt Col
Chief of BACW Internal Control

MINISTRY OF DEFENSE
AERONAUTIC COMMAND
AERONAUTIC AND WARFARE MATERIAL DIRECTORATE
PARQUE DE MATERIAL AERONÁUTICO DO GALEÃO

TECHNICAL SPECIFICATION N° 07/TENG/2017
(GLKR20601C4)

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1. ENGINE DESCRIPTION

1.1. Rolls & Royce, AE3007 A1P, PN 23070401, S/N CAE311642 and reidentified to AE3007 A1, PN as per "SB 72-149 - ENGINE - AE 3007A1P TO AE 3007A1 ENGINE REIDENTIFICATION"

1.1.1. Time Since New (TSN): 19881:40.

1.1.2. Cycles Since New (CSN): 14239.

1.1.3. Time Since Last Shop Visit (TSLSV): 5693:15.

1.1.4. Cycles Since Last Shop Visit (CSLSV): 3732.

1.2. Annex 3 lists significant items that are part of the engine.

1.3. Annex 4 contains copy of engine Logbook, but BAF will deliver the engine with Logbook.

1.4. Fuel Pump and Metering Unit (FPMU), PN 23063131 SN BAE-12586, TSN 5854:05, CSN: 4042, Status: Removed due fuel leakage detected in drain.

1.5. The CONTRACTING PARTY ensures that their engines have been operated in accordance with the operating instructions provided by the aircraft manufacturer and the engine manufacturer.

2. OBJECT

2.1. The object of these Technical Specifications comprises the repair and recovery services of 1 (one) AE3007 engine, including its accessories as incorporations of selected service bulletins.

3. WORK SCOPE

3.1. REASON FOR REMOVAL

3.1.1. The engine was removed due to zero "2nd-stage High-pressure-turbine Wheel" (HPT2) Life Limit.

3.1.2. Annex 1 shows compass data in order to detail engine condition at the time of its removal.

3.2.SERVICES REQUIRED

- 3.2.1. Engine and its accessories shop visit services must be performed in accordance with the updated technical orders issued by engine and its accessories manufacturer respectively.
- 3.2.2. The 2nd-stage High-pressure-turbine Wheel (HPT2) must be replaced due to the remaining component life be less than 5% of the established life limit.
- 3.2.3. All fuel nozzles listed on Annex 3 must be exchanged to a new updated P/N 23075904, 23077006, 23087207, or 23090046 as applicable. The old fuel nozzle shall not be delivered back to the CONTRACTING PARTY.
- 3.2.4. Alert and mandatory service bulletins and DA in the Annex 2 must be incorporated if applicable, but any others applicable alert or mandatory service bulletins or DA not listed in the Annex 2 must be incorporated.
- 3.2.5. SB 72-260 ENGINE - NEW HIGH PRESSURE TURBINE UPGRADE (BLOCK III Service Bulletin) must be complied.
- 3.2.6. All the material applied in the services by the CONTRACTED PARTY shall be original from the manufacturer (OEM-Original Equipment Manufacturer) and it shall be in accordance with the technical orders.
- 3.2.7. The engine must be preserved for 180 (one hundred eighty) days in accordance with the technical orders issued by the manufacturer.
- 3.2.8. The packaging must follow the technical orders issued by the manufacturer.

4. SHIPMENT:

4.1.The CONTRACTED PARTY will be responsible by the shipment, as follows:

- 4.1.1. From the CONTRACTING PARTY to the CONTRACTED PARTY:
INCOTERMS 2010 – FCA – PAMAGL – Rua Alfredo Rocha 495, Ilha do Governador, Rio de Janeiro – RJ. Brasil.
- 4.1.2. From the CONTRACTED PARTY to the CONTRACTING PARTY:
INCOTERMS 2010 – DAP – PAMAGL – Rua Alfredo Rocha 495, Ilha do Governador, Rio de Janeiro – RJ. Brasil..

4.2. As per R&R MM TASK 71-00-00-400-801, shipping dimensions and specifications are on Table 1 below:

Table 1 - Shipping Dimensions and Specifications

Length	123.5 in. (3137 mm)
Width	60 in. (1524 mm)
Height	62.5 in. (1588 mm)
Tare Weight	1345 lbs (610 kg)
Gross Weight	3050 lbs (1384 kg)
Area	264 cu ft (7.48 cu m)

5. EXECUTION MODE

5.1. The object of these technical specifications must be contracted by the indirect mode of execution, under service delivered for a global price.

6. TERMS

6.1. The CONTRACT to be signed between the CONTRACTING PARTY and CONTRACTED PARTY shall:

6.1.1. Be valid for 210 (two hundred and ten) days, counting from the signing date of the CONTRACT.

6.1.2. The start of the performance of the contract shall begin after CONTRACTED PARTY receives a formal authorization from CONTRACTING PARTY, and shall be concluded within 120 (one hundred and twenty) days by delivering the engine at PAMAGL

6.1.2.1. Exceptionally, the CONTRACTED PARTY may request an extension of 30 days for the contract performance by formal request to CONTRACTING PARTY through the contract MONITOR.

6.1.2.2. In the mentioned request, the CONTRACTED PARTY must present a compelling rational for the extension.

6.1.2.3. Failing to commence work as required by the contract, proving poor workmanship or improperly allocating labor and materials, lacking the proper equipment needed to perform the work, failing to make progress with the project, failing to coordinate work, or failing to perform work on time shall not be used as rational for performance extension.

6.2. The engine and its accessories shall be collected, as per 4.1.1, up to 5 (five) days after the date of the issuance of formal authorization from CONTRACTING PARTY.

7. LOCAL OF SERVICES IMPLETATION

7.1. The repair and recovery services will be executed at the Service Center of the CONTRACTED PARTY.

8. WARRANTY

8.1. The technical warranty for the contracted services performed in the engine must be valid for 12 (twelve) months or 600 (six hundred) flight hours, whichever occurs last, starting on the date of the installation of the engine.

8.2. The technical warranty must include:

8.2.1. Correction of defects caused by the material supplied by the CONTRACTED PARTY;

8.2.2. Correction of repair or services performed on the engine or material supplied by the CONTRACTED PARTY or third parties on behalf of the CONTRACTED PARTY;

8.3. The CONTRACTED PARTY shall cover the warranty by the subcontracted services, at least by the same term of item 8.1.

8.4. The technical warranty do not cover the following events:

8.4.1. Foreign object damage;

8.4.2. Accidents or incidents, if it is not caused by components supplied by the CONTRACTED PARTY;

8.4.3. Improper maintenance, or troubleshooting, misuse, negligence;

8.4.4. Modified or faked items not supplied by the CONTRACTED PARTY;

8.4.5. Improper transportation, storage and handling; and

8.4.6. Other customer induced damages.

8.5. All events mentioned in item 8.4, must be proved by a technical report prepared by the CONTRACTED PARTY.

9. CONDITIONS FOR ACCEPTANCE/DELIVERY

9.1. The CONTRACTED PARTY shall:

- 9.1.1. Issue the Certificate of Conformity of the engine and its accessories;
- 9.1.2. Allow free access for BAF members in the repair services facilities during the shop visit respecting safety conditions always;
- 9.1.3. Register the engine performance in the test bench;
- 9.1.4. Update the Log Book;
- 9.1.5. Make a list of expendables applied;
- 9.1.6. Make a list of damaged material replaced;
- 9.1.7. Provide the invoice of the material applied; and
- 9.1.8. Prepare a written technical report of the services, including:
 - 9.1.8.1. Mechanical condition summary (intervention level and the main services performed in the fan, high pressure compressor, combustion chamber, high and low pressure turbine, accessory gearbox and accessories);
 - 9.1.8.2. Service Bulletins and DA incorporated;
 - 9.1.8.3. Fan rotor dispatch configuration, high pressure compressor rotor, high pressure turbine rotor, low pressure turbine rotor and accessory gearbox (part number, serial number, time since new and cycles since new);
 - 9.1.8.4. Test-bench certification;
 - 9.1.8.5. Life limited parts (TSN, CSN and remaining cycles); and
 - 9.1.8.6. Other relevant informations.
- 9.1.9. The CONTRACTED PARTY must deliver the engine with its updated LOGBOOK and the statement of conformity of items, according to the FAA FORM 8130-9.
- 9.1.10. The BAF will not deliver any spare part of the engine separated from it.

9.1.11. The parts, expendables and engine accessories received by the CONTRACTED PARTY are property of the CONTRACTING PARTY and must be sent to the CONTRACTING PARTY in case of replacement for another one.

9.1.12. Allow free access for BAF members in the repair services facilities during the shop visit respecting safety conditions always.

10. TECHNICAL SKILLS REQUIRED OF THE CONTRACTED PARTY

10.1. The CONTRACTED PARTY must present proof of being a:

10.1.1. Service center authorized by the engine manufacturer: and

10.1.2. Certificated by ANAC, FAA or EASA to perform the object of these technical specifications.

11. SUBCONTRACTING

11.1. If the CONTRACTED PARTY is not enabled, or does not have the technical capability or even is not authorized by the manufacturer of a part or an accessory to perform its repair, it must be sent to the part or the accessory repair shop authorized by the manufacturer.

11.2. All costs related to subcontracting cannot be charged to the CONTRACTING PARTY.

11.3. The CONTRACTED PARTY shall be authorized to subcontract services until 40% of the value of the agreement.

12. BUDGET ALLOCATION

12.1. The costs due to these technical specifications shall be supported according to the following budget classification: 001391 Program, Action 2048, Nature 339039 Expense (services) or equivalent for the purpose of these technical specifications.

13. ANNEXES

ANNEX 1 – DATA REGARDING THE REASON OF REMOVAL.

ANNEX 2 – LIST OF SERVICE BULLETINS AND AD TO BE INCORPORATED IF APPLICABLE.

ANNEX 3 - LIST OF INSTALLED SIGNIFICANT ITEMS

ANNEX 4 – COPY OF ENGINE LOGBOOK.

BA

TC
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Rio de Janeiro, August 14th, 2017.

Prepared by:



Leonardo Lima **Monteiro** – 1st Lieutenant Eng
Technical Advisor of AE3007 engines

Verified by:



Robson **Ventura** Coelho – Major Av
Project Coordinator

Approved by:

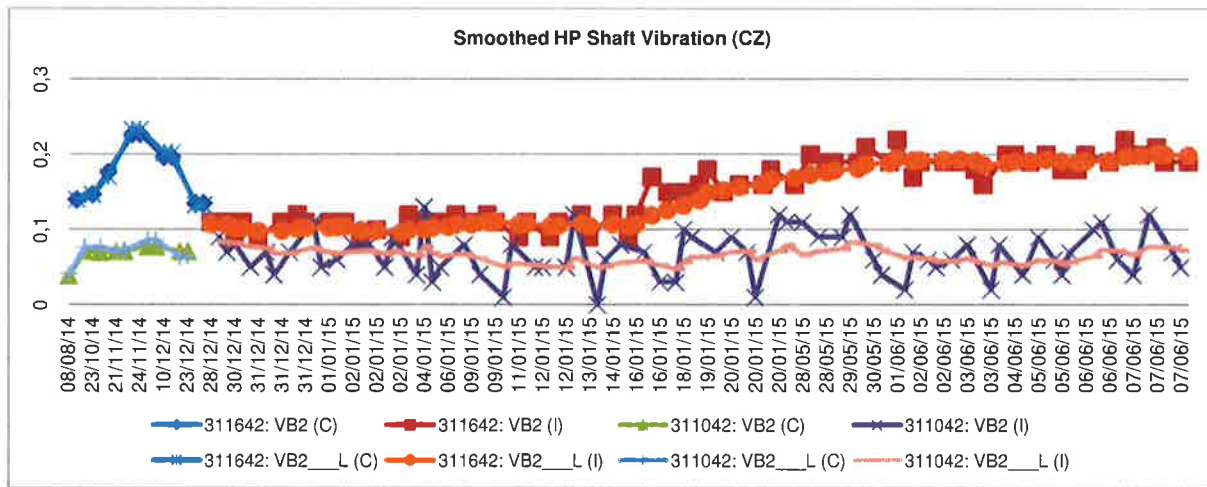
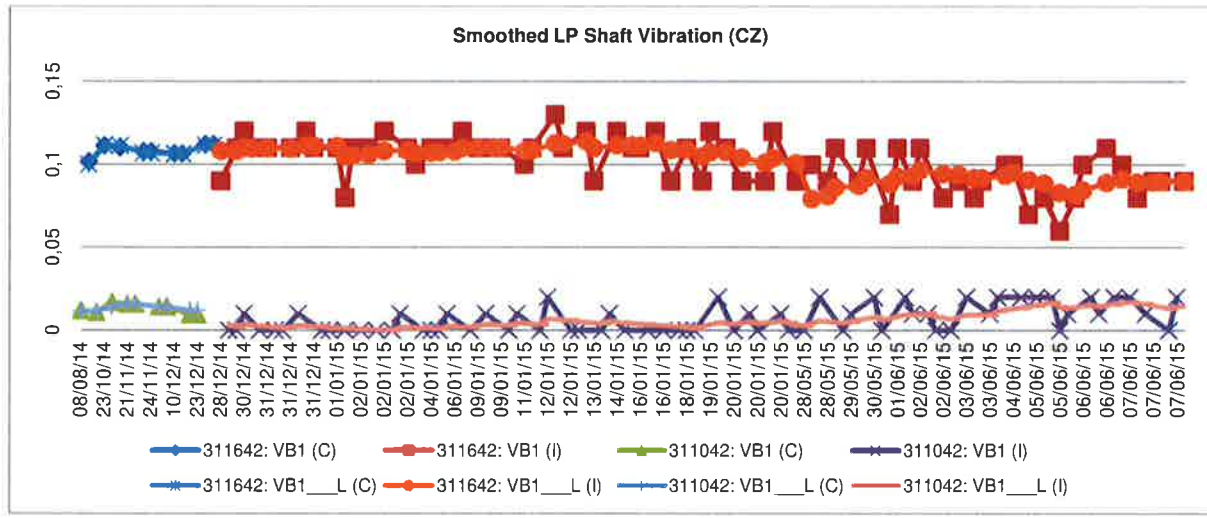


Paulo César Condeixa **Guerreiro** Lima – Colonel Av
Head of Technical Division

ANNEX 1
DATA REGARDING THE REASON OF REMOVAL

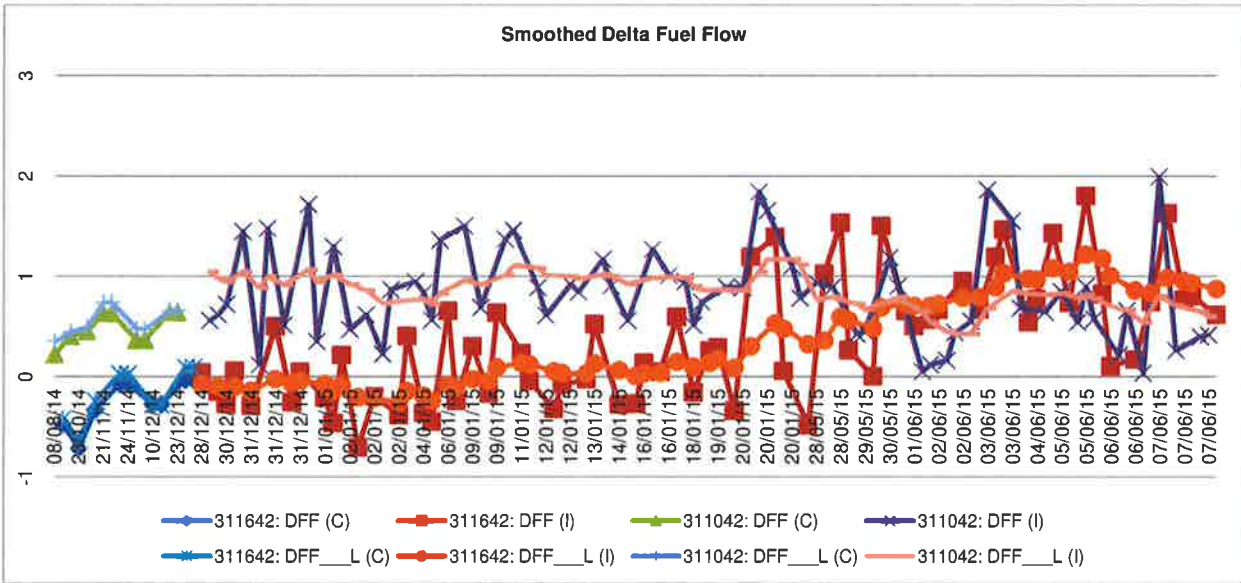
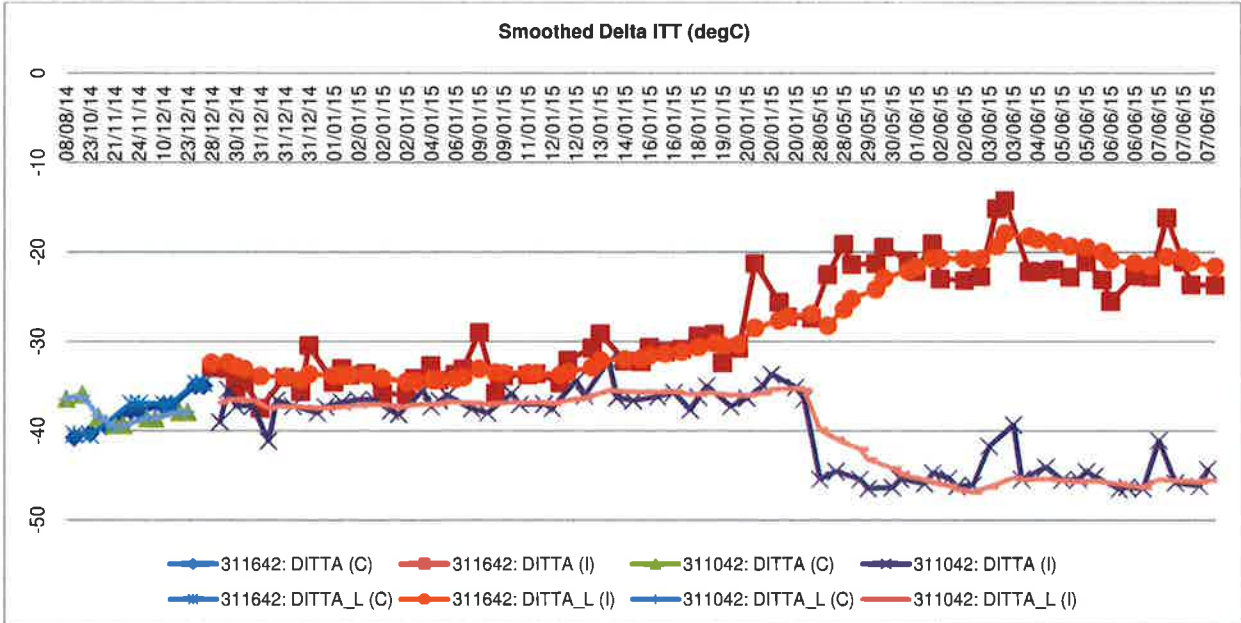
CAE311642

a) Cruise Mechanical Trends – Smoothed

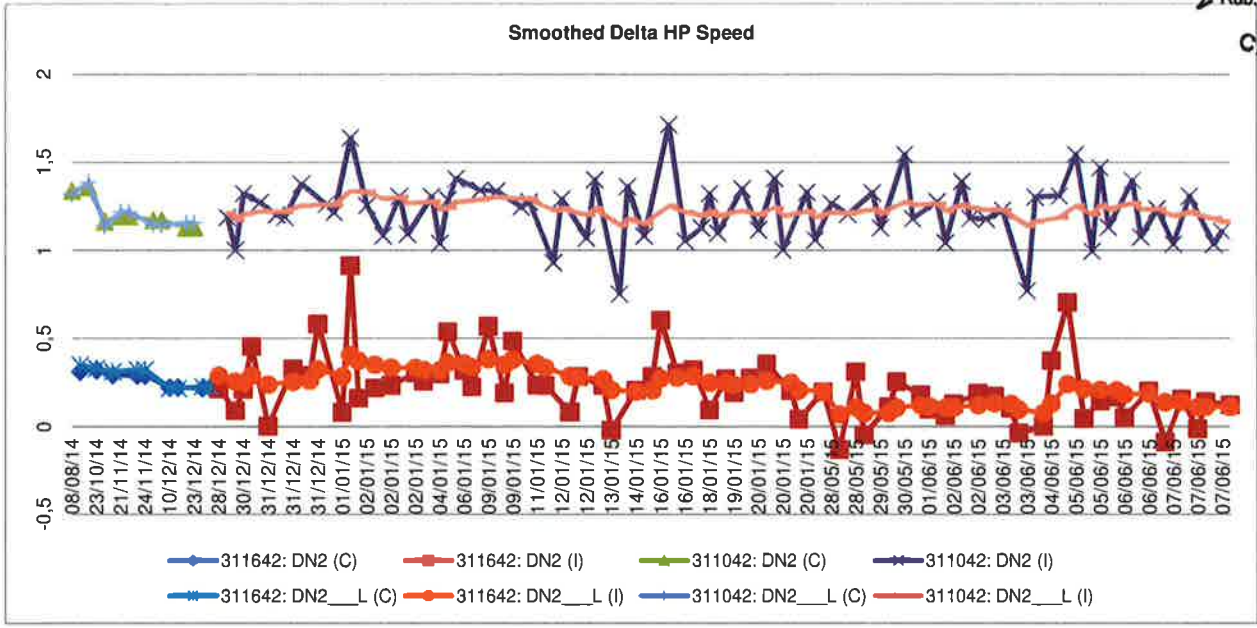


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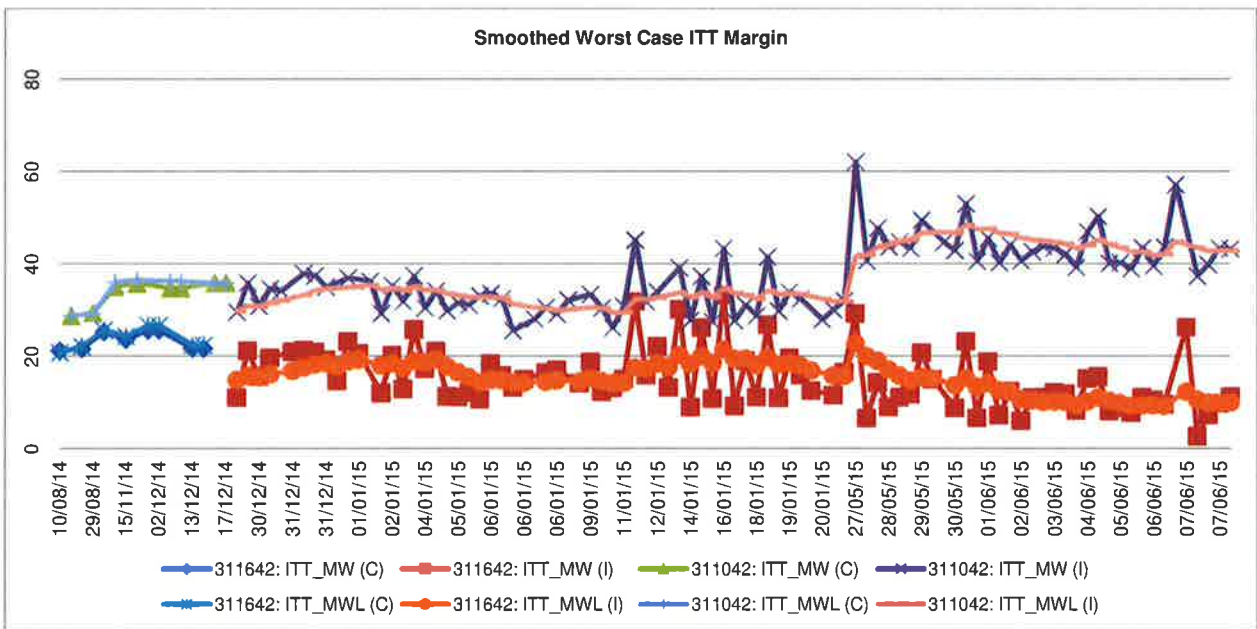
b) Cruise Performance Trends – Smoothed



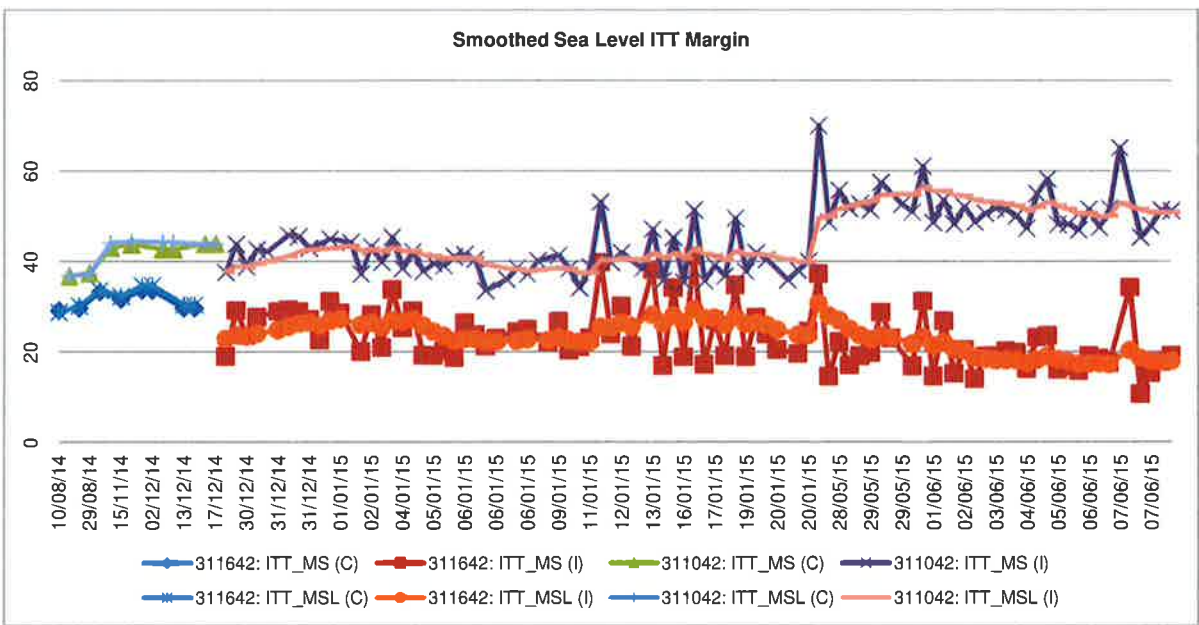
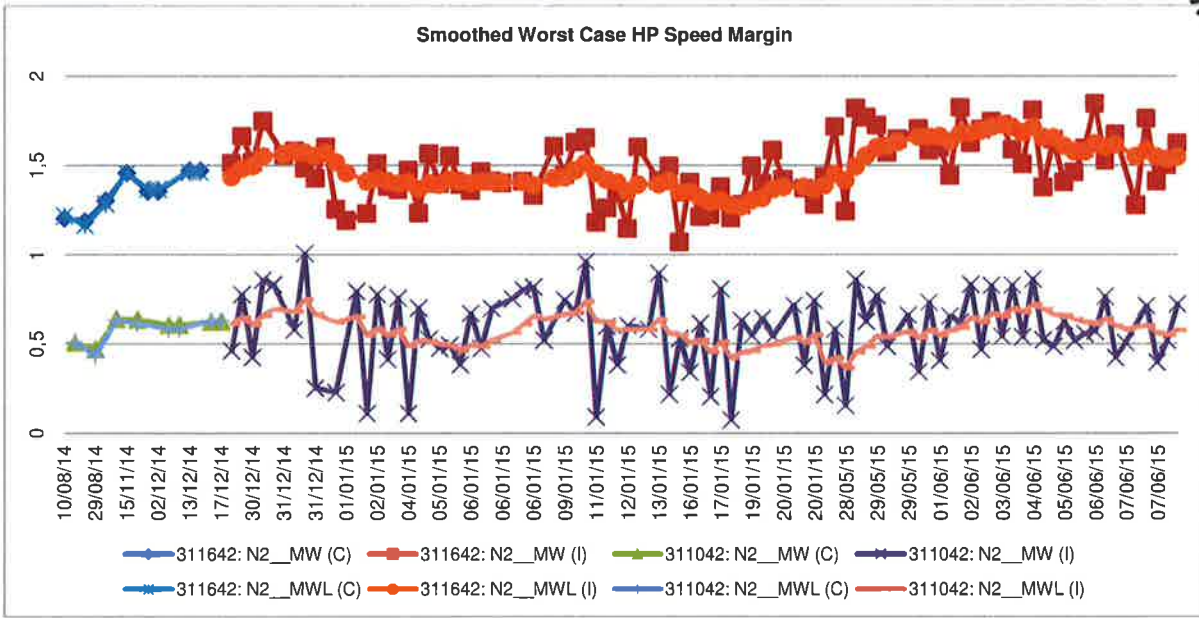
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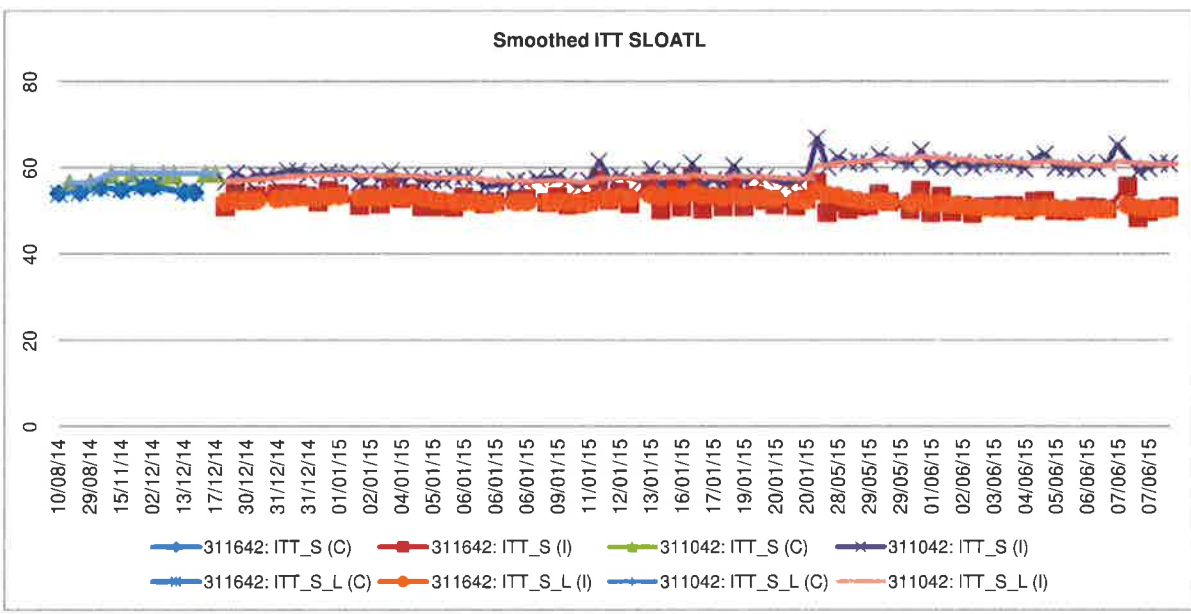
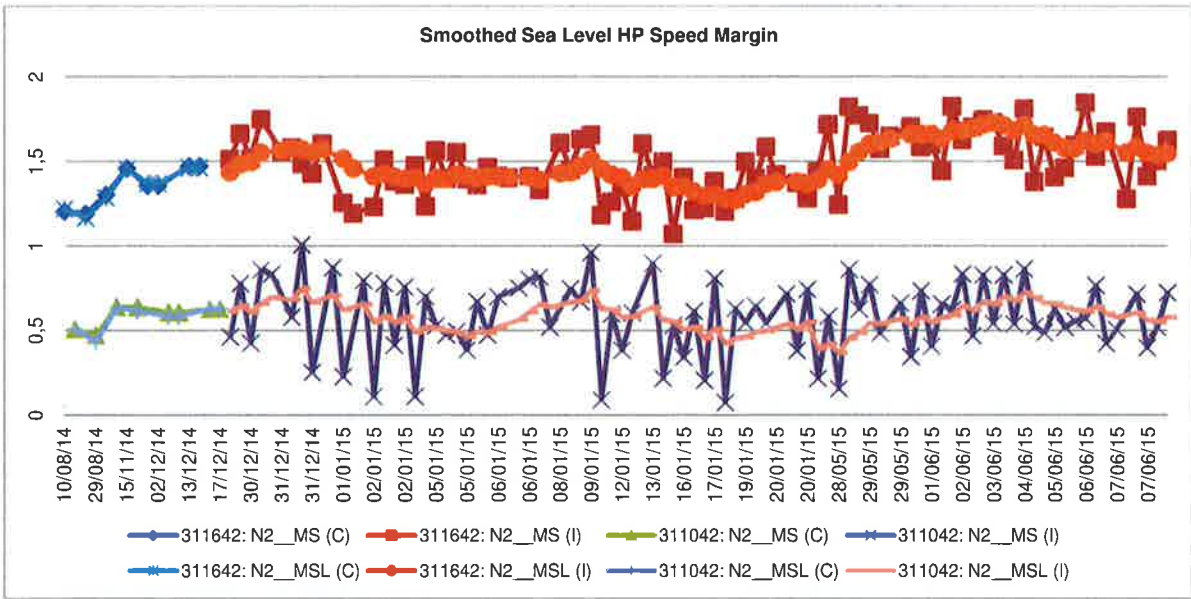
c) Take-off Performance Trends - Smoothed



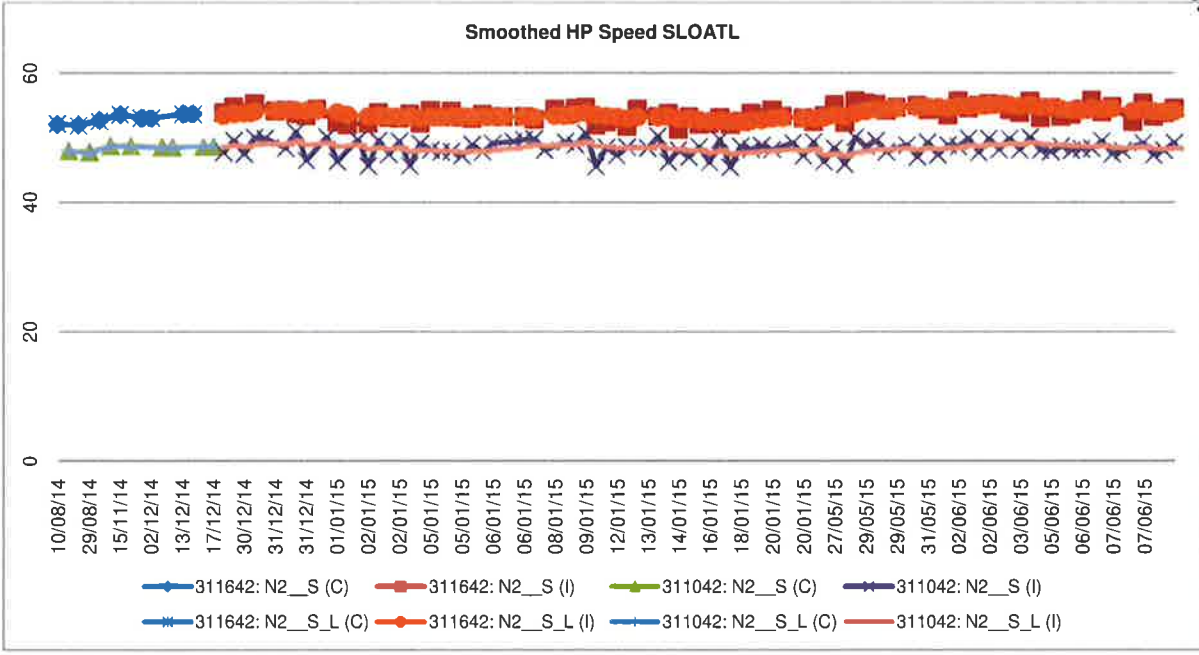
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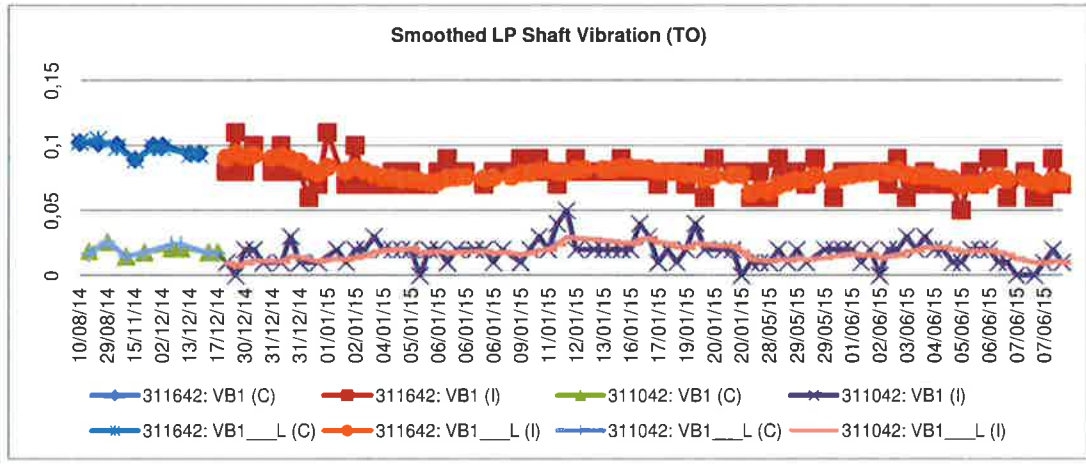
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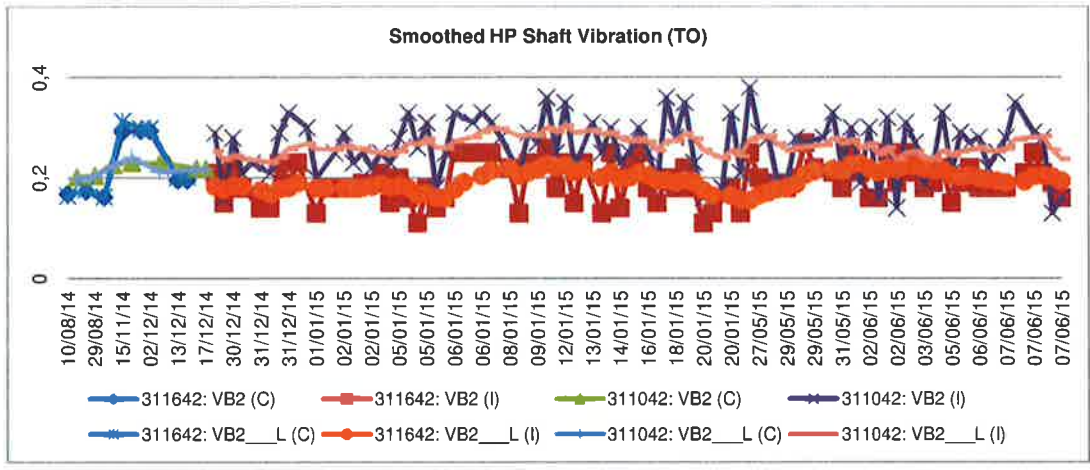
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d) Take-off Mechanical Trends - Smoothed



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ANNEX 2

LIST OF ALERT AND MANDATORY SERVICE BULLETINS TO BE INCORPORATED IF APPLICABLE

Ref.	Title
72-240	72-240 - ENGINE -- NEW 6TH-- THRU 13TH--STAGE CHROME CARBIDE COATED KNIFE SEAL COMPRESSOR WHEELS AND HONEYCOMB VANES
72-361	72-361 - ENGINE - REDESIGNED ONE PIECE FAN SPINNER (23087826)
72-403	72-403 ENGINE -- SHOT PEEN REWORK OF UNPEENED LOW PRESSURE TURBINE WHEELS
72-A156	72-A156 ENGINE -- NEW FAN TEFLON LIP SEAL (23072308)
72-A173	72-A173 - ENGINE INSPECT THE COATING ON THE STATIONARY LABYRINTH SPACER (23057980)

LIST OF AD FAA TO BE INCORPORATED IF APPLICABLE

AD	TITLE
2015-02-08	Turbine wheels
2013-26-06	High-pressure turbine (HPT) stage 2 wheels
2011-22-03	Low-cycle fatigue cracks
2009-24-04	Fan spinner
2007-24-05	Engine oil temperature
2004-04-05	Engine oil system
2001-25-05	Compressor Cone Shafts
2000-18-06	Digital Electronic Controls
2000-13-01	Turbine Wheels
2000-11-22	Critical Life-Limited Parts
98-11-32	Sump Magnetic Chip Collector Plug

ANNEX 3

LIST OF INSTALLED SIGNIFICANT ITEMS

A

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SISTEMA INTEGRADO DE LOGÍSTICA DE MATERIAIS E DE SERVIÇOS
PARQUE DE MATERIAL AERONÁUTICO DO GALEÃO
RELATÓRIO CONFIGURAÇÃO REAL

PG: 1 de 2
 Data: 08/08/2017
 Hora: 15:49:02
 CP: 15:49:02

CP: 23079991 TURBO FAN ENGINE A611 CP: 43009
 CP: 23079991 TURBO FAN ENGINE A611 CP: 43009
 Descrição: Turbopropulsor de Hélice e Turbina para Motor de Avião

Seq.	Part Number (PN)	QTD	Descrição	Material Number (MN)	QTD	CICLO	PUB	PARTE	QTD	CICLO	Reservado	
											SEM CICLO	SEM CICLO
1	23080722	43005	2ND STAGE COMPRESSOR WHEEL	6124268	1	C	R	1	1	30000	30000	30000
2	23082413	43005	ASSEMBLY, FUEL FLOW	610031	1	C	R	1	1	30000	30000	30000
3	23084049	73342	1ST INTERMEDIATE SPICER	7307420	1	C	P3	1	1	30000	30000	30000
4	23084049	73342	1ST INTERMEDIATE SPICER	7307420	1	C	P1	1	1	30000	30000	30000
5	23084049	73342	2ND STAGE LPT WHEEL	60449021	1	C	R	1	1	14052	14052	14052
6	23084220	43005	FUEL DRIVE SHAFT	9712417	1	R	R	1	1	30000	30000	30000
7	23084220	43005	1ST STAGE LPT WHEEL	602109925	1	C	P3	1	1	30000	30000	30000
8	23084470	73342	FUEL WHEEL	60449021	1	C	R	1	1	14052	14052	14052
9	23084691	73342	FUEL FAN STAGE WHEEL	602109925	1	C	P3	1	1	30000	30000	30000
10	23085332	43005	1ST STAGE WHEEL	602109925	1	C	P3	1	1	30000	30000	30000
11	23085681	43005	1ST STAGE COMPRESSOR WHEEL	610031	1	C	R	1	1	30000	30000	30000
12	23085723	43005	2ND STAGE COMPRESSOR WHEEL	6124268	1	C	R	1	1	30000	30000	30000
13	23085995	43005	ASSEMBLY, FUEL	610031	1	C	R	1	1	30000	30000	30000
14	23086180	43005	2ND STAGE ASSEMBLY, FUEL	610031	1	C	R	1	1	30000	30000	30000
15	23086190	43005	2ND STAGE ASSEMBLY, FUEL	610031	1	C	R	1	1	30000	30000	30000
16	23086190	43005	2ND STAGE ASSEMBLY, FUEL	610031	1	C	R	1	1	30000	30000	30000
17	23086190	43005	2ND STAGE ASSEMBLY, FUEL	610031	1	C	R	1	1	30000	30000	30000
18	23086190	43005	2ND STAGE ASSEMBLY, FUEL	610031	1	C	R	1	1	30000	30000	30000
19	23086190	43005	2ND STAGE ASSEMBLY, FUEL	610031	1	C	R	1	1	30000	30000	30000
20	23086223	73342	11TH STAGE COMPRESSOR WHEEL	6214518	1	C	R	1	1	20000	20000	20000
21	23087076	73342	LPT FUEL SHAFT	43080745	1	C	R	1	1	30000	30000	30000
22	23088092	43005	FUEL DRIVE SHAFT	9712417	1	R	R	1	1	30000	30000	30000
23	23088092	43005	1ST STAGE WHEEL	602109925	1	C	P3	1	1	30000	30000	30000
24	23090064	43005	2ND STAGE WHEEL	602109925	1	C	P3	1	1	30000	30000	30000
25	23091289	73342	11TH STAGE COMPRESSOR WHEEL	6214518	1	C	R	1	1	20000	20000	20000
26	23091289	73342	11TH STAGE COMPRESSOR WHEEL	6214518	1	C	R	1	1	20000	20000	20000
27	23091289	73342	11TH STAGE COMPRESSOR WHEEL	6214518	1	C	R	1	1	20000	20000	20000

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N. DEFESA: **38**
 Proc: **173981**
 Rub: *(Handwritten)*
CABW

ANNEX 4

COPY OF ENGINE LOGBOOK

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ROLLS-ROYCE BRASIL

Rua Dr. Choroato Braga, 47, São Bernardo do Campo,
São Paulo, Brazil. CEP 06898-900
Telephone: 011 4990-4800

ACCESSORIES LOG SHEET - ROLLS-ROYCE CORPORATION AE3007A1

CUSTOMER: AIR CARAIBES		RRB W.O. # 259242		DATE SEPTEMBER 29, 2005		WORK CARRIED OUT		
ENGINE S/N	AIRCRAFT	DATE/REMOVED	T.S.N.	T.S.O.	T.S.R.	REPAIR		
CAE311642	F-OJJE	AUG 23, 2005	10082,68	----	0.00			
ITEM	DESCRIPTION	S/N	PIN	T.S.N.	T.S.O.	OH	REP TES	COMENTS
AA	Fuel Nozzle	1ZR03342	23073452A	UNK	---	-	X	Tested and accepted to CMM 73-12-12
AB	Fuel Nozzle	10R02021	23073452A	UNK	---	-	X	Tested and accepted to CMM 73-12-12
AC	Fuel Nozzle	1XR04332	23073452A	UNK	---	-	X	Tested and accepted to CMM 73-12-12
AD	Fuel Nozzle	1ZR03913	23073452A	UNK	---	-	X	Tested and accepted to CMM 73-12-12
AE	Fuel Nozzle	1ZR03847	23073452A	UNK	---	-	X	Tested and accepted to CMM 73-12-12
AF	Fuel Nozzle	1ZR03252	23073452A	UNK	---	-	X	Tested and accepted to CMM 73-12-12
AG	Fuel Nozzle	1ZR03200	23073452A	UNK	---	-	X	Tested and accepted to CMM 73-12-12
AH	Fuel Nozzle	1WR10014	23073452A	UNK	---	-	X	Tested and accepted to CMM 73-12-12
AI	Fuel Nozzle	1WR10007	23073452A	UNK	---	-	X	Tested and accepted to CMM 73-12-12
AJ	Fuel Nozzle	10S02636	23073452A	UNK	---	-	X	Tested and accepted to CMM 73-12-12
AK	Fuel Nozzle	1ZR04730	23073452A	UNK	---	-	X	Tested and accepted to CMM 73-12-12
AL	Fuel Nozzle	1XR03767	23073452A	UNK	---	-	X	Tested and accepted to CMM 73-12-12
AM	Fuel Nozzle	1XR03798	23073452A	UNK	---	-	X	Tested and accepted to CMM 73-12-12
AN	Fuel Nozzle	10P08786	23065950	UNK	0:00	X	-	Overhauled
AO	Fuel Nozzle	1YK07594	23065950	UNK	0:00	X	-	Overhauled
AP	Fuel Nozzle	1TP06066	23073453	UNK	0:00	X	-	Overhauled
B	Fuel Pump and Metering Unit	BAE11924	23063131	UNK	---	-	-	Visual inspection
C1	Full Authority Digital Electronic Control (A)	N/R	N/R	UNK	---	-	-	Not Received
C2	Full Authority Digital Electronic Control (B)	N/R	N/R	UNK	---	-	-	Not Received
D	Fuel Temperature Sensor	10154	23062605	UNK	---	-	-	Visual inspection
E	Fuel Flow Sensor	PT0051	23052613	10062,68	---	-	-	Visual inspection
G	Alternator Stator	UN8045	23075480	UNK	---	-	-	Visual inspection
H1	Ignition Exciter	N/D	N/D	UNK	---	-	-	Visual inspection
H2	Ignition Exciter	UY00464921	23057324	UNK	---	-	-	Not Received
I1	Igniter (A)	N/D	N/D	UNK	---	-	-	Visual inspection
I2	Igniter (B)	N/D	N/D	UNK	---	-	-	Visual inspection
J1	Igniter Lead (RH)	N/D	N/D	UNK	---	-	-	Visual inspection
J2	Igniter Lead (LH)	N/D	N/D	UNK	---	-	-	Visual inspection
K	Vibration Sensor	N/D	N/D	UNK	---	-	-	Visual inspection
L	Comp. Acceleration Bleed Control Valve	EJY126	23075190	UNK	---	-	-	Visual inspection
N	Compress. Variable Vane Hydraulic Actuator	N/D	N/D	UNK	---	-	-	Visual inspection
Q1	External Engine Control Harness (Blue - A)	NX11251	23060759	UNK	---	X	-	Repaired
Q2	External Engine Control Harness (Yellow - B)	NX11244	23062367	UNK	---	-	-	Visual inspection - see CAE311673
Q3	Internal Engine Control Harness (Blue - A)	N/D	N/D	UNK	---	-	-	Visual inspection
Q4	Internal Engine Control Harness (Yellow - B)	N/D	N/D	UNK	---	-	-	Visual inspection
R	External Engine Control Harness (Green)	NX11072	23070216	UNK	---	X	-	Repaired
S	Internal Engine Control Harness (Green)	N/D	N/D	UNK	---	-	-	Visual inspection

DEFESA
Fi: 41
Proc: 173981
Rub: *[Signature]*
CABW
C. AERONAUTICA

U1	Turb Interstage Thermoc. Harness (A)	N/D	N/D	UNK	---	---	---	Visual Inspection
U2	Turb Interstage Thermoc. Harness (B)	N/D	N/D	UNK	---	---	---	Visual Inspection
U3	IT Trim Plug	23058854-04	NX11334	UNK	---	---	---	Not removed
UA	Turb Interstage Thermoc. Assy	N/D	N/D	UNK	---	---	---	Not removed
UB	Turb Interstage Thermoc. Assy	N/D	N/D	UNK	---	---	---	Not removed
UC	Turb Interstage Thermoc. Assy	N/D	N/D	UNK	---	---	---	Not removed
UD	Turb Interstage Thermoc. Assy	N/D	N/D	UNK	---	---	---	Not removed
UE	Turb Interstage Thermoc. Assy	N/D	N/D	UNK	---	---	---	Not removed
UF	Turb Interstage Thermoc. Assy	N/D	N/D	UNK	---	---	---	Not removed
UG	Turb Interstage Thermoc. Assy	N/D	N/D	UNK	---	---	---	Not removed
UH	Turb Interstage Thermoc. Assy	N/D	N/D	UNK	---	---	---	Not removed
UI	Turb Interstage Thermoc. Assy	N/D	N/D	UNK	---	---	---	Not removed
UJ	Turb Interstage Thermoc. Assy	N/D	N/D	UNK	---	---	---	Not removed
UK	Turb Interstage Thermoc. Assy	N/D	N/D	UNK	---	---	---	Not removed
UL	Turb Interstage Thermoc. Assy	N/D	N/D	UNK	---	---	---	Not removed
UM	Turb Interstage Thermoc. Assy	N/D	N/D	UNK	---	---	---	Not removed
UN	Turb Interstage Thermoc. Assy	N/D	N/D	UNK	---	---	---	Not removed
UO	Turb Interstage Thermoc. Assy	N/D	N/D	UNK	---	---	---	Not removed
UP	Turb Interstage Thermoc. Assy	N/D	N/D	UNK	---	---	---	Not removed
V1	Vibration Sensor Assy (Fan)	N/D	N/D	UNK	---	---	---	Not removed
V2	Vibration Sensor Assy (Diffuser)	N/D	N/D	UNK	---	---	---	Not removed
X	Oil Tank	RJ13488	23070328	UNK	---	---	---	Visual Inspection
Y	Oil Filler Assy	Q5769	23084830	UNK	---	---	---	Visual Inspection
Z	Oil Pressure Relief Valve	0810	23073345	UNK	---	---	---	Visual Inspection
Z	Lube and Scavange Pump Assy	NL1311	23068052	10082.66	---	---	---	Visual Inspection
ZA	Air cooled Oil Cooler Assy	N/D	N/D	UNK	---	---	---	Visual Inspection
ZB	Fuel Cooled Oil Cooler	1396	23073532	UNK	---	---	---	Visual Inspection
ZC	Oil Tank Pressurizing Valve Assy	10427	23087185	UNK	---	---	---	Visual Inspection
ZD	Oil Temp/Press Sensor Assy	HT0034	23073715	UNK	---	---	---	Visual Inspection

Comments :

FPMU PIN 23063131 S/N BAE11924 was received without the Log Card.

SAO BERNARDO DO CAMPO, SEPTEMBER 29, 2005

[Signature]
 Accusado's Department

[Signature]
 Inspection Department

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AIR CARAIBES INDUSTRIES

Aéroport de Fort de France
 97232 LE LAMENTIN / MARTINIQUE (FWI)
 Phone : 0596 51 08 09 - Fax : 0596 51 53 94

Organisme d'Entretien
 Agrément / Approval EASA part 145 N° FR.145.508

REPAIR ORDER	
No :	F2 701426
Date :	11/07/2007
Code :	615509

SUPPLIER	SHIPPING ADDRESS	BILLING ADDRESS
ROLLS-ROYCE BRASIL LTDA. RUA DR. CINCINATO BRAGA, 47 SÃO BERNARDO DO CAMPO - SP CEP 09890-900 BRASIL	AIR CARAIBES INDUSTRIES AEROPORT DU LAMENTIN 97232 LE LAMENTIN MARTINIQUE MQ Tel: 011596596519723 Fax: 011596596515394 eMail: rrahridzery@aircarabes.com	AIR CARAIBES INDUSTRIES AEROPORT DU LAMENTIN 97232 LE LAMENTIN MARTINIQUE MQ Tel: 011596596519723 Fax: 011596596515394 eMail: rrahridzery@aircarabes.com
MODE DE REGLEMENT	TYPE	EXPEDIER VIA
	REPAIR	<i>PO SCHEUKEN</i>

Item	Part Number	Désignation	N° de série	Dev	Montant
	AE3007A1	ENGINE ASSY.TURBOFAN	CAE311642		
	TSN:13 890.18	TSD:13 890.18	TSH:3 907.50	TSH:3 907.50	Items A/C L/E
	CSN:10 283.00	CSD:10 283.00	CSH:3 001.00	CSH:3 001.00	N° série A/C : 350
Objet : REPAIR/REMISE EN ETAT					

Remarks : RAISONS OF REMOVAL :
 OIL LEAK & SMOKE IN CABIN & APPLICATION OF AD 2000-11-22

Required Documents : Original Maintenance Organization Authorized Release Certificate
EASA Form 1
Used Components : TCA Form 34-0078
 FAA Form 8130-3 from Repair station Authorized of EASA Approval of FAR 145

- Remarks :**
 - 1 - Please Acknowledge receipt of parts / Veuillez actuser réception de l'article
 - 2 - History of parts provided along with P.O. / Historique des mouvements joint C.R.
 - 3 - Reference manual used for the repair / Référence au manuel utilisé pour réparation
 - 4 - Sent parts must be delivered as aeronautical ones on AWB / Les articles renvoyés doivent être définis comme pièces aéronautiques sur le C.R.
 - 5 - Specify estimated cost prior any work / Notifiez une estimation des coûts avant l'exécution tout travail

RAHARIDZERY RAYMOND LOGISTIC MANAGER Tél : 05 96 51 97 23 Fax : 05 96 51 53 94	LOGISTIC MANAGER	DIRIGEANT RESPONSABLE

Distribution : 1.Fournisseur 2.Service achats 3.Contrôle de gestion 4.Comptabilité



Centre d'entretien d'Aéronef
 Organisme d'entretien agréé EASA Part145 N°-FR.145.508
 Aircraft Maintenance center
 Part 145 Approved Maintenance Organisation N°- FR 145 508

11/07/2007

COMMERCIAL INVOICE

N°: F2701426

Expedition Temporaire pour Réparation
 Temporary Shipment for Repair

FACTURE POUR DOUANES SEULEMENT
INVOICE FOR CUSTOMS PURPOSE ONLY

ATTN : Ann: Fernando SELESTRINO

ROLLS-ROYCE BRASIL LTDA.
 RUA DR. CINCINATO BRAGA, 47
 SÃO BERNARDO DO CAMPO - SP
 CEP 09890-900
BRASIL

PHONE : 55 11 4390-4924

Transit at :
AIR CARAIBES
 C/O SCHENKER
 6, Rue des Cèdres
 95704 ROISSY CDG
FRANCE
 Phone : 01 49 47 06 01

ITEMS	PART NUMBER	Qty	S/N	DESCRIPTION	PRIX
01	AE3007A1	1	CAE311642	Engine Assy Aéro Engine ROLLS ROYCE	\$1 067 000
					\$1 057 000

NOTA : With Transportation Stand and Reusable bag

This engine is been sent to ROLLS ROYCE BRASIL LTDA for Repair

Civil aircraft Engine

1 Stand with Engine of 1 408 Kgs
 330 X 160 X 160cm

RETURN FOR REPAIR TO :

ROLLS-ROYCE BRASIL LTDA.
 RUA DR. CINCINATO BRAGA, 47
 SÃO BERNARDO DO CAMPO - SP
 CEP 09890-900
BRASIL

AIR CARAIBES Industries

R.RAHARIDZERY
 Logistic Manager
 Ph. : 00596 596 51 97 23
 Fax : 00596 596 51 53 94



AE 3007A1 ENGINE TEST CERTIFICATE

AMC Data Reduction Program (EDR 19405B)

Engine Model: AE 3007 A1
Engine Serial Number: CAE311642
Work Order: OSM 299298
Date of the test: 27/Sep/2007
Fuel Type: Jet A1
Oil Type: Aero Shell 500
Trim Resistor: 23058854 - 04
FADEC A Serial Number: BX47234
FADEC B Serial Number: BX47281
FADEC Part Number: 23078456

Predicted Data:	TO-1	ATO	MCO	MCR
N1 Fan Speed (rpm)	7528.0	7288.0	7268.0	6758.0
Thrust (lbf)	7771.1	7104.1	7104.1	
% Delta Spec Max Thrust	-3.28			
% Delta Spec Min Thrust	2.52	3.50	3.50	
N2 Speed (rpm)	15104.2			
% Delta Spec Max N2 Speed	-2.43			
TSFC (lb/hr/lbf)	0.3937			
% Delta Spec Max TSFC	-9.71			
ITT (°C)	787			
Delta Spec Max ITT	-37.11			
ITT7x (°C)	765			
Delta Spec Max ITT7x	-59.33			

Vibration (Max Steady State Level)
 FARVFF: 0.345 Ips RMS N1 7775 rpm N1
 FARVGG: 0.329 Ips RMS N2 10587 rpm N2



Test Cell Inspector



Test Cell Technical Assistant
 Anderson Frazão de Fontes
 Cód ANAC 105589
 LIC 17409

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AE 3007A1 ENGINE TEST CERTIFICATE

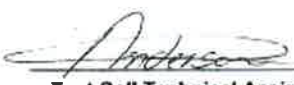
AMC Data Reduction Program (EDR 19405B)

Engine Model: AE 3007 A1
Engine Serial Number: CAE311642
Work Order: OSM 299298
Date of the test: 27/Sep/2007
Fuel Type: Jet A1
Oil Type: Aero Shell 500
Trim Resistor: 23058854 - 04
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Delta Spec Max ITT	-37.11			
ITT7x (°C)	765			
Delta Spec Max ITT7x	-59.33			

Vibration (Max Steady State Level)
 FARVFF: 0.345 Ips RMS N1 7775 rpm N1
 FARVGG: 0.329 Ips RMS N2 10587 rpm N2


 Test Cell Inspector


 Test Cell Technical Assistant
 Anderson Frasson de Foz
 COD ANAC 105589
 LIC 17409

[Handwritten signatures and marks]

1. Approving Competent Authority / Country United Kingdom		AUTHORISED RELEASE CERTIFICATE EASA FORM 1			3. Form Tracking Number RRB - E 44 / 2007	
4. Approved Organisation Name and Address: Rolls-Royce Brasil Ltda. Rua Dr. Cincinato Braga, 47 - São Bernardo do Campo - São Paulo - Brazil CEP 06890-900 Telephone No.: 55 11 4380-4800 Fax No.: 55 11 4341-8071				5. Work Order/Contract/Invoice 299296		
6. Item	7. Description	8. Part Number	9. Eligibility*	10. Qty.	11. Serial /Batch No	12. Status/ Work
01	AE3007A1 TURBOFAN ENGINE	23070991	ERJ-145 LR	01	CAE311642	Repaired
13. Remarks 1- The engine was disassembled, inspected, assembled and tested in accordance with the Engine Manual CSP31010, Revision 23 dated March 01, 2007. 2- Engine life details at the shop visit. TSN = 13890,00 hours, CSN = 10,283 cycles. 3- For AD's status, see RRB Airworthiness Directives Compliance Record. 4- For LLP's status, see RRB life limited components sheet. 5- RRB W O # 299296						
14. Certifies that the items identified above were manufactured in conformity to: <input type="checkbox"/> approved design data and are in condition for safe operation <input checked="" type="checkbox"/> non-approved design data specified in block 13				19. <input checked="" type="checkbox"/> Part-145 A 30 Release to Service <input type="checkbox"/> Other regulation specified in block 13 Certifies that unless otherwise specified in block 13, the work identified in block 12 and described in block 13, was accomplished in accordance with Part-145 and in respect to that work the items are considered ready for release to service.		
15. Authorised Signature 		18. Approval/Authorization Number EASA.145.0119	20. Authorised Signature Julio Martins CREA 0662399590 CDD ANAC 105113		21. Certificate/Approval Ref. No. EASA.145.0119	
17. Name Julio Martins		18. Date (dd/m/y) 27/09/2007	17. Name Julio Martins		18. Date (dd / mmm / yyyy) 27/09/2007	
EASA Form 1 - Issue 1				*Installer must cross-check eligibility with applicable technical data		
Note 1. It is important to understand that the existence of the Document alone does not automatically constitute authority to install the part/component/assembly. 2. Where the user/installer works in accordance with the national regulations of an Airworthiness Authority different from the Airworthiness Authority specified in block 1 it is essential that the user/installer ensures that neither Airworthiness Authority accepts part/component/assemblies from the Airworthiness Authority specified in block 1. 3. Statements 14 and 19 do not constitute installation certification. In all cases the aircraft maintenance record must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.						

User/ Installer



ROLLS-ROYCE BRASIL

Rua Dr. Cincinato Braga, 47
 São Bernardo do Campo
 São Paulo, Brasil, CEP 09890-900

ENGINE SERVICE REPORT

ROLLS-ROYCE CORPORATION AE3007A1 ENGINE SERIAL NUMBER CAE311642

ENGINE PARTICULARS

ESN	TSN	CSN	AIRCRAFT	POSITION	REMOVED
CAE311642	10082.68	7282	F-OIJE	UNK	23 AUGUST 2005

ENGINE PART NUMBER	RRB W.O. #	CUSTOMER	AIRCRAFT TYPE
23070991	259242	AIR CARAIBES	EMBRAER ERJ-145

DISTRIBUTION
 AIR CARAIBES
 Rolls-Royce Corporation Representative
 Rolls-Royce Corporation AMC Project Manager
 Rolls-Royce Brasil Customer Business Manager
 Engine File

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RRB W.O. #	REPORT	DATE	COMPILED BY	VERIFIED BY	PAGE
259242	Rel642-05	29 SEP 05	F. Puccioni	M. Uttembergue	1 / 4

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- **Index**

- a) Reason for Removal
- b) Teardown Report and Shop Findings
- c) Service Bulletins Compliance Table
- d) Engine Major Modules Configuration Chart
- e) Test Cell Results
- f) Final Remarks and Considerations

- **a) Reason for Removal**

Engine was removed from ACFT F-01JE due to "fuel nozzle stud broken".

- **b) Teardown Report and Shop Findings**

The engine was disassembled only to the extent necessary to stand the engine in the vertical position to allow Outer Bypass Duct removal and access to the area to be inspected and repaired following the EM guidelines.

FAN MODULE – ROTATING AND STATIONARY

The Fan Module – Rotating and Stationary was disassembled only to the extent necessary to stand the engine in the vertical position to allow Outer Bypass Duct removal and access to the area to be inspected and repaired.

02 off bypass vanes were replaced due to present impact damage; remaining bypass vanes were inspected and accepted for returning to service.

No other noteworthy condition or unusual features were recorded during the inspections carried out.

HP COMPRESSOR

HP Compressor module assembly was visually inspected IAW the EM 72-30-00-200-801 and accepted.

Fuel Nozzle studs fitted to the diffuser case assembly were inspected and accepted with exception for one stud which was replaced IAW the EM directions.

No other noteworthy conditions or unusual features were recorded.

COMBUSTION MODULE

Combustion Liner was not removed from the engine core.

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HP TURBINE MODULE

HP Turbine Rotor and HPT1 Vanes Assembly were not removed from the engine core.

LOW PRESSURE TURBINE ASSEMBLY

LPT Assembly Casing and engine exhaust were visual externally inspected and no noteworthy condition or unusual features were recorded.

ACCESSORY DRIVE GEARBOX

The Accessory Drive Gearbox was visually inspected and accepted in accordance with the MM 72-00-00-200-801, complying with the intents of the GVI as required by the MM 05-21-00 and 72-60-00. No noteworthy conditions were recorded.

FINAL ASSEMBLY

Outer Bypass Duct was inspected and accepted.
No noteworthy conditions were recorded.

- **c) Service Bulletins Compliance and Notice to Operators List**

No modifications were carried out during this shop visit

- **d) Engine Major Modules Configuration Chart**

Engine Major Modules Configuration				
Description	Part Number	Serial Number	TSN	CSN
Fan Rotor	23063061	WD18597	10082,68	7282
HPC Rotor	23073508	A19348	10082,68	7282
HPT Rotor	23070981	A71171	10082,68	7282
LPT Rotor	23067890	A81150	10082,68	7282
AGB	23077013	1237	10082,68	7282

- **e) Test Cell Results**

As agreed with RR Corp no test was carried out on the engine during this shop visit.

RRB W.O. #	REPORT	DATE	COMPILED BY	VERIFIED BY	PAGE
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• **f) Final Remarks and Considerations**

Reason for engine removal was confirmed.
 As previously stated the engine was disassembled, the fuel nozzle stud was replaced and the engine is being returned to the customer in a serviceable condition.

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RRB W.O. #	REPORT	DATE	COMPILED BY	VERIFIED BY	PAGE
259242	Rel642-05	29 SEP 05	F. Puccioni	M. Uttembergue	4 / 4

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The United States of America
 Department of Transportation
Federal Aviation Administration
 Washington, D.C.

No. E-366102

Export Certificate of Airworthiness

*This certifies that the product identified below and more particularly described in Specification (s)¹ of the Federal Aviation Administration, Numbered **TE6CH** has been examined and as of the date of this certificate, is considered airworthy in accordance with a comprehensive and detailed airworthiness code of the United States Government, and is in compliance with those special requirements of the importing country filed with the United States Government, except as noted below. This certificate in no way attests to compliance with any agreements or contracts between the vendor and purchaser, nor does it constitute authority to operate an aircraft.*

Product: Aircraft Engine
Manufacturer: Rolls-Royce Corporation
Model: AE 3007A1
Serial No.: CAE-311642
New *Recently Overhauled*
Used Aircraft
Country to which exported: Federal Republic of Brazil
Exemptions: None

As of this date no outstanding Airworthiness Directives apply to this unit.

Additional Information: The engine identified by this Certificate has been examined and found to conform to The Centro Tecnico Aeroespacial (CTA) Approved Type Design defined by CTA Type Certification #9608.

Dennis M. Phillippe
 Dennis M. Phillippe

Signature of Authorized Representative

11-30-00
Date

DARF-501101-CE

District Office or Designate Number

¹ For complete aircraft, list applicable specification or Type Certificate Data Sheet numbers for the aircraft, engine, and propeller. Applicable specifications or Type Certificate Data Sheet, if not attached to this export certificate, will have been forwarded to the appropriate governmental office of the importing country.

Rolls-Royce Brasil		Rolls-Royce	
ENGINE MODIFICATION STANDARD			
Engine Serial Number CAE311642			
Model:	AE3007A1	P/N	23070891
Issue Date	Sep 27, 2007	Reason for Removal	OIL LEAKS
TSN	CSN	TSR	CSR
13890,18	10283	3807.5	3001
Operator:		AIR CARAIBES	
W.O.:		299296	

	FOUND EMBODIED				DURING THIS SHOP VISIT			
Fan Rotor	AE3007A-72-025	AE3007A-72-036	AE3007A-72-038	AE3007A-72-108	AE3007A-72-251	AE3007A-72-289	AE3007A-72-309	AE3007A-72-302
	AE3007A-72-167	AE3007A-72-168	AE3007A-72-263	AE3007A-72-238	AE3007A-72-383	AE3007A-72-384	AE3007A-72-331	AE3007A-72-338
	AE3007A-72-238	AE3007A-72-238	AE3007A-72-341	AE3007A-72-547	AE3007A-72-338	AE3007A-72-348	MCL05-04	MCL07-03
	AE3007A-A-72-207	AE3007A-A-72-207	-	-	NTO-043	-	-	-
HP Compressor Rotor	AE3007A-72-018	AE3007A-72-023	AE3007A-72-030	AE3007A-72-031	AE3007A-72-386	AE3007A-72-332	AE3007A-72-334	AE3007A-72-327
	AE3007A-72-048	AE3007A-72-049	AE3007A-72-064	AE3007A-72-066	AE3007A-72-333	AE3007A-72-035	MCL06-16	MCL06-16
	AE3007A-72-087	AE3007A-72-168	AE3007A-72-171	AE3007A-72-172	NTO-044	TVF0318	TVF0319	-
	AE3007A-72-181	AE3007A-72-187	AE3007A-72-214	AE3007A-72-228	-	-	-	-
	AE3007A-72-344	AE3007A-72-345	AE3007A-72-255	AE3007A-72-256	-	-	-	-
	AE3007A-72-357	AE3007A-72-083	AE3007A-72-086	AE3007A-72-016	-	-	-	-
HP Turbine Rotor	AE3007A-72-186	AE3007A-72-205	AE3007A-72-210	AE3007A-72-215	MCL-07-02	-	-	-
	AE3007A-72-285	AE3007A-A-72-265	-	-	-	-	-	-
LP Turbine Rotor	AE3007A-72-011	AE3007A-72-034	AE3007A-72-038	AE3007A-72-104	AE3007A-72-291	AE3007A-72-332	AE3007A-72-336	-
	AE3007A-72-162	AE3007A-72-165	AE3007A-72-185	AE3007A-72-198	-	-	-	-
	AE3007A-72-199	AE3007A-72-212	-	-	-	-	-	-
Accessory Drive Gearbox	AE3007A-72-037	AE3007A-72-072	AE3007A-72-115	AE3007A-72-141	AE3007A-72-399	AE3007A-72-331	AE3007A-72-003	NTO-058
	AE3007A-72-191	AE3007A-72-235	AE3007A-72-253	AE3007A-72-277	-	-	-	-
	AE3007A-72-279	AE3007A-74-004	AE3007A-74-007	AE3007A-79-019	-	-	-	-
	AE3007A-79-021	AE3007A-A-72-134	-	-	-	-	-	-
Final Assembly	AE3007A-72-095	AE3007A-72-037	AE3007A-72-052	AE3007A-72-055	-	-	-	-
	AE3007A-72-116	AE3007A-72-188	AE3007A-72-188	AE3007A-72-183	AE3007A-72-386	AE3007A-72-035	AE3007A-72-024	AE3007A-72-030
	AE3007A-72-095	AE3007A-72-012	AE3007A-72-017	AE3007A-72-022	AE3007A-72-033	AE3007A-72-036	AE3007A-72-083	AE3007A-72-036
	AE3007A-72-088	AE3007A-72-015	AE3007A-72-013	AE3007A-72-015	AE3007A-72-039	MCL08-46	NTO-018	NTO-040
	AE3007A-72-018	AE3007A-72-019	AE3007A-72-086	AE3007A-72-086	NTO-014	NTO-077	NTO-088	-
	AE3007A-72-007	AE3007A-72-015	AE3007A-72-025	AE3007A-72-029	-	-	-	-
	AE3007A-72-038	-	-	-	-	-	-	-
	AE3007A-72-038	-	-	-	-	-	-	-

[Signature]
 Compiled by
EDUARDO PESSOA
 RRB Engineering

[Signature]
 Verified by
JULIO MARTINS
 RRB Engineering

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ROLLS-ROYCE BRASIL

Rua Dr. Cincinato Braga, 47
 São Bernardo do Campo
 São Paulo, Brasil, CEP 09890-900

INVESTIGATION REPORT

ROLLS-ROYCE CORPORATION AE3007A1 ENGINE SERIAL NUMBER CAE311642

ENGINE PARTICULARS

ESN	TSN	CSN	AIRCRAFT	POSITION	REMOVED
CAE311642	8,425:56	5,911	F-OIJF	RH	N/A

ENGINE P/N	RRB W.O.	CUSTOMER	AIRCRAFT TYPE
23070991	246300	AIR CARAIBES	EMB-145
DISTRIBUTION			
AIR CARAIBES Rolls-Royce Corporation Representative Rolls-Royce Corporation AMC Project Manager RRB Customer Business Manager Engine File			

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RRB W.O.	REPORT	DATE	COMPILED BY	APPROVED BY	PAGE
246300	Rel642-4	20 DEC 04	M Uttembergue	Ana Laura Rebello	1 / 4

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• **Index**

- a) Event Description
- b) Teardown Report and Shop Findings
- c) Pictures
- d) Final Remarks and Considerations

• **a) Event Description**

According to the customer the engine presented smoke in the cabin as well as debris on the Fan Sump's chip detector and oil leak evidences on the Fan Case positioned at 6 o'clock. Rolls-Royce Brasil team was sent to the Air Caraibes facility in order to investigate and fix the problem as applicable and some findings were taken into account as described below:

- The oil leak evidence was confirmed on the Fan Case positioned 6 o'clock.
- The #0 Carbon Seal was found oily and its Teflon Lip Seal damaged.
- The Fan Drive Shaft Assembly was removed and it was noticed that the #0 Carbon Seal Runner could be easily rotated.
- The Fan Drive Shaft Assembly, the #0 Carbon Seal, the Teflon-Lip Seal and the #0 Bearing provided by the customer were fitted to the engine and the original ones were sent to Rolls-Royce Brasil for further investigation.

• **b) Teardown Report and Shop Findings**

1st Step: The fan Drive Shaft Assembly was submitted to a visual general inspection and the findings are the following:

- It was noticed that the #0 Carbon Seal Runner could be easily rotated as previously reported by the RRBrasil team during investigation at Air Caraibes facility.
- The whole assembly presented cooked oil.
- The #0 Carbon Seal Runner was found to be oily and scored.

2nd Step: The Self-Locking Bearing Nut was removed from the Fan Drive Shaft in accordance with the Engine Manual instructions Subtask 72-21-15-990-801.

- Torque necessary to remove the Nut: 550 ft-lb.

3rd Step: The #0 Bearing Inner Race as well as the #0 Bearing Spacer and the #0 Carbon Seal Runner were removed from the Fan Drive Shaft IAW the Engine Manual instructions Subtask 72-21-15-050-002.

4th Step: All the components were visually inspected as follows:

- #0 Bearing Inner Race – no noteworthy conditions could be seen.
- #0 Bearing Spacer – it was found presenting cooked oil.
- #0 Carbon Seal Runner / Outer Diameter – it was found scored, oily and presented cooked oil.
- O-ring – showed several marks equally spaced around its diameter.
- #0 Carbon Seal – it was found oily and its segments were jammed.
- Lip Seal – it was found deformed and torn.

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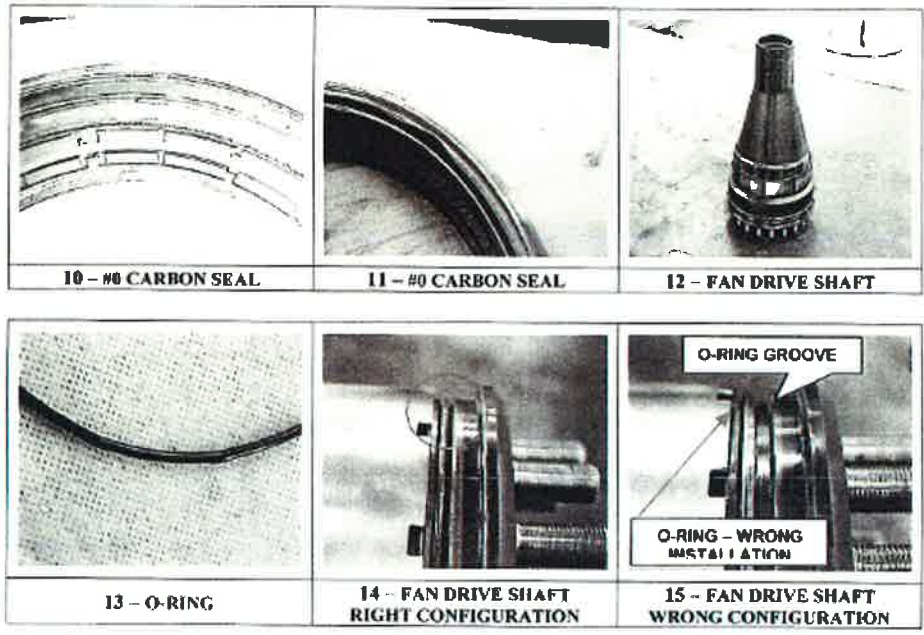


• c) Pictures



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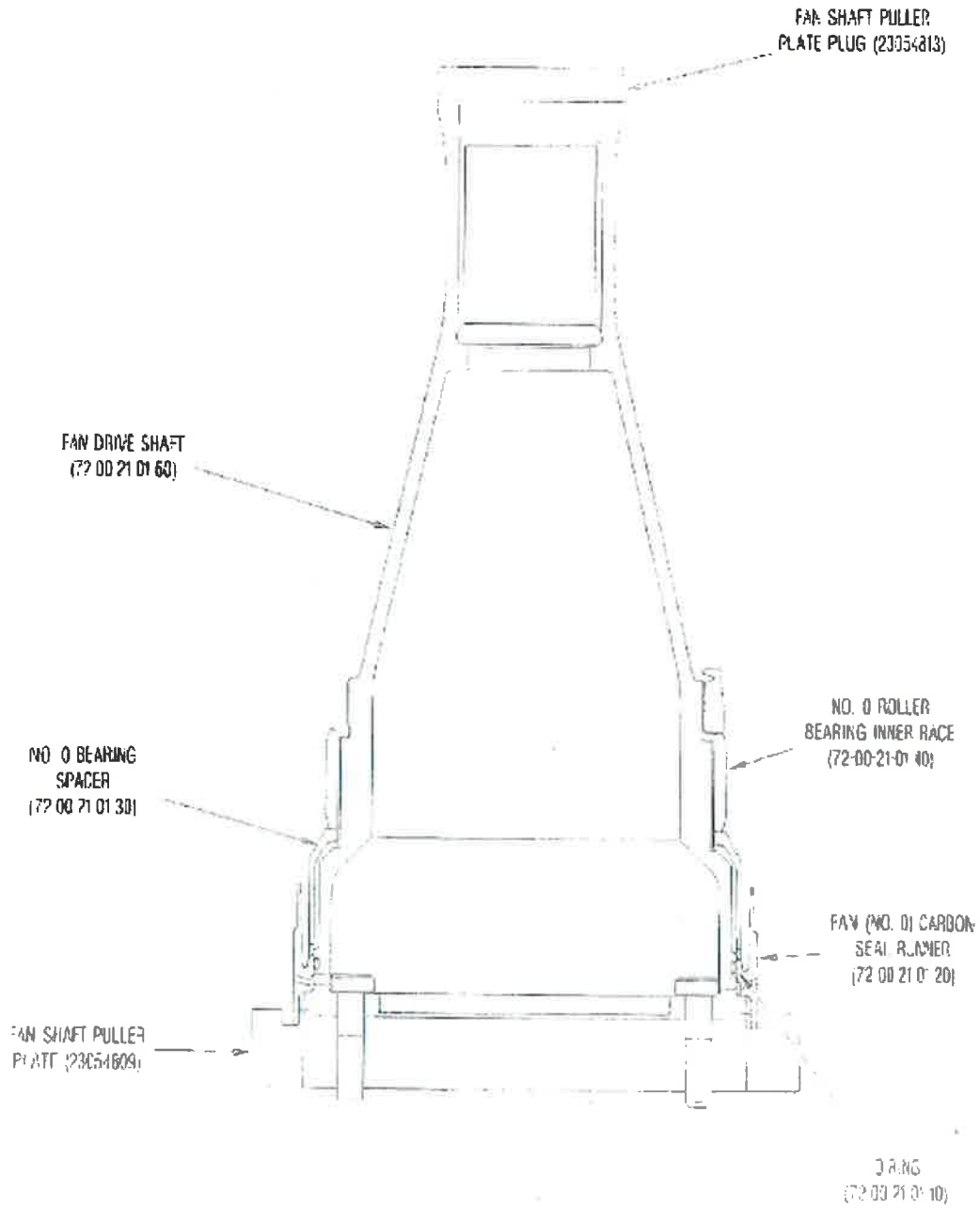
• **d) Final Remarks and Considerations**

Based on the shop findings it was concluded that the #0 Carbon Seal Runner was the source of the debris. It happened because its O-ring was not properly installed causing the #0 Carbon Seal Runner to rotate freely generating debris and contributing to the mal function of the #0 Carbon Seal that lead to the oil leak and the oil smell in the cabin

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ROLLS-ROYCE BRASIL

Rua Dr. Cincinato Braga, 47
 São Bernardo do Campo
 São Paulo, Brasil, CEP 09890-900

ENGINE SERVICE REPORT

ROLLS-ROYCE CORPORATION
AE3007A1
ENGINE SERIAL NUMBER CAE311642

ENGINE PARTICULARS

ESN	TSN	CSN	AIRCRAFT	POSITION	REMOVED
CAE311642	6,965:00	4,721	F-ONF	LH	05 FEB 2004

ENGINE PART NUMBER	RRB W.O. #	CUSTOMER	AIRCRAFT TYPE
23070991	229630	AIR CARAIBES	EMBRAER EMB-145MP
DISTRIBUTION			
AIR CARAIBES Rolls-Royce Corporation Resident Manager Rolls-Royce Corporation AMC Project Manager Rolls-Royce Brasil Customer Business Manager Engine File			

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• **Index**

- a) Reason for Removal
- b) Teardown Report and Shop Findings
- c) Service Bulletins Compliance Table
- d) Engine Major Modules Configuration Chart
- e) Pictures
- f) Test Cell Results
- g) Life Limited Parts
- h) Final Remarks and Considerations
- i) Appendix I

• **a) Reason for Removal**

The subject engine was removed from the ACFT F-01JF, position LH due to present flame / smoke on the exhaust after engine shut off * (see Appendix I – Engine Service Report).

• **b) Teardown Report and Shop Findings**

The engine was disassembled to the extent necessary in order to have the rear sump area investigated and also to comply with a performance refurbishment to the Fan, HPC and HPT modules following the EMP level 03 instructions.

FAN MODULE – ROTATING AND STATIONARY

The Fan Module was disassembled, inspected, repaired and assembled in accordance with the Engine Manual and following the EMP level 03 instructions.

Highlights:

- The #0 Carbon Seal Runner was replaced because it was found to be scratched.
- The Fan Spinner was repaired due to present some minor impact damages.
- 03 off the 25 Fan Bypass Vanes were replaced for being battered and the remaining ones were repaired due to present minor impact damages.
- 03 off the 24 Fan Blades were sent to RRCorp due to present damages to their dovetail coating, the remaining ones were repaired for presenting minor impact damages and also some superficial erosion.
- The Fan-Teflon Lip Seal was replaced for being bent.

HP COMPRESSOR MODULE

The Compressor module was partially disassembled, inspected, repaired and assembled in accordance with the Engine Manual. The Compressor Case - Blade Tracks were match ground to the Compressor Rotor dimensions, making this module comply with the performance refurbishment as per the EMP level 03 recommendations.

Highlights:

- The #4 Carbon Seal as well as its Runner were replaced IAW the EMP recommendations.
- The Front Frame Assembly was replaced for being excessively corroded.

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- The #0 Carbon Seal was found to be excessively worn, therefore it was re-kited and successfully flow checked.
- The #0 Bearing was replaced because it was found to be scratched.
- The Fan Core Vane Assy was repaired due to present some minor impact damages and loss of painting.
- The Stub Shaft was replaced due to present several corrosion points.

DIFFUSER AND COMBUSTION MODULES

The Diffuser and Combustion Modules were disassembled, inspected, repaired and assembled in accordance with the Engine Manual and following the EMP level 03 instructions.

- Highlights:**
- The Combustion Liner was replaced for being cracked.
 - The #5 Carbon Seal and its runner were replaced following the RRCorp instructions.
 - The #6 Carbon Seal was found to be worn, so it was re-kited and successfully flow checked.
 - The #6 Carbon Seal Runner was replaced as per the workscope instructions

HP TURBINE MODULE

The HPT module was partially disassembled, inspected, repaired assembled in accordance with the Engine Manual. A performance refurbishment was carried out to the HPT module as per the EMP level 03 recommendations.

- Highlights:**
- 14 off the 20 HPT1 Vanes were replaced for being eroded.
 - The HPT Case was replaced due to be excessively corroded.
 - The HPT2 Wheel was replaced because it was damaged during the HPT module removal.
 Note: Such a damage occurred due to an abnormal situation faced to remove the HPT module (the HPT module spanner nut was found to be completely locked)
 - The HPT1 Blade Tracks were sent to RRCorp for investigation.
 - The 1st to 2nd Stage HPT Spacer was replaced due to TIMEX as per the RRCorp recommendations

LOW PRESSURE TURBINE ASSEMBLY

The LPT module was partially disassembled, inspected, and assembled in accordance with the Engine Manual guidelines and following the EMP instructions.

- Highlights:**
- The #7 Carbon Seal was found to worn, so it was re-kited and successfully flow checked.

ACCESSORY DRIVE GEARBOX

The Accessory Drive Gearbox was visually inspected and accepted in accordance with the MM 72-00-00-200-801, complying with the intents of the GVI as required by the MM 05-21-00 and 72-60-00.

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FINAL ASSEMBLY

The engine was partially disassembled, inspected, repaired, assembled and successfully tested following the AE3007 Engine Manual and other RR Corp technical publications.

Highlights:

- The Outer Bypass Rear Support was repaired due to present some fretting on its cross-key slots.
- The Air Tube P/N 23061860 was replaced because it was found to be excessively corroded.
- The Forced Mixer was repaired due to present some fretting on its pocket areas.

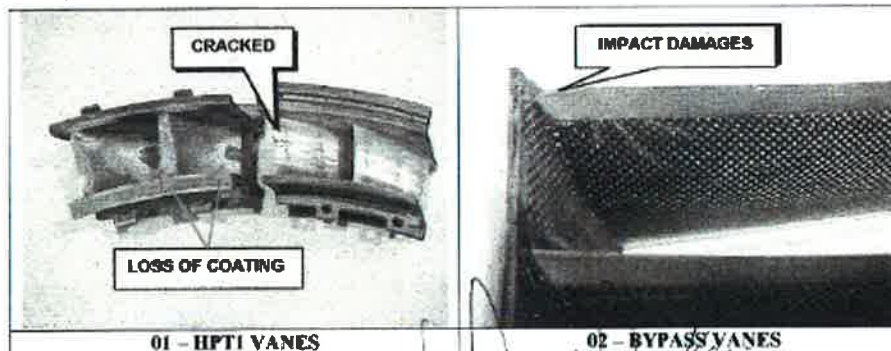
• **c) Service Bulletins Compliance List**

The following Service Bulletins and Notice to Operators were incorporated: SB AE3007 72-197, 72-198, 72-203, 72-207, 72-208, 72-210, 72-212, 72-214, 72-215, 72-228, 72-229, 72-235, 72-239, 72-243, 72-244, 72-246, 72-247, 72-255, 72-256, 72-257, 72-265, 72-270, 72-277, 72-278, 72-280, 74-005, 74-006, 74-007, 75-019, 79-030, NTO-033 and NTO-044R2.

• **d) Engine Major Modules Configuration Chart**

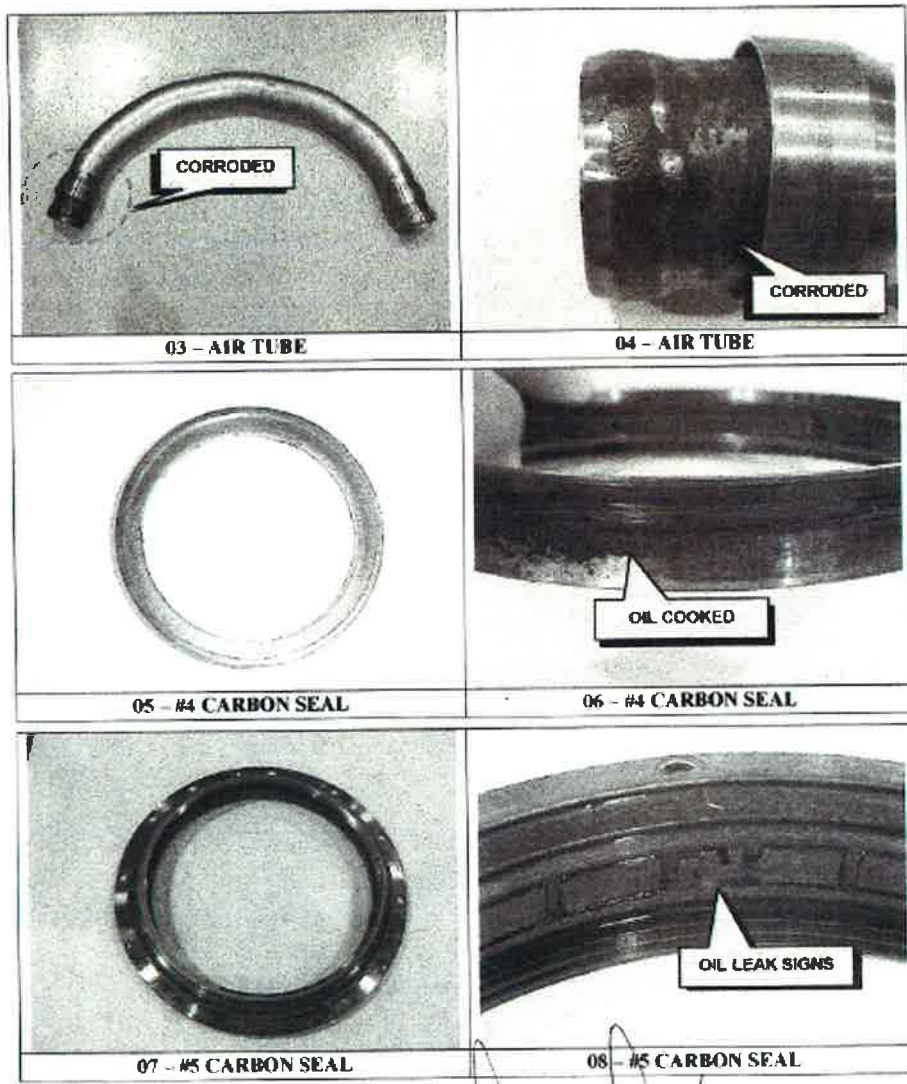
Engine Major Modules Configuration				
Description	Part Number	Serial Number	TSN	CSN
Fan Rotor	23063061	WD18597	6,965:00	4,721
HPC Rotor	23073508	A19348	6,965:00	4,721
HPT Rotor	23070981	A71171	6,965:00	4,721
LPT Rotor	23067890	A81150	6,965:00	4,721
AGB	23077013	1237	6,965:00	4,721

• **e) Pictures**



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• f) Test Cell Results

AE 3007A1 ENGINE TEST CERTIFICATE

AMC Data Reduction Program (EDR 194058)

Engine Model: AE 3007 A1
 Engine Serial Number: CAE311642
 Work Order: OSM 229675
 Date of the test: 07/Mar/2004
 Fuel Type: Jet A1
 Oil Type: Aero Shell 500
 Trim Resistor: 23058854 - 04
 FADEC A Serial Number: BX47281
 FADEC B Serial Number: BX47234
 FADEC Part Number: 23074001

Predicted Data:	TO-1	ATO	MCO	MCR
N1 Fan Speed (rpm)	7528.0	7268.0	7268.0	6758.0
Thrust (lbf)	7908.2	7218.5	7216.5	
% Delta Spec Max Thrust	-1.58			
% Delta Spec Min Thrust	4.33	5.13	5.13	
N2 Speed (rpm)	15139.2			
% Delta Spec Max N2 Speed	-2.21			
TSFC (lb/hr/lbf)	0.3871			
% Delta Spec Max TSFC	-11.21			
ITT (°C)	772.0			
Delta Spec Max ITT	-52.23			
ITT7x (°C)	749.0			
Delta Spec Max ITT7x	-74.45			

Vibration (Max Steady State Level)

FARVFF: 0.544 ips Peak N1 7895 Rpm N1
 FARVGG: 0.447 ips Peak N2 10777 Rpm N2

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• g) Life Limited Parts

CUSTOMER : AIR CARAIBES		RRB W/O # 229630		DATE MARCH 07, 2004		
ENGINE SERIAL NUMBER	T.S.N.	C.S.N.	T.S.O.	C.S.O.	T.S.R.	C.S.R.
CAE311642	6,987.0	4,741	----	----	0.00	000
DESCRIPTION	P/N	S/N	TSN	CSN	REMARKS	
Fan Wheel	23061670	WD18597	6,987.0	4,741		
Fan Blade Fwd Retainer	23062491	HK18963	6,987.0	4,741		
Fan Drive Shaft	23065332	GV15452	6,987.0	4,741		
1 st Stage Compressor Wheel	23065041	L188485	6,987.0	4,741		
2 nd Stage Compressor Wheel	23050752	L184288	6,987.0	4,741		
3 rd Stage Compressor Wheel	23065303	L206042	6,987.0	4,741		
4 th Stage Compressor Wheel	23071259	L188744	6,987.0	4,741		
5 th Stage Compressor Wheel	23071260	L184857	6,987.0	4,741		
6 th Stage Compressor Wheel	23071396	L199670	6,987.0	4,741		
7 th Stage Compressor Wheel	23071397	L210557	6,987.0	4,741		
8 th Stage Compressor Wheel	23071263	L181485	6,987.0	4,741		
9 th Stage Compressor Wheel	23071264	L134590	6,987.0	4,741		
10 th Stage Compressor Wheel	23071265	L243093	6,987.0	4,741		
11 th Stage Compressor Wheel	23066231	L214516	6,987.0	4,741		
12 th Stage Compressor Wheel	23071267	L210178	6,987.0	4,741		
13 th Stage Compressor Wheel	23071268	L207417	6,987.0	4,741		
14 th Stage Compressor Wheel	23071289	L211168	6,987.0	4,741		
Cone Shaft	23076017	L274379	0.00	000	New	
1 st Stage HP Turbine Wheel	23069591	MM143164	6,987.0	4,741		
2 nd Stage HP Turbine Wheel	23075345	MM504916	0.00	000	New	
1 st / 2 nd Stage Spacer	23076778	TW510004	0.00	000	New	
1 st Stage LP Turbine Wheel	23060111	WD209955	6,987.0	4,741		
2 nd Stage LP Turbine Wheel	23058312	WD180831	6,987.0	4,741		
3 rd Stage LP Turbine Wheel	23070046	WD188038	6,987.0	4,741		
LP Turbine Interstage Spacer	23054049	TW17430	6,987.0	4,741		
LP Turbine Interstage Spacer	23054049	TW17436	6,987.0	4,741		
LP Turbine Forward Shaft	23067076	GV185743	6,987.0	4,741		

• h) Final Remarks and Considerations

Based on the shop findings it was concluded that the flame / smoke observed on the exhaust area after the engine shut off was caused by the #7 Carbon Seal which was found to be worn excessively. Although it was not reported some oil leak evidences were disclosed in both the front sump and center sump areas.

The engine was partially disassembled, inspected, repaired, modified, assembled, successfully tested and dispatched to the customer in a serviceable condition following the workscope instructions and the Engine Manual guidelines.

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• **1) Appendix I**

Event Report

Rolls-Royce - AE 3007A Series Engine - ECHO Event Report			
Event Type: LINE			
Page: 1 of 1	Report Date: 8-Mar-04	User ID: Julio G. Q. Grande	
Source ID: JG040125	Event Date: 25-	Custodian: Air Caraibes	
Engine Model: AE3007A1	TSN: 6965 hours	A/C Registration: F-OJF	TSN: 6965 hours
Serial No: CAE311642	CSN: 4721 cycles	A/C Model: RJ145ER	CSN: 4721 cycles
Position: Left		A/C Serial No.: 145.362	
Dispatch Effect: AOG - Flight Cancelled	When Disc: SCHEDULED MAINT/INSPECT	Shop Visit? No	
<p>Narrative: Ground personnel observed flame (spike) on the exhaust at engine shutdown at Martinique - Le Lamentin airport. The flame quickly extinguished itself. Subsequent inspection revealed oil puddling at six o'clock position in the LPT 3-stg blade/case area. Oil quantity was at 10 qts.. There have been no reports of oil consumption. Removal of the exhaust cone revealed no leak from the aft sump oil supply tube. Possible #7 carbon seal failure.</p> <p>Performance i.a.w last trend data available was: ITT WC Margin: 46.2 deg C; N2 WC Margin: 1.2%; Delta FF (Cruise): -1.4%; LP Vib (TO): 0.02 ips; HP Vib (TO): 0.33 ips.</p> <p>RRC's Lease Engine CAE311478 was installed. Lease Engine installation data (performance run performed i.a.w MM Task 72-00-00-710-003): Parameters recorded after 90 sec. at T/O mode: (Ambient Conditions: OAT: 29 deg C; Pressure: 1018 mb; Wind HDG/SPD: 090/19; aircraft HDG 093 deg; Field Elevation: 16 ft; Fuel: JET A-1; Time: 16:00z): Fadec A in control; N1: 88.5%; N2: 97.7%; ITT: 818 deg C; FF: 1420 KPH; Oil Temp.: 89 deg C; Oil Press.: 73 psig; Oil qty.: 11 qts. ITT Trim Plug P/N 23058854-01 The aircraft was deemed good for flight.</p>			
Reason for Action		Workorder:	
Sequence	Symptom		
1	Flame/smoke on the exhaust at engine shutdown		
2	Oil puddling at 6:00 LPT-3 stg blades		
3			
Action Taken: ENGINE REMOVED AT HOME BASE			
Action Taken Custodian: Air Caraibes		Action Taken Date: 2-Feb-04	
Part No: 23070991	TSN: 6965 hours		
Serial No: CAE311642	CSN: 4721 cycles	Quantity: One	
Functional Part Description: Engine Assy., Turbofan, AE3007A1			

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Action Narrative: Engine removed.	
Disposition: ITEM TO BE REPAIRED	Item Status: USED
Fail Item Sequence: PRIMARY FAILED ITEM	Service Bulletin: N/A
Ship To Custodian:	Responsibility: Unscheduled-Engine Caused
	RMAR Reference:
Part Condition	Location Of Condition
1	
2	
3	

Action Taken: ENGINE INSTALLED	
Action Taken Custodian: Air Caraibes	Action Taken Date: 3-Feb-04
Part No: 23070991	TSN: 78.7 hours
Serial No: CAE311478	CSN: 106 cycles
	Quantity: One
Functional Part Description: Engine Assy., Turbofan, AE3007A1	
Action Narrative: Engine installed. Ground tests performed.	
Disposition: AVAILABLE FOR SERVICE	Item Status: REPAIRED
Fail Item Sequence: NO FAILURE	Service Bulletin: N/A
Ship To Custodian: Air Caraibes	Responsibility:
	RMAR Reference:
Part Condition	Location Of Condition
1	
2	
3	

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1. Approving Competent Authority / Country United Kingdom		AUTHORISED RELEASE CERTIFICATE EASA FORM 1			3. Form Tracking Number RRB - E 070 / 2005	
4. Approved Organisation Name and Address Rolls-Royce Brasil Ltda. Rua Dr. Cláudio Braga, 47 - São Bernardo do Campo - São Paulo - Brazil CEP 09890-900 Telephone No.: 55 11 4380-4800 Fax No.: 55 11 4341-8071				5. Work Order/Contract/Invoice 255554		
6. Item	7. Description	8. Part Number	9. Eligibility*	10. Qty.	11. Serial/Batch No	12. Status/Work
01	AE3007A1 TURBOFAN ENGINE	23070991	EMDRAER ERJ-145	01	CAE311642	REPAIRED
13. Remarks 1- The engine was repaired (05 fuel nozzle studs were replaced) in accordance with the AE3007A Maintenance Manual, Section 72-39-00, Task 72-39-00-300-801. 2 - Engine is being released with TSN = 9848.27 hours and CSN = 6936 cycles.						
				19. <input checked="" type="checkbox"/> Part-145 A.30 Release to Service <input type="checkbox"/> Other regulation specified in block 13 <small>Certifies that unless otherwise specified in block 13, the work identified in block 12 and described in block 13, was accomplished in accordance with Part-145 and in respect to that work the items are considered ready for release to service.</small>		
				20. Authorised Signature 		21. Certificate/Approved Ref. No. EASA.145.0119
				17. Name Augusto J. R. Oliveira		18. Date (day): 30-Jun-2005
EASA Form 1 - Issue 1 *Installer must cross-check eligibility with applicable technical data						
Note: 1. It is important to understand that the existence of the Document alone does not automatically constitute authority to install the part/component/assembly. 2. Where the user/installer works in accordance with the national regulations of an Airworthiness Authority different from the Airworthiness Authority specified in block 1 it is essential that the user/installer ensures that higher Airworthiness Authority accepts parts/components/assemblies from the Airworthiness Authority specified in block 1. 3. Statements 14 and 15 do not constitute installation certification. In all cases the aircraft maintenance record must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.						

1. Approving Competent Authority / Country United Kingdom		2. AUTHORISED RELEASE CERTIFICATE EASA FORM 1			3. Form Tracking Number RRB - E 110 / 2005	
4. Approved Organisation Name and Address: Rolls-Royce Brasil Ltda. Rua Dr. Cincinato Braga, 47 - São Bernardo do Campo - São Paulo - Brazil CEP 09890-900 Telephone No.: 55 11 4390-4800 Fax No.: 55 11 4341-8071				5. Work Order/Contract/Invoice 259242		
6. Item	7. Description	8. Part Number	9. Eligibility*	10. Qty	11. Serial /Batch No	12. Status/ Work
01	AE 3007A1 TURBOFAN ENGINE	23070991	EMBRAER ERJ-145	01	CAE311642	REPAIRED
13. Remarks 1- The engine was partially disassembled and the following tasks were performed during the repair in accordance with the Engine Manual CSP31010, Revision 16 dated 15 June 2005: - Inspection of the fuel nozzle studs and replacement of one stud. - Fuel Nozzles set (16 ea) replacement. 2 - Engine is being released with TSN = 10082,68 hours and CSN = 7282 cycles.						
14. Certifies that the items identified above were manufactured in conformity to: <input type="checkbox"/> approved design data and are in condition for safe operation <input type="checkbox"/> non-approved design data specified in block 13				15. <input checked="" type="checkbox"/> Part-145 A 50 Release to Service <input type="checkbox"/> Other regulation specified in block 13 Certifies that unless otherwise specified in block 13, the work identified in block 12 and described in block 13, was accomplished in accordance with Part 145 and in respect to that work the items are considered ready for release to service.		
15. Authorised Signature		16. Approval/Authorisation Number		20. Authorised Signature		21. Certificate/Approval Ref. No
				<i>Augusto J. R. Oliveira</i>		EASA.145.0119
17. Name		18. Date (d/m/y)		17. Name		18. Date (d/m/y)
				Augusto J. R. Oliveira		29-Sep-2005
EASA Form 1 - Issue 1				*Installer must cross-check eligibility with applicable technical data		
User/Installer						
Notes 1. It is important to understand that the existence of the Document alone does not automatically constitute authority to install the part/component/assembly 2. Where the user/installer works in accordance with the national regulations of an Airworthiness Authority different from the Airworthiness Authority specified in block 1 it is essential that the user/installer ensures that higher Airworthiness Authority accepts part/components/assemblies from the Airworthiness Authority specified in block 1 3. Statements 14 and 19 do not constitute installation certification. In all cases the aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.						

From: Antonio Costa <amcosta47@yahoo.com.br>
To: LUIS CARLOS <lsampaio@embraer.com.br>, carlos.tadeu@embraer.com.br
cc: COSTA <amcosta@embraer.com.br>

Date: Thursday, August 21, 2008 09:22AM

Subject: PANES DO FAB-2580-RELAÇÃO FINAL.

History: ↩ This message has been forwarded.

Senhores, segue relação do pessoal GTE que levará o **FAB-2580 hoje (22/08/2008)**, cuja **DEP** está programada para às **10h00** (local):

_ Maj Av Jeferson Cesar DAROLT, rg 443986

_ Cap Av ALEXANDRE Flores da Silva

_ 2S IZAIAS Ribeiro dos Santos

Obs: O Cap e o 2S pernnoitam em Araraquara. O Maj retorna hoje à BSB. O FAB-2560 passará ainda hoje (desconhecemos o horário) para resgatar parte desta trip

A idéia é de eliminar as discrepâncias:

- ✈ 1. ISIS - SUBSTITUIÇÃO/CHECK; *1534*
- ✈ 2. BLEED 1 LEAK - Apenas com APU; *1540*
- ✈ 3. Aparecimento da mensagem-CAS: SPOILER FAIL, abaixo de 25 Kt;
- ✈ 4. Lâmpada do bagageiro queimada;
- 5. Falta Suporte de encaixe da haste da porta do bagageiro;
- 6. Pequena oscilação na Imagem do PFD;
- 7. Fixador de papel da prancheta do 2P quebrado;
- 8. Cabine Pax dianteira com 4 lâmpadas apagadas/oscilando;
- ✈ 9. Assento n.3 do salão central sem movimento;
- ✈ 10. água da pia não aquece;
- ✈ 11. Ocorrendo refluxo de água na pia da galley, após 3 horas de v\do; --
- ✈ 12. Luz 1/2 da indicação de água potável não acende;
- ✈ 13. Mensagem E2 SHORT DISP intermitente;
- ✈ 14. Mensagem RUD HDOV PROT FAIL (intermitente no solo);
- ✈ 15 *PACK # 02 O\HT*

Sds,,,,,,,,,,,,,,,,,,,,Costa.

Novos endereços, o Yahoo! que você conhece. Crie um email novo com a sua cara @ymail.com ou @rocketmail.com.

✈

✈

✈

AVIATION LABORATORIES

910 MARIA STREET
 KENNER, LOUISIANA 70062
 (504) 469-6751

Reçule 12 NOV 2004

ANALYSIS RESULTS

DATE: 11/01/04

AIR CARAIBES INDUSTRY
 ATTN: BRENA HONORINE
 97232 LE LAMENTIN/MARTINIQUE
 AEROPORT DE FORT DE FRANCE
 LAMENTIN 97232
 MQ

ENGINE S/N: CAE311642
 ENGINE MODEL: AE3007
 AIRCRAFT: UNKNOWN *JF*
 S/N:
 TAIL NO.:

** CURRENT		OIL SAMPLE APPEARS NORMAL. FILTER ANALYSIS IS RECOMMENDED FOR TURBINE ENGINES														
SAMPLE DATE:		*** FILTER ANALYSIS RESULTS ***														
ANALYSIS DATE:	11/01/04	MATL:	ST	ST	CB	ST	AL	ST	MS	COPPER	SILVER	MAGNS	ALUM	GRIT	MISC	
SAMPLE NUMBER:	56	AMOUNT:														
TSN:		TYPE:														
TSC:		FORM:														
OIL HRS:		*** OIL ANALYSIS RESULTS ***														
FILTER HRS:		Iron	Copper	Nickel	Chromium	Silver	Magnesium	Aluminum	Lead	Silicon	Titanium	Tin	Moly	Tar		
OIL ADDED:		0.1	0.2	0.0	0.1	0.1	0.3	0.1	0.0	1.5	0.0	0.0	0.3			
FILTER MGS:	0															
FLASHPOINT:																
COMMENT:																

FOR MATERIAL CODE SEE REVERSE SIDE

[Handwritten signatures and initials]

Reçu le 12 DEC 2004

AVIATION LABORATORIES

910 MARIA STREET
 KENNER, LOUISIANA 70062
 (504) 469-6751

ANALYSIS RESULTS

DATE: 11/24/04

AIR CARAIIBES INDUSTRY
 ATTN: BRENA HONORINE
 97232 LE LAMENTIN/MARTINIQUE
 AEROPORT DE FORT DE FRANCE
 LAMENTIN 97232
 MQ

ENGINE S/N: CAE311642
 ENGINE MODEL: AE3007
 AIRCRAFT: EMB145
 S/N: 362
 TAIL NO.: UNK-RH

** CURRENT		RESULT ** SEE LAB COMMENTS													
SAMPLE DATE:		*** FILTER ANALYSIS RESULTS ***													
ANALYSIS DATE: 11/19/04		MATL:	ST	ST	CB	ST	AL	ST	MSD	COPPER	SILVER	MAGNS	ALUM	GRIT	MISC
SAMPLE NUMBER: 70															
TSN: 8050	AMOUNT:														
TSO:	TYPE:														
OIL HRS:	FORM:														
FILTER HRS:	*** OIL ANALYSIS RESULTS ***														
OIL ADDED:	Iron	Copper	Nickel	Chromium	Silver	Magnesium	Aluminium	Lead	Silicon	Titanium	Tin	Moly	Tan		
FILTER MGS:															
FLASHPOINT:															
COMMENTS: CHIPS SENT ARE 400 SERIES STAINLESS STEEL, AMS#5504 OR 561?															

** PREVIOUS 1		OIL SAMPLE APPEARS NORMAL. FILTER ANALYSIS IS RECOMMENDED FOR TURBINE ENGINES													
SAMPLE DATE:		*** FILTER ANALYSIS RESULTS ***													
ANALYSIS DATE: 11/01/04		MATL:	ST	ST	CB	ST	AL	ST	MSD	COPPER	SILVER	MAGNS	ALUM	GRIT	MISC
SAMPLE NUMBER: 56															
TSN:	AMOUNT:														
TSO:	TYPE:														
OIL HRS:	FORM:														
FILTER HRS:	*** OIL ANALYSIS RESULTS ***														
OIL ADDED:	Iron	Copper	Nickel	Chromium	Silver	Magnesium	Aluminium	Lead	Silicon	Titanium	Tin	Moly	Tan		
FILTER MGS:	0.1	0.2	0.3	0.1	0.2	0.0	0.1	0.0	1.5	0.0	0.0	0.0			
FLASHPOINT:															
COMMENTS:															

FOR MATERIAL CODE SEE REVERSE SIDE





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Rolls-Royce

Air Caraibes ESN 311642 Long term trend plots

Last reported aircraft: F-OIJE
Last reported data : July 03, 2007
DS&S activity : No alert / advisory at last data point

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DEFESA C. AERONAUTICA
Fl: 73
Proc: 173981
Rub: *[Handwritten]*
CABW

MATL:

Filter Material Codes

ST ST Stainless Steel
 CB ST Carbon Steel
 AL ST Alloy Steel
 M50 Bearing Alloy
 MAGNS Magnesium
 ALUM Aluminum

AMOUNT:

Filter Amount Codes
Percent of Total

TRACE 0 - 10%
 MINOR 10 - 40%
 MAJOR 40 - 100%

FORM:

Filter Material
Form Codes

BF Brass Fines
 BZ Bronze Fines
 CK Chunks
 CP Corrosion Products
 FL Flakes
 FN Fines
 MC Machining Chips
 OP Oxidized Platelets
 PL Plating
 PT Platelets
 SL Slivers
 ST Stringers

ELEMENTS:

Reported Parts
Per Million

T.A.N. Total Acid Number

TYPE:

Filter Material
Type Codes

BR Black Rubber / Elastic
 CM Carbon Seal Material
 CS Plain Carbon Steel
 CU Copper
 DL Moly Drylube
 FE Iron
 FI Fibers
 FP Fat - Pro CSA
 GB Glass Beads
 HR Hylomar Sealant
 MG Magnesium
 MO Moly (Metal Spray)
 MS 300 Stainless Steel
 NI Nickel
 OX Iron Oxide
 PH 17 - 4 PH Iron
 PC Paint Chips
 SG Silicon Grease
 SI Silicon
 SS 300 Stainless Steel
 TS BRNG Alloy (M50)
 VO Voishan Seal Material

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MATL:
Filter Material Codes

ST ST Stainless Steel
 CB ST Carbon Steel
 AL ST Alloy Steel
 M50 Bearing Alloy
 MAGNS Magnesium
 ALUM Aluminum

ELEMENTS:
Reported Parts
Per Million

AMOUNT:
Filter Amount Codes
Percent of Total

TRACE 0 - 10%
 MINOR 10 - 40%
 MAJOR 40 - 100%

T.A.N. Total Acid Number

FORM:
Filter Material
Form Codes

BF Brass Fines
 BZ Bronze Fines
 CK Chunks
 CP Corrosion Products
 FL Flakes
 FN Fines
 MC Machining Chips
 OP Oxidized Platelets
 PL Plating
 PT Platelets
 SL Slivers
 ST Stringers

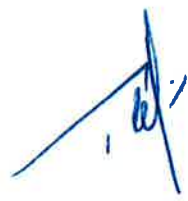
TYPE:
Filter Material
Type Codes

BR Black Rubber / Elastic
 CM Carbon Seal Material
 CS Plain Carbon Steel
 CU Copper
 DL Moly Drylube
 FE Iron
 FI Fibers
 FP Fel - Pro C5A
 GB Glass Beads
 HR Hylomar Sealant
 MG Magnesium
 MO Moly (Metal Spray)
 MS 400 Stainless Steel
 NI Nickel
 OX Iron Oxide
 PH 17 - 4 PH Iron
 PC Paint Chips
 SG Silicon Grease
 SI Silicon
 SS 300 Stainless Steel

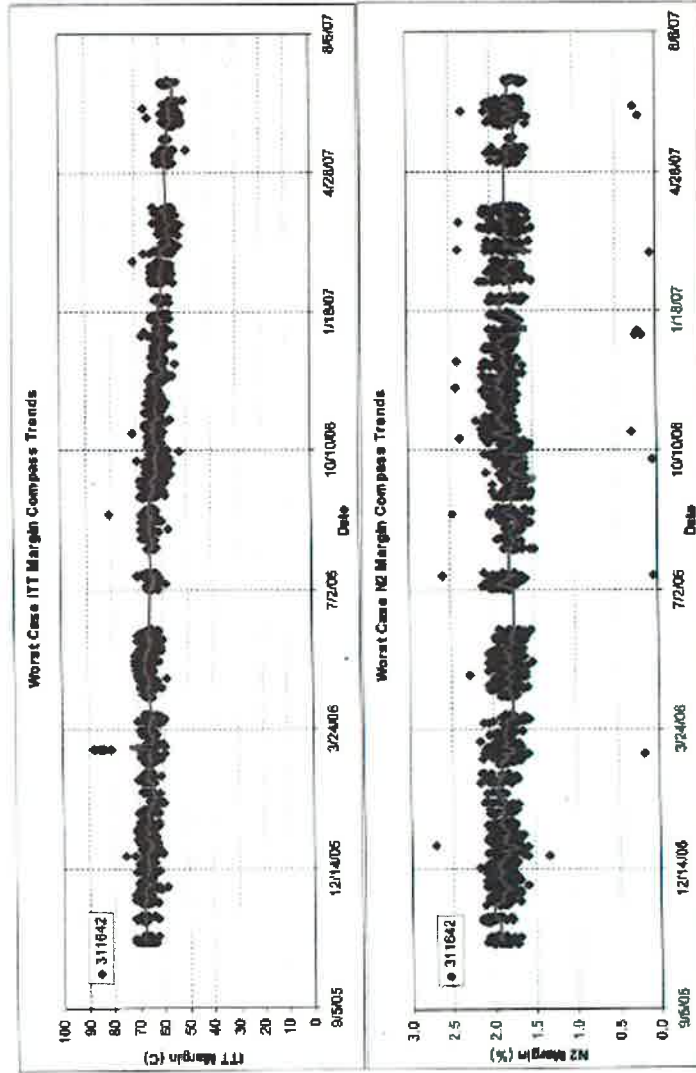
 TS BRNG Alloy (M50)
 VO Voishan Seal Material







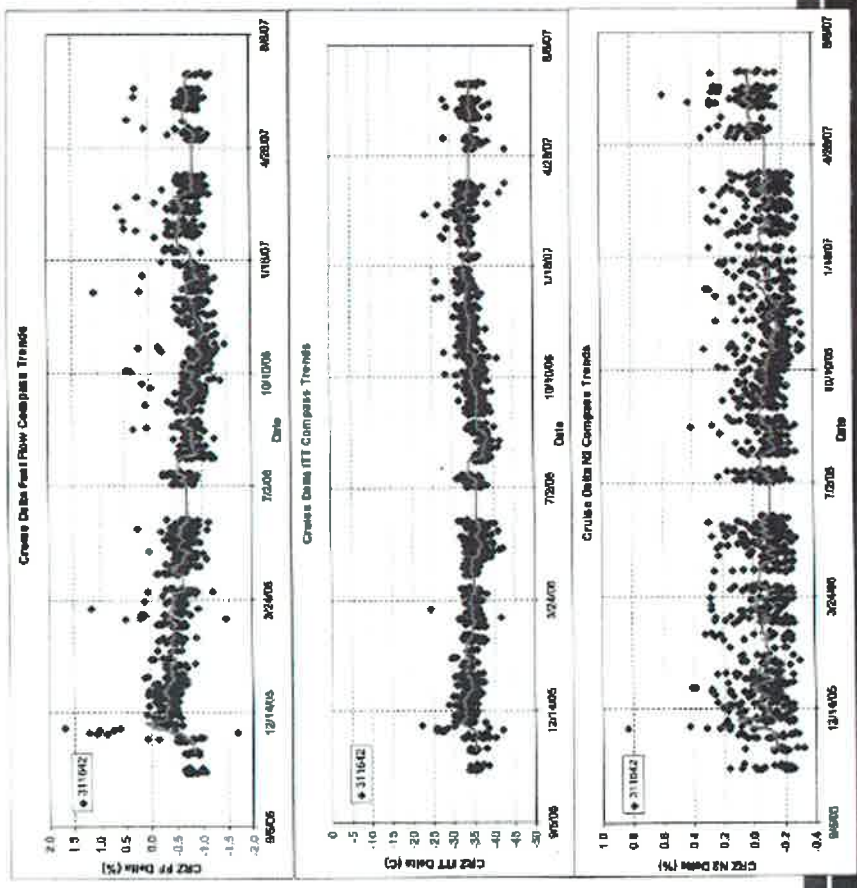
ESN 311642 Take-off Trend
 Available ITT Margin – 56 Deg.C
 Available N2 Margin – 1.68 %



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ESN 311642 Cruise Trend

3



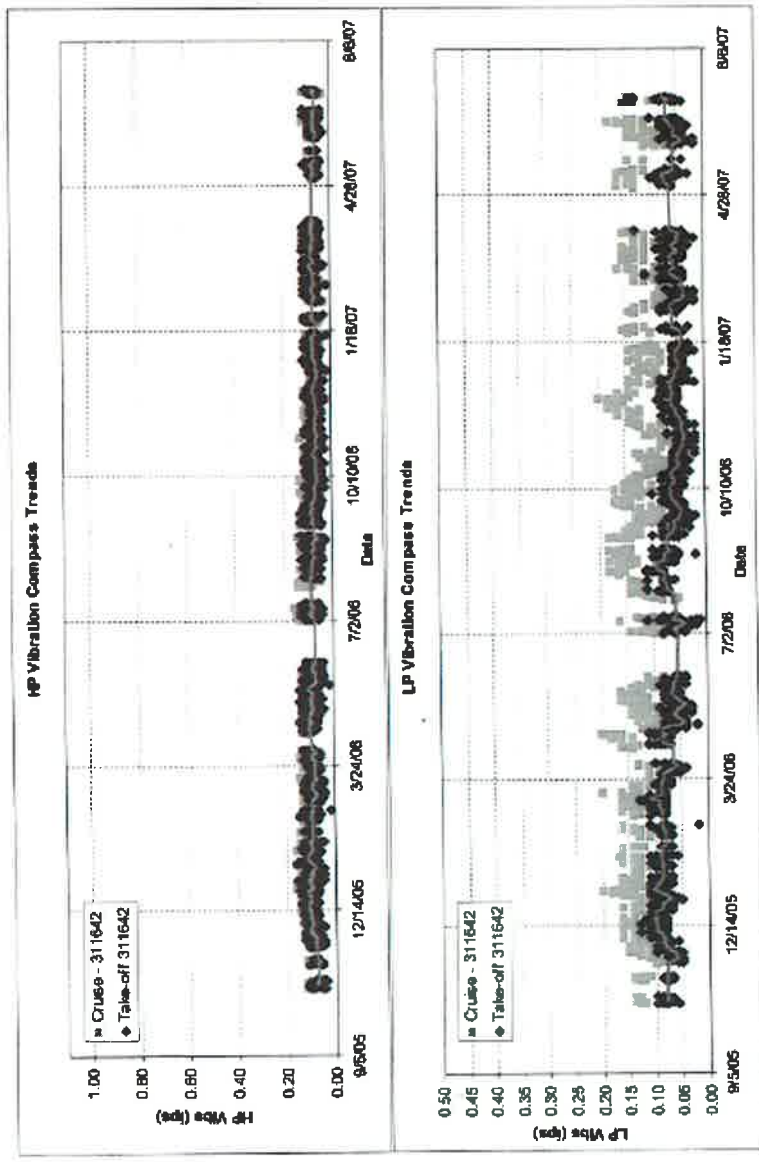
Rolls-Royce

Rolls-Royce data-strictly private

[Handwritten signatures and marks]

ESN 311642 Vibration Trend

4



[Handwritten signatures and marks]

TURBORÉACTEUR * TURBOJET ENGINE

Numéro - Number

CAE311642

Marque - Make

ROLLS-ROYCE CORPORATION

Type

AE-3007A1

Construit par :
Maker :

ROLLS-ROYCE CORPORATION

le :
on : 2000

Documents présentés :
Records submitted :

Rapport de classification aéronautique en date du 30/12/2000

Rappel des heures de fonctionnement
Recall of running time

Depuis fabrication :
Since manufacture : 10 H 35
Depuis révision :
Since overhaul : S.R.

Livret établi à :
Log Book established : 10/01/2001

Signature et Cachet de l'Emetteur
Signature and stamp of Issuing Organisation



N. DEFESA C. AERONAUTICA
Fl: 79
Proc: 173981
Rub: *[Signature]*
CABW

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[Handwritten signature]

[Handwritten signature]

IV CARACTÉRISTIQUES - TYPE - TYPE CHARACTERISTICS

RÉGIME CONDITIONS	Vitesse de rotation t/mn R.P.M	Poussée en daN Thrust
Maxi décollage Max. take off		3371
Maxi continu Max. continuous		3099

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1. Approving National Aviation Authority / Country: UNITED KINGDOM		2. AUTHORISED RELEASE CERTIFICATE JAA FORM ONE		3. Form Tracking Number RRB - J 035/04	
4. Approved Organisation Name and Address: Rolls-Royce Brasil Rua Dr. Cláudio Braga, 47 - São Bernardo do Campo - São Paulo - Brasil CEP 09490-900 - Telefone: 55 11 4390 4800 Fax: 55 11 4341 8071		5. Work Order / Contract / Invoice No. RRB W.O. # 229630			
4. Item:	7. Description:	8. Part Number:	9. Eligibility:	10. Quantity:	11. Serial/Batch Number:
01	Ae3007a1 Turbofan Engine	23070891	Embree ERJ-145	01	CAE311642
12. Status/Work: Repaired					
13. Remarks: 1 - The engine was disassembled, inspected, repaired, assembled and successfully tested IAW the Engine Manual CSP31010, Revision 11 dated 01 October 2003. 2 - Engine is being released with TSN = 6.987.0 and CSN = 4.741.					
14. Certifies the items identified above were manufactured in conformity to: <input type="checkbox"/> Approved design data and site in condition for safe operation <input type="checkbox"/> Non-approved design data specified in Block 13		19. <input checked="" type="checkbox"/> JAR-145-50 Release to Service <small>Confirms that unless otherwise specified in block 13, the work identified in Block 12 and described in Block 13 was accomplished in accordance with JAR 145 and in respect to that work, the items are considered ready for release to service.</small>		<input type="checkbox"/> Other regulation specified in Block 13	
15. Authorised Signature:		20. Authorised Signature: <i>[Signature]</i>		21. Approval/Certificate No.: CAA 00516	
17. Name:		18. Date (dmyy):		23. Date (mday): 03/07/2004	
JAA Form One - Issue 4 Field for use if crosschecked digitally with applicable version of file					

User/Installer Responsibilities

- It is important to understand that the existence of the document alone does not automatically constitute authority to install the part/component/assembly.
- Where the user/installer performs work in accordance with the national regulations of an Airworthiness Authority different than the Airworthiness Authority of the country specified in Block 1, it is essential that the user/installer ensure that his/her Airworthiness Authority accepts part/component/assembly from the Airworthiness Authority specified in Block 1.
- Statements 14 and 19 do not constitute an installation certificate. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.

CS 1 - 14.06.04.7 13/10/04 Rev 4 (1/1/01)



ROLLS-ROYCE BRASIL

Rua Dr. Cincinato Braga, 47
 São Bernardo do Campo
 São Paulo, Brasil, CEP 09890-900

ENGINE SERVICE REPORT (REVISION 01)

ROLLS-ROYCE CORPORATION AE3007A1 ENGINE SERIAL NUMBER CAE311642

ENGINE PARTICULARS

ESN	TSN	CSN	AIRCRAFT	POSITION	REMOVED
CAE311642	6,965:00	4,721	F-OIJF	LH	05 FEB 2004

ENGINE PART NUMBER	RRB W.O. #	CUSTOMER	AIRCRAFT TYPE
23070991	229830	AIR CARAIBES	EMBRAER EMB-145MP
DISTRIBUTION			
AIR CARAIBES Rolls-Royce Corporation Resident Manager Rolls-Royce Corporation AMC Project Manager Rolls-Royce Brasil Customer Business Manager Engine File			

W.O.	REPORT	DATE	COMPILED BY	APPROVED BY	PAGE
229830	Rel642/04	08 March 2004	<i>M. Uttenbergue</i>	<i>Karim</i> K. Shaaban	1 / 9

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• **Index**

- a) Reason for Removal
- b) Teardown Report and Shop Findings
- c) Service Bulletins Compliance Table
- d) Engine Major Modules Configuration Chart
- e) Pictures
- f) Test Cell Results
- g) Life Limited Parts
- h) Final Remarks and Considerations
- i) Appendix I

• **a) Reason for Removal**

The subject engine was removed from the ACFT F-OIJF, position LH due to present " flame / smoke on the exhaust after engine shut off " (see Appendix I – Engine Service Report).

• **b) Teardown Report and Shop Findings**

The engine was disassembled to the extent necessary in order to have the rear sump area investigated and also to comply with a performance refurbishment to the Fan, HPC and HPT modules following the EMP level 03 instructions

FAN MODULE – ROTATING AND STATIONARY

The Fan Module was disassembled, inspected, repaired and assembled in accordance with the Engine Manual and following the EMP level 03 instructions.

Highlights:

- The #0 Carbon Seal Runner was replaced because it was found to be scratched.
- The Fan Spinner was repaired due to present some minor impact damages.
- 03 off the 25 Fan Bypass Vanes were replaced for being battered and the remaining ones were repaired due to present minor impact damages.
- 03 off the 24 Fan Blades were sent to RRCorp due to present damages to their dovetail coating, the remaining ones were repaired for presenting minor impact damages and also some superficial erosion.
- The Fan-Teflon Lip Seal was replaced for being bent.

HP COMPRESSOR MODULE

The Compressor module was partially disassembled, inspected, repaired and assembled in accordance with the Engine Manual. The Compressor Case - Blade Tracks were match ground to the Compressor Rotor dimensions, making this module comply with the performance refurbishment as per the EMP level 03 recommendations.

Highlights:

- The #4 Carbon Seal as well as its Runner were replaced IAW the EMP recommendations.
- The Front Frame Assembly was replaced for being excessively corroded

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229630	Rel642/04	08 March 2004	M. Uttembergue	R. Shaaban	2 / 9

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- The #0 Carbon Seal was found to be excessively worn, therefore it was re-kited and successfully flow checked.
- The #0 Bearing was replaced because it was found to be scratched.
- The Fan Core Vane Assy was repaired due to present some minor impact damages and loss of painting.
- The Stub Shaft was replaced due to present several corrosion points.

DIFFUSER AND COMBUSTION MODULES

The Diffuser and Combustion Modules were disassembled, inspected, repaired and assembled in accordance with the Engine Manual and following the EMP level 03 instructions.

Highlights:

- The #5 Carbon Seal and its runner were replaced following the RRCorp instructions.
- The #6 Carbon Seal was found to be worn, so it was re-kited and successfully flow checked.
- The #6 Carbon Seal Runner was replaced as per the workscope instructions.

HP TURBINE MODULE

The HPT module was partially disassembled, inspected, repaired assembled in accordance with the Engine Manual. A performance refurbishment was carried out to the HPT module as per the EMP level 03 recommendations.

Highlights:

- 14 off the 20 HPT1 Vanes were replaced for being eroded.
- The HPT Case was replaced due to be excessively corroded.
- The HPT2 Wheel was replaced because it was damaged during the HPT module removal. *← **
 Note: Such a damage occurred due to an abnormal situation faced to remove the HPT module (the HPT module spanner nut was found to be completely locked)
- The HPT1 Blade Tracks were sent to RRCorp for investigation.
- The 1st to 2nd Stage HPT Spacer was replaced due to TIMEX as per the RRCorp recommendations

LOW PRESSURE TURBINE ASSEMBLY

The LPT module was partially disassembled, inspected, and assembled in accordance with the Engine Manual guidelines and following the EMP instructions.

Highlights:

- The #7 Carbon Seal was found to worn, so it was re-kited and successfully flow checked.

ACCESSORY DRIVE GEARBOX

The Accessory Drive Gearbox was visually inspected and accepted in accordance with the MM 72-00-00-200-801, complying with the intents of the GVI as required by the MM 05-21-00 and 72-80-00.

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FINAL ASSEMBLY

The engine was partially disassembled, inspected, repaired, assembled and successfully tested following the AE3007 Engine Manual and other RR Corp technical publications.

Highlights:

- The Outer Bypass Rear Support was repaired due to present some fretting on its cross-key slots.
- The Air Tube P/N 23061860 was replaced because it was found to be excessively corroded.
- The Forced Mixer was repaired due to present some fretting on its pocket areas.

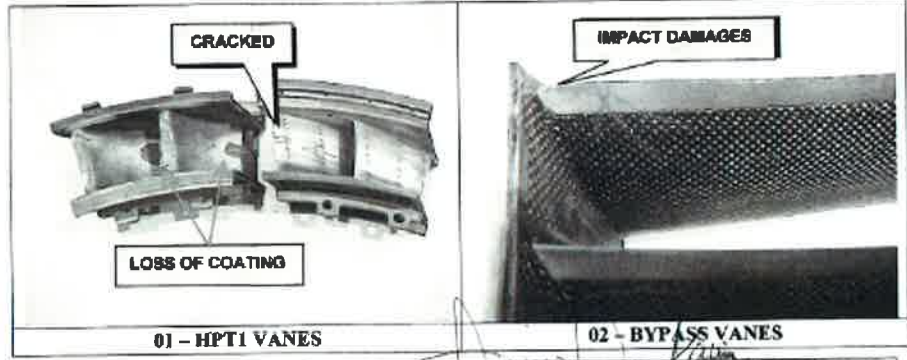
• **c) Service Bulletins Compliance List**

The following Service Bulletins and Notice to Operators were incorporated SB AE3007 72-197, 72-198, 72-203, 72-207, 72-208, 72-210, 72-212, 72-214, 72-215, 72-228, 72-229, 72-235, 72-239, 72-243, 72-244, 72-246, 72-247, 72-255, 72-256, 72-257, 72-265, 72-270, 72-277, 72-278, 72-280, 74-005, 74-006, 74-007, 75-019, 79-030, NTO-033 and NTO-044R2.

• **d) Engine Major Modules Configuration Chart**

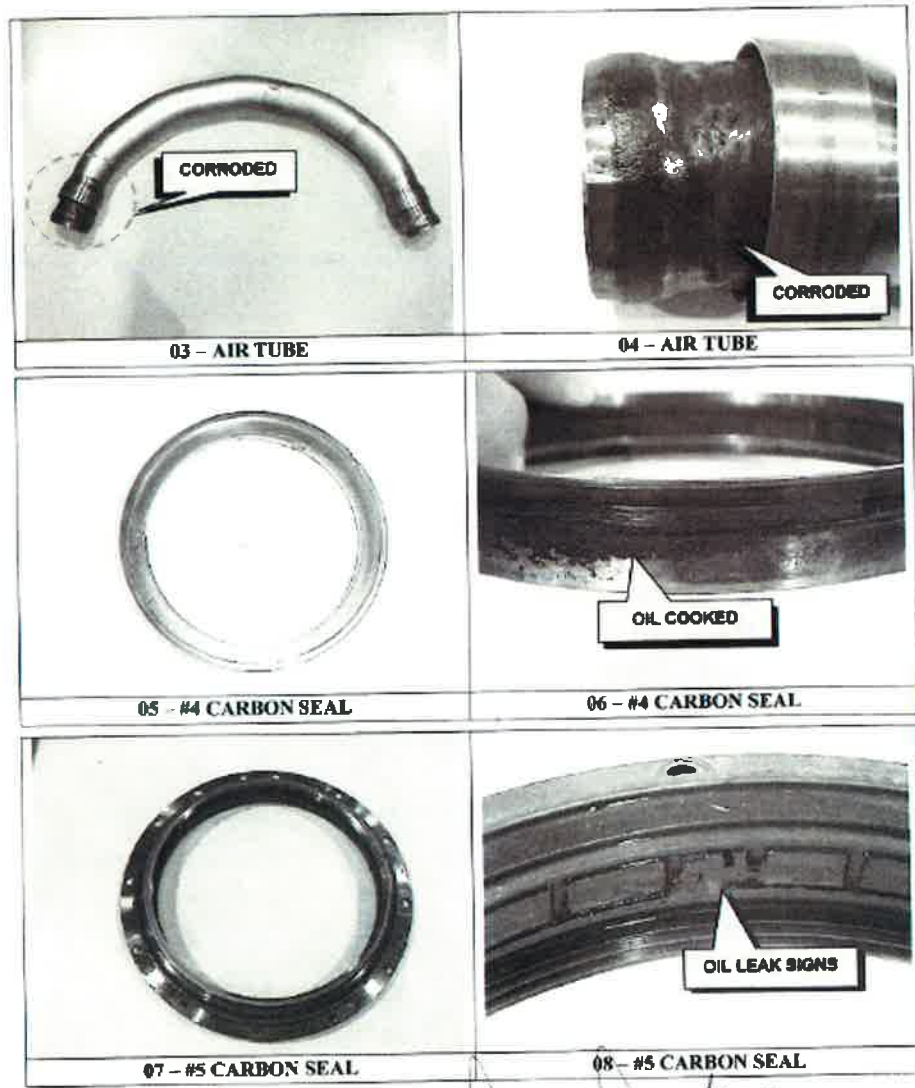
Engine Major Modules Configuration				
Description	Part Number	Serial Number	TSN	CSN
Fan Rotor	23063061	WD18597	6,965:00	4,721
HPC Rotor	23073508	A19348	6,965:00	4,721
HPT Rotor	23070981	A71171	6,965:00	4,721
LPT Rotor	23067890	A81150	6,965:00	4,721
AGB	23077013	1237	6,965:00	4,721

• **e) Pictures**



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• f) Test Cell Results

AE 3007A1 ENGINE TEST CERTIFICATE

AMC Data Reduction Program (EDR 19405B)

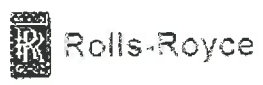
Engine Model: AE 3007 A1
 Engine Serial Number: CAE311642
 Work Order: OSM 229675
 Date of the test: 07/Mar/2004
 Fuel Type: Jet A1
 Oil Type: Aero Shell 500
 Trim Resistor: 23058854 - 04
 FADEC A Serial Number: BX47281
 FADEC B Serial Number: BX47234
 FADEC Part Number: 23074001

Predicted Data:	TO-1	ATO	MCO	MCR
N1 Fan Speed (rpm)	7528.0	7268.0	7268.0	6758.0
Thrust (lbf)	7908.2	7216.5	7216.5	
% Delta Spec Max Thrust	-1.58			
% Delta Spec Min Thrust	4.33	5.13	5.13	
N2 Speed (rpm)	15139.2			
% Delta Spec Max N2 Speed	-2.21			
TSFC (lb/hr/lbf)	0.3871			
% Delta Spec Max TSFC	-11.21			
ITT (°C)	772.0			
Delta Spec Max ITT	-52.23			
ITT7x (°C)	749.0			
Delta Spec Max ITT7x	-74.45			

Vibration (Max Steady State Level)
 FARVFF: 0.544 ips Peak N1
 FARVGG: 0.447 ips Peak N2
 7885 Rpm N1
 10777 Rpm N2

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• **g) Life Limited Parts**

CUSTOMER : AIR CARAIBES		RRB W/O # 229630		DATE MARCH 07, 2004		
ENGINE SERIAL NUMBER	T.S.N.	C.S.N.	T.S.O.	C.S.O.	T.S.R.	C.S.R.
CAE311642	6,987.0	4,741	----	----	0.00	000
DESCRIPTION	P/N	S/N	TSN	CSN	REMARKS	
Fan Wheel	23061870	WD18597	6,987.0	4,741		
Fan Blade Fwd Retainer	23062481	HK18963	6,987.0	4,741		
Fan Drive Shaft	23065332	GV15452	6,987.0	4,741		
1 st Stage Compressor Wheel	23065041	L188465	6,987.0	4,741		
2 nd Stage Compressor Wheel	23050752	L184288	6,987.0	4,741		
3 rd Stage Compressor Wheel	23065303	L206042	6,987.0	4,741		
4 th Stage Compressor Wheel	23071259	L188744	6,987.0	4,741		
5 th Stage Compressor Wheel	23071260	L184657	6,987.0	4,741		
6 th Stage Compressor Wheel	23071396	L199670	6,987.0	4,741		
7 th Stage Compressor Wheel	23071397	L210557	6,987.0	4,741		
8 th Stage Compressor Wheel	23071263	L181485	6,987.0	4,741		
9 th Stage Compressor Wheel	23071264	L134590	6,987.0	4,741		
10 th Stage Compressor Wheel	23071265	L243093	6,987.0	4,741		
11 th Stage Compressor Wheel	23066231	L214516	6,987.0	4,741		
12 th Stage Compressor Wheel	23071267	L210178	6,987.0	4,741		
13 th Stage Compressor Wheel	23071268	L207417	6,987.0	4,741		
14 th Stage Compressor Wheel	23071269	L211168	6,987.0	4,741		
Cone Shaft	23076017	L274379	0.00	000	New	
1 st Stage HP Turbine Wheel	23069591	MM143164	6,987.0	4,741		
2 nd Stage HP Turbine Wheel	23075345	MM504916	0.00	000	New	
1 st / 2 nd Stage Spacer	23076778	TW510004	0.00	000	New	
1 st Stage LP Turbine Wheel	23060111	WD209955	6,987.0	4,741		
2 nd Stage LP Turbine Wheel	23058312	WD180831	6,987.0	4,741		
3 rd Stage LP Turbine Wheel	23070046	WD188038	6,987.0	4,741		
LP Turbine Interstage Spacer	23054049	TW17430	6,987.0	4,741		
LP Turbine Interstage Spacer	23054049	TW17436	6,987.0	4,741		
LP Turbine Forward Shaft	23067076	GV185743	6,987.0	4,741		

• **h) Final Remarks and Considerations**

Based on the shop findings it was concluded that the flame / smoke observed on the exhaust area after the engine shut off was caused by the #7 Carbon Seal which was found to be worn excessively. Although it was not reported some oil leak evidences were disclosed in both the front sump and center sump areas.

The engine was partially disassembled, inspected, repaired, modified, assembled, successfully tested and dispatched to the customer in a serviceable condition following the workscope instructions and the Engine Manual guidelines.

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229630	Rel642/04	08 March 2004	M. Uttembergue	<i>[Signature]</i> K. Shaaban	7 / 9

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• *l) Appendix I*

Event Report

Rolls-Royce - AE 3007A Series Engine - ECHO Event Report			
Event Type: LINE			
Page: 1 of 1	Report Date: 29-Mar-04	User ID: Julio G. Q. Grande	
Source ID JG040125	Event Date: 25-	Custodian: Air Caraibes	
Engine Model: AE3007A1	TSN: 6965 hours	A/C Registration: F-OIJF	TSN: 6965 hours
Serial No: CAE311642	CSN: 4721 cycles	A/C Model: RJ145ER	CSN: 4721 cycles
Position: Left	A/C Serial No.: 145.362		
Dispatch Effect: AOG - Flight Cancelled	When Disc: SCHEDULED MAINT/INSPECT	Shop Visit? No	
<p>Narrative: Ground personnel observed flame (spike) on the exhaust at engine shutdown at Martinique - Le Lamentin airport. The flame quickly extinguished itself. Subsequent inspection revealed oil puddling at six o'clock position in the LPT 3-stg blade/case area. Oil quantity was at 10 qts. There have been no reports of oil consumption. Removal of the exhaust cone revealed no leak from the aft sump oil supply tube. Possible #7 carbon seal failure.</p> <p>Performance i.a.w. last trend data available was: ITT WC Margin: 46.2 deg C, N2 WC Margin: 1.2%; Delta FF (Cruise): -1.4%; LP Vib (TO): 0.02 ips; HP Vib (TO): 0.33 ips.</p> <p>RRC's Lease Engine CAE311478 was installed.</p> <p>Lease Engine installation data (performance run performed i.a.w. MM Task 72-00-00-710-003): Parameters recorded after 90 sec. at T/O mode: (Ambient Conditions: OAT: 29 deg C; Pressure: 1018 mb; Wind HDG/SPD: 090/19; aircraft HDG 093 deg; Field Elevation: 16 ft; Fuel: JET A-1; Time: 16:00z); Fadec A in control; N1: 88.5%; N2: 97.7%; ITT: 818 deg C; FF: 1420 KPH; Oil Temp: 89 deg C, Oil Press.: 73 psig; Oil qty.: 11 qts. ITT Trim Plug P/N 23058854-01</p> <p>The aircraft was deemed good for flight.</p>			
Reason for Action		Workorder:	
Sequence	Symptom		
1	Flame/smoke on the exhaust at engine shutdown		
2	Oil puddling at 6:00 LPT-3 stg blades		
3			
Action Taken: ENGINE REMOVED AT HOME BASE			
Action Taken Custodian: Air Caraibes		Action Taken Date: 2-Feb-04	
Part No: 23070991	TSN: 6965 hours		
Serial No: CAE311642	CSN: 4721 cycles	Quantity: One	
Functional Part Description: Engine Assy., Turbofan, AE3007A1			

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Action Narrative: Engine removed.	
Disposition: ITEM TO BE REPAIRED	Item Status: USED
Fail Item Sequence: PRIMARY FAILED ITEM	Service Bulletin: N/A
Ship To Custodian:	Responsibility: Unscheduled-Engine Caused
RMAR Reference:	
Part Condition	Location Of Condition
1	
2	
3	

Action Taken: ENGINE INSTALLED	
Action Taken Custodian: Air Caraibes	Action Taken Date: 3-Feb-04
Part No: 23070991	TSN: 78.7 hours
Serial No: CAE311478	CSN: 106 cycles
Quantity: One	
Functional Part Description: Engine Assy., Turbofan, AE3007A1	
Action Narrative: Engine installed. Ground tests performed.	
Disposition: AVAILABLE FOR SERVICE	Item Status: REPAIRED
Fail Item Sequence: NO FAILURE	Service Bulletin: N/A
Ship To Custodian: Air Caraibes	Responsibility:
RMAR Reference:	
Part Condition	Location Of Condition
1	
2	
3	

W.O.	REPORT	DATE	COMPILED BY	APPROVED BY	PAGE
229630	Rel642/04	08 March 2004	M. Uttembergue	K. Shaaban	9 / 9

SECTION 1 PART I

ENGINE SERVICE RECORD

1. ENGINE SERIAL NUMBER: CAE 311642		2. ENGINE MODEL: AE3007AJ											
3. AIRCRAFT IDENTIFICATION				4. ENGINE INSTALLATION SECTION				5. ENGINE REMOVAL SECTION				REASON FOR REMOVAL	
A/C MAKE	A/C REGISTRATION	A/C SERIAL NUMBER	DATE	A/C TOTAL HOURS	ENGINE TOTAL HOURS	A/C TOTAL CYCLES	ENGINE TOTAL CYCLES	DATE	A/C TOTAL HOURS	ENGINE TOTAL HOURS	A/C TOTAL CYCLES		ENGINE TOTAL CYCLES
EMB-145LR	FAB-2550	145350	14 A60	9897.20	14188.24	0604	19881.40	0604	15562.50	19881.40	15562.50	19881.40	LIFE LIMIT 4PT2
EMBRAER			2008	10809	10507	2015	14549						
6. REMARKS:													

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SECTION 1 PART I

ENGINE SERVICE RECORD

1. ENGINE SERIAL NUMBER: CAE311642				2. ENGINE MODEL: AE3007A1			
3. AIRCRAFT IDENTIFICATION		4. ENGINE INSTALLATION SECTION		5. ENGINE REMOVAL SECTION		REASON FOR REMOVAL	
A/C MAKE	A/C REGISTRATION	A/C TOTAL HOURS	ENGINE TOTAL HOURS	A/C TOTAL HOURS	ENGINE TOTAL HOURS		
A/C MODEL	A/C SERIAL NUMBER	DATE	DATE	DATE	DATE		
EMBRAER	F-OIJP	0	0				
EMB-145MP	145362	0	0				
EMBRAER	F-OIAT			05 Feb 2004	6987	6987	Fault Thrust
EMB-145MP	145362			2004	4741	4741	Exhaust
EMBRAER	F-OITF	7575	6987	19 Jun 2005	10233	9645	Broken studs
EMB-145MP	145362	5221	4741	2005	7413	6933	
EMB-145MP	F-OIJE	100842	9645	Aug 2005	10650h	10082,68	Studs Nozzle Broken
EMBRAER	145360	8027	6936	2005	8371	7282	
EMB-145MP	F-OIJE	10755,32	10082,68	July 04 2005	14560	13850,18	Oil leaks
EMBRAER	145360	12836,04	7282	2005	11643	10283	
EMB-145MP	145034	15614,55	13890,19	13 Aug 2005	75911	14188,2575h	
EMBRAER	145034	18309	10283	2005	12528	10502	

6. REMARKS: This engine installed on the LEFT hand side of the A/C EMB-145MP, s/n 145362 by EMBRAER

- Engine installed on pos ② w.o F2 001830 - approx 23, 2004.
 - Engine installed on left side Following F2 002755 - October 21st 2005

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SECTION 1 PART II

ENGINE ASSEMBLY RECORD

1. ENGINE SERIAL NUMBER: CAE311642		2. ENGINE MODEL: AE3007A1					
3. ASSEMBLY IDENTIFICATION		4. MAINTENANCE ACTIVITY		3. ASSEMBLY IDENTIFICATION		4. MAINTENANCE ACTIVITY	
ASSEMBLY NAME	PART NUMBER SERIAL NUMBER	INSTALL DATE	REMOVE DATE	ASSEMBLY NAME	PART NUMBER SERIAL NUMBER	INSTALL DATE	REMOVE DATE
ACCESSORY DRIVE	2307236 1237	30 NOV 2000		FULL AUTHORITY DIGITAL ENGINE CONTROL (FADEC)	2307236 BX70119	30 NOV 2000	
GEARBOX				FULL AUTHORITY DIGITAL ENGINE CONTROL (FADEC)	2307236 BX70140	30 NOV 2000	
FAN	23063061	30 NOV 2000		FUEL PUMP & METERING UNIT (FPMU)	23063131 BAE11930	30 NOV 2000	
ROTOR	W018587	30 NOV 2000		LUBE & SCAVENGE PUMP	23068052 NL1311	30 NOV 2000	
COMPRESSOR	23073508	30 NOV 2000		SENSOR, FUEL FLOW	23062613 P10051	30 NOV 2000	
ROTOR	A18048						
HP TURBINE	23070981	30 NOV 2000					
ROTOR	A71171						
LP TURBINE	2306789C	30 NOV 2000					
ROTOR	A81150						
FADEC	23070028 BX70112	14 NOV 2004					
FADEC	23070029 BX46033	14 NOV 2004					
5. REMARKS							

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SECTION 1 PART III ENGINE MODIFICATION RECORD

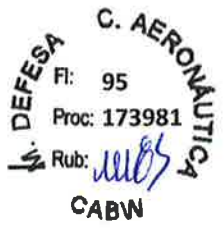
1 ENGINE SERIAL NUMBER: CAE311642		2 ENGINE MODEL: AE3007A1	
3 MODIFICATION INFORMATION			
BULLETIN OR DIRECTIVE NUMBER	ISSUE/REVISION DATE	SUBJECT OF BULLETIN OR DIRECTIVE	TYPE
AE3007A-72-285	ORIGINAL Nov 22, 2004	ENGINE - NEW DIFFUSER TO HPT CASE TUBE SUPPORT BRACKET	ONE-TIME
AE3007A-75-025	REVISION 1 Jul 19, 2004	AIR - NEW CUSTOMER - SERVICES OUTER MANIFOLD ATTACHMENT BOLTS (MS8655-08) FOUND EMBODIED	ONE-TIME
AE3007A-75-026	REVISION 1 Aug 16, 2005	AIR - LOCKWIRE OR SAFETY CABLE THE CUSTOMER - SERVICES OUTER MANIFOLD ATTACHMENT BOLTS	ONE-TIME
AE3007A-75-030	ORIGINAL Jan 06, 2005	AIR - CUSTOMER-SERVICES OUTER MANIFOLD - NEW OUTER BYPASS DUCT GASKET (230791496) FOUND EMBODIED	ONE-TIME
AE3007A-75-033	ORIGINAL Sep 06, 2005	AIR - CUSTOMER-SERVICES OUTER MANIFOLD INSPECTION	ONE-TIME
AE3007A-79-036	ORIGINAL Jul 11, 2006	AIR - OUTER BYPASS DUCT - CUSTOMER - SERVICES OUTER MANIFOLD MOLDED INSERT INSPECTION AND REPAIR	ONE-TIME
AE3007A-79-003	ORIGINAL Sep 09, 2003	ENGINE - NEW CORE FLOWPATH FORCED MIXER SUPPORT ASSEMBLY (23078313)	ONE-TIME
AE3007A-79-035	REVISION 2 Mar 05, 2007	OIL - OIL PRESSURE / TEMPERATURE SENSOR INSPECTION	ONE-TIME

4. COMPLIANCE TIME				5 SIGNATURE ENTRY and COMPANY	
INTERVAL	NEXT DUE	AUTHORIZED SIGNATURE	CERTIFICATION TYPE & NUMBER	ORGANIZATION	
N/A	N/A	<i>[Signature]</i>	EASA - 145.0119	ROLLS-ROYCE BRASIL	
Sep 27, 2007		<i>[Signature]</i>	EASA - 145.0119	ROLLS-ROYCE BRASIL	
N/A	N/A	<i>[Signature]</i>	EASA - 145.0119	ROLLS-ROYCE BRASIL	
Sep 27, 2007		<i>[Signature]</i>	EASA - 145.0119	ROLLS-ROYCE BRASIL	
N/A	N/A	<i>[Signature]</i>	EASA - 145.0119	ROLLS-ROYCE BRASIL	
Sep 27, 2007		<i>[Signature]</i>	EASA - 145.0119	ROLLS-ROYCE BRASIL	
N/A	N/A	<i>[Signature]</i>	EASA - 145.0119	ROLLS-ROYCE BRASIL	
Sep 27, 2007		<i>[Signature]</i>	EASA - 145.0119	ROLLS-ROYCE BRASIL	
N/A	N/A	<i>[Signature]</i>	EASA - 145.0119	ROLLS-ROYCE BRASIL	
Sep 27, 2007		<i>[Signature]</i>	EASA - 145.0119	ROLLS-ROYCE BRASIL	
N/A	N/A	<i>[Signature]</i>	EASA - 145.0119	ROLLS-ROYCE BRASIL	
Sep 27, 2007		<i>[Signature]</i>	EASA - 145.0119	ROLLS-ROYCE BRASIL	

SECTION 1 PART III

ENGINE MODIFICATION RECORD

1. ENGINE SERIAL NUMBER: CAE311642		2. ENGINE MODEL: AE3007A1	
3. MODIFICATION INFORMATION			
BULLETIN OR DIRECTIVE NUMBER AE3007A-79-039	ISSUE/REVISION DATE	SUBJECT OF BULLETIN OR DIRECTIVE	TYPE
	REVISION 2 Oct 16, 2006	OIL - NEW LINE TEE - TO - ACCESSORY GEARBOX PRESSURE OIL TUBE(230R0964)	ONE-TIME
4. COMPLIANCE TIME		5. SIGNATURE ENTRY and COMPANY	
INTERVAL ACCOMPLISHED	NIA	NIA	NIA
NEXT DUE	Sep 27, 2007	AUTHORIZED SIGNATURE	ORGANIZATION
		<i>[Signature]</i>	ROLLS-ROYCE BRASIL
		CERTIFICATION TYPE & NUMBER	
		UNDO SIGNATURE CFEA-3067399590 EASA-14561185113	



ENGINE MODIFICATION RECORD

SECTION 1 PART III

1. ENGINE SERIAL NUMBER: CAE311642			2. ENGINE MODEL: AE3007A1			
3. MODIFICATION INFORMATION						
BULLETIN OR DIRECTIVE NUMBER	ISSUE/REVISION DATE	SUBJECT OF BULLETIN OR DIRECTIVE	TYPE	4. COMPLIANCE TIME		ORGANIZATION
				ACCOMPLISHED	NEXT DUE	
5. SIGNATURE ENTRY AND COMPANY						
				CERTIFICATION TYPE & NUMBER	AUTHORIZED SIGNATURE	
SB AE3007A-A-72-197	ORIGINAL DECEMBER 01 2000	ENGINE - NEW STATIONARY LABYRINTH SEAL (23073906)	DIRECTIVE RECURRING	N/A N/A 07 MARCH 2004	CAA 00516	ROLLS-ROYCE BRASIL
SB AE3007A-A-72-198	REVISION 01 NOVEMBER 15, 2001	ENGINE - NEW REAR TURBINE BEARING SUPPORT OIL SUPPLY TUBE (23073941)	DIRECTIVE RECURRING	N/A N/A 07 MARCH 2004	CAA 00516	ROLLS-ROYCE BRASIL
SB AE3007A-A-72-203	REVISION 01 MAY 12, 2005	ENGINE - NEW FAN (No. 0) BEARING SUPPORT HOUSING (23074279)	DIRECTIVE RECURRING	N/A N/A 07 MARCH 2004	CAA 00516	ROLLS-ROYCE BRASIL
SB AE3007A-A-72-207	REVISION 02 MAY 01, 2002	ENGINE - NEW FAN CARBON SEAL RETAINING RING	DIRECTIVE RECURRING	N/A N/A 07 MARCH 2004	CAA 00516	ROLLS-ROYCE BRASIL
SB AE3007A-A-72-208	REVISION 01 OCTOBER 19, 2001	ENGINE - NEW 1 st -STAGE COMPRESSOR BLADE REAR RETAINER RING (23074307)	DIRECTIVE RECURRING	N/A N/A 07 MARCH 2004	CAA 00516	ROLLS-ROYCE BRASIL
SB AE3007A-A-72-210	REVISION 01 AUGUST 06, 2001	ENGINE - INSPECT THE HIGH-PRESSURE TURBINE 1 st -STAGE VANES AND BLADES	DIRECTIVE RECURRING	N/A N/A 07 MARCH 2004	CAA 00516	ROLLS-ROYCE BRASIL
SB AE3007A-A-72-212	REVISION 02 OCTOBER 22, 2001	ENGINE - INSPECT THE LOW-PRESSURE TURBINE FORWARD SHA-1 (23099894 AND 23097076)	DIRECTIVE RECURRING	N/A N/A 07 MARCH 2004	CAA 00516	ROLLS-ROYCE BRASIL
SB AE3007A-A-72-214	ORIGINAL JUNE 26, 2002	ENGINE - NEW NO. 4 BEARING SPANNER MAT (23074218)	DIRECTIVE RECURRING	N/A N/A 07 MARCH 2004	CAA 00516	ROLLS-ROYCE BRASIL
SB AE3007A-A-72-215	ORIGINAL OCTOBER 16, 2001	ENGINE - INSTALL THE 2 nd -STAGE HIGH-PRESSURE TURBINE WHEEL BALANCE WEIGHTS (23038003)	DIRECTIVE RECURRING	N/A N/A 07 MARCH 2004	CAA 00516	ROLLS-ROYCE BRASIL
SB AE3007A-A-72-223	ORIGINAL SEPTEMBER 17, 2002	ENGINE - TEST THE UPPER BEVEL GEAR OIL MANIFOLD ASSEMBLY FOR FLOW AND TARGET	DIRECTIVE RECURRING	N/A N/A 07 MARCH 2004	CAA 00516	ROLLS-ROYCE BRASIL
SB AE3007A-A-72-229	ORIGINAL AUGUST 31, 2001	ENGINE - INSTALL THE MID-SPAN BEARING WITH LOCKTITE 240	DIRECTIVE RECURRING	N/A N/A 07 MARCH 2004	CAA 00516	ROLLS-ROYCE BRASIL
SB AE3007A-A-72-235	ORIGINAL MARCH 18, 2002	ENGINE - ACCESSORY DRIVE GEARBOX ASSEMBLY - NEW STARTERSHAFT SEAL	DIRECTIVE RECURRING	N/A N/A 07 MAR 2004	CAA 00510	ROLLS-ROYCE BRASIL

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SECTION 1 PART III ENGINE MODIFICATION RECORD








1. ENGINE SERIAL NUMBER: CAE311642		2. ENGINE MODEL: AE3007A1	
3. MODIFICATION INFORMATION			
BULLETIN OR DIRECTIVE NUMBER	ISSUE/REVISION DATE	SUBJECT OF BULLETIN OR DIRECTIVE	TYPE
SB AE3007A-72-239	ORIGINAL DECEMBER 20, 2001	ENGINE - REWORK THE NO. 06 BEARING INSERT	PREVENTIVE RECURRING
SD AE3007A-72-243	REVISION 01 FEBRUARY 24, 2003	ENGINE - FRONT SUMP HOUSING ASSEMBLY INSPECTION	PREVENTIVE RECURRING
SB AE3007A-72-244	REVISION 02 FEBRUARY 24, 2003	ENGINE - 1 st STAGE COMPRESSOR WHEEL BORE INSPECTION	PREVENTIVE RECURRING
SB AE3007A-72-246	ORIGINAL APRIL 24, 2002	ENGINE - NEW TEFLON OMNI-SEAL No. 4 CARBON SEAL	PREVENTIVE RECURRING
SD AE3007A-72-247	REVISION 03 FEBRUARY 10, 2003	ENGINE - REINFORCING PLATES (2075977) FOR PLUG REPAIRED FRONT FRAME FORWARD FLANGE	PREVENTIVE RECURRING
SB AE3007A-72-253	ORIGINAL SEPTEMBER 13, 2002	ENGINE - ACCESSORY GEARBOX STARTER PAD DRAIN - INSTALL THE STARTER DRAIN ADAPTER	PREVENTIVE RECURRING
SB AE3007A-72-255	REVISION 02 JULY 18, 2003	ENGINE - COMPRESSOR CONE SHAFTS AND TIE BOLT - RENDOK	PREVENTIVE RECURRING
SB AE3007A-72-256	ORIGINAL FEBRUARY 24, 2003	ENGINE - NEW CENTER SUMP FORWARD STATIONARY SEAL	PREVENTIVE RECURRING
SB AE3007A-72-257	ORIGINAL FEBRUARY 24, 2003	ENGINE - NEW CENTER SUMP REAR STATIONARY SEAL	PREVENTIVE RECURRING
SB AE3007A-A-72-265	REVISION 01 APRIL 10, 2003	ENGINE - 1 st TO 2 nd STAGE HIGH PRESSURE TURBINE SPACER INSPECTION	PREVENTIVE RECURRING
SB AE3007A-72-270	ORIGINAL JUNE 10, 2003	ENGINE - NO. 4 BALL BEARING INSPECTION	PREVENTIVE RECURRING
SB AE3007A-72-277	ORIGINAL JULY 30, 2001	ENGINE - RADIAL O-JILL SHAFT SCREENING (2306789)	PREVENTIVE RECURRING
4. COMPLIANCE TIME		5. SIGNATURE ENTRY AND COMPANY	
INTERVAL	N/A	CERTIFICATION TYPE & NUMBER	ROLLS-ROYCE BRASIL
NEXT DUE	N/A	AUTHORIZED SIGNATURE	
ACCOMPLISHED	07 MAR 2004		
	N/A		ROLLS-ROYCE BRASIL
	07 MAR 2004		ROLLS-ROYCE BRASIL
	N/A		ROLLS-ROYCE BRASIL
	07 MAR 2004		ROLLS-ROYCE BRASIL
	N/A		ROLLS-ROYCE BRASIL
	07 MAR 2004		ROLLS-ROYCE BRASIL
	N/A		ROLLS-ROYCE BRASIL
	07 MAR 2004		ROLLS-ROYCE BRASIL
	N/A		ROLLS-ROYCE BRASIL
	07 MAR 2004		ROLLS-ROYCE BRASIL
	N/A		ROLLS-ROYCE BRASIL
	07 MAR 2004		ROLLS-ROYCE BRASIL
	N/A		ROLLS-ROYCE BRASIL
	07 MAR 2004		ROLLS-ROYCE BRASIL
	N/A		ROLLS-ROYCE BRASIL
	07 MAR 2004		ROLLS-ROYCE BRASIL
	N/A		ROLLS-ROYCE BRASIL
	07 MAR 2004		ROLLS-ROYCE BRASIL

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SECTION 1 PART III

ENGINE MODIFICATION RECORD

1. ENGINE SERIAL NUMBER: CAE311642			2. ENGINE MODEL: AE3007A1		
3. MODIFICATION INFORMATION					
BULLETIN OR DIRECTIVE NUMBER	ISSUE/REVISION DATE	SUBJECT OF BULLETIN OR DIRECTIVE	TYPE	COMPLIANCE TIME INTERVAL / NEXT DUE	5. SIGNATURE ENTRY and COMPANY
				ACCOMPLISHED	CERTIFICATION TYPE & NUMBER ORGANIZATION
SB AE3007A-72-278	ORIGINAL JUNE 03, 2003	ENGINE - ACCESSORY DRIVE GEARBOX ASSEMBLY - NEW PRMU DRIVE GEAR	ONE TIME RECURRING	N/A / N/A 07 MAR 2004	 CAA 00516 ROLLS-ROYCE BRASIL
SB AE3007A-72-290	ORIGINAL JULY 31, 2003	ENGINE - 1 st -STAGE HIGH PRESSURE TURBINE BLADE- REWORK	ONE TIME RECURRING	N/A / N/A 07 MAR 2004	 CAA 00516 ROLLS-ROYCE BRASIL
SB AE3007A-74-005	ORIGINAL APRIL 16, 2002	IGNITION - PERMANENT MAGNET ALTERNATOR ROTOR AND STATOR INSPECTION	ONE TIME RECURRING	N/A / N/A 07 MAR 2004	 CAA 00516 ROLLS-ROYCE BRASIL
SB AE3007A-74-006	REVISION 01 DECEMBER 16, 2002	IGNITION - REPLACE THE PERMANENT MAGNET ALTERNATOR STATOR	ONE TIME RECURRING	N/A / N/A 07 MAR 2004	 CAA 00516 ROLLS-ROYCE BRASIL
SB AE3007A-74-007	REVISION 01 DECEMBER 16, 2002	IGNITION - PERMANENT MAGNET ALTERNATOR ROTOR INSPECTION	ONE TIME RECURRING	N/A / N/A 07 MAR 2004	 CAA 00516 ROLLS-ROYCE BRASIL
SB AE3007A-75-019	ORIGINAL FEBRUARY 08, 2002	AIR - NEW COMPRESSOR ACCELERATION BLEED VALVE AND ADAPTER.	ONE TIME RECURRING	N/A / N/A 07 MAR 2004	 CAA 00516 ROLLS-ROYCE BRASIL
SB AE3007A-75-030	REVISION 01 JULY 18, 2003	OIL - NEW AFT SUMP OIL SCAVENGE TUBES AND INFL TIPLE TUBE SUPPORT BRACKET ASSEMBLY	ONE TIME RECURRING	N/A / N/A 07 MAR 2004	 CAA 00516 ROLLS-ROYCE BRASIL

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SECTION 1 PART III

ENGINE MODIFICATION RECORD

1. ENGINE SERIAL NUMBER: CAE311642		2. ENGINE MODEL: AF3007A1	
3. MODIFICATION INFORMATION			
BULLETIN OR DIRECTIVE NUMBER	ISSUE/REVISION DATE	SUBJECT OF BULLETIN OR DIRECTIVE	TYPE
SB AF3007A-A-72 131 Rev. 3 AD 99-02-51 FAA	Mar. 30, 99 Mar. 24, 00	ENGINE - Accessory Gearbox Starter Pad Drain Cap the Fitting	ONE-TIME RECURRING
SB A63007A -A-72-131			ONE-TIME RECURRING
SB AF3007A A-72-131		ENGINE NEW (N.O.) - SPAN REMAINING HOUSING COVER	ONE-TIME RECURRING
SB AF3007A A-72-131		ENGINE ACCESSORY GEARBOX STATIONARY BODY U-WIP	ONE-TIME RECURRING
			ONE-TIME RECURRING
			ONE-TIME RECURRING
			ONE-TIME RECURRING
SB A63007A A-72-153		ENGINE OCCASIONALLY OVERHEAT STATIONARY PAD DRAIN	ONE-TIME RECURRING
			ONE-TIME RECURRING
			ONE-TIME RECURRING
			ONE-TIME RECURRING
			ONE-TIME RECURRING

4. COMPLIANCE TIME				5. SIGNATURE ENTRY and COMPANY	
INTERVAL	NEXT DUE	ACCUMPLISHED	CERTIFICATION TYPE & NUMBER	AUTHORIZED SIGNATURE	ORGANIZATION
		02:10 A-check	Quality Control	<i>[Signature]</i>	EMBRAER
		Dec. 20, 2000		<i>[Signature]</i>	EMBRAER
		02/10/2002		<i>[Signature]</i>	EMBRAER
		03/12/2002		<i>[Signature]</i>	EMBRAER
		04/12/2003		<i>[Signature]</i>	EMBRAER
		05/14/2003		<i>[Signature]</i>	EMBRAER
		06/13/2003		<i>[Signature]</i>	EMBRAER

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SECTION 1 PART IV ENGINE INSPECTION RECORD

1. ENGINE SERIAL NUMBER: CAZ 321040		2. ENGINE MODEL: CAC 3007 A1			3. COMPLIANCE TIME		4. REFERENCE		5. AUTHORIZED SIGNATURE	
INSPECTION NUMBER	INSPECTION DESCRIPTION	ENGINE	INTERVAL	NEXT DUE	DATE	CERTIFICATION TYPE & NUMBER	ORGANIZATION	ENGINE SERIAL NUMBER	DATE	SIGNATURE
1	Full engine inspection	1717-83	1000 hrs	1997-03-31	N/A	FAA Form 100-10-1	FAA	321040	1997-03-31	<i>[Signature]</i>

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SECTION 1 PART IV ENGINE INSPECTION RECORD

1. ENGINE SERIAL NUMBER:		2. ENGINE MODEL:		3. COMPLIANCE TIME			4. AUTHORIZED SIGNATURE		5. ORGANIZATION	
INSPECTION INFORMATION		REFERENCE DOCUMENT		ENGINE	INTERVAL	NEXT DUE	DATE	CERTIFICATION TYPE & NUMBER	ORGANIZATION	
INSPECTION NUMBER	INSPECTION DESCRIPTION	INSPECTION DESCRIPTION	REFERENCE DOCUMENT	ENGINE	INTERVAL	NEXT DUE	DATE	CERTIFICATION TYPE & NUMBER	ORGANIZATION	
V001	Recalibrate check gauge	ME	ME	7012	500	/	25/05/04	<i>[Signature]</i>	<i>[Stamp]</i>	
V02	Recalibrate check 2C	-	-	7012	500	/	23/05/04	<i>[Signature]</i>	<i>[Stamp]</i>	
V1	check A	ME	ME	7504	500	/	20/06/04	<i>[Signature]</i>	<i>[Stamp]</i>	
V2	check A + 2A	ME	ME	8038	500	/	12/07/04	<i>[Signature]</i>	<i>[Stamp]</i>	
V3	check(A)	ME	ME	8523	500	/	27/08/04	<i>[Signature]</i>	<i>[Stamp]</i>	
V4	check(A+2A+2B)	ME	ME	8991	500	/	10/03/05	<i>[Signature]</i>	<i>[Stamp]</i>	
V5	check(A+2A)	ME	ME	9680	500	/	20/06/05	<i>[Signature]</i>	<i>[Stamp]</i>	
V5 years	check (5 years)	ME	ME	9512	5 years	/	17/07/05	<i>[Signature]</i>	<i>[Stamp]</i>	
V6	check (A+2A)	ME	ME	99M	500	/	12/08/05	<i>[Signature]</i>	<i>[Stamp]</i>	

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SECTION 1 PART IV ENGINE INSPECTION RECORD

1. ENGINE SERIAL NUMBER: CAE311642		2. ENGINE MODEL: AE3007A1						
3. INSPECTION INFORMATION			4. COMPLIANCE TIME			5. SIGNATURE ENTRY and COMPANY		
INSPECTION NUMBER	INSPECTION DESCRIPTION	REFERENCE DOCUMENT	ENGINE	INTERVAL	NEXT DUE	DATE	AUTHORIZED SIGNATURE CERTIFICATION TYPE & NUMBER	ORGANIZATION
12A	Check MA	ME	6307	400	6787	10/12/03	<i>[Signature]</i>	<i>[Stamp]</i>
13A	12A		6711		501	06/12/04	<i>[Signature]</i>	<i>[Stamp]</i>
14A	13A		5117		5511	11/04/03	<i>[Signature]</i>	<i>[Stamp]</i>
15A	14A		5508		5908	10/06/03	<i>[Signature]</i>	<i>[Stamp]</i>
16A	15A		5965		6308	08/07/03	<i>[Signature]</i>	<i>[Stamp]</i>
17A	16A		6319		6708	09/10/03	<i>[Signature]</i>	<i>[Stamp]</i>
18A	17A		6697		7097	01/10/03	<i>[Signature]</i>	<i>[Stamp]</i>
19A	check MA			400		77/12/04	<i>[Signature]</i>	<i>[Stamp]</i>
20A	check MA			400		20/06/04	<i>[Signature]</i>	<i>[Stamp]</i>
21A	Re certificate for 2550H		7012		7512	25/05/06	<i>[Signature]</i>	<i>[Stamp]</i>
22A	check MA		7012		7512		<i>[Signature]</i>	<i>[Stamp]</i>

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SECTION 1 PART IV (A) ENGINE INSPECTION RECORD

1. ENGINE SERIAL NUMBER: CAE311642		2. ENGINE MODEL: AE3007A1						
3. INSPECTION INFORMATION			4. COMPLIANCE TIME			5. SIGNATURE ENTRY and COMPANY		
INSPECTION NUMBER	INSPECTION DESCRIPTION	REFERENCE DOCUMENT	ENGINE	INTERVAL	NEXT DUE	DATE	AUTHORIZED SIGNATURE CERTIFICATION TYPE & NUMBER	ORGANIZATION
1	check 1A	ME	605FH	400FH	800FH	31/03/01	<i>[Signature]</i>	A-2 CARAIR
2	check 2A	ME	795FH	400FH	1195FH	29/11/01	<i>[Signature]</i>	"
3	check 3A	ME	1277FH	400FH	1595FH	26/11/01	Personal Annual Cert. 44. 894	
4	check 4A	ME	1586FH	400FH	1986FH	11/11/01	Cu SSE. Le. David 15 de 2001	
5	check 5A	ME	1967FH	400FH	2367FH	16/11/01	<i>[Signature]</i>	
6	check 6A	ME	2370FH	400FH	2767FH	23/01/02	Sped. J. JEAN-BLIE	
7	check 7A	ME	2793FH	400FH	3167FH	27/03/02	Sped. J. JEAN-BLIE	
8	check 8A	ME	3193FH	400FH	3567FH	28/05/02	Sped. J. JEAN-BLIE	
9	check 9A	ME	3601FH	400FH	3967FH	06/08/02	Sped. J. JEAN-BLIE	
10	check 10A	ME	3967FH	400FH	4367FH	05/10/02	Sped. J. JEAN-BLIE	
11	check 11C	ME	3947FH	400FH	4347FH	26/10/02	Sped. J. JEAN-BLIE	

GT-10039

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SECTION 1 PART IV ENGINE INSPECTION RECORD

3. INSPECTION INFORMATION		4. COMPLIANCE TIME			4. SIGNATURE ENTRY and COMPANY			
INSPECTION NUMBER	INSPECTION DESCRIPTION	REFERENCE DOCUMENT	ENGINE TSN	INTERVAL	NEXT DUE	DATE	AUTHORIZED SIGNATURE CERTIFICATION TYPE & NUMBER	ORGANIZATION
---	Engine	Engine Trend Analysis	N/A	Not to exceed 70 FLT LEG or 7 DAYS	---	Sep 27, 2007	 EASA 145.0119	ROLLS-ROYCE BRASIL
72-20-00	Air Inlet Section (Fan Assembly)	General Visual Inspection IAW MIM 72-00-00-200-801	13890.18	500 FH	14380.18	Sep 27, 2007	 EASA 145.0119	ROLLS-ROYCE BRASIL
72-21-15	Fan Blades	Detailed Inspection (Ref/MIM)	13890.18	4000 FH	17880.18	Sep 27, 2007	 EASA 145.0119	ROLLS-ROYCE BRASIL
72-21-21	Fan Wheel PW 23061670 SIN: WD18597 and AFT Blade Retainer.	Mandatory Inspection IAW EM Manual.	13890.18	5000 cycles	15.283 cycles	Sep 27, 2007	 EASA 145.0119	ROLLS-ROYCE BRASIL
72-60-00	Accessory Drive Section.	General Visual Inspection IAW MIM 72-00-00-200-801.	13890.18	10000 FH	23880.18	Sep 27, 2007	 EASA 145.0119	ROLLS-ROYCE BRASIL
72-70-00	Bypass Section.	General Visual.	13890.18	10000 FH	23880.18	Sep 27, 2007	 EASA 145.0119	ROLLS-ROYCE BRASIL
73-10-00	Fuel System Distribution (Tubes and Hoses).	General Visual	13890.18	10000 FH	23880.18	Sep 27, 2007	 EASA 145.0119	ROLLS-ROYCE BRASIL
73-11-10	Fuel Nozzles Set	Remove (Ref. MIM) and Clean (Ref. CIMM 73-12-16)	13890.18	10000 FH	23880.18	Sep 27, 2007	 EASA 145.0119	ROLLS-ROYCE BRASIL
73-21-10	Fuel Pump and Metering Unit (FPMU)	General Visual	13890.18	1000 FH	14880.18	Sep 27, 2007	 EASA 145.0119	ROLLS-ROYCE BRASIL
73-25-10	FADEC Anti-Vibration Mounts	Remove (Ref. MIM) and Inspect (Ref. CIMM 73-25-04)	N/A	4000 FH	---	Sep 27, 2007	 EASA 145.0119	ROLLS-ROYCE BRASIL

GT-1003S-1





ENGINE INSPECTION RECORD

SECTION 1 PART IV

3. INSPECTION INFORMATION		4. COMPLIANCE TIME			4. SIGNATURE ENTRY and COMPANY			
INSPECTION NUMBER	INSPECTION DESCRIPTION	REFERENCE DOCUMENT	ENGINE TSN	INTERVAL	NEXT DUE	DATE	AUTHORIZED SIGNATURE CERTIFICATION TYPE & NUMBER	ORGANIZATION
73-37-10	Fuel Indicating System	Function Test (Ref:MM)	N/A	1000 FH	---	Sep 27, 2007	<i>[Signature]</i> EASA - 145.0119	ROLLS-ROYCE BRASIL
74-21-10	Igniters	Detailed Inspection (Ref: MM)	13890.18	4000 FH	17890.18	Sep 27, 2007	<i>[Signature]</i> EASA - 145.0119	ROLLS-ROYCE BRASIL
76-10-00	Power Control Section (Harnesses)	General Visual	13890.18	10000 FH	23890.18	Sep 27, 2007	<i>[Signature]</i> EASA - 145.0119	ROLLS-ROYCE BRASIL
77-21-15	Turbine - Interstage - Thermocouple (A) Harness	General Visual	13890.18	10000 FH	23890.18	Sep 27, 2007	<i>[Signature]</i> EASA - 145.0119	ROLLS-ROYCE BRASIL
77-21-20	Turbine - Interstage - Thermocouple (B) Harness	General Visual	13890.18	10000 FH	23890.18	Sep 27, 2007	<i>[Signature]</i> EASA - 145.0119	ROLLS-ROYCE BRASIL
79-00-00	Oil Tank (Pre - Service Bulletin)	General Visual (Ref. Service Bulletin AE3007A-79-010)	13890.18	400 FH	14290.18	Sep 27, 2007	<i>[Signature]</i> EASA - 145.0119	ROLLS-ROYCE BRASIL
79-20-00	Oil System Distribution (Tubes and Hoses)	General Visual	13890.18	10000 FH	23890.18	Sep 27, 2007	<i>[Signature]</i> EASA - 145.0119	ROLLS-ROYCE BRASIL
79-25-15	Fuel - Cooled Oil Cooler (FDOC)	General Visual	13890.18	10000 FH	23890.18	Sep 27, 2007	<i>[Signature]</i> EASA - 145.0119	ROLLS-ROYCE BRASIL
79-30-00	Multi - Function Display for Oil Debris Message	Inspection (Ref EMB - 145 AMM)	N/A	50 FH OR 5 DAYS	---	Sep 27, 2007	<i>[Signature]</i> EASA - 145.0119	ROLLS-ROYCE BRASIL
79-37-10	Magnetic - Indicating Plug	Functional Test (Ref: MM)	N/A	8000 FH	---	Sep 27, 2007	<i>[Signature]</i> EASA - 145.0119	ROLLS-ROYCE BRASIL

GT-10038-1

SECTION 1 PART IV ENGINE INSPECTION RECORD

1. ENGINE SERIAL NUMBER: CAE311642		2. ENGINE MODEL: AE3007A1		3. ENGINE TSN: 1369018		ENGINE CSN: 10283		5. SALES ORDER#: 299296	
3. INSPECTION INFORMATION				4. COMPLIANCE TIME				4. SIGNATURE ENTRY and COMPANY	
INSPECTION NUMBER	INSPECTION DESCRIPTION	REFERENCE DOCUMENT	ENGINE TSN	INTERVAL	NEXT DUE	DATE	SIGNATURE	CERTIFICATION TYPE & NUMBER	ORGANIZATION
79-37-15	Oil - Filter Electrical Impending - Bypass Indicator	Functional Test (Ref. MM)	N/A	8000 FH	---	Sep 27 2007	<i>[Signature]</i>	CREA 5462899590 CABW/AVAC-103113 EASA 145-0119	ROLLS-ROYCE BRASIL

GT-10039-1

SECTION 1 PART IV ENGINE INSPECTION RECORD

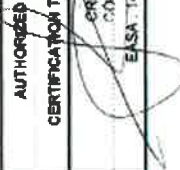
1. ENGINE SERIAL NUMBER: CAE311642		2. ENGINE MODEL: AE3007A1				3. INSPECTION INFORMATION				4. COMPLIANCE TIME				5. SIGNATURE ENTRY and COMPANY					
INSPECTION NUMBER	INSPECTION DESCRIPTION	REFERENCE DOCUMENT	ENGINE	INTERVAL	NEXT DUE	DATE	AUTHORIZED SIGNATURE	CERTIFICATION TYPE & NUMBER	ORGANIZATION	INSPECTION NUMBER	INSPECTION DESCRIPTION	REFERENCE DOCUMENT	ENGINE	INTERVAL	NEXT DUE	DATE	AUTHORIZED SIGNATURE	CERTIFICATION TYPE & NUMBER	ORGANIZATION
05-21-00 72-20-00	Air Inlet Section (Fan Assembly) GVI IAW the MM 72-00-00-200-801	RRB W.C. # 229630	6,987.0 4,741	4,000 HRS N/A	10,987.0 TSN N/A	N/A N/A	<i>[Signature]</i>	CAA 00516	ROLLS-ROYCE BRASIL										
05-21-00 72-21-15	Fan Blades - Detailed Inspection (Ref. MM)	RRB W.C. # 229630	6,987.0 4,741	4,000 HRS N/A	10,987.0 TSN N/A	N/A N/A	<i>[Signature]</i>	CAA 00516	ROLLS-ROYCE BRASIL										
05-21-00 72-60-00	Accessory Drives Section - GVI IAW the MM 72-00-00-200-801	RRB W.C. # 229630	6,987.0 4,741	8,000 HRS N/A	14,987.0 TSN N/A	N/A N/A	<i>[Signature]</i>	CAA 00516	ROLLS-ROYCE BRASIL										
05-21-00 73-11-10	Fuel Nozzles Removal and Clean	RRB W.C. # 229630	6,987.0 4,741	2,000 HRS N/A	8,987.0 TSN N/A	N/A N/A	<i>[Signature]</i>	CAA 00516	ROLLS-ROYCE BRASIL										
AD 2000-11-22	Fan Wheel PIN 23061670 S/N WD18607 and Air Blade Reliner Inspection IAW EMI	RRB W.C. # 229630	6,987.0 4,741	N/A 5,000 CYCLES	N/A 9,741 CSN	N/A N/A	<i>[Signature]</i>	CAA 00516	ROLLS-ROYCE BRASIL										
05-21-00 73-11-10	6 sub. Nozzles for Removal and clean	RRB W.C. # 229630	6,987.0 4,741	2,000 HRS N/A	10,987.0 TSN N/A	21 SEP 2005	<i>[Signature]</i>	SASA 145.D119	RRB										

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ENGINE MAINTENANCE RECORD

SECTION 1 PART V

1. ENGINE SERIAL NUMBER: CAE311642		2. ENGINE MODEL: AE3007A1	
3. COMPLIANCE INFORMATION			
DATE	DESCRIPTION OF MAINTENANCE ACTION	REFERENCE DOCUMENT	HOURS CYCLES
Sep 27, 2007	Engine was disassembled, inspected, repaired, tested and accepted in accordance with the Engine Manual (CFR-31010, Revision 28 dated July 20, 2007.	RRB W.C. # 298296	13860.18 10283
		AUTHORIZED SIGNATURE CERTIFICATION TYPE & NUMBER	ORGANIZATION
		 CREA 5062394590 COD ANAC 105112 EASA 145.0119	ROLLS-ROYCE BRASIL

DEFESA C. AERONAUTICA
 Fl: 108
 Proc: 173981
 Rub: 
 CABW

GT-10040

SECTION 1 PART V ENGINE MAINTENANCE RECORD

1. ENGINE SERIAL NUMBER: CAE311642		2. ENGINE MODEL: AE3007A1	
3. COMPLIANCE INFORMATION		4. SIGNATURE ENTRY and COMPANY	
DATE	DESCRIPTION OF MAINTENANCE ACTION	REFERENCE DOCUMENT	HOURS CYCLES
30 NOV 2000	Fuel system preserved with MIL-O-6081 oil.		0
18 Dec 2000	The preserved oil of the fuel system was removed.		0
18 Dec 2000	The engine oil system was filled with: FXXON 2380		0
14 Jan 2002	53B AE 3007 P2-230 Engine new 3 Pan Bostons Avionics		3263
30 Oct 2002	EPA inspected	ME 3313	2650
15 Nov 2003	3/5 inspections	ME 3313	2650
23 Nov 2003	Lubrication engine		2650
08 Mar 2004	CWA et Certificate (Obs 2-652) The engine was checked, inspected, repaired, tested and accepted in line	ME 229630	4454
2004	F 10, ESP 310, Revision 11, Serial 310101010 Fuel Nozzles were inspected and tested in line		4454
	CWA 2342-02. See section 4 part II by Sps con NTDs compliance.		4454
	CWA system components were inspected as per customer request.		4454

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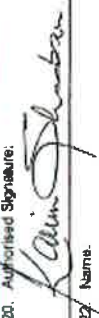
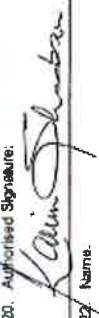
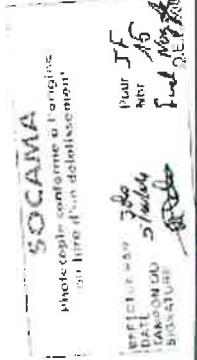
ROLLS-ROYCE BRASIL
 Rua Dr. Cirochato Braga, 47, São Bernardo do Campo,
 São Paulo, Brasil, CEP 06190-900
 Telefone: (11) 4981-1411

ACCESSORIES LOG SHEET - ROLLS-ROYCE CORPORATION AE3007A1

Rolls Royce 3007A1

John do not 3007A1 (2004)

ENGINE S/N	AIRCRAFT	DATE REMOVED	T.S.N.	P/N	T.S.N.	T.S.O.	T.S.R.	DATE	WORK CARRIED OUT
CAE311643	F-OIJE	MAR 04, 2004	5,983.0				0.00	APRIL 08, 2004	REPAIR
ITEM	DESCRIPTION	S/N	P/N	T.S.N.	T.S.O.	OH	REP TES	COMENTS	
AA	Fuel Nozzle	1NS12891	23073452A	UNKN	0.00	X	-	Overhaul at Delavan	
AB	Fuel Nozzle	1PS10251	23073452A	UNKN	0.00	X	-	Overhaul at Delavan	
AC	Fuel Nozzle	1NR63753	23073452A	UNKN	0.00	X	-	Overhaul at Delavan	
AD	Fuel Nozzle	1SN02397	23065950A	UNKN	---	-	-		
AE	Fuel Nozzle	1WM08914	23065950A	UNKN	---	-	-		
AF	Fuel Nozzle	1NS08966	23065950A	UNKN	---	-	-		
AG	Fuel Nozzle	1NL02081	23065950A	UNKN	---	-	-		
AH	Fuel Nozzle	1OS07920	23065950A	UNKN	---	-	-		
AI	Fuel Nozzle	1PP05916	23065950A	UNKN	---	-	-		
AJ	Fuel Nozzle	1UR02189	23065950A	UNKN	---	-	-		
AK	Fuel Nozzle	1UR07278	23065950A	UNKN	---	-	-		
AL	Fuel Nozzle	1YM05262	23065950A	UNKN	---	-	-		
AM	Fuel Nozzle	1SN05839	23065950A	UNKN	---	-	-		
AN	Fuel Nozzle	1XN07288	23073453A	UNKN	---	-	-		
AO	Fuel Nozzle	1YMD0208	23073453A	UNKN	---	-	-		
AP	Fuel Nozzle	1YM05296	23073453A	UNKN	---	-	-		
B	Fuel Pump and Metering Unit	BAE19301	23063191	5,983.0	---	-	-	Visual Inspection	
C1	Full Authority Digital Electronic Control (A)	N/R	N/R	UNKN	---	-	-	Not Equipped	
C2	Full Authority Digital Electronic Control (B)	N/R	N/R	UNKN	---	-	-	Not Received	
D	Fuel Temperature Sensor	C5749	23062605	UNKN	---	-	-	Visual Inspection	
E	Fuel Flow Sensor	P10014	23052613	5,983.0	---	-	-	Visual Inspection	
G	Alternator Stator	UN7365	23057489	UNKN	---	-	-	Visual Inspection	
H1	Ignition Exciter	UY00474948	23057324	UNKN	---	-	-	Visual Inspection	
H2	Ignition Exciter	UY00464918	23057324	UNKN	---	-	-	Visual Inspection	
I1	Igniter (A)	UNKN	UNKN	UNKN	---	-	-	Visual Inspection	
I2	Igniter (B)	UNKN	UNKN	UNKN	---	-	-	Visual Inspection	
J1	Igniter Lead (RH)	UNKN	UNKN	UNKN	---	-	-	Visual Inspection	
J2	Igniter Lead (LH)	UNKN	UNKN	UNKN	---	-	-	Visual Inspection	
L	Comp. Acceleration Bleed Control Valve	EJX224	23075190	0.00	---	-	-	Visual Inspection	
N	Compress. Variable Vane Hydraulic Actuator	N/D	N/D	UNKN	---	-	-	Visual Inspection	
O1	External Engine Control Harness (Blue - A)	UNKN	UNKN	UNKN	---	-	-	Visual Inspection	
O2	External Engine Control Harness (Yellow - B)	UNKN	UNKN	UNKN	---	-	-	Visual Inspection	
O3	Internal Engine Control Harness (Blue - A)	UNKN	UNKN	UNKN	---	-	-	Visual Inspection	
O4	Internal Engine Control Harness (Yellow - B)	N/D	N/D	UNKN	---	-	-	Visual Inspection	
R	External Engine Control Harness (Green)	NX10986	23070216	UNKN	---	-	-	Visual Inspection	
S	Internal Engine Control Harness (Green)	N/D	N/D	UNKN	---	-	-	Visual Inspection	

2. Approving National Aviation Authority / Country: UNITED KINGDOM		3. Form Tracking Number: RRB - J 050/04	
4. Approver Organisation Name and Address: Rolls-Royce Brasil Rua Dr. Chomabo Braga, 47 - São Bernardo do Campo - São Paulo - Brazil CEP 08160-900 Telephone: 55 11 4390 4800 Fax 55 11 4341 8071			
6. Item:	7. Description:	8. Part Number:	9. Eligibility:
01	Ae3007at Turbofan Engine	23070991	Embraer ERJ-145
10. Quantity:	11. Serial/Batch Number:	12. Status/Work:	
01	CAE311643	Repaired	
5. Work Order / Contract / Invoice No. RRB W.O. # 231713			
13. Remarks: 1 - The engine was disassembled, investigated and inspected, repaired, assembled and successfully tested (AW the Engine Manual CSP31010, Revision 11 dated 01 October 2003. 2 - Engine is being released with TSN = 5,983.0 hours and CSN = 4,062 cycles.			
14. Certifies the items identified above were manufactured in conformity to: <input type="checkbox"/> Approved design data and are in condition for safe operation. <input type="checkbox"/> Non-approved design data specified in Block 13			
15. Authorised Signature: <div style="text-align: center;">  Karim Shaaban </div>			
16. Approval/Authorisation number: CAA 00516			
17. Name: Karim Shaaban			
18. Date (d/m/y): 04/08/2004			
19. <input checked="" type="checkbox"/> JAR-145/50 Release to Service Certifies that unless otherwise specified in block 13, the work identified in Block 12 and described in Block 13 was accomplished in accordance with JAR-145 and in respect to that work, the items are considered ready for release to service.			
20. Authorised Signature: <div style="text-align: center;">  Karim Shaaban </div>			
21. Approval/Certificate No.: CAA 00516			
22. Name: Karim Shaaban			
23. Date (d/m/y): 04/08/2004			
24. Other regulation specified in Block 13 <div style="text-align: center;">  </div>			

User/Installer Responsibilities

- It is important to understand that the existence of this document alone does not automatically constitute authority to install the particular assembly.
- Where the user/installer performs work in accordance with the national regulations of an Airworthiness Authority different than the Airworthiness Authority of the country specified in Block 1, it is essential that the user/installer ensures that the Airworthiness Authority accepts the particular assembly from the Airworthiness Authority specified in Block 1.
- Statements 19 and 20 do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.

SECTION 1 PART V

ENGINE MAINTENANCE RECORD

1. ENGINE SERIAL NUMBER: CAE 311692		2. ENGINE MODEL: A300AJP		
3. COMPLIANCE INFORMATION				
DATE	DESCRIPTION OF MAINTENANCE ACTION	REFERENCE DOCUMENT	HOURS CYCLES	
4. SIGNATURE ENTRY and COMPANY			AUTHORIZED SIGNATURE	
			CERTIFICATION TYPE & NUMBER	
			ORGANIZATION	
15 Oct 2004	E/S Fuel nozzles performed work order P. 206	WC P. 206	100.7 P. 5	<i>[Signature]</i> P. 5 Rolls-Royce Brasil
12 Dec 2004	The Tom drive shaft assembly (KIT PN 23072902) was replaced IAW the Maintenance Manual CSP 34022 Rev. 50 dated from Dec 01/2004	208 W.O.# 246300	3,425.86 5,911	<i>[Signature]</i> CNA 20516 Rolls-Royce Brasil
18 Apr 2005	CVB lubricated	P. 2025		<i>[Signature]</i> P. 115-508 Rolls-Royce Brasil
19 Jun 2005	CVB lubricated	P. 2675		<i>[Signature]</i> P. 115-508 Rolls-Royce Brasil
July 30 2005	Visual inspection of studs maggles on them	P. 2603	49 Mph 7137	<i>[Signature]</i> P. 115-508 Rolls-Royce Brasil
July 30 2005	CVG Lubricated	P. 2565	49 Mph 7137	<i>[Signature]</i> P. 115-508 Rolls-Royce Brasil
July 30 2005	CVG was performing maintenance on CVG as per the work order P. 2565	P. 2565	49 Mph 7137	<i>[Signature]</i> P. 115-508 Rolls-Royce Brasil
July 30 2005	Red marks study was done and it was found that the CVG was not lubricated properly			<i>[Signature]</i> P. 115-508 Rolls-Royce Brasil
July 30 2005	IAW the CVG Manual P. 2565			<i>[Signature]</i> P. 115-508 Rolls-Royce Brasil

GT-10040

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SECTION 1 PART V ENGINE MAINTENANCE RECORD

1. ENGINE SERIAL NUMBER: CAE311642		2. ENGINE MODEL: AE3007A1	
3. COMPLIANCE INFORMATION			
DATE	DESCRIPTION OF MAINTENANCE ACTION	REFERENCE DOCUMENT	HOURS CYCLES
4. SIGNATURE ENTRY and COMPANY		AUTHORIZED SIGNATURE	ORGANIZATION
		CERTIFICATION TYPE & NUMBER	

GT-10049

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SECTION 1 PART V ENGINE MAINTENANCE RECORD

1. ENGINE SERIAL NUMBER: CAE311643		2. ENGINE MODEL: AE3007A1			
3. COMPLIANCE INFORMATION					
DATE	DESCRIPTION OF MAINTENANCE ACTION	REFERENCE DOCUMENT	HOURS CYCLES	4. SIGNATURE ENTRY and COMPANY	
				AUTHORIZED SIGNATURE CERTIFICATION TYPE & NUMBER	ORGANIZATION

GT-100-80

DEFESA C. AERONAUTICA
 FI: 114
 Proc: 173981
 Rub: *MB*
 CABW

SECTION 1 PART VII ENGINE EQUIPMENT RECORD

1. EQUIPMENT NAME : SENSOR, FUEL FLOW 2. EQUIPMENT PIN: 23052613 3. EQUIPMENT SIN: P10051

4. ENGINE IDENTIFICATION		5. EQUIPMENT INSTALLATION SECTION		6. EQUIPMENT REMOVAL SECTION	
MODEL NUMBER	SERIAL NUMBER	DATE	ENGINE TOTAL HOURS CYCLES	EQUIP. TOTAL HOURS CYCLES	ENGINE TOTAL HOURS CYCLES
AE3007A1	CAE311842	30 NOV 2000	0 0	0 0	

7. MAINTENANCE ACTION RECORD

DATE	DESCRIPTION OF MAINTENANCE ACTION	SIGNATURE	ORGANIZATION

GT-10045

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SECTION 1 PART VII

ENGINE EQUIPMENT RECORD

1. EQUIPMENT NAME : LUBE & SCAV PUMP			2. EQUIPMENT P/N: 23068062			3. EQUIPMENT S/N: NL1311		
4. ENGINE IDENTIFICATION		5. EQUIPMENT INSTALLATION SECTION			6. EQUIPMENT REMOVAL SECTION			
MODEL NUMBER	SERIAL NUMBER	DATE	HOURS	CYCLES	ENGINE TOTAL	EQUIP. TOTAL	HOURS	CYCLES
AE3007A1	CAE311642	30 NOV 2000	0	0	0	0		

7. MAINTENANCE ACTION RECORD

DATE	DESCRIPTION OF MAINTENANCE ACTION	SIGNATURE	ORGANIZATION



 DEFESA C. AERONAUTICA
 FI: 116
 Proc: 173981
 Rub: *[Signature]*
 CABW

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[Handwritten signature]

GT-10045

SECTION 1 PART VII ENGINE EQUIPMENT RECORD

1. EQUIPMENT NAME : FADEC			2. EQUIPMENT PIN: 23072296			3. EQUIPMENT S/N: BX70119		
4. ENGINE IDENTIFICATION			5. EQUIPMENT INSTALLATION SECTION		4. EQUIPMENT REMOVAL SECTION		EQUIP. TOTAL	
MODEL NUMBER	DATE	ENGINE TOTAL	HOURS	CYCLES	ENGINE TOTAL	HOURS	CYCLES	
SERIAL NUMBER		HOURS	CYCLES	DATE	HOURS	CYCLES		
AE3007A1	30 NOV 2000	0	0					
CAE311642		0	0					

7. MAINTENANCE ACTION RECORD		
DATE	DESCRIPTION OF MAINTENANCE ACTION	SIGNATURE

GT-10045

SECTION 1 PART VII ENGINE EQUIPMENT RECORD

1. EQUIPMENT NAME : FADEC		2. EQUIPMENT PIN: 23072296			3. EQUIPMENT S/N: BX70140		
4. ENGINE IDENTIFICATION			5. EQUIPMENT INSTALLATION SECTION		6. EQUIPMENT REMOVAL SECTION		
MODEL NUMBER SERIAL NUMBER	DATE	ENGINE TOTAL HOURS CYCLES	ENGINE TOTAL HOURS CYCLES	DATE	ENGINE TOTAL HOURS CYCLES	ENGINE TOTAL HOURS CYCLES	
AE3007A1 CAE311642	30 NOV 2000	0 0	0 0				

7. MAINTENANCE ACTION RECORD		
DATE	DESCRIPTION OF MAINTENANCE ACTION	SIGNATURE

(Handwritten marks and scribbles)

SECTION 1 PART VII ENGINE EQUIPMENT RECORD

1. EQUIPMENT NAME : FPMU			2. EQUIPMENT P/N: 23083131			3. EQUIPMENT S/N: BAE11930					
4. ENGINE IDENTIFICATION				5. EQUIPMENT INSTALLATION SECTION				6. EQUIPMENT REMOVAL SECTION			
MODEL NUMBER	SERIAL NUMBER	DATE	ENGINE TOTAL		EQUIP. TOTAL		DATE	ENGINE TOTAL		EQUIP. TOTAL	
			HOURS	CYCLES	HOURS	CYCLES		HOURS	CYCLES	HOURS	CYCLES
AE3007A1		30 NOV 2000	0	0	0	0					
CAE311642			0	0							

7. MAINTENANCE ACTION RECORD		
DATE	DESCRIPTION OF MAINTENANCE ACTION	ORGANIZATION

ENGINE OPERATIONAL HISTORY

ENGINE MODEL : AE3007A1
 ENGINE SERIAL NUMBER : CAE 311642

DATE	AIRCRAFT	POSITION	INSTALLED	REMOVED	ERT(hrs)	TRT(hrs)
Dec 20, 00	145362	LEFT	Dec 6, 00		02:10	02:10
Dec 27, 00					01:30	03:40
Feb 05, 04				Feb 05, 04	6987	6987
Apr 29, 04		R	Apr 29, 04	Apr 19, 05	9661	9661
June 30, 05	145360	RIGHT	June 30, 05	Aug-23-05	171,66	10082,68
Oct 11, 05	145360	LEFT	Oct 11, 05	July 14, 07	3809,55	13890,18

ERT = ENGINE RUN TIME TRT = TOTAL RUN TIME

CENTRO TECNICO AEROSPAICIAL
 IFII DIVISÃO DE HOMOLOGAÇÃO AERONAUTICA
 INSPECIONADO EM: 26/12/07
 HS TOTAIS: 0210 h
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CLASSO EMAM 26/12/07
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Airworthiness Directives Compliance Record		Rolls-Royce		Approvals: FAA AW5742M - EASA 145-0119 - ANAC: 7507-01/ANAC DGAC Mexico: CO-08907 - DNA: 1-B-77				
DA ANAC	AD FAA	CN DGAC France	SIN	CAE311E42	PIN 23070991	TSNCSN 13890,18/10283	TSOCSO:	Customer: AIR CARAIBES
Rolls-Royce Brasil			Service Bulletin			Subject		
Rua Dr. Concilio Braga, 47 - Pavullo Sítio Bommeço do Campo - São Paulo - Brazil 08180-900 Tel: +55 11 4990 4800 - Fax: +55 11 4341 8071			AE 3007 A-A-72-034			To inspect the accessory gearbox and the mid-span roller bearing to verify that none of the roller in the mid-span roller bearing are missing.		
97-08-05			AE 3007 A-A-73-012			To examine the fuel manifold for existing damage, replace as necessary and install additional brackets and clamps to prevent cracks in the future.		
97-10-06R1			AE 3007 A-A-75-005			Procedure to obtain the in-line, steady state CVG fuel pressure, calculate the CVG actuation force, and determine the replacement interval. The data is collected with the engine running.		
98-01-05			98-142-IMP(8)			To remove the accessory-drive gearbox (230630B0) and install the new accessory (23070087). To remove the pressurizing valve-to-line tee vent tube (23052187) and the accessory gearbox-to-service manifold vent tube (23060257, 23069667), and to install the new valve-to-accessory-drive gearbox vent tube (23065524) and the accessory-drive gearbox-to-service-manifold vent tube (23065523). To do a general visual inspection of the oil tank after the engine has been operated with a MOP of 91.95 PSI.		
98-02-08			98-02-08			Substituted by 98-11-32		
98-02-01R1			98-11-32			To prevent nº 4 bearing failure due to excessive bearing wear, which can result in an inflight engine shutdown.		
						Compliance		
						N/A		
						PCW SB-A-A-73-012		
						N/A		
						PCW SB-A-79-010		
						N/A		
						N/A		

Verified by: *[Signature]* Date: 27.09.2007
 Issue 03 Date July 16/2007
 CREA-304239590
 POC ANAC 105113

Airworthiness Directives Compliance Record		Approvals: FAA: AN51742M - EASA: 145-0119 - ANAC: 7507-01/ANAC DGAC Mexico CO-008/07 - DINA 1-B-77					
Rolls-Royce Brasil		Engine	Model	Manufacturer	Issue n° 18		
Rui Dr. Cincinato Braga, 47 - Planalto São Bernardo do Campo - São Paulo - Brazil 08890-900 Tel. +55 11 4390 4800 - Fax +55 11 4341 8071		AE 3007	A Series	Rolls-Royce Corporation	Date July 26/2007 Page.		
Work order	DA ANIAC	AD FAA	CN DGAC France	Service Bulletin	Subject	Compliance	Approved by
299298	88-12-12	88-12-12	1899-018-IMP(B)	AE 3007 A-72-131	Superseded by 89-03-03.	-----	/
	89-02-51	89-02-51	1899-018-IMP(B)	AE 3007 A-72-131	To prevent in-flight engine shutdown due to loss of engine oil from the starter shaft seal (Maintenance Manual Chapter 72-00-00 Pag.506 Subbank 72-00-00-790-002)	PCW SB-A-A-72-131 SB-A-72-253 AND SB-A-72-321	/
	89-03-03	89-03-03	1899-03-03	AE 3007 A-73-021	To prevent an unintentional or uncommanded in-flight engine shutdown.	N/A	/
	2000-09-05	2000-09-05	2000-285-IMP(B)	2000-11-22	Superseded by AD 2001-25-05.	-----	/
	2000-11-22	2000-11-22	2000-285-IMP(B)	2000-11-22	To prevent critical life-limited rotating engine part failure, which could result in an uncontained engine failure and damage to the airplane. (Engine Manual Chapter 72-21-21 Subtask 72-21-21-200-801)	C/W - Fan Wheel PN 2308167C S/N WD18597 Note Re-inspection of the fan wheel according to Airworthiness Directive 2000-11-22 is required at the first piece part opportunity following the fan wheel accumulating 15 283 cycles.	[Signature]

Verified by: [Signature] Date: 21.09.2007
 Issue: 03 Date: July 16/2007

SECTION 1 PART VI

ENGINE TRANSFER RECORD

1. ENGINE SERIAL NUMBER: CAE311642		2. ENGINE MODEL: AE3007A1				
3. SHIPPING INFORMATION			4. RECEIVING INFORMATION			
DATE	SHIPPED FROM	SHIPPED TO	HOURS CYCLES	REASON FOR TRANSFER	DATE	RECEIVED BY
30 NOV 2000	Rolls-Royce Corporation Indianapolis, IN USA	Embarser, Sao Jose Dos Campos Sao Paulo, Brazil	0 0			
03 Mar 2004	Rolls-Royce Brasil	Air Conanches	6,965:00 4,721	Return to Service		
05 Oct 2004						
23 Jul 2005	Rolls-Royce Brasil	Air Conanches	1208:00 705:0	Repaired - Return to Service		

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 C. AERONAUTICA
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 Proc: 173981
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 CABW

Airworthiness Directives Compliance Record		Rolls-Royce		Approvals: FAA AW5742M - EASA 145-011B - ANAC 7507-01/ANAC DGAC Mexico CO-069/07 - DNA: 1-B-77	
DA ANAC	AD FAA	CN DGAC France	Service Bulletin	Subject	Approved by
2000-13-01	2000-13-01	2000-321-IMP(B)	AE3007 A A-72-105 AE3007 C A-72-105	To prevent an uncontained turbine wheel failure which could result in damage to the airplane.	N/A
2000-18-06	2000-18-06	2000-410-IMP(B)	AE3007 A 73-042 AE3007 C 73-024	To prevent an uncommanded in-flight engine shutdown and the potential for an in-flight dual-engine shutdown. (FADEC replacement).	N/A
2000-09-02 (*)	2000-09-02 (*)	2000-09-02 (*)	AE3007 A 79-028	To remove the old oil pressure sensor (23062818 or 23072992) and install the new oil pressure sensor (23073475).	N/A
2000-09-03 (*)	2001-18-10	2001-18-10	AE3007 A 79-025	To prevent an elevated oil pressure during operations, especially during take-off. Procedures to install the oil tank pressure relief kit and install the oil tank pressurizing valve in a new location are detailed in the service bulletin.	PCW SB-A-79-025
(*) - The DAAs 2000-09-02 and 2000-09-03 are complementary and temporary solutions of the DA 2001-04-03 (Revised to CN 2001-152) that removes the oil pressure sensors PIN23073475 installed in the temporary solution (application of BS 79-028). This temporary solution is only applicable on previous 17 versions of the software EICAS. Apply the final solution (DA 2001-04-03) to the 17 or later versions. SEE NOTE 1 of DA 2001-09-02					
2001-08-15	2001-08-15	2001-08-15	2001-206-IMP(B) R1 2003-324(B)	Superseded by AD 2004-04-05 / N2004-04-05	
2001-17-31	2001-17-31	2001-436-IMP(B)	AE 3007 A A-72-179 AE 3007 C A-72-153	To detect and prevent early development of cracks due to low cycle fatigue of the stage HPT wheel in the left bore face that can lead to wheel failure, power loss, and possible damage to the airplane.	N/A

Work order: 298286 S/N CAE311642 P/N: 23070991 TSNCSN: 13890,18/10283 TSO/CSO N/A Customer: AIR CARAIBES
 Rolls-Royce
 Rue Di. Caetano Braga, 47 - Pinheiro
 São Bernardo do Campo - São Paulo - Brazil
 08890-000
 Tel. +55 11 4358 4800 - Fax: +55 11 4341 8071

Engine: AE 3007
 Model: A Series
 Manufacturer: Rolls-Royce Corporation
 Issue n°: 16
 Date: July 26/2007
 Page:

Verified by: *[Signature]* Date: 21.09.2007
 Issue: 03
 Date: July 16, 2007

Airworthiness Directives Compliance Record		Approvals: FAA AW5742M - EASA 146-0119 - ANAC 7507-01/ANAC DGAC Mexico: CC-00907 - DNA: 1-B-77				
Rolls-Royce Brasil Rua Dr. Cincelato Braga, 47 - Pinheirão São Bernardo do Campo - São Paulo - Brasil 09360-900 Tel.: +55 11 4390-4800 - Fax: +55 11 4241 8071		Rolls-Royce Model: A Series Manufacturer: Rolls-Royce Corporation Issue nº: 16 Date: 4 of 4 July 26/2007 Page				
Work order: 286296 SIN: CAE311842 P/N: 23070861 TSN/CSN: 13890,18/10283 TSO/CSO: N/A Customer: AIR CARAIBES		Engine: AE 3007				
DA ANAC	AD FAA	CN DGAC	Service Bulletin	Subject	Compliance	Approved by
-----	2001-19-03	2001-492-IMP(B)	-----	To prevent HPT 1st to 2nd stage turbine spacer failure, which could result in an uncontained engine failure and damage to the airplane	-----	/
-----	2001-26-06	2002-024-IMP(B) R1	-----	To prevent low cycle fatigue failure of cone shafts, which could result in an uncontained engine failure and damage to the aircraft	-----	/
-----	2003-26-08	N2003-25-08	AE3007 A A-72-285	This AD is prompted by a report that during a scheduled inspection, aft pilot lands on a 1st to 2nd stage turbine spacer, were found bent and cracked. We are issuing this AD to prevent 1st and 2nd stage turbine failure, leading to uncontained turbine failure.	PCW SB-A-72-285	/
-----	2004-04-05	N2004-04-05	AE3007 A 79-034 72-198 72-213 72-246 72-263 72-284	This AD is prompted by design introduced by the manufacturer that reduce the no. 1 bearing load. The actions specified in this AD are intended to prevent the rapid failure of the no. 1 bearing, which could result in smoke in the cabin and an uncommanded in-flight engine shutdown	PCW SB-A-72-199	/

Verified by: *[Signature]* Date: 27 07 2007
 Issue: 03 Date: JUL 16 2007
 Julio Martins
 CREX 5052399390
 COD ANAC 105113

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Comentarinho (Revisão): Com
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 E.L. A1, A12

Rolls Royce Brasil		Approvals: DAC - 7507-01 FAA - AW5742M CAA - 00516 DNA - 1877		Engine: AE 3007	SIN: CAE317642	Customer: AIR CARABES
Aerotec S.A. - PHARO Rua: ... Cidade: ... UF: ...		Manufacturer: Rolls-Royce Corporation		Model: AE 3007A1	PIN: 23070991	Issue no. 12
Aerotec S.A. - PHARO Rua: ... Cidade: ... UF: ...		DNA - 1877		Work Order: 229830	TSNCSN: 5.997.07.4.741	Issue Date: 16/01/2004
Airworthiness Directives Compliance Record - Revision 01						
DA (DAC)	AD (FAA)	Service Bulletin	Subject			Compliance
EB7-08-03		AE 3007 A-A-72-034	To inspect the accessory gear box and the mid-span roller bearing to verify that none of the roller in the mid-span roller bearing are missing			N/A PCW SB 72-035
97-09-05		AE 3007 A-A-73-012	To examine the fuel manifold for existing damage, replace as necessary and install additional brackets and clamps to prevent cracks in the future			PCW
97-10-08R1		AE 3007 A-A-75-005	Procedures to obtain the in-flight, steady state CVG fuel pressure, calculate the CVG suction force, and determine the replacement interval. The data is collected with the engine running.			N/A
98-01-05		AE 3007 A-72-045 A-79-009 AE 3007 A-79-010	To remove the accessory-drive gearbox (20069270, 20069260) and install the new accessory (20070087). To remove the pressure regulator (see part 23070187) and the accessory gearbox to remove restricted vent tube (20069257, 23069267), and to install the new valve-to-accessory-drive gearbox vent tube (23069264) and the accessory drive gearbox-to-service manifold vent tube (23069253). To do a general visual inspection of the oil tank after the engine has been operated with a MOP of 91-65 PSL.			N/A
	98-02-08		Superseded by 98-11-32			
9-02-01R1		AE 3007 A-A-79-014 AE 3007 C-A-79-015	To prevent in-flight bearing failure due to excessive bearing wear, which can result in an in-flight engine shutdown.			N/A PCW SB 72-118
	98-12-12		Superseded by 99-03-03			
	99-02-51	AE 3007 A-72-131	To prevent in-flight engine shutdown due to loss of engine oil from the station shaft seal (Maintenance Manual Chapter 72-00-00 Page 503 (S-0000 72-00-00-180-002)).			
	99-03-03	AE 3007 A-73-021	To prevent an uncommanded or uncommanded in-flight engine shutdown.			PCW SB 72-253 FADECs were not received
N/A = Not Applicable						

Approved by: *[Signature]*
 Fernando Pucciani
 RRB Engineering
 AUG 19, 2004

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Rolls Royce Brasil		Approvals: DAC - 7507-01 FAA - AW87742M CAA - 00516 DNA - 1877		Engine: AE 3007 Manufacturer: Rolls-Royce Corporation Model: AE 3007A1 Work Order: 228030		S/N: CAE311642 PIN: 23070891 TSMCSN: 6.987.014.741 TSOCSO: -----/-----		Customer: AIR CARABES Issue no.: 12 Issue Date: 16/01/2004 Page 2 of 3	
Inworthiness Directives Compliance Record.									
IA (DAC)	AD (FAA)	Service Bulletin	Subject	Compliance					
	2000-08-05	-----	Superseded by 2001-25-05.	-----					
	2000-11-22	-----	To prevent critical life-limited rotating engine part failure, which could result in an uncontained engine failure and damage to the airplane (Engine Manual Chapter 72-21-21 (Subtask 72-21-21-200-501))	Compliance from Volo Per 2306(670) 5th 10/10/04. Repairs to be done in 10 days after engine failure. See engine failure. CSN - 24-91.					
	2000-13-01	AE3007 A-A-72-105 AE3007 C-A-72-105	To prevent an uncontained turbine wheel failure, which could result in damage to the airplane.	N/A					
	2000-18-08	AE3007 A-73-042 AE3007 C-73-024	To prevent an uncommanded in-flight engine shutdown and the potential for an in-flight dual-engine shutdown. (FADEC replacement)	FADECs were not received					
00-09-02	-----	AE 3007 A-79-026	To remove the old oil pressure sensor (2008/16 or 2317/2592) and install the new oil pressure sensor (23073473).	N/A PCW SD in case					
00-09-03	2001-16-10	AE 3007 A-79-025	To prevent an overload of pressure during operations, especially during take-off. Procedures to install the oil tank pressure relief kit and install the oil tank pressurizing valve in a new location are detailed in the service bulletin.	PCW					
	2001-08-15	AE 3007 A-A-79-027	To detect the rapid failure of the no.01 bearing, which could result in engine in the cabin and an uncommanded in flight engine shutdown.	Not comply with. Compliance with the 1644. For the 162005 AD / SB					
	2001-17-31	AE 3007 A-A-72-179 AE 3007 C-A-72-153	To detect and prevent early development of cracks due to low cycle fatigue of the stage HPPT wheel in the aft bore face that can lead to wheel failure, power loss, and possible damage to the airplane.	N/A 2nd Stage HPPT Wheel Part 2307/2045 GPO 16/01/03 TSN - 05N - 020					
	2001-19-03	-----	To prevent HPPT 1" to 2" stage turbine spacer failure, which could result in an uncontained engine failure and damage to the airplane.	N/A					

Approved By: Fernando Pucciani AUG 19, 2004

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 pleter com o modelo do motor.
 Ex: A1, A11, A12

Rolls Royce Brasil		Approvals:		Engine: AE 3007		Customer: AIR CARAIRES	
Aviação Brasileira - São Paulo Rua Santa Catarina, 111 - São Paulo CEP: 04031-000 Fone: (11) 5091-1000		DAC - 7507-01 FAA - AHSY 742M CAA - ODS18 OMA - 1877		Manufacturer: Rolls-Royce Corporation Model: AE 3007A1 Work Order: 228630		SIN: CAE311642 PIN: 23070991 TSN/CSN: 6.987.0 / 4.741 TSN/CSO: / /	
IA (DAC)	AD (FAA)	Service Bulletin	Subject	Compliance			
	2001-25-05		To prevent low cycle fatigue failure of core shafts, which could result in an uncontained engine failure and damage to the aircraft.	Complied With Installed a Frame Repair Core Shaft PIN 23070991 SN 1274378 TSN = CSN = 0			
	2003-25-08	AE 3007 A-A72-265	The AD is prompted by a report that during a scheduled inspection, all pilot lugs on a 1" to 2" stage turbine spacer were found bent and cracked. We are issuing this AD to prevent 1" and 2" stage turbine failure, leading to uncontained turbine failure.	CW SB A72-265 Replaced the HP1 Spacer installed PIN 23076778 SN TV9510004 TSN x CSN = 0			

IA - Not Applicable

Approved by: Fernando Puccini
 RRB Engineering
 AUG 19, 2004

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Rolls Royce Brasil		Approvals:		Engine: AE 3007		SN: CAE311642		Customer: AIR CARAIBES	
Rua Dr. Ciciliano Braga, 47 - Piumbeiro Bairro: Santa Cruz - São Paulo Cidade: São Paulo - SP CEP: 05695-000 Tel: +55 11 4942-1000 Fax: +55 11 4942-1001		DAC - 7507-01 FAA - AW5742M CAA - 00516 DNA - 1B77		Manufacturer: Rolls-Royce Corporation Model: AE 3007A1 Work Order: 229830		PIN: 23070691 TSN/CSN: 6,987,014,741 TSOXCSO: <i>[blank]</i>		Issue no.: 12 Issue Date: 16/01/2004 Page: 1 of 3	
DA (DAC)	AD (FAA)	Service Bulletin	Subject	Compliance					
E97-09-03	-----	AE 3007 A-A-72-034	To inspect the accessory gearbox and the mid-span roller bearing to verify that none of the roller in the mid-span roller bearing are missing	N/A PCW SB 72-035					
97-09-05	-----	AE 3007 A-A-73-012	To examine the fuel manifold for existing damage, replace as necessary and install additional brackets and clamps to prevent cracks in the future.	PCW					
97-10-08R1	-----	AE 3007 A-A-75-005	Procedure to obtain the in-line, steady state CVG fuel pressure, calculate the CVG actuation force, and determine the replacement interval. The data is collected with the engine running	N/A					
98-01-05	-----	AE 3007 A-72-045 AE 3007 A-79-008 AE 3007 A-79-010	To remove the accessory-drive gearbox (23069270, 23063050) and install the new accessory (23070087). To remove the producing valve; the fuel vent tube (23062187) and the accessory gearbox-service manifold vent tube (23066257, 23069507), and to install the new valve-to-accessory-drive gearbox vent tube (23065524) and the accessory-drive gearbox-to-service-manifold vent tube (23065523). To do a general visual inspection of the oil tank after the engine has been operate with a MOP of 91-85 PSI	N/A					
-----	98-02-09	-----	Superseded by 98-11-32	-----					
98-02-01R1	98-11-32	AE 3007 A-A-79-014 AE 3007 C-A-79-018	To prevent n° 4 bearing failure due to excessive bearing wear, which can result in an in-flight engine shutdown	N/A PCW SB 72-118					
-----	98-12-12	-----	Superseded by 98-03-03	-----					
-----	99-02-51	AE 3007 A-72-131	To prevent in-flight engine shutdown due to loss of engine oil from the starter shaft seal. (Maintenance Manual Chapter 72-00-00 Page 505 (Subtask 72-00-00-790-002)).	PCW SB 72-253					
-----	99-03-03	AE 3007 A-73-021	To prevent an unintentional or uncommanded in-flight engine shutdown	FADECS were not received					

*N/A = Not Applicable

Approved by:

Mar 07, 2004

[Signature]
Fernando Puccioni
RRB Engineering

Rolls Royce Brasil		Approvals: DAC - 7507-01 FAA - AW5Y742IM CAA - 00516 DNA - 1B77		Engine: AE 3007 Manufacturer: Rolls-Royce Corporation Model: AE 3007A1 Work Order: 229630		Customer: AIR CARAIRES Issue no.: 12 Issue Date: 18/01/2004 Page 2 of 3	
DA (DAC)	AD (FAA)	Service Bulletin	Subject	Compliance			
	2000-09-05	Superseded by 2001-25-05.					
	2000-11-22		To prevent critical life-limited rotating engine part failure, which could result in an uncontained engine failure and damage to the airplane (Engine Manual Chapter 72-21-21 (Subtask 72-21-21-210-801))		Compliance with FAA Whirl Part 206 (70 See Appendix B Items to be done with Engine COW = 8.741		
	2000-13-01	AE3007 A-A-72-105 AE3007 C-A-72-105	To prevent an uncontained turbine wheel failure, which could result in damage to the airplane.	N/A			
	2000-18-06	AE3007 A-73-042 AE3007 C-73-024	To prevent an uncommanded in-flight engine shutdown and the potential for an in-flight dual engine shutdown. (FADEC replacement)	FADEC5 were not received			
2000-09-02		AE 3007 A-7B-026	To remove the old oil pressure sensor (23002818 or 23072862) and install the new oil pressure sensor (23073475)	N/A PCW SB 79-029			
2000-09-03	2001-18-10	AE 3007 A-7B-025	To prevent an elevated oil pressure during operations, especially during take-off. Procedures to install the oil tank pressure relief kit and install the oil tank pressurizing valve in a new location are depicted in the service bulletin.	PCW			
	2001-08-15	AE 3007 A-A-79-027	To detect the rapid failure of the no.01 bearing, which could result in a smother in the cabin and an uncommanded in flight engine shutdown.	Not complied with Compliance in the field per the subject AD TSB			
	2001-17-31	AE 3007 A-A-72-179 AE 3007 C-A-72-133	To detect and prevent early development of cracks due to low cycle fatigue of the stage HPT wheel in the aft bore face that can lead to wheel failure, power loss, and possible damage to the airplane	N/A 2nd Stage HPT Wheel Part 206/5345 SN 1445/4916 TSN = CBN = 000			
	2001-18-03		To prevent HPT 1 to 2nd stage turbine spacer failure, which could result in an uncontained engine failure and damage to the airplane	N/A			

*N/A = Not Applicable.

Approved by:

[Signature]
 Fernando Puccioni
 RRB Engineering

Mar 07, 2004

Rolls Royce Brasil
 Rua Dr. Cristiano Baggio, 47 - Pequeno Brás - São Paulo - SP - 05065-800
 Tel: +55 11 4301-800 Fax: +55 11 4301-801

Approvals: DAC - 7507-01
 FAA - AM5Y742M
 CAA - 00516
 DINA - 1877

Engine: AE 3007
Manufacturer: Rolls-Royce Corporation
Model: AE 3007A1
Work Order: 229630

S/N: CAE311642
P/N: 23070991
TSN/CSN: 6 987 0 / 4,741
TSO/CSO: ----- / -----

Customer: AIR CARABEES
Issue no.: 12
Issue Date: 16/01/2004
Page: 3 of 3

Airworthiness Directives Compliance Record.

DA (DAC)	AD (FAA)	Service Bulletin	Subject	Compliance
	2001-25-05	-----	To prevent low cycle fatigue failure of cone shafts, which could result in an uncontrolled engine failure and damage to the aircraft.	Not complied with
	2003-25-08	AE 3007 A-A-72-283	This AD is prompted by a report that during a scheduled inspection, sag pilot lags on s. 1 st to 2 nd stage turbine spool were found bent and cracked. We are issuing this AD to prevent 1 st and 2 nd stage turbine failure, leading to uncontained turbine failure.	CW SB A-72-283 Replaced the 1 st Stage Inlet Spool indicated P/N 23076778 S/N TWS10004 TSN = CSN = 0

*N/A = Not Applicable.

Approved by: Fernando Puccioni Mar 07, 2004
 RRB Engineering

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AE 3007A Series Airworthiness Directives

AD Number / Effective Date	Reason	Action	Status	Applicable Service Bulletin(s)
Priority letter AD 98-02-09 16 January 1998 Superseded by AD 98-11-32 18 June 1998	Prevent in-flight shutdowns due to number 4 bearing failures	Required frequent inspections of engine magnetic chip collectors on engines with a certain bearing part number.	All of the subject bearings have been removed from the fleet.	AE 3007A-72-048 Superseded by SB AE 3007A-72-118 Or AE 3007A-72-055
AD 98-12-12 (AE 3007A) 24 June 1998 Superseded by AD 99-03-03 (AE 3007A and AE 3007A11) 16 February 1999	Prevent in-flight shutdowns due to inadequate control system fault accommodation logic	Reprogram the FADECs with software version V1.2. Reprogram the FADECs with software version V1.6A	All engines comply.	AE 3007A-A-73-014 Superseded by SB AE 3007A-73-021 Superseded by SB AE 3007A-73-025
Telegraphic AD T99-02-51 8 January 1999 Superseded by AD 99-02-51 20 April 1999	Prevent in-flight shutdowns due to loss of oil from starter pad magnetic carbon seal	None if oil temperature is above 32°F. If oil temperature is below 32°F, run the engine at high power and monitor the engine oil level prior to takeoff.	Alternative means of compliance is to cap the starter pad drain.	AE 3007A-A-72-131
AD Published in the Federal Register on July 3, 2000, AD 2000-13-01 NPRM (Proposed AD) Docket No. 99-NE-15-AD Published in the Federal Register 8/5/99	Turbine wheels with potential tungsten inclusions or adverse surface condition	Remove certain turbine wheels before exceeding new, reduced cyclic life limits.		AE 3007A-A-72-105
AD Published in the Federal Register on June 2, 2000, AD 2000-11-22 NPRM (Proposed AD) Docket No. 98-NE-07-AD Published in the Federal Register 8/17/99	FAA initiative for enhanced inspection of selected critical life-limited parts.	Add enhanced inspection requirement to Maintenance Manual Airworthiness Section. AD would also require an air carrier's approved continuous airworthiness program to incorporate these inspection procedures.	MM revisions complete.	Not Applicable

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AE 3007A Series Airworthiness Directives



AD Number / Effective Date	Reason	Action	Status	Applicable Service Bulletin(s)
AD Published in the Federal Register on May 8, 2000, AD 2000-08-05 NPRM (Proposed AD) Docket No. 99-NE-46-AD Published in the Federal Register 10/12/99	Reduced compressor cone shaft life limits	Remove P/Ns 23050728 & 23070729 compressor cone shafts before exceeding new, reduced cyclic life limits		AE 3007A-A-72-152
AD Published in the Federal Register on September 7, 2000, AD 2000-18-06	Prevent in-flight shutdowns due to failure of FADIEC TR-1 transistor	Ensure that all effected aircraft have no more than one effected engine before the next flight Remove and repair all effected FADECs prior to 22 December, 2000		AE 3007A-A-73-041

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Rolls-Royce

Service Bulletin Compliance

Engine Model: 3007A1

Engine Serial Number: CAE 311642

Ship Date: 30-Nov-00

Module: Engine

Module Serial Number: CAE311642

SB Number	Title	Date	Incorporated	Status
AE 3007A-72-005	Engine - New Forward Ground-Handling Bracket	12-Mar-97	Incorporated	Published
AE 3007A-72-023	Engine - Chem-Milled Diffuser	14-Aug-97	Incorporated	Published
AE 3007A-72-024	Superceded by AE 3007A-72-104	22-Jun-98	Incorporated	Superceded
AE 3007A-72-030	Engine - Rework the Compressor-to-Turbine Shaft	12-Sep-97	Incorporated	Published
AE 3007A-72-031	Engine - New Compressor to Turbine Shell and Liner with Locking Spiral Retaining Ring	17-Mar-98	Incorporated	Published
AE 3007A-72-035	Engine - Mid-Span Roller Bearing	27-Jan-98	Incorporated	Published
AE 3007A-72-037	Superceded by AE 3007A-72-052 & AE 3007A-72-064	01-May-98	Incorporated	Superceded
AE 3007A-72-052	Superceded by AE 3007A-72-182	15-Apr-98	Incorporated	Superceded
AE 3007A-72-064	Engine - No. 6 Carbon Seal Assembly with Steel Sleeve	15-Apr-98	Incorporated	Published
AE 3007A-72-066	Engine - New No. 4 Teflon Lip Seal	03-Aug-98	Incorporated	Published
AE 3007A-72-104	Engine - New Upper and Lower Rear Turbine Bearing Support Heat Shields	21-Sep-98	Incorporated	Published
AE 3007A-72-109	Engine - New No. 4 Teflon Lip Seal (23070367)	29-Oct-99	Incorporated	Published
AE 3007A-72-118	Engine - Split - Inner-Race Ball Bearing - New Bearing (23061084 or 23071692)	03-Dec-98	Incorporated	Published
AE 3007A-72-143	Engine - Front Frame Assembly - Rework	06-Aug-99	Incorporated	Published
AE 3007A-72-156	Engine - New Fan Teflon Lip Seal (23072308)	04-Apr-00	Incorporated	Published
AE 3007A-72-161	Engine - New Front Sump Housing Assembly and No. 4 Carbon Seal Baffle		Incorporated	Not Published
AE 3007A-72-162	Engine - New Rear Turbine Bearing Support (23071169)	25-Sep-00	Incorporated	Published
AE 3007A-72-167	Engine - New Fan Spinner Assembly (23070964)	12-Apr-00	Incorporated	Published
AE 3007A-72-178	Engine - Reset the Inlet Guide Vanes	27-Jun-00	Incorporated	Published

The intent of the above Service Bulletins are incorporated into Engine Serial Number CAE 311642 as of 30-Nov-00

Form printed on Thursday, November 30, 2000

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Rolls-Royce

Service Bulletin Compliance

Ship Date: 30-Nov-00

Engine Serial Number: CAE 311642

Engine Model: 3007A1

Module Serial Number: CAE311642

Module: Engine

SB Number	Title	Date	Incorporated	Status
AE 3007A-72-180	Engine - New Right hand and Left Hand Service Manifolds		Incorporated	Not Published
AE 3007A-72-183	Engine - External Hardware and Clamping Changes		Incorporated	Not Published
AE 3007A-72-188	Engine - Remove the Cruciform Bolts from the Fan-Bearing Support Housing	31-Aug-00	Incorporated	Published
AE 3007A-72-190	Engine - New Start Bleed Valve Bracket (23073820)	27-Oct-00	Incorporated	Published
AE 3007A-72-193	Engine - Replace the Identification Plates		Incorporated	Not Published
AE 3007A-72-199	Engine - New HP-to-LP Turbine Seal Assembly (23073953)	27-Oct-00	Incorporated	Published
AE 3007A-73-005	Engine Fuel and Control - Fuel Tube and FADEC A Hardness Clamping	14-Mar-97	Incorporated	Published
AE 3007A-73-012	Engine Fuel and Control - Examine the Fuel Manifold and Install Additional Clamps	18-Apr-97	Incorporated	Published
AE 3007A-73-017	Superseded by AE 3007A-73-021	27-Apr-98	Incorporated	Superseded
AE 3007A-73-022	Engine Fuel and Control - New FADEC with Version II.6	01-Dec-98	Incorporated	Published
AE 3007A-73-028	Engine Fuel and Control - New FADEC with Software Version IV.2 for the AE 3007A1 Engine	13-Aug-99	Incorporated	Published
AE 3007A-75-012	Air - New CVG Torquetube		Incorporated	Not Published
AE 3007A-75-013	Air - New Compressor Variable Vane Torquetube System Assembly Hardware		Incorporated	Not Published
AE 3007A-75-015	Air - New Torquetube Assembly (23071270)		Incorporated	Not Published
AE 3007A-75-018	Air - New Compressor Air Bleed Valve (6809125)		Incorporated	Not Published
AE 3007A-77-005	Superseded by AE 3007A-75-006	16-Jun-98	Incorporated	Superseded
AE 3007A-79-006	Oil - Rework the Fuel-Cooled Oil Cooler (FCOC)	14-Aug-97	Incorporated	Published
AE 3007A-79-007	Oil - Rework the Oil-Filter Unit	09-Jun-98	Incorporated	Published

The intent of the above Service Bulletins are incorporated into Engine Serial Number CAE 311642 as of 30-Nov-00
 Form printed on Thursday, November 30, 2000

SECTION 2 PART I **23077013** **MODULE SERVICE RECORD**

1. MODULE NAME: ACCY DRIVE GEARBOX		2. MODULE P/N: 23072174				3. MODULE SN: 1237					
4. ENGINE IDENTIFICATION		5. MODULE INSTALLATION SECTION				6. MODULE REMOVAL SECTION				REASON FOR REMOVAL	
		ENGINE TOTAL HOURS CYCLES	DATE	MODULE TOTAL HOURS CYCLES	ENGINE TOTAL HOURS CYCLES	DATE	MODULE TOTAL HOURS CYCLES	ENGINE TOTAL HOURS CYCLES			
ENGINE MODEL NUMBER											
ENGINE SERIAL NUMBER											
	AE3007A1	0	0	0	30 NOV 2000	0	0				
	CAE311642	0	0	0							
7. REMARKS											

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SECTION 2 PART II

MODULE ASSEMBLY RECORD

23077013

1. MODULE NAME: ACCY DRIVE GEARBOX		2. MODULE P/N: 23072474		3. MODULE S/N: 1237	
4. ASSEMBLY IDENTIFICATION		5. MAINTENANCE ACTIVITY		6. MAINTENANCE ACTIVITY	
ASSEMBLY NAME	PART NUMBER SERIAL NUMBER	ASSEMBLY NAME	PART NUMBER SERIAL NUMBER	INSTALL DATE	REMOVE DATE
				INSTALL DATE	REMOVE DATE

6. REMARKS

GT-10034



SECTION 2 PART III

MODULE MODIFICATION RECORD

1. MODULE NAME: Accessory Drive Gearbox		2. MODULE P/N: 23078390		3. MODULE S/N: 1237	
4. MODIFICATION INFORMATION					
BULLETIN OR DIRECTIVE NUMBER	ISSUE/REVISION DATE	SUBJECT OF BULLETIN OR DIRECTIVE	TYPE	INTERVAL ACCOMPLISHED	NEXT DUE
AE3007A-72-266	REVISION 2 Jun 13, 2006	ENGINE - NEW RADIAL DRIVE QUILL SHAFT (2307207)	ONE-TIME	N/A Sep 27, 2007	N/A
AE3007A-72-321	REVISION 1 Nov 07, 2005	ENGINE - ACCESSORY DRIVE GEARBOX ASSEMBLY - NEW STARTER SHAFT SEAL FOUND EMBEDDED	ONE-TIME	N/A Sep 27, 2007	N/A
AE3007A-74-005	REVISION 2 Mar 12, 2007	IGNITION - PERMANENT MAGNET ALTERNATOR ROTOR AND STATOR INSPECTION	ONE-TIME	N/A Sep 27, 2007	N/A

5. COMPLIANCE TIME		6. SIGNATURE ENTRY and COMPANY	
INTERVAL ACCOMPLISHED	NEXT DUE	AUTHORIZED SIGNATURE	ORGANIZATION
N/A Sep 27, 2007	N/A	<i>[Signature]</i> EASA 145.0119 COO ANAC 105.13	ROLLS-ROYCE BRASIL
N/A Sep 27, 2007	N/A	<i>[Signature]</i> EASA 145.0119 Julio Martins CEO ANAC 5062399990	ROLLS-ROYCE BRASIL
N/A Sep 27, 2007	N/A	<i>[Signature]</i> EASA 145.0119	ROLLS-ROYCE BRASIL

Issue: 03 Date: Jun 01/2007

W.O.# 299286

ESN: CAE311642

Page: 1/1



SECTION 2 PART III MODULE MODIFICATION RECORD

1. MODULE NAME: ACCY DRIVE GEARBOX		2. MODULE PIN: 23077013		3. MODULE SN: 1237	
4. MODIFICATION INFORMATION					
BULLETIN OR DIRECTIVE NUMBER	ISSUE/REVISION DATE	SUBJECT OF BULLETIN OR DIRECTIVE	TYPE	INTERVAL	NEXT DUE
SB AE3007A-72-277	ORIGINAL JULY 30, 2003	ENGINE - RADIAL QUILL SHAFT SCREENING (23056789)	DIRECTIVE RECURRING	N/A 07 MAR 2004	N/A
SB AE3007A-72-278	ORIGINAL JUNE 03 2003	ENGINE - ACCESSORY DRIVE GEARBOX ASSEMBLY - NEW PLAN/DRIVE GEAR	DIRECTIVE RECURRING	N/A 07 MAR 2004	N/A
SB AE3007A-74-005	ORIGINAL APRIL 15, 2002	IGNITION - PERMANENT MAGNET ALTERNATOR ROTOR AND STATOR INSPECTION	DIRECTIVE RECURRING	N/A 07 MAR 2004	N/A
SB AE3007A-74-087	REVISION 01 DECEMBER 16, 2002	IGNITION - PERMANENT MAGNET ALTERNATOR ROTOR INSPECTION	DIRECTIVE RECURRING	N/A 07 MAR 2004	N/A
			ONE-TIME RECURRING		
			ONE-TIME RECURRING		
			ONE-TIME RECURRING		
			ONE-TIME RECURRING		
			ONE-TIME RECURRING		
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			ONE-TIME RECURRING		
			ONE-TIME RECURRING		

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SECTION 2 PART III *237703* **MODULE MODIFICATION RECORD**

1. MODULE NAME: ACCY DRIVE GEARBOX			2. MODULE PN: 20072474		3. MODULE SIN: 1237		
4. MODIFICATION INFORMATION				5. COMPLIANCE TIME		6. SIGNATURE ENTRY and COMPANY	
BULLETIN OR DIRECTIVE NUMBER	ISSUE/REVISION DATE	SUBJECT OF BULLETIN OR DIRECTIVE	TYPE	INTERVAL	NEXT DUE	AUTHORIZED SIGNATURE	ORGANIZATION
			ONE-TIME				
			RECURRING				
			ONE-TIME				
			RECURRING				
			ONE-TIME				
			RECURRING				
			ONE-TIME				
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			RECURRING				

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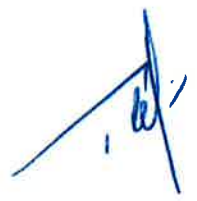
SECTION 2 PART IV MODULE INSPECTION RECORD

1. MODULE NAME: **ACCY DRIVE GEARBOX** 2. MODULE PIN: **23072474** 3. MODULE SIN: **1237**

4. INSPECTION INFORMATION			5. COMPLIANCE TIME				6. SIGNATURE ENTRY and COMPANY	
INSPECTION NUMBER	INSPECTION DESCRIPTION	REFERENCE DOCUMENT	MODULE	INTERVAL	NEXT DUE	DATE	AUTHORIZED SIGNATURE	ORGANIZATION


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SECTION 2 PART V

MODULE MAINTENANCE RECORD


1. MODULE NAME: Accessory Drive Gearbox		2. MODULE PIN: 23079390		3. MODULE SN: 1237	
4. COMPLIANCE INFORMATION					
DATE	DESCRIPTION OF MAINTENANCE ACTION	REFERENCE DOCUMENT	HOURS CYCLES	AUTHORIZED SIGNATURE CERTIFICATION TYPE & NUMBER	ORGANIZATION
Sep 27, 2007	A level 01 workscope was carried out following the EMP directions and IAW the EM C5F3 (010 Revision 2). Jailed July 20, 2007.	RRB W.O. # 292296	13480.16 10283	 CREA 5042399290 COD ANAC 105113 EASA 145.0119	ROLLS-ROYCE BRASIL

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SECTION 2 PART V **23077013** **MODULE MAINTENANCE RECORD**

1. MODULE NAME: ACCY DRIVE GEARBOX 2. MODULE PIN: 23072174 3. MODULE S/N: 1237

4. COMPLIANCE INFORMATION					5. SIGNATURE ENTRY and COMPANY		
DATE	DESCRIPTION OF MAINTENANCE ACTION	REFERENCE DOCUMENT	HOURS CYCLES	AUTHORIZED SIGNATURE CERTIFICATION TYPE & NUMBER	ORGANIZATION		
02 Nov 2004	A level 02 workshop was carried out on per the EMP recommendations.	RBB W U. # 289G30	6,965.00 A.784	 CABW 100516	Bells Bayce Bros		

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Service Bulletin Compliance

Engine Model: 3007A1 Engine Serial Number: CAE 311642 Ship Date: 30-Nov-00

Module: Accessory Gearbox Module Serial Number: 1237

SB Number	Title	Date	Incorporated	Status
AE 3007A-72-027	Engine - Replace the Shroud in the Accessory Drive Gearbox	12-Feb-98	Incorporated	Published
AE 3007A-72-072	Engine - Accessory Drive Gearbox - Starter Shaft Spacer	17-Jun-98	Incorporated	Published
AE 3007A-72-115	Engine - Accessory Drive Gearbox - New Mounting Stud Washers	19-Jul-98	Incorporated	Published
AE 3007A-72-141	Engine - Accessory Drive Gearbox Assembly - New Wavespring and Spacer	08-Jun-99	Incorporated	Published
AE 3007A-72-191	Engine - Accessory Gearbox - Install the Drain Plug		Incorporated	Not Published
AE 3007A-79-010	Oil - New Vent System Tubes (23065523 and 23065524)	01-Dec-97	Incorporated	Published
AE 3007A-79-021	Oil - New Camter Sump Vent Tubes	26-Jul-99	Incorporated	Published

The intent of the above Service Bulletins are incorporated into Engine Serial Number CAE 311642 as of 30-Nov-00
Form printed on Thursday, November 30, 2000





RRB - AE 3007A Series Airworthiness Directives

ASSEMBLY NAME: Accessory Drive Gearbox ASSEMBLY P/N: 23079390 ASSEMBLY S/N: 1237

AD Number	Subject	Compliance	Approved by:
98-02-51	To prevent in-flight engine shutdown due to loss of engine oil from the starter shaft seal. (Maintenance Manual Chapter 72-00-00 Pag.505 (Subtask 72-00-00-790-002))	PCW SB-A-A-72-131, SB-A-72-253 AND SB-A-72-321	N/A

Note: Reference to Airworthiness Directives Compliance Record, Issue N. 16, dated Sep 27, 2007 issued for CAE311642.

Revised by: *[Signature]*
 CREA 052399590
 C00 ANAG 105113
 ROLLS-ROYCE BRASIL - Sep 27, 2007

SECTION 3 PART I ASSEMBLY SERVICE RECORD

1. ASSEMBLY NAME: FAN ROTOR			2. ASSEMBLY PIN: 23063061		3. ASSEMBLY S/N: WD18597	
4. MODULE IDENTIFICATION			5. ASSEMBLY INSTALLATION SECTION		6. ASSEMBLY REMOVAL SECTION	
NAME: ENGINE	PART NUMBER	DATE	MODULE TOTAL HOURS CYCLES	ASSEMBLY TOTAL HOURS CYCLES	MODULE TOTAL HOURS CYCLES	ASSEMBLY TOTAL HOURS CYCLES
	SERIAL NUMBER					REASON FOR REMOVAL
	AE3007A1	30 NOV 2000	0 0	0 0		
	CAE311642					
7. REMARKS						

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SECTION 3 PART II

LIFE LIMITED PARTS RECORD

2. PART NAME: FAN WHEEL				3. PART NUMBER: 23061670				4. SERIAL NUMBER: WD18597			
5. ASSEMBLY IDENTIFICATION		6. PART INSTALLATION SECTION		7. PART REMOVAL SECTION		PART TOTAL		PART TOTAL		PART TOTAL	
NAME: FAN ROTOR	PART NUMBER	DATE	HOURS	CYCLES	HOURS	CYCLES	DATE	HOURS	CYCLES	HOURS	CYCLES
	23063061	30 NOV 2000	0	0							
	WD18587		0	0							
8. REMARKS											

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SECTION 3 PART II

LIFE LIMITED PARTS RECORD

This record to remain with part listed.												
2. PART NAME: FAN BLADE FWD RETAINER		3. PART NUMBER: 23062491		4. SERIAL NUMBER: HK18963								
5. ASSEMBLY IDENTIFICATION						5. PART INSTALLATION SECTION			7. PART REMOVAL SECTION			
NAME: FAN ROTOR						ASSY TOTAL	HOURS	CYCLES	ASSY TOTAL	HOURS	CYCLES	PART TOTAL
PART NUMBER												
SERIAL NUMBER												
23063061							0	0				
WD-18567							0	0				
8. REMARKS												

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SECTION 3 PART II **LIFE LIMITED PARTS RECORD**


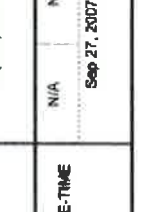

2. PART NAME: FAN DRIVE SHAFT		3. PART NUMBER: 23068320				4. SERIAL NUMBER: GV12817			
This record to remain with part listed.									
5. ASSEMBLY IDENTIFICATION									
NAME: FAN ROTOR									
PART NUMBER									
SERIAL NUMBER									
		6. PART INSTALLATION SECTION		7. PART REMOVAL SECTION		PART TOTAL		PART TOTAL	
		DATE	HOURS	CYCLES	DATE	HOURS	CYCLES	HOURS	CYCLES
23063061		1 MAY 1998	0	0	31 Jul 2000	3799.4	3799.4	3799.4	3799.4
WY15681			0	0	2000	2891	2891	2891	2891
R3263061		27 Aug 2000	0	0	20 Jul 2007	15400.05	15400.05	15400.05	15400.05
WD18453		2000	0	0	2007	11812	11812	11812	11812
23063061		20 Jul 2007	12148.15	15255.45	20 Sep 2007	12148.15	15255.45	12148.15	15255.45
WD18716		2007	5480	14703	2007	9480	9480	9480	9480
23063061		26 SEP 2007	13890.18	14259.45					
WD18594		2007	10783	14703					
8. REMARKS 27 Aug 2000 Removed + Re-installed. Part: 319 Part of Part used at 12879. Re-installed. Replaced. 1 Nov 2007									

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SECTION 3 PART III ASSEMBLY MODIFICATION RECORD

1. ASSEMBLY NAME: Fan Rotor		2. ASSEMBLY P/N: 23063081		3. ASSEMBLY S/N: WD18697		
4. MODIFICATION INFORMATION			5. COMPLIANCE TIME			
BULLETIN OR DIRECTIVE NUMBER	ISSUE/REVISION DATE	SUBJECT OF BULLETIN OR DIRECTIVE	TYPE	INTERVAL ACCOMPLISHED	NEXT DUE	6. SIGNATURE ENTRY and COMPANY
AE3007A-72-300	ORIGINAL Apr 28, 2004	ENGINE - INSPECTION OF THE FAN - BLADE FORWARD RETAINER ASSEMBLY (23062491)	ONE-TIME	N/A Sep 27, 2007	N/A	<i>[Signature]</i> EASA - 145.0119 COD ANAC 105113 CREA 5062399590 Julio Martins
AE3007A-72-302	ORIGINAL Mar 15, 2004	ENGINE - NEW O-RING (H83-851-047) FOR THE NO 3 BEARING DAMPER	ONE-TIME	N/A Sep 27, 2007	N/A	<i>[Signature]</i> EASA - 145.0119 COD ANAC 105113 CREA 5062399590 Julio Martins
AE3007A-72-303	REVISION 1 Feb 14, 2005	ENGINE - NEW FAN (NO.01 BEARING OIL NOZZLE (23076868))	ONE-TIME	N/A Sep 27, 2007	N/A	<i>[Signature]</i> EASA - 145.0119 COD ANAC 105113 CREA 5062399590 Julio Martins
AE3007A-72-304	ORIGINAL Sep 20, 2005	ENGINE - NEW FAN SPINNER ASSEMBLY (23075763) - REWORK	ONE-TIME	N/A Sep 27, 2007	N/A	<i>[Signature]</i> EASA - 145.0119 COD ANAC 105113 CREA 5062399590 Julio Martins
AE3007A-72-281	REVISION 1 May 23, 2005	ENGINE - INSPECTION OF THE FRONT SUMP	ONE-TIME	N/A Sep 27, 2007	N/A	<i>[Signature]</i> EASA - 145.0119 COD ANAC 105113 CREA 5062399590 Julio Martins
AE3007A-72-289	REVISION 1 Jul 19, 2004	ENGINE - REWORK THE FRONT FRAME ASSEMBLY AND ISNTALL THE NEW SINGLE FORWARD GROUND HANDLING BRACKET.	ONE-TIME	N/A Sep 27, 2007	N/A	<i>[Signature]</i> EASA - 145.0119 COD ANAC 105113 CREA 5062399590 Julio Martins
AE3007A-72-331	REVISION 1 Nov 20, 2005	ENGINE - NEW FAN BEARING SUPPORT HOUSING ASSEMBLY (23081657) AND LINER (23090768)	ONE-TIME	N/A Sep 27, 2007	N/A	<i>[Signature]</i> EASA - 145.0119 COD ANAC 105113 CREA 5062399590 Julio Martins

SECTION 3 PART III ASSEMBLY MODIFICATION RECORD

1. ASSEMBLY NAME: Fan Rotor		2. ASSEMBLY P/N: 23063061		3. ASSEMBLY S/N: WD18997				
4. MODIFICATION INFORMATION			5. COMPLIANCE TIME			6. SIGNATURE ENTRY AND COMPANY		
BULLETIN OR DIRECTIVE NUMBER	ISSUE/REVISION DATE	SUBJECT OF BULLETIN OR DIRECTIVE	TYPE	INTERVAL ACCOMPLISHED	NEXT DUE	AUTHORIZED SIGNATURE	CERTIFICATION TYPE/A NUMBER	ORGANIZATION
AE3007A-72-338	REVISION 1 Nov 17, 2008	ENGINE - INSPECTION OF THE FAN SPINNER ASSEMBLY	ONE-TIME	N/A	N/A		EASA 145.0119	ROLLS-ROYCE BRASIL
AE3007A-72-339	ORIGINAL Aug 07, 2006	ENGINE - BEVEL PINION GERSHAFT - REWORK	ONE-TIME	N/A	N/A		EASA 145.0119	ROLLS-ROYCE BRASIL
AE3007A-72-348	ORIGINAL Apr 05, 2007	ENGINE- FRONT BUMP BEVEL GEAR RETAINING RING INSPECTION.	ONE-TIME	N/A	N/A		EASA 145.0119	ROLLS-ROYCE BRASIL



SECTION 3 PART III ASSEMBLY MODIFICATION RECORD

1. ASSEMBLY NAME: FAN ROTOR		2. ASSEMBLY PIN: 23063061		3. ASSEMBLY SN: WD18587	
4. MODIFICATION INFORMATION					
BULLETIN OR DIRECTIVE NUMBER	ISSUE/REVISION DATE	SUBJECT OF BULLETIN OR DIRECTIVE	TYPE	5. COMPLIANCE TIME INTERVAL ACCOMPLISHED	6. SIGNATURE ENTRY and COMPANY
SE-AE3007A-72-203	REVISION 01 MAY 12, 2003	ENGINE - NEW PAN (NO. 01) BEARING SUPPORT HOUSINGS (23074279)	PREVENTIVE RECURRING	N/A 07 MAR 2004	[Signature] CAA 00516 ROLLS-ROYCE BRASIL
SB-AE3007A-72-287	REVISION 02 MAY 01, 2002	ENGINE - NEW FAN CARBON SEAL RETAINING RING	PREVENTIVE RECURRING	N/A 07 MAR 2004	[Signature] CAA 00516 ROLLS-ROYCE BRASIL
SD-AE3007A-72-247	REVISION 03 FEBRUARY 10, 2003	ENGINE - REINFORCING PLATES (23075077) FOR PLUG REPAIRED FRONT FRAME FORWARD FLANGE	PREVENTIVE RECURRING	N/A 07 MAR 2004	[Signature] CAA 00516 ROLLS-ROYCE BRASIL

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SECTION 3 PART III ASSEMBLY MODIFICATION RECORD

1. ASSEMBLY NAME: FAN ROTOR		2. ASSEMBLY PN: 23063061		3. ASSEMBLY SN: WD18597	
4. MODIFICATION INFORMATION				5. COMPLIANCE TIME	
BULLETIN OR DIRECTIVE NUMBER	ISSUE/REVISION DATE	SUBJECT OF BULLETIN OR DIRECTIVE	TYPE	INTERVAL	NEXT DUE
				ACCOMPLISHED	
			ONE-TIME		
			RECURRING		
			ONE-TIME		
			RECURRING		
			ONE-TIME		
			RECURRING		
			ONE-TIME		
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 Proc: 173981
 Rub: *[Signature]*
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SECTION 3 PART IV ASSEMBLY INSPECTION RECORD

1. ASSEMBLY NAME: Fan Rotor		2. ASSEMBLY P/N: 23063061		3. ASSEMBLY S/N: WD16597	
4. INSPECTION INFORMATION			5. COMPLIANCE TIME		
INSPECTION NUMBER	INSPECTION DESCRIPTION	REFERENCE DOCUMENT	MODULE	INTERVAL	NEXT DUE
72-21-21	Fan Wheel P/N 23061670 S/N: WD16597 and AFT Blade Retainer.	RRB W.O. # 292296	13880,18 10283	5000 cycles	15,283 cycles
				DATE	ORGANIZATION
				Sep 27, 2007	ROLLS-ROYCE BRASIL
				AUTHORIZED SIGNATURE CERTIFICATION TYPE & NUMBER CREB 3067399590 CGO ANAC 105113 EASA 1463719	

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SECTION 3 PART IV

ASSEMBLY INSPECTION RECORD

1. ASSEMBLY NAME: FAN ROTOR				2. ASSEMBLY P/N: 23063061				3. ASSEMBLY S/N: WD18597			
4. INSPECTION INFORMATION		5. COMPLIANCE TIME						6. SIGNATURE ENTRY and COMPANY			
INSPECTION NUMBER	INSPECTION DESCRIPTION	REFERENCE DOCUMENT	MODULE	INTERVAL	NEXT DUE	DATE	AUTHORIZED SIGNATURE	CERTIFICATION TYPE & NUMBER	ORGANIZATION		

GT-10049

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SECTION 3 PART V ASSEMBLY MAINTENANCE RECORD

1. ASSEMBLY NAME: Fan Rotor		2. ASSEMBLY P/N: 23063001		3. ASSEMBLY SN: WD18887	
4. COMPLIANCE INFORMATION					
DATE	DESCRIPTION OF MAINTENANCE ACTION	REFERENCE DOCUMENT	HOURS CYCLES	AUTHORIZED SIGNATURE CERTIFICATION TYPE & NUMBER	ORGANIZATION
Sep 27, 2007	A level 03 workscope was carried out following the EAMP directions and IAW the EM CBP31010 Revision 25, dated July 20, 2007 - (T83=0)	R6B W.O. # 29226	13860,18 10283	 CREA 5042399490 COD ANAC 105113 EASA: 143.0119	ROLL-ROYCE BRASIL

DEFESA C. AERONAUTICA
 Fl: 157
 Proc: 173981
 Rub:
 CABW

GT-10050

(((((((((

SECTION 3 PART V ASSEMBLY MAINTENANCE RECORD

1. ASSEMBLY NAME: FAN ROTOR		2. ASSEMBLY PIN: 23063061		3. ASSEMBLY SIN: WD18597	
4. COMPLIANCE INFORMATION					
DATE	DESCRIPTION OF MAINTENANCE ACTION	REFERENCE DOCUMENT	HOURS CYCLES	AUTHORIZED SIGNATURE CERTIFICATION TYPE & NUMBER	ORGANIZATION
02 May 2004	A level 03 message was cleared out in the EKD recommendations	228 W.S.# 229630	6,965.50 4,721	[Signature] CAA C0536	Rolls-Royce Bristol



[Handwritten signatures and marks]



Rolls-Royce

Ship Date: 30-Nov-00

Service Bulletin Compliance

Engine Model: 3007A1 Engine Serial Number: CAE 311642

Module: Fan Rotor Module Serial Number: WD18597

SB Number	Title	Date	Incorporated	Status
AE 3007A-72-025	Engine - Fan Spanner Nut Lock Plug	19-May-97	incorporated	Published
AE 3007A-72-036	Engine - Rework the Fan Drive Shaft		incorporated	Not Published

The intent of the above Service Bulletins are incorporated into Engine Serial Number CAE 311642 as of 30-Nov-00
Form printed on Thursday, November 30, 2000

N. DEFESA C. AERONAUTICA
 FI: 159
 Proc: 173981
 Rub: *MB*
 CABW



Rolls-Royce

Service Bulletin Compliance

Engine Model: 3007A1

Engine Serial Number: CAE 311642

Ship Date: 30-Nov-00

Module: Fan Rotor

Module Serial Number: WD18597

SB Number	Title	Date	Incorporated	Status
AE 3007A-72-025	Engine - Fan Spanner Nut Lock Plug	19-May-97	Incorporated	Published
AE 3007A-72-036	Engine - Rework the Fan Drive Shaft		Incorporated	Not Published

The intent of the above Service Bulletins are incorporated into Engine Serial Number CAE 311642 as of 30-Nov-00
Form printed on Thursday, November 30, 2000

DEFESA C. AERONAUTICA
 Fl: 160
 Proc: 173981
 Rub: *MB*
 CABW

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RRB - AE 3007A Series Airworthiness Directives

ASSEMBLY NAME: Fan Rotor ASSEMBLY P/N: 23063061 ASSEMBLY S/N: WD18597

AD Number	Subject	Compliance	Approved by:
2000-11-22	To prevent critical life-limited rotating engine part failure, which could result in an uncontained engine failure and damage to the airplane. (Engine Manual Chapter 72-21-21 (Subtask 72-21-21-200-801))	CW - Fan Wheel P/N 23061670 S/N: WD18597. Note: Re-inspection of the fan wheel according to Airworthiness Directive 2000-11-22 is required at the first piece part opportunity following the fan wheel accumulating 15,283 cycles.	<i>[Signature]</i>

Note: Reference to Airworthiness Directives Compliance Record, Issue N. 16, dated Sep 27, 2007 issued for CAE311642.

Revised by: *[Signature]*
 Julio Medina
 CREK 5062399590
 C02TAMAC 103112

ROLLS-ROYCE BRASIL - Sep 27, 2007

DEFESA C. AERONAUTICA
 FI: 161
 Proc: 173981
 Rub: *[Signature]*
 CABW

SECTION 3 PART I **ASSEMBLY SERVICE RECORD**

1. ASSEMBLY NAME: COMPRESSOR ROTOR 2. ASSEMBLY PIN: 23073608 3. ASSEMBLY SIN: A19348

4. MODULE IDENTIFICATION			5. ASSEMBLY INSTALLATION SECTION			6. ASSEMBLY REMOVAL SECTION			REASON FOR REMOVAL
NAME: ENGINE	PART NUMBER	SERIAL NUMBER	DATE	HOURS	ASSEMBLY TOTAL	MODULE TOTAL	HOURS	ASSEMBLY TOTAL	
				CYCLES	CYCLES		CYCLES	CYCLES	
	AE3007A1		30 NOV	0	0				
	CAE311642		2000	0	0				

7. REMARKS

[Handwritten marks and signatures in blue ink]

GT-10846

SECTION 3 PART II

LIFE LIMITED PARTS RECORD

This record to remain with part listed.

2. PART NAME: 1ST STG WHEEL		3. PART NUMBER: 23065041				4. SERIAL NUMBER: L188465						
5. ASSEMBLY IDENTIFICATION		6. PART INSTALLATION SECTION				7. PART REMOVAL SECTION						
NAME: COMPRESSOR ROTOR		ASSY TOTAL	HOURS	CYCLES	DATE	ASSY TOTAL	HOURS	CYCLES	DATE	ASSY TOTAL	HOURS	CYCLES
PART NUMBER	SERIAL NUMBER											
	23073508	0		0	30 NOV 2000							
	A18348	0		0								

8. REMARKS

GT-10047

DEFESA C. AERONAUTICA
Fl: 163
Proc: 173981
Rub: *UBS*
CABW



SECTION 3 PART II **LIFE LIMITED PARTS RECORD**

This record to remain with part listed.

2. PART NAME: 2ND STG WHEEL 3. PART NUMBER: 23080752 4. SERIAL NUMBER: L184288

5. ASSEMBLY IDENTIFICATION NAME: COMPRESSOR ROTOR PART NUMBER SERIAL NUMBER	6. PART INSTALLATION SECTION			7. PART REMOVAL SECTION		
	DATE	ASSY TOTAL HOURS CYCLES	PART TOTAL HOURS CYCLES	DATE	ASSY TOTAL HOURS CYCLES	PART TOTAL HOURS CYCLES
28073508 A18348	30 NOV 2000	0 0	0 0			

8. REMARKS

DEFESA C. AERONAUTICA
Fi: 164
Proc: 173981
Rub: [Signature]
CABW

GT-10047

[Handwritten marks and signatures]

((((((((((((((((((

SECTION 3 PART II LIFE LIMITED PARTS RECORD

This record to remain with part listed.		3. PART NUMBER: 23071259				4. SERIAL NUMBER: L188744			
5. ASSEMBLY IDENTIFICATION		6. PART INSTALLATION SECTION				7. PART REMOVAL SECTION			
NAME: COMPRESSOR ROTOR		ASSY TOTAL		PART TOTAL		ASSY TOTAL		PART TOTAL	
PART NUMBER	SERIAL NUMBER	HOURS	CYCLES	HOURS	CYCLES	HOURS	CYCLES	HOURS	CYCLES
23073508	A19348	0	0	0	0				

8. REMARKS

GT-10047



SECTION 3 PART II **LIFE LIMITED PARTS RECORD**

This record to remain with part listed.											
2. PART NAME: 5TH STG WHEEL				3. PART NUMBER: 23071260				4. SERIAL NUMBER: L184657			
5. ASSEMBLY IDENTIFICATION											
NAME: COMPRESSOR ROTOR											
PART NUMBER			DATE			ASSY TOTAL			PART TOTAL		
SERIAL NUMBER			HOURS			HOURS			HOURS		
23073508			CYCLES			CYCLES			CYCLES		
A18348			0			0			0		
			30 NOV								
			2000								
8. REMARKS											

GT-10047

SECTION 3 PART II

LIFE LIMITED PARTS RECORD

This record to remain with part listed.											
2. PART NAME: 6TH STG WHEEL				3. PART NUMBER: 23071396				4. SERIAL NUMBER: L199670			
5. ASSEMBLY IDENTIFICATION											
NAME: COMPRESSOR ROTOR											
PART NUMBER											
SERIAL NUMBER											
23073608											
A19346											
6. PART INSTALLATION SECTION											
DATE				ASSY TOTAL		PART TOTAL		7. PART REMOVAL SECTION			
30 NOV 2000				HOURS		HOURS		DATE			
0				CYCLES		CYCLES		HOURS			
0				0		0		CYCLES			
0				0		0		CYCLES			
8. REMARKS											

QT-10047

DEFESA G. AERONAUTICA
 FI: 168
 Proc: 173981
 Rub: *[Signature]*
 CABW

SECTION 3 PART II

LIFE LIMITED PARTS RECORD

This record to remain with part listed.		3. PART NUMBER: 23071397		4. SERIAL NUMBER: L210557	
5. ASSEMBLY IDENTIFICATION NAME: COMPRESSOR ROTOR		6. PART INSTALLATION SECTION		7. PART REMOVAL SECTION	
PART NUMBER	DATE	HOURS CYCLES	PART TOTAL HOURS CYCLES	HOURS CYCLES	PART TOTAL HOURS CYCLES
23073508	30 NOV 2000	0 0	0 0		
A18348					
8. REMARKS					

DEFESA C. AERONAUTICA
Fl: 169
Proc: 173981
Rub:
CABW

GT-10047

SECTION 3 PART II **LIFE LIMITED PARTS RECORD**

This record to remain with part listed.

2. PART NAME: 8TH STG WHEEL 4. SERIAL NUMBER: L181485

3. PART NUMBER: 23071263

5. ASSEMBLY IDENTIFICATION NAME: COMPRESSOR ROTOR	6. PART INSTALLATION SECTION				7. PART REMOVAL SECTION			
	DATE	HOURS	CYCLES	PART TOTAL HOURS CYCLES	DATE	HOURS	CYCLES	PART TOTAL HOURS CYCLES
PART NUMBER								
SERIAL NUMBER								
23073508	30 NOV	0	0					
A19348	2000	0	0					

8. REMARKS

GT-10047

[Handwritten signatures and marks]

SECTION 3 PART II

LIFE LIMITED PARTS RECORD

This record to remain with part listed.											
2. PART NAME: 9TH STG WHEEL				3. PART NUMBER: 23071264				4. SERIAL NUMBER: L134590			
5. ASSEMBLY IDENTIFICATION NAME: COMPRESSOR ROTOR			6. PART INSTALLATION SECTION				7. PART REMOVAL SECTION				PART TOTAL
PART NUMBER	SERIAL NUMBER	DATE	ASSY TOTAL HOURS	CYCLES	PART TOTAL HOURS	CYCLES	DATE	ASSY TOTAL HOURS	CYCLES	PART TOTAL HOURS	CYCLES
23073508	A18348	30 NOV 2000	0	0	0	0					
8. REMARKS											

DEFESA C. AERONAUTICA
 FI: 171
 Proc: 173981
 Rub: *M.B.*
CABW

GT-10047

GT-10047

[Handwritten signatures and marks]

SECTION 3 PART II LIFE LIMITED PARTS RECORD

This record to remain with part listed.

2. PART NAME: 10TH STG WHEEL **4. SERIAL NUMBER:** L243093

3. PART NUMBER: 23071265

5. ASSEMBLY IDENTIFICATION NAME: COMPRESSOR ROTOR	6. PART INSTALLATION SECTION			7. PART REMOVAL SECTION		
	DATE	ASSY TOTAL HOURS CYCLES	PART TOTAL HOURS CYCLES	DATE	ASSY TOTAL HOURS CYCLES	PART TOTAL HOURS CYCLES
PART NUMBER 23073508	30 NOV 2000	0 0	0 0			
SERIAL NUMBER A19348						

8. REMARKS

CABW
 DEFESA C. AERONAUTICA
 Fl: 172
 Proc: 173981
 Rub:

OT-10047

SECTION 3 PART II **LIFE LIMITED PARTS RECORD**

This record to remain with part listed.

2. PART NAME: 11TH STG WHEEL **4. SERIAL NUMBER:** L214516
3. PART NUMBER: 23066231

5. ASSEMBLY IDENTIFICATION NAME: COMPRESSOR ROTOR PART NUMBER SERIAL NUMBER	6. PART INSTALLATION SECTION				7. PART REMOVAL SECTION			
	DATE	HOURS CYCLES	ASSY TOTAL HOURS CYCLES	PART TOTAL HOURS CYCLES	DATE	HOURS CYCLES	ASSY TOTAL HOURS CYCLES	PART TOTAL HOURS CYCLES
23073508	30 NOV 2000	0 0	0 0	0 0				
A18348								

8. REMARKS

GT-100-47

DEFESA G. AERONAUTICA
 FI: 173
 Proc: 173981
 Rub: [Signature]
 CABW

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SECTION 3 PART II **LIFE LIMITED PARTS RECORD**

This record to remain with part listed.

2. PART NAME: 12TH STG WHEEL **3. PART NUMBER: 23071267** **4. SERIAL NUMBER: L210178**

	6. PART INSTALLATION SECTION				7. PART REMOVAL SECTION			
	DATE	ASSY TOTAL HOURS CYCLES	PART TOTAL HOURS CYCLES		DATE	ASSY TOTAL HOURS CYCLES	PART TOTAL HOURS CYCLES	
5. ASSEMBLY IDENTIFICATION								
NAME: COMPRESSOR ROTOR								
PART NUMBER								
SERIAL NUMBER								
	30 NOV 2000	0 0	0 0					
8. REMARKS								

[Handwritten marks]

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SECTION 3 PART II LIFE LIMITED PARTS RECORD

This record to remain with part listed.											
2. PART NAME: 13TH STG WHEEL				3. PART NUMBER: 23071268				4. SERIAL NUMBER: L207417			
5. ASSEMBLY IDENTIFICATION NAME: COMPRESSOR ROTOR											
PART NUMBER		SERIAL NUMBER		DATE		ASSY TOTAL		PART TOTAL		PART TOTAL	
						HOURS CYCLES		HOURS CYCLES		HOURS CYCLES	
23073506		A19346		30 NOV 2000		0 0		0 0			
6. PART INSTALLATION SECTION											
7. PART REMOVAL SECTION											
8. REMARKS											

GT-10047

DEFESA C. AERONAUTICA
Fl: 175
Proc: 173981
Rub:
CABW

SECTION 3 PART III LIFE LIMITED PARTS RECORD

This record to remain with part listed.

2. PART NAME: 14TH STG WHEEL **3. PART NUMBER: 23071269** **4. SERIAL NUMBER: L211168**

5. ASSEMBLY IDENTIFICATION NAME: COMPRESSOR ROTOR PART NUMBER SERIAL NUMBER	6. PART INSTALLATION SECTION				7. PART REMOVAL SECTION			
	DATE	ASSY TOTAL		DATE	ASSY TOTAL		PART TOTAL HOURS CYCLES	
		HOURS	CYCLES		HOURS	CYCLES		
23073608 A18348	30 NOV 2000	0	0					

8. REMARKS

QT-10047

[Handwritten marks and signatures]

SECTION 3 PART II LIFE LIMITED PARTS RECORD

This record to remain with part listed.

2. PART NAME: CONE SHAFT
5. ASSEMBLY IDENTIFICATION
NAME: HP Compressor Rotor

3. PART NUMBER: 23076016
7. PART REMOVAL SECTION

3. SERIAL NUMBER: L299014

6. PART INSTALLATION SECTION

PART NUMBER
SERIAL NUMBER

23073508
A19348

DATE

Sep 27,
2007

ASSY TOTAL
HOURS
CYCLES

13890.18
10283

PART TOTAL
HOURS
CYCLES

0.00
0

DATE

ASSY TOTAL
HOURS
CYCLES

PART TOTAL
HOURS
CYCLES

8 REMARKS

GI-10047



SECTION 3 PART III ASSEMBLY MODIFICATION RECORD

1. ASSEMBLY NAME: COMPRESSOR ROTOR		2. ASSEMBLY PIN: 23073508		3. ASSEMBLY SIN: A19348	
4. MODIFICATION INFORMATION					
BULLETIN OR DIRECTIVE NUMBER	ISSUE/REVISION DATE	SUBJECT OF BULLETIN OR DIRECTIVE	TYPE	5. COMPLIANCE TIME INTERVAL	6. SIGNATURE ENTRY and COMPANY
SB AE3007A-72-197	ORIGINAL DECEMBER 01, 2000	ENGINE - NEW STATIONARY LABYRINTH SEAL (23073926)	DIRECTIVE RECURRING	N/A	<i>[Signature]</i> CAA 00516 ROLLS-ROYCE BRASIL
SS AE3007A-72-208	REVISION 01 OCTOBER 19, 2001	ENGINE - NEW 1 st -STAGE COMPRESSOR BLADE REAR RETAINER RING (23074307)	DIRECTIVE RECURRING	N/A	<i>[Signature]</i> CAA 00516 ROLLS-ROYCE BRASIL
SB AE3007A-72-214	ORIGINAL JUNE 26, 2002	ENGINE - NEW NO. 4 BEARING SPANNER NUT (23074206)	DIRECTIVE RECURRING	N/A	<i>[Signature]</i> CAA 00516 ROLLS-ROYCE BRASIL
SB AE3007A-72-239	ORIGINAL DECEMBER 30, 2001	ENGINE - REWORK THE NO. 4 BEARING INSERT	DIRECTIVE RECURRING	N/A	<i>[Signature]</i> CAA 00516 ROLLS-ROYCE BRASIL
SB AE3007A-72-243	REVISION 01 FEBRUARY 24, 2003	ENGINE - FRONT SHIP HOUSING ASSEMBLY INSPECTION	DIRECTIVE RECURRING	N/A	<i>[Signature]</i> CAA 00516 ROLLS-ROYCE BRASIL
SB AE3007A-72-244	REVISION 02 FEBRUARY 24, 2003	ENGINE - 1 st -STAGE COMPRESSOR WHEEL BORE INSPECTION	DIRECTIVE RECURRING	N/A	<i>[Signature]</i> CAA 00516 ROLLS-ROYCE BRASIL
SB AE3007A-72-248	ORIGINAL APRIL 25, 2002	ENGINE - NEW TEFLON O-RING SEAL No. 4 CARBON SEAL	DIRECTIVE RECURRING	N/A	<i>[Signature]</i> CAA 00516 ROLLS-ROYCE BRASIL
SS AE3007A-72-255	REVISION 02 JULY 18, 2003	ENGINE - COMPRESSOR CONE SHAFTS AND TIE BOLT - REWORK	DIRECTIVE RECURRING	N/A	<i>[Signature]</i> CAA 00516 ROLLS-ROYCE BRASIL

GT-10048

SECTION 3 PART III ASSEMBLY MODIFICATION RECORD

1. ASSEMBLY NAME: COMPRESSOR ROTOR		2. ASSEMBLY P/N: 23073508		3. ASSEMBLY S/N: A19348		
4. MODIFICATION INFORMATION			5. COMPLIANCE TIME		6. SIGNATURE ENTRY and COMPANY	
BULLETIN OR DIRECTIVE NUMBER	ISSUE/REVISION DATE	SUBJECT OF BULLETIN OR DIRECTIVE	TYPE	INTERVAL ACCOMPLISHED	NEXT DUE	AUTHORIZED SIGNATURE CERTIFICATION TYPE & NUMBER ORGANIZATION
			ONE-TIME RECURRING			
			ONE-TIME RECURRING			
			ONE-TIME RECURRING			
			ONE-TIME RECURRING			
			ONE-TIME RECURRING			
			ONE-TIME RECURRING			
			ONE-TIME RECURRING			
			ONE-TIME RECURRING			
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			ONE-TIME RECURRING			
			ONE-TIME RECURRING			
			ONE-TIME RECURRING			
			ONE-TIME RECURRING			
			ONE-TIME RECURRING			

GT-10048

DEFESA C. AERONAUTICA
 Fl: 179
 Proc: 173981
 W. Rub: *[Signature]*
 CABW

SECTION 3 PART IV

ASSEMBLY INSPECTION RECORD

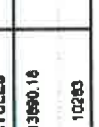
1. ASSEMBLY NAME: COMPRESSOR ROTOR		2. ASSEMBLY PIN: 23073508				3. ASSEMBLY SIN: A19348		
4. INSPECTION INFORMATION			5. COMPLIANCE TIME			6. SIGNATURE ENTRY and COMPANY		
INSPECTION NUMBER	INSPECTION DESCRIPTION	REFERENCE DOCUMENT	MODULE	INTERVAL	NEXT DUE	DATE	AUTHORIZED SIGNATURE CERTIFICATION TYPE & NUMBER	ORGANIZATION

GT-10049

DEFESA C. AERONAUTICA
 FI: 180
 Proc: 173981
 Rub: *[Signature]*
 CABW

[Handwritten marks/signatures]


SECTION 3 PART V ASSEMBLY MAINTENANCE RECORD

1. ASSEMBLY NAME: HP Compressor Rotor		2. ASSEMBLY PIN: 23073508		3. ASSEMBLY S/N: A18348	
4. COMPLIANCE INFORMATION					
DATE	DESCRIPTION OF MAINTENANCE ACTION	REFERENCE DOCUMENT	HOURS CYCLES	AUTHORIZED SIGNATURE CERTIFICATION TYPE & NUMBER	ORGANIZATION
Sep 27, 2007	A level 03 workcode was carried out following the EMP directions and IAW the EIA C5P31010 Revision 25, dated July 20, 2007 - (TS3-0).	RRB W.O. # 296294	13690.16 10283	 J. M. Martins CDEAR-5062399390 CDEAR/ANAC 105113 EASA 145-0119	ROLLS-ROYCE BRASIL

GT-10056

DEFESA C. AERONAUTICA
Fl: 181
Proc: 173981
Rub: 
CABW

SECTION 3 PART V ASSEMBLY MAINTENANCE RECORD

1. ASSEMBLY NAME: COMPRESSOR ROTOR		2. ASSEMBLY PIN: 23073508		2. ASSEMBLY S/N: A19348	
4. COMPLIANCE INFORMATION					
DATE	DESCRIPTION OF MAINTENANCE ACTION	REFERENCE DOCUMENT	HOURS CYCLES	SIGNATURE, ENTRY and COMPANY AUTHORIZED SIGNATURE CERTIFICATION TYPE & NUMBER	ORGANIZATION
08 Nov 2004	A level 1B inspection was carried out on Per the FMS Recommendation	2207, A.D.S 2240-30	9,165.00 4,721	<i>[Signature]</i> CAA 10816	Rolls-Royce Bristol
28 Sep 2004	Lubn. friction of CVG	W O F2-2031	7,942 5,579	<i>[Signature]</i>	

GT-10050

SECTION 3 PART I ASSEMBLY SERVICE RECORD

1. ASSEMBLY NAME: HP TURBINE ROTOR			2. ASSEMBLY PIN: 23070981			3. ASSEMBLY SN: A71171		
4. MODULE IDENTIFICATION NAME: ENGINE		5. ASSEMBLY INSTALLATION SECTION		6. ASSEMBLY REMOVAL SECTION		ASSEMBLY TOTAL		REASON FOR REMOVAL
PART NUMBER	SERIAL NUMBER	DATE	HOURS CYCLES	DATE	HOURS CYCLES	HOURS CYCLES	HOURS CYCLES	
	AE3007A1	30 NOV 2000	0 0					
	CAE311642							

7. REMARKS

GT-10046

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SECTION 3 PART II **LIFE LIMITED PARTS RECORD**

This record to remain with part listed.

2. PART NAME: 1ST STG HP TURBINE WHEEL **3. PART NUMBER:** 23069591 **4. SERIAL NUMBER:** MM143164

5. ASSEMBLY IDENTIFICATION NAME: HP TURBINE ROTOR PART NUMBER SERIAL NUMBER	6. PART INSTALLATION SECTION		7. PART REMOVAL SECTION	
	DATE	ASSY TOTAL HOURS CYCLES	DATE	ASSY TOTAL HOURS CYCLES
23070961 A71171	30 NOV 2000	0 0		

8. REMARKS

GT-10047

SECTION 3 PART II **LIFE LIMITED PARTS RECORD**

This record to remain with part listed.

2. PART NAME: **2ND STG HPT WHEEL** 3. PART NUMBER: **23075345** 4. SERIAL NUMBER: **MM504916**

5. ASSEMBLY IDENTIFICATION NAME: HP TURBINE ROTOR		6. PART INSTALLATION SECTION			7. PART REMOVAL SECTION		
		DATE	ASSY TOTAL HOURS CYCLES	PART TOTAL HOURS CYCLES	DATE	ASSY TOTAL HOURS CYCLES	PART TOTAL HOURS CYCLES
PART NUMBER	23070081	07 MAR 2004	6,987.0 4,741	0.00 000			
SERIAL NUMBER	A71141						
8. REMARKS							

GT-10047

[Handwritten marks and signatures]

SECTION 3 PART III ASSEMBLY MODIFICATION RECORD

1. ASSEMBLY NAME: HP Compressor Rotor		2. ASSEMBLY PIN: 23073608		3. ASSEMBLY S/N: A19348		
4. MODIFICATION INFORMATION			5. COMPLIANCE TIME		6. SIGNATURE ENTRY and COMPANY	
BULLETIN OR DIRECTIVE NUMBER	ISSUE/REVISION DATE	SUBJECT OF BULLETIN OR DIRECTIVE	TYPE	INTERVAL ACCOMPLISHED	AUTHORIZED SIGNATURE CERTIFICATION TYPE & NUMBER	ORGANIZATION
AE3007A-75-035	REVISION 1 Oct 20, 2006	AIR - NEW CVG ACTUATION CYLINDER MOUNTING BRACKET. (23034046)	ONE-TIME	N/A Sep 27, 2007	<i>[Signature]</i> EASA 145 0119 COA ANAC 105113	ROLLS-ROYCE BRASIL
AE3007A-72-309	ORIGINAL Jun 14, 2004	ENGINE - INCREASED COMPRESSOR TIE BOLT STRETCH VALUE	ONE-TIME	N/A Sep 27, 2007	<i>[Signature]</i> EASA 145 0119 COA ANAC 105113	ROLLS-ROYCE BRASIL
AE3007A-72-322	ORIGINAL May 06, 2005	ENGINE - NEW GLASS - PEENED 1ST - STAGE COMPRESSOR BLADE (23075387)	ONE-TIME	N/A Sep 27, 2007	<i>[Signature]</i> EASA 145 0119 COA ANAC 105113	ROLLS-ROYCE BRASIL
AE3007A-72-324	ORIGINAL Aug 05, 2005	ENGINE - NO. 4 BALL BEARING INSPECTION	ONE-TIME	N/A Sep 27, 2007	<i>[Signature]</i> EASA 145 0119 COA ANAC 105113	ROLLS-ROYCE BRASIL
AE3007A-72-327	ORIGINAL May 09, 2005	ENGINE - NEW TEFLON SEAL (23034495) ON NO. 4 CARBON SEAL	ONE-TIME	N/A Sep 27, 2007	<i>[Signature]</i> EASA 145 0119 COA ANAC 105113	ROLLS-ROYCE BRASIL
AE3007A-72-333	REVISION 2 Mar 17, 2006	ENGINE - INSPECTION OF 3RD, 4TH, 5TH & 13TH - STAGE COMPRESSOR WHEELS	ONE-TIME	N/A Sep 27, 2007	<i>[Signature]</i> EASA 145 0119 COA ANAC 105113	ROLLS-ROYCE BRASIL

[Handwritten signatures and initials in blue ink]

SECTION 3 PART III

ASSEMBLY MODIFICATION RECORD

1. ASSEMBLY NAME: HP TURBINE ROTOR			2. ASSEMBLY P/N: 23070981			3. ASSEMBLY S/N: A71171				
4. MODIFICATION INFORMATION				5. COMPLIANCE TIME					6. SIGNATURE ENTRY and COMPANY	
BULLETIN OR DIRECTIVE NUMBER	ISSUE/REVISION DATE	SUBJECT OF BULLETIN OR DIRECTIVE	TYPE	INTERVAL	NEXT DUE	ACCOMPLISHED	AUTHORIZED SIGNATURE	CERTIFICATION TYPE & NUMBER	ORGANIZATION	
SB AE3007A-72-210	REVISION 01 AUGUST 06, 2001	ENGINE - INSPECT THE HIGH-PRESSURE TURBINE 1 st -STAGE VANES AND BLADES	DIRECTIVE RECURRING	N/A	N/A	07 MAR 2004	<i>[Signature]</i>	CAA 00516	ROLLS-ROYCE BRASIL	
SB AE3007A-72-215	ORIGINAL OCTOBER 10, 2001	ENGINE - INSTALL THE 2 nd - STAGE HIGH-PRESSURE TURBINE WHEEL BALANCE WEIGHTS (23038953)	DIRECTIVE RECURRING	N/A	N/A	07 MAR 2004	<i>[Signature]</i>	CAA 00516	ROLLS-ROYCE BRASIL	
SB AE3007A-A-72-265	REVISION 01 APRIL 10, 2003	ENGINE - 1 st TO 2 nd -STAGE HIGH PRESSURE TURBINE SPACER INSPECTION	DIRECTIVE ALUMINUM	N/A	N/A	07 MAR 2004	<i>[Signature]</i>	CAA 00516	ROLLS-ROYCE BRASIL	
SB AE3007A-72-260	ORIGINAL JULY 31, 2003	ENGINE - 1 st STAGE HIGH PRESSURE TURBINE RIALK - HEWKRK	DIRECTIVE RECURRING	N/A	N/A	07 MAR 2004	<i>[Signature]</i>	CAA 00516	ROLLS-ROYCE BRASIL	

GT-10048

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SECTION 3 PART III ASSEMBLY MODIFICATION RECORD

1. ASSEMBLY NAME: HP TURBINE ROTOR		2. ASSEMBLY PN: 23070981		3. ASSEMBLY SIN: A71171			
4. MODIFICATION INFORMATION				5. COMPLIANCE TIME		6. SIGNATURE ENTRY and COMPANY	
BULLETIN OR DIRECTIVE NUMBER	ISSUE/REVISION DATE	SUBJECT OF BULLETIN OR DIRECTIVE	TYPE	INTERVAL	NEXT DUE ACCOMPLISHED	AUTHORIZED SIGNATURE	ORGANIZATION
			ONE-TIME RECURRING				
			ONE-TIME RECURRING				
			ONE-TIME RECURRING				
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			ONE-TIME RECURRING				
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			ONE-TIME RECURRING				
			ONE-TIME RECURRING				

GT-10049

[Handwritten signatures and marks]

SECTION 3 PART V ASSEMBLY MAINTENANCE RECORD

1. ASSEMBLY NAME: HP Turbine Rotor		2. ASSEMBLY PIN: 23070861		3. ASSEMBLY SN: A71171	
4. COMPLIANCE INFORMATION					
DATE	DESCRIPTION OF MAINTENANCE ACTION	REFERENCE DOCUMENT	HOURS CYCLES	AUTHORIZED SIGNATURE CERTIFICATION TYPE & NUMBER	ORGANIZATION
Sep 27, 2007	A level 03 workscope was carried out following the EAMP directions and IAW the EM CSP31010 Revision 25, dated July 20, 2007 - (TC3-0)	RRE W.O. # 288286	13880.18 10283	 Julio Marins CREA 5002399590 COD ANAC: 103113 EASA 143.0119	ROLLS-ROYCE BRASIL

DEFESA C. AERONAUTICA
 FI: 192
 Proc: 173981
 Rub: 
 CABW

GT-18050

SECTION 3 PART V

ASSEMBLY MAINTENANCE RECORD

1. ASSEMBLY NAME: **HP TURBINE ROTOR** 2. ASSEMBLY P/N: **23070981** 3. ASSEMBLY S/N: **A71171**

4. COMPLIANCE INFORMATION				5. SIGNATURE ENTRY AND COMPANY	
DATE	DESCRIPTION OF MAINTENANCE ACTION	REFERENCE DOCUMENT	HOURS CYCLES	AUTHORIZED SIGNATURE CERTIFICATION TYPE & NUMBER	ORGANIZATION
03 Mar 2024	A level 1A was sample job carried out IAW the EMI recommendations.	RB B W D. # 224130	696.5:00 4.721		Balls Bayce Brown

GT-10080

DEFESA C. AERONAUTICA
 FI: 193
 Proc: 173981
 W. Rub.
 CABW

Service Bulletin Compliance

Rolls-Royce

Engine Model: 3007A1 Engine Serial Number: CAE 311642 Ship Date: 30-Nov-00

Module: HP Turbine Rotor Module Serial Number: A71171

SB Number	Title	Date	Incorporated	Status
AE 3007A-72-186	Engine - New 1st-Stage High-Pressure Turbine Vane Assembly (23073494)	21-Sep-00	Incorporated	Published
AE 3007A-HPT	None Applicable		Incorporated	Not Published

The intent of the above Service Bulletins are incorporated into Engine Serial Number CAE 311642 as of 30-Nov-00
 Form printed on Thursday, November 30, 2000



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SECTION 3 PART I ASSEMBLY SERVICE RECORD

1. ASSEMBLY NAME: LP TURBINE ROTOR		2. ASSEMBLY PIN: 23067890		3. ASSEMBLY SIN: A81150		
4. MODULE IDENTIFICATION			5. ASSEMBLY INSTALLATION SECTION		6. ASSEMBLY REMOVAL SECTION	
NAME: ENGINE	PART NUMBER	DATE	HOURS	HOURS	HOURS	REASON FOR REMOVAL
	SERIAL NUMBER		CYCLES	CYCLES	CYCLES	
	AE3007A1	30 NOV 2000	0	0		
	CAE311642		0	0		
7. REMARKS						

DEFESA C. AERONAUTICA
 Fl: 195
 Proc: 173981
 Rub: *[Signature]*
 CABW

GT-10046

SECTION 3 PART II LIFE LIMITED PARTS RECORD

This record to remain with part listed.													
2. PART NAME: 2ND STG LP TURB WHEEL				3. PART NUMBER: 23058312				4. SERIAL NUMBER: WD180831					
6. ASSEMBLY IDENTIFICATION						6. PART INSTALLATION SECTION				7. PART REMOVAL SECTION			
NAME: LP TURBINE ROTOR						ASSY TOTAL		PART TOTAL		ASSY TOTAL		PART TOTAL	
PART NUMBER						HOURS	CYCLES	HOURS	CYCLES	HOURS	CYCLES	HOURS	CYCLES
SERIAL NUMBER						DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
23057890						30 NOV							
A8:150						2000							

8. REMARKS

GT-10847

SECTION 3 PART II

LIFE LIMITED PARTS RECORD

This record to remain with part listed.													
2. PART NAME: LP TURB INTERSTG SPACER				3. PART NUMBER: 23054049				4. SERIAL NUMBER: TW17430					
5. ASSEMBLY IDENTIFICATION													
NAME: LP TURBINE ROTOR													
PART NUMBER			DATE			ASSY TOTAL		PART TOTAL		ASSY TOTAL		PART TOTAL	
SERIAL NUMBER			DATE			HOURS		HOURS		HOURS		HOURS	
23067890			30 NOV			CYCLES		CYCLES		CYCLES		CYCLES	
A81150			2000			0		0		0		0	
6. PART INSTALLATION SECTION													
7. PART REMOVAL SECTION													
8. REMARKS													

QT-10047

DEFESA C. AERONAUTICA
 FI: 201
 Proc: 173981
 Rub: *[Signature]*
 CABW

SECTION 3 PART II **LIFE LIMITED PARTS RECORD**

This record to remain with part, listed.

2. PART NAME: **LP TURB INTERSTG SPACER** 3. PART NUMBER: **23054049** 4. SERIAL NUMBER: **TW17436**

5. ASSEMBLY IDENTIFICATION NAME: LP TURBINE ROTOR	6. PART INSTALLATION SECTION			7. PART REMOVAL SECTION		
	DATE	ASSY TOTAL HOURS CYCLES	PART TOTAL HOURS CYCLES	DATE	ASSY TOTAL HOURS CYCLES	PART TOTAL HOURS CYCLES
SERIAL NUMBER 23067890 A61150	30 NOV 2000	0 0	0 0			

8. REMARKS

M. DEFESA C. AERONAUTICA
 Fl: 202
 Proc: 173981
 Rub: 
 CABW

QT-10047



SECTION 3 PART II **LIFE LIMITED PARTS RECORD**

This record to remain with part listed.

2. PART NAME: LP TURB FORWARD SHAFT				3. PART NUMBER: 23067076				4. SERIAL NUMBER: GV185743			
5. ASSEMBLY IDENTIFICATION						6. PART INSTALLATION SECTION			7. PART REMOVAL SECTION		
NAME: LP TURBINE ROTOR						ASSY TOTAL			ASSY TOTAL		
PART NUMBER						HOURS			HOURS		
SERIAL NUMBER						CYCLES			CYCLES		
23067880						DATE			DATE		
A81150						30 NOV					
						2000					
						0			0		
						0			0		

8. REMARKS

GT-10047

DEFESA C. AERONAUTICA
 Fi: 203
 Proc: 173981
 Rub:
 CABW

SECTION 3 PART III

ASSEMBLY MODIFICATION RECORD

1. ASSEMBLY NAME: LP TURBINE ROTOR			2. ASSEMBLY PIN: 23067890		3. ASSEMBLY S/N: A81150		
4. MODIFICATION INFORMATION			5. COMPLIANCE TIME		6. SIGNATURE ENTRY and COMPANY		
BULLETIN OR DIRECTIVE NUMBER	ISSUE/REVISION DATE	SUBJECT OF BULLETIN OR DIRECTIVE	TYPE	INTERVAL	NEAT DUE ACCOMPLISHED	AUTHORIZED SIGNATURE CERTIFICATION TYPE & NUMBER	ORGANIZATION
			ONE-TIME RECURRING				
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			ONE-TIME RECURRING				
			ONE-TIME RECURRING				

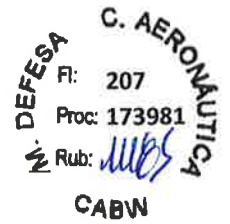
GT-10048

DEFESA
 C. AERONAUTICA
 FI: 205
 Proc: 173981
 Rub: *[Signature]*
 CABW

[Handwritten marks and signatures]

SECTION 3 PART III ASSEMBLY MODIFICATION RECORD

1. ASSEMBLY NAME: LP Turbine Rotor		2. ASSEMBLY P/N: 23007890		3. ASSEMBLY S/N: A81160		
4. MODIFICATION INFORMATION			5. COMPLIANCE TIME			
BULLETIN OR DIRECTIVE NUMBER	ISSUE/REVISION DATE	SUBJECT OF BULLETIN OR DIRECTIVE	TYPE	INTERVAL ACCOMPLISHED	NEXT DUE	6. SIGNATURE ENTRY AND COMPANY
AE3007A-72-336	ORIGINAL Mar 21, 2006	ENGINE - UPPER AND LOWER REAR TURBINE BEARING SUPPORT MEAT SHIELD WASHER (MS14151-3)	ONE-TIME	N/A	N/A	ROLLS-ROYCE BRASIL
AE3007A-72-332	REVISION 1 Jul 03, 2008	ENGINE - NEW LOW PRESSURE TURBINE REAR - SHAFT PLUG O-RING (23078077-5)	ONE-TIME	N/A	N/A	ROLLS-ROYCE BRASIL
AE3007A-72-291	ORIGINAL Jul 19, 2005	ENGINE - NEW REAR TURBINE BEARING SUPPORT AND FORCED MIXER CORE FLOW PATH SUPPORT ASSEMBLY	ONE-TIME	N/A	N/A	ROLLS-ROYCE BRASIL



[Handwritten signatures and marks in blue ink]


SECTION 3 PART V ASSEMBLY MAINTENANCE RECORD

1. ASSEMBLY NAME: LP Turbine Rotor		2. ASSEMBLY P/N: 23067890		3. ASSEMBLY S/N: A81160	
4. COMPLIANCE INFORMATION					
DATE	DESCRIPTION OF MAINTENANCE ACTION	REFERENCE DOCUMENT	HOURS CYCLES	AUTHORIZED SIGNATURE CERTIFICATION TYPE & NUMBER	ORGANIZATION
Sep 27, 2007	A level 03 workshop was carried out following the EMP directions and IAW the EM CSF31010 Revision 25, dated July 20, 2007 (TSJ-03).	RRB W.O. # 286298	13890.16 10283	 Jairo Martins CREA 50623994590 COO ANAC 1051173 EASA -145.0119	ROLLS-ROYCE BRASIL

M. DEFESA C. AERONAUTICA
 Fl: 208
 Proc: 173981
 Rub:
 CABW

GT-10050

SECTION 3 PART V ASSEMBLY MAINTENANCE RECORD

1. ASSEMBLY NAME: LP TURBINE ROTOR		2. ASSEMBLY P/N: 23067890		3. ASSEMBLY S/N: A81150	
4. COMPLIANCE INFORMATION					
DATE	DESCRIPTION OF MAINTENANCE ACTION	REFERENCE DOCUMENT	HOURS Cycles	AUTHORIZED SIGNATURE CERTIFICATION TYPE & NUMBER	ORGANIZATION
09 May 2014	A level of overhaule was carried out than the EHP recommendations	2235 W.W.# 224630	6165.00 A171	 CAS COSMIC	Rolls-Royce Bion1

GT-10060

ROLLS-ROYCE BRASIL
 Rua Dr. Cincinato Braga, 47, São Bernardo do Campo,
 São Paulo, Brazil, CEP 09990-900
 Fax: 55+11+4341-8071
 Phone: 55+11+4390 4800



LIFE LIMITED COMPONENTS
ROLLS-ROYCE CORPORATION AE3007A1

CUSTOMER: FAB - FORÇA AEREA		RRB W/O# 377335		DATE Jun 13, 2012		
ENGINE SERIAL NUMBER	T S N	C S N	TSL-3	CSL-3	T S R	C S R
CAE311042	13351:50	14474	0:00	0	0	0
DESCRIPTION	P/N	S/N	TSN	CSN	REMAINING CYCLES	REMARKS
AN WHEEL	23061870	WY15660	13351:50	14474	4925	
AN BLADE FWD RETAINER	23062491	HK15925	13351:50	14474	6526	
AN DRIVE SHAFT	23065332	GV13286	12749:38	13502	16498	
ST STG. HPC WHEEL	23065041	L69635	13579:38	14584	5416	
ND STG. HPC WHEEL	23060752	L70250	13579:38	14584	5416	
RD STG. HPC WHEEL	23065303	L72308	13579:38	14584	5416	
TH STG. HPC WHEEL	23050754	L80731	13579:38	14584	5416	
7H STG. HPC WHEEL	23065605	L72822	13579:38	14584	5416	
TH STG. HPC WHEEL	23062666	L71589	13579:38	14584	5416	
TH STG. HPC WHEEL	23084162	L379899	0:00	0	30000	
TH STG. HPC WHEEL	23084163	L373939	0:00	0	30000	
TH STG. HPC WHEEL	23084164	L377287	0:00	0	30000	
0TH STG. HPC WHEEL	23084165	L373232	0:00	0	30000	
1TH STG. HPC WHEEL	23084166	L375526	0:00	0	30000	
2TH STG. HPC WHEEL	23084167	L371304	0:00	0	30000	
3TH STG. HPC WHEEL	23084168	L372606	0:00	0	30000	
4TH STG. HPC WHEEL	23061634	L70955	13579:38	14584	5416	
ONE SHAFT	23076016	L276164	4928:02	3927	16073	
ST STG. HPT WHEEL	23069115	MM158316	12937:26	13860	16140	
ND STG. HPT WHEEL	23089438	MM228434	8985:25	5014	14986	*
ST TO 2ND STG. HPT SPACER	23072849	TW508635	5287:50	4482	8608	*
ST STG. LPT WHEEL	23060111	VWD62824	14400:38	15501	14499	*
ND STG. LPT WHEEL	23058312	VWD53655	14400:38	15501	14499	*
RD STG. LPT WHEEL	23070046	VWD131818	10359:26	10688	19412	*
ST TO 2ND LPT INTERSTG. SPACER	23054049	TW12369	14400:38	15501	14499	*
ND TO 3RD LPT INTERSTG. SPACER	23054049	TW12402	14400:38	15501	14499	*
PT FORWARD SHAFT	23059694	GV71883	14400:38	15501	8489	

REMARKS:
 Information obtained from the engine logbook. Life limited components were not accessed during this shop visit.
 * Unit from ESN CAE311886.

SÃO BERNARDO DO CAMPO, Jun 13, 2012


 Compiled by
LOUISE FERNANDA RODRIGUES OLIVEIRA
 RRB Engineering


 Verified by
LUCIANO BASSO
 RRB Engineering





Rolls-Royce

Rolls-Royce Brasil Ltda
Civil Small and Medium Engines
Rua Dr. Cinvelo Braga 47
São Bernardo do Campo
São Paulo, Brazil - CEP 06690-900
Fax: Ddx 11 4390 4898
Telephone: Ddx 11 4390 4806

Ref.: Motor snº CAE311042

TERMO DE GARANTIA TÉCNICA

§ 1º - Se antes de completar 12 (DOZE) MESES ou 300 (TREZENTAS) HORAS VOADAS a partir da data de instalação do EQUIPAMENTO em uma aeronave, o que ocorrer primeiro, e desde que o EQUIPAMENTO tenha sido instalado em até 180 (cento e oitenta) dias corridos após a data constante no Termo de Recebimento de Serviço elaborado pela COMREC, se evidenciar a ocorrência de um DEFEITO em uma PEÇA de tal EQUIPAMENTO, e ficar demonstrado para a razoável satisfação da Rolls-Royce Brasil (RRB) que tal DEFEITO deveu-se a uma falha de mão de obra da RRB durante o último TRABALHO realizado neste EQUIPAMENTO, então a RRB que irá prontamente substituir ou se encarregar do REPARO de tal PEÇA, a seu critério, sob a condição de:

- 1.1 - Esta garantia não será aplicável caso o EQUIPAMENTO falhe devido a qualquer acidente, abuso, prática indevida, uso indevido ou negligência, ou como consequência destes ou tenha sido indevidamente instalado, mantido, operado, armazenado ou embalado para transporte, ou se o EQUIPAMENTO defeituoso, durante o período da Garantia, for alterado, reparado ou revisado pela CONTRATANTE ou empresa que não seja a RRB.
- 1.2 - O prazo da garantia estabelecida no § 1º acima é o prazo total da garantia ora outorgada pela RRB, não sendo cumulativo a nenhum outro prazo de garantia que deva ser computado por força de qualquer disposição legal. Na hipótese de incidência de qualquer disposição legal que determine a contagem de prazo mínimo de validade de garantia, a somatória do prazo mínimo legal e do prazo contratual será o prazo estipulado no § 1º acima.

§ 2º - Com relação a todas as PEÇAS incorporadas aos EQUIPAMENTOS durante a realização de um TRABALHO a CONTRATANTE aceita as garantias oferecidas pelos fabricantes, que são em substituição a todas as outras obrigações e responsabilidades da RRB para com a CONTRATANTE por qualquer DEFEITO em PEÇAS e/ou materiais fornecidos. A garantia é oferecida à CONTRATANTE, não podendo, dessa forma, ser transferida a qualquer pessoa, firma ou empresa que possa operar qualquer MOTOR, ACESSÓRIO ou PEÇA sem a prévia autorização da RRB.

- 2.1 - A RRB irá acionar a garantia junto ao(s) fabricante(s) no caso de defeito em PEÇAS.

§ 3º - Qualquer TRABALHO feito pela RRB no cumprimento de suas obrigações em virtude desta garantia será realizado na BASE DE REVISÃO, em São Bernardo do Campo, SP, salvo se de outro modo pactuado entre as partes. A RRB não será responsável por quaisquer despesas ou responsabilidades incorridas em conexão com a remoção ou a substituição de quaisquer MOTORES, MÓDULOS ou PEÇAS defeituosos do local onde se descobriu o defeito, ou em conexão com a remoção de quaisquer PEÇAS dos MOTORES, ou por quaisquer despesas, impostos, taxas ou obrigações incorridas em conexão com qualquer envio para ou da BASE DE REVISÃO, salvo se expressamente declarado.

§ 4º - A obrigação da RRB com relação a qualquer reivindicação em virtude da garantia expressa no § 1º será condicionada à notificação dessa reivindicação pela CONTRATANTE à RRB no prazo de 90 dias calendário após a descoberta pela CONTRATANTE do defeito ao qual a reivindicação se refere.

§ 5º - A CONTRATANTE aceita que os benefícios explicitos da garantia concedida à CONTRATANTE de acordo com o § 1º retro e a garantia referida no § 2º juntamente com as expressas soluções providenciadas para a CONTRATANTE a respeito dos EQUIPAMENTOS, representam a total responsabilidade e obrigação da RRB para com a CONTRATANTE, a respeito de todos os termos, condições e garantias explícitas ou implícitas e quaisquer outras obrigações e responsabilidades, sejam quais forem, relacionadas aos TRABALHOS, e a quaisquer outras PEÇAS ou serviços a serem efetuados. Em nenhum caso a RRB será responsável por quaisquer outros danos ou prejuízos consequenciais.

§ 6º - A obrigação da RRB resultando desta Garantia dependerá da manutenção, pela CONTRATANTE, de registros de operação e manutenção de MOTORES, conforme procedimentos aceitos pelas autoridades competentes, para comprovar quaisquer reivindicações. Todos esses registros estarão abertos para inspeção pela RRB.



Rolls-Royce

AE 3007A1 ENGINE TEST CERTIFICATE

AMC Data Reduction Program (EDR 19405D)

Engine Model: AE 3007 A1
 Engine Serial Number: CAE311042
 Work Order: OSM 406022
 Date of the test: 13/Jun/2012
 Fuel Type: Jet A1
 Oil Type: BP 2380
 Trim Resistor: 23058854 - 04
 FADEC A Serial Number: *BX47234 BX 47234*
 FADEC B Serial Number: *BX47281 BX 47281*
 FADEC Part Number: 23078456

Predicted Data:	TO-1	ATO	MCO	MCR
N1 Fan Speed (rpm)	7528.0	7268.0	7268.0	6758.0
Thrust (lbf)	7736.9	7118.6	7118.6	
% Delta Spec Max Thrust	-3.70			
% Delta Spec Min Thrust	2.07	3.71	3.71	
N2 Speed (rpm)	15291.4			
% Delta Spec Max N2 Speed	-1.21			
TSFC (lb/hr/lbf)	0.3939			
% Delta Spec Max TSFC	-8.65			
ITT (°C)	793			
Delta Spec Max ITT	-31			
ITT7x (°C)	771			
Delta Spec Max ITT7x	-53			

Vibration (Max Steady State Level)

FARVFF: 0.211 ips RMS N1 2458 Rpm N1
 FARVGG: 0.419 ips RMS N2 10829 Rpm N2



Test Cell Operator



Test Cell Inspector

[Handwritten signatures]



AE 3007A1 ENGINE TEST CERTIFICATE

AMC Data Reduction Program (EDR 19405D)

Engine Model: AE 3007 A1
Engine Serial Number: CAE311042
Work Order: OSM 406022
Date of the test: 13/Jun/2012
Fuel Type: Jet A1
Oil Type: BP 2380
Trim Resistor: 23058854 - 04
FADEC A Serial Number: BX47234
FADEC B Serial Number: BX47281
FADEC Part Number: 23078456

Predicted Data:	TO-1	ATO	MCO	MCR
N1 Fan Speed (rpm)	7528.0	7268.0	7268.0	6758.0
Thrust (lbf)	7736.9	7118.6	7118.6	
% Delta Spec Max Thrust	-3.70			
% Delta Spec Min Thrust	2.07	3.71	3.71	
N2 Speed (rpm)	15291.4			
% Delta Spec Max N2 Speed	-1.21			
TSFC (lb/hr/lbf)	0.3939			
% Delta Spec Max TSFC	-9.65			
ITT (°C)	793			
Delta Spec Max ITT	-31			
ITT7x (°C)	771			
Delta Spec Max ITT7x	-53			

Vibration (Max Steady State Level)
 FARVFF 0.211 Ips RMS N1 2458 Rpm N1
 FARVGG 0.419 Ips RMS N2 10829 Rpm N2



Test Cell Operator



Test Cell Inspector

[Handwritten signatures]



Rolls-Royce

AE 3007A1 ENGINE TEST CERTIFICATE

AMC Data Reduction Program (EDR 19405B)

Engine Model: AE 3007 A1
Engine Serial Number: CAE311642
Work Order: OSM 229675
Date of the test: 07/Mar/2004
Fuel Type: Jet A1
Oil Type: Aero Shell 500
Trim Resistor: 23058854 - 04
FADEC A Serial Number: BX47281
FADEC B Serial Number: BX47234
FADEC Part Number: 23074001

Predicted Data:	TO-1	ATO	MCO	MCR
N1 Fan Speed (rpm)	7528.0	7268.0	7268.0	6758.0
Thrust (lbf)	7908.2	7216.5	7216.5	
% Delta Spec Max Thrust	-1.58			
% Delta Spec Min Thrust	4.33	5.13	5.13	
N2 Speed (rpm)	15139.2			
% Delta Spec Max N2 Speed	-2.21			
TSFC (lb/hr/lbf)	0.3871			
% Delta Spec Max TSFC	-11.21			
ITT (°C)	772.0			
Delta Spec Max ITT	-52.23			
ITT7x (°C)	749.0			
Delta Spec Max ITT7x	-74.45			

Vibration (Max Steady State Level)
 FARVFF: 0.544 ips Peak N1 7895 Rpm N1
 FARVGG: 0.447 ips Peak N2 10777 Rpm N2

Responsible:

[Signature]

[Handwritten marks and signatures at the bottom of the page]

M. DEFESA C. AERONAUTICA
Fl: 216
Proc: 173981
Rub: *[Signature]*
CABW

 **Rolls-Royce**

Rolls-Royce Corporation
Box 420
Munich, Indiana
206-0420 USA

ENGINE TEST LOG

1110 (6/00)

[Handwritten marks]

ROLLS-ROYCE BRASIL
 Rua Dr. Celso de Brito, 47, São Bernardo do Campo,
 São Paulo, Brazil, CEP 09569-900
 Telephone: 011 4390-4900

ACCESSORIES LOG SHEET - ROLLS-ROYCE CORPORATION AE3007A1

CUSTOMER: AIR CARAIRES		RRB W.O. # 229630		DATE MARCH 07, 2004		WORK CARRIED OUT	
ENGINE S/N	AIRCRAFT	DATE/REMOVED	T.S.N.	T.S.O.	T.S.R	T.S.O.	REPAIR
CAE311642	F-OIJF	FEB 05, 2004		-----	0.00		
ITEM	DESCRIPTION	S/N	PIN	T.S.N.	T.S.O.	OH	REPAIR
AA	Fuel Nozzle	1YR04625	23073452A	UNK	---	-	X
AB	Fuel Nozzle	1YR05414	23073452A	UNK	---	-	X
AC	Fuel Nozzle	1SR07796	23073452A	UNK	---	-	X
AD	Fuel Nozzle	1YR04890	23073452A	UNK	---	-	X
AE	Fuel Nozzle	1PS04750	23073452A	UNK	---	-	X
AF	Fuel Nozzle	1YR05398	23073452A	UNK	---	-	X
AG	Fuel Nozzle	1YR05319	23073452A	UNK	---	-	X
AH	Fuel Nozzle	1YR02928	23073452A	UNK	---	-	X
AI	Fuel Nozzle	1YR04728	23073452A	UNK	---	-	X
AJ	Fuel Nozzle	1PS04765	23073452A	UNK	---	-	X
AK	Fuel Nozzle	1YR05332	23073452A	UNK	---	-	X
AL	Fuel Nozzle	1YR05331	23073452A	UNK	---	-	X
AM	Fuel Nozzle	1YR07771	23073452A	UNK	---	-	X
AN	Fuel Nozzle	1YR04908	23073452A	UNK	---	-	X
AO	Fuel Nozzle	1PN02284	23073463A	UNK	---	-	X
AP	Fuel Nozzle	1Y404186	23073453A	UNK	---	-	X
B	Fuel Pump and Metering Unit	BAE11930	23063131	6,96570	---	-	X
C1	Full Authority Digital Electronic Control (A)	NIR	NIR	UNK	---	-	-
C2	Full Authority Digital Electronic Control (B)	NIR	NIR	UNK	---	-	-
D	Fuel Temperature Sensor	10154	23062805	UNK	---	-	-
E	Fuel Flow Sensor	P10051	23052613	6,965.0	---	-	-
G	Alternator Stator	UN8045	23075489	0.00	---	-	-
H1	Ignition Exciter	UY00464921	430035	UNK	---	-	-
H2	Ignition Exciter	UY00464914	430035	UNK	---	-	-
I1	Igniter (A)	UNK	UNK	UNK	---	-	-
I2	Igniter (B)	UNK	UNK	UNK	---	-	-
J1	Igniter Lead (RH)	UNK	UNK	UNK	---	-	-
J2	Igniter Lead (LH)	UNK	UNK	UNK	---	-	-
L	Comp. Acceleration Bleed Control Valve	EJY126	23075190	0.00	---	-	-
M	Compres. Variable Vane Hydraulic Actuator	UNK	UNK	UNK	---	-	-
D1	External Engine Control Harness (Blue - A)	NX1125	23066758	UNK	---	-	-
D2	External Engine Control Harness (Yellow - B)	NX11287	23062387	UNK	---	-	-
D3	Internal Engine Control Harness (Blue - A)	NX10547	23061469	UNK	---	-	-
D4	Internal Engine Control Harness (Yellow - B)	NX1085	23061470	UNK	---	-	-
R	External Engine Control Harness (Green)	NX11072	23070216	UNK	---	-	-
S	Internal Engine Control Harness (Green)	NX10130	23070210	UNK	---	-	-

DEFESA
 C. AERONAUTICA
 Fl: 217
 Proc: 173981
 Rub: *[Signature]*
 CABW

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U1	Turb Interstage Thermoc. Harness (A)	UIM00853	23059970	0.00	***	***	***	***	***	New
U2	Turb Interstage Thermoc. Harness (B)	UIM01189	23059971	0.00	***	***	***	***	***	New
UA	Turb Interstage Thermoc. Assy	FF281402	23039952	0.00	***	***	***	***	***	New
UB	Turb Interstage Thermoc. Assy	FF281450	23039952	0.00	***	***	***	***	***	New
UC	Turb Interstage Thermoc. Assy	FF281483	23039952	0.00	***	***	***	***	***	New
UD	Turb Interstage Thermoc. Assy	FF281530	23039952	0.00	***	***	***	***	***	New
UE	Turb Interstage Thermoc. Assy	FF281421	23039952	0.00	***	***	***	***	***	New
UF	Turb Interstage Thermoc. Assy	FF281508	23039952	0.00	***	***	***	***	***	New
UG	Turb Interstage Thermoc. Assy	FF281415	23039952	0.00	***	***	***	***	***	New
UH	Turb Interstage Thermoc. Assy	FF281529	23039952	0.00	***	***	***	***	***	New
UI	Turb Interstage Thermoc. Assy	FF281404	23039952	0.00	***	***	***	***	***	New
UJ	Turb Interstage Thermoc. Assy	FF281502	23039952	0.00	***	***	***	***	***	New
UK	Turb Interstage Thermoc. Assy	FF281533	23039952	0.00	***	***	***	***	***	New
UL	Turb Interstage Thermoc. Assy	FF281487	23039952	0.00	***	***	***	***	***	New
UM	Turb Interstage Thermoc. Assy	FF281624	23039952	0.00	***	***	***	***	***	New
UN	Turb Interstage Thermoc. Assy	FF281463	23039952	0.00	***	***	***	***	***	New
UO	Turb Interstage Thermoc. Assy	FF281508	23039952	0.00	***	***	***	***	***	New
UP	Turb Interstage Thermoc. Assy	FF281500	23039952	0.00	***	***	***	***	***	New
VT	Vibration Sensor Assy (Fan)	N/D	N/D	UNK	***	***	***	***	***	UNK
V2	Vibration Sensor Assy (Diffuser)	N/D	N/D	UNK	***	***	***	***	***	UNK
X	Oil Tank	RJ13489	23070328	UNK	***	***	***	***	***	Visual Inspection
Y	Oil Filler Assy	Q6169	23064830	UNK	***	***	***	***	***	Visual Inspection
Z'	Oil Pressure Relief Valve	0910	23073346	UNK	***	***	***	***	***	Visual Inspection
Z	Lube and Scavange Pump Assy	NL1311	23068052	6,965.0	***	***	***	***	***	Visual Inspection
ZA	Air cooled Oil Cooler Assy	N/D	N/D	UNK	***	***	***	***	***	Visual Inspection
ZB	Fuel Coolant Oil Cooler	1396	23073532	UNK	***	***	***	***	***	Visual Inspection
ZC	Oil Tank Pressurizing Valve Assy	0427	23062185	UNK	***	***	***	***	***	Visual Inspection
ZD	Oil Temp/Press Sensor Assy	HT0034	23079715	UNK	***	***	***	***	***	Visual Inspection

Comments :

SAC BERNARDO DO CAMPO, MARCH 07 , 2004

Inspection Department

Accessories Department

ESPCOM 311647 00P32630

Page 7 of 2



ROLLS-ROYCE BRASIL

Rua Dr. Cincinato Braga, 47, São Bernardo do Campo,
 São Paulo, Brazil, CEP 09890-900
 Fax: 55+11+4341-8071
 Phone: 55+11+4390-4800

LIFE LIMITED COMPONENTS ROLLS-ROYCE CORPORATION AE3007A1

CUSTOMER : AIR CARAIBES		RRB W/O #	229630	DATE	MARCH 07, 2004	
ENGINE SERIAL NUMBER	T.S.N.	C.S.N.	T.S.O.	C.S.O.	T.S.R	C.S.R.
CAE311642	6,987.0	4,741	----	----	0.00	000
DESCRIPTION	P/N	S/N	TSN	CSN	REMARKS	
Fan Wheel	23061670	WD18597	6,987.0	4,741		
Fan Blade Fwd Retainer	23062491	HK18963	6,987.0	4,741		
Fan Drive Shaft	23065332	GV15452	6,987.0	4,741		
1 st Stage Compressor Wheel	23065041	L188465	6,987.0	4,741		
2 nd Stage Compressor Wheel	23050752	L184288	6,987.0	4,741		
3 rd Stage Compressor Wheel	23065303	L206042	6,987.0	4,741		
4 th Stage Compressor Wheel	23071259	L188744	6,987.0	4,741		
5 th Stage Compressor Wheel	23071260	L184657	6,987.0	4,741		
6 th Stage Compressor Wheel	23071396	L199670	6,987.0	4,741		
7 th Stage Compressor Wheel	23071397	L210557	6,987.0	4,741		
8 th Stage Compressor Wheel	23071263	L181485	6,987.0	4,741		
9 th Stage Compressor Wheel	23071264	L134590	6,987.0	4,741		
10 th Stage Compressor Wheel	23071265	L243093	6,987.0	4,741		
11 th Stage Compressor Wheel	23066231	L214516	6,987.0	4,741		
12 th Stage Compressor Wheel	23071267	L210178	6,987.0	4,741		
13 th Stage Compressor Wheel	23071268	L207417	6,987.0	4,741		
14 th Stage Compressor Wheel	23071269	L211168	6,987.0	4,741		
Cone Shaft	23076017	L274379	0.00	000	New	
1 st Stage HP Turbine Wheel	23069591	MM143164	6,987.0	4,741		
2 nd Stage HP Turbine Wheel	23075345	MM504916	0.00	000	New	
1 st / 2 nd Stage Spacer	23076778	TW510004	0.00	000	New	
1 st Stage LP Turbine Wheel	23060111	WD209955	6,987.0	4,741		
2 nd Stage LP Turbine Wheel	23058312	WD180831	6,987.0	4,741		
3 rd Stage LP Turbine Wheel	23070046	WD188038	6,987.0	4,741		
LP Turbine Interstage Spacer	23054049	TW17430	6,987.0	4,741		
LP Turbine Interstage Spacer	23054049	TW17436	6,987.0	4,741		
LP Turbine Forward Shaft	23067076	GV185743	6,987.0	4,741		
REMARKS:						
SAO BERNARDO DO CAMPO, MARCH 07, 2004						
 Marcel Ottembergue RRB Engineering			 Fernando Puccioni RRB Engineering			



ROLLS-ROYCE BRASIL

Rua Dr. Cincinato Braga, 47. São Bernardo do Campo.
 São Paulo, Brazil, CEP 09890-900
 Fax: 55+11+4341-8071
 Phone: 55+11+4390-4800

LIFE LIMITED COMPONENTS ROLLS-ROYCE CORPORATION AE3007A1

CUSTOMER: AIR CARAIBES		RRB W/O # 229630		DATE MARCH 07, 2004	
ENGINE SERIAL NUMBER	T.S.N.	C.S.N.	T.S.O.	C.S.O.	T.S.R. C.S.R.
CAE311642	6,987.0	4,741	----	----	0.00 000
DESCRIPTION	P/N	S/N	TSN	CSN	REMARKS
Fan Wheel	23061870	WD18597	6,987.0	4,741	
Fan Blade Fwd Retainer	23062491	HK18963	6,987.0	4,741	
Fan Drive Shaft	23065332	GV15452	6,987.0	4,741	
1 st Stage Compressor Wheel	23065041	L188465	6,987.0	4,741	
2 nd Stage Compressor Wheel	23050752	L184288	6,987.0	4,741	
3 rd Stage Compressor Wheel	23065303	L206042	6,987.0	4,741	
4 th Stage Compressor Wheel	23071259	L188744	6,987.0	4,741	
5 th Stage Compressor Wheel	23071260	L184657	6,987.0	4,741	
6 th Stage Compressor Wheel	23071396	L199670	6,987.0	4,741	
7 th Stage Compressor Wheel	23071397	L210557	6,987.0	4,741	
8 th Stage Compressor Wheel	23071263	L181485	6,987.0	4,741	
9 th Stage Compressor Wheel	23071264	L134590	6,987.0	4,741	
10 th Stage Compressor Wheel	23071265	L243093	6,987.0	4,741	
11 th Stage Compressor Wheel	23066231	L214516	6,987.0	4,741	
12 th Stage Compressor Wheel	23071267	L210178	6,987.0	4,741	
13 th Stage Compressor Wheel	23071268	L207417	6,987.0	4,741	
14 th Stage Compressor Wheel	23071289	L211168	6,987.0	4,741	
Cone Shaft	23076017	L274379	0.00	000	New
1 st Stage HP Turbine Wheel	23069591	MM143164	6,987.0	4,741	
2 nd Stage HP Turbine Wheel	23075345	MM504916	0.00	000	New
1 st / 2 nd Stage Spacer	23076778	TW510004	0.00	000	New
1 st Stage LP Turbine Wheel	23060111	WD209955	6,987.0	4,741	
2 nd Stage LP Turbine Wheel	23058312	WD180831	6,987.0	4,741	
3 rd Stage LP Turbine Wheel	23070046	WD188038	6,987.0	4,741	
LP Turbine Interstage Spacer	23054049	TW17430	6,987.0	4,741	
LP Turbine Interstage Spacer	23054049	TW17436	6,987.0	4,741	
LP Turbine Forward Shaft	23067076	GV185743	6,987.0	4,741	
REMARKS					
SAO BERNARDO DO CAMPO, MARCH 07, 2004 <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> Marcel Uttembergue RRB Engineering </div> <div style="text-align: center;"> Fernando Puccioni RRB Engineering </div> </div>					



Rolls-Royce

AE 3007A1 ENGINE TEST CERTIFICATE

AMC Data Reduction Program (EDR 19405B)

Engine Model: AE 3007 A1
Engine Serial Number: CAE311642
Work Order: OSM 229675
Date of the test: 07/Mar/2004
Fuel Type: Jet A1
Oil Type: Aero Shell 500
Trim Resistor: 23058854 - 04
FADEC A Serial Number: BX47281
FADEC B Serial Number: BX47234
FADEC Part Number: 23074001

Predicted Data:	TO-1	ATO	MCO	MCR
N1 Fan Speed (rpm)	7528.0	7268.0	7268.0	8758.0
Thrust (lbf)	7908.2	7216.5	7216.5	
% Delta Spec Max Thrust	-1.58			
% Delta Spec Min Thrust	4.33	5.13	5.13	
N2 Speed (rpm)	15139.2			
% Delta Spec Max N2 Speed	-2.21			
TSFC (lb/hr/lbf)	0.3871			
% Delta Spec Max TSFC	-11.21			
ITT (°C)	772.0			
Delta Spec Max ITT	-52.23			
ITT7x (°C)	749.0			
Delta Spec Max ITT7x	-74.45			

Vibration (Max Steady State Level)
 FARVFF: 0.544 ips Peak N1 7895 Rpm N1
 FARVGG: 0.447 ips Peak N2 10777 Rpm N2

Responsible: *[Signature]*

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part_nbr	serial_nbr	serial_sfx_nbr	fpc_cd	part_desc	ship_date
AE3007A1	CAE311842			ENGINE ASSY, TURBOFAN AE3007A1	11/30/2000 00:00:00
23073508	A19348		723500000000	ROTOR ASSEMBLY, COMPRESSOR HP	11/30/2000 00:00:00
23072226	GV200687		723500030000	SHAFT, COMPRESSOR - STUB	11/30/2000 00:00:00
23072583	L198670		723586000000	WHEEL ASSY, COMPR-STG 6	11/30/2000 00:00:00
23071396	L198670		723586010000	WHEEL, COMPR-6TH STG	11/30/2000 00:00:00
23072584	L210557		723587000000	WHEEL ASSY, COMPR-STG 7	11/30/2000 00:00:00
23071397	L210557		723587010000	WHEEL, COMPR-7TH STG	11/30/2000 00:00:00
23070730	L199224		723500050000	BOLT, TIE-COMPRESSOR	11/30/2000 00:00:00
23070729	MM160732		723500050000	CONE ASSY, SHAFT-COMPRESSOR	11/30/2000 00:00:00
23071697	L134590		723586000000	WHEEL ASSY, COMPR-8TH STG	11/30/2000 00:00:00
23071264	L134590		723586010000	WHEEL, COMPR-8TH STG	11/30/2000 00:00:00
23071696	L181485		723586000000	WHEEL ASSY, COMPR-8TH STG	11/30/2000 00:00:00
23071263	L181485		723586010000	WHEEL, COMPR-8TH STAGE	11/30/2000 00:00:00
23063015	GX76168		774102000000	SENSOR, ACCELEROMETER VIBRA	11/30/2000 00:00:00
23070210	NX10130		761302000000	HARNES ASSY, INT-ENG INDIC	11/30/2000 00:00:00
23068447	L214158		723500040000	SHAFT, COMPRESSOR TO TURB	11/30/2000 00:00:00
23067891	L188485		723581000000	WHEEL ASSY, COMPR-1ST STG	11/30/2000 00:00:00
23065041	L188485		723581010000	WHEEL ASSY, HP COMPR-1ST ST	11/30/2000 00:00:00
23067892	L184288		723582000000	WHEEL ASSY, COMPR-2ND STG	11/30/2000 00:00:00
23060752	L184288		723582010000	WHEEL, COMPR-2ND STG	11/30/2000 00:00:00
23067893	L206042		723583000000	WHEEL ASSY, COMPR-3RD STG	11/30/2000 00:00:00
23065303	L206042		723583010000	WHEEL, COMPR-3RD STG	11/30/2000 00:00:00
23071259	L188744		723584000000	WHEEL ASSY, COMPR-4TH STG	11/30/2000 00:00:00
23067895	L188744		723584010000	WHEEL, COMPR-4TH STG	11/30/2000 00:00:00
23071260	L184657		723585000000	WHEEL ASSY, COMPR-5TH STG	11/30/2000 00:00:00
23067900	L243093		723585010000	WHEEL, COMPR-5TH STG	11/30/2000 00:00:00
23071265	L243093		723590000000	WHEEL ASSY, COMPR-10TH STG	11/30/2000 00:00:00
23067901	L214516		723591000000	WHEEL ASSY, COMPR-11TH STG	11/30/2000 00:00:00
23066231	L214518		723591010000	WHEEL, COMPR-11TH STG	11/30/2000 00:00:00
23067902	L210178		723592000000	WHEEL ASSY, COMPR-12TH STG	11/30/2000 00:00:00
23071267	L210178		723592010000	WHEEL, COMPR-12TH STG	11/30/2000 00:00:00
23067903	L207417		723593000000	WHEEL ASSY, COMPR-13TH STG	11/30/2000 00:00:00
23071268	L207417		723593010000	WHEEL, COMPR-13TH STG	11/30/2000 00:00:00
23067904	L211168		723594000000	WHEEL ASSY, COMPR-14TH STG	11/30/2000 00:00:00
23071269	L211168		723594010000	WHEEL, COMPR-14TH STG	11/30/2000 00:00:00

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23065047	BP211979	7239000000000	DIFFUSER ASSY, COMPR	11/30/2000 00:00:00
23073831	KV1L122	723902060539	SEAL ASSY, CARBON NO.5	11/30/2000 00:00:00
23071692	NWSET00452	723802050400	BEARING, BALL-SPL INN RACE	11/30/2000 00:00:00
23071407	NY18322	7239020000096	HOUSING ASSY, CENTER SUMP	11/30/2000 00:00:00
23063758	KV262C9	723802060638	SEAL ASSY, CARBON NO.6	11/30/2000 00:00:00
23062872	JH0002801	742101010000	IGNITOR ASSY, REC.ELECT.	11/30/2000 00:00:00
23062872	JH0002804	742101010000	IGNITOR ASSY, REC.ELECT.	11/30/2000 00:00:00
23054368	UY00334215	742101020200	LEAD ASSY, SPARK IGNITER(B)	11/30/2000 00:00:00
23054367	UY00414801	742101020100	LEAD ASSY, SPARK IGNITER(A)	11/30/2000 00:00:00
23061569	JB226864	7237000000000	CASE ASSY, COMPRESSOR	11/30/2000 00:00:00
23073029	JB226864	7237020000000	CASE ASSY, COMPR-9TH STG BL	11/30/2000 00:00:00
23061470	NX1065	761102010000	HARNES ASSY, INT ENG (B)	11/30/2000 00:00:00
23061469	NX10647	761101010000	HARNES ASSY, INT ENG (A)	11/30/2000 00:00:00
23058911	BAE2013	7533020000000	HYD ACT ASSY, INT LUDT	11/30/2000 00:00:00
6609125	FF80881	753102010000	VALVE ASSY, COMPR AIR BLEED	11/30/2000 00:00:00
6609125	FF80857	753102010000	VALVE ASSY, COMPR AIR BLEED	11/30/2000 00:00:00
23072174	1237	7630000000000	GEARBOX ASSY, ACCESSORY	11/30/2000 00:00:00
23070291	NX2359	7411010000000	STATOR, ALTERNATOR	11/30/2000 00:00:00
23063131	BAE11830	7321010000000	FUEL PUMP & METERING UNIT	11/30/2000 00:00:00
23068052	NL1311	7921020000000	PUMP ASSY, LUB&SCAV/REG V.L.V	11/30/2000 00:00:00
23058838	END537	771101010000	SENSOR, GAS PRODUCER	11/30/2000 00:00:00
23058838	END586	771101010000	SENSOR, GAS PRODUCER	11/30/2000 00:00:00
23066789	GV15530	726303010000	SHAFT, RADIAL DRIVE QUILL	11/30/2000 00:00:00
23036813	NX2389	7411020000000	ROTOR, ALTERNATOR	11/30/2000 00:00:00
23070981	A71171	7252000000000	ROTOR ASSY, BLADED, HP TURB	11/30/2000 00:00:00
23070982	MM143164	7252810000000	WHEEL ASSY, BLADED, HP TURB	11/30/2000 00:00:00
23066591	MM143164	725281010000	WHEEL, TURBINE-STAGE 1	11/30/2000 00:00:00
23071511	D197867	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000 00:00:00
23071511	D197672	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000 00:00:00
23071511	D193296	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000 00:00:00
23071511	D201589	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000 00:00:00
23071511	D197860	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000 00:00:00
23071511	D202535	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000 00:00:00
23071511	D202528	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000 00:00:00
23071511	D198196	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000 00:00:00
23071511	D197670	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000 00:00:00
23071511	D197863	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000 00:00:00

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23071511	D197600	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D197475	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D202009	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D202776	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D202559	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D197581	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	R3688	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D201988	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D198015	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D201595	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D198074	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D201012	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D201307	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D198021	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D197392	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D202768	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	B3737	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D197563	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D201586	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D198886	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D198882	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D197609	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D202101	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	N3867	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D197993	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D198084	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D198551	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D201652	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D201023	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	N3861	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D201364	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D198110	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D198117	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D197717	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D198087	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D197631	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00
23071511	D198148	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000	00:00:00

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23071511	D188105	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000 00:00:00
23071511	D188369	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000 00:00:00
23071511	D201842	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000 00:00:00
23071511	D193286	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000 00:00:00
23071511	D197651	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000 00:00:00
23071511	R3621	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000 00:00:00
23071511	D188099	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000 00:00:00
23071511	D202660	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000 00:00:00
23071511	D188138	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000 00:00:00
23071511	D188039	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000 00:00:00
23071511	D197402	725281020000	BLADE ASSY, TURB-STG 1	11/30/2000 00:00:00
23070979	837	725182010000	SUPPORT & SEAL ASSY, HP TUR	11/30/2000 00:00:00
23070987	A5116	725182010000	VANE ASSY, HP TURBINE-STG 2	11/30/2000 00:00:00
23070987	C5011	725182010000	VANE ASSY, HP TURBINE-STG 2	11/30/2000 00:00:00
23070987	B4885	725182010000	VANE ASSY, HP TURBINE-STG 2	11/30/2000 00:00:00
23070987	B5310	725182010000	VANE ASSY, HP TURBINE-STG 2	11/30/2000 00:00:00
23070987	C5138	725182010000	VANE ASSY, HP TURBINE-STG 2	11/30/2000 00:00:00
23070987	C5210	725182010000	VANE ASSY, HP TURBINE-STG 2	11/30/2000 00:00:00
23070987	A5058	725182010000	VANE ASSY, HP TURBINE-STG 2	11/30/2000 00:00:00
23070987	B5042	725182010000	VANE ASSY, HP TURBINE-STG 2	11/30/2000 00:00:00
23070987	A5026	725182010000	VANE ASSY, HP TURBINE-STG 2	11/30/2000 00:00:00
23070987	E5456	725182010000	VANE ASSY, HP TURBINE-STG 2	11/30/2000 00:00:00
23070987	E5239	725182010000	VANE ASSY, HP TURBINE-STG 2	11/30/2000 00:00:00
23070987	C5439	725182010000	VANE ASSY, HP TURBINE-STG 2	11/30/2000 00:00:00
23070987	C5110	725182010000	VANE ASSY, HP TURBINE-STG 2	11/30/2000 00:00:00
23070987	H4872	725182010000	VANE ASSY, HP TURBINE-STG 2	11/30/2000 00:00:00
23070987	C5212	725182010000	VANE ASSY, HP TURBINE-STG 2	11/30/2000 00:00:00
23070987	A5156	725182010000	VANE ASSY, HP TURBINE-STG 2	11/30/2000 00:00:00
23070988	TW184884	725281000044	SPACER, TURB-1ST TO 2ND STAG	11/30/2000 00:00:00
23068178	MM183421	725282000000	WHEEL ASSY, BLADED-2ND STG	11/30/2000 00:00:00
23068438	MM183421	725282010000	WHEEL, TURBINE-STAGE 2	11/30/2000 00:00:00
23060273	EU240809	725281000039	RING SEAL, TURB WHL-STG 1	11/30/2000 00:00:00
23060842	LT186093	725281000035	RING, AIR DISTRIBUTION	11/30/2000 00:00:00
23071148	JE45490	724500000000	LINER ASSY, COMB (EFFUSION)	11/30/2000 00:00:00
23073452	1YR05332	731101000000	FUEL NOZZLE ASSEMBLY	11/30/2000 00:00:00
23073452	1YR04996	731101000000	FUEL NOZZLE ASSEMBLY	11/30/2000 00:00:00
23073452	1YR04981	731101000000	FUEL NOZZLE ASSEMBLY	11/30/2000 00:00:00

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23073452	1YR05414	731101000000	FUEL NOZZLE ASSEMBLY	11/30/2000	00:00:00
23073452	1YR05319	731101000000	FUEL NOZZLE ASSEMBLY	11/30/2000	00:00:00
23073452	1XR13288	731101000000	FUEL NOZZLE ASSEMBLY	11/30/2000	00:00:00
23073452	1YR04900	731101000000	FUEL NOZZLE ASSEMBLY	11/30/2000	00:00:00
23073452	1YR04898	731101000000	FUEL NOZZLE ASSEMBLY	11/30/2000	00:00:00
23073452	1YR04625	731101000000	FUEL NOZZLE ASSEMBLY	11/30/2000	00:00:00
23073452	1YR05396	731101000000	FUEL NOZZLE ASSEMBLY	11/30/2000	00:00:00
23073452	1YR05334	731101000000	FUEL NOZZLE ASSEMBLY	11/30/2000	00:00:00
23073452	1YR05331	731101000000	FUEL NOZZLE ASSEMBLY	11/30/2000	00:00:00
23073452	1YR04908	731101000000	FUEL NOZZLE ASSEMBLY	11/30/2000	00:00:00
23073452	1YR05342	731101000000	FUEL NOZZLE ASSEMBLY	11/30/2000	00:00:00
23073452	1YR04890	731101000000	FUEL NOZZLE ASSEMBLY	11/30/2000	00:00:00
23073452	1YR04629	731101000000	FUEL NOZZLE ASSEMBLY	11/30/2000	00:00:00
23067890	A81150	725800000000	ROTOR ASSY, LP TURBINE	11/30/2000	00:00:00
23071198	NWK003094	725900050500	BEARING, ROLLER-CYL 55 X 85 X 28.1 MM	11/30/2000	00:00:00
23070352	GV211538	725802000040	SHAFT, LP TURBINE-REAR	11/30/2000	00:00:00
23067850	LA18620	725700000000	TURBINE ASSY, LP	11/30/2000	00:00:00
23072561	KV2319K	725700000039	SEAL, INTERSHAFT CARBON	11/30/2000	00:00:00
23065541	LA18620	725702000000	CASE ASSY, LP TURBINE	11/30/2000	00:00:00
23066409	A01BU	725785010000	VANE & SEAL ASSY, STG 3	11/30/2000	00:00:00
23072638	A01BU	725785010100	VANE RING, LP TURB, STG 3	11/30/2000	00:00:00
23066407	A01CA	725784010000	VANE & SEAL ASSY, STG 2	11/30/2000	00:00:00
23072946	A01CA	725784010100	VANE RING, LP TURBINE, STAGE 2	11/30/2000	00:00:00
23066431	A01RD	725763010100	VANE RING, LP TURBINE-STG 1	11/30/2000	00:00:00
23059921	NX10492	772103000000	WIRING ASSY, T/C	11/30/2000	00:00:00
23059920	NX11172	772102000000	WIRING HARNESS, T/C	11/30/2000	00:00:00
23039952	FF216446	772101000000	THERMOCOUPLE ASSY, TURBINE	11/30/2000	00:00:00
23039952	FF216445	772101000000	THERMOCOUPLE ASSY, TURBINE	11/30/2000	00:00:00
23039952	FF216444	772101000000	THERMOCOUPLE ASSY, TURBINE	11/30/2000	00:00:00
23039952	FF216443	772101000000	THERMOCOUPLE ASSY, TURBINE	11/30/2000	00:00:00
23039952	FF216442	772101000000	THERMOCOUPLE ASSY, TURBINE	11/30/2000	00:00:00
23039952	FF216441	772101000000	THERMOCOUPLE ASSY, TURBINE	11/30/2000	00:00:00
23039952	FF216440	772101000000	THERMOCOUPLE ASSY, TURBINE	11/30/2000	00:00:00
23039952	FF216439	772101000000	THERMOCOUPLE ASSY, TURBINE	11/30/2000	00:00:00
23039952	FF216436	772101000000	THERMOCOUPLE ASSY, TURBINE	11/30/2000	00:00:00
23039952	FF216437	772101000000	THERMOCOUPLE ASSY, TURBINE	11/30/2000	00:00:00
23039952	FF216435	772101000000	THERMOCOUPLE ASSY, TURBINE	11/30/2000	00:00:00

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23039652	FF216435	772101000000	THERMOCOUPLE ASSY, TURBINE	11/30/2000	00:00:00
23039652	FF216434	772101000000	THERMOCOUPLE ASSY, TURBINE	11/30/2000	00:00:00
23039652	FF216433	772101000000	THERMOCOUPLE ASSY, TURBINE	11/30/2000	00:00:00
23039652	FF216432	772101000000	THERMOCOUPLE ASSY, TURBINE	11/30/2000	00:00:00
23039652	FF216431	772101000000	THERMOCOUPLE ASSY, TURBINE	11/30/2000	00:00:00
23067076	GV185743	725801000040	SHAFT, LP TURBINE-FORWARD	11/30/2000	00:00:00
23070047	WD188038	725885000000	WHEEL ASSY, BLADED-LPT	11/30/2000	00:00:00
23070046	WD188038	725885010000	WHEEL, TURBINE-LP STG 3	11/30/2000	00:00:00
23064111	MP009558	725800050100	BEARING, BALL-SIR	11/30/2000	00:00:00
23061737	KV2272H	725900080736	SEAL ASSY, CARBON #7	11/30/2000	00:00:00
23054318	WD180831	725884000000	WHEEL ASSY, TURBINE-LP	11/30/2000	00:00:00
23058312	WD180831	725884010000	WHEEL ASSY, LPT-STG 2	11/30/2000	00:00:00
23054049	TW17436	725884000044	SPACER, TURBINE-LP	11/30/2000	00:00:00
23054317	WD209955	725883000000	WHEEL ASSY, TURBINE-LP	11/30/2000	00:00:00
23060111	WD209955	725883010000	WHEEL, LPT-STAGE 1	11/30/2000	00:00:00
23063088	TW17430	725883000044	SPACER, TURBINE-LP	11/30/2000	00:00:00
23063088	HQ002565	727300000000	DUCT ASSY, OUTER BYPASS	11/30/2000	00:00:00
23079532	1386	792514000000	COOLER ASSY, OIL-FUEL COOLE	11/30/2000	00:00:00
23073367	HQ004468KI	727100020000	INNER DUCT ASSY, COMP LWR	11/30/2000	00:00:00
23073366	HQ004453KI	727100030000	INNER DUCT ASSY, COMP LT	11/30/2000	00:00:00
23073365	HQ004568KI	727100040000	INNER DUCT ASSY, COMP RT	11/30/2000	00:00:00
23072286	EX70119	732501000000	ELEC CONT ASSY-HRDWR & SFTW	11/30/2000	00:00:00
23072288	EX70140	732501000000	ELEC CONT ASSY-HRDWR & SFTW	11/30/2000	00:00:00
23070328	RJ13489	781101000000	TANK ASSY, OIL WITH AVO SEP	11/30/2000	00:00:00
23070218	NX11072	761301000000	HARNESS ASSY, EXT-ENG INDIC	11/30/2000	00:00:00
23064830	Q5169	792303000000	UNIT ASSY, OIL FILTER	11/30/2000	00:00:00
23066429	724	727302000200	SUPPORT ASSY, BYPASS	11/30/2000	00:00:00
23066759	NX11251	761101020000	WIRING HARNESS ASY,ENG CNTL	11/30/2000	00:00:00
23062387	NX11287	761102020000	HARN ASSY, WIRING, EXT ENG	11/30/2000	00:00:00
23056822	1323	792512000000	COOLER ASSY, OIL-AIR COOLED	11/30/2000	00:00:00
23057324	UY00464921	741301000000	EXCITER, IGNITION	11/30/2000	00:00:00
23057324	UY00464914	741301000000	EXCITER, IGNITION	11/30/2000	00:00:00
23052813	P10051	733501010000	FLOWMETER ASSY, FUEL	11/30/2000	00:00:00
23063061	WD18597	722101000000	ROTOR ASSY, FAN	11/30/2000	00:00:00
23072549	TJ16172	722103030000	FRAME ASSY, FRONT	11/30/2000	00:00:00
23072309	KV1E387	722103060036	SEAL ASSY, SEG CARBON FAN	11/30/2000	00:00:00
23065841	HN17307	722103050086	HSG ASSY, SUPP.,FAN BRG.	11/30/2000	00:00:00

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23063015	GX76131	774105000000	SENSOR, ACCELEROMETER VIBRA	11/30/2000 00:00:00
23065332	GV15452	722101070000	SHAFT ASSY, DRIVE FAN	11/30/2000 00:00:00
23066321	GO17566	722502000000	GEAR,BEVEL-FRONT SUMP	11/30/2000 00:00:00
23070366	KV16S71	722502060439	SEAL ASSY, NO.4 CARBON	11/30/2000 00:00:00
23063132	NWLJ003567	722502050700	BEARING,ROLLER FLNGED(Ø7MM)	11/30/2000 00:00:00
23062542	NWJ002891	722502050900	BEARING, ROLL BOX100X11 MM	11/30/2000 00:00:00
23064222	MP01062	722502050800	BEARING, BALL-ANNULAR	11/30/2000 00:00:00
23064113	MP01474	722502050300	BEARING, ROLLER-CYL	11/30/2000 00:00:00
23069576	MP01327	722101010000	WHEEL, FAN	11/30/2000 00:00:00
23061626	JD18224	722503050500	BEARING, ROLLER-CYL	11/30/2000 00:00:00
23062389	ENC449	722102000000	CASE ASSY, FAN	11/30/2000 00:00:00
23062389	ENC450	711103010000	SENSOR, FAN SPEED PICKUP	11/30/2000 00:00:00
23062491	HK18963	711103010000	SENSOR, FAN SPEED PICKUP	11/30/2000 00:00:00
23061402	GQ36913	722101020134	RETAINER ASSY, BLADE-FAN	11/30/2000 00:00:00
23064226	NWK0003442	722501050600	GEARSHAFT ASSY,RADIAL DRIVE	11/30/2000 00:00:00
23061191	DD44829	722501050600	BEARING, CONRAD 30X82X18MM	11/30/2000 00:00:00
23059750	RT47866	722101070027	NUT, SPANNER-END SLOTS	11/30/2000 00:00:00
23055446	84028161	754101010000	SENSOR, TOTAL TEMP	11/30/2000 00:00:00
23055446	837487	754301010000	SENSOR, P2.5 PRESSURE TRANS	11/30/2000 00:00:00
23056318	GV15832	722504000040	SHAFT, HORIZONTAL QUILL	11/30/2000 00:00:00
23054008	LK30801LN	722101050027	NUT, SELF LOCKING-BEARING	11/30/2000 00:00:00
23054010	AF00283	722101050000	BEARING, ROLLER CYLINDRICAL	11/30/2000 00:00:00
23034925	65262126	754304010000	TRANSDUCER, P2 PRESSURE-ABS	11/30/2000 00:00:00
23034925	65262100	754304010000	TRANSDUCER, P2 PRESSURE-ABS	11/30/2000 00:00:00

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Rolls-Royce Corporation
 P.O. Box 420
 Indianapolis, Indiana
 46206-0420 USA



PACKING LIST

Stand No. 23054395 Stand 106
 One run engine New G.P.A.E.
 Two run engine
 ENGINE Unit No. CAE-311642 Model AE-3007A1 Date 11-30-00
 ACCY DR GEARBOX 1237

Quantity	Part number	Name of part
1	23070991 ✓	ENGINE ASSEMBLY
1	23072174 ✓	ACCESSORY DRIVE GEARBOX ASSEMBLY
2	23034925 ✓	TRANSDUCER, AIRFRAME MOUNTED COMPONENT <u>S/N 6526-2-126</u> ✓ <u>S/N 6526-2-100</u> ✓
2	AS3085-009 ✓	O-RING - TRANSDUCER
2	23072296 ✓	CONTROL ASSY, PADEC <u>S/N BX70119</u> ✓ <u>S/N BX70140</u> ✓

of 127718/80

Inspected *[Signature]*

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31.1292
 Rev 10-24-00
 2802C
 31024
 Date Prepared *[Signature]*
 Date Shipped *[Signature]*

PACKING ROOM CHECK SHEET
 3007 SERIES TURBO FAN ENGINE ASSEMBLY
 3007A1 P/N 23070402
 3007A2 P/N 23070402
 3007A3 P/N 23070402
 3007A4 P/N 23070402
 3007A5 P/N 23070402

ENGINE S/N CAE *311642*
 3007A P/N 23054092
 3007A1 P/N 23070402
 3007A2 P/N 23070402
 3007A3 P/N 23070402
 3007A4 P/N 23070402
 3007A5 P/N 23070402

Contract *17-30-06*
 Destination *NEW (V)*

PART NAME	PART NO.	S/N	PART NAME	PART NO.	S/N
Compressor Rotor	23073508	A19348	Fan Rotor Assy	23063061	WD18597
Compr. Cone Shaft	23070729	MM100732	Fan Wheel	23061670	WD18597
Compr. Tiebolt	23070730	L199224	Fan Blade Fwd Retainer	23062491	HK18963
Compr. Stub Shaft	23072276	6V200687	Fan Drive Shaft	23065332	6V15452
Compr-Turb Shaft Assy	23068447	L214158	LP Turbine Rotor	23060111	A81150
Compr. Case	23073029	JB226864	LP 1st Stg T. Wheel	23058312	WD209955
HP Turbine Rotor	23070981	A71171	LP 2nd Stg T. Wheel	23070046	WD180831
HP 1st Stg T. Wheel	23069591	MM143164	LP 3rd Stg T. Wheel	23070046	WD188038
HP 2nd Stg T. Wheel	23069438	MM183421	LP Turb Int. Spacer 1-2	23054049	TW17430
HP 3-2 Stg Spacer	23070989	TW184884	LP Turb Int. Spacer 2-3	23054049	TW17430
	23069557		LP Turb Forward Shaft	23067076	6V185743

NEW (V) OVERHAUL () REPAIR () MODIFICATION ()

Inspector *[Signature]* Certified Inspector

2-1293
 Rev. 12-17-99
 3007A P/N 23052702
 3007A P/N 23055502
 Date Prepared / / S.O. -02
 Date Shipped / / S.O. -02
 Contract / / S.O. -02
 Destination / / S.O. -02

PACKING ROOM CHECK SHEET
 3007 SERIES TURBO FAN ENGINE ASSEMBLY
 ENGINE S/N CAE 311642
 3007A P/N 23054892
 3007A1 P/N 23070991
 3007A1A P/N 23029992
 3007A1B P/N 23029992
 3007A1C P/N 23029992

PART NAME	PART NO.	S/N	PART NAME	PART NO.	S/N
1 st Stg. Compr. Wheel	23065041	L 188465	8 th Stg. Compr. Wheel	23071263	L 181485
2 nd Stg. Compr. Wheel	23050752	L 184288	9 th Stg. Compr. Wheel	23071264	L 134590
3 rd Stg. Compr. Wheel	23065303	L 206042	10 th Stg. Compr. Wheel	23071265	L 243093
4 th Stg. Compr. Wheel	23071259	L 188744	11 th Stg. Compr. Wheel	23066231	L 214516
5 th Stg. Compr. Wheel	23071260	L 184657	12 th Stg. Compr. Wheel	23071267	L 210178
6 th Stg. Compr. Wheel	23071396	L 199070	13 th Stg. Compr. Wheel	23071268	L 207417
7 th Stg. Compr. Wheel	23071397	L 210557	14 th Stg. Compr. Wheel	23071269	L 211668

NEW () OVERHAUL () REPAIR () MODIFICATION ()
 Inspector *C. Phillips* Certified Inspector

MB

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Rolls-Royce Data Reduction Report

Sales Page was generated at 11:24:57 on 11/30/00
 Using ae3007aiprod Version: 1.5.3
 Generated with: #H Ae3007aprog Version: 1.6.1

SERNO = 311642	Prod/Field Return: Production
MODEL = AE3007A1	Memo No: 902 Rev E
TSTAND = 111	FADEC Assy P/N: 23072298
TTLHV = 18524.0	FADEC A Serial No: BX70099
API = 43.2	FADEC B Serial No: BX70104
Resistor No = 23058854-4	Run Type: Final
Testid = 111_30Nov2000_Ap	Vane Area:
Date (YYMMDD) = 001130	Comment:
Time (HHMMSS.s) = 105225.3	Engine Routing: Storage
Pamb (psia) = 14.51	Operator No. 1: WOOD
T10avg (Deg F) = 37.7	Operator No. 2:
NumPoints = 7	
NamePlate Thrust = 8338	
NamePlate Rating = A1P	

Predicted Data		A1P TO	A1 T0-1	A1 ATO	A1 MCL	A1 MCR
N1 Fan Speed (rpm)	=	7811.0	7528.0	7268.0	7228.0	6758.0
Thrust (lbf)	=	8494.4	7765.7	7124.2	7027.5	5924.6
%Delta Spec Max Thrust	=	-3.9	-3.4	-2.1	-1.9	-2.1
%Delta Spec Min Thrust	=	1.9	2.4	3.8	4.0	3.7
N2 Speed (rpm)	=	15527.1	15254.8	15021.3	14986.7	14604.3
% of Spec Max N2	=	-1.4	-1.3	-1.4	-1.5	-1.5
TSFC (lb/h/lbf)	=	0.3931	0.3880	0.3827	0.3820	0.3783
%Delta Spec SFC	=	-1.49	-2.03	-2.62	-2.81	-3.01
T4.5 (Deg F)	=	1459.4	1398.5	1342.2	1333.6	1235.0
Delta Spec T4.5	=	-30.6	-31.5	-29.8	-28.4	-34.0
GI N1 (rpm)	=	2144.7				
GI Thrust (lbf)	=	487.0				

* Indicates parameter failed the performance limit for the rating.

Vibration (Max Steady State Level)

	IPSPeak	/ fan rpm
FFV N1>6000	: 0.28	/ 7750
VGG N2>0	: 0.55	/ 10753

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Rolls-Royce Data Reduction Report

Sales Page was generated at 11:24:57 on 11/30/00
 Using ae3007alpprod Version: 1.5.3
 Generated with: #H Ae3007aprog Version: 1.6.1

SERNO = 311642	Prod/Field Return: Production
MODEL = AE3007A1	Memo No: 902 Rev E
TSTAND = 111	FADEC Assy P/N: 23072298
TTLHV = 18524.0	FADEC A Serial No: BX70099
API = 43.2	FADEC B Serial No: BX70104
Resistor No = 23058854-1	Run Type: Final
Testid = 111_30Nov2000_Ap	Vane Area:
Date (YYMMDD) = 001130	Comment:
Time (HHMMSS.s) = 105225.3	Engine Routing: Storage
Pamb (psia) = 14.51	Operator No. 1: WOOD
T10avg (Deg F) = 37.7	Operator No. 2:
NumPoints = 7	
NamePlate Thrust = 8338	
NamePlate Rating = A1P	

Predicted Data	A1/1 TO-1	A3 TO-1	A1/1 ATD	A3 MCO	A3 A TO
N1 Fan Speed (rpm)	= 7556.0	7408.0	7254.0	7254.0	7131.0
Thrust (lbf)	= 7836.3	7466.6	7090.3	7090.3	6795.2
%Delta Spec Max Thrust	= -2.5	-2.2	-2.1	-2.1	-2.0
%Delta Spec Min Thrust	= 3.4	3.7	3.8	3.8	3.9
N2 Speed (rpm)	= 15280.8	15145.1	15009.2	15009.2	14904.2
% of Spec Max N2	= -3.5	-4.3	-2.9	-2.9	-3.1
TSFC (lb/h/lbf)	= 0.3880	0.3851	0.3825	0.3825	0.3806
%Delta Spec SFC	= -2.03	-2.50	-2.68	-2.68	-2.40
T4.5 (Deg F)	= 1389.5	1357.4	1324.2	1324.2	1297.8
Delta Spec T4.5	= -93.5	-89.6	-87.8	-87.8	-88.2
GI N1 (rpm)	= 2144.7				
GI Thrust (lbf)	= 487.0				

* Indicates parameter failed the performance limit for the rating.

Vibration (Max Steady State Level)

	IPSPeak	/ fan rpm
FFV N1>6000	: 0.28	/ 7750
VGG N2>0	: 0.55	/ 10753

[Handwritten signatures and marks]