

# *Managing Continuing Airworthiness*

*BDCA Seminar April 2009*

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## *LLC DHAC Avia*

- David Hall, Director General, 20 years in UK CAA.
- Started a UK consulting company 2004
- Russia and CIS quickly became centre of the business
- Formed a Russian consulting company 2008 to provide services to all areas of the Russian aviation industry

# *Today's Talk*

- Not specifically about OTAR 39 or requirements
- Many of the subjects have related requirements
- All of the subjects do however affect either the residual value of the aircraft, or the ability to easily return the aircraft at end of lease

# *Continuing Airworthiness in Russia*

- The philosophies of design, operation and maintenance are so very different to Soviet built aircraft
- A weakness due to the lack of experienced, qualified people to organise and manage western built aircraft
- People move from one Operator to another, taking with them their misunderstandings, CAME, Spreadsheets, etc

# *Typical Problems - Maintenance Programme*

- Common misunderstanding between a Maintenance Schedule and a Maintenance Programme
- The aircraft is maintained to a Maintenance Schedule derived from the MPD. It is not a Maintenance Programme.
- Many elements are missing

# *Typical Problems - Maintenance Programme*

- Corrosion Control Programme
- Reliability Programme
- Engine off-wing maintenance programme
- STC derived maintenance tasks, Airworthiness Limitations, CMRs etc
- Category B and C repairs

# *Typical Problems - Maintenance Programme*

- Hard time parts control, particularly safety equipment (manufacturer's recommendations)
- Life Limited Parts (LLP) control
- Fuel and oil contamination checks
- Flight Data and Cockpit Voice Recorders

# *Typical Problems – Service Bulletins*

- SBs are not mandatory but the Operator should have a policy and review them
- Not performing SBs affects the reliability of the aircraft
- The MPD assumes that the aircraft is new and latest SBs have been embodied at build
- Some aircraft imported into Russia have not had any SBs incorporated for many years.

# *Typical Problems – Airworthiness Directives*

- Confusion over what constitutes an AD
- Where to look for an AD
- Equipment ADs frequently not assessed as the equipment fitted not known therefore unsure as to the NAA responsible
- Alternative Method of Compliance used by previous Operator

# *Typical Problems – Deferred Defects*

- Original date of the defect not evident in the system
- “N” code used for defects not considered to be an MEL item therefore deferred indefinitely
- Cabin Log contains airworthiness items not transferred to the TLB, not cleared as rectified

# *Typical Problems – Parts Robbery*

- Parts robbed from one VP registered aircraft to be fitted to another VP registered aircraft are removed and an EASA Form one certified that is not in accordance with AMC 145.A.50

## *Typical Problems – PMA Parts*

- Parts manufactured under the FAA Parts Manufacturing Approval (PMA) are acceptable to BDCA when accompanied by an 8130-3 form
- However, they must be eligible for fitment on the aircraft type.
- Some leasing contracts prevent the fitment of PMA parts

09-10-08 11-107

# AUTHORIZED RELEASE CERTIFICATE

## FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG

3. Part Tracking Number  
AV0566490870-2382846

FAA UNITED STATES

1. Organization Name and Address:  
AVIALL  
2750 Republic Blvd.  
Dallas, Texas 75261

5. Work Order Contract/Order Number  
CPO45079608801

6. Item	7. Description	8. Part Number	9. Eligibility*	10. Quantity	11. Serial/Part Number: S/N:	12. Status/Work:
01	HORN, GROUND CREW CALL	01-0770544-00	BOEING 747  A20WC	10	08550 08679 08694 09680 09685 08603 08261 08692 09660 08682	NEW

13. Remarks:  
The above part is a PMA component or sub-component

QTY: 10    INSP: 9    LOT:    INC:    0382846

14. Certify the items identified above were manufactured in conformity to:  
 Approved drawings and are in a condition for safe operation.  
 No approved design data specified in Block 13.

19.  Off 415 Return to Service     Other regulation specified in Block 13  
HAM HF062 10.06.06 13:42 T  
Identified in Block 12 and Title 14, Chapter I Federal regulations approved for return to service.

15. Authorized Signatory: *[Signature]*

16. Approval/Authorization No.:  
DART-76000-SW



21. Approval Certificate No.:

17. Name (Typed or Printed):  
KENNETH H. ROBINSON

18. Date (mm/dd/yyyy):  
Jun 5, 2006

22. 303 880162

23. Date Issued:

### User/Installer Responsibilities

It is important to understand that the release of this requirement 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 a jurisdiction other than the jurisdiction authority of the country specified in Block 1, it is essential that the user/installer retains full national airworthiness authority except for the component/assembly from the jurisdiction authority of the country specified in Block 1.  
Statements of work to be performed must constitute installation and inspection that cases, aircraft maintenance records must contain a full and complete certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.

FAA FORM 8130-3 (9-01)

# *Typical Problems – ATA 106 Certification*

- ATA 106 forms frequently accepted as certification of the part
- ATA 106 forms are statements not certifications
- Many resemble the 8130-3 or EASA Form One format

ATC Lasham Ltd  
 Britavia Hangar  
 Southend Airport  
 Southend-on-Sea  
 Essex  
 SS2 0YU  
 Tel: +44 (0) 1702 841616  
 Fax: +44 (0) 1702 569743



Aviation Support Europe  
 Hamestraat 14  
 3301 AA RSCHEMPT  
 Belgium

**CERTIFICATE OF CONFORMITY**

Customer Order: 1905 1675  
 ATC Reference no: SHL201283

Item	Description	Part Number	Eligibility	Qty	Serial	Batch No.	Status/Work
1	FILTER	179536 1 LAST ITEM	N/A	2		60651	NEW SURPLUS

**Remarks / Comments:**

Certified that component parts have originated from qualified manufacturing sources and are in the same condition as when received and unless otherwise stated conform to the specification required by your order.  
 Above item supplied surplus from stock ATC Lasham Ltd. Previously Purchased from PDC Aerospace Ltd on Certificate of Conformity 190518 with Trace to United Airlines 5130-3 Tracking Number 01E-A00001431 Dated 6<sup>th</sup> November 2003

Certified that unless otherwise stated above, the article is supplied as delivered without alteration, inspection, testing etc, unless otherwise stated, conform with the applicable specification.

ATC Lasham Ltd. Registered in England, No. 02990036, 770 Chancery Street, London W1G 0DD

ATC Lasham Cert C No: 1235

signed: *S. Rossiter*



Date: 26<sup>th</sup> August 2007

Form No: C0000001

**PART OR MATERIAL CERTIFICATION FORM  
CERTIFICATE OF CONFORMITY**

ORIGINAL  
ATA SPECIFICATION 108

<b>2. SELLERS NAME</b>  <b>PDQ AIRSPARES LTD</b>	<b>3. REFERENCE NO.</b>  P59919
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<b>4. ORGANISATION</b>  ADDRESS: The Fairgate Centre, Burgate, Fordingbridge, Hampshire. United Kingdom SP6 1LX	PHONE NO. 44-1425-652200  FAX NO. 44-1425-652001  STATUS
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<b>5A. SELLER'S CONTRACT NO.</b> P59919	<b>5B. BUYER'S CONTRACT NO.</b> P606631
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6. Item	Description	8. Manufacturer & Part No.	9. Eligibility	10. Qty	11. Serial/Batch	12. Status
1	FILTER	179536-1	UNKNOWN	3	398479-1	N5


BATCH No.  
606631


THE UNDERSIGNED IN BOX 15 OR 19, CERTIFY THAT THE WHOLE OF THE SUPPLIES DETAILED ABOVE HAVE BEEN INSPECTED, TESTED AND UNLESS OTHERWISE STATED ABOVE, CONFORM IN ALL RESPECTS TO THE REQUIREMENTS OF THE PURCHASE ORDER REFERENCED IN BOX 5B.



**13A. REMARKS:** THE UNDERSIGNED, HEREBY CERTIFIES THAT THE APPLICABLE NEW MATERIAL SO IDENTIFIED ABOVE HAS NOT BEEN OBTAINED FROM ANY GOVERNMENT OR MILITARY SOURCE AND ORIGINATED FROM A QUALIFIED AND AUTHORISED MANUFACTURER. USED MATERIAL SO IDENTIFIED ABOVE HAS NOT BEEN SUBJECT TO SEVERE STRESS OR HEAT AS IN MAJOR ENGINE FAILURE, ACCIDENT, INCIDENT OR FIRE. VENDOR FURNISHED CERTIFICATION AGAINST ALL MATERIAL SUPPLIED TO PDQ IS RETAINED ON FILE AND IS AVAILABLE ON DEMAND TO THE ORGANISATION / OPERATOR SO REQUESTING.

<b>3B. TRACEABLE TO</b>  UNITED AIRLINES	<b>13C. LAST CERTIFIED AGENCY</b>
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<b>14. NEW PARTS/MATERIAL VERIFICATION:</b> THE FOLLOWING SIGNATURE ATTESTS THAT THE PART(S) OR MATERIAL(S) IDENTIFIED ABOVE WAS (WERE) MANUFACTURED BY A FAA PRODUCTION APPROVAL HOLDER (FAH), OR TO AN INDUSTRY COMMERCIAL STANDARD.	<b>18. USED, REPAIRED OR OVERHAULED PARTS VERIFICATION:</b> THE FOLLOWING SIGNATURE ATTESTS THAT THE DOCUMENTATION SPECIFIED ABOVE OR ATTACHED IS ACCURATE WITH REGARD TO THE ITEM(S) DESCRIBED.
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<b>15. SIGNATURE:</b> 	<b>19. SIGNATURE:</b>
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<b>16. NAME:</b> 	<b>17. DATE:</b> 29/04/2005	<b>20. NAME:</b>	<b>21. DATE:</b> 29/04/2005
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1. Approving National Aviation Authority/Country: <b>FAA/United States</b>		<b>AUTHORIZED RELEASE CERTIFICATE</b> FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG				3. Form Tracking Number: <b>016-A00001431</b>	
4. Organisation Name and Address: <b>SAN FRANCISCO INTERNATIONAL AIRPORT, SAN FRANCISCO, CALIFORNIA 94126-3800 USA</b>		 <b>UNITED AIRLINES</b>				5. Work Order/Contract/Invoice Number: <b>123905</b>	
6. Item:	7. Description:	8. Part Number:	9. Eligibility:	10. Qty.:	11. Serial/Batch #:	12. Status/Work:	
(1)	FILTER	179536-1	N/A	31	NSN	INSPECTED	
13. Remarks: RECEIVING INSPECTION REQUIRED. ITEM #1 HAS BEEN INSPECTED AND FOUND TO BE NEW SURPLUS; REFERENCE: IPC 49-20-00-000R-430. CERTIFIES THAT THE WORK SPECIFIED IN BLOCK 12/13 WAS CARRIED OUT IN ACCORDANCE WITH JAR 145 AND IN RESPECT TO THAT WORK THE AIRCRAFT COMPONENT(S) IS (ARE) CONSIDERED READY FOR RELEASE TO SERVICE UNDER JAA ACCEPTANCE CERTIFICATE NUMBER: JAA.4980. ***END***							
 <p>Reference Your PO # <u>ML4571</u> I certify that this photocopy is a copy of the original document. Airline Services LLC is supplying a quantity of <u>1</u> from this document. Print Name: <u>DANIEL H. GARDNER</u> Signature: <u>[Signature]</u></p>							
14. Certified the items described above were manufactured in conformity with the applicable design data and are in a condition for safe operation.		15. <input checked="" type="checkbox"/> 14 CFR 43.9 Return to Service <input checked="" type="checkbox"/> Other regulation specified in Block 13		16. Approved design data and are in a condition for safe operation.		17. Certifies that unless otherwise specified in Block 13, the work identified in Block 12 and described in Block 13 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.	
18. Authorized Signature:		19. Approval Authorization No.:		20. Authorized Signature:		21. Approval Certificate No.:	
[Signature]		[Blank]		[Signature]		UALR011A	
22. Name & FN (Typed or Printed):		23. Date (mm/dd/yyyy):		24. Name & FN (Typed or Printed):		25. Date (mm/dd/yyyy):	
BERNABE, JR. F., LUIS		06/11/2003		BERNABE, JR. F., LUIS		06/11/2003	
007027				007027			
<b>User/Installer Responsibilities</b>							
It is important to understand that the existence of this document alone does not automatically constitute authority to install the part/component/assembly.							
Where the user/installer performs work in accordance with the national regulation 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 his/her airworthiness authority accepts part/assemblies from the airworthiness authority of the country specified in Block 1.							
Statements in Blocks 14 and 19 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.							
* Installer must cross-check eligibility with applicable technical data.							
[FAA Form 8130-3 (8-01)-NSN: 0052-00-012-9905] ACP 3-3-1 & IPM 90-20-01 (REV. 03/07/2003)							

# *Typical Problems – Status Lists*

- Hard Time
- ADs
- LLP
- OCCM
- Maintenance Program tasks

# *Typical Problems – Status Lists*

- Corrosion Control
- SSID
- Major Repairs
- Major Modifications
- A combination of other Operators Status Lists

# *Shop Visit Reports*

- Shop visit reports for LDG and engines contain much required records needed when returning from lease
- BTB traceability
- Hard time EASA Form ones etc
- Full Shop visit reports sometimes missing if part overhauled just before Delivery

# *Typical Problems – Flight Manuals*

- Pilots confused over what is the Flight Manual and what is the Aircraft Operating Manual
- FM amended incorrectly
- No ADs or old Ads not removed
- Temp Revisions not removed
- Supplements missing

# *Continuing Airworthiness Birth to Grave*

- Failure to ensure that records and information are available and correct at Delivery will inevitably give problems
- Even if the State of Registration is satisfied – the leasing company can give (expensive) problems on Redelivery

# *Continuing Airworthiness*

## *Birth to Grave*

- The aircraft lease agreement will often state that the leasing company is not an expert in the aircraft and the Operator must supply experts to satisfy themselves and accept the aircraft
- Mistakes or omissions when accepting the aircraft are the lessee's responsibility!

# *Delivery of the Aircraft Incomplete Records*

- Many old aircraft have incomplete records
- Often only records back to the last 'D' Check are available
- AN(O)TO, OTARs and EASA requirements all require that all detailed records to be kept

# *Delivery of the Aircraft Incomplete Records*

- The inventory of historic records should be accurate and comprehensive
- If the records are incomplete then this should be recorded on the Acceptance Certificate from the leasing company

# *Delivery of the Aircraft Airworthiness Directives*

- Files with Dirty Fingerprints (DFP) of AD accomplishment is not a specific requirement but the leasing company expect them.
- If the DFPs are incorrect at Delivery then the lessee could be made to correct this at Redelivery.
- DFP records should be kept up to date

# *Delivery of the Aircraft Major Modifications (STCs)*

- All the information supporting an STC should be in the records (STC, ICAW, Drwgs, FM Supplement , Airworthiness Limitations, CMRs etc)
- You cannot manage the continuing airworthiness without these
- Very expensive to get them afterwards from the STC Holder

# *Delivery of the Aircraft Repairs*

- A list of all the major repairs on the aircraft should be available
- A file for each repair should be available with copies of the approval (e.g. 8110-3, 8100-9) and drawings etc
- Justifying old repairs upon Redelivery can be very time consuming and expensive

# *Delivery of the Aircraft Back to Birth Records*

- No clear regulatory requirement for BTB records
- Leasing companies demand them
- You must have BTB records for all LLPs and the last overhaul certification for Service Life Limited Parts

# *Delivery of the Aircraft Dent and Buckle Mapping*

- Some Lease Agreements require a map of the dents and buckles
- The previous Operator should have supplied one

# *Delivery of the Aircraft Original Delivery Documents*

- Original Export C of A from the factory when new – any waivers may be important
- The document with all the serialised parts installed
- List of SBs embodied during build

# *Delivery of the Aircraft Previous Operator's Maintenance Programme*

- A very useful document
- If the previous Operator was doing any more tasks than the MPD baseline programme, investigate why
- Corrosion control, AMOC AD inspections, Category B and C repairs etc

# *Delivery of the Aircraft Acceptance Certificate*

- Be very careful about what you accept as a deviation from the Delivery Conditions
- LLP BTB missing
- Proof of origin for parts missing
- Repair approvals not per Type Acceptance Certificate

# *During the Operation in Russia*

- Make your own status list using the information from the previous Operator
- Keep the records, files and lists up to date
- Retain all records during your operation, e.g. repair data, modifications, 8130-3/EASA Form Ones, Tech Log Pages
- Scanning of records is recommended for easy searching

# *Aircraft Redelivery*

- Aircraft are only now really starting to be Redelivered back to the Leasing companies
- Many are finding this a painful and expensive process because they did not do the work when taking Delivery or keep good records when they operated the aircraft

# *QUESTIONS?*



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