United Kingdom Overseas Territories Aviation Circular

OTAC 21-6

39-5

Aircraft Airworthiness Review

Issue 3 10 March 2021

Effective: on Issue

GENERAL

Overseas Territories Aviation Circulars are issued to provide advice, guidance and information on standards, practices and procedures necessary to support Overseas Territory Aviation Requirements. They are not in themselves law but may amplify a provision of the Air Navigation (Overseas Territories) Order or provide practical guidance on meeting a requirement contained in the Overseas Territories Aviation Requirements.

PURPOSE

This Circular provides guidance on the format and content expected of an Aircraft Airworthiness Review Report. The Airworthiness Review Report is a collection of data on the status of the build standard and continued airworthiness of an aircraft that will assist organisations and regulators in their assessment of the aircraft during the Certificate of Airworthiness process.

RELATED REQUIREMENTS

This Circular relates to OTAR Parts 21 and 39.

CHANGE INFORMATION

Issue 3. New Part 3 added to provide guidance on the arrangements for making an Airworthiness Review. Additional guidance advice added as new Part 4 regarding the content, layout and completion of an Aircraft Airworthiness Review report.

ENQUIRIES

Enquiries regarding the content of this Circular should be addressed to Air Safety Support International at the address on the ASSI website www.airsafety.aero or to the appropriate Overseas Territory Aviation Authority.

Issue 3.00

CONTENTS

1	Introduction	3
2	AIRCRAFT AIRWORTHINESS REVIEW REPORT	3
3	ARRANGEMENTS FOR MAKING AN AIRCRAFT AIRWORTHINESS REVIEW	3
4	AIRCRAFT AIRWORTHINESS REVIEW REPORT CONTENT	4

1 Introduction

- 1.1 In order to certify that an aircraft conforms to an acceptable standard it may be necessary for an organisation to investigate the aircraft's build, operational fit, design and repair standard and provide a report to the Authority. This report is referred to as the 'Aircraft Airworthiness Review' report. Organisations may be approved to supply reports under an OTAR Part 39 Approval or by holding an appropriate design approval granted by an acceptable NAA.
- 1.2 The Airworthiness Review Report shall reflect the guidance material contained in this Circular and include information on compliance with the approved standard.

 Deviations and exceptions to the approved standard shall also be stated.
- 1.3 The Airworthiness Review Report is a collection of data on the status of the build standard and continued airworthiness of an aircraft that will assist organisations and regulators in their assessment of the aircraft. The report will also outline any applicable operational requirements. The report is to be used in conjunction with other documents, particularly the Survey Report detailed in OTAC 21-3, in the assessment of the aircraft for the issue of a Certificate of Airworthiness.
- 1.4 It is not the intention that the Airworthiness Review Report will provide all of the information necessary for the Certificate of Airworthiness process, nor is it suggested that an Airworthiness Review report will be necessary for every Certificate of Airworthiness issued, it is merely one of the tools used. It would typically be requested by an OTAA where the history of a particular aircraft is complicated or where an aircraft has not been in service for an extended period.
- 1.5 OTAR Part 21 provides details of the Type Approvals and Design Changes Approvals acceptable to ASSI and the OTAAs.

2 Aircraft Airworthiness Review report

Part 4 provides guidance regarding the content and layout of the Aircraft Airworthiness Review report. This should not be considered as an exhaustive checklist of the issues to be addressed during the investigation.

3 Arrangements for making an Aircraft Airworthiness Review

- In most cases, the OTAA is required to review for acceptance the arrangements made for the development of an AAR. As there are varied reasons for the OTAA prescribing the need for an AAR, it follows that the scope of the review may also be varied to suit the circumstance. This scope will also feature in the OTAA acceptance of arrangements.
- Typically an appropriate organisation being qualified to make this review would be appropriately approved to the requirements of EASA Part M Subpart G or Part CAMO or Part CAO. It may, however, be recognised that other capable organisations and individuals are able to undertake such an exercise. For such persons it would be necessary to demonstrate to the OTAA either generically or in a specific circumstance that competent personnel, procedures and resources are available.

4

4.1 The AAR and EASA Airworthiness Review, whilst similar, they are different. An EASA approved organisation primarily utilising the EASA review format will need to amend their report, and where necessary procedures, to take account of the additional elements required of the AAR.

Aircraft Airworthiness Review Report Content

- 4.2 Material evidence of acceptable or otherwise statements must be reflected in the report. The OTAA may not require the regeneration of aircraft records for the purpose of this report. Cross reference to, and where appropriate, copies of records may be acceptable. It is important to recognise that the objective of the report is to establish the airworthiness and certification status of the subject aircraft. The AAR process should not be designed to rectify adverse findings. It should be designed to provide sufficient data and reports to facilitate the assigned Continued Airworthiness Management Organisation to be able to effectively manage the airworthiness of the subject aircraft. Any adverse findings referred in the report will be required to be addressed in a manner acceptable to the OTAA.
- 4.3 The scope of the report may be varied by agreement with the OTAA. In some circumstances, a reduced or specific scope of report may be acceptable thereby reducing workload and making the report meet the primary objectives. Where it is seen that a varied scope of report would be appropriate, discussions should be made with the OTAA supported with technical justification.
- 4.4 The following provides guidance regarding the content and layout of the Aircraft Airworthiness Review report. This should not be considered as an exhaustive checklist of the issues to be addressed during the investigation.

Front sheet

Organisation:	
Approval Reference:	
Aircraft Report Reference:	
Issue:	
Type Acceptance Certificate No:	
Aircraft Registration:	
Applicant:	
Application Form dated:	

Report Title

E.g. Transfer of Pre-Owned [aircraft type] from [Country] to [OTAA] Register

Report summary

Write a summary statement of the report contents and conclusion

Compiled By: Date:	Checked By:	
Date:	Date:	
	Approved By: Date:	
	Date:	

Aircraft Airworthiness Review Issue 3.00 OTAC 21-6 39-5

Contents index

Front Sheet, Report Title, Report Summary

1. Introduction

2. Basic Aircraft Data

3. List of source documents reviewed

4. Aircraft Build Standard Status

- Build Standard
- Modification History
- Manufactures Service Bulletins (or equivalent) Embodiment
- Repair History
- Environmental Standards Compliance
- Equipment Fit / Configuration
- Flight Manual
- List of Deviations

5. Continued Airworthiness

- Maintenance Schedule/Programme
- Airworthiness Limitations
- Airworthiness Directives
- Instructions for Continued Airworthiness
- Repairs Modifications

6. Certification Requirements

- Air Navigation (OT) Order Compliance
- Overseas Territories Aviation Requirements Compliance Airworthiness Directives
- Alternative Methods of Compliance (AMOC)
- Aircraft Inspection
- 'Lifed' Items
- Post Type Design Generic Regulation Changes

7. Conclusion

Aircraft Airworthiness Review Issue 3.00 OTAC 21-6 39-5

1. Introduction

Write a short introduction including:

- The introduction should discuss the reason for the AAR, the environment for the review, disposition of the aircraft and records, key personnel and parties involved. The scope and objective of the review should also be discussed.
- For a used aircraft coming onto the Cayman Islands aircraft register, this section should explain the history of previous regulatory jurisdictions, explanation of operational history and details of Export C of A's.
- The assessment is carried out against the TCDS Standard for the type listed on the applicable OTAA Type Acceptance Certificate.
- The aircraft currently has (hours) hours total time. (NAA) Export C of A No. refers.

2. Basic Aircraft Data

Aircraft Type:	. Manufacturer's Serial No:
Engine Type:	. Manufacturer's Serial No:
APU Type:	
Propeller Type:	
The aircraft is proposed for o	certification in Certificate of Airworthiness Category:

3. List of source documents reviewed

Provide a list here, together with their revision status, of all the high-level source documents used in the review of the aircraft and its build standard, e.g. Design Reports, Flight Manual, Damage/Repair Reports, Technical Records, Survey Reports, modification reports, Log Books, Worksheets etc.

4. Aircraft build standard status

4.1 Build Standard

The aircraft was built in *[date]* to *[NAA]* Type Certificate Data Sheet: *[number]* Rev. *[number]* Top drawing *(1234-789)* defines the basic build standard for the aircraft.

(List as applicable)

4.2 Modification History

The following modifications have been embodied since manufacture:

Item	Date Installed	Modification Details	Modification No.	Installer	Modification Approval	Comments
1						
2						
3						
4						

Comments arising from modification history above:

Item	Comments	Closure
1		
2		
3		
4		

Notes:

- Include details of any repainting since new and certification.
- The embodiment of a design change where the aircraft serial number applicability is different from the subject aircraft, will require a design investigation as per OTAR Part 21 Subpart C.

• Any instructions for continued airworthiness associated with the design changes embodied should be listed in the Continued Airworthiness section of the report.

4.3 Manufacturers Service Bulletins (or equivalent) Embodiment

The following Manufacturers Service Bulletins have been embodied:

NB. * ensure that for Post Type Certification SB's any applicable SB by classification (Typically Major –significant) is approved under applicable post TC arrangements.

Item	Date Installed	Modification Details	SB No.	Installer	*Post Type Certification Approved	Comments
1						
2						
3						
4						

4.4 Repair History

The following repairs have been carried out since manufacture:

Item	Date	Airframe hours	Damage details	Repair	Installer	Approval reference	Comments

Notes:

- Quote references to the Structural Repair Manual, Manufacturer type certificated drawings, repairs certified against AC43 and aircraft Maintenance Manuals as appropriate.
- Review and assess the aircraft damage chart (if applicable) and/or Technical Log for repaired and unrepaired damage.
- Detail any repaint work and the certification basis.
- · Record the date of the last compass swing.

- Check the last weighing report and variable load schedule (Ref 39 Subpart D).
- Any airworthiness limitations or inspections associated with a repair should be listed in the Continued Airworthiness section of this report.

4.5 Environmental standards compliance

Provide statements on the noise, engine and CO2 emission compliance with the requirements detailed in OTAR Part 36. Assess the history of the aircraft for any modifications that could affect the noise or emission (Engines and CO2) compliance statements/certificates. See also OTAC 36-1 for guidance on the application for a noise certificate.

4.6 Equipment fit

This section should include a list of the original and replacement equipment fitted along with the associated equipment approval/modification references. Equipment fitted with no evidence of an acceptable approval will have to be assessed as a design change to the aircraft, ref OTAR Part 21 Subpart C. The avionics fitted must be listed by part number or type along with the equipment or design change (modification) approval reference number for each system. The VHF FM Immunity status, if any, shall be declared. The Mode S address code shall also be specified.

4.7 Flight Manual

This section should specify the reference and revision status of the Aircraft Flight Manual (AFM). The Temporary Revisions, applicable Supplement(s) and Change Sheet(s) must also be referenced. The AFM, revisions, supplements and changes should be approved by an appropriate NAA or Design Organisation. The AFM must reflect the current configuration of the aircraft.

4.8 Summary List of Deviations and Variations to Approved Build Standard

This section should contain a summary list of deviations from the design certification requirements, if any. Discussions with the authority will be necessary to determine the actions required for the eventual acceptance of these deviations and variations.

5 Continued Airworthiness

5.1 Maintenance Schedule/Programme

- The Airframe has been maintained to *(manufacturer's)* recommendations: (Detail past maintenance schedule history sufficient to determine continued airworthiness)
- List any Airworthiness Limitations and Utilisation (hours/year)
- The Engines have been maintained IAW (manufacturer) Maintenance Schedule/Manual [number]

- The aircraft will be maintained to Maintenance Programme Reference: [number]
- OTAA approval reference: [number]
- The following bridging checks are necessary to transfer the aircraft on to the new Maintenance Programme: [Provide details]

5.2 Airworthiness Limitations

• Compliance must be established with the airworthiness limitations that are specified or referenced by the Aircraft, Engine or Propeller Type Certificate/Type Acceptance Certificate Data Sheets.

5.3 Instructions for Continued Airworthiness

- ICAs should be identified and incorporated in maintenance planning/Maintenance programme, supporting data should be available including details of responsible organisation, standards, specifications, implementation, tasking and reporting.
- List the sources of Continued Airworthiness (MRB, Maintenance Manual Chapter 4/5 for example).

5.4 Repairs Modifications

• List additional Continued Airworthiness tasks resulting from modifications or repairs since build.

6 Certification requirements

All the certification requirements applicable to the issue of the Certificate of Airworthiness must be complied with. The following tables should be used to document compliance to the pertinent requirements.

6.1 Air Navigation (Overseas Territories) Order requirements:

Article.	Description	Method of Compliance

6.2 Overseas Territories Aviation Requirements:

Paragraph	Description	Method of Compliance

Examples:

- The aircraft must be weighed and a weight schedule produced. (OTAR Part 39 Subpart D).
- Placards and Markings required by the AN(OT)O must be affixed and displayed in appropriate locations.
- Compliance with the appropriate equipment requirements and radio requirements in the Operational OTARS must be declared.

6.3 Airworthiness Directives

FAA, Transport Canada, EASA (List all airframe, engine and equipment Airworthiness Directives including means of compliance and date since build).

6.4 Alternative Methods of Compliance (AMOC)

An AMOC is defined as a different approach or technique not specified in an Airworthiness Directive or mandatory requirement that can assure a level of safety equivalent to that offered by direct compliance with the subject AD or requirement. AMOCs are normally supported by the State of Design or AD issuing Authority.

If upon the review of the aircraft and its records it is discovered that there are a number of AMOCs applied to the aircraft they should be listed in this section together with the particular approval process route used. The OTAA shall be consulted on the acceptance or otherwise of the AMOCs.

6.5 Aircraft Inspection

Make a statement about the physical condition of the aircraft, engines and equipment. See also OTAC 21-3.

6.6 Flight Test

Attach a copy of any completed flight test schedule, flight evaluation or check flight as applicable, noting any deficiencies and making reference to their rectification.

6.7 Continued Airworthiness

List the sources of Continued Airworthiness (MRB, Maintenance Manual Chapter 4/5 for example). List additional Continued Airworthiness tasks resulting from modifications or repairs since build.

6.8 'Lifed' Items

Provide evidence that the remaining hours and cycles of components that are subject to a hard time life or overhaul are acceptable.

6.9 Post Type Design Generic Regulation Changes

Investigate the applicability, compliance and impact on the aircraft modification standard and continued airworthiness instructions of any generic post type approval design changes, e.g. Fuel Tank Safety, Ageing Aircraft, EWIS etc.

7. Conclusion

Summarise the contents of the report above and make a statement that the aircraft either meets the requirements of the OTAA for the initial issue of a Certificate of Airworthiness or list the deviations or further data that is required.