Flight Safety Notification
Airworthiness

Flight Safety Notifications (FSNs) are not mandatory in nature, but provide means such as guidance, methods, procedures and practices acceptable to the Authority for complying with regulations and other requirements in a systematic manner. These are not necessarily the only means of compliance. FSNs may also contain explanations of regulations, other guidance material, best practices or information useful to the aviation community. Unless incorporated into a regulation by reference, FSNs are not regulatory and do not create or change a regulatory requirement. A change of a regulatory requirement may come in the form of a Directive. A Flight Safety Notification is not a Directive.

Airworthiness Directive Research Procedures

Reason for Revision

Standardization of format to all Flight Safety Notifications.

Purpose

The following guidelines are being issued due to the many instances of non-compliance with Airworthiness Directives (ADs) generally and for aircraft registered in Jamaica, or foreign-registered aircraft operating in Jamaican airspace. Many of the violations occur due to a lack of knowledge of the processes and a scarcity of resources, on the part of owners and operators. The purpose of this Flight Safety Notification (FSN) is to provide information and to help owners and operators identify resources that they may use to ensure compliance with all applicable ADs, and to maintain airworthiness of aircraft.

Definition

An Airworthiness Directive (AD) is a mandatory instruction issued by the Regulatory Authority of the country of Design/Manufacture and/or country of Registration, when an unsafe condition is found to exist, or is likely to develop, in an aircraft or product of a particular Type Design. ADs are used to notify aircraft owners and operators of these unsafe conditions and to outline the requirements for the corrective measures to be implemented, in order to ensure continued airworthiness of the aircraft or product.

AD Content

Applicability

Each AD contains an applicability statement specifying the product (aircraft, engine, propeller, or appliance) to which it applies. Unless specifically stated, ADs apply to the make and model set forth in the applicability statement regardless of the classification or category of the Airworthiness Certificate issued for the aircraft.

Reason

This states why the AD was issued (e.g., "To prevent crankshaft failure")

Method of Compliance

This prescribes the standards, conditions and/or limitations, including inspection, repair or alteration to be complied with in order for the product to continue to be operated.

Alternate methods of Compliance

Where the operator finds that compliance can be achieved other than by the methods prescribed, without compromising safety, he may seek approval from the Authority of the State that issued the AD.

Compliance Threshold

Compliance requirements specified in ADs are established for safety reasons and may be stated in various ways. Some ADs are of such a serious nature that they require immediate compliance (i.e. prior to any further flights). Other ADs express the period in which compliance will be accomplished in terms of a specific number of hours, cycles or calendar time.

Responsibility for AD Compliance

The owner/operator of a Jamaican registered aircraft or foreign-registered aircraft operating in Jamaican airspace, is responsible for maintaining that aircraft in an airworthy condition, including compliance with all applicable ADs. Refer to This Jamaica Civil Aviation Regulations (JCAR) 28, and the Fifth Schedule for details.

A Certificate of Airworthiness ceases to be valid if any AD issued by the Authority or the regulatory authority having jurisdiction over the applicable Type Certificate Holder is not complied with. Refer to Civil Aviation Regulations (CARs) 29-(1)(c) which states: "No person shall operate or cause to be operated, an aircraft registered in Jamaica, or a foreign-registered aircraft operating in Jamaican airspace, in respect of which a Certificate of Airworthiness is in force unless…all required Airworthiness Directives …have been complied with…"

Airworthiness Directive Research Tools

Types of Research Tools

There are three types of AD research tools available today.

(1) Paper:
- (a) Advantages:
  - (i) comfort in using a physical document
  - (ii) copy machine compatible
  - (iii) low cost
- (b) Limitations:
  - (i) easily damaged and/or lost
  - (ii) requires a lot of storage space
  - (iii) revisions are time consuming
  - (iv) several steps and indexes required to locate all ADs
  - (v) most time consuming method

(2) Microfiche:
- (a) Advantages:
  - (i) better document protection and organization
  - (ii) faster access to information
  - (iii) less storage space required
  - (iv) revisions are more efficiently handled
- (b) Limitations:
  - (i) needs microfiche printer to obtain copies
  - (ii) not as expedient as electronic

(3) Electronic:
- (a) Advantages:
  - (i) built-in AD index customized to model
  - (ii) word search capabilities
  - (iii) revisions extremely simple and fast
  - (iv) immediate information retrieval
  - (v) high quality printing of documents
  - (vi) built –in AD sign-off sheets available with some products
  - (vii) information portable with use of laptop computer
  - (viii) search strings to SB/SI referred to in the AD
- (b) Limitations:
  - (i) requires use of computer equipment
  - (ii) more expensive investment

AD Indexes

It is important that owners/operators understand how to properly conduct AD research. It is virtually impossible to perform an AD research by reading every AD. For example, a research of ADs for American manufactured aircraft may be conducted as follows:

(1) Start with a complete FAA AD Summary and subsequent Bi-Weeklies
(2) Be certain that the index is current and accurate
(3) Ensure that you understand how this system operates, and how cross-referencing works

AD Research Procedure

Having accessed and understood the FAA, AD summary and bi-weeklies index system and how it works, the researcher may accomplish the following:

Airframe ADs

(1) Locate the appropriate volume (large or small aircraft)
(2) Find the manufacturer for the airframe or rotorcraft
(3) Under the manufacturer, find and record all model-specific and series Ads

Note: Always look for any "see also" notes next to a manufacturer's name, because some ADs for a model or series are indexed with a previous or later manufacturer.

Engine ADs

(1) Locate the engine manufacturer
(2) Record the ADs applicable to the model and series

Note: Look for any ADs listed immediately following the engine manufacturer's name because some general ADs not assigned to a specific series, may be listed

Propeller ADs

(1) Locate the propeller manufacturer
(2) Carefully review all the listings under the manufacturer's name

Note: ADs are listed by hub model numbers, blade numbers, hub series and propeller shank descriptions. ADs for a given propeller may be found under multiple listings.

Appliance ADs

(1) Identifying all the appliances on an aircraft with applicable ADs can be a challenge. The only way to be certain of not missing an AD is to use the process of elimination.

(2) From an index of all appliance ADs, systematically make a determination of whether each and every appliance referred to in an appliance AD, is in service on the aircraft. Most indexes list appliance ADs by manufacturer, but using an index that lists appliance ADs by category and then manufacturer, expedites this process.

(3) Compile a list of all the appliances installed on an aircraft then, check this list against the FAA appliance ADs list.

Note: As manufacturers sell all, or part, of their components to other manufacturers, it becomes even more time consuming to keep up with all the buyouts and to locate all the buyouts. The main reason for appliance ADs being missed is the time consuming task of obtaining a complete record of all appliance manufacturers, models, parts and serial numbers. The Type Certificate for the airframe and engine don't list all appliances from accumulators to wind shear detection systems, the appliance AD category covers a large number of items. Make sure that you are equally diligent about both research and inspection. Appropriate time must be invested in both activities to perform this task properly.

Proposed and New ADs

Since new ADs become effective almost every day, it is very difficult for a single index to remain absolutely current. It is therefore necessary to monitor the daily issues of the AD register for both proposed and new final rule ADs. Track proposed and new ADs until they are incorporated into your AD index. Many new final rules and proposed ADs can be tracked via the internet. Some useful websites are www.faa.gov, www.tc.gc.ca/CivilAviation and www.easa.europa.eu.

Validation and Cross Check

To verify that your research is accurate, complete and current, it is always a good practice to use an alternative index to check your findings. Reconciling two indexes once you have a complete set of records doesn't add that much time to the entire process. However it may prevent a lot of aggravation resulting from missing ADs that were catalogued or indexed using alternative interpretations.

Recording AD Compliance

AD compliance as with any maintenance requires entries in the aircraft's permanent records, in accordance with Jamaica Civil Aviation Regulations as amended from time to time and other JCAA requirements, must include:

(1) Description of work performed
(2) Date/time/cycles of completion
(3) Licence/approval number
(4) Signature

Aircraft Record Keeping System

Each aircraft's AD record keeping system should also include:

(1) A complete AD record segregating the ADs by the appropriate categories (airframe, engine, propeller, appliance).
(2) A list of non-applicable ADs found during the research and the reason that each AD doesn't apply (eg. excluded model number, serial number, not installed, etc.). This practice not only assures a thorough research, but also saves an enormous amount of time for each subsequent AD research.
(3) Recurring and partially complied with ADs including the next time/date/hours due.
(4) Method of compliance (e.g., per SB123; visually inspected per paragraph A of AD)
(5) A detailed entry of AD compliance. Avoid making the entry "all ADs complied with".

Proper AD research takes time. Although some research tools on the market will be more efficient than others, the owner/operator must ensure understanding of the limitations of the products, ascertain that the latest information is used, and should always use a variety of means to validate the results.

The above example applies only to aircraft manufactured in the USA and subsequent ADs issued by the FAA. It is the responsibility of the owner/operator to familiarize himself with other systems when complying with ADs issued by regulatory authorities from ICAO member States outside of the American framework.

Approved by: _____ Date: April 11, 2016

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