U.S. Department
of Transportation
Federal Aviation
Administration

Advisory Circular

Subject: **AIRWORTHINESS DIRECTIVES**

Date: **11/16/95**
Initiated by: **AFS-340**

AC No: **39-7C**
Change:

1. PURPOSE. This advisory circular (AC) provides guidance and information to owners and operators of aircraft concerning their responsibility for complying with airworthiness directives (AD) and recording AD compliance in the appropriate maintenance records.

2. CANCELLATION. AC 39-7B, Airworthiness Directives, dated April 8, 1987, is canceled.

3. PRINCIPAL CHANGES. References to specific Federal Aviation Regulations have been updated and text reworded for clarification throughout this document.

4. RELATED FEDERAL AVIATION REGULATIONS. 14 Code of Federal Regulations (CFR) part 39; part 43, §§ 43.9 and 43.11; part 91, §§ 91.403, 91.417, and 91.419.

5. BACKGROUND. The authority for the role of the Federal Aviation Administration (FAA) regarding the promotion of safe flight for civil aircraft may be found generally at Title 49 of the United State Code (USC) § 44701 et. seq. (formerly, Title VI of the Federal Aviation Act of 1958 and related statutes). One of the ways the FAA has implemented its authority is through 14 CFR part 39, Airworthiness Directives. Pursuant to its authority, the FAA issues AD's when an unsafe condition is found to exist in a product (aircraft, aircraft engine, propeller, or appliance) of a particular type design. AD's are used by the FAA to notify aircraft owners and operators of unsafe conditions and to require their correction. AD's prescribe the conditions and limitations, including inspection, repair, or alteration under which the product may continue to be operated. AD's are authorized under part 39 and issued in accordance with the public rulemaking procedures of the Administrative Procedure Act, 5 USC 553, and FAA procedures in part 11.

6. AD CATEGORIES. AD's are published in the Federal Register as amendments to part 39. Depending on the urgency, AD's are issued as follows:

a. Normally a notice of proposed rulemaking (NPRM) for an AD is issued and published in the Federal Register when an unsafe condition is found to exist in a product. Interested persons are invited to comment on the NPRM by submitting such written data, views, contained in the notice may be changed or withdrawn in light of comments received. When the final rule,

resulting from the NPRM, is adopted, it is published in the Federal Register, printed and distributed by first class mail to the registered owners and certain known operators of the product(s) affected.

b. Emergency AD's. AD's of an urgent nature may be adopted without prior notice (without an NPRM) under emergency procedures as immediately adopted rules. The AD's normally become effective in less than 30 days after publication in the Federal Register and are distributed by first class mail, telegram, or other electronic methods to the registered owners and certain known operators of the product affected. In addition, notification is also provided to special interest groups, other government agencies, and Civil Aviation Authorities of certain foreign countries.

7. AD's WHICH APPLY TO PRODUCTS OTHER THAN AIRCRAFT. AD's may be issued which apply to aircraft engines, propellers, or appliances installed on multiple makes or models of aircraft. When the product can be identified as being installed on a specific make or model aircraft, the AD is distributed by first class mail to the registered owners of those aircraft. However, there are times when such a determination cannot be made, and direct distribution to registered owners is impossible. For this reason, aircraft owners and operators are urged to subscribe to the Summary of Airworthiness Directives which contains all previously published AD's and a biweekly supplemental service. Advisory Circular 39-6, Announcement of Availability--Summary of Airworthiness Directives, provides ordering information and subscription prices on these publications. The most recent copy of AC 39-6 may be obtained, without cost, from the U.S. Department of Transportation, General Services Section, M-483.1, Washington, D.C. 20590. Information concerning the Summary of Airworthiness Directives may also be obtained by contacting the FAA, Manufacturing Standards Section (AFS-613), P.O. Box 26460, Oklahoma City, Oklahoma 73125-0460. Telephone (405) 954-4103, FAX (405) 954-4104.

8. APPLICABILITY OF AD's. Each AD contains an applicability statement specifying the product (aircraft, aircraft engine, propeller, or appliance) to which it applies. Some aircraft owners and operators mistakenly assume that AD's do not apply to aircraft with other than standard airworthiness certificates, i.e., special airworthiness certificates in the restricted, limited, or experimental category. Unless specifically stated, AD's 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. Type certificate and airworthiness certification information are used to identify the product affected. Limitations may be placed on applicability by specifying the serial number or number series to which the AD is applicable. When there is no reference to serial numbers, all serial numbers are affected. The following are examples of AD applicability statements:

a. "Applies to Smith (Formerly Robin Aero) RA-15-150 series airplanes, certificated in any category." This statement, or one similarly worded, makes the AD applicable to all airplanes of the model listed, regardless of the type of airworthiness certificate issued to the aircraft.

b. "Applies to Smith (Formerly Robin Aero) RA-15-150 Serial Numbers 15-1081 through 15-1098." This statement, or one similarly worded, specifies certain aircraft by serial number within a specific model and series regardless of the type of airworthiness certificate issued to the aircraft.

c. "Applies to Smith (Formerly Robin Aero) RA-15-150 series aircraft certificated in all categories excluding experimental aircraft." This statement, or one similarly worded, makes the AD applicable to all airplanes except those issued experimental airworthiness certificates.

d. "Applicability: Smith (Formerly Robin Aero) RA-15-150 series airplanes; Cessna Models 150, 170, 172, and 175 series airplanes; and Piper PA-28-140 airplanes; certificated in any category, that have been modified in accordance with STC SA807NM using ABLE INDUSTRIES, Inc., (Part No. 1234) muffler kits." This statement, or one similarly worded, makes the AD applicable to all airplanes listed when altered by the supplemental type certificate listed, regardless of the type of airworthiness certificate issued to the aircraft.

e. Every AD applies to each product identified in the applicability statement, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of the AD. For products that have been modified, altered, or repaired so that performance of the requirements of the AD is affected, the owner/operator must use the authority provided in the alternative methods of compliance provision of the AD (see paragraph 12) to request approval from the FAA. This approval may address either no action, if the current configuration eliminates the unsafe condition; or, different actions necessary to address the unsafe condition described in the AD. In no case, does the presence of any alteration, modification, or repair remove any product from the applicability of this AD. Performance of the requirements of the AD is "affected" if an operator is unable to perform those requirements in the manner described in the AD. In short, either the requirements of the AD can be performed as specified in the AD and the specified results can be achieved, or they cannot.

9. AD COMPLIANCE. AD's are regulations issued under part 39. Therefore, <u>no person may operate a product to which an AD applies, except in accordance with the requirements of that AD</u>. Owners and operators should understand that to "operate" not only means piloting the aircraft, but also causing or authorizing the product to be used for the purpose of air navigation, with or without the right of legal control as owner, lessee, or otherwise. Compliance with emergency AD's can be a problem for operators of leased aircraft because the FAA has no legal requirement for notification of other than registered owners. Therefore, it is important that the registered owner(s) of leased aircraft make the AD information available to the operators leasing their aircraft as expeditiously as possible, otherwise the lessee may not be aware of the AD and safety may be jeopardized.

10. COMPLIANCE TIME OR DATE.

a. The belief that AD compliance is only required at the time of a required inspection, e.g., at a 100-hour or annual inspection is not correct. The required compliance time is specified in each AD, and no person may operate the affected product after expiration of that stated compliance time.

b. Compliance requirements specified in AD's are established for safety reasons and may be stated in various ways. Some AD's are of such a serious nature they require compliance before further flight, for example: "To prevent uncommanded engine shutdown with the inability to restart the engine, prior to further flight, inspect...." Other AD's express compliance time in terms of a specific number of hours in operation, for example: "Compliance is required within the next 50 hours time in service after the effective date of this AD." Compliance times may also be expressed in operational terms, such as: "Within the next 10 landings after the effective date of this AD...." For turbine engines, compliance times are often expressed in terms of cycles. A cycle normally consists of an engine start, takeoff operation, landing, and engine shutdown.

c. When a direct relationship between airworthiness and calendar time is identified, compliance time may be expressed as a calendar date. For example, if the compliance time is specified as "within 12 months after the effective date of this AD...." with an effective date of July 15, 1995, the deadline for compliance is July 15, 1996.

d. In some instances, the AD may authorize flight after the compliance date has passed, provided that a special flight permit is obtained. Special flight authorization may be granted only when the AD specifically permits such operation. Another aspect of compliance times to be emphasized is that not all AD's have a one-time compliance requirement. Repetitive inspections at specified intervals after initial compliance may be required in lieu of, or until a permanent solution for the unsafe condition is developed.

11. ADJUSTMENTS IN COMPLIANCE REQUIREMENTS. In some instances, a compliance time other than the compliance time specified in the AD may be advantageous to an aircraft owner or operator. In recognition of this need, and when an acceptable level of safety can be shown, flexibility may be provided by a statement in the AD allowing adjustment of the specified interval. When adjustment authority is provided in an AD, owners or operators desiring to make an adjustment are required to submit data substantiating their proposed adjustment to their local FAA Flight Standards District Office or other FAA office for consideration as specified in the AD. The FAA office or person authorized to approve adjustments in compliance requirements is normally identified in the AD.

12. ALTERNATIVE METHODS OF COMPLIANCE. Many AD's indicate the acceptability of one or more alternative methods of compliance. Any alternative method of compliance or adjustment of compliance time other than that listed in the AD must be substantiated and approved by the FAA before it may be used. Normally the office or person authorized to approve an alternative method of compliance is indicated in the AD.

13. RESPONSIBILITY FOR AD COMPLIANCE AND RECORDATION. The owner or operator of an aircraft is primarily responsible for maintaining that aircraft in an airworthy condition, including compliance with AD's.

a. This responsibility may be met by ensuring that properly certificated and appropriately rated maintenance person(s) accomplish the requirements of the AD and properly record this action in the appropriate maintenance records. This action must be accomplished within the compliance time specified in the AD or the aircraft may not be operated.

b. Maintenance persons may also have direct responsibility for AD compliance, aside from the times when AD compliance is the specific work contracted for by the owner or operator. When a 100-hour, annual, progressive, or any other inspection required under parts 91, 121, 125, or 135 is accomplished, § 43.15 (a) requires the person performing the inspection to determine that all applicable airworthiness requirements are met, including compliance with AD's.

c. Maintenance persons should note even though an inspection of the complete aircraft is not made, if the inspection conducted is a progressive inspection, determination of AD compliance is required for those portions of the aircraft inspected.

d. For aircraft being inspected in accordance with a continuous inspection program (§ 91.409), the person performing the inspection must ensure that an AD is complied with only when the portion of the inspection program being handled by that person involves an area covered by a particular AD. The program may require a determination of AD compliance for the entire aircraft by a general statement, or compliance with AD's applicable only to portions of the aircraft being inspected, or it may not require compliance at all. This does not mean AD compliance is not required at the compliance time or date specified in the AD. It only means that the owner or operator has elected to handle AD compliance apart from the inspection program. The owner or operator remains fully responsible for AD compliance.

e. The person accomplishing the AD is required by § 43.9 to record AD compliance. The entry must include those items specified in § 43.9 (a) (1) through (a) (4). The owner or operator is required by § 91.405 to ensure that maintenance personnel make appropriate entries and, by § 91.417, to maintain those records. Owners and operators should note that there is a difference between the records required to be kept by the owner under § 91.417 and those § 43.9 requires maintenance personnel to make. In either case, the owner or operator is responsible for maintaining proper records.

f. Pilot Performed AD Checks. Certain AD's permit pilots to perform checks of some items under specific conditions. AD's allowing this action will include specific direction regarding recording requirements. However, if the AD does not include recording requirements for the pilot, § 43.9 requires persons complying with an AD to make an entry in the maintenance record of that product. § 91.417 (a) and (b) requires the owner or operator to keep and retain

certain minimum records for a specific time. The person who accomplished the action, the person who returned the aircraft to service, and the status of AD compliance are the items of information required to be kept in those records.

14. RECURRING/PERIODIC AD's. Some AD's require repetitive or periodic inspection. In order to provide for flexibility in administering such AD's, an AD may provide for adjustment of the inspection interval to coincide with inspections required by part 91, or other regulations. The conditions and approval requirements under which adjustments may be allowed are stated in the AD. If the AD does not contain such provisions, adjustments are usually not permitted. However, amendment, modification, or adjustment of the terms of the AD may be requested by contacting the office that issued the AD or by following the petition procedures provided in part 11.

15. DETERMINING REVISION DATES. The revision date required by § 91.417 (a) (2) (v) is the effective date of the latest amendment to the AD and may be found in the last sentence of the body of each AD. For example: "This amendment becomes effective on July 10, 1995." Similarly, the revision date for an emergency AD distributed by telegram or priority mail is the date it was issued. For example: "Priority Letter AD 95-11-09, issued May 25, 1995, becomes effective upon receipt." Each emergency AD is normally followed by a final rule version that will reflect the final status and amendment number of the regulation including any changes in the effective date.

16. SUMMARY. The registered owner or operator of an aircraft is responsible for compliance with AD's applicable to the airframe, engine, propeller, appliances, and parts and components thereof for all aircraft it owns or operates. Maintenance personnel are responsible for determining that all applicable airworthiness requirements are met when they accomplish an inspection in accordance with part 43.

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