



U.S. Department
of Transportation
Federal Aviation
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Memorandum

APR - 1 2003

John

Subject: INFORMATION: Airworthiness Directives that
Apply to Engines and Propellers Installed on
Amateur-Built Aircraft

Date: APR 27 2003

From: Manager, Technical Standards Branch, ANE-230

Reply to: W. Williams:
Attn. of: (781) 238-7211
FAX (781) 238-7245

To: Manager, NE-FSDO-01, NE-FSDO-03, *lll*
NE-FSDO-05 *4/1*

Recently there have been questions and concerns regarding the applicability of Airworthiness Directives (AD's) to engines and propellers installed on amateur-built aircraft. A legal determination regarding this issue was requested from Regional Counsel and is attached.

Two major points were covered in this legal determination. The first was that AD's that apply to type-certificated engines and propellers will continue to apply to those products even if the engine or propeller is installed in an aircraft operating under an experimental airworthiness certificate. The second was that removal of a data plate from a type-certificated engine or propeller will not change the nature of the engine or propeller, or mean that an AD that applies to that particular engine or propeller, based on its type design, no longer applies.

The justification for these determinations is found in the attached memorandum, dated March 26, 2003, and the attached Advisory Circular AC 39-7C AIRWORTHINESS DIRECTIVES, dated November 16, 1995.

If you have any questions, please contact Bill Williams, ANE-230F at (781) 238-7211.

Edward L. Reinecker
Edward L. Reinecker

Attachments
AD Memorandum, dated March 26, 2003
Advisory Circular AC-39-7C, dated Nov 16, 1995



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Office of the Regional Counsel, ANE-7
New England Region, Room 401
Federal Aviation Administration
12 New England Executive

Subject: INFORMATION: Airworthiness Directives that
apply to the engines and propellers installed on
amateur-built aircraft.

Date: March 26, 2003

From: Acting Regional Counsel

Reply to: C. Poreda:
Attn: of: 781-238-7042
FAX: 781-238-7055

To: Manager, Technical Standards Branch, ANE-230

Some owners of amateur-built aircraft have questioned whether they must comply with airworthiness directives (AD's) that apply to the type-certified engines or propellers installed in those aircraft. These owners assert various reasons why they need not comply with those AD's, including 1) the aircraft operates under an experimental airworthiness certificate and, therefore, the maintenance rules do not apply, or 2) engine or propeller AD's do not apply when the engine or propeller is not listed on the aircraft's type certificate, or 3) engine or propeller AD's apply only to those engines and propellers that conform to their type design, or 4) engine or propeller AD's apply only to those engines and propellers with data plates. None of those reasons is correct; AD's issued under Part 39 of the Federal Aviation Regulations (14 CFR part 39) apply to type-certified engines or propellers regardless of their installation or conformity with the original design. Advisory Circular (AC) 39-7C, 11/16/95, (attached) provides excellent guidance on this question.

Section 44701 of Title 49 of the United States Code authorizes the FAA to issue regulations that establish minimum standards for aircraft, aircraft engines, propellers, and appliances. Those standards are established to promote safe flight for all civil aircraft, including those operating under an experimental airworthiness certificate. AD's are rules issued under that authority that apply to aircraft, aircraft engines, propellers or appliances (products) based on the approved design of the product. Individual AD's are published in the Federal Register as amendments to Part 39. To issue an AD, the FAA must determine that an unsafe condition exists and that it is likely to exist or develop on other products of the same type design. An AD requires the owner or operator of the product to perform certain actions in order to correct the identified unsafe condition. Part 39 also prohibits the operation of any product that does not meet the requirements of an applicable AD.

AD's that apply to type-certified engines and propellers will continue to apply to those products even if the engine or propeller is installed in an aircraft operating under an experimental airworthiness certificate. Although owners of aircraft operating under an

experimental airworthiness certificate need not follow Part 43 (14 CFR part 43) when performing maintenance, Part 39 does not contain a similar exclusion. That owners need not follow Part 43 when performing the required work does not mean that the owner may ignore the requirements of the AD. Part 39 prohibits the operation of each "product," that is each airframe, engine, propeller, and appliance to which an AD applies unless the owner has performed the required actions. Part 39's prohibition is not limited to just the operation of the aircraft as a whole. Had the FAA intended Part 39 to prohibit only the operation of the aircraft the regulation would have been written differently, for example, to prohibit the operation of any aircraft with a product installed to which an AD applies except in accordance with that AD. Since the prohibition of Part 39 runs to each individual product, owners of amateur-built aircraft with type-certified engines or propellers must comply with any AD's that apply to the installed engine or propeller.

The FAA issues AD's based on the type design of the product. The type design of an engine or propeller is not altered or affected by the aircraft in which that engine is installed. That an aircraft type design specifies that only certain engine/propeller combinations are approved for installation on that aircraft does not mean that the engine or propeller itself no longer conforms to its own approved type design if installed in a aircraft the approved design of which does not allow for the installation of that combination. The engine and propeller type design remains separate from the aircraft type design. Under Part 39, the FAA treats each product independently. Therefore, AD's that apply to particular engine models or propellers will continue to apply to those engine models and propellers even if those engines and propellers are used in an aircraft for which the FAA has not approved their installation.

In addition, AD's will continue to apply to products after those products have been modified. Even products maintained under Part 43 may undergo modifications of which the FAA is unaware. Each AD specifies the products to which that AD applies by listing the product model, or series of models, based on the approved type design of the product. That individual engines or propellers may have been modified does not affect whether the AD applies to that engine. AD's continue to apply to each product identified in the AD's "Applicability Statement" regardless of whether the product has been modified, altered, or repaired. In 2002 Part 39 was revised to contain that statement, which previously appeared in individual AD's as a "note" and is also found in ¶8.e. of AC 39-7C. Therefore, when an owner of an amateur-built aircraft modifies a type-certified engine or propeller installed in that aircraft, any AD's that apply to that engine or propeller before the modification continue to apply. The owner may ask the FAA if those modifications correct the unsafe condition or warrant an adjustment to the requirements of the AD. The owner may not, however, ignore the AD and operate the aircraft without either complying with the AD or receiving approval for an alternative method of compliance (AMOC).

Lastly, removal of a data plate on an engine or propeller may only be accomplished in accordance with the provisions of Part 45 (14 CFR part 45). In general, §45.13 prohibits the removal of a data plate without the approval of the Administrator. Part 45 also contains no exception for aircraft operating under an experimental airworthiness certificate. The removal of a data plate from a type-certified engine or propeller will not

change the nature of the engine or propeller, or mean that an AD that applies to that particular engine or propeller, based in its type design, no longer applies. The owner must still comply with any AD's that apply to that engine or propeller model, with or without a data plate.

Therefore, the reasons asserted by some operators of amateur-built aircraft as to why they believe they need not comply with AD's that apply to type-certificated engines or propellers in their aircraft do not support their conclusion. AD's that apply to type-certificated engines or propellers installed in amateur-built aircraft must be complied with before the aircraft is operated. Please call me if you have any questions.


CHRISTOPHER POREDA

Attachment
AC 39-7C, 11/16/95