

PREAMBLE FOR 98-21-21

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 98-CE-88-AD; Amendment 39-10844; AD 98-21-21] RIN 2120-AA64

Airworthiness Directives; Bob Fields Aerocessories Inflatable Door Seals

AGENCY:

Federal Aviation Administration, DOT.

ACTION:

Final rule; request for comments.

SUMMARY:

This document publishes in the Federal Register an amendment adopting Airworthiness Directive (AD) 98-21-21, which was sent previously to all known U.S. owners and operators of aircraft equipped with Bob Fields Aerocessories inflatable door seals installed in accordance with the applicable supplemental type certificate (STC). These inflatable door seals could also be installed on aircraft through field approval. This AD requires either de-activating the electric door seal inflation system; fabricating and installing a placard specifying that the system is inoperative; and inserting a copy of the AD into the Limitations Section of the airplane flight manual (AFM); or removing all provisions of the Bob Fields Aerocessories inflatable door seals installation, and installing original equipment manufacturer door seals or an FAA-approved equivalent that is of different design than the referenced Bob Fields Aerocessories inflatable door seals. The AD resulted from occurrences of overheated components associated with the electric door seal inflation system on aircraft equipped with the affected inflatable door seals. The actions specified by this AD are intended to prevent smoke and a possible fire in the cockpit caused by overheating of the electric door seal inflation systems, which could result in passenger injury.

DATES:

Effective October 30, 1998, to all persons except those to whom it was made immediately effective by priority letter AD 98-21-21, issued October 2, 1998, which contained the requirements of this amendment.

Comments for inclusion in the Rules Docket must be received on or before December 13, 1998.

ADDRESSES:

Submit comments in triplicate to the Federal Aviation Administration (FAA), Central Region, Office of the Regional Counsel, Attention: Rules Docket 98-CE-88-AD, Room 1558, 601 E. 12th Street, Kansas City, Missouri 64106.

Information related to this AD may be examined at the FAA at the address referenced above.

FOR FURTHER INFORMATION CONTACT:

Mr. Paul S. Wells, Jr., Aerospace Engineer, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712; telephone: [REDACTED] [REDACTED]

SUPPLEMENTARY INFORMATION:

Discussion

On October 2, 1998, the FAA issued priority letter AD 98-21-21, which applies to aircraft equipped with Bob Fields Aerocessories inflatable door seals installed in accordance with either the applicable supplemental type certificate (STC) or through field approval. This AD requires either:

- de-activating the electric door seal inflation system; fabricating and installing a placard specifying that the system is inoperative; and inserting a copy of the AD into the Limitations Section of the airplane flight manual (AFM); or
- removing all provisions of the Bob Fields Aerocessories inflatable door seals installation, and installing original equipment manufacturer door seals or an FAA-approved equivalent that is of different design than the referenced Bob Fields Aerocessories inflatable door seals.

That AD resulted from numerous reported occurrences of overheated components associated with the electric door seal inflation system on aircraft equipped with Bob Fields Aerocessories inflatable door seals installed in accordance with the applicable supplemental type

98-21-21 - Inflatable door seals

Inflatable door seals:

Category - Appliance

Effective Date - 10/30/98 Recurring - No

Supersedes - N/A Superseded by - N/A

See PREAMBLE

Bob Fields Aerocessories:

Amendment 39-10844;
Docket No. 98-CE-88-AD.

Applicability: Inflatable door seals, installed either in accordance with the applicable supplemental type certificate (STC) or through field approval, that are installed on, but not limited to, the following aircraft:

Affected STC	Make and model aircraft affected
<u>SA3735NM</u>	Cessna Models 170, 170A, and 170B Airplanes.
<u>SA4136WE</u>	Cessna Models 310, 310A, 310B, 310C, 310D, 310E, 310F, 310G, 310H, 310I, 310J, 310K, 310L, 310N, 310P, 310Q, 310R, T310P, T310Q, and T310R Airplanes.
<u>SA2226NM</u>	Cessna Models P210N and P210R Airplanes.
<u>SA3736NM</u>	Cessna Models 185, 185A, 185B, 185C, 185D, A185E, and A185F Airplanes.
<u>SA4177WE</u>	Cessna Models 175, 175A, 175B, and 175C Airplanes.
<u>SA4212WE</u>	Cessna Models 210, 210A, 210B, 210C, 210D, 210E, 210F, 210G, 210H, 210J, 210K, 210L, 210M, 210N, T210F, T210G, T210H, T210J, T210K, T210L, T210M, T210N, 210-5 (205), and 210-5A (205A) Airplanes.
<u>SA4213WE</u>	Cessna Models 310, 310A, 310B, 310C, 310D, 310F, 310G, 310H, 310I, 310J, 310K, 310L, 310N, 310P, 310Q, 310R, T310P, T310Q, and T310R Airplanes.
<u>SA4283WE</u>	Cessna Models 172, 172A, 172B, 172C, 172D, 172E, 172F, 172G, 172H, 172I, 172K, 172L, 172M, and 172N Airplanes.
<u>SA4284WE</u>	Cessna Models 180, 180A, 180B, 180C, 180D, 180E, 180F, 180G, 180H, 180J, and 180K Airplanes.
<u>SA4285WE</u>	Cessna Models 182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H, 182J, 182K, 182L, 182M, 182N, 182P, 182Q, R182, and TR182 Airplanes.
<u>SA4286WE</u>	Cessna Models 206, P206, P206A, P206B, P206C, P206D, P206E, TP206A, TP206B, TP206C, TP206D, TP206E, U206, U206A, U206B, U206C, U206D, U206E, U206F, U206G, TU206A, TU206B, TU206C, TU206D, TU206E, TU206F, and TU206G Airplanes.
<u>SA4287WE</u>	Cessna Models 320, 320A, 320B, 320C, 320D, 320E, 320F, and 320-1 Airplanes.
<u>SA4180WE</u>	Raytheon (Beech) Models H35, J35, K35, M35, N35, P35, S35, V35, V35A, V35B, 35-33, 35-A33, 35-B33, 35-C33, 35-C33A,

	E33, E33A, E33C, F33, F33A, F33C, G33, 36, A36, A36TC, and B36TC Airplanes.
<u>SA4184WE</u>	Raytheon (Beech) Models 95, B95, B95A, E95, 95-55, 95-A55, 95-B55, 95-B5A, 95-B55B, 95-C55, D55, E55, 56TC, 58, and 58A Airplanes.
<u>SA4239WE</u>	Raytheon (Beech) Models 58P, 58PA, 58TC, and 58TCA Airplanes.
<u>SA4240WE</u>	Raytheon (Beech) Models 50, B50, C50, D50, D50A, D50B, D50C, D50E, D50E-5990, E50, F50, G50, H50, and J50 Airplanes.
<u>SA4282WE</u>	Raytheon (Beech) Models 35, A35, B35, C35, D35, E35, F35, G35, and 35R Airplanes.
<u>SA4178WE</u>	Mooney Models M20, M20A, M20C, M20D, M20E, M20F, M20G, M20J, and M20K Airplanes.
<u>SA4472NM</u>	Aerostar Models PA-60-601P, PA-60-602P, and PA-60-700P Airplanes.
<u>SA4234WE</u>	The New Piper Aircraft, Inc. (Piper) Models PA-34-200, PA-34-200T, and PA-34-220T Airplanes.
<u>SA4179WE</u>	Piper Models PA-24, PA-24-250, PA-24-260, and PA-24-400 Airplanes.
<u>SA4235WE</u>	Piper Models PA-44-180 and PA-44-180T Airplanes.
<u>SA4236WE</u>	Piper Models PA-28-140, PA-28-150, PA-28-160, PA-28-180, PA-28-235, PA-28-151, PA-28-181, PA-28-161, PA-28-236, PA-28-201T, PA-285-160, PA-28S-160, PA-28S-180, PA-28R-180, PA-28R-200, PA-28R-201, PA-28R-201T, PA-28RT-201, and PA-28RT-201T Airplanes.
<u>SA4237WE</u>	Piper Models PA-23, PA-23-160, PA-23-235, PA-23-250, and PA-E23-250 Airplanes.
<u>SA4238WE</u>	Piper Models PA-30, PA-39, and PA-40 Airplanes.
<u>SA4385WP</u>	Piper Models PA-31, PA-31-300, PA-31-325, and PA-31-350 Airplanes.
<u>SA4288WE</u>	Piper Models PA-32-260, PA-32-300, PA-32S-300, PA-32-301, PA-32-301T, PA-32R-300, PA-32R-301, PA-32R-301T, PA-32RT-300, and PA-32RT-300T Airplanes.
<u>SA2511NM</u>	Bellanca Models 17-30, 17-31, and 17-31TC Airplanes.
<u>SA2510NM</u>	Bellanca Models 17-30A, 17-31A, and 17-31ATC Airplanes.
<u>SA4316WE</u>	Wing Aircraft Company Model D-1 Airplanes.

Note 1: This AD applies to each aircraft identified in the preceding applicability provision that has the affected inflatable door seals installed, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For aircraft that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (f) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required prior to further flight after the effective date of this AD, unless already accomplished.

To prevent smoke and a possible fire in the cockpit caused by overheating of the electric door seal inflation systems, which could result in passenger injury, accomplish the following:

(a) Deactivate the electric door seal inflation system by accomplishing the following:

- (1) Disconnect the battery.
- (2) Locate the air pump and identify the power wire to the air pump.
- (3) Trace the power wire to its connection to the airplane's original electrical power system. Disconnect the power wire at its attachment to the airplane's electrical power system and stow the wire end.

(4) For non-pressurized airplanes or for airplanes that have an operating manual door seal inflation system, fabricate a placard that incorporates the following words utilizing letters that are at least 0.10-inch in height, and install this placard on the instrument panel within the pilot's clear view:

"ELECTRIC DOOR SEAL INFLATION SYSTEM INOPERATIVE"

(5) For pressurized airplanes or for airplanes that do not have an operating manual door seal inflation system, fabricate a placard that incorporates the following words utilizing letters that are at least 0.10-inch in height, and install this placard on the instrument panel within the pilot's clear view:

"ELECTRIC DOOR SEAL INFLATION SYSTEM INOPERATIVE. THIS AIRPLANE CAN ONLY BE OPERATED IN UNPRESSURIZED FLIGHT"

(6) Reconnect the battery before returning to service.

(b) Insert a copy of this AD into the Limitations Section of the airplane flight manual (AFM).

(c) As an alternative method of compliance to the actions of paragraph (a), including all subparagraphs, and paragraph (b) of this AD, remove all provisions of the Bob Fields Aerocessories inflatable door seals, and install original equipment manufacturer door seals or an FAA-approved equivalent that is of different design than the referenced Bob Fields Aerocessories inflatable door seals.

(d) As of the effective date of this AD, no person may install on any aircraft, Bob Fields Aerocessories inflatable door seals either in accordance with the applicable STC or through field approval.

(e) Special flight permits may be issued in accordance with Secs. 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished provided the following are adhered to, as applicable:

(1) Locate and remove the in-line fuse for the electric door seal inflation system; or

(2) Pull the system circuit breaker for the electric door seal inflation system; and

(3) For pressurized airplanes or for airplanes that do not have an operating manual door seal inflation system, operate the airplane in unpressurized flight only.

(f) An alternative method of compliance or adjustment of the compliance time that provides an equivalent level of safety may be approved by the Manager, FAA, Los Angeles Aircraft Certification Office (ACO), 3960 Paramount Blvd., Lakewood, California 90712. The request shall be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Los Angeles ACO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Los Angeles ACO.

(g) Information related to this AD may be examined at the FAA, Central Region, Office of the Regional Counsel, Room 1558, 601 E. 12th Street, Kansas City, Missouri 64106.

(h) This amendment becomes effective on October 30, 1998, to all persons except those persons to whom it was made immediately effective by priority letter AD 98-21-21, issued October 2, 1998, which contained the requirements of this amendment.

FOR FURTHER INFORMATION CONTACT:

Mr. Paul S. Wells, Jr., Aerospace Engineer, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712; telephone: [REDACTED] facsimile: [REDACTED]

certificate (STC).

One of the above-referenced occurrences resulted in a safety recommendation from the National Transportation Safety Board (NTSB). In this incident, an in-flight electrical fire caused the pilot of a Cessna Model P210N to initiate an emergency descent with a successful landing and only minor airplane damage. NTSB investigation revealed that the fire originated on the cabin sidewall, under the left side of the instrument panel and resulted in burned vinyl, plastic, and insulation material. An overheated resistor used in an electric door seal inflation system caused the fire. The resistor was used to reduce the 28-volt aircraft electrical system's voltage to meet the power requirements of the door seal system's 14-volt air pump motor.

The inflatable door seals on this airplane were installed in accordance with STC SA4212WE, which the FAA issued to Bob Fields Aerocessories. The purpose of the seals is to decrease in-flight cabin noise caused by ill-fitting cabin doors. The FAA has issued numerous other STC's that allow this installation on other make and model airplanes. In addition, these Bob Fields Aerocessories inflatable door seals could be installed on aircraft through field approvals.

All of the aircraft involved in the occurrences incorporate Bob Fields Aerocessories inflatable door seals. Investigation results of three other occurrences reveal the following:

- An electric door seal inflation pump that was mounted on the forward side of the nose bulkhead was found heavily charred;
- The pump assembly and resistors of the electric door seal inflation system were partially melted; and
- Vinyl, plastic, and insulation material in the proximity of the electric door seal inflation system were found burned.

Further analysis of all of these occurrences revealed leaks in the Bob Fields Aerocessories inflatable door seals. Each electric door seal inflation system consists of an electric motor, an air pump, inflatable silicon door seals, a pressure sensing switch, an air supply control valve, a resistor assembly, a 7.5-amp in-line fuse, a caution light, and electrical wiring. The motor draws power directly from the airplane's battery bus and is used to inflate the door seals to a pressure of about 10 pounds per square inch (psi). A sensor in the air pump determines when the pressure drops below 10 psi, at which time the air pump motor starts back up again until obtaining proper pressure. The standard time period for the air pump to inflate the door seal is about 4 to 12 seconds. During this time, the caution light remains illuminated.

If the door seal has a small leak, the pump turns on and off to maintain the desired inflation pressure. When this small leak develops to a larger leak, the air pump may run continuously to keep the door seal inflated. This could cause the resistors or the air pump motor to overheat. This would cause smoke and a possible fire in the cockpit.

The FAA's Determination and Explanation of the AD

Since an unsafe condition has been identified that is likely to exist or develop in other aircraft equipped with Bob Fields Aerocessories inflatable door seals installed in accordance with either the applicable supplemental type certificate (STC) or through field approval, the FAA issued priority letter AD 98-21-21 to prevent smoke and a possible fire in the cockpit caused by overheating of the electric door seal inflation systems, which could result in passenger injury.

Determination of the Effective Date of the AD

Since it was found that immediate corrective action was required, notice and opportunity for prior public comment thereon were impracticable and contrary to the public interest, and good cause existed to make the AD effective immediately by individual letters issued on October 2, 1998, to all known U.S. operators of aircraft equipped with the affected inflatable door seals that were installed in accordance with the applicable STC. These conditions still exist, and the AD is hereby published in the Federal Register as an amendment to section 39.13 of the Federal Aviation Regulations (14 CFR 39.13) to make it effective as to all persons.

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting immediate flight safety and, thus, was not preceded by notice and opportunity to comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted in triplicate to the address specified above. All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. 98-CE-88-AD." The postcard will be date stamped and returned to the commenter.

Regulatory Impact

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39--AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 USC 106(g), 40113, 44701.

Sec. 39.13 [Amended]

2. Section 39.13 is amended by adding a new airworthiness directive (AD) to read as follows:

98-21-21 Bob Fields Aerocessories: Amendment 39-10844; Docket No. 98-CE-88-AD.
