

Proposed Rules

Federal Register

Vol. 64, No. 224

Monday, November 22, 1999

This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 98-NM-293-AD]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 727 and 727C Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This document proposes the adoption of a new airworthiness directive (AD) that is applicable to certain Boeing Model 727 and 727C series airplanes. This proposal would require one-time inspections of the exterior body skin located at the forward corners of the mid-galley door hinge cutouts to detect cracking, and corrective actions, if necessary. This proposal also would require modification of the body skin of the mid-galley door hinge cutouts. This proposal is prompted by a report indicating that, during fatigue testing on a Boeing Model 727 series airplane, a crack was found in the body skin at the lower forward corners of the mid-galley door hinge cutouts due to cabin pressurization cycles. The actions specified by the proposed AD are intended to prevent such fatigue cracking of the body skin, which could result in reduced structural integrity of the fuselage and consequent loss of cabin pressurization.

DATES: Comments must be received by January 6, 2000.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 98-NM-293-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9:00 a.m. and 3:00

p.m., Monday through Friday, except Federal holidays.

The service information referenced in the proposed rule may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. **FOR FURTHER INFORMATION CONTACT:** Walter Sippel, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Linda Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2774; fax (425) 227-1181.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of the proposed rule by submitting such written data, views, or arguments as they may desire. Communications shall 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, specified above, will be considered before taking action on the proposed rule. The proposals contained in this notice may be changed in light of the comments received.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the proposed 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 summarizing each FAA-public contact concerned with the substance of this proposal will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 98-NM-293-AD." The postcard will be date stamped and returned to the commenter.

Availability of NPRMs

Any person may obtain a copy of this NPRM by submitting a request to the FAA, Transport Airplane Directorate, ANM-114, Attention: Rules Docket No.

98-NM-293-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056.

Discussion

The FAA has received reports indicating that, during fatigue testing on a Boeing Model 727 series airplane, a crack was found in the body skin at the lower forward corners of the mid-galley door hinge cutouts. The crack was attributed to fatigue induced by cabin pressurization cycles. Such cracking, if not corrected, could result in reduced structural integrity of the fuselage and consequent loss of cabin pressurization.

Other Related Rulemaking

On January 16, 1990, the FAA issued AD 90-06-09, amendment 39-6488 (55 FR 8370, March 7, 1990), applicable to certain Boeing Model 727 series airplanes, which currently requires the incorporation of certain structural modifications specified by Boeing Document No. D6-54860, Revision C, dated December 11, 1989, "Aging Airplane Service Bulletin Structural Modification Program—Model 727." That Boeing document references numerous Boeing service bulletins that specify various modification actions that are mandated by AD 90-06-09. That AD was prompted by reports of incidents involving fatigue cracking and corrosion in transport category airplanes that were approaching or had exceeded their design life goal. The actions required by that AD are intended to prevent a degradation in the structural capabilities of the affected airplanes, which could result in structural failure. That action also reflects the FAA's decision that long-term continued operational safety should be assured by actual modification of the airframe rather than repetitive inspection.

Since issuance of that AD, the FAA has determined that the same unsafe condition addressed in that AD may exist on certain additional Model 727 and 727C series airplanes. The FAA was advised that three Model 727 and 727C series airplanes (line numbers 153, 290, and 339) were omitted inadvertently from the applicability of AD 90-06-09 because those airplanes had been excluded inadvertently from the effectivity of Section I.A. of Boeing Service Bulletin 727-53-0054, Revision 1, dated November 16, 1989. Therefore, these additional airplanes are also subject to the same unsafe condition addressed in AD 90-06-09.

Explanation of Relevant Service Information

The FAA has reviewed and approved Boeing Service Bulletin 727-53-0054,

Revision 1, which describes a modification to the corners of the hinge cutouts and provides a top kit and instructions for installing doublers. Procedures include a close (detailed) visual inspection and a high-frequency eddy current (HFEC) inspection of the forward upper and lower corners of the mid-galley door hinge cutouts for cracks in the body skin. If no cracks are found, procedures specify either a modification, which includes modifying cutout corners and installing doublers, or a reinspection at "C" check intervals until accomplishment of the modification. If cracks are within specified repair limits, procedures include stop-drilling cracks, modifying cutout corners, and installing doublers. If cracks exceed specified repair limits, procedures specify contacting the manufacturer for repair instructions. Accomplishment of the modification is intended to increase the fatigue life of the body skin adjacent to the forward corners of the mid-galley door hinge cutouts.

The procedures specified by Revision 1 of the service bulletin are essentially the same as those procedures included in Boeing Document D6-54860, Revision C, as cited in AD 90-06-09, and the procedures specified in the original issue of Boeing Service Bulletin 727-53-0054.

Accomplishment of the actions specified in AD 90-06-09 is acceptable for compliance with the requirements of this proposed AD.

Explanation of Requirements of Proposed Rule

Since an unsafe condition has been identified that is likely to exist or develop on other products of this same type design, the proposed AD would require accomplishment of the actions specified in Revision 1 of the service bulletin described previously, except as described below in the Differences section of this AD.

Since this AD expands the applicability of AD 90-06-09, the FAA has considered a number of factors in determining whether to issue a new AD or to supersede the "old" AD. Although the three additional airplanes included in the applicability of this proposed AD were inadvertently omitted from Boeing Service 727-53-0054, numerous other service bulletins referenced in Boeing Document No. D6-54860, Revision C, (cited in AD 90-06-09) included those additional airplanes in the effectivity.

The FAA also has considered the entire fleet size that would be affected by superseding AD 90-06-09 and the consequent workload associated with revising maintenance record entries. In light of this, the FAA has determined that a less burdensome approach is to issue a separate AD applicable only to these additional airplanes. This proposed AD would not supersede AD 90-06-09; airplanes listed in the applicability of AD 90-06-09 are required to continue to comply with the requirements of that AD. This proposed AD is a separate AD action, and is applicable only to Boeing Model 727 and 727C series airplanes, line numbers 153, 290, and 339; certificated in any category.

Differences Between Proposed AD and Relevant Service Information

Operators should note that the proposed AD differs from Boeing Service Bulletin 727-53-0054, Revision 1, as follows:

- The effectivity of Revision 1 includes Model 727-100 series airplanes, line positions 1 through 474 inclusive. However, the applicability of this proposal includes Model 727 and 727C series airplanes, line numbers 153, 290, and 339 inclusive, which were inadvertently omitted from AD-90-06-09.
- Although Revision 1 specifies that, in certain cases, repetitive inspections may be performed in lieu of a modification, this proposal does not allow such action. Instead, this proposal would require accomplishment of a repair and modification if cracking is detected, or a modification if no cracking is detected. The FAA has determined that long-term continued operational safety will be better assured by design changes to remove the source of the problem, rather than by repetitive inspections. Long-term inspections may not be providing the degree of safety assurance necessary for the transport airplane fleet. This, coupled with a better understanding of the human factors associated with numerous continual inspections, has led the FAA to consider placing less emphasis on inspections and more emphasis on design improvements. The proposed repair and modification requirement is in consonance with these conditions.

• Paragraph III.C. of the Accomplishment Instructions of Revision 1 specifies that if any crack is found that is greater than 1.00 inch, the manufacturer must be contacted for repair instructions. However, this proposal requires the repair of those conditions to be accomplished in accordance with a method approved by

the FAA, or in accordance with data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative who has been authorized by the FAA to make such findings.

- Figure 1 of Revision 1 specifies a "close visual inspection" of the body skin at the forward corners of mid-galley door hinge cutouts. However, this AD would require a "detailed visual inspection" of the body skin at those locations.

Cost Impact

There are approximately 1,516 airplanes of the affected design in the worldwide fleet. The FAA estimates that 3 airplanes of U.S. registry would be affected by this proposed AD.

The FAA estimates that it would take approximately 1 work hour per airplane to accomplish the required inspections of the body skin at the corners of the mid-galley door hinge cutouts, and that the average labor rate is \$60 per work hour. Based on these figures, the cost impact of the required inspections on U.S. operators is estimated to be \$180, or \$60 per airplane.

The FAA also estimates that it would take approximately 28 work hours per airplane to accomplish the repair and modification, and that the average labor rate is \$60 per work hour. Required parts would cost approximately \$1,023 per airplane. Based on these figures, the cost impact of the proposed AD on U.S. operators is estimated to be \$8,109, or \$2,703 per airplane.

The cost impact figure discussed above is based on assumptions that no operator has yet accomplished any of the proposed requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted.

Regulatory Impact

The regulations proposed herein would 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 proposal would not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this proposed regulation (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) if

promulgated, will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the draft regulatory evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting 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.

The Proposed Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend 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 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

Boeing: Docket 98-NM-293-AD.

Applicability: Model 727 and 727C series airplanes, line numbers 153, 290, and 339 inclusive; certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes 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 (b) 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 as indicated, unless accomplished previously.

To prevent fatigue cracking of the body skin at the forward corners of the mid-galley door hinge cutouts, which could result in reduced structural integrity of the fuselage and consequent loss of cabin pressurization, accomplish the following:

One-Time Inspections

(a) Prior to the accumulation of 60,000 total flight cycles, or within 3,000 flight cycles after the effective date of this AD, whichever occurs later, perform a one-time detailed visual inspection and a high frequency eddy current inspection of the exterior body skin

located adjacent to the forward corners of the mid-galley door hinge cutouts for cracking in accordance with Boeing Service Bulletin 727-53-0054, Revision 1, dated November 16, 1989.

Note 2: For the purposes of this AD, a detailed visual inspection is defined as: "An intensive examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate by the inspector. Inspection aids such as mirrors, magnifying lenses, etc. may be used. Surface cleaning and elaborate access procedures may be required."

Repairs and Modification

(1) If no cracking is found during any inspection, prior to further flight, modify the body skin at the forward corners of the mid-galley door hinge cutouts, in accordance with Boeing Service Bulletin 727-53-0054, Revision 1, dated November 16, 1989. No further action is required by this AD.

(2) If any cracking is found during any inspection, prior to further flight, accomplish the requirements of either paragraph (a)(2)(i) or (a)(2)(ii) of this AD, as applicable.

(i) If any crack is less than or equal to 1.00 inch, accomplish the repair and modification in accordance with Boeing Service Bulletin 727-53-0054, Revision 1, dated November 16, 1989. No further action is required by this AD.

(ii) If any crack is greater than 1.00 inch, accomplish the repair and modification in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate; or in accordance with data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative who has been authorized by the Manager, Seattle ACO, to make such findings. For a repair method to be approved by the Manager, Seattle ACO, as required by this paragraph, the Manager's approval letter must specifically reference this AD. No further action is required by this AD.

Note 3: Accomplishment of the actions required by AD 90-06-09, amendment 39-6488, is considered acceptable for compliance with this AD.

Alternative Method of Compliance

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO, FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

Note 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(c) Special flight permits may be issued in accordance with sections 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.

Issued in Renton, Washington, on November 16, 1999.

D.L. Riggins,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 99-30372 Filed 11-19-99; 8:45 am]

BILLING CODE 4910-13-U

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 98-NM-314-AD]

RIN 2120-AA64

Airworthiness Directives; Lockheed Model L-1011-385 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This document proposes the adoption of a new airworthiness directive (AD) that is applicable to all Lockheed Model L-1011-385 series airplanes. This proposal would require modifications of the engine turbine cooling air panel at the flight engineer/second officer's console, pilot's caution and warning light panel on the main instrument panel, and monitoring system for the engine turbine air temperature. This proposal is prompted by reports of an undetected fire breaching the high speed gearbox (HSGB) case on certain Rolls Royce engines installed on in-service airplanes due to lack of an internal fire detection system within the HSGB. The actions specified by the proposed AD are intended to prevent undetected fires originating within the HSGB from breaching the HSGB case, which could result in engine damage and increased difficulty in extinguishing a fire.

DATES: Comments must be received by January 6, 2000.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 98-NM-314-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9 a.m. and 3 p.m., Monday through Friday, except Federal holidays.

The service information referenced in the proposed rule may be obtained from Lockheed Martin Aircraft & Logistics