

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2001-NM-296-AD; Amendment 39-14171; AD 2005-13-34]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 777-200 and -300 Series Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain Boeing Model 777-200 and -300 series airplanes, that requires replacing existing ceiling and sidewall light connectors in the passenger cabin with new connectors, and follow-on actions. This action is necessary to prevent overheating of the light connectors, which could result in smoke and a possible fire in the passenger cabin. This action is intended to address the identified unsafe condition.

DATES: Effective August 2, 2005.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of August 2, 2005.

ADDRESSES: The service information referenced in this AD may be obtained from Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington.

FOR FURTHER INFORMATION CONTACT: Binh V. Tran, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 917-6485; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to certain Boeing Model 777-200 and -300 series airplanes was published in the Federal Register on August 15, 2003 (68 FR 48833). That action proposed to require replacing existing ceiling and sidewall light connectors in the passenger cabin with new connectors, and follow-on actions.

Explanation of New Relevant Service Information

Since the issuance of the proposed AD, the FAA has reviewed and approved Boeing Special Attention Service Bulletin 777-33-0019, Revision 1, dated March 11, 2004. (The proposed AD refers to Boeing Special Attention Service Bulletin 777-33-0019, dated July 19, 2001, as the appropriate source of service information for the proposed actions.) Revision 1 limits the effectivity listing to airplanes having line numbers 1 through 264 inclusive. (Connectors on airplanes with line numbers 265 and subsequent were modified and screened prior to delivery of those airplanes to ensure the connectors' resistance to moisture contamination.) We have revised the applicability statement of this AD accordingly.

The work instructions in Revision 1 of the service bulletin are essentially the same as those in the original issue. Accordingly, we have revised paragraph (a) of this AD to refer to Revision 1 of the service bulletin and to give credit for actions accomplished previously per the original issue of the service bulletin. We have also revised paragraph (b) of this AD to remove the reference to the applicable steps in Work Packages 1, 2, and 3 of the service bulletin. Since all steps in Work Packages 1, 2, and 3 of Boeing Special Attention Service Bulletin 777-33-0019, Revision 1, must be done, there is no need to include this information in the AD.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. We have duly considered the comments received.

Support for the Proposed AD

One commenter supports the proposed AD.

Request To Withdraw the Proposed AD

One commenter, the airplane manufacturer, requests that we withdraw the proposed AD. The commenter notes that it has performed a comprehensive hazard assessment of the subject connectors and has concluded that a connector failure would not adversely affect the airplane's capacity for continued safe flight and landing. The commenter states that the hazard assessment included a review of the materials adjacent to the subject connectors. This review shows that these materials do not propagate a flame and would not significantly affect the magnitude or duration of a potential connector failure. The commenter notes that the type of material adjacent to the connectors was also changed to an improved material at a certain line number during production. The commenter further explains that the reported connector failures were detected during troubleshooting of inoperative lighting or during airplane maintenance and, in all cases, short circuiting was limited by circuit breaker protection. Based on this information, the commenter concludes that the proposed AD is not justified. The commenter also expresses concern that the extensive rework associated with the proposed AD could be detrimental because the rework would increase the probability of latent system failures due to the large number of connectors in the airplane that must be reworked in an environment not conducive to such rework.

After the comment period closed, we coordinated with the commenter on this issue. The commenter agrees that an unsafe condition exists, and that the proposed AD is an appropriate means of addressing it. Thus, we find that no change to the AD is necessary in this regard.

Requests To Extend Compliance Time

Several commenters request that we extend the proposed compliance time beyond the proposed 18 months. The commenters' proposals for the extended compliance time range from 24 months to 6

years. The commenters justify their requests based on the scope of the necessary work, especially related to the amount of work associated with gaining access to the connectors (e.g., removing stowage bins and ceiling panels, which are not normally removed during minor maintenance visits). The commenters state that extending the compliance time would allow them to accomplish the proposed requirements during a scheduled heavy maintenance visit. Two commenters question the urgency of the unsafe condition (a factor that we considered in determining the compliance time, as explained in the proposed AD). These commenters have not experienced any connector failures in their fleets and thus conclude that an extension of the compliance time would not adversely affect safety. Another commenter suggests that we require the replacement of Priority "A+" and "A" connectors (as defined in Revision 01 of the referenced service bulletin) within 18 months, and the replacement of Priority "B" and "C" connectors within 6 years. One commenter also expresses concern about parts availability, in that the number of airplanes affected by the proposed AD and the relatively short compliance time could overburden the ceiling light supplier with a large number of lights sent to them for modification.

We agree that the compliance time for the requirements of this AD may be extended somewhat. We have reconsidered the urgency of the unsafe condition and the amount of work related to the required actions. We find that extending the compliance time from 18 months to 60 months will not adversely affect safety, and, for the majority of affected operators, will allow the required actions to be performed during regularly scheduled maintenance at a base where special equipment and trained maintenance personnel will be available if necessary. A 60-month compliance time will reduce the burden on affected operators, while at the same time addressing one of the manufacturer's concerns, stated previously, that the rework associated with the connector replacement could increase the probability of latent system failures. We have revised paragraph (b) of this AD accordingly.

Request To Limit Required Replacement of Connectors

One commenter, the airplane manufacturer, requests that we limit the requirement to replace connectors to connectors that are prioritized "A+" and "A" (as defined in Revision 1 of the referenced service bulletin). The commenter notes that Revision 1 of the referenced service bulletin designates connectors with "A+" priority as those that have failed in service, and connectors with "A" priority as those that are in the same physical area and exposed to the same conditions as the failed connectors. (Connectors with "B" priority are those that are in the same physical areas as connectors with "A" priority, but that are not expected to be subject to the same environmental conditions (e.g., possible exposure to moisture) as connectors with "A" priority. Connectors with priority "C" are all other connectors in which 115-volt power is present.)

We acknowledge the manufacturer's position with regard to known service problems. We also acknowledge our common interest in replacing all of the connectors. We have determined that all connectors, regardless of their location, have the potential to fail if they are contaminated by moisture. Also, these connectors are interchangeable, so it is possible that connectors with priority "C" could be removed and reinstalled in a location where they would merit priority "A+" or "A" replacement. For these reasons, we find that all connectors are subject to the same unsafe condition that is addressed by this AD. We find that requiring replacement of all connectors with improved connectors that are more resistant to moisture contamination will eliminate the unsafe condition and ensure the continued operating safety of the affected airplane fleet. As stated previously, we have agreed to extend the compliance time for the replacement of all connectors to 60 months, which the manufacturer has agreed will not impose an unnecessary burden on operators. No further change is necessary in this regard.

Requests To Increase Estimate of Cost Impact

Several commenters request that we revise the Cost Impact section of the proposed AD to increase the estimated number of work hours, as well as the estimated number of affected Model 777-200 series airplanes.

Several commenters note that the referenced service bulletin estimates that 242 work hours per airplane will be needed to modify each Model 777-200 series airplane. One of these commenters explains that the time required for gaining access and closing up should be included as a specific cost of the proposed AD because the overhead bins and ceiling panels would not normally be removed at a maintenance visit corresponding to the proposed compliance time of 18 months. Another commenter notes that the estimate in the service bulletin of 242 work hours is low. Based on its past experience, the commenter estimates that 300 work hours per airplane will be necessary.

We do not concur with the request to increase the estimated number of work hours. Section 1. G., "Manpower," of the service bulletin states that 242 work hours per airplane will be needed to accomplish the actions that apply to Model 777-200 series airplanes. This total figure of 242 work hours includes 79 work hours for opening access and 91 work hours for closing access. We do not typically include the time for gaining access and closing up in the Cost Impact estimates in ADs. Thus, in this AD we estimate that 72 work hours will be needed to accomplish the required actions on each Model 777-200 series airplane.

Regarding the commenter's statement that the time for gaining access and closing up should be included because the overhead bins and ceiling panels would not normally be removed at a maintenance visit corresponding to the originally proposed compliance time of 18 months: As explained previously, we have revised the compliance time for this AD from 18 months to 60 months. This extension should allow the majority of affected operators to accomplish the required actions at a scheduled heavy maintenance visit (when stowage bins and ceiling panels are removed). No additional change is necessary in this regard.

Several commenters also note that the estimate that the proposed AD would affect 22 Model 777-200 series airplanes of U.S. registry is incorrect, and that there are actually 107 of these airplanes that would be affected by the proposed AD. We partially concur. We find that 74 Model 777-200 series airplanes will be affected by this AD. We also find that there are no affected Model 777-300 series airplanes currently on the U.S. Register. (The proposed AD identifies 86 affected Model 777-300 series airplanes.) We have revised the Cost Impact section of this AD accordingly.

Other commenters request that we add cost estimates for additional actions. One commenter requests that we revise the cost estimate to include the work hours for modifying each light connector. We do not concur. We find that the light connectors may be modified by the operator or by a vendor. Thus, the time for modifying the light connectors may not be borne by the operator. No change is necessary in this regard.

One commenter states that, to support the modification program, it will need to purchase an entire ship's set of lights to create a rotating pool of light assemblies. This commenter requests that we increase the cost estimate to reflect this cost of \$63,200. We do not concur. The need to create a rotating pool of light assemblies is a planning decision made by the individual operator. Not all operators will choose such a course of action; thus, the cost of additional light assemblies should not be attributable to this AD. No change is necessary in this regard.

Another commenter requests that we revise the Cost Impact section of the proposed AD to include the cost of an oxygen leak detection test that it must accomplish following removal/installation of stowage bins on airplanes equipped with gaseous oxygen systems. We do not concur. Not all airplanes subject to this AD are equipped with a gaseous oxygen system in the passenger cabin. Thus, not all airplanes will be subject to the cost of a test of such a system. Further, the estimated work hours needed for testing, as specified in Section 1.G., Manpower, of the service bulletin, are already included in the Cost Impact estimate specified in this AD. No change is necessary in this regard.

Explanation of Additional Change to This AD

We have revised the Note included in the proposed AD to correct the reference to Diehl Service Information Letter 3352-33-01/01, dated June 20, 2001, and to designate the note as "Note 1."

Conclusion

After careful review of the available data, including the comments noted above, we have determined that air safety and the public interest require the adoption of the rule with the changes previously described. We have determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Cost Impact

There are approximately 264 airplanes of the affected design in the worldwide fleet. We estimate that 74 Model 777-200 series airplanes of U.S. registry will be affected by this AD.

For Model 777-200 series airplanes, it will take approximately 72 work hours per airplane to accomplish the required actions, at an average labor rate of \$65 per work hour. Required parts will cost approximately \$4,631 per airplane. Based on these figures, we estimate the cost impact of this AD on U.S. operators of Model 777-200 series airplanes to be \$689,014, or \$9,311 per airplane.

There are currently no affected Model 777-300 series airplanes on the U.S. Register. However, if an affected Model 777-300 series airplane is placed on the U.S. Register in the future, it will take approximately 82 work hours per airplane to accomplish the required actions, at an average labor rate of \$65 per work hour. Required parts will cost approximately \$5,488 per airplane. Based on these figures, we estimate the cost impact of this AD to be \$10,818 per affected Model 777-300 series airplane.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in subtitle VII, part A, subpart III, section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect 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, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) 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 final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it 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, Incorporation by reference, 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 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

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

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2005-13-34 Boeing: Amendment 39-14171. Docket 2001-NM-296-AD.

Applicability

Model 777-200 and -300 series airplanes, certificated in any category, line numbers 001 through 264 inclusive.

Compliance

Required as indicated, unless accomplished previously.

To prevent overheating of ceiling and sidewall light connectors, which could result in smoke and a possible fire in the passenger cabin, accomplish the following:

Service Bulletin References

(a) The following information pertains to the service bulletin referenced in this AD:

(1) The term "service bulletin," as used in this AD, means the Accomplishment Instructions of Boeing Special Attention Service Bulletin 777-33-0019, Revision 1, dated March 11, 2004.

(2) Although the service bulletin referenced in this AD specifies to submit information to the manufacturer, this AD does not include such a requirement.

(3) Actions accomplished before the effective date of this AD per Boeing Special Attention Service Bulletin 777-33-0019, dated July 19, 2001, are acceptable for compliance with the corresponding actions required by this AD.

Replacement of Light Connectors

(b) Within 60 months after the effective date of this AD: Replace, with improved parts, the existing ceiling and sidewall light connectors and wire bundle connectors in the areas specified in the service bulletin; by accomplishing all actions in Work Packages 1, 2, and 3, of the Accomplishment Instructions of the service bulletin.

Note 1: Boeing Special Attention Service Bulletin 777-33-0019 refers to Diehl Service Information Letter 3352-33-01/01, dated June 20, 2001, as an additional source of service information for accomplishment of the connector replacements.

Alternative Methods of Compliance

(c) In accordance with 14 CFR 39.19, the Manager, Seattle Aircraft Certification Office, FAA, is authorized to approve alternative methods of compliance for this AD.

Incorporation by Reference

(d) Unless otherwise specified in this AD, the actions shall be done in accordance with Boeing Special Attention Service Bulletin 777-33-0019, Revision 1, dated March 11, 2004. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. To get copies of this service information, go to Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207. To inspect copies of this service information, go to the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or to the National Archives and Records Administration (NARA). For information on the availability of this material at the NARA, call (202) 741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Effective Date

(e) This amendment becomes effective on August 2, 2005.

Issued in Renton, Washington, on June 21, 2005.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 05-12635 Filed 6-27-05; 8:45 am]

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