

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Part 39**

[Docket No. 99-NM-66-AD; Amendment 39-11799; AD 2000-12-21]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747-400 Series Airplanes Equipped with Pratt & Whitney PW4000 Series Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain Boeing Model 747-400 series airplanes. The AD requires installation of a modification of the thrust reverser control and indication system and wiring on each engine; and repetitive functional tests of that installation to detect discrepancies, and repair, if necessary. This amendment is prompted by the results of a safety review, which revealed that in-flight deployment of a thrust reverser could result in a significant reduction in airplane controllability. The actions specified by this AD are intended to ensure the integrity of the fail-safe features of the thrust reverser system by preventing possible failure modes, which could result in inadvertent deployment of a thrust reverser during flight, and consequent reduced controllability of the airplane.

DATES: Effective July 28, 2000.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of July 28, 2000.

ADDRESSES: The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, 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; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Larry Reising, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2683; fax (425) 227-1181.

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 747-400 series airplanes was published in the *Federal Register* on December 28, 1999 (64 FR 72579). That action proposed to require installation of a modification of the thrust reverser control and indication system and wiring on each engine; and repetitive functional tests of that installation to detect discrepancies, and repair, if necessary.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

Support for the Proposed Rule

One commenter states that it has no objection to the proposed rule and does not anticipate any adverse impact due to the proposed rule.

Request to Reference Previous Revisions of Service Bulletins

Two commenters request that the FAA revise the proposed rule to reference Boeing Service Bulletin 747-78-2155, Revision 1, dated January 30, 1997, as an acceptable source of service information for accomplishment of the actions specified in paragraph (a)(1) of the proposed rule. [The proposed rule referenced Revision 2 of Boeing Service Bulletin 747-78-2155, dated November 5, 1998, as the appropriate source of service information for the actions specified in paragraph (a)(1).] One of the commenters also requests that the FAA revise paragraph (a)(2)(iii) of the proposed rule to reference Boeing Service Bulletin 747-78-2154, Revision 1, dated November 2, 1995, and Revision 2, dated October 31, 1996, as acceptable sources of service information. [The proposed rule referenced Revision 3 of Boeing Service Bulletin 747-78-2154, dated December 11, 1997, as the appropriate source of service information for the actions specified in paragraph (a)(2)(iii).] One of the commenters, an operator, states that it has already modified its Model 747-400 series airplanes using Boeing Service Bulletin 747-78-2155, Revision 1. The other commenter notes that the earlier issues of the service bulletins are similar to the revisions referenced in the proposed rule, which only made corrections of typographical errors and clarifications of illustrations.

The FAA concurs with the commenters' requests. The FAA has

reviewed and approved Boeing Service Bulletins 747-78-2155, Revision 1, and 747-78-2154, Revisions 1 and 2, and finds that they are substantially similar to the later revisions of the service bulletins referenced in the proposed rule. Accordingly, two new notes (Note 2 and Note 3) have been added to this final rule to give credit for accomplishment of the actions in paragraphs (a)(1) and (a)(2)(iii) of this AD prior to the effective date of this AD in accordance with the earlier revisions of the service bulletins described previously.

Request To Specify Terminating Action

One commenter requests that the proposed rule be revised to specify that, for airplanes having line numbers 1067 and higher on which the intent of Boeing Service Bulletin 747-78-2155 was accomplished during production, this AD is terminating action for AD 94-15-05, amendment 39-8976 (59 FR 37655, July 25, 1994). The commenter states that this is not clear in the proposed rule.

Because paragraph (a) of this AD does not apply to airplanes having line numbers 1067 and higher, the FAA infers that the commenter is requesting that paragraph (b) of the proposed rule be revised to state that accomplishment of the functional test in that paragraph constitutes terminating action for the actions required by AD 94-15-05. The FAA concurs with the commenter's request. Paragraph (a) of AD 94-15-05 requires various inspections and functional tests of the thrust reverser control and indication system, and correction of any discrepancy found, on Boeing Model 747-400 series airplanes powered by Pratt & Whitney PW4000 series engines. For airplanes having line numbers 1067 and higher on which the intent of Boeing Service Bulletin 747-78-2155 was accomplished during production, accomplishment of the repetitive functional tests required by paragraph (b) of this AD constitutes terminating action for the repetitive inspections and functional tests required by paragraph (a) of AD 94-15-05. Therefore, a new paragraph (c) has been added to this AD to state this, and all subsequent paragraphs have been relettered accordingly.

Explanation of Additional Change to Proposed Rule

Paragraph (b) of the proposed rule contains an incorrect reference. That paragraph specifies that any discrepancy detected during the functional test must be corrected in accordance with procedures described in the Boeing 747 Airplane Maintenance

Manual. The correct source of service information for the accomplishment of corrective actions is the Boeing 747-400 Airplane Maintenance Manual. Paragraph (b) of this final rule has been revised accordingly.

Conclusion

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes previously described. The FAA has 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 177 Model 747-400 series airplanes of the affected design in the worldwide fleet. The FAA estimates that 53 airplanes of U.S. registry will be affected by this AD.

For airplanes identified in Boeing Service Bulletin 747-78-2155, Revision 2 (45 airplanes), it takes approximately 510 work hours per airplane to accomplish the required installation, at an average labor rate of \$60 per work hour. Required parts will be provided by the manufacturer at no cost to the operators. Based on these figures, the cost impact of the installation required by this AD on U.S. operators is estimated to be \$1,377,000, or \$30,600 per airplane.

For all airplanes (53 airplanes) it will take approximately 2 work hours per airplane to accomplish the required functional test, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the functional test required by this AD on U.S. operators is estimated to be \$6,360, or \$120 per airplane, per test cycle.

The cost impact figures discussed below refer to actions in other service bulletins for the airplanes identified in Boeing Service Bulletin 747-78-2155, Revision 2 (affects 45 U.S.-registered airplanes), that must be accomplished prior to or concurrent with the installation specified in Boeing Service Bulletin 747-78-2155, Revision 2.

It will take approximately 3 work hours per airplane to accomplish the central maintenance computer system modification, at an average labor rate of \$60 per work hour. Required parts will be provided by the manufacturer at no cost to the operators. Based on these figures, the cost impact of this modification is estimated to be \$8,100, or \$180 per airplane.

It will take approximately 2 work hours per airplane to accomplish the changes to the integrated display

system, at an average labor rate of \$60 per work hour. Required parts will be provided by the manufacturer at no cost to the operators. Based on these figures, the cost impact of this modification is estimated to be \$5,400, or \$120 per airplane.

It will take approximately 346 work hours per airplane to accomplish wiring provisions for the thrust reverser sync locks, at an average labor rate of \$60 per work hour. Required parts will be provided by the manufacturer at no cost to the operators. Based on these figures, the cost impact of this modification is estimated to be \$934,200, or \$20,760 per 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.

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:

2000-12-21 Boeing: Amendment 39-11799. Docket 99-NM-66-AD.

Applicability: Model 747-400 series airplanes equipped with Pratt & Whitney PW4000 series engines; 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 (d) 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 inadvertent deployment of a thrust reverser during flight and consequent reduced controllability of the airplane, accomplish the following:

Modifications

(a) For airplanes identified in Boeing Service Bulletin 747-78-2155, Revision 2, dated November 5, 1998: Accomplish the requirements of paragraphs (a)(1) and (a)(2) of this AD at the times specified in those paragraphs. Accomplishment of these actions constitutes terminating action for the inspections and tests required by paragraph (a) of AD 94-15-05, amendment 39-8976.

(1) Within 36 months after the effective date of this AD: Install an additional locking system on each engine thrust reverser in accordance with the Accomplishment Instructions of Boeing Service Bulletin 747-78-2155, Revision 2, dated November 5, 1998.

Note 2: Installations accomplished prior to the effective date of this AD in accordance with Boeing Service Bulletin 747-78-2155, Revision 1, dated January 30, 1997, are considered acceptable for compliance with paragraph (a)(1) of this AD.

(2) Prior to or concurrent with the installation required by paragraph (a)(1) of this AD, accomplish the requirements of paragraphs (a)(2)(i), (a)(2)(ii), and (a)(2)(iii) of this AD:

(i) Modify the central maintenance computer system hardware and software in accordance with Boeing Service Bulletin 747-45-2016, Revision 1, dated May 2, 1996.

(ii) Modify the integrated display system software in accordance with Boeing Service Bulletin 747-31-2245, dated June 27, 1996.

(iii) Install the provisional wiring for the locking system on the thrust reversers in accordance with Boeing Service Bulletin 747-78-2154, Revision 3, dated December 11, 1997.

Note 3: Installations accomplished prior to the effective date of this AD in accordance with Boeing Service Bulletin 747-78-2154, Revision 1, dated November 2, 1995, and Revision 2, dated October 31, 1996, are considered acceptable for compliance with paragraph (a)(2)(iii) of this AD.

Repetitive Functional Tests

(b) Within 4,000 hours time-in-service after accomplishment of paragraph (a) of this AD, or production equivalent; or within 1,000 hours time-in-service after the effective date of this AD, whichever occurs later: Perform a functional test to detect discrepancies of the additional locking system on each engine thrust reverser, in accordance with Appendix 1 of this AD. Prior to further flight, correct any discrepancy detected and repeat the functional test of that repair, in accordance with the procedures described in the Boeing 747-400 Airplane Maintenance Manual. Repeat the functional test thereafter at intervals not to exceed 4,000 hours time-in-service.

Terminating Action: Airplanes Having Line Numbers 1067 and Higher

(c) For airplanes having line numbers 1067 and higher on which the intent of Boeing Service Bulletin 747-78-2155, Revision 2, dated November 5, 1998, was accomplished during production: Accomplishment of the repetitive functional tests required by paragraph (b) of this AD constitutes terminating action for the repetitive inspections and functional tests required by paragraph (a) of AD 94-15-05, amendment 39-8976.

Alternative Methods of Compliance

(d) 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 Aircraft Certification Office (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

(e) 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.

Incorporation by Reference

(f) Except as provided by paragraph (b) of this AD, the actions shall be done in accordance with Boeing Service Bulletin

747-78-2155, Revision 2, dated November 5, 1998; Boeing Service Bulletin 747-45-2016, Revision 1, dated May 2, 1996; Boeing Service Bulletin 747-31-2245, dated June 27, 1996; or Boeing Service Bulletin 747-78-2154, Revision 3, dated December 11, 1997; as applicable. 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. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(g) This amendment becomes effective on July 28, 2000.

Issued in Renton, Washington, on June 14, 2000.

Donald L. Riggan,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 00-15545 Filed 6-22-00; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Airspace Docket No. 00-ASO-9]

Amendment to Class D and Class E5 Airspace, Greenwood, MS

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This action amends Class D and E airspace at Greenwood—Leflore Airport, Greenwood, MS. An Area Navigation (RNAV) Runway (RWY) 18 Standard Instrument Approach Procedure (SIAP) has been developed for Greenwood, MS. As a result, additional controlled airspace extending upward from the surface and extending upward from 700 feet Above Ground Level (AGL) is needed to accommodate the SIAP. This action also makes a technical change by amending the name of the VORTAC from Greenwood to Sidon.

EFFECTIVE DATE: 0901 UTC, October 5, 2000.

FOR FURTHER INFORMATION CONTACT: Nancy B. Shelton, Manager, Airspace Branch, Air Traffic Division, Federal Aviation Administration, P.O. Box 20636, Atlanta, Georgia 30320; telephone (404) 305-5627.

SUPPLEMENTARY INFORMATION:

History

On April 19, 2000, the FAA proposed to amend part 71 of the Federal Aviation Regulations (14 CFR part 71) by amending Class D and E airspace at Greenwood—Leflore Airport, Greenwood, MS. This action would provide adequate Class D and E airspace at the airport for the RNAV RWY 18 SIAP. Class D airspace designations are published in Paragraph 5000, Class E4 airspace designations are published in Paragraph 6004 and Class E5 airspace designations are published in Paragraph 6005 of FAA Order 7400.9G, dated September 1, 1999, and effective September 16, 1999, which is incorporated by reference in 14 CFR 71.1, dated September 1, 1999. The Class D and E airspace designations listed in this document will be published subsequently in the Order.

Interested parties were invited to participate in this rulemaking proceeding by submitting written comments on the proposal to the FAA. No comments objecting to the proposal were received.

The Rule

This amendment to Part 71 of the Federal Aviation Regulations (14 CFR part 71) amends Class D and E airspace at Greenwood—Leflore Airport, Greenwood, MS. This action also makes a technical change by amending the name of the VORTAC from Greenwood to Sidon.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. It, therefore, (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) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR part 71

Airspace, Incorporated by reference, Navigation (air).

Adoption of the Amendment

In consideration of the foregoing, the Federal Aviation Administration amends 14 CFR Part 71 as follows: