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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2000-NM-318-AD; Amendment 39-12411; AD 2001-17-20]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 707 and 720 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain Boeing Model 707 and 720 series airplanes, that requires replacement of wiring for the fuel boost pumps and override pumps with new wiring, installation of Teflon sleeving on the wiring, and associated actions. This amendment also requires repetitive inspections to detect damage of the wiring or evidence of a fuel leak. This amendment is necessary to detect and correct damaged wiring for the fuel boost pumps and override pumps, which could cause electrical arcing that could puncture the conduit containing the wire, and result in an explosion or fire adjacent to the fuel tank. This action is intended to address the identified unsafe condition.

DATES: Effective October 1, 2001.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of October 1, 2001.

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: Sulmo Mariano, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2686; 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 707 and 720 series airplanes was published in the Federal Register on March 29, 2001 (66 FR 17123). That action proposed to require replacement of wiring for the fuel boost pumps and override pumps with new wiring, installation of Teflon sleeving on the wiring, and associated actions. That action also proposed to require repetitive inspections to detect damage of the wiring or evidence of a fuel leak.

Comments Received

Interested persons have been afforded an opportunity to participate in the making of this amendment. The FAA has duly considered several comments received from a single commenter.

Refer to Revised Service Information

The commenter requests that we revise the proposed rule to reference Boeing Service Bulletin A3500, Revision 1, dated April 26, 2001. (The proposed rule refers to the original issue of Boeing Alert Service Bulletin A3500, dated July 27, 2000, as the appropriate source of service information for doing the proposed actions.) The commenter notes Revision 1 of the service bulletin contains updated information, such as changes to part numbers, but necessitates no additional work on airplanes modified per the original issue of the service bulletin.

We concur and have revised paragraphs (a) and (b) of this final rule to reference Revision 1 of the service bulletin. We have also added a new note, Note 4, which states that accomplishment of the actions required by this AD prior to the effective date of this AD according to the original issue of the service bulletin is acceptable for compliance with this AD.

Refer to Service Bulletin for Rework Instructions

The commenter requests that we revise paragraph (b) of the proposed AD to remove the instructions in that paragraph and instead refer to the appropriate section of the Accomplishment Instructions of the referenced service bulletin. The commenter states that, as written, paragraph (b) would require an operator to replace the wiring, Teflon sleeving, and conduit with new parts if a small fuel leak is found, even if no evidence of electrical arcing or an exposed conductor is found. The commenter notes that the intent of the proposed AD is to require replacement of the wiring and sleeving only when there is evidence of arcing or an exposed conductor.

We concur with the commenter's request and rationale. Therefore, we have revised paragraph (b) to require, if any electrical arcing or exposed copper wire or evidence of a fuel leak is detected during any inspection per paragraph (b), accomplishment of applicable corrective actions (including finding the source of any fuel leak and repairing the affected area, replacing the wiring, replacing the conduit, or installing new Teflon sleeving; as applicable) according to the Accomplishment Instructions of the service bulletin.

Revise Cost Impact

The commenter asks that we revise the Cost Impact section of the proposed AD to reduce the number of affected U.S.-registered airplanes from 65 to 22 airplanes. The commenter states that the airplane manufacturer's records show that there are only 22 U.S.-registered Boeing Model 707 and 720 series airplanes in service.

We do not concur. The figure of 22 U.S.-registered airplanes cited by the commenter does not include all of the Model 707 series airplanes operated by the U.S. military. When these airplanes are included in the total, there are 65 U.S. airplanes affected by this AD. No change is necessary in this regard.

The commenter also asks us to revise the Cost Impact section of the proposed AD to increase the number of work hours necessary to do the required actions from 27 to 38 work hours. The commenter states that the referenced service bulletin provides a figure of 38 work hours.

We partially concur. The figure of 38 work hours in the service bulletin includes time for gaining access and closing up. The cost impact analysis in AD rulemaking actions typically includes only the "direct" costs of the specific actions required by the AD, and does not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions. Because incidental costs may vary significantly from operator to operator, they are almost impossible to calculate. However, we find that the time needed for testing may be included in the cost estimate of this AD. Therefore, the estimate for the number of work hours for the required actions stated in the Cost Impact section of this final rule has been revised from 27 to 31 work hours.

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 261 Model 707 and 720 series airplanes of the affected design in the worldwide fleet. The FAA estimates that 65 airplanes of U.S. registry will be affected by this AD.

The replacement and initial associated actions will take approximately 31 work hours per airplane, at the average labor rate of \$60 per work hour. Based on these figures, the FAA estimates the cost impact of these required actions on U.S. operators to be \$120,900, or \$1,860 per airplane.

The inspection for damage of the wiring or evidence of a fuel leak will take approximately 3 work hours per airplane, at the average labor rate of \$60 per work hour. Based on these figures, the FAA estimates the cost impact of this required inspection on U.S. operators to be \$11,700, or \$180 per airplane, per inspection cycle.

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.

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.

Sec. 39.13 [Amended]

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

SUPERSEDED

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

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

We post ADs on the internet at "av-info.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).

2001-17-20 Boeing: Amendment 39-12411. Docket 2000-NM-318-AD.

Applicability: Model 707 and 720 series airplanes, line numbers 1 through 941 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 (c) 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 detect and correct damaged wiring for the fuel boost pumps and override pumps, which could cause electrical arcing that could puncture the conduit containing the wire and result in an explosion or fire adjacent to the fuel tank, accomplish the following:

Replacement of Wiring, Installation of Sleeving, and Associated Actions

(a) Within 1 year or 4,000 flight hours after the effective date of this AD, whichever occurs first, replace the wiring for the fuel boost pumps and override pumps, install Teflon sleeving over the wiring, and do all associated actions, per the Accomplishment Instructions of Boeing Service Bulletin A3500, Revision 1, dated April 26, 2001. The associated actions include performing a general visual inspection of the area around each fuel boost pump and override pump for evidence of a fuel leak; finding the source of any fuel leak and repairing the affected area; replacing the conduit, if required; and performing a detailed visual inspection of the wiring installed in the conduit for evidence of electrical arcing or a fuel leak, or exposed copper wire. If replacement of the conduit is deferred per the service bulletin, repeat the inspection for fuel leaks every 500 flight hours until the conduit is replaced, and replace the conduit within 6,000 flight hours or 18 months, whichever occurs first.

Note 2: For the purposes of this AD, a general visual inspection is defined as: "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or drop-light, and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

Note 3: For the purposes of this AD, a detailed visual inspection is defined as: "An intensive visual 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 intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

Note 4: Use of Boeing Alert Service Bulletin A3500, dated July 27, 2000, to accomplish the actions required by this AD prior to the effective date of this AD is considered acceptable for compliance with this AD.

Repetitive Inspections

(b) After replacement of the wiring per paragraph (a) of this AD, repeat the detailed visual inspection of the wiring for the fuel boost pumps and override pumps for damage, such as evidence of electrical arcing or exposed copper wire, or evidence of a fuel leak. Repeat the inspection at least every 30,000 flight hours, per the Accomplishment Instructions of Boeing Service Bulletin A3500, Revision 1, dated April 26, 2001. If any electrical arcing or exposed copper wire or evidence of a fuel leak is detected during any inspection per this paragraph, before further flight, do the applicable corrective actions (including finding the source of any fuel leak and repairing the affected area, replacing the wiring, replacing the conduit, or installing new Teflon sleeving; as applicable) according to the Accomplishment Instructions of the service bulletin.

Alternative Methods of Compliance

(c) 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. 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 5: 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

(d) 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

(e) The actions shall be done in accordance with Boeing Service Bulletin A3500, Revision 1, dated April 26, 2001. 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

(f) This amendment becomes effective on October 1, 2001.

Issued in Renton, Washington, on August 17, 2001.

Vi L. Lipski,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 01-21395 Filed 8-24-01; 8:45 am]

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