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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2000-NM-146-AD; Amendment 39-12458; AD 2001-20-10]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 737 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain Boeing Model 737 series airplanes, that requires inspection of wire bundles in certain junction boxes in the main wheel well to detect chafing or damage, and follow-on actions. The actions specified by this AD are intended to prevent wire damage, which could result in arcing and consequent fire in the main wheel well or passenger cabin, or inability to stop the flow of fuel to an engine or to the auxiliary power unit in the event of a fire. This action is intended to address the identified unsafe condition.

DATES: Effective November 20, 2001.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of November 20. 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: Stephen Oshiro, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2793; 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 737 series airplanes was published as a supplemental notice of proposed rulemaking (NPRM) in the Federal Register on June 5, 2001 (66 FR 30114). That action proposed to require inspection of wire bundles in four junction boxes in the main wheel well to detect chafing or damage, and follow-on actions.

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.

One commenter concurs with the proposed rule; another commenter indicates that it is already accomplishing the proposed inspections and has no further comments.

Extend Compliance Time

One commenter asks that we extend the compliance time for the proposed requirements from 12 to 18 months after the effective date of the AD. The commenter states that the 12-month compliance time is not a sufficient amount of time to perform the inspection (check) during its 737 fleet `C-check' cycle. The assessment was based on the amount of operational testing that would have to be performed on the systems that would be disturbed by the proposed inspections and modifications. The commenter recommends the compliance time be extended to 18 months to ensure the inspection may be accomplished during a scheduled maintenance visit.

The FAA agrees to extend the compliance time for the inspection to 18 months. In developing an appropriate compliance time for the inspection required by the final rule, we considered not only the degree of urgency associated with addressing the unsafe condition, but the practical aspect of accomplishing the inspection of the wire bundles on the Model 737 fleet in a timely manner. It is our intent in this final rule to allow the inspections to be done within the time frame of a regular maintenance interval. We took the commenter's recommendations into account, as well as the time necessary to do the specified actions, and we find that an 18-month compliance time should correspond with the regular maintenance schedules of the majority of affected operators. An extension of the compliance time to 18 months will not adversely affect safety. Paragraph (a) of the final rule has been changed accordingly.

Two commenters ask that the proposed compliance time be extended to 24 months. One commenter, the airplane manufacturer, states that, based on input from the airlines and an internal Boeing review, the compliance time should be extended. The commenter notes that this extension will provide adequate time for compliance to operators with large fleets because they will be able to accomplish the inspection during routine maintenance, rather than scheduling an inspection specifically to address the proposed rule. The second commenter states that a 24-month compliance time would allow it to accomplish the inspections during regularly scheduled maintenance.

We do not agree to extend the compliance time for the inspection to 24 months. We have already considered factors such as operators' maintenance schedules in setting a compliance time for the required modification, and have determined that 18 months is an appropriate compliance time in which the inspection may be accomplished during scheduled airplane maintenance for the majority of affected operators. Since maintenance schedules vary from operator to operator, it would not be possible to guarantee that all affected airplanes could be modified during scheduled maintenance, even with a compliance time of 24 months. In any event, we find that 18 months represents the maximum time wherein the affected airplanes may continue to operate prior to inspection without compromising safety. No further change to the final rule is necessary in this regard.

Add New Service Information

One commenter asks that Boeing Service Letter 737-SL-24-138, dated May 24, 1999, be added to the proposed rule as another source of service information for accomplishment of certain actions related to those specified in the proposed rule. The service letter was referenced in a Civil Airworthiness Authorities' Additional Airworthiness Directive.

On July 2, 2001, the FAA issued AD 2001-14-06, amendment 39-12316 (66 FR 36445, July 12, 2001), which references that service letter as the appropriate source of service information for accomplishment of the inspections of the circuit connectors of the fuel shutoff valve in the main wheel well. As the service letter has been addressed in another AD, no change to the final rule is necessary in this regard.

Change Certain Requirements

One commenter asks that the proposed requirement of wire protection features, as specified in paragraph (a)(1) of the proposed rule, be changed to agree verbatim with the procedures specified in Boeing Service Letter 737-SL-24-111, dated February 27, 1996. The commenter states that the proposed requirement implies that the protective methods need to be incorporated regardless of the condition of the wire bundles, whereas the service letter does not specify incorporation of wire protection features unless contact between the wiring and junction box is found. The commenter adds that such action would require re-inspection of the fleet, in addition to added work that may be unjustified. The commenter also adds that installation of wire protection would not be necessary in that the affected wire bundles are short in length and, due to the relatively rigid nature of the installation at the pressure seal, if a wire bundle was found to have adequate clearance from the cover, this condition probably would not change.

The FAA does not agree. Although there may be no damage to the wiring found during the inspection, the chafing condition that prompted this rulemaking action could still develop eventually, due to airplane vibration. Incorporation of the wire protection features will ensure that this condition does not develop. No change to the final rule is necessary in this regard.

Add Work Hours to Cost Impact Section

One commenter asks that the estimate of 8 work hours per airplane for doing the proposed actions, as specified in the Cost Impact section of the proposed rule, be changed. The commenter states that the estimate is not accurate based on the amount of operational checks required after disturbing the affected connectors/systems in the junction boxes to repair damage to wiring. The commenter recommends that the estimate be changed to 35 work hours per aircraft and adds that this labor estimate is based on its experience with accomplishment of the original release of the referenced service letter.

The FAA does not agree with the commenter's request to include the work hours necessary for repairs of the wiring and subsequent operational checks in the Cost Impact section of the proposed AD. The Cost Impact section only includes the ``direct'' costs of the specific actions required, which include inspecting the wire bundles and protecting the wires from chafing. The AD does not include the cost of ``on-condition'' actions, such as repair of the wiring if chafing is detected during the required inspection (``repair, if necessary''). Such on-condition repair actions would be required to be accomplished, regardless of AD direction, to correct an unsafe condition identified in an airplane and to ensure the airworthiness of that airplane, as required by the Federal Aviation Regulations. No change to the work hour estimate in the final rule is necessary.

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 change previously described. The FAA has determined that this change will neither increase the economic burden on any operator nor increase the scope of the AD.

Cost Impact

There are approximately 3,719 airplanes of the affected design in the worldwide fleet. The FAA estimates that 1,467 airplanes of U.S. registry will be affected by this AD, that it will take approximately 8 work hours per airplane to accomplish the required actions, and that the average labor rate is $60 per work hour. The cost of required parts will be negligible. Based on these figures, the cost impact of the AD on U.S. operators is estimated to be $704,160, or $480 per airplane.

The cost impact figure discussed above is 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:

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"

2001-20-10 Boeing: Amendment 39-12458. Docket 2000-NM-146-AD.

Applicability: All Model 737-100, -200, -300, -400, and -500 series airplanes; and Model 737-600, -700, -800, and -900 series airplanes, line numbers 1 through 706 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 chafing of wire bundles in four junction boxes in the main wheel well, which could result in arcing and consequent fire in the main wheel well or passenger cabin, or inability to stop the flow of fuel to an engine or to the auxiliary power unit in the event of fire, accomplish the following:

Inspection

(a) Within 18 months after the effective date of this AD, perform a detailed visual inspection of the wire bundles in the four junction boxes formed by electrical disconnect brackets on the left and right sides of the main wheel wells to detect damage or chafing, as specified in Boeing Service Letter 737-SL-24-111-B, dated January 16, 2001.

Note 2: 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."

(1) If no chafing is detected, prior to further flight, protect the wire bundles from chafing against the cover plate of the junction box, according to the service letter.

(2) If any chafing is detected, prior to further flight, repair the wiring in accordance with the service letter, and protect the wire bundles from chafing against the cover plate of the junction box, according to the service letter.

Note 3: Boeing Service Letter 737-SL-24-111-B, dated January 16, 2001, refers to Boeing Standard Wiring Practices Manual D6-54446, Subject 20-10-13, as the appropriate source of repair instructions if any damaged wiring is found.

Alternative Methods 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 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 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.

Incorporation by Reference

(d) The actions shall be done in accordance with Boeing Service Letter 737-SL-24-111-B, including Attachment, dated January 16, 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

(e) This amendment becomes effective on November 20, 2001.

Issued in Renton, Washington, on October 4, 2001.

Vi L. Lipski,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 01-25616 Filed 10-15-01; 8:45 am]
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