2. Electronic Flight Control System: Control Surface Awareness

In addition to compliance with §§ 25.143, 25.671, and 25.672, the following special conditions apply.

(a) The system design must ensure that the flightcrew is made suitably aware whenever the primary control means nears the limit of control authority. This indication should direct the pilot to take appropriate action to avoid the unsafe condition in accordance with appropriate airplane flight manual (AFM) instructions. Depending on the application, suitable annunciations may include cockpit control position, annunciator light, or surface position indicators. Furthermore, this requirement applies at limits of control authority, not necessarily at limits of any individual surface travel.

(b) Suitability of such a display or alerting must take into account that some pilot-demanded maneuvers are necessarily associated with intended full performance, which may require full surface deflection. Therefore, simple alerting systems, which would function in both intended or unexpected control-limiting situations, must be properly balanced between needed crew awareness and nuisance factors. A monitoring system which might compare airplane motion, surface deflection, and pilot demand could be useful for eliminating nuisance alerting.

3. High Intensity Radiated Fields (HIRF) Protection

(a) Protection from Unwanted Effects of High-intensity Radiated fields. Each electrical and electronic system which performs critical functions must be designed and installed to ensure that the operation and operational capabilities of these systems to perform critical functions are not adversely affected when the airplane is exposed to high intensity radiated fields external to the airplane.

(b) For the purposes of these Special Conditions, the following definition applies. Critical Functions: Functions whose failure would contribute to or cause a failure condition that would prevent continued safe flight and landing of the airplane.

4. Limit Engine Torque Loads for Sudden Engine Stoppage

In lieu of § 25.361(b) the Boeing Model 787–8 must comply with the following special conditions.

(a) For turbine engine installations, the engine mounts, pylons, and adjacent supporting airframe structure must be designed to withstand 1g level flight loads acting simultaneously with the maximum limit torque loads imposed by each of the following:

(1) Sudden engine deceleration due to a malfunction which could result in a temporary loss of power or thrust.

(2) The maximum acceleration of the engine.

(b) For auxiliary power unit installations, the power unit mounts and adjacent supporting airframe structure must be designed to withstand 1g level flight loads acting simultaneously with the maximum limit torque loads imposed by each of the following:

(1) Sudden auxiliary power unit deceleration due to malfunction or structural failure.

(2) The maximum acceleration of the power unit.

(c) For engine supporting structure, an ultimate loading condition must be considered that combines 1g flight loads with the transient dynamic loads resulting from each of the following:

(1) Loss of any fan, compressor, or turbine blade.

(2) Where applicable to a specific engine design, any other engine structural failure that results in higher loads.

(d) The ultimate loads developed from the conditions specified in paragraphs (c)(1) and (c)(2) are to be multiplied by a factor of 1.0 when applied to engine mounts and pylons and multiplied by a factor of 1.25 when applied to adjacent supporting airframe structure.

5. Design Roll Maneuver Requirement

In lieu of compliance to § 25.349(a), the Boeing Model 787–8 must comply with the following special conditions.

The following conditions, speeds, and cockpit roll control motions (except as the motions may be limited by pilot effort) must be considered in combination with an airplane load factor of zero and of two-thirds of the positive maneuvering factor used in design. In determining the resulting control surface deflections, the torsional flexibility of the wing must be considered in accordance with § 25.301(b):

(a) Conditions corresponding to steady rolling velocities must be investigated. In addition, conditions corresponding to maximum angular acceleration must be investigated for airplanes with engines or other weight concentrations outboard of the fuselage. For the angular acceleration conditions, zero rolling velocity may be assumed in the absence of a rational time history investigation of the maneuver.

(b) At V_A, sudden movement of the cockpit roll control up the limit is assumed. The position of the cockpit roll control must be maintained until a steady roll rate is achieved and then must be returned suddenly to the neutral position.

(c) At V_C, the cockpit roll control must be moved suddenly and maintained so as to achieve a roll rate not less than that obtained in paragraph (b).

(d) At V_D, the cockpit roll control must be moved suddenly and maintained so as to achieve a roll rate not less than one third of that obtained in paragraph (b).

Issued in Renton, Washington, on July 18, 2007.

Stephen P. Boyd,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 07–3689 Filed 7–27–07; 8:45 am]

BILLING CODE 4910–13–M

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2007–27359; Directorate Identifier 2006–NM–042–AD; Amendment 39–15136; AD 2007–15–07]

RIN 2120–AA64

Airworthiness Directives; Boeing Model 747–100, 747–100B, 747–200B, 747–200C, 747–200F, 747–300, 747SR, and 747SP Series Airplanes

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

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Boeing Model 747–100, 747–100B, 747–200B, 747–200C, 747–200F, 747–300, 747SR, and 747SP series airplanes. This AD requires repetitive high frequency eddy current inspections for cracks of the fuselage skin at stringer 5 left and right between stations 340 and 350, and corrective actions if necessary. This AD results from reports of fatigue cracks in the fuselage skin near stringer 5 between stations 340 and 350. We are issuing this AD to detect and correct fatigue cracking of the fuselage skin near stringer 5. Cracks in this area could join together and result in in-flight depressurization of the airplane.

DATES: This AD becomes effective September 4, 2007.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of September 4, 2007.

ADDRESSES: You may examine the AD docket on the Internet at *http://dms.dot.gov* or in person at the U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC.

Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124–2207, for service information identified in this AD.

FOR FURTHER INFORMATION CONTACT: Ivan Li, Aerospace Engineer, Airframe Branch, ANM–120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057–3356; telephone (425) 917–6437; fax (425) 917–6590.

SUPPLEMENTARY INFORMATION:

Examining the Docket

You may examine the airworthiness directive (AD) docket on the Internet at *http://dms.dot.gov* or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Operations office (telephone (800) 647–5527) is located on the ground floor of the West Building at the street address stated in the **ADDRESSES** section.

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to certain Boeing Model 747–100, 747–100B, 747–200B, 747–200C, 747–200F, 747–300, 747SR, and 747SP series airplanes. That NPRM was published in the **Federal Register** on March 6, 2007 (72 FR 9877). That NPRM proposed to require repetitive high frequency eddy current inspections for cracks of the fuselage skin at stringer 5 left and right between stations 340 and 350, and corrective actions if necessary.

Comments

We provided the public the opportunity to participate in the development of this AD. We have considered the comments received.

Support for the NPRM

Boeing concurs with the NPRM.

Request for Alternative Method of Repair

Air Transport Association (ATA) on behalf of its member United Parcel Service (UPS), requests that we allow the use of an alternate method of repair. UPS notes that ''Boeing Alert Service Bulletin 747–53A2542 allows operators to install a repair in accordance with the Boeing 747–100/200/300 Structural Repair Manual (SRM) 53–30–03, provided that the repair is removed and replaced with the Boeing Service Bulletin 747–53–2272 modification prior to the threshold of AD 90–06–06.'' (We referred to Service Bulletin 747–53–2272, Revision 17, dated November 18, 1999; and Revision 18, dated May 16, 2002; as appropriate sources of service information for doing the terminating action specified in paragraph (g) of the NPRM.) UPS believes that this option is beneficial to operators, in that it would allow operators to effect repairs (if necessary) in an expedient manner, and that this is especially important given that the proposed initial inspection compliance time of 250 cycles may not be sufficient to allow accomplishing the initial inspection in a normal C-check environment. UPS believes that the NPRM should be re-formatted to more clearly specify inspection, repair, and terminating action requirements. Therefore, UPS requests that paragraph (f) be modified to include a standard repair per Boeing 747–100/200/300 SRM 53–30–03 as an acceptable alternative for repairing the crack(s), for airplanes which have not reached the incorporation threshold of AD 90–06–06 (20,000 flights is one incorporation threshold described by AD 90–06–06). The SRM repair would then be removed and replaced by the permanent repair per Service Bulletin 747–53–2272, Revision 18 or earlier, prior to reaching 20,000 total aircraft cycles (flights). Further, to clarify the inspection, repair and terminating action requirements, UPS provides a revised paragraph (f) and suggests new paragraphs (g) and (h), which would lead to re-identifying subsequent existing paragraphs.

We agree with UPS that the described SRM repair option is beneficial to operators and should be allowed. However, this option is already allowed. Paragraph (f) of the AD requires doing applicable corrective actions in accordance with Boeing Alert Service Bulletin 747–53A2542, dated February 16, 2006. The corrective actions described in the alert service bulletin permit operators to choose the option of doing the SRM repair followed by eventual replacement with the permanent repair described in Boeing Service Bulletin 747–53–2272, Revision 18, dated May 16, 2002. Therefore, we have determined that the option described by UPS is already available to the operators, and no change is needed to the AD in this regard.

Change Made to Paragraph (b) of the AD

We have revised this action to clarify the effects of AD 90–06–06, amendment 39–6490 (55 FR 8374, March 7, 1990) on the repetitive inspection requirements of paragraph (f) of this AD. We have moved the reference to AD 90–06–06 from paragraph (b) to new paragraph (g) of this AD, and reidentified existing paragraphs (g) and (h) of this AD accordingly.

Change Made to Paragraph (g) of the AD

We have changed paragraph (g) of the AD to specify that the actions required in that paragraph must be done in accordance with a method approved by the Manager, Seattle Aircraft Certification Office, FAA, and that Boeing Service Bulletin 747–53–2272, Revision 18, dated May 16, 2002, and earlier revisions, are one approved method of compliance for doing the required actions. After the effective date of this AD, no revision of Service Bulletin 747–53–2272 other than Revision 18 is acceptable as an approved method of compliance. Further, as described above, we have re-identified existing paragraph (g) as paragraph (h) of this AD.

Clarification of Alternative Method of Compliance (AMOC) Paragraph

We have revised this action to clarify the appropriate procedure for notifying the principal inspector before using any approved AMOC on any airplane to which the AMOC applies.

Conclusion

We have carefully reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We have determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Costs of Compliance

There are about 281 airplanes of the affected design in the worldwide fleet. This AD will affect about 92 airplanes of U.S. registry. The required inspection will take about 4 work hours per airplane, at an average labor rate of $80 per work hour. Based on these figures, the estimated cost of the inspection for U.S. operators is $29,440, or $320 per airplane, per inspection cycle.

For Group 2 airplanes (about 4 of U.S. registry), the mandatory terminating action for the repetitive inspections will take about 1,240 work hours, at an average labor rate of $80 per work hour. The manufacturer states that it will supply required parts to the operators at no cost. Based on these figures, the estimated cost of the terminating action

for U.S. operators is $396,800, or $99,200 per airplane.

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 Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD 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.

For the reasons discussed above, I certify that this AD:

(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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket. See the **ADDRESSES** section for a location to examine the regulatory evaluation.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

■ Accordingly, under the authority delegated to me by the Administrator, the FAA amends 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. The Federal Aviation Administration (FAA) amends § 39.13 by adding the following new airworthiness directive (AD):

2007–15–07 Boeing: Amendment 39–15136. Docket No. FAA–2007–27359; Directorate Identifier 2006–NM–042-AD.

Effective Date

(a) This AD becomes effective September 4, 2007.

Affected ADs

(b) Installing external skin doublers as required only for Group 2 airplanes by paragraph (h) of this AD, ends the repetitive inspections of the fuselage skin required by paragraph (f) of AD 2005–08–01, amendment 39–14053, only for the area near the flight deck windows modified by the external skin doublers.

Applicability

(c) This AD applies to Boeing Model 747–100, 747–100B, 747–200B, 747–200C, 747–200F, 747–300, 747SR, and 747SP series airplanes, certificated in any category; as identified in Boeing Alert Service Bulletin 747–53A2542, dated February 16, 2006.

Unsafe Condition

(d) This AD results from reports of fatigue cracks in the fuselage skin near stringer 5 between body stations 340 and 350. We are issuing this AD to detect and correct fatigue cracking of the fuselage skin near stringer 5. Cracks in this area could join together and result in in-flight depressurization of the airplane.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Inspections and Corrective Actions

(f) For any airplane that has not had external skin doublers installed around the left- or right-side Number 3 flight deck window in accordance with Boeing Service Bulletin 747–53–2272, Revision 18, dated May 16, 2002, or an earlier revision: Do the applicable actions described in paragraphs (f)(1) and (f)(2) of this AD. Do all the actions in and in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747–53A2542, dated February 16, 2006. Do the actions at the compliance times specified in paragraph 1.E., ''Compliance,'' of Boeing Alert Service Bulletin 747–53A2542, dated February 16, 2006, on the side(s) of the airplane on which the doubler installation has not been done; except where the service bulletin specifies compliance times after the date on the service bulletin, this AD requires compliance times after the effective date of this AD. Installing external skin doublers around the left- or right-side Number 3 flight deck windows in accordance with Boeing Service Bulletin 747–53–2272, Revision 18, or an earlier revision, ends the repetitive high-frequency eddy current (HFEC) inspections required by this paragraph on the side of the airplane on which the doublers are installed. After the effective date of this AD, only Boeing Service Bulletin 747–53–2272, Revision 18, may be used to install the external skin doublers around the left- and right-side Number 3 flight deck windows.

(1) Do a HFEC inspection for cracks of the fuselage skin at stringer 5, between body stations 340 and 350; and do all applicable corrective actions before further flight.

(2) Repeat the HFEC inspection thereafter at the applicable interval specified in paragraph 1.E. of Boeing Alert Service Bulletin 747–53A2542, dated February 16, 2006.

Credit for Actions of Alternative AD

(g) For Group 1 airplanes only: External skin doublers installed around the left- or right-side Number 3 flight deck windows in accordance with the requirements of AD 90–06–06, amendment 39–6490, end the repetitive HFEC inspections required by paragraph (f) of this AD on the side of the airplane on which the doublers are installed.

Terminating Action

(h) For Group 2 airplanes only: Before accumulating 24,000 total flight cycles, or within 250 flight cycles after the effective date of the AD, whichever occurs later, install external skin doublers around the left- and right-side Number 3 flight deck windows; in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA. Boeing Service Bulletin 747–53–2272, Revision 17, dated November 18, 1999, and Revision 18, dated May 16, 2002, describe one approved method of compliance for doing the required actions. After the effective date of this AD, only Revision 18 is acceptable as an approved method of compliance. Accomplishing this action ends the repetitive inspections required by paragraph (f) of this AD.

Alternative Methods of Compliance (AMOCs)

(i)(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD, if it is approved by an Authorized Representative for the Boeing Commercial Airplanes Delegation Option Authorization Organization who has been

authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

Material Incorporated by Reference

(j) You must use Boeing Alert Service Bulletin 747–53A2542, dated February 16, 2006, to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference of this document in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124–2207, for a copy of this service information. You may review copies at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal-register/cfr/ibr-locations.html*.

Issued in Renton, Washington, on July 15, 2007.

Stephen P. Boyd,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. E7–14140 Filed 7–27–07; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2007–28157 Directorate Identifier 2007–CE–046–AD; Amendment 39–15138; AD 2007–15–09]

RIN 2120–AA64

Airworthiness Directives; Pilatus Aircraft Limited Model PC–6 Series Airplanes

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

ACTION: Final Rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above. This AD results from mandatory continuing airworthiness information (MCAI) issued by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

This Airworthiness Directive (AD) is prompted due to the discovery of cracks in the upper wing strut fittings of some PC–6 aircraft.

It is possible that the spherical bearing of the wing strut fittings installed in the underwing can be loose in the fitting or cannot rotate because of corrosion. In this condition, the joint cannot function as designed and fatigue cracks may then develop. Undetected cracks in this area could lead to failure of the upper attachment fitting. This could result in the failure of the wing structure with subsequent loss of control of the airplane.

We are issuing this AD to require actions to correct the unsafe condition on these products.

DATES: This AD becomes effective September 4, 2007.

On September 4, 2007, the Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD.

ADDRESSES: You may examine the AD docket on the Internet at *http://dms.dot.gov* or in person at Document Management Facility, U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Doug Rudolph, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329–4059; fax: (816) 329–4090.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the **Federal Register** on May 30, 2007 (72 FR 29895). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

This Airworthiness Directive (AD) is prompted due to the discovery of cracks in the upper wing strut fittings of some PC–6 aircraft.

It is possible that the spherical bearing of the wing strut fittings installed in the underwing can be loose in the fitting or cannot rotate because of corrosion. In this condition, the joint cannot function as designed and fatigue cracks may then develop. Undetected cracks in this area could lead to failure of upper the attachment fitting. This could result in the failure of the wing structure with subsequent loss of control of the airplane.

In order to correct and monitor this situation, the present AD mandates a one time inspection of the wing strut fittings and replacement of damaged wing strut fittings with new ones. This AD also requires examination of the spherical bearings installed in the wing strut fittings and their replacement for bearings that do not pass the examination criteria.

Comments

We gave the public the opportunity to participate in developing this AD. We have considered the comment received.

Comment Issue: Allow a Dye-Penetrant Inspection

One commenter requested that we allow a dye-penetrant inspection as an option to the eddy current inspection.

Without specific procedures and proposed intervals, the FAA is not able to approve dye-penetrant inspection as an approved method for this AD. The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community and Pilatus (the design organization approval holder) only approved using an eddy current procedure for this inspection. Pilatus has only established procedures to detect cracks in the affected areas using the eddy current method. The FAA will not change the AD to allow for dye-penetrant inspections in place of eddy current as called out for in the NPRM per the Pilatus service bulletin (SB) without having specific procedures and intervals that we can coordinate with EASA and Pilatus. An operator may propose these procedures and intervals to the FAA using the alternative method of compliance (AMOC) process specified in 14 CFR 39.19 and the AD. The AMOC proposal must provide the complete method of inspection that the operator believes will provide an acceptable level of safety as that proposed in the AD. The FAA will then coordinate the proposed AMOC with Pilatus and EASA to determine if the method provides an acceptable level of safety. If so, an AMOC can be granted for the FAA issued AD.

We are making no changes to the final rule AD action based on this comment.

Conclusion

We reviewed the available data, including the comment received, and determined that air safety and the public interest require adopting the AD as proposed.

Differences Between this AD and the MCAI or Service Information

We have reviewed the MCAI and related service information and, in general, agree with their substance. But we might have found it necessary to use different words from those in the MCAI to ensure the AD is clear for U.S. operators and is enforceable. In making these changes, we do not intend to differ substantively from the information provided in the MCAI and related service information.