fuel after the engines were shut down. This release of fuel is caused by unexpected elevated fuel manifold pressures that result in the release of fuel from the fuel nozzles. Under certain atmospheric conditions this release of fuel results in a visible vapor. This event was not observed during the GEnx engine's certification testing under 14 CFR part 33, but only after it was installed and operated on the subject airplanes.

Following these observations, the FAA reconsidered how the provisions of § 34.11 should be applied under the circumstances of these certifications. A review of the history of the section found that it was promulgated in 1973 in response to short-sighted environmental practices of the time, including the routine dumping of up to a gallon of raw fuel onto the ground after engines were shut down. The general prohibition in § 34.11 is stated in the first sentence of that section, that ''[n]o fuel venting emissions shall be discharged into the atmosphere from any new or in-use aircraft gas turbine engine subject to the subpart.'' The second sentence appears to condition this prohibition, stating that ''[t]his paragraph is directed at the elimination of intentional discharge to the atmosphere of fuel drained from fuel nozzle manifolds after engines are shut down and does not apply to normal fuel seepage from shaft seals, joints, and fittings.'' The language of the second sentence presents a unique situation in aircraft certification by introducing the concept of intent, without clearly referencing where the intent attaches. The second sentence also specifies three locations where ''seepage'' is considered normal and acceptable.

Historically, application of § 34.11 has not been an issue. Aircraft engines designed since promulgation of the rule have not included any means by which fuel is collected and dispersed outside the engine after shutdown. The GEnx engines at issue do not release fuel from the three locations noted in the regulation—shaft seals, joints, or fittings. Nor does the amount of fuel or the manner in which it is being released rise to the level of historical fuel dumping that prompted the adoption of the regulation in 1973. Yet, small quantities of fuel (up to 5.5 ounces) are being released intermittently under certain conditions, and the fuel is being vaporized on contact with hot surfaces inside the engine, resulting in the visible fuel vapors that have been observed when they emit from either the inlet or exit plane of the engine.

The new engines incorporate technological advances and environmental performance improvements that were never envisioned when the original regulation was adopted in 1973. These factors have made it more difficult to reconcile the design and function of these engines in a certification context with a 38-year-old regulation that was aimed at a different set of circumstances. Application of the current regulation has become less clear in this context.

With the cooperation of the equipment manufacturers, the FAA investigated the safety and environmental effects of the fuel release and vaporization. The FAA consulted with the Environmental Protection Agency (EPA) on the local air quality impacts. While we were satisfied that no safety and minimal environmental effects are evident, we remain concerned about compliance with the intent of the current regulation, and the inability of the current regulation to be unambiguously applied to the certification situation.

The FAA has determined that the best course of action is to allow the current certification of these engine/airframe combinations. The certification basis includes requirements that the manufacturers develop and install modifications that will eliminate these intermittent fuel releases and observed vapors that have been experienced during certification testing. These modifications will apply to newly manufactured airplanes by December 31, 2012, and in-use airplanes by December 31, 2014.

The technological advances incorporated in these engines allow them to more than exceed the separate regulatory requirements for emissions that are the focus of current environmental compliance efforts. The FAA will re-examine the language of the fuel venting regulation and its application during certification to determine whether it needs to be changed to address issues associated with newer technologies. We may consult with the EPA on whether to propose changes to § 34.11 and its companion regulation at 40 CFR 87.11. We will also consider whether more flexibility in application of the regulation is appropriate based on the experience gained during this certification. The decision to proceed with certification of the subject airframe/engine combinations is an effort to acknowledge the lack of clarity in the application of the regulation to the specific circumstances encountered. The requirement to modify the aircraft is intended to prevent any retrenchment from the original regulatory intent.

Issued in Washington, DC, on July 14, 2011.

Lourdes Q. Maurice,

Executive Director, Office of Environment and Energy.

[FR Doc. 2011–18191 Filed 7–25–11; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2008–0402; Directorate Identifier 2007–NM–165–AD; Amendment 39–16760; AD 2011–16–02]

RIN 2120–AA64

Airworthiness Directives; The Boeing Company Model 747 Airplanes and Model 767 Airplanes Equipped With General Electric Model CF6–80C2 or CF6–80A Series Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above. This AD requires revising the airplane flight manual (AFM) to advise the flightcrew to use certain procedures during descent in certain icing conditions. This AD was prompted by reports of several in-flight engine flameouts, including multiple dual engine flameout events and one total power loss event, in ice-crystal icing conditions. We are issuing this AD to ensure that the flightcrew has the proper procedures to follow in certain icing conditions. These certain icing conditions could cause a multiple engine flameout during flight with the potential inability to restart the engines, and consequent forced landing of the airplane.

DATES: This AD is effective August 30, 2011.

ADDRESSES:

Examining the AD Docket

You may examine the AD docket on the Internet at *http://www.regulations.gov;* or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800–647–5527) is 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: Rebel Nichols, Aerospace Engineer, Propulsion Branch, ANM–140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057–3356; phone: 425–917–6509; fax: 425–917–6590; e-mail: *rebel.nichols@faa.gov.*

SUPPLEMENTARY INFORMATION:

Discussion

We issued a supplemental notice of proposed rulemaking (SNPRM) to amend 14 CFR part 39 to include an airworthiness directive (AD) that would apply to the specified products. That SNPRM published in the **Federal Register** on August 4, 2010 (75 FR 46868). The original NPRM (73 FR 18721, April 7, 2008) proposed to require revising the airplane flight manual (AFM) to advise the flightcrew to use certain procedures during descent in certain icing conditions. The SNPRM proposed to revise the original NPRM by revising the text of the proposed AFM revision.

Other Relevant Rulemaking

Related AD 2010–16–03, Amendment 39–16379 (75 FR 47203, August 5, 2010), requires similar actions for Model MD–11 and MD–11F airplanes, certificated in any category, equipped with General Electric (GE) CF6–80C2 series engines. These airplanes have been determined to be subject to the identified unsafe condition addressed in this AD.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal and the FAA's response to each comment.

Request To Withdraw SNPRM

While GE Aviation (GE) recognized that the FAA has the ultimate responsibility in evaluating and declaring the existence of an unsafe condition, GE disagreed that an unsafe condition is likely to exist and refuted the FAA's basis for its determination. GE pointed out that there has never been a Model CF6–80C2 engine that has failed to relight rapidly, and that this fact is significant in that this is different from the field experience for some other turbofan engines of different design. GE pointed out that Note 11 of FAA-approved Type Certificate Data Sheet E13NE for Model CF6–80A engines includes the following statement: ''* * * momentary N_1 excursions below 40%, not to exceed 60 seconds durations, are permissible for approach and landing operation below 10,000 feet pressure altitude.'' For these reasons, GE contended that the data prove that a forced landing is extremely improbable, and, while the proposed changes in the SNPRM will provide additional margin against rare inclement weather-related flameouts, GE did not believe that the proposed changes should be mandated.

GE also agreed that, while there might be variation in operational costs among operators and a relatively small cost impact on an individual per-flight basis, there is a cumulative impact when applied to the more than 1,000 airplanes in the worldwide fleet. GE estimated that the proposed procedures would result in an environmental burden of tens of millions of pounds of carbon dioxide per year (estimate assumes an additional 50 gallons of fuel per flight × 20 pounds of carbon dioxide per gallon of fuel × 600,000 flights a year × an estimated 10 percent of flight descents in visible moisture). So, while the bleed does add some projected event rate benefit in certain circumstances, GE believes the extremely improbable rate of dual engine flameouts coupled with the adverse environmental impact outweigh the benefits of the proposed AFM procedure.

From these statements, we infer that GE requests that we withdraw the NPRM. We do not agree. We have evaluated the unsafe condition and find that sufficient data exist to demonstrate that certain icing conditions that cause the engine flameout could also cause engine damage that potentially would prevent an engine from relighting. The condition could exist on all of an airplane's engines, resulting in a forced landing. We have determined that an unsafe condition exists, and the appropriate vehicle for correcting an unsafe condition is an AD. These safety concerns must be addressed, even in light of the environmental impact. We have not changed the AD regarding this issue.

Request To Clarify Additional Flameout Event on Model 747 Airplane

GE referred to the ''Actions Since Original NPRM Was Issued'' section of the SNPRM, particularly the report of another significant flameout event on a Model 747 airplane. GE believes the mentioned event was actually a temporary power loss event that occurred in 2007, and that no more recent multi-engine inclement-weather-related events have occurred on a CF6-powered Model 747 airplane.

We agree to clarify. Any time a transport category airplane experiences power loss events resulting from a common cause on multiple engines, we consider it a significant event. Flameout events do cause power loss, but can also cause adverse engine operation, which can include engine stall and power rollback. Certain icing conditions that lead to flameouts could also cause compressor damage, preventing the engine from relighting. Loss of a single engine affects other aircraft systems—hydraulic, pressurization, and electrical—all of which are supplied by engine-driven components. There are backup systems, but relighting an engine in flight can still be difficult because of the distracting secondary effects of losing power. A multi-engine flameout compounds these factors. In November 2007, the airplane in the subject report sustained three multi-engine flameouts, including, at one point, a three-engine flameout. This multi-engine flameout event developed into much more than a simple power loss event. We have not changed the AD in this regard.

Request To Allow Use of Automatic Activation of Anti-Ice Systems

UPS asserted that the proposed AFM revision does not address airplanes with automatic anti-ice systems. UPS confirmed that a portion of their fleet is equipped with automatic nacelle and wing anti-ice systems, and questioned whether setting these systems in the ''auto'' position will satisfy the requirement to have nacelle and wing anti-ice systems on during descent.

From these statements, we infer that UPS is requesting that we revise the SNPRM to allow operators with airplanes equipped with automatic anti-ice systems to use the ''auto'' setting in lieu of manually activating the anti-ice systems. We do not agree. Automatic anti-ice systems or primary in-flight ice detection systems have been effective in detecting typical icing conditions, but they do not have the capability to detect ice-crystal icing. Therefore, the anti-ice systems would not be activated during these icing encounters, and would not provide an adequate level of safety in lieu of manual anti-ice activation in ice-crystal icing conditions. We have made no change to the final rule in this regard.

Requests To Revise AFM Procedure To Qualify Weather Conditions

Delta Airlines (Delta) requested that we revise the proposed AFM procedure to add the qualifier, ''when near convective weather systems, including thunderstorms.'' Japan Airlines (JAL) also requested that we include a similar statement. Delta stated that it

understands that the risk of flameout due to ice-crystal icing occurs only when the airplane is near convective weather systems, and explained that its flightcrews can recognize nearby convective weather. Delta contended that revising the AFM procedure to allow flightcrews to activate nacelle anti-ice when convective weather is near would prevent the unnecessary increase in fuel burn and overuse of engine anti-ice when engine flameouts due to ice crystals are not factors. JAL reasoned that, because operating the anti-ice systems increases the crew workload and fuel consumption, the weather conditions that require use of the anti-ice systems should be limited to areas where there is technical benefit of preventing engine flameout.

We do not agree. Ice-crystal icing does typically occur in or near convective weather. However, this type of icing does not appear on radar due to its low reflectivity, and neither the airplane ice detectors nor visual indications indicate the presence of this type of icing condition. Service experience has demonstrated that flightcrews are not always able to differentiate between ice-crystal icing that causes engine flameout and other types of visible moisture that typically do not lead to engine flameouts. Therefore, relying on flightcrews to recognize the necessary weather conditions might not provide an adequate level of safety. We have not changed the final rule in this regard.

Additionally, in regard to JAL's statement that anti-ice system operation increases fuel consumption, we have determined that the additional fuel burn necessitated by the AFM procedure would not be significant enough to warrant removal of the requirement to use anti-ice under certain conditions. However, as we explain under ''Requests to Allow Deactivation of Anti-ice Systems When Icing No Longer Exists,'' we have revised the procedure to allow anti-icing systems to be deactivated when the subject icing conditions no longer exist. This allowance will further reduce any additional fuel burn caused by the use of the anti-ice system.

Request for Additional Revision of AFM Procedure

JAL further requested that we revise the proposed AFM procedure to remove ''the wing anti-ice operation below 22,000 ft and above TAT 10 degree C.'' JAL explained that, in Asia, where most of the engine flameout events occurred, the total air temperature (TAT) at 22,000 feet is around 8 °Celsius (C) according to standard calculations, and that the ground temperature in southern Asia is estimated to be 32 °C. JAL further explained that static air temperature (SAT) decreases 2 degrees per every 1,000 feet; therefore, the SAT at 22,000 feet is −12 °C. Therefore, JAL states that, considering +20 °C ram effect in descent speed, TAT at 22,000 feet is approximately 8 °C. For these reasons, and because the flightcrew would be required to turn the anti-ice systems on and off in a very short time, JAL stated it believes that the use of wing anti-ice systems should not be included in the proposed AFM procedure, especially given the additional crew workload and the probability of a flameout.

We agree that clarification is necessary. It is not our intent to require activation of the wing anti-ice system at temperatures above TAT 10 °C. The required AFM procedure specified in this AD requires use of the anti-ice systems only when in visible moisture and a TAT of less than 10 °C. As explained under ''Requests to Allow Deactivation of Anti-ice Systems When Icing No Longer Exists,'' we have revised the required AFM procedure to allow anti-icing systems to be turned off when the specified icing conditions are no longer present or anticipated. No further change to this AD is necessary in this regard.

Requests To Allow Deactivation of Anti-Ice Systems When Icing No Longer Exists

Boeing and GE requested that we revise the proposed AFM procedure to allow anti-icing systems to be deactivated when the subject icing conditions no longer exist. Boeing and GE contended that this change would provide clarity and consistency with related rulemaking on Model MD–11 airplanes.

We agree. We have determined that there is no additional benefit to having the nacelle and wing anti-ice switched on once icing conditions are no longer present or anticipated. Therefore, we have revised the AFM text provided in paragraph (g) of this final rule accordingly.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously.

We also determined that these changes will not increase the economic burden on any operator or increase the scope of the AD.

Interim Action

We consider this AD interim action. If final action is later identified, we might consider further rulemaking then.

Costs of Compliance

There are about 1,064 airplanes of the affected design in the worldwide fleet. The following table provides the estimated costs for U.S. operators to comply with this AD.

ESTIMATED COSTS

Action	Work hours	Average labor rate per hour	Parts	Cost per airplane	Number of U.S.-registered airplanes	Fleet cost
AFM revision	1	$85	$0	$85	340	$28,900

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

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),

(3) Will not affect intrastate aviation in Alaska, and

(4) 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.

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 FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2011–16–02 The Boeing Company: Amendment 39–16760; Docket No. FAA–2008–0402; Directorate Identifier 2007–NM–165–AD.

Effective Date

(a) This AD is effective August 30, 2011.

Affected ADs

(b) None.

Applicability

(c) This AD applies to The Boeing Company Model 747 airplanes and Model 767 airplanes, certified in any category, equipped with General Electric Model CF6–80C2 or CF6–80A series engines.

Subject

(d) Air Transport Association (ATA) of America Code 30: Ice and rain protection.

Unsafe Condition

(e) This AD was prompted by reports of several in-flight engine flameouts, including multiple dual engine flameout events and one total power loss event, in ice-crystal icing conditions. We are issuing this AD to ensure that the flightcrew has the proper procedures to follow in certain icing conditions. These certain icing conditions could cause a multiple engine flameout during flight with the potential inability to restart the engines, and consequent forced landing of the airplane.

Compliance

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

Airplane Flight Manual (AFM) Revision

(g) Within 14 days after the effective date of this AD, revise the Limitations Section of the Boeing 747 or 767 AFM, as applicable, to include the following statement. This may be done by inserting a copy of this AD into the AFM.

''Prior to reducing thrust for descent in visible moisture and TAT less than 10 °C, including SAT less than −40 °C, nacelle anti-ice switch must be in the ON position. At or below 22,000 ft, wing anti-ice selector must be in the ON position. When these icing conditions (visible moisture and TAT less than 10 °C, including SAT less than −40 °C) are no longer present or anticipated, place the nacelle and wing anti-ice selectors in the OFF (or AUTO) position.''

Note 1: When a statement identical to that in paragraph (g) of this AD has been included in the general revisions of the AFM, the general revisions may be inserted into the AFM, and the copy of this AD may be removed from the AFM.

Special Flight Permits

(h) Special flight permits, as described in Section 21.197 and Section 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199), may be issued to operate the airplane to a location where the requirements of this AD can be accomplished provided the operational requirements defined in the Limitations Section of the AFM are used if icing is encountered.

Related Information

(i) For more information about this AD, contact Rebel Nichols, Aerospace Engineer, Propulsion Branch, ANM–140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057–3356; phone: 425–917–6509; fax: 425–917–6590; e-mail: *rebel.nichols@faa.gov.*

Material Incorporated by Reference

(j) None.

Issued in Renton, Washington, on July 14, 2011.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2011–18747 Filed 7–25–11; 8:45 am]

BILLING CODE 4910–13–P

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

14 CFR Part 1209

[Notice 11–071]

RIN 2700–AD50

Boards and Committees

AGENCY: National Aeronautics and Space Administration.

ACTION: Direct final rule.

SUMMARY: This direct final rule makes nonsubstantive organizational changes to the NASA Inventions and Contributions Board (the Board) and removes and replaces obsolete references. The National Aeronautics and Space Administration (NASA) is amending its regulations by removing the reference to an obsolete NASA Management Instruction and to afford organizational flexibility to the Administrator in the functional placement of the Inventions and Contributions Board within the Agency without the need to amend the Code of Federal Regulations.

DATES: This direct final rule is effective September 26, 2011 unless the Agency receives significant adverse comments by midnight Eastern Standard Time on August 25, 2011.

ADDRESSES: Comments must be identified with ''RIN 2700–AD50'' and may be sent to NASA by the following method:

• *Federal E-Rulemaking Portal: http://www.regulations.gov.* Follow the online instructions for submitting comments. Please note that NASA may post all comments on the Internet without change, including any personal information provided.

FOR FURTHER INFORMATION CONTACT: Helen M. Galus, Office of the General Counsel, NASA Headquarters, telephone (202) 358–3437, fax (202) 358–4341.

SUPPLEMENTARY INFORMATION:

Direct Final Rule and Significant Adverse Comments

NASA has determined this rulemaking meets the criteria for a direct final rule because it involves nonsubstantive changes dealing with NASA's management of the Board. NASA does not anticipate that this direct final rule will result in any changes in the functions, authority, or membership of the Board. NASA expects no opposition to the changes and no significant adverse comments. However, if NASA receives a significant adverse comment, the Agency will withdraw this direct final rule by