[Federal Register: November 5, 2010 (Volume 75, Number 214)]
[Rules and Regulations]
[Page 68177-68179]
From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr05no10-5]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-1040; Directorate Identifier 2010-NM-207-AD; Amendment 39-16492; AD 2010-23-03]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Model 757 and 767 Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above. This AD requires repetitive testing for correct functioning of the engine indication and crew alerting system (EICAS) to ensure that it receives both the LOW FUEL and FUEL CONFIG discrete signals from the fuel quantity processor unit, and alerts the flightcrew of a low fuel situation, and if the test fails, troubleshooting to find wire faults and damaged equipment, and corrective actions if necessary. This AD was prompted by a report that the EICAS failed to alert the flightcrew of an improper fuel system configuration during flight. Later in that flight, the EICAS failed to alert the flightcrew that the fuel in the left- and right-hand main tanks was depleted below the minimum of 2,200 pounds. We are issuing this AD to detect and correct a single latent failure of the FUEL CONFIG discrete signal, which disables both the FUEL CONFIG and LOW FUEL messages. Such failure, combined with a flightcrew error in configuring the fuel system, could lead to depletion of the fuel in the main tanks and possible flame out of both engines. A dual engine flame out could result in inaccessibility of the remaining fuel in the center tank due to loss of electrical power to the pumps, consequent unrecoverable dual engine shutdown, and forced landing of the airplane.

DATES: This AD is effective November 22, 2010.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of November 22, 2010.

We must receive comments on this AD by December 20, 2010.

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to http://www.regulations.gov. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1, fax 206-766-5680; e-mail me.boecom@boeing.com; Internet https://www.myboeingfleet.com. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

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 street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Tak Kobayashi, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6499; fax (425) 917-6590; e-mail: takahisa.kobayashi@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We received a report from an operator of a Model 757-200 series airplane that the engine indication and crew alerting system (EICAS) failed to alert the flightcrew of an improper fuel system configuration during flight. Later in that flight, the EICAS failed to alert the flightcrew that the fuel in the left- and right-hand main tanks was depleted below the minimum of 2,200 pounds. The EICAS receives both the LOW FUEL and FUEL CONFIG discrete signals from the fuel quantity processor unit to display certain messages to alert the flightcrew. When the center fuel tank pump switches are off with more than 200 pounds of fuel in the center tank the EICAS should display the FUEL CONFIG advisory message. When the fuel in either main tank is below 2,200 pounds, the EICAS should display the LOW FUEL caution message. The EICAS design allows a single latent failure of the FUEL CONFIG discrete signal, which disables both the FUEL CONFIG and LOW FUEL messages. Such failure, combined with a flightcrew error in configuring the fuel system, could lead to depletion of the fuel in the main tanks and possible flame out of both engines. A dual engine flame out could result in inaccessibility of the remaining fuel in the center tank due to loss of electrical power to the pumps, consequent unrecoverable dual engine shutdown, and forced landing of the airplane.

The fuel quantity indicating system (FQIS), EICAS, and large format display system (LFDS) installed on Model 757-200 series airplanes are similar to the systems installed on Model 767 airplanes. Therefore, Model 767 airplanes are also subject to the identified unsafe condition and are included in the applicability of this AD.

Relevant Service Information

We reviewed Boeing Special Attention Service Bulletins 757-28-0121, dated August 18, 2010; and 767-28-0106, dated August 25, 2010. The service information describes procedures for repetitive testing for correct functioning of the EICAS, and if the test fails, troubleshooting to find wire faults, bent connector pins, or damaged equipment. Boeing Special Attention Service Bulletin 757-28-0121, dated August 18, 2010, also specifies procedures for corrective actions if any wire fault or damaged equipment (including bent connector pins) is found. The corrective actions include repairing or replacing affected wires and damaged equipment (including bent connector pins).

FAA's Determination

We are issuing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of these same type designs.

AD Requirements

This AD requires accomplishing the actions specified in the service information described previously, except as discussed under "Difference Between the AD and the Service Information."

Difference Between the AD and the Service Information

Boeing Special Attention Service Bulletins 767-28-0106, dated August 25, 2010, does not specify instructions on how to repair certain conditions, but this AD would require repairing those conditions in one of the following ways:

- In accordance with a method that we approve; or
- Using data that meet the certification basis of the airplane, and that have been approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) whom we have authorized to make those findings.

Interim Action

We consider this AD interim action. The manufacturer is currently developing a modification that will address the unsafe condition identified in this AD. Once this modification is developed, approved, and available, we might consider additional rulemaking.

FAA's Justification and Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because if the EICAS malfunctions, the flightcrew will not be alerted of a low fuel situation, which could result in depletion of the fuel in the main tanks and consequent unrecoverable dual engine shutdown and forced landing of the airplane. Therefore, we find that notice and opportunity for prior public comment are impracticable and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment. However, we invite you to send any written data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES

section. Include "Docket No. FAA-2010-1040; Directorate Identifier 2010-NM-207-AD;" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to http://www.regulations.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this AD.

Costs of Compliance

We estimate that this AD affects 686 Model 757 airplanes and 425 Model 767 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
EICAS test	1 work-hour X $85 per hour = $85 per test cycle	N/A	$85 per test cycle	$58,310 (for Model 757 airplanes) $36,125 (for Model 767 airplanes)

We have received no definitive data that would enable us to provide a cost estimate for the on-condition actions specified in this AD.

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):

2010-23-03 The Boeing Company: Amendment 39-16492; Docket No. FAA-2010-1040; Directorate Identifier 2010-NM-207-AD.

Effective Date

(a) This AD is effective November 22, 2010.

Affected ADs

(b) None.

Applicability

(c) This AD applies to The Boeing Company Model 757-200, 200CB, -200PF, and -300 series airplanes, line numbers 1 through 1050 inclusive, and all Model 767-200, -300, -300F, and -400ER series airplanes; certificated in any category.

Subject

(d) Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 28: Fuel.

Unsafe Condition

(e) This AD was prompted by a report that the EICAS failed to alert the flightcrew of an improper fuel system configuration during flight. Later in that flight the EICAS failed to alert the flightcrew that the fuel in the left- and right-hand main tanks was depleted below the minimum of 2,200 pounds. We are issuing this AD to detect and correct a single latent failure of the FUEL CONFIG discrete signal, which disables both the FUEL CONFIG and LOW FUEL messages. Such failure, combined with a flightcrew error in configuring the fuel system, could lead to depletion of the fuel in the main tanks and possible flame out of both engines. A dual engine flame out could result in inaccessibility of the remaining fuel in the center tank due to loss of electrical power to the pumps, consequent unrecoverable dual engine shutdown, and forced landing of the airplane.

Compliance

(f) Comply with this AD within the compliance times specified, unless already done.

Repetitive Tests

(g) Within 100 flight hours after the effective date of this AD: Do a test for correct functioning of the EICAS to ensure that it receives both the LOW FUEL and FUEL CONFIG discrete signals from the fuel quantity processor unit, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 757-28-0121, dated August 18, 2010; or Boeing Special Attention

Service Bulletin 767-28-0106, dated August 25, 2010; as applicable. Repeat the test thereafter at intervals not to exceed 100 flight hours.

Corrective Actions If Necessary

(h) If any test required by paragraph (g) of this AD fails, before further flight, troubleshoot to find any wire faults, and damaged equipment (including bent connector pins), in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 757-28-0121, dated August 18, 2010; or Boeing Special Attention Service Bulletin 767-28-0106, dated August 25, 2010; as applicable.

(i) If, during any troubleshooting required by paragraph (h) of this AD, any wire fault or damaged equipment (including bent connector pins) is found, before further flight, do the applicable actions specified in paragraph (i)(1) or (i)(2) of this AD.

(1) For airplanes identified in Boeing Special Attention Service Bulletin 757-28-0121, dated August 18, 2010: Repair or replace affected wires and equipment (including bent connector pins), in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 757-28-0121, dated August 18, 2010.

(2) For airplanes identified in Boeing Special Attention Service Bulletin 767-28-0106, dated August 25, 2010: Do corrective actions using a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA.

Note 1: Guidance on doing corrective actions can be found in Chapter 28, Subject 28-41-00, Section July, of the Boeing 767 Fault Isolation Manual (FIM).

Alternative Methods of Compliance (AMOCs)

(j)(1) The Manager, Seattle ACO, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD. Information may be e-mailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your Principal Maintenance Inspector or Principal Avionics Inspector, as appropriate, or lacking a principal inspector, your local Flight Standards District Office.

Related Information

(k) For more information about this AD, contact Tak Kobayashi, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle ACO, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6499; fax (425) 917-6590; e-mail takahisa.kobayashi@faa.gov.

Material Incorporated by Reference

(l) You must use Boeing Special Attention Service Bulletin 757-28-0121, dated August 18, 2010; or Boeing Special Attention Service Bulletin 767-28-0106, dated August 25, 2010; as applicable; to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1, fax 206-766-5680; e-mail me.boecom@boeing.com; Internet https://www.myboeingfleet.com.

(3) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

(4) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at an NARA facility, call 202-741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on October 20, 2010.
Michael Kaszycki,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.