(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):

2016–07–08 The Boeing Company: Amendment 39–18453; Docket No. FAA–2016–5036; Directorate Identifier 2015–NM–180–AD.

(a) Effective Date

This AD is effective April 20, 2016.

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model DC–9–83 (MD–83) airplane, fuselage number 2155 (variable number 80E718, serial number 53192), certificated in any category.

(d) Subject

Air Transport Association (ATA) of America Code 28: Fuel.

(e) Unsafe Condition

This AD was prompted by fuel system reviews conducted by the manufacturer. We are issuing this AD to prevent the potential of ignition sources inside fuel tanks, which, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

(f) Compliance

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

(g) Fuse Installation

Within 60 months after the effective date of this AD, install fuel level float and pressure switch in-line fuses, and do applicable wiring changes, on the left, right, and center wing forward spars, forward auxiliary fuel tank, and aft auxiliary fuel tank. Do the actions in accordance with the Accomplishment Instructions of Boeing Service Bulletin MD80–28–226, Revision 1, dated March 6, 2015.

(h) Credit for Previous Actions

This paragraph provides credit for the actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Boeing Service Bulletin MD80–28–226, dated April 14, 2010, which is incorporated by reference in AD 2011–01–16, Amendment 39–16573 (76 FR 1993, January 12, 2011).

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Los Angeles Aircraft Certification Office (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 Los Angeles ACO, send it to the attention of the person identified in paragraph (j)(1) of this AD. Information may be emailed to: *9-ANM-LAACO-AMOC-Requests@faa.gov.*

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Los Angeles ACO, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(j) Related Information

(1) For more information about this AD, contact Samuel Lee, Aerospace Engineer, Propulsion Branch, ANM–140L, FAA, Los Angeles ACO, 3960 Paramount Boulevard, Lakewood, CA 90712–4137; phone: 562–627–5262; fax: 562–627–5210; email: *samuel.lee@faa.gov.*

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (k)(3) and (k)(4) of this AD.

(k) Material Incorporated by Reference

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

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Service Bulletin MD80–28–226, Revision 1, dated March 6, 2015.

(ii) Reserved.

(3) For Boeing service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, 3855 Lakewood Boulevard, MC D800–0019, Long Beach, CA 90846–0001; telephone 206–544–5000, extension 2; fax 206–766–5683; Internet *https://www.myboeingfleet.com.*

(4) You may view this service information at 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.

(5) You may view this service information that is incorporated by reference 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 March 22, 2016.

Michael Kaszycki,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2016–07230 Filed 4–4–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2012–0187; Directorate Identifier 2011–NM–094–AD; Amendment 39–18452; AD 2016–07–07]

RIN 2120–AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain The Boeing Company Model 757 airplanes. This AD was prompted by fuel system reviews conducted by the manufacturer. This AD requires modifying the fuel quantity indication system (FQIS) wiring to prevent development of an ignition source inside the center fuel tank. We are issuing this AD to prevent ignition sources inside the center fuel tank, which, in combination with flammable fuel vapors, could result in a fuel tank explosion and consequent loss of the airplane.

DATES: This AD is effective May 10, 2016.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of May 10, 2016.

ADDRESSES: For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H–65, Seattle, WA 98124–2207; telephone 206–544–5000, extension 1; fax 206–766–5680; Internet *https://www.myboeingfleet.com.* You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425–227–1221. It is also available on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2012–0187.

Examining the AD Docket

You may examine the AD docket on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2012–0187; 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 Docket 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: Jon Regimbal, Aerospace Engineer, Propulsion Branch, ANM–140S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057–3356; phone: 425–917–6506; fax: 425–917–6590; email: *jon.regimbal@faa.gov.*

SUPPLEMENTARY INFORMATION:

Discussion

We issued a supplemental notice of proposed rulemaking (SNPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain The Boeing Company Model 757 airplanes. The SNPRM published in the **Federal Register** on February 23, 2015 (80 FR 9400) (''the SNPRM''). We preceded the SNPRM with a notice of proposed rulemaking (NPRM) that published in the **Federal Register** on March 1, 2012 (77 FR 12506). The NPRM proposed to require modifying the fuel quantity indication system (FQIS) wiring or fuel tank systems to prevent development of an ignition source inside the center fuel tank. The NPRM was prompted by fuel system reviews conducted by the manufacturer. The SNPRM proposed to revise the applicability, including alternative actions for cargo airplanes, and extend the compliance time. We are issuing this AD to prevent ignition sources inside the center fuel tank, which, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

Record of Ex Parte Communication

In preparation of AD actions such as NPRMs and immediately adopted rules, it is the practice of the FAA to obtain technical information and information on the operational and economic impact from design approval holders and aircraft operators. We discussed certain issues related to this final rule in a meeting held December 1, 2015, with Airlines for America (A4A) and other members of the aviation industry. This final rule addresses the issues discussed during that meeting that are relevant to this final rule. A summary of this meeting can be found in the rulemaking docket at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2012–0187.

Comments

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

Request To Withdraw SNPRM: New Certification Requirements for Flammability Reduction Means (FRM) Unwarranted

A4A, representing U.S. cargo operators, stated that the FAA intends to issue rulemaking requiring U.S. cargo operators to do additional fuel safety modifications to meet the latest aircraft certification requirements.

We infer that A4A considers that requiring airplanes to meet the latest certification requirements is not warranted and that the SNPRM should therefore be withdrawn. We assume that by ''the latest aircraft certification requirements,'' A4A is referring to the relatively new requirements for FRM contained in 14 CFR part 125.

We do not agree that the SNPRM should be withdrawn. This AD is not specifically intended to require that the affected airplanes meet the flammability requirements of 14 CFR part 125. It is instead intended to address an unsafe condition as required by 14 CFR part 39 identified by the FAA under the policy contained in the FAA's Special Federal Aviation Regulation No. 88 (14 CFR part 21, SFAR 88) AD decision policy (Policy Memorandum ANM–100–2003–112–15) (*http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgPolicy.nsf/0/DC94C3A46396950386256D5E006AED11?OpenDocument&Highlight=anm-100-2003-112-15*), dated February 25, 2003, and the FAA's Transport Airplane Risk Assessment Methodology (TARAM) (Policy Statement PS–ANM–25–05) (*http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgPolicy.nsf/0/4E5AE8707164674A862579510061F96B?OpenDocument&Highlight=ps-anm-25-05*). The FAA determined that installing FRM that meets 14 CFR part 125 would be one acceptable way to address the identified unsafe condition, so airplanes on which such a modification was incorporated were excluded from the applicability of the SNPRM. Other modifications identified later in this discussion are available as alternative actions to installing FRM for certain operations. We have determined it is necessary to proceed with issuance of this final rule.

Request To Withdraw SNPRM: Intrusive, Expensive, Unnecessary

A4A stated that Airbus and Boeing have indicated to them that the service bulletins for the wire separation modification that is part of the cargo airplane alternative actions will be intrusive and expensive and will not significantly improve safety. A4A stated that the safety analyses performed by the aircraft manufacturers do not classify the proposed modifications as safety critical. A4A noted that those service bulletins will not be issued as ''Alert'' service bulletins. Additionally, A4A stated that foreign regulatory authorities, aircraft manufacturers, and airlines do not support that a safety issue remains.

We infer that A4A is requesting that we withdraw the SNPRM because the airplane manufacturers have determined that an unsafe condition does not exist and the SNPRM will not significantly improve safety. We do not agree that the SNPRM should be withdrawn. We acknowledge that Boeing does not consider the condition associated with FQIS on these airplanes to be unsafe. We disagree with Boeing's assertions, for the reasons discussed extensively in our response to Boeing's similar comment in the SNPRM, under ''Request to Withdraw NPRM (77 FR 12506, March 1, 2012): Unjustified by Risk.'' We have determined that it is necessary to proceed with issuance of this final rule.

Request To Withdraw SNPRM: Global Economic Disadvantage to U.S. Operators

A4A does not expect that foreign regulators will require modification of affected foreign-registered aircraft, and stated that the competitive position of U.S. cargo operators will be harmed as a result. A4A stated that foreign regulatory agencies did not mandate retrofit of FRM for cargo airplanes, and therefore A4A did not expect that those authorities will mandate FQIS changes for their operators. A4A's comment made reference to documents published by the European Aviation Safety Agency (EASA), the Civil Aviation Authority of China (CAAC), and the Japan Civil Aviation Bureau (JCAB) as evidence that those agencies are not planning action to address any unsafe condition associated with FQIS.

We infer that A4A is requesting that we withdraw the NPRM because other foreign regulatory agencies have determined that an unsafe condition does not exist with regard to FQIS as addressed by the proposed AD.

We were unable to examine the EASA document A4A attempted to reference because the reference number was incomplete. We do not agree that the CAAC and JCAB documents indicate a position on the unsafe condition addressed by the SNPRM. Both of those documents simply state a requirement for existing type certificate holders to review fuel tank designs that is similar to the FAA's SFAR 88. Those documents do not state positions on any unsafe conditions or AD proposals identified by the FAA, the CAAC, or the JCAB.

A4A stated that the U.S. air cargo industry is currently in an extremely competitive global market. Additional lower deck capacity on passenger aircraft, especially through Middle East hubs, has significantly increased the need for cargo industry capacity. Several cargo carriers have ceased operations, and many others have parked some aircraft. U.S. carriers compete directly with foreign cargo operators. A4A stated that any additional costs on U.S. cargo operators that are not incurred by foreign operators will make U.S. operators less competitive and will lead to the loss of jobs in the U.S.

We infer that A4A is requesting that we withdraw the proposal to require corrective action on cargo airplanes because non-U.S. cargo operators will not be required to make similar modifications, and the FAA AD action would harm the competitive position of U.S. cargo operators, resulting in the loss of U.S. jobs.

We do not agree to withdraw the SNPRM for corrective action on cargo airplanes. As part of the AD development process, the FAA works with the affected manufacturer to develop a cost estimate for the corrective actions in a proposed AD. The FAA considers all possible corrective actions proposed by a manufacturer in an attempt to minimize the cost burden on operators. In some cases the FAA even makes a specific suggestion to a manufacturer for a less costly alternative. In the end, the manufacturer is responsible for development of an appropriate corrective action.

While the FAA attempts to minimize the costs associated with a required corrective action for a U.S. product, ultimately the FAA has the responsibility as the civil aviation authority (CAA) of the state of design to address unsafe conditions through AD action. Other CAAs overseeing foreign operators will typically apply the FAA AD or develop a similar AD for U.S. products operated under each CAA's jurisdiction. Other CAAs rely heavily on the knowledge and judgment of the CAA of the state of design to identify unsafe conditions and appropriate corrective actions for products of that state. The FAA is not aware at this time of any affected CAAs that do not plan to issue a corresponding mandate to address the unsafe condition associated with FQIS identified in the proposed AD. Even if such a situation occurs, the FAA would not use a foreign CAA's position as a justification for not addressing an unsafe condition identified by the FAA. While we acknowledge such a situation could harm the competitive position of a U.S. operator, we are still obligated by U.S. law and by international treaties to address the identified unsafe condition. We have determined that it is necessary to proceed with issuance of this final rule.

Request To Withdraw SNPRM: Costs of Compliance

A4A stated that the proposed modifications are very costly, and noted that United Parcel Service (UPS) has estimated a total cost of $16 million for its fleet of four aircraft types that are potentially affected by the SNPRM and other similar planned ADs. A4A pointed out that U.S. cargo operators have already spent tens of millions of dollars on fuel tank safety improvements. UPS alone has spent $35.5 million to comply with 51 SFAR 88 ADs on the four fleet types potentially affected. A4A noted that cargo operators already have recurring expenses for Enhanced Airworthiness Program for Airplane Safety (EAPAS) maintenance program tasks that continue to help ensure fuel tank safety. A4A added that cargo operators have already invested in improved and more expensive fuel tank component repair and overhaul processes.

We infer that A4A is requesting that we withdraw the SNPRM because the costs of addressing previously identified fuel tank unsafe conditions has been high, and that the additional cost to address the FQIS latent-plus-one issue will also be high, with very little safety benefit.

We do not agree to withdraw the SNPRM. We acknowledge that the total industry cost to address other fuel tank system unsafe conditions has been high. The SFAR 88 studies for Boeing airplanes identified several basic design deficiencies in lightning protection that could cause an ignition source in a fuel tank in the event of a lightning strike, and several issues with fuel pump systems and fuel valve systems where a single failure could result in an ignition source in a fuel tank. Fuel pump issues are suspected to have caused several fuel tank ignition events, so these issues were considered to be the highest priority for the development of corrective actions and related AD actions. The FAA considers the cost of addressing those issues to be clearly justified. Deficiencies in maintenance programs and inappropriate component repair actions that could lead to inadvertent significant increases in the risk of an ignition source in a fuel tank were also identified, and the cost of airworthiness limitations to address those issues is also considered to be justified.

The SFAR 88 studies and the FAA's subsequent decision-making process identified FQIS vulnerability of Model 707, 727, 737, 747, 757, 767, and 777 airplanes as an unsafe condition requiring corrective action. While the more recently designed of these airplane models have significant improvements in FQIS design details, they all have similar FQIS design architecture with respect to the identified failure scenario. That architecture is vulnerable to a combination of a latent in-tank wiring failure and a subsequent wiring failure outside of the tank that connects a high power source to the FQIS tank circuit creating an ignition source in a fuel tank. This failure combination was determined by the National Transportation Safety Board (NTSB) to have been the most likely cause of the Model 747 fuel tank explosion accident

off Long Island in 1996. NTSB Safety Recommendation A–98–038 (*http://www.ntsb.gov/about/employment/_layouts/ntsb.recsearch/Recommendation.aspx?Rec=A-98-038*) recommended that the FAA require that FQIS wiring on all airplane models that have similar wiring installations be separated and shielded to the maximum extent possible.

The FAA issued AD 98–20–40, Amendment 39–10808 (63 FR 52147, September 30, 1998); and AD 99–03–04, Amendment 39–11018 (64 FR 4959, February 2, 1999); to address this issue on early Model 747 and Model 737 airplanes, respectively, which used the same FQIS as the accident airplane. The FAA subsequently (in 2003) determined that this same architectural vulnerability was an unsafe condition for high flammability fuel tanks on all Boeing jet transports existing at that time. This determination was consistent with the published FAA policy for SFAR 88 corrective actions and with the current FAA TARAM guidelines for identification of unsafe conditions on transport airplanes.

The FAA deferred acting on this unsafe condition until after the FRM rulemaking activity was complete because introduction of FRM had the potential to change the classification of many of the affected fuel tanks to low flammability. When the final decision for the FRM rule did not include a requirement for FRM on all airplanes, the FAA resumed the planned actions to address the identified FQIS unsafe condition on the airplanes that were not required to have FRM.

The FAA considers the safety benefit of the SNPRM to be significant for both passenger and cargo airplanes. We estimate that the installation of compliant FRM will provide approximately an order of magnitude reduction in the risk of a fuel tank explosion on anticipated flights with a latent failure of an FQIS circuit in the center fuel tank. We estimate that the periodic BITE checks in the cargo airplane alternative actions will result in a 75- to 90-percent reduction in the number of flights that operate with a latent in-tank failure that makes them vulnerable to a single additional wiring hot short failure creating an ignition source in the center fuel tank. We estimate that the proposed wire separation modification in the cargo airplane alternative actions will reduce the risk of a hot short (and a resultant ignition source) on flights that have a latent in-tank failure by 50 to 75 percent. This estimated reduction in the risk on anticipated flights with a latent in-tank failure is sufficient to reduce the risk below the FAA's TARAM individual flight risk guideline level for urgent action. As discussed below in our response to ''Request to Remove Alternative Actions for Cargo Airplanes,'' we determined that further changes to further reduce the risk below the TARAM individual flight risk corrective action guideline of 1 in 10 million per flight hour would significantly increase the costs of compliance and are not necessary to adequately address the unsafe condition. We have determined that it is necessary to proceed with issuance of this final rule.

Request To Withdraw SNPRM: Unsafe Condition Addressed by Previous Requirements

A4A stated that there have been no fuel tank ignition incidents since the previously issued fuel tank safety ADs were implemented. A4A stated that this provides direct evidence that FAA projections for additional incidents were overstated and that SFAR 88 changes have worked. They further stated that no unsafe condition exists, asserting that service experience has shown that the fuel tank safety issues have been sufficiently addressed with significant previous modifications, recurring maintenance, controlled overhaul processes and repair processes, and maintenance program tasks.

We infer that A4A is requesting that we withdraw the SNPRM because previously required actions have adequately addressed the need for improvements in fuel tank safety.

We do not agree to withdraw the SNPRM. Until recently, fuel tank ignition incidents on U.S.- and European-manufactured transport airplanes have occurred roughly once every five to six years, with the most recent event in May 2006 (a Model 727 airplane in India in 2006, a Model 737 airplane in Thailand in 2001, a Model 747 airplane near New York in 1996, and a Model 737 airplane in the Philippines in 1991). It has now been ten years since the most recent event.

We agree that a significant improvement in fuel tank safety has occurred due to actions that have reduced the potential for ignition sources associated with single failures of fuel pumps and fuel pump power systems. That improvement alone would be expected to increase the average interval between fuel tank ignition incidents to more than ten years. However, the fact that no incidents have occurred since 2006 is not statistically significant, and is not sufficient to predict that additional events will not occur. In addition, even assuming the average interval between events is significantly improved to the extent that the overall fleet risk is considered acceptable, we would still address unsafe conditions identified based on the published FAA policy for SFAR 88 corrective actions and the current FAA guidelines for identification of unsafe conditions on transport airplanes when the individual flight safety risk exceeds our guidelines, as in this case. We have determined that it is necessary to proceed with issuance of this final rule.

Request To Withdraw SNPRM: All Related NTSB Safety Recommendations Closed

A4A stated that the NTSB previously issued the following safety recommendations related to flammability, wiring, and wiring maintenance:

- A–96–174—Preclude flammable fuel air mixtures in fuel tanks. Closed—Acceptable Action: FRM Rulemaking. Safety Recommendation A–96–174 can be found at *http://www.ntsb.gov/_layouts/ntsb.recsearch/Recommendation.aspx?Rec=A-96-174.*
- A–98–038—Separation of FQIS wires to the max extent possible. Closed—Acceptable Action: SFAR 88 Rulemaking.
- A–98–039—Require surge protection systems for FQIS wires. Closed—Acceptable Action: SFAR 88 Rulemaking. Safety Recommendation A–98–039 can be found at *http://www.ntsb.gov/about/employment/_layouts/ntsb.recsearch/Recommendation.aspx?Rec=A-98-039.*
- A–00–106—Assess wiring criticality and separation. Closed—Acceptable Action: EAPAS/FTS Rulemaking. Safety Recommendation A–00–106 can be found at (*http://www.ntsb.gov/_layouts/ntsb.recsearch/Recommendation.aspx?Rec=A-00-106.*
- A–00–108—Repair of potentially unsafe wiring conditions. Closed—Acceptable Action: EAPAS/FTS Rulemaking. Safety Recommendation A–00–108 can be found at *http://www.ntsb.gov/_layouts/ntsb.recsearch/Recommendation.aspx?Rec=A-00-108.*

A4A noted that all applicable NTSB safety recommendations are closed with acceptable actions taken by the FAA. A4A stated that none of the NTSB safety recommendations called for the FAA to address wire separation for the FQIS.

We infer that A4A is requesting that we withdraw the SNPRM because the NTSB considers the overall fuel tank safety issue to be adequately addressed by previous actions.

We do not agree to withdraw the SNPRM. A4A appears to have

misunderstood NTSB Safety Recommendation A–98–038 and the NTSB's acceptance of the FAA's response to that safety recommendation. NTSB Safety Recommendation A–98–038 specifically called for the FAA to require, in ''airplanes with fuel quantity indication system (FQIS) wire installations that are co-routed with wires that may be powered, the physical separation and electrical shielding of FQIS wires to the maximum extent possible.'' The NTSB classified that recommendation as ''closed, acceptable action'' after the FAA stated that it would issue ADs to mandate FQIS protection on the high flammability tanks of aircraft on which the installation of FRM is not required by the Fuel Tank Flammability Reduction (FTFR) rule (73 FR 42444, July 21, 2008). The communications between the NTSB and the FAA on Safety Recommendation A–98–038 can be viewed at *http://www.ntsb.gov/about/employment/_layouts/ntsb.recsearch/Recommendation.aspx?Rec=A-98-038.* We have determined that it is necessary to proceed with issuance of this final rule.

Request To Withdraw SNPRM: Unjustified by Risk Assessment

A4A stated that the original equipment manufacturers (OEMs) and other regulatory agencies are having difficulty calculating the true safety value associated with the proposed FQIS AD. A4A stated that its position is that all the unsafe conditions have been mitigated, operationally and across industry, and all previous rules have been effective. A4A added that, in light of the operators' financial and technical investment to mitigate the unsafe conditions in all areas, the SNPRM is difficult to understand technically relative to the amount of mitigation that would be required, in light of a true risk assessment. A4A stated that the FAA is alone in believing that a safety issue still exists.

We infer that A4A is requesting that we withdraw the SNPRM because it has not been justified by a risk assessment and because previously required actions have adequately addressed the need for improvements in fuel tank safety.

We do not agree to withdraw the SNPRM. We provided a detailed response to similar comments and described the FAA's risk assessment in the SNPRM in the sections ''Request to Withdraw NPRM (77 FR 12506, March 1, 2012): Unjustified by Risk,'' ''Request to Withdraw NPRM (77 FR 12506, March 1, 2012): Not Supported by Risk Analysis,'' and ''Request to Withdraw NPRM (77 FR 12506, March 1, 2012): No Unsafe Condition,'' as well as in earlier paragraphs in this discussion. We have determined that it is necessary to proceed with issuance of this final rule.

Request To Remove Requirement for Corrective Actions for Cargo Airplanes

A4A stated that the alternative wire separation modifications allowed for cargo airplanes would not meet the ''new design criteria.'' (We assume that A4A is referring to the wire separation requirements for repairs and modifications that are included in the fuel tank system airworthiness limitations required by recent ADs for the various Boeing models.) A4A stated that in the Model 757 service bulletin under development by Boeing, only about ''5 percent'' of FQIS wires can be separated from other systems by a distance of 2 inches, and that the majority of the wire bundle relocation will achieve only up to 0.5-inch spacing. A4A stated that because the wire separation requirements are not met, partial exemptions from the requirements of 14 CFR 25.981 are required to allow approval of these wire separation service bulletins. Based on the reduced separation distance and the need for exemptions, A4A considered the proposed wire separation requirements included in the cargo airplane alternative actions to be a symbolic gesture with no significant safety benefit, while at the same time being expensive and intrusive. A4A further stated that operators have reviewed the associated draft service bulletins and are concerned about the lack of a design target or adequate rationale for the actions proposed by the FAA. Finally, A4A stated that Boeing had stated to them that Boeing does not understand what design changes the FAA wants or why the FAA considers there to be a safety issue.

We infer that A4A is requesting that we remove the alternative actions for a wire separation modification on cargo airplanes because A4A believes the wire separation actions associated with the cargo airplane alternative actions in the SNPRM would have no significant safety benefit since inadequate physical wire separation is provided.

We do not agree to withdraw the SNPRM. A4A appears to have misunderstood the intent of the FQIS wire separation requirements added to the airworthiness limitations as a critical design configuration control limitation (CDCCL). The FQIS wire separation CDCCL provides a set of wire separation requirements that are intended to be used as a default when modifying or repairing an aircraft to ensure that the intended level of separation of the FQIS wiring from other wiring is maintained. The Model 757 CDCCL (28–AWL–05) contains a simple 2-inch separation requirement as originally proposed by Boeing. While Boeing has not proposed changes to the Model 757 FQIS wire separation CDCCL, the corresponding CDCCL (28–AWL–05) for Model 737–700, –800, and –900 airplanes has numerous additional provisions approving other design approaches (typically combinations of wire sleeving and smaller separation distances) that Boeing or operators proposed and that the FAA approved. Each time wire separation configuration options were approved for Boeing, alternative CDCCL wording was approved as an AMOC with the AD that required the addition of the CDCCLs to operators' maintenance programs. A similar AMOC will be granted for the approved modifications to the FQIS for Model 757 airplanes.

A4A also appears to have misunderstood the reason that exemptions would be required to allow approval of the cargo airplane wire separation modification. Lack of a full 2 inches of wire separation in all of the changed areas is not the reason an exemption is required. Rather, an exemption is required because the overall FQIS will not comply with 14 CFR 25.901(c) and 25.981(a)(3) due to the existing noncompliance of the unchanged areas of the system. Because those rules require a system-level safety analysis, we cannot find the changes to the system compliant if a noncompliance exists in the unchanged areas of the system.

The proposed Boeing design uses sleeving over the wire bundles and extensive retention features to provide a level of wire protection similar to the protection that would be provided by a greater separation distance. The design measures are consistent with those previously approved by the FAA in the Model 737–700/800/900 CDCCL mentioned previously.

We consider the safety benefit provided by the proposed cargo airplane alternative actions to be significant. The unsafe condition determination and the rationale and estimated safety benefit for the cargo airplane alternative actions were discussed extensively with Boeing in several meetings, and we consider that Boeing fully understands the FAA's position on each of those aspects of the proposal. The proposed requirement for a periodic check through the built-in test equipment (BITE) of the FQIS processor is intended to identify and result in corrective actions for the detectable fault conditions in the FQIS in-tank wiring. We estimated that this

proposed requirement will result in a 75- to 90-percent reduction in the number of flights that operate with a latent in-tank failure that makes them vulnerable to a single additional wiring hot short failure creating an ignition source in the center fuel tank. The proposed FQIS wire separation modification is intended to reduce the risk of a hot short of power onto center tank FQIS circuits by physically isolating the portions of those circuits that are outside of the tank in the areas where those circuits are most vulnerable to damage and most easily separated. We did not propose to require modifications of the wiring in the electrical racks or in the cockpit areas because of the difficulty involved in accessing and achieving additional wire separation in those areas, and in recognition that the FQIS processor provides some beneficial circuit isolation to protect against hot shorts in those areas. We estimated that the proposed wire separation modification would reduce the risk of a hot short on flights that have a latent in-tank failure by 50 to 75 percent. Those estimates were reviewed with Boeing, and Boeing did not disagree with those estimates. We have determined it is necessary to proceed with issuance of this final rule.

Request To Remove Alternative Actions for Cargo Airplanes

Colin Edwards and an anonymous commenter made no explicit request to change the SNPRM, but objected to the proposed addition of alternative actions for cargo airplanes that would allow a design change that does not fully comply with the fuel tank system safety requirements of 14 CFR part 25 (14 CFR 25.981(a)(3)) to be used to address the unsafe condition. The commenters stated that it should not be acceptable to allow greater risk to exist on cargo airplanes than that allowed for passenger airplanes.

We infer that the commenters propose the elimination of the proposed alternative corrective action for cargo airplanes. We disagree with this request. We determined that an acceptable level of safety would be provided for the affected cargo airplanes, and explained our position in depth in response to similar comments in the SNPRM. However, we will attempt to address the commenters' concerns by expanding on the explanation of our safety determination.

When assessing potential unsafe conditions on transport airplanes to determine if corrective action is necessary, the FAA assesses the total risk to the affected fleet of airplanes exposed to the condition, and assesses the level of risk on individual airplanes within the fleet. The FAA's guidelines for assessing the total fleet risk related to the unsafe condition are slightly different for cargo and passenger airplanes due to operational usage differences. In this case, however, the total risk to the affected fleet is lower than the unsafe condition risk guidelines for both passenger and cargo airplanes. Total fleet risk is therefore not the risk assessment element driving the proposed actions.

When assessing the level of risk on individual airplanes, the FAA considers the risk on the worst reasonably anticipated flights to ensure that the level of safety on each flight is acceptable. Our individual flight risk unsafe condition threshold is $1 \times 10E{-}7$ events (or a 1-in-10-million chance of a catastrophic event) per flight hour. In addition, the worst reasonably anticipated flights should not be vulnerable to a single failure that causes a fatal event, regardless of probability. There is no difference in the individual flight risk unsafe condition criteria for cargo airplanes and passenger airplanes because the operational differences are not considered in this risk calculation.

In this case, we are concerned about a latent failure inside the fuel tank that, in combination with an electrical short circuit in FQIS wiring outside of the tank, could result in an electrical spark or arc in the tank. An electrical arc or spark in the fuel tank combined with flammable conditions in the fuel tank could result in a fuel tank explosion. The worst reasonably anticipated flights in this case are those that have both the latent failure and flammable conditions in the tank. The manufacturer's analysis indicates that a significant number of flights would be expected to occur with these conditions in the life of the affected fleet if no corrective action is taken. For those flights, one additional failure—a short circuit between FQIS wiring and power wiring—could cause a fuel tank explosion. Also, the probability of an explosion is between 1 in a million and 1 in 10 million, per flight hour, which slightly exceeds the numerical unsafe condition guideline for individual flight risk discussed above.

An issue that violates one or more of the individual flight risk guidelines would normally require corrective action that reduces the risk to a level that is below the unsafe condition guidelines. However, in this case the FAA acknowledged that the cost of corrective action is high, and that the available corrective action (fuel tank FRM systems) would reduce, but not eliminate, the number of expected flights with the condition we are concerned about (a latent failure plus flammable conditions inside the tank). The alternative actions for cargo airplanes would also reduce the number of expected flights with the condition we are concerned about, but to a lesser degree. The FAA has determined that allowing a moderate number of cargo flights per year (on average) with this condition provides an acceptable level of safety. As part of making this determination, we noted that the level of risk on the worst reasonably anticipated flights is similar to the level of risk for private and commercial pilots flying normal category airplanes.

We have not changed the final rule regarding this issue.

Request To Require FQIS Modification in all Fuel Tanks

National Air Traffic Controllers Association (NATCA) requested that we require changes to the FQIS to address the potential ''latent-plus-one-failure scenario'' in all fuel tanks, not just in the center fuel tank.

NATCA stated that the failure condition that is the subject of the SNPRM should be classified as a ''known'' latent-plus-one-failure condition when applying the FAA Transport Airplane Directorate Policy Memorandum 2003–112–15, ''SFAR 88—Mandatory Action Decision Criteria,'' dated February 25, 2015 (*http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgPolicy.nsf/0/dc94c3a46396950386256d5e006aed11/$FILE/Feb2503.pdf*). NATCA stated that this would have the effect of classifying the failure condition as an unsafe condition requiring corrective action in all affected fuel tanks regardless of flammability level.

NATCA considered the combination of a latent in-tank failure with electrical energy transmitted into the fuel tank via the FQIS wiring due to an additional failure outside of the tank to be a ''known'' failure condition because that failure condition was considered to be the most likely cause of the TWA Flight 800 Model 747 accident. (That accident occurred on July 17, 1996, shortly after takeoff from John F. Kennedy International Airport in Jamaica, New York.) NATCA concluded that because the Model 757 FQIS is similar to that of the Model 747, both models are vulnerable to the same failure scenario. NATCA cited the unsafe condition statement for the SNPRM as evidence that the scenario should be classified as ''known.'' NATCA pointed out that the FAA issued AD 98–20–40, Amendment 39–10808 (63 FR 52147, September 30, 1998), to address this issue for Model

747 airplanes, and pointed out that the FAA TARAM Handbook specifically states that Policy Memorandum 2003–112–15 should be followed in determining whether corrective action should be required for fuel tank safety concerns identified through SFAR 88.

We disagree with the request to require modification of the FQIS in all fuel tanks. We have determined that, under the policy contained in the policy memorandum, this failure condition for the Model 757 FQIS should not be classified as ''known.'' The memo defines ''known'' failure conditions as follows:

> [T]hose conditions which have occurred in-service and are likely to occur on other products of the same or similar type design, and conditions which have been subject to mandatory corrective actions, following in-service findings, on products with a similar design of fuel system.

We agree that the Model 757 FQIS has the same high-level system architecture and operating principles as those of the Model 747 FQIS, resulting in vulnerability to the same theoretical latent-plus-one-failure scenario. There are, however, significant differences in the details of the Model 757 FQIS design that reduce the likelihood of the individual contributing failures. Those differences include the following:

- Improved FQIS probe terminal connector block design;
- The use of wiring that is not silver plated and therefore does not create silver sulfide deposits on the terminal blocks;
- The use of improved wire types and wiring installation practices outside of the fuel tanks; and
- The use of a system processor that provides significant isolation of the tank probe circuits from the indication and power circuits of the FQIS.

We therefore did not consider that the FQIS designs for the Model 747 and Model 757 were so similar that the Model 757 FQIS design should be considered to have a ''known'' latent-plus-one-failure condition vulnerability as defined in the policy memorandum. The provisions in the above definition for classifying a failure condition as ''known'' based on the existence of a similar design were intended to allow the FAA to evaluate the degree of similarity in the design, and to make discretionary judgments in determining that a failure condition that is believed to have occurred (and/or was addressed by AD action) in one specific design should be classified as ''known'' in a different specific design. The application of that discretion would be expected to involve evaluation of design detail differences and the effects of those differences on failure modes and failure probability. Based on our determination that sufficient design differences exist between the Model 757 and Model 747 FQIS designs to not classify the Model 757 FQIS latent-plus-one-failure condition as ''known,'' under the direction contained in the policy memorandum, this AD addresses that failure condition vulnerability only for the center fuel tank, which is the only high-flammability fuel tank on the Model 757.

NATCA expressed a concern that the FAA did not understand NATCA's previous comment on this matter, and stated that the FAA had not considered the requirements of ''Element 2.a)'' from Policy Memorandum 2003–112–15, dated February 25, 2015. In fact, we had addressed the requirements of ''Element 2.a)'' in the response to the comments under ''Request to Revise Proposed AD Requirements to Apply to All Fuel Tanks'' of the SNPRM. The FAA understood the earlier comment and understands the more recent comment, but has reached a different conclusion about the classification of the failure condition under the guidance in the policy memorandum. We classified the Model 757 FQIS latent-plus-one-failure scenario as a theoretical vulnerability rather than a ''known'' combination of failures. Policy Memorandum 2003–112–15, dated February 25, 2015, calls for corrective action for theoretical latent-plus-one-failure conditions only in high-flammability fuel tanks. Contrary to the assertion in the NATCA comment, the acknowledgement of the scenario as theoretically possible and the consequent AD proposal to address the scenario in the high flammability center fuel tank do not automatically drive classification of the failure as ''known'' under the policy memorandum. We have not changed this final rule regarding this issue.

Request To Address Unsafe Condition in All Fuel Tanks, With or Without FRM

NATCA requested that we require design changes to the FQIS to address the potential latent-plus-one-failure scenario in all fuel tanks of all Model 757 airplanes, regardless whether FRM is installed. NATCA stated that the minimum performance standards for FRM contained in 14 CFR part 25 allow flights to occur with flammable conditions in tanks that are required to incorporate FRM due to system performance as designed and due to system failures. In addition, time-limited dispatch with an inoperative FRM has been allowed in the master minimum equipment list (MMEL) for affected airplanes. Flights with flammable conditions and a pre-existing latent in-tank FQIS failure are reasonably anticipated to occur in the life of the affected fleet. For those flights, a fuel tank explosion could occur due to a single additional failure (hot short of power onto FQIS tank probe circuits). NATCA notes that four fuel tank explosion events have occurred in fuel tanks that are classified as low flammability.

We disagree with the request. We have determined that the proposed corrective actions (either installation of FRM or specific FQIS changes limited to the center fuel tank) represent a reasonable, cost-effective method to achieve a meaningful reduction in the risk of an accident due to potential FQIS fuel tank ignition sources.

The service history of conventional unheated aluminum wing tanks that contain Jet A fuel indicates that there would be little safety benefit by further limiting the flammability of these tanks. While NATCA expressed concern because fuel vapor ignition events have occurred in wing fuel tanks, NATCA did not differentiate service experience based on fuel type used (JP–4 versus Jet A fuel).

Our review of the nine wing tank ignition events we know to have occurred on turbine-engine-powered transport airplanes shows that five of the nine airplanes were using JP–4 fuel, and this type of fuel is no longer used except on an emergency basis in the U.S. Use of JP–4 fuel in other parts of the world is also relatively rare, and is normally limited to areas with extremely cold airport conditions. Three of the remaining four events were caused by external heating of the wing by engine fires, and the remaining event occurred on the ground during maintenance. To date, there have been no fuel tank explosions in conventional unheated aluminum wing tanks fueled with Jet A fuel that have resulted in any fatalities.

The flammability characteristics of JP–4 fuel results in the fuel tanks being flammable a significant portion of the time when an airplane is in flight. This is not the case for wing tanks containing Jet A fuel. Therefore, based on the low fleet average flammability of the Model 757 wing fuel tanks and on the specific features of the Model 757 FQIS design, we have determined that the latent-plus-one vulnerability that exists in the Model 757 wing tank FQIS is not an unsafe condition requiring corrective action on in-service airplanes.

We have not changed this final rule regarding this issue.

Request To Require Design Changes for Full Compliance with Airworthiness Regulations

NATCA requested that we require design changes to the FQIS that would bring that system into full compliance with the applicable airworthiness regulations. NATCA stated that the failure condition that is the subject of the SNPRM represents a noncompliance of the type design with the requirements of 14 CFR 25.901(c) and 25.981(a)(3), even for low-flammability fuel tanks. NATCA stated that the proposed corrective actions would not bring the airplane design into compliance with those regulations ''as required by SFAR 88 and SFAR 88 Policy published by the FAA as Mandatory Corrective Action criteria in FAA Policy Statement No. 2003–112–15.'' NATCA added that the proposed alternative corrective actions for cargo airplanes do not comply with those regulations because the alternative actions do not fully eliminate the potential for the failure condition that is addressed by the SNPRM.

We disagree with the request. SFAR 88, as modified by Amendment 21–82, and Policy Memorandum 2003–112–15, dated February 25, 2003, do not specifically require noncompliant designs discovered through SFAR 88 to be brought into compliance. As originally issued, SFAR 88 required design approval holders to develop the corrective actions necessary to bring any noncompliant design fuel system features into compliance. However, SFAR 88 did not dictate that the FAA require a given corrective action. In fact, the FAA later published Amendment 21–82, ''Equivalent Safety Provisions for Fuel Tank System Fault Tolerance Evaluations (SFAR 88),'' to clarify that the FAA would accept SFAR 88 reports that do not provide corrective actions that directly comply with 14 CFR 25.981(a)(3) provided any aspects that do not comply are compensated for by factors that provide an equivalent level of safety. The FAA used the introduction of flammability reduction in place of corrective action for a specific ignition source as an example of a potentially acceptable compensating factor.

Also, while the normal certification process requires proposed design changes to be compliant with the applicable regulations, applicants are permitted under 14 CFR part 11 to petition for an exemption from any FAA regulatory requirement. Policy Memorandum 2003–112–15, dated February 25, 2003, did not state that the FAA would not consider a petition for exemption from an airworthiness requirement for a proposed design intended as corrective action for an SFAR 88 issue. We therefore consider that the applicant may petition for an exemption and propose a noncompliant design change, and the FAA may approve and issue an AD to require a noncompliant design change. Boeing's FRM design change for the Model 757 was approved some time ago. We have determined that for Model 757 airplanes, installation of FRM, instead of FQIS design changes, represents a reasonable, cost-effective method to achieve a meaningful overall reduction in the risk of an accident due to fuel tank ignition events. We therefore excluded airplanes with FRM installed from the applicability of this AD.

Request To Mandate Compliance with Airworthiness Regulations for Newly Produced Airplanes

NATCA requested that we require newly produced airplanes to be in compliance with 14 CFR 25.901, 25.981(a), and 25.981(b). NATCA expressed concern that nearly 20 years after the TWA Flight 800 accident, manufacturers have been allowed to continue production of airplanes without making changes to eliminate the FQIS latent-plus-one-failure scenario, and that the FAA has granted exemptions to approve certain design changes without fully addressing the issue.

We disagree with the request. This AD applies only to certain Model 757 series airplanes, and the Model 757 is out of production. The comment is therefore outside of the scope of this AD. We have not changed the final rule regarding this issue.

Request To Allow Alternative Procedure for BITE Check

FedEx proposed that we revise paragraph (h)(1) of the SNPRM to allow use of the FQIS BITE check procedure in its airplane maintenance manual (AMM) as an alternative to the procedure in Boeing Service Bulletin 757–28–0136, dated June 5, 2014, which does not apply to FedEx's fleet. We assume this is because FedEx operates some airplanes that were converted to a cargo configuration using a non-Boeing supplemental type certificate.

We disagree with the request. FedEx's comment did not provide adequate information to show that its AMM procedure is equivalent to the procedure described in Boeing Service Bulletin 757–28–0136, dated June 5, 2014. FedEx's comment also did not identify the fault conditions for which dispatch would be prohibited. We therefore do not have sufficient information at this time to allow FedEx's proposed alternative procedure. However, under the provisions of paragraph (i) of this AD, we will consider requests for approval of alternative procedures, if sufficient data are submitted to substantiate that the change would provide an acceptable level of safety. We have not changed this final rule regarding this request.

Request To Reduce Compliance Time

NATCA requested that we reduce the compliance time to 5 years or less. NATCA noted that the proposed 72-month compliance time would result in a corrective action deadline that is approximately 27 years after the TWA Flight 800 accident. NATCA stated that such a long delay in action is not in the public interest.

We disagree with the request to reduce the compliance time, which we have determined is necessary to give operators adequate time to prepare for and perform the required modifications without excessive disruption of operations. We had initially proposed 60 months, but extended that to 72 months in response to operator comments, which included extension requests of up to 108 months. NATCA made a similar comment to the NPRM (77 FR 12506, March 1, 2012), requesting a reduction in the compliance time to 36 months, and the FAA provided its response in the SNPRM under ''Request to Reduce Compliance Time.'' We have not changed this final rule regarding this issue.

Statement Regarding Compliance Time for Wire Separation

FedEx stated that without service information for the wire separation, it cannot effectively determine whether the proposed 72-month compliance time is acceptable.

We had previously determined, as specified in the SNPRM, that the work involved for the cargo airplane wire separation modification would take 230 work-hours, and a compliance time of 72 months would be adequate for operators to perform the modification on their affected fleets. Boeing has since provided an updated estimate of 74 work-hours for the alternative modification for cargo airplanes. We have revised the cost estimate accordingly in this final rule, but since this change reduces the work-hour estimate, it is not necessary to adjust the compliance time to accommodate the workload for this action for cargo operators.

Request To Remove Reference to ''Fuel Tank Systems''

Paragraph (g) of the SNPRM would have required modification of ''the FQIS wiring or fuel tank systems.'' Boeing asked that we remove reference to ''fuel tank systems'' in this proposed requirement because a fuel tank system modification could be done as an AMOC.

We agree with the commenter's request and rationale. We have removed the references to ''fuel tank systems'' throughout the preamble and in paragraph (g) of this AD.

Request To Clarify Condition Requiring Repair

Boeing requested that we revise paragraph (h)(1) of the SNPRM to specify that repair is required for any ''nondispatchable'' fault code recorded before or as a result of the BITE check. (The SNPRM would have required repair for any fault code.) Boeing requested this change to make the repair requirement consistent with the BITE check service information referenced in the SNPRM (Boeing Service Bulletin 757–28–0136, dated June 5, 2014).

We agree with the request. The intent of the SNPRM was to require correction only of faults identified as ''nondispatchable.'' The SNPRM used the terminology ''as applicable'' to indicate this intent, but we agree that further clarification is appropriate. We have revised paragraph (h)(1) in this AD as requested by the commenter.

Request To Clarify End Point for FQIS Wire Separation

Paragraph (h)(2) of the SNPRM specified that the FQIS wiring separation was to be done on the wiring that runs between the FQIS processor and the center fuel tank. Boeing requested that we change ''the center fuel tank'' to ''the center fuel tank wall penetrations.'' Boeing requested this change to clarify the end point for the FQIS wire separation.

We agree with the request. Boeing's suggestion is consistent with the intent of this AD, and improves the clarity of the requirement. We have revised paragraph (h)(2) in this AD to incorporate Boeing's request.

Request To Delay Final Rule Pending New Service Information

Boeing requested that we delay issuance of the final rule pending issuance of new service information that would specifically define an acceptable wiring configuration that complies with the proposed requirements.

We disagree with the request because the referenced service information was not available at the time we were ready to publish the final rule, and we cannot reliably predict the time that service information will be issued by Boeing. We do not consider it in the public interest to further delay this rulemaking. We have determined that it is necessary to proceed with issuing the final rule as proposed. Operators may, however, request approval under the provisions of paragraph (i) of this AD to use a future approved service bulletin, if developed, as an AMOC with the requirements of this AD, or we may approve the service bulletin as a global AMOC.

Statement Regarding Unsafe Condition

Boeing stated that it has accepted the FAA's requirement to provide service information defining an acceptable wire separation modification, but, based on previously provided analysis, maintained that the risk level is less than extremely improbable. As asserted in earlier comments, Boeing considers the design of the affected airplanes safe and the proposed requirements therefore unnecessary.

We disagree with Boeing's assertions for the reasons discussed extensively in our response to Boeing's similar comment in the SNPRM. The FAA's response to Boeing's assertion is covered in the response to comments in the SNPRM under ''Request to Withdraw NPRM (77 FR 12506, March 1, 2012): Unjustified by Risk.''

Additional Change Made to This AD

We have revised the introductory text to paragraph (h) of this AD to clarify that the alternative modification for cargo airplanes must be accompanied by periodic BITE checks started within 6 months after the effective date of this AD. And, for airplanes converted to an all-cargo configuration more than 6 months after the effective date of this AD, operators must perform the first BITE check before flight after the conversion. In reviewing the proposed requirements after publication of the SNPRM, we recognized that operators might interpret the requirements as allowing a delay in the decision to exercise the cargo airplane alternative until late in the compliance period. That is not the literal meaning of the proposed language of the requirement, and was not the FAA's intent. However, we determined that we should clarify the language of paragraph (h) of this AD regarding the required timing for the first BITE check if an operator chooses to exercise the cargo airplane alternative.

Conclusion

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

- Are consistent with the intent that was proposed in the SNPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the SNPRM.

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

Related Service Information Under 1 CFR Part 51

We have reviewed Boeing Service Bulletin 757–28–0136, dated June 5, 2014, which describes procedures for a BITE check (check of built-in test equipment). This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the **ADDRESSES** section.

Costs of Compliance

We estimate that this AD affects 167 airplanes of U.S. registry. This estimate includes 148 cargo airplanes and 19 non-air-carrier passenger airplanes. We estimate the following costs to comply with this AD:

ESTIMATED COSTS: BASIC REQUIREMENT FOR ALL AIRPLANES

Action	Labor cost	Parts cost	Cost per product
Fully correct FQIS vulnerability to latent-plus-one-failure conditions.	1,200 work-hours × $85 per hour = $102,000	$200,000	$302,000

ESTIMATED COSTS: BASIC REQUIREMENT FOR ALL AIRPLANES—Continued

Action	Labor cost	Parts cost	Cost per product
Estimated Costs: Alternative Actions for All Airplanes			
Install FRM	720 work-hours × $85 per hour = $61,200	323,000	$384,200.
Estimated Costs: Alternative Actions for Cargo Airplanes			
Wire separation	74 work-hours × $85 per hour = $6,290	10,000	$16,290.
FQIS BITE check (required with wire separation alternative actions).	1 work-hour × $85 per hour = $85	0	$85 per check (4 checks per year).

Existing regulations already require that air-carrier passenger airplanes be equipped with FRM by December 26, 2017. We therefore assume that the FRM installation specified in paragraph (g) of this AD will be done on only the 19 affected non-air-carrier passenger airplanes, for an estimated passenger fleet cost of $7,299,800. We also assume that the operators of the 148 affected cargo airplanes would choose the less costly actions specified in paragraph (h) of this AD, at an estimated cost of $2,410,920 for the wire separation modification, plus $50,320 annually for the BITE checks.

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):

2016–07–07 The Boeing Company: Amendment 39–18452; Docket No. FAA–2012–0187; Directorate Identifier 2011–NM–094–AD.

(a) Effective Date

This AD is effective May 10, 2016.

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 757–200, –200PF, –200CB, and –300 series airplanes; certificated in any category; except airplanes equipped with a flammability reduction means (FRM) approved by the FAA as compliant with the Fuel Tank Flammability Reduction (FTFR) rule (73 FR 42444, July 21, 2008) requirements of 14 CFR 25.981(b) or 14 CFR 26.33(c)(1).

(d) Subject

Joint Aircraft System Component (JASC) Code 7397: Engine fuel system wiring.

(e) Unsafe Condition

This AD was prompted by fuel system reviews conducted by the manufacturer. We are issuing this AD to prevent ignition sources inside the center fuel tank, which, in combination with flammable fuel vapors, could result in a fuel tank explosion and consequent loss of the airplane.

(f) Compliance

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

(g) Modification

Within 72 months after the effective date of this AD, modify the fuel quantity indication system (FQIS) wiring to prevent development of an ignition source inside the center fuel tank, using a method approved in accordance with the procedures specified in paragraph (i) of this AD.

(h) Alternative Actions for Cargo Airplanes

For airplanes used exclusively for cargo operations: As an alternative to the requirements of paragraph (g) of this AD, do the actions specified in paragraphs (h)(1) and (h)(2) of this AD, using methods approved in accordance with the procedures specified in paragraph (i) of this AD. To exercise this alternative, operators must perform the first inspection required under paragraph (h)(1) of this AD within 6 months after the effective date of this AD. To exercise this alternative for airplanes returned to service after conversion of the airplane from a passenger configuration to an all-cargo configuration more than 6 months after the effective date of this AD, operators must perform the first inspection required under paragraph (h)(1) of this AD prior to further flight after the conversion.

(1) Within 6 months after the effective date of this AD, record the existing fault codes stored in the FQIS processor and then do a BITE check (check of built-in test equipment) of the FQIS, in accordance with the

Accomplishment Instructions of Boeing Service Bulletin 757–28–0136, dated June 5, 2014. If any nondispatchable fault code is recorded prior to the BITE check or as a result of the BITE check, before further flight, do all applicable repairs, and repeat the BITE check until a successful test is performed with no nondispatchable fault found, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 757–28–0136, dated June 5, 2014. Repeat these actions thereafter at intervals not to exceed 750 flight hours.

(2) Within 72 months after the effective date of this AD, modify the airplane by separating FQIS wiring that runs between the FQIS processor and the center fuel tank wall penetrations, including any circuits that pass through a main fuel tank, from other airplane wiring that is not intrinsically safe.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle Aircraft Certification Office (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 paragraph (j) of this AD. Information may be emailed to: *9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.*

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(j) Related Information

For more information about this AD, contact Jon Regimbal, Aerospace Engineer, Propulsion Branch, ANM–140S, FAA, Seattle ACO, 1601 Lind Avenue SW., Renton, WA 98057–3356; phone: 425–917–6506; fax: 425–917–6590; email: *jon.regimbal@faa.gov.*

(k) Material Incorporated by Reference

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

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Service Bulletin 757–28–0136, dated June 5, 2014.

(ii) Reserved.

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

(4) You may view this service information at FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425–227–1221.

(5) You may view this service information that is incorporated by reference 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 March 21, 2016.

Michael Kaszycki,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2016–07150 Filed 4–4–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2015–6537; Directorate Identifier 2014–NM–154–AD; Amendment 39–18457; AD 2016–07–12]

RIN 2120–AA64

Airworthiness Directives; Airbus Airplanes

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

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain Airbus Model A318, A319, A320, and A321 series airplanes. This AD was prompted by reports of cracking of the aft fixed fairing (AFF) of the pylons due to fatigue damage of the structure. This AD requires repetitive inspections for damage and cracking of the AFF of the pylons, and repair if necessary. We are issuing this AD to detect and correct damage and cracking of the AFF of the pylons, which could result in detachment of a pylon and consequent reduced structural integrity of the airplane.

DATES: This AD becomes effective May 10, 2016.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of May 10, 2016.

ADDRESSES: For service information identified in this final rule, contact Airbus, Airworthiness Office—EIAS, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email *account.airworth-eas@airbus.com;* Internet *http://www.airbus.com.* You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425–227–1221. It is also available on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2015–6537.

Examining the AD Docket

You may examine the AD docket on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2015–6537; 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 Operations office (telephone 800–647–5527) is Docket 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.

FOR FURTHER INFORMATION CONTACT: Sanjay Ralhan, Aerospace Engineer, International Branch, ANM–116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057–3356; telephone 425–227–1405; fax 425–227–1149.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Airbus Model A318, A319, A320, and A321 series airplanes. The NPRM published in the **Federal Register** on November 30, 2015 (80 FR 74729) (''the NPRM'').

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive 2014–0154, dated July 2, 2014 (referred to after this as the Mandatory Continuing Airworthiness Information, or ''the MCAI''), to correct an unsafe condition for certain Airbus Model A318, A319, A320, and A321 series airplanes. The MCAI states:

On aeroplanes equipped with post-mod 33844 CFM pylons, several operators have reported cracks on the Aft Fixed Fairing (AFF). After material analysis, it appears that