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[Page 66497-66512]  
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## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2005-20836; Directorate Identifier 2005-NM-028-AD; Amendment 39-15730; AD 2008-23-09]

RIN 2120-AA64

**Airworthiness Directives; Boeing Model 727-200 and 727-200F Series Airplanes; 737-200, 737-200C, 737-300, and 737-400 Series Airplanes; 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747SR, and 747SP Series Airplanes; 757-200, 757-200CB, and 757-200PF Series Airplanes; and 767-200 and 767-300 Series Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Boeing transport category airplanes. This AD requires replacing any insulation blanket constructed of polyethyleneterephthalate (PET) film, ORCON Orcofilm[reg] AN-26 (hereafter "AN-26"), with a new insulation blanket. This AD results from reports of in-flight and ground fires on certain airplanes manufactured with insulation blankets covered with AN-26, which may contribute to the spread of a fire when ignition occurs from sources such as electrical arcing or sparking. We are issuing this AD to ensure that insulation blankets constructed of AN-26 are removed from the fuselage. Such insulation blankets could ignite and propagate a fire that is the result of electrical arcing or sparking.

**DATES:** This AD is effective December 15, 2008.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of December 15, 2008.

**ADDRESSES:** For service information identified in this AD, contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207; telephone 206-544-9990; fax 206-766-5682; e-mail DDCS@boeing.com; Internet <https://www.myboeingfleet.com>.

#### Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and

other information. The address for the Docket Office (telephone 800-647-5527) is the Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Shannon Lennon, Aerospace Engineer, Cabin Safety and Environmental Systems Branch, ANM-150S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6436; fax (425) 917-6590.

## **SUPPLEMENTARY INFORMATION:**

### **Summary of the NPRM**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an airworthiness directive (AD) that would apply to certain Boeing Model 727-200 and 727-200F series airplanes; 737-200, 737-200C, 737-300, and 737-400 series airplanes; 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747SR, and 747SP series airplanes; 757-200 and 757-200PF series airplanes; and 767-200 and 767-300 series airplanes. That NPRM was published in the Federal Register on April 4, 2005 (70 FR 16986). That NPRM proposed to require removing all insulation blankets within the pressurized areas of the affected airplanes and installing a new insulation blanket meeting the requirements of Section 25.856(a) of Title 14 of the Code of Federal Regulations (CFR) (14 CFR 25.856(a)). That NPRM also proposed to allow operators to develop methods for distinguishing between insulation blankets constructed of AN-26 and other materials. In addition, that NPRM proposed a provision that, if the FAA approves such a method, operators would not be required to remove blankets they determine are not constructed of AN-26.

### **Related Activities**

After issuance of the NPRM, we extended the comment period of the NPRM by 60 days due to the extensive scope and significant potential impact of the NPRM. An NPRM, extending the comment period, was published in the Federal Register on June 6, 2005 (70 FR 32738). Subsequently, we decided that more time was necessary for interested parties to continue to evaluate the proposal and to submit additional comments with more specific details concerning issues. An NPRM, reopening the comment period, was published in the Federal Register on November 23, 2005 (70 FR 70749).

### **Differences Between the NPRM and the Final Rule**

We have extended the compliance time of the required replacement from 72 months to 96 months. The revised compliance time should minimize the cost impact on operators by allowing more planning time to comply with the requirements of this AD. We also have revised the cost information and note that there is a substantial change in estimated cost due to increased parts and labor costs, reduced number of airplanes, and assumed service change for the future fleet. In addition, we have deleted the reinstallation requirement of paragraph (h)(2) of the NPRM. The reinstallation requirement would have created an undue burden on operators because not all removals of insulation blankets are done at a heavy maintenance visit with the necessary replacement materials available.

### **Comments**

We gave the public the opportunity to participate in developing this AD. We considered the comments received from the 21 commenters. The significant comments are as follows.

## Questioning the Safety Risk of AN-26

Several commenters, such as the Air Transport Association (ATA) on behalf of its members, Boeing, KLM, and Northwest Airlines (NWA), request that we reconsider the NPRM because AN-26 poses a lower safety risk than indicated in the NPRM, and that AN-26 was not considered unsafe during certification.

Boeing states that its in-service events/test data show limited flame spread and no damage to structure/systems due to aged AN-26. Boeing implies that the mitigating actions for the NPRM should be revised to correspond to the low risk presented by the data, which are proportionally associated with the combination of contamination, ignition, and flame propagation.

In addition, Boeing states that the replacement of AN-26 for all locations may not be required due to the isolation of materials from ignition sources or lack of susceptibility to high levels of contamination. NWA agrees with Boeing's conclusion that AN-26 (based on flame propagation characteristics by itself) without contamination is not an unsafe condition (i.e., high-level threat) for airplanes.

Based on our review of the details of the in-service events/test data, we do not agree with Boeing to revise the NPRM to reflect its presented information or with its conclusions about the data. With regard to ignition and propagation, we have examined the incident/event history of fires involving airplanes manufactured between 1981 and 1988 and, in particular, those events that have involved AN-26 thermal/acoustic insulation materials. Results of this examination revealed that flames have propagated on the thermal/acoustic insulation materials initiated from several types of ignition sources such as electrical arc/sparks and lightning strikes. Flight or ground personnel extinguished some of these fires with extinguishing equipment while other fires self-extinguished. It is unknown whether all of these fires would have self-extinguished and how much of the material would have been consumed or if the fire would have spread to other materials. These events took place in several areas of the airplanes, but primarily in inaccessible areas, those that are hidden from view from the passengers and flight crew. The burned areas ranged from a relatively small area (< one ft<sup>2</sup>) to a large area (40 ft<sup>2</sup>). Some of these events resulted in significant system and/or structural damage to the airplane.

We also do not agree with the commenters suggestions that an unsafe condition only exists if contamination is present. Data from in-service events and tests, conducted by both Boeing and us, support the conclusion that relatively uncontaminated, in-service AN-26 has ignited and resulted in unacceptable flame propagation behavior. As discussed in the "Background" section of the NPRM, we have concluded that the flammability characteristics of AN-26 are more a factor of fundamental material properties than a factor of contamination.

Contamination, in many cases, can increase the susceptibility to ignition and flame propagation, although, in certain cases, some forms of contamination actually inhibit the propagation of flames. In addition, as discussed in the "FAA's Determination and Requirements of the Proposed AD" section of the NPRM, we issued Flight Standards Information Bulletin for Airworthiness (FSAW) 00-09, "Special Emphasis Inspection on Contamination of Thermal/Acoustic Insulation," effective September 28, 2000, to ensure that operators have procedures defined in their approved maintenance programs for the inspection for contamination and corrective action. Boeing also has revised service letters alerting operators to methods for preventing and removing contamination. The procedures in these documents serve to mitigate the separate risk associated with contamination.

NWA also comments that AN-26 was not considered unsafe at the time of certification, and that we are changing the flammability test for insulation material 20 years after certification.

We do not agree. Whether or not AN-26 meets the certification flammability requirements that were applicable to the affected airplanes is irrelevant to the determination of an unsafe condition. As mentioned in Amendment No. 25-111 (68 FR 45045, July 31, 2003), prior certification standards did not adequately distinguish between acceptable and unacceptable materials. As a result, we did, in fact, change those standards in Amendment No. 25-111, and the old test methods are no longer applicable to thermal/acoustic insulation. As such, our long-range plan is application of Amendment

No. 25-111, where material that met the previous standards will be reduced by attrition as required by the associated 14 CFR Part 91 and Part 121 operational rules.

Furthermore, in response to NWA's observation that we are changing test methods to account for electrical arcing, the arc/spark test is only used to assess whether an unsafe condition exists. It is not used as a certification standard. We have determined that the most common ignition threat is electrical arcing/sparking. When AN-26 is subject to arcs and sparks, it ignites and propagates a fire with characteristics unlike other insulation material we have evaluated. These characteristics create the unsafe condition.

KLM and NWA are concerned that in addition to AN-26, there may be additional materials that should be subject to the requirements of the NPRM. KLM states that it received a list of several thermal/acoustic insulation materials from ORCON, the manufacturer of AN-26, that do not comply with 14 CFR 25.856(a).

As discussed in the NPRM, this AD addresses an identified unsafe condition (i.e., insulation blankets constructed of AN-26, if not removed from the fuselage, could ignite and propagate a fire that is the result of electrical arcing or sparking). AN-26 differs from other films in use, except for metallized polyethyleneteraphthalate (MPET) material which has been addressed in other similar rulemaking, in that it is susceptible to propagation of a fire from a small ignition source. Other films, while not necessarily meeting the requirements of 14 CFR 25.856(a), do not have this susceptibility. It is the susceptibility to small ignition sources that creates the unsafe condition.

ATA states that AN-26 is not as unsafe as MPET. ATA states that investigation results of in-service events and the FAA Technical Center's video recording of the tests of insulation blankets constructed of MPET indicate that propagation characteristics of AN-26 is not a safety threat.

We do not agree with ATA's assertion that AN-26 poses a propagation hazard significantly less than that posed by MPET. We have determined that each material is susceptible to ignition and propagation from a small ignition source and thus presents an unsafe condition. The flame propagation characteristics of MPET in a specific test scenario are not a recognizable standard with which to compare other materials, including AN-26, as MPET has not been deemed the baseline material for safety evaluations. For this same reason, we also do not agree that the comparison of propagation characteristics of AN-26 and MPET should be factored into the development of an appropriate compliance time for the required replacement.

## **Service Information**

Several commenters, such as ATA, Continental, and NWA, express concern about the lack of service information in order to comply with the AD. ATA notes that paragraph (f) of the NPRM states that the insulation blankets must be replaced "using applicable maintenance manual procedures." ATA states that such a provision is inadequate, and that the effective date of the AD should be delayed to ensure appropriate service information is available to operators. While preparing for the MPET ADs <sup>1</sup> (hereafter "MPET ADs"), ATA found that the maintenance manual procedures:

Describe the fabrication of insulation blankets, but provide no instructions for the removal or installation of insulation blankets; and

Do not adequately address the wholesale replacement of an insulation blanket system nor provide any accounting for assessing or planning the labor or logistical support required to mount the proposed replacement.

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<sup>1</sup> ADs 2000-11-01, amendment 39-11749 (65 FR 34321, May 26, 2000), and 2000-11-02, amendment 39-11750 (65 FR 34341, May 26, 2000).

In addition, ATA states that having service information with detailed procedures for replacing AN-26 in the flight deck and electronics compartment (areas in which insulation blankets are rarely replaced during the lifetime of an airplane) is necessary to ensure that the electrical systems are not disturbed during the proposed replacement. Without approved service information, ATA also states that the NPRM, in effect, relies on the future development and FAA's approval of operators' equivalent methods, alternative methods of compliance (AMOC), or supplemental type certificates (STCs), or a combination of these methods. ATA points out that it took 9 to 18 months to develop and to get approved 22 STCs for a similar issue (i.e., strengthened flight deck doors).

Continental states that the NPRM does not refer to any approved service information with instructions for inspecting systems that are disturbed during the AN-26 replacement. Without this service information, Continental also states that Boeing, operators, and the FAA will be unable to determine whether there are compliance issues similar to those the FAA previously noted before the issuance of the MPET ADs. Continental concludes that requiring operators to develop their own service information will cause operators and the FAA an undue burden after the AD is released and could cause compliance issues.

As an alternative to extending the effective date of the AD, ATA requests that we consider issuing a supplemental NPRM that proposes a reasonable compliance time once appropriate service information is available. ATA appreciates the reopening/extension of the comment period of the NPRM to evaluate AMOCs; however, ATA notes that the results of the evaluated AMOCs revealed that none of them have a high likelihood of substantially reducing the cost impact of the NPRM. Since no AMOCs have been approved for use, ATA states that any estimate of their economic benefits and impacts would be somewhat speculative. ATA believes that waiting for approved service information will ensure a reasonable cost impact and will ensure the availability of at least one practical method of compliance throughout the compliance time of the AD.

After issuance of the NPRM, we reviewed the following Boeing special attention service bulletins:

**Table–Boeing Special Attention Service Bulletins**

<b>Boeing Special Attention Service Bulletin –</b>	<b>Dated –</b>	<b>For Model –</b>
727-25-0300	April 30, 2008	727-200 and -200F series airplanes
737-25-1572	April 30, 2008	737-200, 737-200C, 737-300, and 737-400 series airplanes
747-25-3429	April 30, 2008	747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747SP, and 747SR series airplanes
757-25-0295	April 30, 2008	757-200, 757-200CB, and 757-200PF series airplanes
767-25-0411	April 30, 2008	767-200 and 767-300 series airplanes

The special attention service bulletins describe procedures for an optional one-time general visual inspection to determine if the existing insulation blankets are constructed of AN-26, removal of existing insulation blankets, and installation of new insulation blankets. We have determined that accomplishing the actions specified in those special attention service bulletins is considered an acceptable means of compliance with the requirements of paragraphs (f) and (g) of this AD. Therefore, we have revised paragraphs (f) and (g) of this AD accordingly.

Alternatively, we determined that existing maintenance manual procedures should be sufficient for accessing and replacing AN-26 in the flight deck, as well as the electronic and passenger and cargo compartments. Maintenance manual procedures also provide instructions for restoring disturbed systems and conducting detailed inspections of disturbed wiring. Therefore, we determined that it is possible to do the required replacement in these areas by developing the necessary installation data in conjunction with existing maintenance practices. We also determined that these areas will most likely be accessed during a heavy maintenance check, which would better facilitate replacement of insulation materials; and we have accounted for this in the compliance time.

We also acknowledge that the maintenance manual procedures describe methods for fabricating replacement insulation blankets as well as removal and installation of blankets in several locations throughout the airplane. We also are aware that, through existing maintenance manual procedures, it is possible to utilize existing insulation blankets as templates in conjunction with new thermal/acoustic insulation materials meeting 14 CFR 25.856(a) to create replacement insulation blankets. While some operators may not be equipped or may decide not to manufacture replacement insulation blankets, we are aware that there are resources available in the industry to manufacture and install replacement insulation blankets in almost all locations without specific service information from Boeing.

Furthermore, we are also aware that certain operators and modifiers are developing their own installation data. We support the efforts of these parties to generate potential methods of compliance. However, we have not received any specific proposals to date.

US Airways requests that the NPRM be withdrawn and reissued when approved methods of identifying insulation blankets constructed of AN-26 and service information are available. Boeing, British Airways (BA), Continental, Henderson Projects, FedEx, NWA, and Transport Canada Civil Aviation request that the NPRM be revised to include a method of identifying non-compliant insulation blankets constructed of AN-26. Two commenters specifically request that the first paragraph in the "FAA's Determination and Requirements of the Proposed AD" section of the NPRM be revised to include Boeing's AN-26 visual identification flow chart. Without such a method, the two commenters state that operators will be required to get approval from the FAA before installing replacement insulation blankets, which will cause a significant work overload for all respective parties. Another commenter states that Note 1 of the NPRM is not adequate to identify AN-26 and would like to see color pictures and a description of AN-26. Other commenters state that including such a method will help offset the economic impact on operators. One other commenter states that many original insulation blankets have been replaced with locally fabricated insulation blankets, which do not have visible markings.

We acknowledge that operators need a better method to identify insulation blankets constructed of AN-26. We are aware that ORCON used a variety of methods to part-mark the subject materials, and in some cases, there is no part marking at all. We are also aware that more than one material has been qualified to Boeing's material specification during the timeframe AN-26 was used.

We do not agree, however, to include Boeing's AN-26 visual identification flow chart in the current form in the AD. We have determined that the flow chart does not provide an adequate means of identifying insulation blankets constructed of AN-26 and lacks key characteristics necessary to aid personnel. However, Boeing has provided instructions for identifying insulation blankets constructed of AN-26 in the service information described previously.

### **Need for More Meetings/Central Repository**

ATA requests that we form an Aviation Rulemaking Committee (ARC) to coordinate insulation-related initiatives of large scope that may arise in the future. ATA also requests that we work with manufacturers to coordinate the development and publication of a central repository of data showing:

Thermal/acoustic insulation materials that have passed current flame propagation test standards; and

Plans to test in-service materials that have not yet been tested.

ATA states that rulemaking applicable to insulation material can have a tremendous impact on labor, out-of-service time and, in particular, the development of methods of compliance and associated service instructions, planning, logistic support, and configuration control, for both production and out-of-production airplanes. ATA further states that experience with insulation blanket rules similar to the NPRM have shown that such initiatives should be regarded as significant, and are candidates for extensive, close, and preferably advance coordination within the industry and the FAA.

We do not agree. We note that data regarding in-service materials are already available from the FAA Technical Center. We have not seen any tendency for aged material to perform differently than new materials. While none of the data suggest that there is a trend toward increased flammability with age, we support further investigation into this issue. However, we do not plan to test additional materials, unless new information surfaces to suggest a need. We do not agree that a central repository of data, whether descriptive or substantiating, is necessary. We have gathered test data for a number of in-service materials, which can be accessed at:

[http://www.fire.tc.faa.gov/ppt/materials/Flammability\\_test.zip](http://www.fire.tc.faa.gov/ppt/materials/Flammability_test.zip). These data were obtained by the International Aircraft Materials Fire Test Working Group (IAMFTWG) on a strictly voluntary basis. In general, data are proprietary to the applicant, and we cannot disclose those data to the public. We would support an industry initiative wherein design approval holders voluntarily disclose such information.

We do agree that it is necessary to coordinate insulation-related initiatives; however, we do not agree that it is necessary to form an ARC. We, along with several manufacturers and operators, are a member of the IAMFTWG, which studies improvements to flammability standards, specifically those for non-metallic materials within the pressurized portions of an airplane. The group is divided into several task groups, one of which is the Aging/Contamination Task Group. Members of this task group evaluate in-service parts from operators to study contaminants and to determine materials used by manufacturers and operators, and conduct laboratory tests to artificially age various film materials. However, the IAMFTWG is not an FAA-chartered committee and thus does not make specific rulemaking recommendations, nor can we task it to do so. However, we actively participate in IAMFTWG meetings and intend to utilize information provided by this group to determine how contamination may impact the risk of fire and/or fire propagation and also determine if alternative regulatory action may be appropriate. In addition, the potential for forming a working group on aging and contamination insulation materials was formally presented to the Transport Airplane and Engine Issues Group (TAEIG) of the Aviation Rulemaking Advisory Committee. Based on the minimal feedback from the group members, we determined that such a working group is not necessary, and therefore, we do not plan to initiate any activity beyond that in the IAMFTWG.

NWA proposes that we withdraw the NPRM until we can task industry to develop a reasonable resolution to our insulation flammability concerns (i.e., aging and contamination).

We agree that it may be necessary to conduct studies on the effects of contamination on insulation materials. However, we do not agree to withdraw the NPRM until another industry task group can be formed to address aging and contamination outside of current, ongoing activity. We have concluded that the flammability characteristics of AN-26 are more a factor of fundamental material properties than a factor of aging or contamination. As discussed previously, we extended the comment period of the NPRM in June 2005, as well as reopened the comment period in November 2005. During that time, industry was unable to arrive at a common approach or to propose specific AMOCs that are alluded to in comments that were submitted to the NPRM. Any additional delay for further study would be unacceptable, because doing so would allow the unsafe condition to persist.

## **Compliance Time**

BA and Transport Canada Civil Aviation agree with the 72-month compliance time for the replacement required by paragraph (f) of the NPRM.

ABX Air (ABX), ATA, Champion Air, Continental, DHL, FedEx, International Air Transport Association (IATA), KLM, Lufthansa, NWA, UPS, and US Airways request that the 72-month compliance time for the replacement of AN-26 required by paragraph (f) of the NPRM be extended. The commenters propose new compliance times ranging from 96 months to 144 months.

Certain commenters state that such an extension will align with their scheduled maintenance intervals such as a heavy maintenance, 4C-check, C-check (two intervals), or D-check, and will thereby eliminate disruptions in flight schedules. One commenter also states that 72 months would result in an undue maintenance burden. Another commenter states that 72 months would result in unnecessary grounding of airplanes due to the associated cost burden. Others state that such an extension is necessary to offset the economic impact.

Another commenter states a longer compliance time is necessary due to the assertion that AN-26 is not as unsafe as MPET—an insulation subject to an AD with a 60-month compliance time. The commenter notes that investigation results of in service events and FAA Technical Center test data associated with AN-26 indicate that the propagation threat to safety is limited when compared to similar MPET data.

We agree that the 72-month compliance time in paragraph (f) of the NPRM can be extended. Based on the information supplied by the commenters, and in consideration of the impact this type and level of replacement action imposes on the operators and the size of the affected fleet, we have determined that extending the compliance time to 96 months will not adversely affect safety. We acknowledge that our efforts with industry to minimize ignition sources and to reduce contamination on insulation blankets are actions that reduce the risk of fire, and thus are mitigating actions that support the compliance time extension. While these factors partially mitigate the risk and enable us to allow a compliance time that is longer than the 60-month compliance time for the MPET ADs, they do not adequately address the risk of flame propagation without removal or appropriate modification of insulation blankets constructed of AN-26. As a secondary consideration, this extension will allow the required replacement be conducted during a regularly scheduled heavy maintenance visit for the majority of the affected fleet, when the airplanes would be located at a base where special equipment (i.e., special rigs, devices, etc., to facilitate removal and installation of equipment) and trained personnel would be readily available, if necessary. Therefore, we have revised paragraph (f) of this AD to require a compliance time of 96 months.

### **Delete Freighter Airplanes From the Applicability**

DHL requests that freighter airplanes be deleted from paragraphs (c)(1) and (c)(2) of the NPRM, because the risk for casualties in the event of a fire is almost zero on those airplanes.

We do not agree with DHL to exclude freighters or those airplanes that have been converted from a passenger to a freighter configuration from the applicability of this AD. AN-26 is primarily used in areas of airplanes that are unoccupied, behind lining materials, and hidden from view. The risk of an in-flight fire and the propagation of a fire in those areas is essentially the same whether the airplane is equipped to fly passengers or cargo. Therefore, we have made no change to the AD in this regard.

### **Changes to the Applicability**

After issuance of the NPRM, we determined that Model 757-200CB series airplanes are subject to the identified unsafe condition of this AD. Currently, there are no affected Model 757-200CB series airplanes on the U.S. Register. Because the identified unsafe condition is likely to exist or develop on other products of this same type design that could be registered in the United States in the future, we have revised the applicability of this AD to include Model 757-200CB series airplanes. Since no Model 757-200CB series airplanes are affected by this AD, notice and opportunity for public comment before issuing this AD are unnecessary.

## **Limit Replacement to Cover Film Material, Not Entire Insulation Blanket**

Boeing and NWA request that paragraphs (d) and (f) of the NPRM and the "FAA's Determination and Requirements of the Proposed AD" section of the NPRM be revised to refer to the replacement of the cover film material only, not the entire insulation blanket. Boeing notes that the FAA has only determined that AN-26 cover film is non-compliant with 14 CFR 25.856(a). Boeing states that requiring replacement insulation blankets to be in full compliance under that rule is unnecessary and places an undue hardship on the airlines and the supply chain for replacement insulation blankets. Boeing also states that most replacement insulation blankets are now available in the supply chain, but the availability is strained to meet production needs that started in September 2005.

For comparison, Boeing points out that the MPET ADs only require replacement of films to remedy the unsafe conditions of those ADs—not tapes, threads, felts, hook/loop, etc., which are not part of the safety issue. In addition, Boeing states that requiring the latest materials for treatments or construction of replacement insulation blankets will slow their installation, which will place an additional burden on industry. Boeing states further that incorporating its suggested change of mandating replacement of AN-26 cover film only will also support alternate mitigation approaches to satisfy the safety issue.

We do not agree with the commenters' requests to limit the required replacement to cover film materials only. Operational rules have been implemented that require thermal/acoustic insulation materials installed as replacements to meet the requirements of 14 CFR 25.856(a). As such, there is significant benefit in defining a consistent standard for this AD both from a level of safety perspective and from a practical standpoint in order to avoid confusion. As stated in the preamble of Amendment No. 25-111, the requirement is also applicable to "tapes or hook and loop fasteners that are affixed to the film. Research testing has shown that these details can have a pronounced effect on the flame propagation characteristics of the insulation cover material."

We do not believe that the supply chain for replacement materials will be unnecessarily strained. The compliance time extension is intended to allow for planning and ensuring availability of necessary materials.

In general, film material is intended to provide a level of protection to the insulation batting or "felt" from contamination and moisture. We have determined that removing the film alone may introduce undesirable effects such as the breakdown of the insulation or batting material due to the effects of moisture or other agents, which have not been evaluated as part of this AD.

We acknowledge, however, that removal and replacement of AN-26 film cover material and associated affixed details such as hook/loop, threads, etc., with materials compliant with the requirements of 14 CFR 25.856(a) may be an option for consideration of an AMOC should an operator elect to pursue this means versus outright replacement of the blanket assembly. We have made no change to the final rule in this regard.

## **AMOCs**

Transport Canada Civil Aviation requests that the criteria for evaluating and approving AMOCs for the replacement in paragraph (f) of the NPRM be included in the final rule to assist industry in developing such AMOCs.

Boeing requests that we define the acceptance criteria in the AD rather than requiring operators to obtain the criteria from the Manager, Seattle Aircraft Certification Office (ACO). Boeing states that this change, as well as airlines' input on implementation and cost impact, will allow industry to develop solutions.

We partially agree. We agree with the commenters that a description of the criteria and test methods for evaluating AMOCs is needed to reduce the flow time and overall implementation costs of the AD. However, we do not agree that a change is necessary to this AD in this regard. We have

developed an FAA document that describes criteria and test methods for evaluating AMOCs. You may view this document at [http://www.fire.tc.faa.gov/materials/AN\\_26\\_AMOC.pdf](http://www.fire.tc.faa.gov/materials/AN_26_AMOC.pdf); or in the AD docket on the Internet at <http://www.regulations.gov>.

Boeing requests that the FAA follow Boeing's AMOC plan for "Spray-on Solution," which it provided to the FAA in September 2004. In addition, Boeing believes that its plan, approach, and schedule for the overall safety issue aligns with the potential risk level that is apparent from incident analysis and testing. Boeing states that the FAA is aware of the development and progress of its spray-on fire retardant solution, and that when approved, it will be an acceptable remedy to the identified fire propagation condition with AN-26.

Other commenters request that a specific AMOC such as Boeing's spray-on-solution be included in the paragraph (f) of the final rule. Some commenters request that the final rule not be issued until there is an approved AMOC relating to spray-on fire retardants or covering material using existing insulation materials.

We acknowledge that Boeing has been in the process of developing a spray-on fire retardant as an AMOC for the replacement required by this AD. We understand that AMOCs can be valuable to assist operators in complying with ADs. However, Boeing has not submitted its modification to us for approval yet. We do not consider it appropriate to delay issuance of this final rule, since we have determined that an unsafe condition exists and that replacement must be conducted to ensure continued safety. We will work with Boeing or other entities to approve its modification when the development is complete and substantiating data are provided.

Boeing and Continental request that paragraph (h)(1) of the NPRM be revised to allow the Boeing Commercial Airplanes Delegated Compliance Organization (BDCO) to approve AMOC requests, in addition to the Manager, Seattle ACO. Continental states that allowing such delegation to the BDCO will enable operators to rapidly respond to day-to-day operational issues and will lessen the operational burden of the required replacement.

We do not agree with Continental to delegate AMOC approvals to the BDCO, nor do we agree with Boeing to revise our AMOC approval process. In some ADs, we have authorized the BDCO to approve AMOCs for certain structural repairs of cracking that are found during routine maintenance or inspections. These repairs warrant "routine" handling. However, we consider the required AN-26 replacement to be complex in nature, and there are potential new and novel approaches for compliance. It is crucial that the FAA be aware of all modifications made to AN-26. It is essential that we have feedback as to the type of modifications being made. Given that possible new relevant issues might be revealed during this process, it is imperative that we have such feedback. We can be assured of this feedback and of the adequacy of the modification methods only by reviewing the modification proposals.

We have determined that standardization and continuity of modification approvals can best be maintained by having one single point of approval for all AMOCs to the requirements of this AD. Since the Manager, Seattle ACO, is accountable for the primary oversight for the actions regarding this AD, it is appropriate to establish and maintain this single point of approval. We have made no change to the AD in response to these comments.

### **Exclude Certain Areas From Requirement To Replace AN-26**

ABX, Boeing, DHL, Florida West International Airways, Lufthansa, and NWA request that paragraph (g) of the NPRM include a provision to exclude areas (i.e., electrical equipment bay, flight deck, adjacent areas, and certain areas behind the smoke barrier) that can be isolated and contained and thus pose a limited fire risk.

Some commenters state that removal of structure or systems to gain access to certain areas may be more detrimental to safety of the airplane. Two commenters also state that some areas containing AN-26 are not accessible after original installation. In addition, the commenters state that their suggested provision will provide for efficient implementation methods and will allow compliance with the NPRM for the entire airplane.

We do not agree with these commenters' rationale to include a provision in paragraph (g) of this AD to exclude certain areas of the airplane. We have evaluated the areas to which the commenters refers and have determined that such areas are accessible. We do acknowledge that certain areas may be easier to access when a major maintenance activity is also occurring in these areas. Proper planning as to the time of blanket replacement to coincide with other major maintenance work, development of proper procedures, and training of maintenance technicians and inspectors will minimize the chance of causing damage to wires or other systems. We will require any operator/modifier that develops its own installation data to include specific instructions to ensure that any displaced wires, systems, and installations are in an airworthy condition after doing the required replacement.

We are not aware of any specific locations on the affected aircraft where AN-26 cannot be accessed after original installation. If there are certain areas that are completely inaccessible, we may consider proposals for AMOCs, in accordance with paragraph (i) of this AD, which include appropriate substantiating data.

Boeing proposes to exclude certain areas up to 20 square feet and has provided test and in-service data intended to support its request. Boeing proposes that an equivalent area to the "foam block" be defined to allow exempt areas. Boeing notes that the "foam block" is defined by the FAA Technical Center as a realistic in-service fire threat taking into account materials and contamination. Boeing states that the crown test with the "foam block" is used by the FAA to determine acceptable flame propagation performance. In addition, Boeing states that the heat released from AN-26 film up to 20 square feet is equivalent to the heat released from a polyurethane foam block.

We do not agree with Boeing that it is appropriate to determine an acceptable amount of square footage of insulation blankets constructed of AN-26 based on the size of the Heptane-soaked "foam block" used during FAA tests. The "foam block" was established as an appropriate ignition source when doing intermediate and full-scale tests and the resultant development of a suitable test standard capable of evaluating improved thermal/acoustic insulation materials (i.e., 14 CFR part 25, Appendix F, Part VI), but does not constitute a standard for an acceptable area of AN-26. We do not agree that heat release characteristics of the "foam block" can be translated to an acceptable area of AN-26. Insulation blankets constructed of AN-26, even in limited amounts, may be ignited via a small ignition source and may propagate flames to other nearby materials and potentially lead to a catastrophic event.

We do not agree that the data, submitted by Boeing, to exclude certain areas (i.e., electrical equipment bay, flight deck, and adjacent areas) up to 20 square feet of AN-26 support its conclusion that leaving AN-26 in place in those areas provides an acceptable level of safety. Those areas are located where potential ignition sources are likely to exist and thus are susceptible to the identified unsafe condition of this AD. We have determined that the data submitted by Boeing and the tests done by the FAA Technical Center support our conclusion that AN-26 is susceptible to ignition and propagation, and has an unacceptable ignition and flame propagation behavior. This AD is intended to eliminate initiation and propagation of an AN-26 fire in areas containing critical equipment where the consequence of a fire would be severe.

ABX states that the NPRM does not have any supporting data to justify total replacement of insulation blankets constructed of AN-26. Based on data it has collected from the Service Difficulty Report (SDR) database, ABX concludes that there is no safety benefit to replacing insulation blankets constructed of AN-26 in areas that have no or minimal ignition sources.

We do not agree with ABX that there are no data to support replacing insulation blankets constructed of AN-26 in the entire airplane. There are several incidents as cited in the NPRM that clearly show the involvement of AN-26 in fire propagation. In addition, we have conducted testing that shows that AN-26 can propagate a fire under realistic conditions, and therefore even materials not near an ignition source can become involved. While we agree that the SDR database does not in itself contain this information, we do, in fact, have sufficient information to conclude that AN-26 throughout the airplane represents an unsafe condition. We have also received a report of burned insulation blankets initiated by chafed wires and a resultant electrical arc which was discovered by

maintenance personnel. In addition, potential ignition sources exist throughout the airplane and insulation blankets constructed of AN-26 are located throughout the airplane. As discussed previously, we have determined that insulation blankets constructed of AN-26 in all areas of the affected airplanes must be replaced, unless specific justification for an AMOC is provided.

Lufthansa states that the MPET ADs excluded areas with lower levels of risk for ignition sources.

We find that clarification is necessary. The MPET ADs do not exclude any areas because of perceived lower levels of risk for ignition sources. The preamble of the MPET ADs states that "MPET insulation blankets in all areas of the affected airplanes must be addressed." It also states that " \* \* \* most [affected airplanes] do not have MPET insulation blankets in the nose section of the airplane. Also, a number of airplanes do not have MPET insulation blankets in the fuselage, but have MPET insulation blankets only on the air conditioning ducting." As such, the service information referenced in the MPET ADs identifies certain areas where MPET is not installed, and therefore, those areas are not subject to corrective action. Boeing does not include this specific provision in service information for AN-26, as AN-26 is installed throughout the affected Boeing airplanes. However, we are aware that a number of AMOCs to the MPET ADs, excluding certain areas from replacement, have been approved. For this AD, we have accepted specific exclusion areas, which are identified in the applicable special attention service bulletin described previously for Model 747 and 767 airplanes.

While some of the commenter's proposals to exclude areas of replacement were accompanied by general rationale, the identification of risk mitigating factors and exclusionary details were not specific enough to enable us to approve such proposals other than those identified in the special attention service bulletins. However, we may approve requests for an AMOC under the provisions of paragraph (i) of this AD if operators can show that leaving AN-26 in place is acceptable because other design features prevent ignition and/or propagation of a fire in the specific area requested. Any request to leave AN-26 installed in an airplane must provide justification that the identified unsafe condition has been mitigated, and that an acceptable level of safety is maintained.

## **Requests to Delete, Revise, or Limit Parts Installation Requirements**

ABX, ATA, BA, Boeing, Champion Air, Continental, DHL, IATA, Lufthansa, NWA, and US Airways request that paragraph (h) of the NPRM be deleted or revised for various reasons.

In summary, the commenters state that a requirement to replace insulation blankets constructed of AN-26 that have been removed in a piecemeal fashion would have very little overall safety benefit and would create a significant burden on immediate maintenance actions. In addition, the commenters state that the replacement process should be consistent with the flammability requirements to minimize the impact with airline maintenance processes. They note that we similarly addressed the replacement issue in 14 CFR 25.856 and this existing replacement requirement is sufficient and will apply to in-service airplanes affected by the NPRM.

We partially agree with the commenters' requests. We do not agree that paragraph (h) should be deleted. As stated in the preamble of the NPRM, some international civil aviation authorities have not adopted regulations similar to 14 CFR 91.613(b)(1), 121.312(e)(1), 125.113(c)(1), and 135.170(c)(1) to prohibit insulation blankets constructed of AN-26 from being installed after a certain date. Therefore, we have determined that paragraph (h) of this AD is necessary to inform the international civil aviation authorities of the need to prevent that installation.

However, we do agree to revise paragraph (h)(1) (reidentified as paragraph (h) of this final rule) to eliminate confusion with the regulations noted previously by the commenters. We have revised paragraph (h) of the AD to clarify that insulation blankets constructed of AN-26 may not be installed "as a replacement" unless they have been modified to meet the flame propagation requirements of 14 CFR 25.856(a).

In addition, we do agree with the commenters that the proposed conditions for reinstallation of insulation in paragraph (h)(2) would create an undue burden on operators because, as mentioned by

some of the commenters, not all removals of insulation blankets are done at a heavy maintenance visit with the necessary replacement materials available. This may cause unnecessary downtime of airplanes to allow for fabrication and installation of the applicable insulation blanket. In consideration of the comments provided on this issue, we have deleted paragraph (h)(2) of the NPRM.

### **Issue Special Airworthiness Information Bulletin (SAIB)**

Boeing requests that we issue a SAIB to inform industry about mitigation approaches for material susceptible to contamination. Boeing suggests that the SAIB reflect certain risks identified in its data and emphasize replacement of significantly contaminated blankets.

We partially agree. We acknowledge that providing information to reduce contamination of insulation blankets in general is needed. However, this information has been provided in FSAW 00-09, as described previously. Therefore, we have determined that no SAIB specific to AN-26 is necessary.

### **Clarification of Compliance Language**

We have slightly revised the wording in paragraph (c)(1) of this AD to reflect currently used compliance language. That is, we have replaced the reference to "an original Airworthiness Certificate" with a reference to "an original standard Airworthiness Certificate."

### **Clarification of Unsafe Condition**

We have revised the unsafe condition in this AD to state, "Such insulation blankets could ignite and propagate a fire that is the result of electrical arcing or sparking." We find that including the word "ignite" further clarifies the unsafe condition of this AD.

### **Costs of Compliance**

This final cost analysis incorporates industry's comments, updated fleet data, and a changed assumption on the future fleet service. This AD affects 669 U.S. registered airplanes (Back Aviation Solutions, Fleet iNET database, January 5, 2007), 41 of which are foreign operated. We estimate compliance cost for the 628 U.S. operated and registered airplanes only. The number of airplanes is reduced from those in the NPRM because of airplane retirements or changes from U.S. to foreign operation. A substantial decrease in estimated cost results from the net change of increasing parts and labor cost, but reduced number of airplanes, and a changed assumption of service for the future fleet.

Boeing commented to the docket that nonrecurring engineering design costs of defining new blanket parts and defining removal and replacement kits were not accounted for in the NPRM. Across the five major models addressed in this AD, Boeing estimates 40,000 part numbers would need to be redefined and replaced. Boeing estimates a minimum of eight hours/part to account for the required engineering, planning, procurement, tooling, and changes in "Instructions for Continued Airworthiness." ATA also noted non-recurring engineering costs should be accounted for and estimated material costs would be over twice the estimates given in the NPRM. UPS commented that the parts costs for a 757-200PF would be approximately triple the estimate given in the NPRM. In response to these comments, we revised estimates of material cost for all affected airplanes and increased our original estimates by 9.7%. More importantly, to account for non-recurring engineering costs, we then doubled our revised parts cost estimates. This results in an estimate of \$30.4 million for non-recurring engineering costs (average of \$48,392 per airplane times 628 airplanes). If we estimate the engineering wage rate at \$100 per hour, this is close to the value of Boeing's estimate of non-recurring engineering costs:  $40,000 \times 8 \times \$100 = \$32$  million, or \$50,955 per airplane.

UPS commented that our labor hour estimate was too low for Model 757-200PF airplanes, but ATA commented that our estimates of labor hours were consistent with operator experience with the

MPET ADs. Accordingly, we have not changed our labor hour estimates. ATA estimated labor rates would be up to 30 percent higher than the \$65 hourly rate given in the NPRM for this final rule. We increased our wage rate estimate to \$80 an hour. FedEx noted that the NPRM did not take into consideration additional out-of-service maintenance time necessary for compliance. ATA provided an estimate of an average of 3.6 days of out-of-service time per airplane and also a cost estimate for out-of-service time. We accept ATA's estimate of 3.6 days of out-of-service time per airplane. We estimate out-of-service cost as the opportunity cost of capital: Airplane value<sup>2</sup> x Proportion of a year the airplane is out of service (3.6/365) x Productive return on capital (0.07).<sup>3</sup>

The NPRM overestimated compliance cost by not taking into account the fact that passenger airplanes eventually will be retired from passenger service. This omission was particularly consequential, as the affected airplanes are old, having been delivered into service over the period July 1981 to December 1989. As of January 1, 2009, the youngest airplane in the AD fleet will be 20 years old. Historically, on average airplanes leave passenger service at 25 years, either directly into retirement or for conversion into cargo service. For the purposes of this analysis, we convert all passenger airplanes into cargo airplanes at 25 years. This conversion to cargo service greatly reduces the estimated cost of the AD as our estimate of the direct material and labor costs for cargo airplanes is just 40% of those costs for passenger airplanes. Still, this cost estimate is substantially higher than assuming the airplanes retire at 25 years of service. Given the eight-year compliance period for the final rule, all passenger airplanes in the AD fleet will reach 25 years of passenger service at most three years prior to the end of the compliance period, at which time we assume they will be converted into cargo service.

In the table, "Cost of compliance," the NPRM cost estimates are modified and expanded in accordance with the above discussion. "Labor hours per airplane" is unchanged, but "Labor cost per airplane" increases because of the increase in the labor hourly rate from \$65 to \$80. "Parts cost per airplane" has been increased by 9.7% to reflect increased material cost. "Labor costs per airplane" and "Parts costs per airplane" are summed to obtain the column of "Total remove & replace cost per airplane." This cost is multiplied by the number of airplanes<sup>4</sup> to obtain "U.S. fleet remove & replace cost." "Out-of-service cost per airplane"<sup>5</sup> is calculated as an opportunity cost of capital and multiplied by the number of airplanes to obtain the following column of "Total out-of-service cost." "Total out-of-service cost" added to "Total remove & replace cost per airplane" equals "Total Cost." Since we have no information on these maintenance schedules by operator or airplane model, we assume that an equal number of the affected airplanes will undergo heavy maintenance at the end of each of the eight years from the effective date of the AD.<sup>6</sup> Accordingly, we calculate "Present Value Total Cost" in the table by discounting "Total Cost" by the average (0.7464) of the 7% discount factors for one through eight years.<sup>7</sup> As noted earlier in the preamble, compliance time was increased to 8 years to more closely agree with operators' heavy maintenance schedules.

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<sup>2</sup> Airliner Price Guide, vol. 57, January 2006.

<sup>3</sup> A 7% return on capital is required by the Office of Management & Budget. See OMB, Circular A-94, "Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs", October, 29, 1992, p. 8 (<http://www.whitehouse.gov/omb/circulars/index.html>).

<sup>4</sup> Back Aviation Solutions, Fleet iNET database, January 5, 2007.

<sup>5</sup> For the 767-200 freighter category, airplane values were not available for 26 airplanes. Accordingly, out-of-service cost per airplane was estimated using airplane values for the remaining 16 airplanes in the category.

<sup>6</sup> This assumption is largely consistent with passenger airplanes complying later in the compliance period than cargo airplanes in order to extend their lives in passenger service to 25 years.

<sup>7</sup> OMB, Circular A-94, p. 8.

We estimate the total cost of the final rule to be about \$177.7 million, with a present value of about \$140.8 million. The \$177.7 million total cost is 53 percent of the \$334.1 million total cost estimated in the NPRM. Thus, even though our estimated labor rate has increased by 23.1% and we have more than doubled our estimates of parts cost, our estimate of total cost is much lower because of a reduction in the number of affected airplanes and, most importantly, because of the much lower AD costs for cargo airplanes compared to passenger airplanes.<sup>8</sup>

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<sup>8</sup> The cost of the rule may be somewhat lower than estimated to the extent that airplanes go directly into retirement at age 25 rather than converting to cargo service as assumed here. Moreover, even if an old airplane is not due for retirement, the operator will still retire if more economical than compliance, in which case the costs of the rule will also be less than assumed here.

Table–Cost of Compliance

Model	REMOVE AND REPLACE PARTS & LABOR COST						OUT-OF-SERVICE COST		TOTAL COST	PRESENT VALUE TOTAL COST	Total cost per AP
	Mechanic hours per airplane	Labor cost per airplane	Parts cost per airplane	Total remove & replace cost per AP	No. of APs	US fleet remove & replace cost	Out-of-service cost per AP	Total out-of-service cost			
727-200 (& variants)	1,618	\$ 129,440	\$ 69,966	\$ 199,406	39	\$ 7,776,834	\$ 1,354	\$ 52,823	\$ 7,829,657	\$ 5,844,153	\$ 200,760
737-200, 737-200C, 737-300, 737-400 (& variants)	1,483	\$ 118,640	\$ 64,136	\$ 182,776	319	\$ 58,305,544	\$ 3,444	\$ 1,098,651	\$ 59,404,195	\$ 44,340,023	\$ 186,220
747-100, 747-200, 747-300, 747-400, 747SR, 747SP (& variants)	5,933	\$ 474,640	\$ 256,542	\$ 731,182	42	\$ 30,709,644	\$ 7,414	\$ 311,382	\$ 31,021,026	\$ 23,154,476	\$ 738,596
757-200 (& variants)	2,256	\$ 180,480	\$ 97,544	\$ 278,024	120	\$ 33,362,880	\$ 5,946	\$ 713,491	\$ 34,076,371	\$ 25,435,023	\$ 283,970
767-200 and 767-300 (& variants)	3,236	\$ 258,880	\$ 139,932	\$ 398,812	108	\$ 43,071,696	\$ 6,636	\$ 716,702	\$ 43,788,398	\$ 32,684,199	\$ 405,448
<b>Total/weighted average</b>	2,238	\$ 179,054	\$ 96,785	\$ 275,839	628	\$ 173,226,598	\$ 4,607	\$ 2,893,050	\$ 176,119,648	\$ 131,457,874	\$ 280,445
	wt. ave.	wt. ave.	wt. ave.	wt. ave.	total	total	wt. ave.	total	total	total	wt. ave.

## **Explanation of Change to Paragraph (f)(1) of This AD**

We have revised paragraph (f)(1) of this AD to remove reference to the "applicable maintenance manual procedures." Instead, paragraph (f)(1) of this AD specifies to "Remove all insulation blankets from the pressurized areas of the fuselage and install new insulation blankets using a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA." Operators should note that while their existing maintenance manuals should be sufficient for accomplishing the actions required by paragraph (f)(1) of this AD, they must contact the Manager, Seattle ACO, for information regarding approval of these procedures for compliance with paragraph (f)(1) of this AD.

## **Conclusion**

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

## **Final Regulatory Flexibility Analysis**

### *A. Introduction and Purpose of This Analysis*

The Regulatory Flexibility Act of 1980 (Pub. L. 96-354) (RFA) establishes "as a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the businesses, organizations, and governmental jurisdictions subject to regulation." To achieve this principle, the RFA requires agencies to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure that such proposals are seriously considered. The RFA covers a wide-range of small entities, including small businesses, not-for-profit organizations, and small governmental jurisdictions.

Agencies must perform a review to determine whether a rule will have a significant economic impact on a substantial number of small entities. If the agency determines that it will, the agency must prepare a regulatory flexibility analysis as described in the RFA.

We determined that this final rule will have a significant economic impact on a substantial number of small entities and, accordingly, as required by section 603(a) of the RFA, we prepared and published an initial regulatory flexibility analysis (IRFA) as part of the NPRM for this final rule (70 FR 16986, April 4, 2005). Section 604 of the RFA also requires an agency to publish a final regulatory flexibility analysis (FRFA) in the Federal Register when issuing a final rule. Section 604(a) requires that each final regulatory flexibility analysis contain:

A succinct statement of the need for, and objectives of, the rule;

A summary of the significant issues raised by the public comments in response to the IRFA, a summary of agency's assessment of such issues, and a statement of any changes made to the NPRM resulting from such comments;

A description of and an estimate of the number of small entities for which the final rule will apply;

A description of the projected reporting, recordkeeping and other compliance requirements of the final rule, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for preparation of the report or record; and

A description of the steps the agency has taken to minimize the significant economic impact on small entities consistent with the stated objectives of applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each one of the other significant alternatives to the final rule considered by the agency which affect the impact on small entities was rejected.

## *B. Need for and Objectives of the Final Rule*

We are mandating a new AD for certain Boeing transport category airplanes. The AD will require air operators to remove and replace insulation blankets made of AN-26 with new insulation blankets. The AD is prompted by reports of in-flight and ground fires on certain airplanes manufactured with insulation blankets covered with AN-26. Following the reports of in-flight and ground fires, the airplane manufacturer and the FAA undertook extensive investigations and flammability tests. Even though AN-26 met the certification standards in 1981, the results of these flammability tests showed that AN-26 will propagate a fire when subjected to electrical arcing and sparks.

We are issuing this AD to ensure that operators remove insulation blankets made of AN-26 from the fuselage. We previously issued similar ADs on another insulation material that affected certain McDonnell Douglas and Aerospatiale model airplanes.

### *C.1.A. Summary of the Significant Issues Raised by the Public Comments in Response to the IRFA, a Summary of the Assessment of the Agency of Such Issues, and a Statement of Any Changes Made to the NPRM Resulting From Such Comments*

### *C.2.A. Description of the Steps the Agency Has Taken To Minimize a Significant Economic Impact on Small Entities and Why Other Significant Alternatives to the Final Rule That Affect Small Entities Were Rejected*

There were no responses to the IRFA, but there were many comments to the NPRM itself, which have relevance for small and large entities alike. In response to these comments, the FAA made major changes to the NPRM that significantly reduced the economic impact on the affected firms.

Twelve commenters, including one small firm (included in our data analysis below), requested we extend the compliance time from the proposed 6 years to 8 to 12 years, some noting that an increased compliance time would more closely correspond to heavy maintenance schedules (when all insulation blankets are removed). As discussed in the preamble to the final rule, we have increased the compliance time to 8 years. This reduces the economic impact of the final rule in two ways. First, it increases the likelihood that a firm will be able to comply with the final rule at the time of a scheduled heavy maintenance check, thereby minimizing out-of-service time. Second, it allows the average firm to delay compliance, thereby reducing the discounted cost of the final rule. If we maintain our assumption that an equal number of firms will undergo heavy maintenance in each year of the compliance period, then an increase in the compliance period reduces the average present-value discount factor from 0.8468 to the 0.7464 used in our analysis, thereby reducing the present value cost of the final rule by  $(.8468-.7464)/.8468 = 11.1\%$ .

Paragraph (h)(2) of the NPRM proposed that any insulation blanket removed within six months of the final rule's effective date could not be reinstalled unless it was compliant with the safety standards of this final rule. Several commenters stated that this provision was impractical and imposed an undue burden. In particular, the small firm noted that:

"\* \* \* as a supplemental carrier, our aircraft frequently operate away from a maintenance base for extended periods. The requirements of paragraph (h)(2) could generate significant out of service time if a blanket has to be removed while the aircraft is away from base since a replacement blanket would not be readily available."

As discussed in the preamble to the final rule, we agree with the commenters that the reinstallation provision would impose an undue burden. We have deleted paragraph (h)(2) of the NPRM.

The FAA believes there are no currently available additional alternatives to the final rule that would allow the safety objectives of the final rule to be achieved.

For a complete summary of public comments and our responses, please see the preamble to the final rule.

*D. A Description of and an Estimate of the Number of Small Entities for Which the Final Rule Will Apply*

To estimate the number of small entities, we first identified all U.S.-operated affected civilian airplanes from a commercial fleet data provider (BACK Aviation Solutions, Fleet-iNET database, November 20, 2006). Using information provided by company Web sites and other Internet sources, we removed large commercial operators and commercial operators that are subsidiaries of firms larger than the Small Business Administration (SBA) size standard for the North American Industry Classification System (NAICS) industry in question.<sup>9</sup> For example, for Atlas Air, Inc., the number of employees is 1220—below the 1500 employee threshold for the NAICS air transportation industries, in one of which it operates ("Nonscheduled Chartered Freight Air Transportation"). Atlas Air, however, is a subsidiary of Atlas Air Worldwide Holdings (AAWH), which has 2007 employees.<sup>10</sup> As 2007 employees exceed the SBA threshold, we did not include Atlas Air as a small entity.

Following this process, we ended up with 45 firms. From information on firm Web sites or from other Internet sources, we were able to classify most of these 45 firms by NAICS industry. For 15 firms, which constitute most of the firms classified in four NAICS air transportation industries (see table, "Possible small firm operators affected by the final rule by NAICS industry"), we were able to find employment data showing that they were small by the SBA size standard for these industries (upper bound of 1500 employees). Although we have no size evidence for the remaining 30 firms, we suspect that many are small by SBA size standards. We believe a substantial number of small entities, in particular economic activities, are affected by this final rule.

**Table—Possible Small Firm Operators Affected by the Final Rule by NAICS Industry**

<b>Operator</b>	<b>No. APs</b>	<b>No. of Employees</b>	<b>NAICS Industry</b>
Aviation Technologies Inc. (PA-USA)	1		336413--Oth. A/C Part & Auxiliary Equip. Man.
Ameristar Jet Charter inc.	2	160	481111--Scheduled Passenger Air Transportation
Maxjet Airways	3		481111--Scheduled Passenger Air Transportation
Ryan International Airlines	2	649	481111--Scheduled Passenger Air Transportation
Sierra Pacific Airlines	1	32	481111--Scheduled Passenger Air Transportation
Kitty Hawk Aircargo	3	201	481112--Scheduled Freight Air Transportation
Northern Air Cargo	4	225	481112--Scheduled Freight Air Transportation

<sup>9</sup> U.S. Small Business Administration. Table of Small Business Size Standards Matched to North American Industry Classification System Codes, July 21, 2006.

<sup>10</sup> The employment figures for Atlas Air and AAWH are for 2005.

<b>Operator</b>	<b>No. APs</b>	<b>No. of Employees</b>	<b>NAICS Industry</b>
Champion Air	5	739	481211—Nonscheduled Chartered Passenger Air Transp.
Gold Transportation Inc.	1		481211—Nonscheduled Chartered Passenger Air Transp.
Omega Air Holdings DBA Focus Air	3	151	481211—Nonscheduled Chartered Passenger Air Transp.
Pace Airlines	4	549	481211—Nonscheduled Chartered Passenger Air Transp.
Sky King Inc. (CA-USA)	2	75	481211—Nonscheduled Chartered Passenger Air Transp.
Vision Airlines	1		481211—Nonscheduled Chartered Passenger Air Transp.
Wedge Aviation Inc.	1		481211—Nonscheduled Chartered Passenger Air Transp.
Astar Air Cargo	6	1023	481212—Nonscheduled Chartered Freight Air Transp.
Capital Cargo International Airlines	3	188	481212—Nonscheduled Chartered Freight Air Transp.
Cargo 360	3		481212—Nonscheduled Chartered Freight Air Transp.
Cargo Aircraft Management (all entries)	5		481212—Nonscheduled Chartered Freight Air Transp.
Evergreen International Airlines	3	394	481212—Nonscheduled Chartered Freight Air Transp.
Kalitta Air	3	786	481212—Nonscheduled Chartered Freight Air Transp.
Southern Air (CT-USA)	4	179	481212—Nonscheduled Chartered Freight Air Transp.
Tradewinds Airlines (NC-USA)	1	263	481212—Nonscheduled Chartered Freight Air Transp.
Celtic Capital Corporation (all entries)	3		522298--All Other Non-Depository Credit Intermediation
Aerolease Financial Group Inc. (all entries)	1		532411--Comm'l Air ... Transp. Equip. Rental & Leasing
Aeroturbine Inc. (all entries)	1		532411--Comm'l Air ... Transp. Equip. Rental & Leasing

<b>Operator</b>	<b>No. APs</b>	<b>No. of Employees</b>	<b>NAICS Industry</b>
Automatic LLC (all entries)	1		532411--Comm'l Air ... Transp. Equip. Rental & Leasing
Aventura Aviation LLC (all entries)	2		532411--Comm'l Air ... Transp. Equip. Rental & Leasing
Echelon International Corporation	1		532411--Comm'l Air ... Transp. Equip. Rental & Leasing
First Chicago Leasing Corporation (all entries)	1		532411--Comm'l Air ... Transp. Equip. Rental & Leasing
GA Telesis LLC	2		532411--Comm'l Air ... Transp. Equip. Rental & Leasing
JT Power LLC (all entries)	2		532411--Comm'l Air ... Transp. Equip. Rental & Leasing
Pegasus Capital Corporation (all entries)	5		532411--Comm'l Air ... Transp. Equip. Rental & Leasing
Nomads Inc.	1		561520--Tour Operators
NBA Orlando Magic	1		711211--Sports Teams and Clubs
A & W Aeronautics Services Inc.	1		
AA 767 LLC	1		
Apollo Aviation Capital LLC (all entries)	1		
Aviation Finance Group LLC	1		
BCM Majestic Corporation	1		
Blackwater USA LLC (all entries)	1		
IDM Aviation Services LLC (all entries)	1		
Jet Partners LLC (NY-USA)	3		
Leading Edge Group LLC	2		
RPK Capital Management Group LLC (all entries)	1		
WP Supply Corporation	1		
<b>Total</b>	<b>96</b>		

Sources: 1. List of firms & number of affected airplanes–Back Aviation Solutions, Fleet iNET database, November, 20, 2006. 2. Employment data–Ameristar Jet Charter, <http://www.ameristar.com>; Kalitta Air & Southern Air: <http://www.transtat.bts.gov>, Air Carrier Financial Reports (Form 41 Financial Data), Schedule P10. All others–<http://www.bts.gov/Programs>, Airline Date and Statistics, Number of Employees, Certified Air Carriers (Full-time and Part-time).

## *E. Reporting, Recordkeeping, and Other Compliance Requirements*

We expect that small entities will incur little or no new reporting and recordkeeping requirements as a result of this final rule. Boeing will incur substantial reporting and recordkeeping costs, but is not a small entity.

This AD will require compliance from operators of large commercial transport category Boeing Model 727, 737, 747, 757, and 767 airplanes having an original standard Airworthiness Certificate or original Export Certificate of Airworthiness issued between July 1981 and December 1988 inclusive. The AD also applies to five specific Boeing Model 747-400 airplanes delivered in 1989.<sup>11</sup>

The AD requires that operators of affected Boeing airplanes replace insulation blankets made of AN-26 with new insulation blankets complying with 14 CFR part 25.856(a). As shown in the "Cost of Compliance" section of the final rule, this operation requires thousands of labor hours and, consequently, is an expensive operation that will have a significant economic impact on the substantial number of small firms we have identified above. That impact is documented and analyzed below.

### 1. Economic Impact on Small Operators Assessed With Financial Data

In our analysis of the economic impact of the final rule on small entities, we were restricted to 14 of the 45 potential small entities owing to the availability of Department of Transportation financial data for air transportation operators. These operators are 14 (of the 15) operators identified in table, "Small firm operators affected by the final rule by NAICS industry," as small entities based on employment. We first incorporate into the analysis the final rule's 8-year compliance time, a period specified to closely agree with airplane heavy maintenance schedules. Since we have no information on these maintenance schedules by operator or airplane model, we assume that an equal number of affected airplanes will undergo heavy maintenance at the end of each of the eight years from the effective date of the final rule.<sup>12</sup> Accordingly, we calculate the variable "Present Value AD Cost" in the table by discounting "AD Cost"<sup>13</sup> by the average (0.7464) of the 7% discount factors for one through eight years.<sup>14</sup> As we noted previously, we reduced the economic impact of the final rule by extending the compliance time from six to eight years. That reduced impact is reflected here in a lower Present Value AD Cost.

The last column of table, "Financial data by small operator for assessing the economic impact of the final rule," shows that Present Value AD Cost as a percentage of Operating Revenues is 1% or greater for 8 of the 14 operators (and as high as 13.1%). The median impact is 1.0% of Operating Revenues. We sort the table by Operating Revenue to demonstrate the economic impact tends to be higher for the smallest of the small operators. We should note that these percentages do not represent a continuous impact on operating revenues. Rather, they measure the economic impact of the final rule as a one-time capital cost relative to the financial size of the operators.

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<sup>11</sup> Boeing Model 747-400 airplanes with serial numbers 23719, 23720, 23814, 23816-23820, 23999, 24061, and 24062.

<sup>12</sup> As noted in the "Cost of Compliance" section of this rule, this assumption is largely consistent with passenger airplanes complying later in the compliance period than cargo airplanes in order to extend their lives in passenger service to 25 years.

<sup>13</sup> AD Cost is for the affected fleet of each operator and is calculated using cost per airplane from the "Costs of Compliance" section.

<sup>14</sup> A 7% discount rate is required by the Office of Management & Budget. See OMB, Circular A-94, "Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs", October, 29, 1992, p. 8 (<http://www.whitehouse.gov/omb/circulars/index.html>).

**Table–Financial Data by Small Operator for Assessing the Economic Impact of the Final Rule**

<b>Airline</b>	<b>Type</b>	<b>Employment<sup>1</sup></b>	<b>Op. Revenue (\$ 000)<sup>2</sup></b>	<b>AD Cost<sup>3</sup></b>	<b>Present Value AD Cost (\$)</b>	<b>PV AD Cost/ Operating Revenue</b>
Kitty Hawk Aircargo	C	201	3,799	558,660	416,991	11.0%
Omega Air Holdings dba Focus Air	C	151	12,634	2,215,788	1,653,891	13.1%
Sierra Pacific Airlines	P	32	12,967	186,220	138,997	1.1%
Sky King Inc.	P	75	18,535	372,440	277,994	1.5%
Northern Air Cargo Inc.	C	225	45,440	744,880	555,988	1.2%
Capital Cargo International	C	188	46,913	602,281	449,550	1.0%
Pace Airlines	P	549	57,160	842,630	628,949	1.1%
Southern Air Inc.	C	179	59,614	2,954,383	2,205,188	3.7%
Tradewinds Airlines	C	263	60,848	738,596	551,297	0.9%
Champion Air	P	739	142,301	1,003,802	749,250	0.5%
Ryan International Airlines	P	649	157,888	567,940	423,917	0.3%
Astar Air Cargo Inc.	C	1023	331,929	1,204,563	899,100	0.3%
Kalitta Air LLC	C	786	372,546	2,215,788	1,653,891	0.4%
Evergreen Int'l Inc.	C	394	392,103	2,215,788	1,653,891	0.4%
			1,714,676 Total	16,423,758 Total	12,258,895 Total	1.0% Median

<sup>1</sup> Employment data is for 2005.

<sup>2</sup> Op. Revenue is the average for 2003-2005, but for Omega Air Holdings is the 2005 value only.

<sup>3</sup> AD Cost is for the affected fleet of each operator and is calculated using cost per airplane from the "Costs of Compliance" section of this final rule. See table, "The cost of the final rule relative to the value of the affected fleet by operator."

**Note:** The discount factor for AD Cost is 0.7464, the average of the 7% discount factors for Years 1 through 8 from the effective date of the AD. Sources: 1. Employment data–Kalitta Air & Southern Air: <http://www.transtat.bts.gov>, Air Carrier Financial Reports (Form 41 Financial Data), Schedule P10. All others–<http://www.bts.gov/Programs>, Airline Date and Statistics, Number of Employees, Certified Air Carriers (Full-time and Part-time). 2. Operating Revenue–<http://www.transtat.bts.gov>, Air Carrier Financial Reports (Form 41 Financial Data), Schedules P1.1 & P1.2.

## 2. Economic Impact on Small Operators Assessed With Affected Fleet Values

Since, as noted previously, the costs of this final rule occur as a one-time capital cost, another way to assess the economic impact of the final rule is to measure the costs of the final rule relative to the capital value of the airplanes the final rule affects. Table, "The cost of the final rule relative to the value of the affected fleet by operator," lists the 14 operators, the number of affected airplanes, AD Cost per airplane, Total AD Cost, and Affected Fleet Value. The key variable in that table is Affected Fleet Value, which sums affected airplane values for each operator. These values were obtained from the Airliner Price Guide, vol. 57, January 2006. That table shows that AD Cost as a percentage of Affected Fleet Value is high, with a median value of 12.2 percent and values ranging as high as 32.9 percent.<sup>15</sup> Both measures of the cost of compliance—discounted AD cost relative to operating revenue (table, "Financial data by small operator for assessing the economic impact of the final rule") and AD cost relative to affected fleet value (table, "The cost of the final rule relative to the value of the affected fleet by operator")—indicate that this final rule will have a significant economic impact on a substantial number of small entities.

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<sup>15</sup> Relatively high Total AD Cost/Affected Fleet Value percentages may reflect low airplane values. Low airplane values suggest airplanes may retire before the compliance deadline, thus allowing operators to avoid or reduce compliance cost. See discussion in Section 4.

**Table–The cost of the Final Rule Relative to the Value of the Affected Fleet by Operator**

<b>Operator</b>	<b>Type</b>	<b>Equipment Type (LAR Code)<sup>3</sup></b>	<b>Num-ber. AP</b>	<b>AD Cost/AP (\$)</b>	<b>Total AD Cost (\$)</b>	<b>Affected Fleet Value (\$ mil.)<sup>2</sup></b>	<b>AD Cost/Fleet Value (percent)</b>
Astar Air Cargo	C	Boeing 727-200F	6	200,760	1,204,563	7.27	16.6%
Capital Cargo Int'l Airlines	C	Boeing 727-200F	3	200,760	602,281	3.27	18.4%
Champion Air	P	Boeing 727-200	5	200,760	1,003,802	3.05	32.9%
Evergreen International Airlines	C	Boeing 747-200B/SCD	3	738,596	2,215,788	30.44	7.3%
Kalitta Air	C	Boeing 747-200B (2), -200B/SCD(1)	3	738,596	2,215,788	14.44	15.3%
Kitty Hawk Air Cargo	C	Boeing 737-300F	3	186,220	558,660	22.33	2.5%
Northern Air Cargo	C	Boeing 737-200 (3), 200C/F (1)	4	186,220	744,880	3.52	21.2%
Omega Air Holdings DBA Focus Air	C	Boeing 747-200B/SCD (2), -300/SCD (1)	3	738,596	2,215,788	24.68	9.0%
Pace Airlines	P	Boeing 737-200 (2), -300 (1); 757-200 (1)	4	210,657 <sup>1</sup>	842,630	14.25	5.9%
Ryan International Airlines	P	Boeing 757-200	2	283,970	567,940	15.42	3.7%
Sierra Pacific Airlines	P	Boeing 737-200	1	186,220	186,220	0.84	22.2%
Sky King Inc. (CA-USA)	P	Boeing 737-200	2	186,220	372,440	1.72	21.7%
Southern Air (CT-USA)	C	Boeing 747-200B/SCD (2), -200F (2)	4	738,596	2,954,383	33.72	8.8%
Tradewinds Airlines (NC-USA)	C	Boeing 747-200B/SCD	1	738,596	738,596	8.42	8.8%
Total/Average			44	376,028 (wt. avg.)	16,545,237 (total)	183.37 (total)	12.2% (median)

<sup>1</sup> Cost/AP for Pace Airlines is weighted average of 737s and 757 costs.

Pace Airlines	P	Boeing 737-200 and -300	3	186,220	558,660
Pace Airlines	P	Boeing 757-200	1	283,970	283,970

<sup>2</sup> Affected Fleet Value is the sum, by small operator, of the values of affected airplanes. Airplane values were obtained from the Airliner Price

Guide, vol. 57, January 2006.

<sup>3</sup> Equipment Type & number of airplanes were obtained from Back Aviation Solutions, Fleet iNET database, January 17, 2007.

### 3. Disproportionality Analysis

Disproportionality analysis addresses the question of whether small entities bear a larger compliance burden than larger entities. Large operators may be able to negotiate better pricing from outside sources for purchase, installation, and inspection of insulation blankets. We do not have the data that would allow us to assess that potential advantage. Data are readily available, however, to calculate the percentage of operators' airplanes affected by this final rule. We use this simple measure to compare the equipment compliance burden of the small operators with the 15 large airline operators affected by the final rule. One small operator, Maxjet Airways, was added to the small operator list, so as to have equal-sized small and large comparison groups.<sup>16</sup> The data are shown in table, "Proportionality analysis using the percentage of the fleet affected by the final rule, by small and large operators," which sorts the data by Affected Fleet as a percentage of Total Fleet for both small and large operators. As measured by this variable, small operators generally have a higher compliance burden than large operators—a result summarized in the higher mean percentage (38% vs. 29%) and much higher median percentage (31% vs. 17%) for small operators.

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<sup>16</sup> We identified Maxjet Airways as a highly likely small entity by Maxjet's small total fleet size compared with other small operators.

**Table–Proportionality Analysis Using the Percentage of the Fleet Affected by the Final Rule, by Small and Large Operators**

<b>Small Operator</b>	<b>Affected Fleet</b>	<b>Total Fleet</b>	<b>Affected Fleet/Total Fleet</b>	<b>Large Operator</b>	<b>Affected Fleet</b>	<b>Total Fleet</b>	<b>Affected Fleet/Total Fleet</b>
Kitty Hawk Air Cargo	3	32	9.4%	Alaska Airlines	2	93	2.2%
Kalitta Air	3	20	15.0%	American Airlines	31	374	8.3%
Astar Air Cargo	6	31	19.4%	United Parcel Service	15	148	10.1%
Ryan International Airlines	2	10	20.0%	United Air Lines	40	310	12.9%
Capital Cargo Int'l Airlines	3	14	21.4%	Atlas Air	3	23	13.0%
Evergreen Int'l Airlines	3	14	21.4%	Continental Airlines	48	366	13.1%
Tradewinds Airlines (NC-USA)	1	4	25.0%	Hawaiian Airlines	4	29	13.8%
Champion Air	5	16	31.3%	Federal Express	18	105	17.1%
Sky King Inc. (CA-USA)	2	6	33.3%	Southwest Airlines	83	479	17.3%
Southern Air (CT-USA)	4	9	44.4%	Delta Air Lines	72	319	22.6%
Pace Airlines	4	8	50.0%	US Airways	41	113	36.3%
Sierra Pacific Airlines	1	2	50.0%	Northwest Airlines	44	114	38.6%
Northern Air Cargo	4	7	57.1%	Aloha Airlines	13	24	54.2%
Omega Air Holdings DBA Focus Air	3	4	75.0%	America West Airlines <sup>1</sup>	29	39	74.4%
Maxjet Airways	3	3	100.0%	ABX Air	38	38	100.0%
Totals	47	180		Totals	481	2574	
Median			31.3%	Median			17.1%
Mean			38.2%	Mean			28.9%

<sup>1</sup> American West Airlines merged with U.S. Airways on September 27, 2005. A merger of the FAA operating certificates was expected in 2007. Source: Back Aviation Solutions, Fleet iNET database, December 5, 2006.

Note: Medians and means are column averages. Affected Fleet/Total Fleet for all small operators is  $47/180 = 26.1\%$  compared with  $481/2574 = 18.7\%$  for all large operators. These figures are equivalent to weighted means of the Affected Fleet/Total Fleet percentages with the operator's total fleet numbers as weights. As an average of the column of percentages, the unweighted mean corresponds to the median, and more appropriately reflects the situation of the typical operator in its group.

#### 4. Conclusion on Economic Impact

On the basis of our analysis in sections E.1-E.3 above, we conclude this AD will have a significant economic impact on a substantial number of firms.<sup>17, 18</sup>

#### **International Trade Impact Analysis**

The Trade Agreement Act of 1979 prohibits Federal agencies from establishing any standards or engaging in related activities that create unnecessary obstacles to the foreign commerce of the United States. The statute does not consider legitimate domestic objectives, such as safety, as unnecessary. The statute also requires consideration of international standards and, where appropriate, that they be the basis for U.S. standards. We are issuing this final rule because of a known safety problem and thus the AD is not considered an unnecessary obstacle to international trade.

#### **Unfunded Mandates Reform Act Assessment**

Title II of the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4) requires each Federal agency to prepare a written statement assessing the effects of any Federal mandate in a proposed or final agency rule that may result in an expenditure of \$100 million or more (adjusted annually for inflation with the base year 1995) in any one year by State, local, and tribal governments in the aggregate, or by the private sector. The Act deems such a mandate to be a "significant regulatory action." We currently use an inflation-adjusted value of \$136.1 million.

This AD does not contain such a mandate.

#### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

#### **Regulatory Findings**

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

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<sup>17</sup> The cost of the rule may be somewhat lower than estimated to the extent that airplanes go directly into retirement at age 25 rather than converting to cargo service as assumed here. Even if an old airplane is not due for retirement, the operator will still retire if more economical than compliance, in which case the costs of the rule will also be less than assumed here.

<sup>18</sup> In addition to the lower Present Value AD Cost discussed in Section E.1, another benefit of the extended compliance time, especially to small operators, is the increased economic feasibility of retirement or freighter conversion as an alternative to compliance.

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

(1) Is not a "significant regulatory action" under Executive Order 12866; and

(2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979).

You can find our regulatory evaluation and the estimated costs of compliance in the AD Docket.

### **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 AD:



**2008-23-09 Boeing:** Amendment 39-15730. Docket No. FAA-2005-20836; Directorate Identifier 2005-NM-028-AD.

**Effective Date**

(a) This airworthiness directive (AD) is effective December 15, 2008.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to Boeing airplanes, certificated in any category, specified in paragraphs (c)(1) and (c)(2) of this AD.

(1) Boeing airplanes listed in Table 1 of this AD, having an original standard Airworthiness Certificate or original Export Certificate of Airworthiness issued between July 1981 and December 1988 inclusive.

**Table 1—Applicability of Certain Airplanes**

<b>Model</b>
727-200 and 727-200F series airplanes
737-200, 737-200C, 737-300, and 737-400 series airplanes
747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747SR, and 747SP series airplanes
757-200, 757-200CB, and 757-200PF series airplanes
767-200 and 767-300 series airplanes

(2) Boeing Model 747-400 series airplanes, serial numbers 23719, 23720, 23814, 23816, 23817, 23818, 23819, 23820, 23999, 24061, and 24062.

**Unsafe Condition**

(d) This AD results from reports of in-flight and ground fires on certain airplanes manufactured with insulation blankets covered with a specific polyethyleneterephthalate (PET), ORCON Orcofilm[reg] AN-26 (all variants, including AN-26, AN-26A, and AN-26B), hereafter referred to as "AN-26," which may contribute to the spread of a fire when ignition occurs from sources such as electrical arcing or sparking. We are issuing this AD to ensure that insulation blankets constructed of AN-26 are removed from the fuselage. Such insulation blankets could ignite and propagate a fire that is the result of electrical arcing or sparking.

## Compliance

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

## Replacement

(f) Except as provided in paragraph (g) of this AD, within 96 months after the effective date of this AD, do the actions specified in paragraph (f)(1) or (f)(2) of this AD.

(1) Remove all insulation blankets from the pressurized areas of the fuselage and install new insulation blankets using a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA. The new insulation blankets must comply with 14 Code of Federal Regulations (CFR) 25.856(a). The areas where the affected insulation blankets are installed include, but are not limited to, the following areas:

- (i) Crown area of the airplane;
- (ii) Areas behind flight deck panels and circuit breaker panels;
- (iii) Areas behind sidewalls, lavatories, closets, and galleys;
- (iv) Cargo compartment areas;
- (v) Air ducting;
- (vi) Waste and water tubing; and
- (vii) Areas attached to the underside of floor panels.

(2) Remove the existing fuselage insulation blankets and install new insulation blankets, in accordance with the Accomplishment Instructions of the applicable service bulletin specified in Table 2 of this AD.

**Table 2–Boeing Special Attention Service Bulletins**

<b>Boeing Special Attention Service Bulletin –</b>	<b>Dated –</b>	<b>For Model –</b>
(i) 727-25-0300	April 30, 2008	727-200 and -200F series airplanes
(ii) 737-25-1572	April 30, 2008	737-200, 737-200C, 737-300, and 737-400 series airplanes
(iii) 747-25-3429	April 30, 2008	747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747SP, and 747SR series airplanes
(iv) 757-25-0295	April 30, 2008	757-200, 757-200CB, and 757-200PF series airplanes
(v) 767-25-0411	April 30, 2008	767-200 and 767-300 series airplanes

## Exception

(g) The actions described in paragraph (f) are not required for any insulation blanket that is determined not to be constructed of AN-26, using an identification method approved by the Manager, Seattle Aircraft Certification Office (ACO), or in accordance with Appendix A of the applicable service bulletin specified in Table 2 of this AD.

**Note 1:** Insulation material that is part-marked with a date of manufacture indicating that it was manufactured before July 1981 or after December 1988 is not constructed of AN-26.

## Parts Installation

(h) As of the effective date of this AD, no person may install any insulation blanket constructed of AN-26 as a replacement unless it has been modified to comply with 14 CFR 25.856(a), in accordance with a method approved by the Manager, Seattle ACO.

### Alternative Methods of Compliance (AMOCs)

(i)(1) The Manager, Seattle ACO, ATTN: Shannon Lennon, Aerospace Engineer, Cabin Safety and Environmental Systems Branch, ANM-150S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6436; fax (425) 917-6590; has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

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

### Material Incorporated by Reference

(j) You must use the applicable service information contained in Table 3 of this AD 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, P.O. Box 3707, Seattle, Washington 98124-2207; telephone 206-544-9990; fax 206-766-5682; e-mail DDCS@boeing.com; Internet <https://www.myboeingfleet.com>.

(3) You may review copies of the service information that is incorporated by reference at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:

[http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

**Table 3—Material Incorporated by Reference**

<b>Boeing Special Attention Service Bulletin—</b>	<b>Dated—</b>
727-25-0300	April 30, 2008
737-25-1572	April 30, 2008
747-25-3429	April 30, 2008
757-25-0295	April 30, 2008
767-25-0411	April 30, 2008

Issued in Renton, Washington, on October 24, 2008.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. E8-26352 Filed 11-7-08; 8:45 am]