DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. FAA–2001–9634; Notice No. 01–04]

RIN 2120–AH27

Electrical Installation, Nickel Cadmium Battery Installation, and Nickel Cadmium Battery Storage

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking.

SUMMARY: The Federal Aviation Administration proposes to amend the airworthiness standards for transport category airplanes concerning electrical equipment and nickel cadmium battery installations, and nickel cadmium battery storage. Adopting this proposal would eliminate regulatory differences between the airworthiness standards of the U.S. and the Joint Aviation Requirements of Europe, without affecting current industry design practices.

DATES: Send your comments on or before July 16, 2001.

ADDRESSES: Address your comments to Dockets Management System, U.S. Department of Transportation Dockets, Room Plaza 401, 400 Seventh Street SW., Washington, DC 20590–0001. You must identify the docket number FAA–2001–9634 at the beginning of your comments, and you should submit two copies of your comments. If you wish to receive confirmation that the FAA has received your comments, please include a self-addressed, stamped postcard on which the following statement is made: ''Comments to Docket No. FAA–2001–9634''. We will date-stamp the postcard and mail it back to you.

You also may submit comments electronically to the following Internet address: *http://dms.dot.gov.*

You may review the public docket containing comments to this proposed regulation at the Department of Transportation (DOT) Dockets Office, located on the plaza level of the Nassif Building at the above address. You may review the public docket in person at this address between 9:00 a.m. and 5:00 p.m., Monday through Friday, except Federal holidays. Also, you may review the public dockets on the Internet at *http//dms.dot.gov.*

FOR FURTHER INFORMATION CONTACT: Stephen Slotte, FAA, Branch, ANM–111, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW., Renton, WA 98055–4056; telephone 425–227–2315; facsimile 425–227–1320, e-mail steve.slotte@faa.gov.

SUPPLEMENTARY INFORMATION:

How Do I Submit Comments to This NPRM?

Interested persons are invited to participate in the making of the proposed action by submitting such written data, views, or arguments, as they may desire. Comments relating to the environmental, energy, federalism, or economic impact that might result from adopting the proposals in this document are also invited. Substantive comments should be accompanied by cost estimates. Comments must identify the regulatory docket number and be submitted in duplicate to the DOT Rules Docket address specified above.

All comments received, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposed rulemaking, will be filed in the docket. The docket is available for public inspection before and after the comment closing date.

We will consider all comments received on or before the closing date before taking action on this proposed rulemaking. Comments filed late will be considered as far as possible without incurring expense or delay. The proposals in this document may be changed in light of the comments received.

How Can I Obtain a Copy of This NPRM?

You may download an electronic copy of this document using a modem and suitable communications software from the FAA regulations section of the Fedworld electronic bulletin board service (telephone: 703–321–3339); the Government Printing Office (GPO)'s electronic bulletin board service (telephone: 202–512–1661); or, if applicable, the FAA's Aviation Rulemaking Advisory Committee bulletin board service (telephone: 800–322–2722 or 202–267–5948).

Internet users may access recently published rulemaking documents at the FAA's web page at *http://www.faa.gov/avr/arm/nprm/nprm.htm* or the *GPO's* web page at *http://www.access.gpo.gov/nara.*

You may obtain a copy of this document by submitting a request to the Federal Aviation Administration, Office of Rulemaking, ARM–1, 800 Independence Avenue, SW., Washington, DC 20591; or by calling 202–267–9680. Communications must identify the docket number of this NPRM.

Any person interested in being placed on the mailing list for future rulemaking documents should request from the above office a copy of Advisory Circular 11–2A, ''Notice of Proposed Rulemaking Distribution System,'' which describes the application procedure.

Background

What Are the Relevant Airworthiness Standards in the United States?

In the United States, the airworthiness standards for type certification of transport category airplanes are contained in Title 14, Code of Federal Regulations (CFR) part 25. Manufacturers of transport category airplanes must show that each airplane they produce of a different type design complies with the appropriate part 25 standards. These standards apply to:

- Airplanes manufactured within the U.S. for use by U.S.-registered operators, and
- Airplanes manufactured in other countries and imported to the U.S. under a bilateral airworthiness agreement.

What Are the Relevant Airworthiness Standards in Europe?

In Europe, the airworthiness standards for type certification of transport category airplanes are contained in Joint Aviation Requirements (JAR)–25, which are based on part 25. These were developed by the Joint Aviation Authorities (JAA) of Europe to provide a common set of airworthiness standards within the European aviation community. Twenty-three European countries accept airplanes type certificated to the JAR–25 standards, including airplanes manufactured in the U.S. that are type certificated to JAR–25 standards for export to Europe.

What Is ''Harmonization'' and How Did It Start?

Although part 25 and JAR–25 are very similar, they are not identical in every respect. When airplanes are type certificated to both sets of standards, the differences between part 25 and JAR–25 can result in substantial additional costs to manufacturers and operators. These additional costs, however, frequently do not bring about an increase in safety. In many cases, part 25 and JAR–25 may contain different requirements to accomplish the same safety intent. Consequently, manufacturers are usually burdened with meeting the requirements of both sets of standards, although the level of safety is not increased correspondingly.

Recognizing that a common set of standards would not only benefit the

aviation industry economically, but also maintain the necessary high level of safety, the FAA and the JAA began an effort in 1988 to ''harmonize'' their respective aviation standards. The goal of the harmonization effort is to ensure that:

- Where possible, standards do not require domestic and foreign parties to manufacture or operate to different standards for each country involved; and
- The standards adopted are mutually acceptable to the FAA and the foreign aviation authorities.

The FAA and JAA have identified a number of significant regulatory differences (SRD) between the wording of part 25 and JAR–25. Both the FAA and the JAA consider ''harmonization'' of the two sets of standards a high priority.

What Is ARAC and What Role Does It Play in Harmonization?

After initiating the first steps towards harmonization, the FAA and JAA soon realized that traditional methods of rulemaking and accommodating different administrative procedures was neither sufficient nor adequate to make appreciable progress towards fulfilling the goal of harmonization. The FAA then identified the Aviation Rulemaking Advisory Committee (ARAC) as an ideal vehicle for assisting in resolving harmonization issues, and, in 1992, the FAA tasked ARAC to undertake the entire harmonization effort.

The FAA had formally established ARAC in 1991 (56 FR 2190, January 22, 1991), to provide advice and recommendations concerning the full range of the FAA's safety-related rulemaking activity. The FAA sought this advice to develop better rules in less overall time and using fewer FAA resources than previously needed. The Committee provides the FAA firsthand information and insight from interested parties regarding potential new rules or revisions of existing rules.

There are 64 member organizations on the committee, representing a wide range of interests within the aviation community. Meetings of the committee are open to the public, except as authorized by section 10(d) of the Federal Advisory Committee Act.

The ARAC establishes working groups to develop recommendations for resolving specific airworthiness issues. Tasks assigned to working groups are published in the **Federal Register**. Although working group meetings are not generally open to the public, the FAA solicits participation in working groups from interested members of the public who possess knowledge or experience in the task areas. Working groups report directly to the ARAC, and the ARAC must accept a working group proposal before ARAC presents the proposal to the FAA as an advisory committee recommendation.

The activities of the ARAC will not, however, circumvent the public rulemaking procedures; nor is the FAA limited to the rule language ''recommended'' by ARAC. If the FAA accepts an ARAC recommendation, the agency proceeds with the normal public rulemaking procedures. Any ARAC participation in a rulemaking package is fully disclosed in the public docket.

What Is the Status of the Harmonization Effort Today?

Despite the work that ARAC has undertaken to address harmonization, there remain a large number of regulatory differences between part 25 and JAR–25. The current harmonization process is extremely costly and time-consuming for industry, the FAA, and the JAA. Industry has expressed a strong desire to conclude the harmonization program as quickly as possible to alleviate the drain on their resources and to finally establish one acceptable set of standards.

Recently, representatives of the aviation industry [including Aerospace Industries Association of America, Inc. (AIA), General Aviation Manufacturers Association (GAMA), and European Association of Aerospace Industries (AECMA)] proposed an accelerated process to reach harmonization.

What Is the ''Fast Track Harmonization Program''?

In light of a general agreement among the affected industries and authorities to expedite the harmonization program, the FAA and JAA in March 1999 agreed upon a method to achieve these goals. This method, which the FAA has titled ''The Fast Track Harmonization Program,'' is aimed at expediting the rulemaking process for harmonizing not only the 42 standards that are currently tasked to ARAC for harmonization, but approximately 80 additional standards for part 25 airplanes.

The FAA initiated the Fast Track program on November 26, 1999 (64 FR 66522). This program involves grouping all of the standards needing harmonization into three categories:

Category 1: Envelope

For these standards, parallel part 25 and JAR–25 standards would be compared, and harmonization would be reached by accepting the more stringent of the two standards. Thus, the more stringent requirement of one standard would be ''enveloped'' into the other standard. In some cases, it may be necessary to incorporate parts of both the part 25 and JAR standard to achieve the final, more stringent standard. (This may necessitate that each authority revises its current standard to incorporate more stringent provisions of the other.)

Category 2: Completed or Near Complete

For these standards, ARAC has reached, or has nearly reached, technical agreement or consensus on the new wording of the proposed harmonized standards.

Category 3: Harmonize

For these standards, ARAC is not near technical agreement on harmonization, and the parallel part 25 and JAR–25 standards cannot be ''enveloped'' (as described under Category 1) for reasons of safety or unacceptability. A standard developed under Category 3 would be mutually acceptable to the FAA and JAA, with a consistent means of compliance.

Further details on the Fast Track Program can be found in the tasking statement (64 FR 66522, November 26, 1999) and the first NPRM published under this program, Fire Protection Requirements for Powerplant Installations on Transport Category Airplanes (65 FR 36978, June 12, 2000).

Under this program, the FAA provides ARAC with an opportunity to review, discuss, and comment on the FAA's draft NPRM. In the case of this rulemaking, ARAC suggested a number of editorial changes, which have been incorporated into this NPRM.

Discussion of the Proposal

How Does This Proposed Regulation Relate to ''Fast Track''?

This proposed regulation results from the recommendations of ARAC submitted under the FAA's Fast Track Harmonization Program. In this notice, the FAA proposes to amend three sections concerning transport category airplane electrical equipment and nickel cadmium batteries. The three proposed changes are described separately below.

Proposal 1: Section 25.1353(a), ''Electrical Equipment Installation''

What Is the Underlying Safety Issue Addressed by the Current Standards?

Section 25.1353 and JAR 25.1353 require that transport category airplanes install electrical equipment, controls, and wiring in a manner that will not adversely affect the simultaneous operations of any other electrical unit or

system essential to the safe operation of the airplane.

What Are the Current 14 CFR and JAR Standards?

• The current text of 14 CFR 25.1353(a) is:

Section 25.1353 Electrical equipment and installations

(a) Electrical equipment, controls, and wiring must be installed so that operation of any one unit or system of units will not adversely affect the simultaneous operation of any other electrical unit or system essential to the safe operation.

• The current text of JAR–25.1353(a) is:

JAR 25.1353 Electrical equipment and installations

(a) Electrical equipment, controls, and wiring must be installed so that operations of any one unit or system of units will not adversely affect the simultaneous operation of any other electrical unit or system essential to the safe operation. *Any electrical interference likely to be present in the aeroplane must not result in hazardous effects upon the aeroplane or its systems except under extremely remote conditions. (See ACJ 25.1353(a).)*

What Are the Differences in the Standards and What Do Those Differences Result in?

Both part 25 and JAR texts require that operation of any one unit or system will not adversely affect the simultaneous operation of any other electrical unit or system essential to safe operation under normal operating conditions. The JAR text also considers failure effects on the airplane or its systems and is therefore considered to be more stringent. JAR 25.1353(a) with its related Advisory Circular Joint (ACJ) 25.1353(a) provides a clarification in the intent of the requirement.

What, If Any, Are the Differences in the Means of Compliance?

Part 25 does not give a specific means of compliance for this regulation. The JAR standard has a specific ACJ to establish a list of possible sources of interference and reference to JAR 25.1309 to be considered and used for means of compliance. Although the explicit standards are different, there are no differences in the means of compliance.

What Is the Proposed Action?

The proposed action would add both the additional JAR text to part 25, and also adopt the JAR ACJ material.

How Does This Proposed Standard Address the Underlying Safety Issue?

The proposed standard would continue to address the underlying safety issue in the same manner, but would add a requirement to ensure that transport category airplanes include failure conditions and establish a means of compliance.

What Is the Effect of the Proposed Standard Relative to the Current Regulations?

The proposed standard would increase the level of safety for transport category airplanes by adding the additional JAR text to address failure effects in the airplane and its systems. Also, the intent of this regulation would be clarified.

What Is the Effect of the Proposed Standard Relative to Current Industry Practice?

The proposed standard would maintain the same level of safety since current industry practice is to comply with both standards. Additionally, the understanding of the intent of this regulation would be clarified.

What Other Options Have Been Considered and Why Were They Not Selected?

Adoption of the FAA text was considered, however, it was decided to adopt the more stringent JAR with the associated ACJ material. The FAA considers the proposed action to be the most appropriate way to fulfill harmonization goals while maintaining safety and without affecting current industry practice.

Who Would Be Affected by the Proposed Change?

The proposed change would have a minimum effect for aircraft operators and manufacturers of transport category airplanes. However, since the proposed change does not result in any practical changes in requirements or practice, there would not be any significant effect.

Is Existing FAA Advisory Material Adequate?

The FAA plans to adopt the JAR advisory material as an acceptable means of showing compliance with the proposed revision to § 25.1353(a). Public comments concerning the AC material are invited by separate notice following this NPRM.

Proposal 2: Section 25.1353(c)(5). ''Nickel Cadmium Battery''

What Is the Underlying Safety Issue Addressed by the Current Standards?

This requirement addresses the design and installation of nickel cadmium storage batteries. Part 25 limits this requirement to batteries only capable of being used to start an engine or auxiliary power unit.

What Are the Current 14 CFR and JAR Standards?

• The current text of 14 CFR 25.1353(c)(5) is:

Section 25.1353 Electrical equipment and installations

* * * (c)(5) Each nickel cadmium battery installation capable of being used to start an engine or auxiliary power unit must have provisions to prevent any hazardous effect on structure or essential systems that may be caused by the maximum amount of heat the battery can generate during a short circuit of the battery or of individual cells.

• The current text of JAR–25.1353(c)(5) is:

JAR–25.1353 Electrical equipment and installations

* * * (c)(5) Each nickel cadmium battery installation must have provisions to prevent any hazardous effect on structure or essential systems that may be caused by the maximum amount of heat the battery can generate during a short circuit of the battery or of individual cells.

What Are the Differences in the Standards and What Do Those Differences Result in?

Section 25.1353 requires provisions only for the batteries capable of being used to start an engine or auxiliary power unit; whereas JAR 25.1353 requires provisions to prevent any hazardous effect on structure or essential systems by all nickel cadmium batteries regardless of their capabilities.

What, If Any, Are the Differences in the Means of Compliance?

Although the explicit standards are different, there are no differences in the means of compliance.

What Is the Proposed Action?

The proposed action would adopt the more stringent JAR standard. This would allow for coverage of a greater range of battery sizes and capabilities than is currently covered in part 25.

How Does This Proposed Standard Address the Underlying Safety Issue?

The proposed standard would add the additional JAR text to part 25. The level of safety would be increased by the new § 25.1353(c)(5) by covering all nickel cadmium battery sizes regardless of their capabilities.

What Is the Effect of the Proposed Standard Relative to the Current Regulations?

The proposed standard would increase the level of safety by covering the design and installation of all nickel

cadmium batteries regardless of their sizes and capabilities for transport category airplanes.

What Is the Effect of the Proposed Standard Relative to Current Industry Practice?

The proposed standard would maintain the same level of safety for aircraft main batteries used for engine or APU starting since this is the current industry practice, however, in relation to all other nickel cadmium batteries, the level of safety may be increased.

What Other Options Have Been Considered and Why Were They Not Selected?

The FAA considers the proposed action to be the most appropriate way to fulfill harmonization goals while maintaining safety and without affecting current industry practice. The FAA considered deletion of the reference to ''nickel cadmium'' batteries so that the rule would apply to all battery types. This change was not adopted because it would require evaluation of the impact of other types of batteries.

Who Would Be Affected by the Proposed Change?

The proposed change for main batteries would be in line with current design practices, and therefore, the effect would be considered minimal. There may be an impact on other nickel cadmium battery installations by aircraft operators, manufacturers and modifiers.

Is Existing FAA Advisory Material Adequate?

There is no specific advisory material for either part 25 or the JAR. The FAA considers developing new harmonized advisory material to be unnecessary.

Proposal 3: Section 25.1353(c)(6), ''Nickel Cadmium Battery Installation''

What Is the Underlying Safety Issue Addressed by the Current Standards?

This requirement is part of § 25.1353(c)(6) and JAR 25.1353(c)(6) that addresses nickel cadmium battery installations with regard to protection against battery overheating.

What Are the Current 14 CFR and JAR Standards?

• The current text of 14 CFR 25.1353(c)(6) is:

Section 25.1353 Electrical equipment and installations

* * * (c)(6) Nickel cadmium battery installations capable of being used to start an engine or auxiliary power unit must have—

(i) A system to control the charging rate of the battery automatically so as to prevent battery overheating;

(ii) A battery temperature sensing and over-temperature sensing and over-temperature warning system with a means for disconnecting the battery from its charging source in the event of an over-temperature condition; or

(iii) A battery failure sensing and warning system with a means for disconnecting the battery from its charging source in the event of battery failure.

• The current text of JAR–25.1353(c)(6) is:

JAR–25.1353 Electrical equipment and installations

(c)(6) Nickel cadmium battery *installations that are not provided with low-energy charging means* must have—

(i) A system to control the charging rate of the battery automatically so as to prevent battery overheating;

(ii) A battery temperature sensing and over-temperature warning system with a means for disconnecting the battery from its charging source in the event of an over-temperature condition; or

(iii) A battery failure sensing and warning system with a means for disconnecting the battery from its charging source in the event of battery failure. [See ACJ 25.1353(c)(6)(ii) and (iii).)]

What Are the Differences in the Standards and What Do Those Differences Result in?

The part 25 standard specifies nickel cadmium battery installations capable of being used to start an engine or auxiliary power unit. The more stringent JAR standard, with its related ACJ 25.1353(c)(6) material, provides requirements for all nickel cadmium battery installations (not provided with low-energy charging means) in addition to those provided for engine or APU starting.

What, If Any, Are the Differences in the Means of Compliance?

Section 25.1353 requires only nickel cadmium battery installations capable of being used to start an engine to show compliance. The JAR 25.1353 requires all nickel cadmium battery installations (not provided with a low energy charging means) to show compliance to the JAR 25.1353 requirements. The JAR has specific ACJ material to address the maintenance requirements of temperature sensing and over-temperature warning devices installed to cover the requirements of 25.1353.

What Is the Proposed Action?

The proposed action would revise § 25.1353(c)(6) to adopt a modified, more stringent JAR 25.1353(c)(6) and the associated ACJ. The modification to the JAR is to remove the words ''that are not provided with low energy charging means.'' The proposed standard would provide for greater coverage by including all nickel cadmium battery installations, irrespective of whether provided for engine or APU starting. Service experience has shown that any battery installation can, if not carefully controlled, result in an overheat or fire condition. The proposed action is also in line with current design practices.

How Does This Proposed Standard Address the Underlying Safety Issue?

The proposed standard would expand the requirement to cover all nickel cadmium battery installations addressing the underlying safety concern of battery overheat and/or fire.

What Is the Effect of the Proposed Standard Relative to the Current Regulations?

The proposed revision for part 25 would expand the requirement to include all nickel cadmium batteries regardless of their use. The level of safety, therefore, would be increased.

What Is the Effect of the Proposed Standard Relative to Current Industry Practice?

The proposed standard would be in line with current industry practice for aircraft main batteries used for engine or APU starting, however, in relation to all other nickel cadmium batteries the level of safety may be increased.

What Other Options Have Been Considered and Why Were They Not Selected?

The FAA considers the proposed action to be the most appropriate way to fulfill harmonization goals while maintaining safety and without affecting current industry practices. The adoption of § 25.1353(c)(6) was considered, however, for the reasons stated above the JAR was selected.

Who Would Be Affected by the Proposed Change?

The proposed change is in line with current design practices and, therefore, the effect on batteries used for engine or APU starting is considered to be minimal. There may be an impact on other nickel cadmium battery installations by aircraft operators, manufacturers and modifiers.

Is Existing FAA Advisory Material Adequate?

The FAA considers that adopting the existing JAA ACJ material would be necessary to address the means of compliance for § 25.1353(c)(6). The FAA recommends adopting the JAR ACJ to 25.1353(c)(6) as advisory material. Public comments concerning this

proposed revision are invited by separate notice, following this NPRM.

What Regulatory Analyses and Assessments Has the FAA Conducted?

Regulatory Evaluation Summary

Proposed changes to Federal regulations must undergo several economic analyses. First, Executive Order 12866 directs that each Federal agency shall propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 requires agencies to analyze the economic impact of regulatory changes on small entities. Third, the Trade Agreements Act (19 U.S.C. section 2531–2533) prohibits agencies from setting standards that create unnecessary obstacles to the foreign commerce of the United States. In developing U.S. standards, this Trade Act requires agencies to consider international standards and, where appropriate, that they be the basis of U.S. standards. Fourth, the Unfunded Mandates Reform Act of 1995 requires agencies to prepare a written assessment of the costs, benefits and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by State, local or tribal governments, in the aggregate, or by the private sector, of $100 million or more, in any one year (adjusted for inflation).

In conducting these analyses, the FAA has determined that this proposed rulemaking has benefits, but no costs, and that it is not ''a significant regulatory action'' under section 3(f) of Executive Order 12866. This proposed rulemaking would not have a significant economic impact on a substantial number of small entities, reduces barriers to international trade, and imposes no unfunded mandates on State, local, or tribal governments, or the private sector.

Because there are no apparent costs associated with this proposal, it does not warrant the preparation of a full economic evaluation for placement in the docket. The basis of this statement and for the above determinations is summarized in this section of the preamble. The FAA requests comments with supporting documentation in regard to the conclusions contained in this section.

Presently, airplane manufacturers must satisfy both the Title 14, Code of Federal Regulations (14 CFR) and the European Joint Aviation Requirements (JAR) certification standards to market transport category aircraft in both the United States and Europe. Meeting two sets of certification requirements raises the cost of developing a new transport category airplane often with no increase in safety. In the interest of fostering international trade, lowering the cost of aircraft development, and making the certification process more efficient, the FAA, JAA, and aircraft manufacturers have been working to create to the maximum possible extent a single set of certification requirements accepted in both the United States and Europe. These efforts are referred to as harmonization.

This proposed rulemaking would replace section(s) 25.1353(a), 25.1353(c)(5), and 25.1353(c)(6) of part 25 with the ''more stringent'' section(s) 25.1353(a), 25.1353(c)(5), and 25.1353(c)(6) of JAR part 25. The FAA has concluded for the reasons previously discussed in the preamble that the adoption of these JAR requirements into 14 CFR is the most efficient way to harmonize these section(s) and in so doing, the existing level of safety will be preserved.

Proposal 1: Electrical Installation, Section 25.1353(a)

The FAA estimates that there are no costs associated with this proposal. A review of current manufacturers of transport category aircraft certificated under part 25 has revealed that all such future aircraft are expected to be certificated under part 25 of both 14 CFR and JAR. Since future certificated transport category aircraft are expected to meet the existing section 25.1353(a) of JAR requirement and this proposed rule simply adopts the same JAR requirement, manufacturers would incur no additional cost resulting from this proposal.

Furthermore, this proposed rulemaking is in line with current industry practices, which follow Radio Technology Commission for Aeronautics (RTCA) DO–160D, Environmental Conditions and Test Procedures. The DO–160D sets forth the standard procedures and environmental test criteria for testing airborne equipment for the entire spectrum of aircraft from light general aviation aircraft and helicopters through the ''Jumbo Jets'' and SST categories of aircraft. Examples of tests covered include vibration, power input radio frequency susceptibility, lightning, and electrostatic discharge. This standard is an internationally recognized standard of testing.

Also, a new company entering the manufacturing industry must comply with these standards for testing electrical systems, and therefore, the FAA expects any additional cost imposed by this proposal to be minimal and the level of safety to be maintained. In fact, manufacturers are expected to receive cost-savings by a reduction in the FAA/JAA certification requirements for new aircraft.

The FAA, however, has not attempted to quantify the cost savings that may accrue due to this specific proposed rulemaking, beyond noting that while they may be minimal, they contribute to a large potential harmonization savings. The agency concludes that because there is consensus among potentially impacted airplane manufacturers that savings will result, further analysis is not required.

Proposal 2: Nickel Cadmium Battery, Section 25.1353(c)(5)

The FAA estimates that there are no costs associated with this proposal. A review of current manufacturers of transport category aircraft certificated under part 25 has revealed that all such future aircraft are expected to be certificated under part 25 of both 14 CFR and JAR. Since future certificated transport category aircraft are expected to meet the existing section 25.1353(c)(5) of JAR requirement and this proposed rule simply adopts the same JAR requirement, manufacturers would incur no additional cost resulting from this proposal.

This proposed rulemaking would require *all* nickel cadmium batteries to be tested. The FAA believes this testing is the current practice. For example, engineers identified a total of 33 nickel cadmium batteries on a typical Boeing Model 777. In line with current industry practice, nickel cadmium batteries used to power the Engine and Auxiliary Power Unit are tested to prevent any hazardous effect on structure or essential systems that may be caused by overheating of the battery or its individual cells.

This proposed rulemaking would require that the other batteries used for such things as the Emergency Power Assist System (door), the Cockpit Voice Recorder—Underwater Locator Beacon, and the Flight Data Recorder—Underwater Locator Beacon also be tested according to current industry practice. Thus, the FAA expects any additional costs imposed by this proposal to be minimal, and the level of safety to be maintained. The FAA requests comments to the contrary, identifying additional testing, time, procedures, paperwork, and cost estimates.

Proposal 3: Nickel Cadmium Battery Installation, Section 25.1353(c)(6)

The FAA estimates that there are no costs associated with this proposal. A review of current manufacturers of transport category aircraft certificated under part 25 has revealed that all such future aircraft are expected to be certificated under part 25 of both 14 CFR and JAR. Since future certificated transport category aircraft are expected to meet the existing section 25.1353(c)(6) of JAR requirement and this proposed rule simply adopts the same JAR requirement, manufacturers would incur no additional cost resulting from this proposal.

Current industry practice requires that the nickel cadmium batteries used to start the Engine or Auxiliary Power Unit must have a system to control the battery to prevent overheating, a temperature sensing and over-temperature warning system, or a battery failure sensing and warning system with a means for disconnecting the battery. Thus, the FAA expects any additional costs imposed by this proposal to be minimal, and the level of safety to be maintained. The FAA requests comments to the contrary, identifying additional testing, time, procedures, paperwork, and cost estimates.

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (RFA) of 1980 as amended, establishes as a principle of regulatory issuance that agencies shall endeavor, consistent with the objective of the rule and of applicable statutes, to fit regulatory and informational requirements to the sale of the business, organizations, and government jurisdictions subject to regulation. To achieve that principle, the RFA requires agencies to solicit and consider flexible regulatory proposals and to explain the rationale for their actions.

Agencies must perform a review to determine whether a proposed or final rule will have a significant economic impact on a substantial number of small entities. If the determination is that the rule will, the Agency must prepare a regulatory flexibility analysis as described in the RFA.

However, if an agency determines that a proposed or final rule is not expected to have a significant economic impact on a substantial number of small entities, section 605(b) of the RFA provides that the head of the agency may so certify and a regulatory flexibility analysis is not required. The certification must include a statement providing the factual basis for this determination, and the reasoning should be clear.

The FAA believes that this proposed rule would not have a significant economic impact on a substantial number of small entities for two reasons. First, the net effect of the proposed rule is minimum regulatory cost relief. The proposed rule requires that new transport category aircraft manufacturers meet just the ''more stringent'' European certification requirement, rather than both the United States and European standards. Airplane manufacturers already meet or expect to meet this standard as well as the existing requirements of 14 CFR. Second, all United States transport-aircraft category manufacturers exceed the Small Business Administration small-entity criteria of 1,500 employees for aircraft manufacturers. United States part 25 airplane manufacturers include: The Boeing Company, Cessna Aircraft, Gulfstream Aerospace, Learjet (owned by Bombardier), Lockheed Martin, McDonnell Douglas (a wholly-owned subsidiary of The Boeing Company), Raytheon Aircraft, and Sabreliner Corporation.

Given that this proposed rule is only minimally cost-relieving and that there are no small entity manufacturers of part 25 airplanes, the FAA certifies that this proposed rule will not have a significant economic impact on a substantial number of small entities.

International Trade Impact

The Trade Agreement Act of 1979 prohibits Federal agencies from engaging in any standards or related activities that create unnecessary obstacles to the foreign commerce of the United States. Legitimate domestic objectives, such as safety, are not considered unnecessary obstacles. The statute also requires consideration of international standards and where appropriate, that they be the basis for U.S. standards. In addition, consistent with the Administration's belief in the general superiority and desirability of free trade, it is the policy of the Administration to remove or diminish to the extent feasible, barriers to international trade, including both barriers affecting the export of American goods and services to foreign countries and barriers affecting the import of foreign goods and services into the United States.

In accordance with the above statute and policy, the FAA has assessed the potential effect of this proposed rule and determined that it supports the Administration's free trade policy because this proposed rule would use European international standards as the basis for U.S. standards.

Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (the Act), enacted as Pub. L. 104–4 on March 22, 1995, requires each Federal agency, to the extent permitted by law, to prepare a written assessment of the effects of any Federal mandate in a proposed or final agency rule that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of $100 million or more (adjusted annually for inflation) in any one year. This proposed rule does not contain a Federal intergovernmental or private sector mandate that exceeds $100 million in any year, therefore the requirements of the act do not apply.

What Other Assessments Has the FAA Conducted?

Executive Order 13132, Federalism

The FAA has analyzed this proposed rule and the principles and criteria of Executive Order 13132, Federalism. The FAA has determined that this action would 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. Therefore, the FAA has determined that this notice of proposed rulemaking would not have federalism implications.

Paperwork Reduction Act

The Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)) requires that the FAA consider the impact of paperwork and other information collection burdens imposed on the public. We have determined that there are no new information collection requirements associated with this proposed rule.

International Compatibility

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to comply with International Civil Aviation Organization (ICAO) Standards and Recommended Practices to the maximum extent practicable. The FAA determines that there are no ICAO Standards and Recommended Practices that correspond to this proposed regulation.

Environmental Analysis

FAA Order 1050.1D defines FAA actions that may be categorically excluded from preparation of a National Environmental Policy Act (NEPA) environmental impact statement. In accordance with FAA Order 1050.1D,

appendix 4, paragraph 4(j), this proposed rulemaking action qualifies for a categorical exclusion.

Energy Impact

The energy impact of the proposed rule has been assessed in accordance with the Energy Policy and Conservation Act (EPCA) and Public Law 94–163, as amended (43 U.S.C. 6362), and FAA Order 1053.1. It has been determined that it is not a major regulatory action under the provisions of the EPCA.

Regulations Affecting Intrastate Aviation in Alaska

Section 1205 of the FAA Reauthorization Act of 1996 (110 Stat. 3213) requires the Administrator, when modifying regulations in Title 14 of the CFR in a manner affecting intrastate aviation in Alaska, to consider the extent to which Alaska is not served by transportation modes other than aviation, and to establish such regulatory distinctions as he or she considers appropriate. Because this proposed rule would apply to the certification of future designs of transport category airplanes and their subsequent operation, it could, if adopted, affect intrastate aviation in Alaska. The FAA therefore specifically requests comments on whether there is justification for applying the proposed rule differently to intrastate operations in Alaska.

Plain Language

In response to the June 1, 1998, Presidential memorandum regarding the issue of plain language, the FAA re-examined the writing style currently used in the development of regulations. The memorandum requires Federal agencies to communicate clearly with the public. We are interested in your comments on whether the style of this document is clear, and in any other suggestions you might have to improve the clarity of FAA communications that affect you. You can get more information about the Presidential memorandum and the plain language initiative at http://www.plainlanguage.gov.

List of Subjects in 14 CFR Part 25

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

The Proposed Amendment

In consideration of the foregoing, the Federal Aviation Administration proposes to amend part 25 of Title 14, Code of Federal Regulations, as follows:

PART 25—AIRWORTHINESS STANDARDS: TRANSPORT CATEGORY AIRPLANES

1. The authority citation for Part 25 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701, 44702 and 44704.

2. Amend § 25.1353 by revising paragraphs (a), (c)(5), and (c)(6) to read as follows:

§ 25.1353 Storage battery design and installation.

(a) Electrical equipment, controls, and wiring must be installed so that operations of any one unit or system of units will not adversely affect the simultaneous operation of any other electrical unit or system essential to the safe operation. Any electrical interference likely to be present in the airplane must not result in hazardous effects upon the airplane or its systems except under extremely remote conditions.

* * * * *

(c) * * *

(5) Each nickel cadmium battery installation must have provisions to prevent any hazardous effect on structure or essential systems that may be caused by the maximum amount of heat the battery can generate during a short circuit of the battery or of individual cells.

(6) Nickel cadmium battery installations must have—

(i) A system to control the charging rate of the battery automatically so as to prevent battery overheating; or

(ii) A battery temperature sensing and over-temperature warning system with a means for disconnecting the battery from its charging source in the event of an over-temperature condition; or

(iii) A battery failure sensing and warning system with a means for disconnecting the battery from its charging source in the event of battery failure.

Issued in Renton, Washington, on May 3, 2001.

Lirio Liu Nelson,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

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