DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. FAA–2002–11272; Notice No. 02–02]

RIN 2120–AH37

Revisions to Various Powerplant Installation Requirements for Transport Category Airplanes

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 powerplant installations. Specifically, the proposed rule would affect the standards applicable to thrust or power augmentation systems; fuel filling points; designated fire zones; and powerplant instruments. 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 April 1, 2002.

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–2002–11272 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–2002–11272.'' 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 that 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: Michael McRae, Propulsion/and Mechanical Systems Branch, ANM–112, Transport Airplane Directorate, Aircraft Certification Service, FAA, 1601 Lind Avenue SW., Renton, WA 98055–4056; telephone (425) 227–2133; fax (425) 227–1320, *e-mail mike.mcrae@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.

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, however, ARAC did not request the opportunity to review the draft prior to publication.

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 four sections of 14 CFR part 25, specifically:

Change #	Section No.	Section title
1	§ 25.945(b)(5)	Thrust or power augmentation system.
2	§ 25.973(d)	Fuel tank filler connection.
3	§ 25.1181(b)	Designated fire zones; regions included.

Change #	Section No.	Section title
4	§ 25.1305(a)(7) and (d)(2).	Powerplant instruments.

We have identified this proposed rulemaking project as a Category 1 project under the criteria of the Fast Track Harmonization Program. Each of the proposed changes would adopt the ''more stringent'' requirements of the parallel JAR.

How Is This Preamble Organized?

Each of the four proposed changes to the standards is discussed separately below. Although the reader may find much of the information repetitious, we consider it important that the public be provided the full explanation and reasoning behind each of the four proposed changes.

Change 1: § 25.945, Thrust or Power Augmentation System

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

Currently, JAR 25.945 contains a paragraph, which requires that:

- each augmentation system fluid tank must have an expansion space of not less than 2% of the tank capacity, and
- it must be impossible to fill the expansion space inadvertently while the airplane is in the normal ground attitude.

These requirements are intended to prevent the inadvertent discharge overboard of thrust or power augmentation fluids.

The parallel part 25 section does not contain this standard. However, the requirements of JAR 25.945(b)(5) are equivalent to those of § 25.969 (''Fuel tank expansion space'') and § 25.1013(b)(2) (''Oil tanks''), which address preventing the inadvertent discharge overboard of fuel and engine oil, respectively. (The JAR contains these same sections.) Both of those sections of part 25 require that there be a 2% expansion space in the tank to accommodate the likely volumetric expansion of the fluid when the airplane is exposed to hot day conditions, after the fluids are initially replenished in cold conditions.

The current requirements of both part 25 and JAR–25 do not specify the location of any augmentation fluid tank vent outlets, so it is not possible to be certain that adverse effects will not occur if fluid is discharged. However, depending on the type of augmentation fluid used, the adverse effects could include fire, corrosion, and freezing of controls or equipment. The 2% expansion space ensures that the risk of discharge of commonly-used augmentation fluids (typically water, or a mix of water and methanol) is unlikely to occur during typical operation of the airplane within its normal operating temperature envelope.

What Are the Current 14 CFR and JAR Standards?

There currently is no paragraph (b)(5) of § 25.945 in 14 CFR.

The current text of JAR 25.945(b)(5) (Change 15, amendment 25/ 96/1) is:

JAR 25.945 Thrust or power augmentation system

* * * * *

(b) Fluid tanks. Each augmentation system fluid tank must meet the following requirements:

* * *

(5) Each tank must have an expansion space of not less than 2% of the tank capacity. It must be impossible to fill the expansion space inadvertently with the aeroplane in the normal ground attitude.

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

As explained above, the requirements of JAR 25.945(b)(5) for the 2% expansion space ensure that the risk of discharge of commonly-used augmentation fluids is unlikely to occur during typical operation of the airplane under typical operating temperatures. Because JAR–25 contains this specific requirement in section 25.945, but part 25 does not, the JAR is considered ''more stringent.'' However, although there is no equivalent standard specifically in § 25.945, the requirement is basically covered separately under other sections of part 25.

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

Currently, U.S. manufacturers must comply with the ''more stringent'' requirements of JAR 25.945(b)(5) if they intend to sell their airplanes in Europe. Future certificated airplanes also are expected to meet the existing JAR requirements. In actual practice, however, U.S. manufacturers and other applicants already are meeting the ''more stringent'' JAR requirements by complying with §§ 25.969 and § 25.1013(b)(2).

Further, compliance with the JAR 25.945(b)(5) requirement rarely involves much additional design or manufacturing resources; in principle, it should be fairly simple to meet the design requirement of a tank that is 2% larger. Augmentation fluid tanks are small in comparison to fuel tanks and it is unlikely that design constraints would be encountered.

What Is the Proposed Action?

We propose to amend § 25.945 by incorporating the ''more stringent'' requirements of the JAR in a new paragraph (b)(5). The new paragraph would be identical (with some minor editorial differences) to the existing JAR 25.945(b)(5).

How Does This Proposed Standard Address the Underlying Safety Issue?

The proposed standard would continue to address the original underlying safety issue. The new § 25.945(b)(5) would control the identified adverse effects in the same way as the current JAR–25 requirement.

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

The proposed standard would maintain, and may increase, the level of safety currently provided by part 25.

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

Industry practice has been based upon the existing JAR–25 requirement. Currently, U.S. manufacturers are either already complying, or fully intend to comply, with the more stringent JAR requirements in order to sell their airplanes in Europe. Future certificated airplanes also are expected to meet the existing JAR requirements, and this proposed rule would simply adopt those same requirements.

Change 2: § 25.973, Fuel Tank Filler Connection

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

The current standards provide for a means by which the build-up of unwanted electrostatic charge can be prevented. Static charge can build up wherever fuel is flowing (during refueling, for example), and precautions are needed to dissipate that charge. Failure to do so could result in adverse effects such as uncontrolled sparking and arcing.

What Are the Current 14 CFR and JAR Standards?

The current text of 14 CFR 25.973(d) [amendment 25–72 (55 FR 29785, July 20, 1990)] is:

Section 25.973 Fuel tank filler connection.

Each fuel tank filler connection must prevent the entrance of fuel into any part of the airplane other than the tank itself. In addition—

* * * * *

(d) *Each fuel filling point, except pressure fueling connection points, must have a provision for electrically bonding the airplane to ground fueling equipment.*

The current text of JAR 25.973(d) (Change 15, amendment 25/ 96/1) is:

JAR 25.973 Fuel tank filler connection

Each fuel tank filler connection must prevent the entrance of fuel into any part of the aeroplane other than the tank itself. In addition-

* * * * *

(d) Each fuel filling point must have a provision for electrically bonding the aeroplane to ground fueling equipment.

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

Currently, § 25.973(d) requires that each fuel filling point—except the pressure fueling connection points—must have a provision for electrically bonding the airplane to ground fueling equipment. We have traditionally assumed that, whenever pressure refueling equipment is used, there is always a metallic connection between the aircraft fueling receptacle and the end of the refueling hose; this creates the electrical bonding that the standard requires. Thus, we included the exception in this section because pressure fueling connection points are considered to inherently provide adequate bonding.

The parallel JAR 25.973(d) does not make such an exception; it requires all fuel filling points to have a provision for electrically bonding the airplane to ground fueling equipment. On airplanes with pressure refueling connection points, this requirement can be met if the aircraft refueling receptacle is bonded to the airframe.

Because the JAR standard does not provide for an exception, it can be considered ''more stringent.'' In actuality, however, both standards ensure that the pressure fueling connection points provide adequate bonding.

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

In current practice, both the part 25 and the JAR standards have been applied to require bonding of pressure refueling connections. As stated previously, although the FAA standard includes the exception, we have applied the standard assuming that pressure fueling connection points naturally provide adequate bonding because there is always a metallic connection between the aircraft fueling receptacle and the end of the refueling hose.

What Is the Proposed Action?

We propose to adopt the ''more stringent'' requirements of the JAR by deleting the words ''except pressure fueling connection points'' from § 25.973(d). The requirements of the amended section would pertain to all fuel filling points. This change would make the part 25 and JAR–25 standards identical.

How Does This Proposed Standard Address the Underlying Safety Issue?

The proposed standard would continue to address the original underlying safety issue. The new § 25.973(d) would control the identified adverse effects in the same way as the current JAR 25.973(d) requirement.

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

The proposed standard would maintain, and may increase, the level of safety currently provided by part 25.

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

Industry practice has been based upon the existing JAR–25 requirement. Currently, U.S. manufacturers are either already complying, or fully intend to comply, with the ''more stringent'' JAR requirements in order to sell their airplanes in Europe. Future certificated airplanes also are expected to meet the existing JAR requirements, and this proposed rule would simply adopt those same requirements.

Change 3: § 25.1181, Designated Fire Zones

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

Section 25.1181 of both part 25 and JAR–25 defines which regions of the airplane are ''Designated Fire Zones.'' Paragraph (b) of that section defines a set of requirements that each Designated Fire Zone must meet so that the required level of powerplant fire protection can be achieved.

What Are the Current 14 CFR and JAR Standards?

The current text of 14 CFR 25.1181(b) [amendment 25–72, (55 FR 29785, July 20, 1990)] is:

Section 25.1181 Designated fire zones; regions included.

* * * * *

(*b*) *Each designated fire zone must meet the requirements of §§ 25.867 and 25.1185 through 25.1203.*

The current text of JAR 25.1181(b) (Change 15, amendment 25/96/1) is:

JAR 25.1181 Designated fire zones: regions included (*See ACJ 25.1181.*)

* * * * *

(b) Each designated fire zone must meet the requirements of JAR 25.867, 25.869, and 25.1185 to 25.1203.

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

The requirements of § 25.1181(b) and JAR 25.1181(b) are essentially identical: Both standards require that each designated fire zone must meet the requirements of sections 25.867 (''Fire protection: other components''), 25.1185 (''Flammable fluids''), and 25.1203 (''Fire detector system''). However, JAR 25.1181(b) contains an additional reference to 25.869 (''Fire protection: systems'').

Amendment 25–72 of part 25 introduced § 25.869 that, among other things, cross-referenced a number of Subpart E regulations related to systems situated in a Designated Fire Zone. However, there was no revision to any of the cross-referenced regulations in Subpart E (such as § 25.1181) to reference the new § 25.869.

When JAR–25 was revised at Change 14, it included the equivalent new JAR 25.869 requirement. In that action, JAR 25.1181(b) (in Subpart E) also was revised to add a reference to the new JAR 25.869.

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

There are no differences in the means of compliance with the two parallel standards. The only differences in the standards are the cross-references each contains to other related standards. The cross-references in this section are meant only to draw the applicant's attention to the fact that there are some associated fire protection requirements to consider that are located elsewhere in the standards. Regardless of whether the cross-references are contained in § 25.1181, applicants will have to consider the requirements of the cross-referenced standards in any case when

designing powerplant fire protection systems.

What Is the Proposed Action?

Section 25.1181(b) would be revised by adding an additional reference to § 25.869. Besides achieving harmonization between the two sets of standards, this change to § 25.1181(b) will clarify to applicants showing compliance with the powerplant fire protection requirements of part 25, Subpart E, that there are some associated fire protection requirements in § 25.869.

In addition, we propose to add references to § 25.863 (''Flammable fluid fire protection'') and to § 25.865 (''Fire protection of flight controls, engine mounts, and other flight structure'') in § 25.1181(b). (The JAA plans to take similar action.) These additional references will document the applicability of these two sections to fire zone standards. (This action is related to a separate harmonization project concerning flammable fluid fire protection.)

There is no legal standard concerning the use of ''cross-references'' in regulations. Even though one regulation may not contain a cross-reference to a second pertinent regulation, affected applicants are still expected to comply with both regulations as appropriate. In the case of this proposed change, applicants already have to consider the requirements of §§ 25.863, 25.865, and 25.869 in any case when designing powerplant fire protection systems.

How Does This Proposed Standard Address the Underlying Safety Issue?

The proposed standard would continue to address the safety issue and to maintain the current level of safety. It also would provide a more complete cross-referencing to other related rules.

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

The basic effect of the proposed changes to § 25.1181(b) is editorial—it merely provides a more complete cross-referencing of applicable standards. As stated previously, in actual practice, applicants already consider the requirements of all of the cross-referenced sections in any case when designing powerplant fire protection systems.

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

If the proposed standard is adopted, there would be no change to industry practice. However, the accurate cross-reference will enable applicants to clearly understand and comply with the standard.

Change 4: § 25.1305, Powerplant Instruments

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

The current standards specify the need for a indication on the flight deck to alert the flightcrew as to engine fire conditions and the position of the thrust reverser.

What Are the Current 14 CFR and JAR Standards?

The current texts of 14 CFR 25.1305(a)(7) and (d)(2) [amendment 25–72 (55 FR 29785, July 20, 1990)] are:

Section 25.1305 Powerplant instruments.

The following are required powerplant instruments:

(a) For all airplanes.

* * *

(7) Fire-warning indicators.

* * * * *

(d) For turbojet engine powered airplanes. In addition to the powerplant instruments required by paragraphs (a) and (c) of this section, the following powerplant instruments are required:

* * *

(2) A position indicating means to indicate to the flightcrew when the thrust reversing device is in the reverse thrust position, for each engine using a thrust reversing device.

* * * * *

The current texts of JAR 25.1305(a)(7) and (d)(2) (Change 15, amendment 25/96/1) are:

JAR 25.1305 Powerplant instruments

The following are required powerplant instruments:

(a) For all aeroplanes

* * *

(7) Fire-warning devices that provide visual and audible warning.

* * * * *

(d) For turbo-jet engine-powered aeroplanes. In addition to the powerplant instruments required by sub-paragraphs (a) and (c) of this paragraph, the following powerplant instruments are required:

* * *

(2) A means to indicate to the flight crew when the thrust reversing device—

(i) Is not in the selected position, and

(ii) Is in the reverse thrust position, for each engine using a thrust reversing device.

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

Both the FAA and JAA identify the need for positive annunciation directing the flightcrew's attention both to engine fire conditions and to thrust reverser positioning. However, the part 25 and JAR–25 requirements for such annunciation, as presented in § 25.1305, differ as follows:

1. *Paragraph (a)(7):* This requirement specifies the need for a flight deck warning of engine fire conditions.

- *The part 25 standard* requires ''[engine] fire warning indicators'' (which implies a visual means), but does not specifically require an audible warning.
- *The JAR–25 standard* specifies that the engine fire warning devices must provide both a visual *and* an audible warning. A warning that has both visual and audible aspects can be assumed to have enhanced ''attention getting'' capability.

2. *Paragraph (d)(2):* This requirement specifies the need for a flight deck indication of the position of the thrust reverser.

- *Both the part 25 and JAR–25 standards* require an indication of when the thrust reverser is deployed.
- *The JAR–25 standard* also requires an indication of when the thrust reverser is not in its selected position (for example, when the reverser has been commanded to deploy, but remains stowed).

In both paragraph (a)(7) and (d)(2), the JAR standard is considered the ''more stringent'' because it requires additional means to address the safety issue.

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

Complying with the JAR standard requires that applicants design flight deck systems with means to provide additional indications to the flightcrew. Currently, U.S. manufacturers must comply with these ''more stringent'' JAR requirements if they intend to sell their airplanes in Europe. Future certificated airplanes also are expected to meet the existing JAR requirements.

What Is the Proposed Action?

We recognize the higher level of safety provided by the JAR regulations and propose to revise § 25.1305 to adopt the more stringent requirements of JAR 25.1305(a)(7) and (d)(2).

How Does This Proposed Standard Address the Underlying Safety Issue?

The proposed standard would continue to address the safety issue by ensuring that the flightcrew would be provided with additional indications to enhance their awareness of the condition of the engines and thrust reversers.

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

The proposed standard would maintain, and may increase, the level of safety currently provided by part 25.

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

Industry practice has been based upon the existing JAR–25 requirement. Currently, U.S. manufacturers must comply with the ''more stringent'' requirements of JAR 25.1305 if they intend to sell their airplanes in Europe. Future certificated airplanes also are expected to meet the existing JAR requirements, and this proposed rule would simply adopt those same requirements.

General Information About the Proposal

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

We considered two alternatives to this proposal:

1. *No change to the existing standards.* We did not select this option because it would mean that the standards would continue to be ''unharmonized'' and manufacturers would have to continue to meet two different sets of standards when certificating their airplanes.

2. *The JAA could unilaterally adopt the standards of part 25.* We did not seriously consider this option because, where the part 25 standards are ''less stringent,'' this could potentially mean adopting a lower level of safety.

We consider the proposal, as contained in this notice, to be the most appropriate method to:

- Ensure that the highest level of safety is achieved, and
- Fulfill the objectives of harmonizing the U.S. and European standards.

Who Would Be Affected by the Proposed Changes?

Applicants for new, amended, or supplemental type certificates (which typically include manufacturers and modifiers) who have not previously applied for JAA certification would potentially be affected by the proposed amendment. However, as stated throughout this preamble, the aviation industry is either already complying, or fully intends to comply, with the more stringent standards as a means of obtaining joint FAA/JAA certification. Industry practice has been based upon the existing JAR–25 requirement and it is anticipated that there will be minimal impact to the industry if the proposed changes are adopted.

Is Existing FAA Advisory Material Adequate?

We do not consider that advisory material is necessary for any of the changes proposed.

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 effect 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 also requires the consideration of international standards and, where appropriate, that they be the basis of U.S. standards. And 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 annually (adjusted for inflation).

The FAA has determined that this proposal has no substantial costs, and that it is not ''a significant regulatory action'' as defined in Executive Order 12866, nor ''significant'' as defined in DOT's Regulatory Policies and Procedures. Further, this proposed rule would not have a significant economic impact on a substantial number of small entities, would reduce barriers to international trade, and would not impose an Unfunded Mandate on state, local, or tribal governments, or on the private sector.

The DOT Order 2100.5 prescribes policies and procedures for simplification, analysis, and review of regulations. If it is determined that the expected impact is so minimal that the proposed rule does not warrant a full evaluation, a statement to that effect and the basis for it is included in the proposed regulation. Accordingly, the FAA has determined that the expected impact of this proposed rule is so minimal that the proposed rule does not warrant a full evaluation. The FAA provides the basis for this minimal impact determination as follows:

Currently, airplane manufacturers must satisfy both part 25 and the European JAR–25 standards to certificate 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. As explained in detail previously, these efforts are referred to as ''harmonization.''

This proposal would revise §§ 25.945, 25.973, 25.1181 and 25.1305 of 14 CFR to incorporate the ''more stringent'' requirements currently in those same sections of JAR–25. This proposed rule results from the FAA's acceptance of recommendations made by ARAC. We have concluded that, for the reasons previously discussed in the preamble, the adoption of the proposed requirements in 14 CFR part 25 is the most efficient way to harmonize these sections and in so doing, the existing level of safety will be preserved.

There was consensus within the ARAC members, comprised of representatives of the affected industry, that the requirements of the proposed rule will not impose additional costs on U.S. manufacturers of part 25 airplanes. We have reviewed the cost analysis provided by industry through the ARAC process. A copy is available through the public docket. Based on this analysis, we consider that a full regulatory evaluation is not necessary.

We invite comments with supporting documentation regarding the regulatory evaluation statements based on ARAC's proposal.

Initial Regulatory Flexibility Determination

The Regulatory Flexibility Act (RFA) of 1980, 50 U.S.C. 601–612, 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 scale of the business, organizations, and

governmental 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 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 considers that this proposed rule would not have a significant 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 would require that new transport category aircraft manufacturers meet just one certification requirement, rather than different standards for the United States and Europe. Airplane manufacturers already meet or expect to meet this standard as well as the existing 14 CFR part 25 requirement.

Second, all U.S. transport-aircraft category manufacturers exceed the Small Business Administration small-entity criteria of 1,500 employees for aircraft manufacturers. The current U.S. part 25 airplane manufacturers include: Boeing, 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 minimally cost-relieving and that there are no small entity manufacturers of part 25 airplanes, the FAA certifies that this proposed rule would not have a significant impact on a substantial number of small entities.

International Trade Impact Assessment

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 the proposed rule and has determined that it supports the Administration's free trade policy because this 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), codified in 2 U.S.C. 1532–1538, enacted as Public Law 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. We have 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, we have 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 determined 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. We therefore specifically request 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. Add a new paragraph (b)(5) to § 25.945 to read as follows:

§ 25.945 Thrust or power augmentation system.

* * * * *

(b) * * *

(5) Each tank must have an expansion space of not less than 2% of the tank capacity. It must be impossible to fill the expansion space inadvertently with the airplane in the normal ground attitude.

* * * * *

3. Republish the introductory text and revise paragraph (d) of § 25.973 to read as follows:

§ 25.973 Fuel tank filler connection.

Each fuel tank filler connection must prevent the entrance of fuel into any part of the airplane other than the tank itself. In addition—

* * * * *

(d) Each fuel filling point must have a provision for electrically bonding the airplane to ground fueling equipment.

4. Revise paragraph (b) of § 25.1181 to read as follows:

§ 25.1181 Designated fire zones; regions included.

* * * * *

(b) Each designated fire zone must meet the requirements of §§ 25.863, 25.865, 25.867, 25.869, and 25.1185 through 25.1203.

5. Republish the introductory text and revise paragraphs (a)(7) and (d)(2) of § 25.1305 to read as follows:

§ 25.1305 Powerplant instruments

The following are required powerplant instruments:

(a) * * *

(7) Fire-warning devices that provide visual and audible warning.

* * * * *

(d) * * *

(2) A position indicating means to indicate to the flight crew when the thrust reversing device—

(i) Is not in the selected position, and

(ii) Is in the reverse thrust position, for each engine using a thrust reversing device.

* * * * *

Issued in Renton, Washington, on December 18, 2001.

Vi Lipski,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 02–1002 Filed 1–30–02; 8:45 am]

BILLING CODE 4910–13–U