DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Aviation Rulemaking Advisory Committee; Transport Airplane and Engine Issues—New Tasks

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of new task assignments for the Aviation Rulemaking Advisory Committee (ARAC).

SUMMARY: Notice is given of new tasks assigned to and accepted by the Aviation Rulemaking Advisory Committee (ARAC). This notice informs the public of the activities of ARAC.

FOR FURTHER INFORMATION CONTACT: Stewart R. Miller, Transport Standards Staff (ANM–110), Federal Aviation Administration, 1601 Lind Avenue, SW., Renton, WA 98055–4056; phone (425) 227–1255; fax (425) 227–1320.

SUPPLEMENTARY INFORMATION:

Background

The FAA has established an Aviation Rulemaking Advisory Committee to provide advice and recommendations to the FAA Administrator, through the Associate Administrator for Regulation and Certification, on the full range of the FAA's rulemaking activities with respect to aviation-related issues. This includes obtaining advice and recommendations on the FAA's commitment to harmonize its Federal Aviation Regulations (FAR) and practices with its trading partners in Europe and Canada.

One area ARAC deals with is Transport Airplane and Engine Issues. These issues involve the airworthiness standards for transport category airplanes and engines in 14 CFR parts 25, 33, and 35 and parallel provisions in 14 CFR parts 121 and 135.

The Tasks

This notice is to inform the public that the FAA has asked ARAC to provide advice and recommendation on the following harmonization tasks:

Avionics Systems

Task 1: Takeoff Warning System

JAR 25.703(a) is more specific in the requirements than the FAR. The JAR, requires parking brake input, while FAR is silent. Also, the JAR 25.703(b) references guidance material on manual warning deactivation and reset of the warning that needs to be examined, the FAA advisory material generated, and both advisories harmonized.

Task 2: Cockpit Instrument Systems

The wording of 25.1333(b) is different between FAR and JAR, which may lead to interpretation differences. In addition, the existing JAR guidance material needs to be examined and harmonized. Currently, no FAA guidance material exists, therefore, advisory circular will be written. AC/AMJ 25.11 paragraph 4 to be revisited.

The FAA expects ARAC to submit its recommendation(s) by March 31, 2001.

For each of the above tasks the working group is to review airworthiness, safety, cost, and other relevant factors related to the specified differences, including recent certification and fleet experience. Must reach consensus on harmonized Part 25/JAR 25 rule and guidance material.

The FAA also has asked that ARAC prepare the necessary documents, including notice of proposed rulemaking (NPRM) and economic analysis, to justify and carry out its recommendations. If the resulting recommendation is one or more NPRM's published by the FAA, the FAA may ask ARAC to recommend disposition of any substantive comments the FAA receives.

ARAC Acceptance of Tasks

ARAC has accepted the tasks and has chosen to establish a new Avionics Systems Harmonization Working Group. The working group will serve as staff to ARAC to assist ARAC in the analysis of the assigned task. Working group recommendations must be reviewed and approved by ARAC. If ARAC accepts the working group's recommendations, it forwards them to the FAA as ARAC recommendations.

Working Group Activity

The Avionics Systems Harmonization Working Group is expected to comply with the procedures adopted by ARAC. As part of the procedures, the working group is expected to:

1. Recommend a work plan for completion of the task, including the rationale supporting such a plan, for consideration at the meeting of ARAC to consider transport airplane and engine issues held following publication of this notice.

2. Give a detailed conceptual presentation of the proposed recommendations, prior to proceeding with the work stated in item 3 below.

3. Draft appropriate regulatory documents with supporting economic and other required analyses, and/or any other related guidance material or collateral documents the working group determines to be appropriate; or, if new or revised requirements or compliance methods are not recommended, a draft report stating the rationale for not making such recommendations. If the resulting recommendation is one or more notices of proposed rulemaking (NPRM) published by the FAA, the FAA may ask ARAC to recommend disposition of any substantive comments the FAA receives.

4. Provide a status report at each meeting of ARAC held to consider transport airplane and engine issues.

Participation in the Working Group

The Avionics Systems Harmonization Working Group will be composed of technical experts having an interest in the assigned task. A working group member need not be a representative of a member of the full committee.

An individual who has expertise in the subject matter and wishes to become a member of the working group should write to the person listed under the caption **FOR FURTHER INFORMATION CONTACT** expressing that desire, describing his or her interest in the tasks, and stating the expertise he or she would bring to the working group. All requests to participate must be received no later than November 20, 1998. The requests will be reviewed by the assistant chair and the assistant executive director, and the individuals will be advised whether or not the request can be accommodated.

Individuals chosen for membership on the working group will be expected to represent their aviation community segment and participate actively in the working group (e.g., attend all meetings, provide written comments when requested to do so, etc.). They also will be expected to devote the resources necessary to ensure the ability of the working group to meet any assigned deadline(s). Members are expected to keep their management chain advised of working group activities and decisions to ensure that the agreed technical solutions do not conflict with their sponsoring organization's position when the subject being negotiated is presented to ARAC for a vote.

Once the working group has begun deliberations, members will not be added or substituted without the approval of the assistant chair, the assistant executive director, and the working group chair.

The Secretary of Transportation has determined that the formation and use of ARAC are necessary and in the public interest in connection with the performance of duties imposed on the FAA by law.

Meetings of ARAC will be open to the public. Meetings of the Avionics Systems Harmonization Working Group

will not be open to the public, except to the extent that individuals with an interest and expertise are selected to participate. No public announcement of working group meetings will be made.

Issued in Washington, DC, on October 21, 1998.

Joseph A. Hawkins,

Executive Director, Aviation Rulemaking Advisory Committee.

[FR Doc. 98–28757 Filed 10–26–98; 8:45 am]

BILLING CODE 4910–13–M

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Notice of Intent To Rule on Application To Impose and Use the Revenue From a Passenger Facility Charge (PFC) at Mobile Regional Airport, Mobile, AL

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of intent to rule of application.

SUMMARY: The FAA proposes to rule and invites public comment on the application to Impose And Use the revenue from a PFC at Mobile Regional Airport under the provisions of the Aviation Safety and Capacity Expansion Act of 1990 (Title IX of the Omnibus Budget Reconciliation Act of 1990) (Pub. L. 101–508) and Part 158 of the Federal Aviation Regulations (14 CFR Part 158).

DATES: Comments must be received on or before November 27, 1998.

ADDRESSES: Comments on this application may be mailed or delivered in triplicate to the FAA at the following address: FAA Airports District Office, 120 North Hangar Driver, Suite B, Jackson, MS 39208–2306.

In addition, one copy of any comments submitted to the FAA must be mailed or delivered to Mobile Regional Airport, Mr. Roger Engstrom, Director of Aviation, of the Mobile Airport Authority at the following address: Mobile Airport Authority, P.O. Box 88004, Mobile, Alabama 36608–0004.

Air carriers and foreign air carriers may submit copies of written comments previously provided to the Mobile Airport authority under section 158.23 of Part 158.

FOR FURTHER INFORMATION CONTACT: Keafur Grimes, Program Manager, Jackson, Airports District Office, 120 North Hangar Drive, Suite B, Jackson, Mississippi 39208–2306, telephone number 601–965–4628. The application may be reviewed in person at this same location.

SUPPLEMENTARY INFORMATION: The FAA proposes to rule and invites public comment on the application to impose and use the revenue from a PFC at Mobile Regional Airport under the provisions of the Aviation Safety and Capacity Expansion Act of 1990 (Title IX of the Omnibus budget Reconciliation Act of 1990) (Public Law 101–508) and part 158 of the Federal Aviation Regulations (14 CFR Part 158).

On September 29, 1998, the FAA determined that the application to Impose and Use the revenue from a PFC submitted by Mobile Airport Authority was substantially complete within the requirements of section 158.25 of Part 158. The FAA will approve or disapprove the application, in whole or in part, no later than January 21, 1988.

The following is a brief overview of the application. PFC Application No. 98–02–C–00–MOB.

Level of the proposed PFC: $3.00.

Proposed charge effective date: May 1, 1999.

Proposed charge expiration date: August 30, 1999.

Total estimated PFC revenue: $445,000.

Brief description of proposed project(s): Elevator; Baggage claim display; and Terminal seating.

Class or classes of air carriers which the public agency has requested not be required to collect PFCs: Air Taxi/Commercial operators (ATCO) filing FAA Form 1800–31.

Any person may inspect the application in person at the FAA office listed above under **FOR FURTHER INFORMATION CONTACT.** In addition, any person may, upon request, inspect the application, notice and other documents germane to the application in person at the Mobile Airport Authority.

Issued in Jackson, Mississippi on October 5, 1998.

Wayne Atkinson,

Manager, Jackson Airports District Office, Southern Region.

[FR Doc. 98–28752 Filed 10–26–98; 8:45 am]

BILLING CODE 4910–13–M

[Federal Register: November 26, 1999 (Volume 64, Number 227)]
[Notices]
[Page 66522-66524]
From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr26no99-123]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Aviation Rulemaking Advisory Committee; Transport Airplane and Engine Issues--New and Revised Tasks

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

ACTION: Notice of new and revised task assignments for the Aviation Rulemaking Advisory Committee (ARAC).

SUMMARY: Notice is given of new tasks assigned to and accepted by the Aviation Rulemaking Advisory Committee (ARAC) and of revisions to a number of existing tasks. This notice informs the public of the activities of ARAC.

FOR FURTHER INFORMATION CONTACT: Dorenda Baker, Transport Airplane Directorate, Aircraft Certification Service (ANM-110), 1601 Lind Avenue, SW., Renton, WA 98055; phone (425) 227-2109; fax (425) 227-1320.

SUPPLEMENTARY INFORMATION:

Background

The **FAA** has established an Aviation Rulemaking Advisory Committee to provide advice and recommendations to the **FAA** Administrator, through the Associate Administrator for Regulation and Certification, on the full range of the **FAA**'s rulemaking activities with respect to aviation-related issues. This includes obtaining advice and recommendations on the **FAA**'s commitment to harmonize its Federal Aviation Regulations (FAR) and practices with its trading partners in Europe and Canada.

One area ARAC deals with is transport airplane and engine issues. These issues involve the airworthiness standards for transport category

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airplanes and engines in 14 CFR parts 25, 33, and 35 and parallel provisions in 14 CFR parts 121 and 135. The corresponding Canadian standards are contained in Parts V, VI, and VII of the Canadian Aviation Regulations. The corresponding European standards are contained in Joint Aviation Requirements (JAR) 25, JAR-E, JAR-P, JAR-OPS-Part 1, and JAR-26.

As proposed by the U.S. and European aviation industry, and as

agreed between the Federal Aviation Administration (**FAA**) and the European Joint Aviation Authorities (JAA), an accelerated process to reach harmonization has been adopted. This process is based on two procedures:

(1) Accepting the more stringent of the regulations in Title 14 of the Code of Federal Regulations (FAR), Part 25, and the Joint Airworthiness Requirements (JAR); and

(2) Assigning approximately 41 already-tasked significant regulatory differences (SRD), and certain additional part 25 regulatory differences, to one of three categories:

<bullet> Category 1--Envelope
<bullet> Category 2--Completed or near complete
<bullet> Category 3--Harmonize

The Revised Tasks

ARAC will review the rules identified in the ``FAR/JAR 25 Differences List,'' dated June 30, 1999, and identify changes to the regulations necessary to harmonize part 25 and JAR 25. ARAC will submit a technical report on each rule. Each report will include the cost information that has been requested by the **FAA**. The tasks currently underway in ARAC to harmonize the listed rules are superseded by this tasking.

New Tasks

The **FAA** has submitted a number of new tasks for the Aviation Rulemaking Advisory Committee (ARAC), Transport Airplane and Engine Issues. As agreed by ARAC, these tasks will be accomplished by existing harmonization working groups. The tasks are regulatory differences identified in the above-referenced differences list as Rule type = P-SRD.

New Working Group

In addition to the above new tasks, a newly established Cabin Safety Harmonization Working Group will review several FAR/JAR paragraphs as follows:

ARAC will review the following rules and identify changes to the regulations necessary to harmonize part 25 and JAR:

(1) Section 25.787;
(2) Section 25.791(a) to (d);
(3) Section 25.810;
(4) Section 25.811;
(5) Section 25.819; and
(6) Section 25.813(c).

ARAC will submit a technical report on each rule. Each report will include the cost information that has been requested by the **FAA**.

The Cabin Safety Harmonization Working Group would be expected to complete its work for the first five items (identified as Category 1 or 2) before completing item 6 (identified as Category 3).

Schedule

Within 120 days of tasking/retasking:

<bullet> For Category 1 tasks, ARAC submits the Working Groups' technical reports to the **FAA** to initiate drafting of proposed rulemaking documents.

<bullet> For Category 2 tasks, ARAC submits technical reports, including already developed draft rules and/or advisory materials, to the **FAA** to complete legal review, economic analysis, coordination, and issuance.

June 2000: For Category 3 tasks, ARAC submits technical reports including draft rules and/or advisory materials to the **FAA** to complete legal review, economic analysis, coordination, and issuance.

ARAC Acceptance of Tasks

ARAC has accepted the new tasks and has chosen to assign all but one of them to existing harmonization working groups. A new Cabin Safety Harmonization Working Group will be formed to complete the remaining tasks. The working groups serve as staff to ARAC to assist ARAC in the analysis of the assigned tasks. Working group recommendations must be reviewed and approved by ARAC. If ARAC accepts a working group's recommendations, it forwards them to the **FAA** and ARAC recommendations.

Working Group Activity

All working groups are expected to comply with the procedures adopted by ARAC. As part of the procedures, the working groups are expected to accomplish the following:

1. Document their decisions and discuss areas of disagreement, including options, in a report. A report can be used both for the enveloping and for the harmonization processes.
2. If requested by the **FAA**, provide support for disposition of the comments received in response to the NPRM or review the **FAA**'s prepared disposition of comments. If support is requested, the Working Group will review comments/disposition and prepare a report documenting their recommendations, agreement, or disagreement. This report will be submitted by ARAC back to the **FAA**.
3. Provide a status report at each meeting of ARAC held to consider Transport Airplane and Engine Issues.

Partcipation in the Working Groups

Membership on existing working groups will remain the same, with the formation of subtask groups, if appropriate. The Cabin Safety Harmonization Working Group will be composed of technical experts having an interest in the assigned task. A working group member need not be a representative of a member of the full committee.

An individual who has expertise in the subject matter and wishes to become a member of the Cabin Safety Harmonization Working Group should write to the person listed under the caption FOR FURTHER INFORMATION CONTACT expressing that desire, describing his or her interest in the tasks, and stating the expertise he or she would bring to the working group. All requests to participate must be received no later than December 30, 1999. The requests will be reviewed by the assistant chair, the assistant executive director, and the working group chair, and the individuals will be advised whether or not the request can be accommodated.

Individuals chosen for membership on the Cabin Safety Harmonization Working Group will be expected to represent their aviation community segment and participate actively in the working group (e.g., attend all meetings, provide written comments when requested to do so, etc.). They also will be expected to devote the resources necessary to ensure the ability of the working group to meet any assigned deadline(s). Members are expected to keep their management chain advised of working group activities and decisions to ensure that the agreed technical solutions do not conflict with their sponsoring organization's position when the subject being negotiated is presented to ARAC for a vote.

Once the working group has begun deliberations, members will not be added or substituted without the approval of the assistant chair, the assistant executive director, and the working group chair.

The Secretary of Transportation has determined that the formation and use of ARAC are necessary and in the public interest in connection with the performance of duties imposed on the **FAA** by law.

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Meetings of ARAC will be open to the public. Meetings of the working groups will not be open to the public, except to the extent that individuals with an interest and expertise are selected to participate. No public announcement of working group meetings will be made.

Issued in Washington, DC, on November 19, 1999.
Anthony F. Fazio,
Executive Director, Aviation Rulemaking Advisory Committee.
[FR Doc. 99-30774 Filed 11-24-99; 8:45 am]
BILLING CODE 4910-13-M

MAR 15 2000

Mr. Craig Bolt
Assistant Chair, Transport Airplanes
and Engines Issues Group
400 Main Street
East Hartford, CT 06108

Dear Mr. Bolt:

This letter acknowledges receipt of the following working group technical reports that you have submitted on behalf of the Aviation Rulemaking Advisory Committee (ARAC) on Transport Airplane and Engine Issues (TAE):

Date of Letter	Task No.	Description of Recommendation	Working Group
12/14/00	1, 2, 3	Fast track reports addressing §§ 25.703(a) thru (c) (takeoff warning system); 25.1333(b) (instrument systems; and 25.1423(b) (public address system)	ASHWG
12/17/00	5	Fast track reports addressing §§ 25.111(c)(4), 25.147, controllability in 1-engine inoperative condition; 25.161 (c) (2) and (4), and (e) (longitudinal trim and airplanes with 4 or more engines) 25.175(d) (static longitudinal stability; 25.177(a)(b) (static lateral-directional stability); 25.253(a)(3) (high speed characteristics); 25.1323(c) (airspeed indicating system); 25.1516 (landing gear speeds); 25.1527 (maximum operating altitude); 25.1583(c) and (f) operating limitations) 25.1585 (operating procedures); and 25.1587 (performance information)	FTHWG
12/17/00	7	Fast track report addressing § 25.903(e) (inflight engine failures)	PPIHWG

12/20/00	5	Fast track reports addressing §§ 25.1103 (auxiliary power units); 25.933(a) (thrust reverers); 25.1189 (shutoff means); 25.1141 (powerplant controls); 25.1093 (air intake/induction systems); 25.1091 (air intake system icing protection; 25.943 (thrust reverser system tests); 25.934 (negative acceleration); 25.905(d) (propeller blade debris); 25.903(d)(1) (engine case burn-through); 25.901(d) (auxiliary power unit installation; and 1.1 (general definitions)	PPIHWG
12/20/00	4	Fast track report, category 2 format--NRRM addressing § 25.302 and appendix K (interaction of systems and structures	LDHWG
12/20/00	2	Fast track report—(in NPRM/AC format) addressing §§ 25.361 and 25.362 (engine and auxiliary power unit load conditions)	LDHWG
12/20/00	1	Fast track report addressing § 25.1438 (pressurization and low pressure pneumatic systems)	MSHWG

The above listed reports will be forwarded to the Transport Airplane Directorate for review. The Federal Aviation Administration's (FAA) progress will be reported at the TAE meetings.

This letter also acknowledges receipt of your July 28, 1999, submittal which included proposed notices and advisory material addressing lightning protection. We apologize for the delay. Although the lightning protection task is not covered under the fast track proposal, the FAA recognizes that technical agreement has been reached and we will process the package accordingly. The package has been sent to Aircraft Certification for review; the working group will be kept informed of its progress through the FAA representative assigned to the group.

Lastly, at the December 8 - 9, 1999, TAE meeting, Mr. Phil Salee of the Powerplant Installation Harmonization Working Group indicated that the working group members agreed that § 25.1103 was sufficiently harmonized and that any further action was beyond the scope of task 8 assigned. We agreed with the TAE membership to close the task. This letter confirms the FAA's action to close the task to harmonize § 25.1103.

ACTION: ANM

Pratt & Whitney
400 Main Street
East Hartford, CT 06108

Pratt & Whitney
A United Technologies Company

December 14, 1999

Department of Transportation
Federal Aviation Administration
800 Independence Ave, SW
Washington, D.C. 20591

Attention: Mr. Tom McSweeny, Associate Administrator for Regulation and Certification

Reference: ARAC Tasking, Federal Register, November 26, 1999

Dear Tom,

In accordance with the reference tasking statement, the ARAC Transport Airplane and Engine Issues Group is pleased to forward the attached technical reports which provide ARAC recommendations for FAR/JAR harmonization of the following rules:

25.703(a)(b)(c) – Takeoff Warning System – ANM-99-017-A -TASK #1
25.1333(b) – Instrument Systems – ANM-99-018-A -TASK #2
25.1423(b) – Public Address System – ANM-00-092-A
TRANS TO FLIGHT TEST HWG NOW ANM-00-208-A

These reports have been prepared by the Avionics System Harmonization Working Group of the TAEIG.

Sincerely,

Craig R. Bolt

C. R. Bolt
Assistant Chair, TAEIG
Phone: 860-565-9348, Fax 860-557-2277, M/S 162-24
Email: boltcr@pweh.com

cc: Dorenda Baker – FAA-NWR*
Tony Fazio – FAA. ARM-1*
Kristin Larson – FAA-NWR
Vid Variakojis, Boeing*
*(letter only)

Action ARM

400 Main Street
East Hartford, Connecticut 06108

Pratt & Whitney
A United Technologies Company

April 4, 2000

Federal Aviation Administration
800 Independence Avenue, SW
Washington, DC 20591

Attention: Mr. Thomas McSweeny, Associate Administrator for Regulation and Certification

Subject: ARAC Recommendations

Reference:
1) ARAC Tasking, Federal Register, November 19, 1999
2) TAEIG letter to FAA, Transmittal of ARAC Recommendations for 25.703 and 25.1333b, dated December 14, 1999

Dear Tom,

The Transport Airplane and Engine Issues Group is pleased to submit the following "Fast Track" reports as recommendations in accordance with the Reference 1 tasking. These reports have been prepared by the Avionics Harmonization Working Group.

- FAR 25.703 - Note report previously submitted per Reference 2 but has been modified to include recommended advisory material.
- FAR 25.1333(b) - Note report previously submitted per Reference 2 but has been modified to clarify terminology.
- FAR 25.1331 (a)(2) and (a)(3).

Sincerely yours,

Craig R. Bolt

Craig R. Bolt
Assistant Chair, TAEIG

Attachments

Copy: Kris Carpenter, FAA-NWR
*Clark Badie, Honeywell
*Effie Upshaw, FAA Washington, DC

*letter only

CRB06_040400

FAR/JAR 25.1333 (b)

(Final Report)

A. FAR 25.1333(b)

1. **What is the underlying safety issue addressed by FAR/JAR?**
The requirement ensures that there is sufficient information to the flight crew for safe control of the airplane in the event of a failure condition. It also ensures that the crew work load will not be increased by requiring that essential information to be present without additional crew action.

2. **What are current FAR and JAR standards?**
Current FAR 25.1333(b):

(b) The equipment, systems, and installations must be designed so that one display of the information essential to the safety of flight which is provided by the instruments, including attitude, direction, airspeed, and altitude will remain available to the pilots, without additional crew member action, after any single failure or combination of failures that is not shown to be extremely improbable; and

Current JAR 25.1333(b):

(b) The equipment, systems, and installations must be designed so that sufficient information is available to assure control of the aeroplane in speed, altitude, heading and attitude by one of the pilots without immediate crew action, after any single failure or combination of failures that is not assessed to be extremely improbable (see ACJ 25.1333(b)); and

3. **What are the differences in the standards?**
a. The FAR requires one display of the essential information required for safe flight (attitude, direction airspeed, and altitude) while the JAR asks for sufficient information to assure control of attitude, direction, airspeed, and altitude.
b. The JAR language replaces the word "additional" in phrase "without additional crew action" with the word "immediate" implying that some later crew member action is possible.
c. The FAR uses "direction" while the JAR uses "heading".

4. **What, if any, are the differences in required means of compliance?**
   a. The JAA may require to demonstrate what is the sufficient information required to assure control of the airplane in attitude, direction, airspeed, and altitude.
   b. The FAA requires an analysis to show compliance, while the JAA may accept a combination of analysis and/or demonstration.

FAR/JAR 25.1333 (b)

(Final Report)

A. FAR 25.1333(b)

1. What is the underlying safety issue addressed by FAR/JAR?

The requirement ensures that there is sufficient information to the flight crew for safe control of the airplane in the event of a failure condition. It also ensures that the crew work load will not be increased by requiring that essential information to be present without additional crew action.

2. What are current FAR and JAR standards?

Current FAR 25.1333(b):

(b) The equipment, systems, and installations must be designed so that one display of the information essential to the safety of flight which is provided by the instruments, including attitude, direction, airspeed, and altitude will remain available to the pilots, without additional crew member action, after any single failure or combination of failures that is not shown to be extremely improbable; and

Current JAR 25.1333(b):

(b) The equipment, systems, and installations must be designed so that sufficient information is available to assure control of the aeroplane in speed, altitude, heading and attitude by one of the pilots without immediate crew action, after any single failure or combination of failures that is not assessed to be extremely improbable (see ACJ 25.1333(b)); and

3. What are the differences in the standards?

a. The FAR requires one display of the essential information required for safe flight (attitude, direction airspeed, and altitude) while the JAR asks for sufficient information to assure control of attitude, direction, airspeed, and altitude.

b. The JAR language replaces the word "additional" in phrase "without additional crew action" with the word "immediate" implying that some later crew member action is possible.

c. The FAR uses "direction" while the JAR uses "heading".

4. What, if any, are the differences in required means of compliance?

a. The JAA may require to demonstrate what is the sufficient information required to assure control of the airplane in attitude, direction, airspeed, and altitude.

b. The FAA requires an analysis to show compliance, while the JAA may accept a combination of analysis and/or demonstration.

5. **What is the proposed action?**
Envelope on the FAR/JAR; use the JAR words modified to include the FAR statement "without additional crew action". Also change "speed" to "airspeed".

6. **What should the harmonized standard be?**
(b) The equipment, systems, and installations must be designed so that sufficient information is available to assure control of the airplane airspeed, altitude, heading, and attitude by one of the pilots without additional crew member action, after any single failure or combination of failures that is not assessed to be extremely improbable;
and

7. **How does this proposed standard address the underlying safety issue (identified in #1)?**
Same as stated on #1 above.

8. **Relative to current FAR, does the proposed standard increase, decrease, or maintain the same level of safety?**
Maintains the same level of safety.

9. **Relative to current industry practice, does the proposed standard increase, decrease, or maintains the same level of safety?**
Maintains the same level of safety.

10. **What other options have been considered and why were they not selected?**
The FAR words were considered. However, the proposed wording permits better flexibility in light of the new technologies while maintaining the same safety level.

11. **Who would be affected by the proposed change?**
Non FAA certificated systems.

12. **To ensure harmonization, what current advisory material (e.g., ACJ, AMJ, AC, policy letters) need to be included in the rule text or preamble?**
The AC/AMJ 25-11 and ACJ 25.1333 needs to be reviewed. A harmonized AC/ACJ needs to be developed.

13. **Is existing FAA advisory material adequate?**
See #12 above.

14. **If not, what advisory material should be adopted?**
See #12 above.

15. **How does the proposed standard affect the current ICAO standard?**
The AVHWG is not aware of any..

16. **How does the proposed standard affect other HWG's?**
None affected.

17. **What is the cost impact of complying with the proposed standard?**
None if the system complies with the FAA requirements.

18. **Does the HWG want to review the draft NPRM at "Phase 4" prior to publication in the Federal Register?**
Yes.

19. **In light of the information provided in this report, does the HWG consider that the "fast Track" process is appropriate for this rulemaking project, or is the project too complex or controversial for the "Fast Track" process?**
This project is appropriate for the "Fast Track" process.

FAR/JAR 25.1333 (b)
Avionics Harmonization Working Group
Final Report / Issue 2

(as agreed in AVHWG Meeting #4 in Toulouse on January 13, 2000)

TAE
AVIONICS 99
AVHWG

1. What is the underlying safety issue addressed by FAR/JAR?

The requirement ensures that there is sufficient information to the flight crew for safe control of the airplane in the event of a failure condition. It also ensures that the crew work load will not be increased by requiring that essential information to be present without additional crew action.

2. What are current FAR and JAR standards?

Current FAR 25,1333(b):

(b) The equipment, systems, and installations must be designed so that one display of the information essential to the safety of flight which is provided by the instruments, including attitude, direction, airspeed, and altitude will remain available to the pilots, without additional crew member action, after any single failure or combination of failures that is not shown to be extremely improbable; and . . .

Current JAR 25.1333(b):

(b) The equipment, systems, and installations must be designed so that sufficient information is available to assure control of the aeroplane in speed, altitude, heading and attitude by one of the pilots without immediate crew action, after any single failure or combination of failures that is not assessed to be extremely improbable (see ACJ 25.1333(b)); and. . .

3. What are the differences in the standards?

The FAR requires one display of the essential information required for safe flight (attitude, direction airspeed, and altitude), while the JAR asks for sufficient information to assure control of attitude, direction, airspeed, and altitude.

The JAR language replaces the word "*additional*" in the phrase "without additional crew action" with the word "*immediate*," implying that some later crew member action is possible.

The FAR uses the term "*direction,*" while the JAR uses "*heading.*"

4. What, if any, are the differences in required means of compliance?

a. The JAA may require demonstration of the *sufficient information* necessary to assure control of the airplane in attitude, direction, airspeed, and altitude.

b. The FAA requires an analysis to show compliance, while the JAA may accept a combination of analysis and/or demonstration.

5. What is the proposed action?

Envelope on the FAR/JAR; use the JAR words modified to include the FAR statement "without additional crew action".

6. What should the harmonized standard be?

"(b) The equipment, systems, and installations must be designed so that sufficient information is available to assure control of the airplane in airspeed, altitude, direction, and attitude by one of the pilots without additional crew member action, after any single failure or combination of failures that is not assessed to be extremely improbable; and . . ."

7. How does this proposed standard address the underlying safety issue (identified in #1)?

Same as stated on #1, above.

8. Relative to current FAR, does the proposed standard increase, decrease, or maintain the same level of safety?

Maintains the same level of safety.

9. Relative to current industry practice, does the proposed standard increase, decrease, or maintains the same level of safety?

Maintains the same level of safety.

10. What other options have been considered and why were they not selected?

The FAR words were considered. However, the proposed wording permits better flexibility in light of the new technologies while maintaining the same safety level.

The group considered both terms "direction" and "heading" for the harmonized FAR/JAR, taking into consideration both the conventional display methods and possible future display methods developed to control the aircraft.

As a starting point we reviewed the definition of direction – "The course by which something moves, lies, or points." This implies that heading is ONE FORM of direction, but not necessarily the only form. Graphical representation of aircraft direction is becoming more widespread, and may provide better situational awareness than today's conventional representation using heading as a primary or only direction source. Other information sources (position, database information, and inertial velocities) may provide more accurate and more integrated representations of aircraft direction, possibly resulting in more accurate control.

In addition, the word "direction indicator" is used in other FAR/JAR material, most notably 25.1303 which identifies required instruments. The existing FAR 25.1333(b) includes the word "direction." Admittedly, many parenthetical and other comments within the FAR/JAR, as well as historical applications, imply a gyroscopically stabilized (or heading) indicator, but the sole use of "heading" becomes more restrictive, possibly preventing the implementation of novel and improved design features intended for safer operation of the aircraft. Therefore, the group's position is to maintain the existing FAR wording of "direction."

11. Who would be affected by the proposed change?

Airplane and airplane systems manufacturers. Non-FAA-certificated systems.

12. To ensure harmonization, what current advisory material (e.g., ACJ, AMJ, AC, policy letters) need to be included in the rule text or preamble?

The AC/AMJ 25-11 and ACJ 25.1333 needs to be reviewed. A harmonized AC/ACJ needs to be developed. *[PER 1/00 TAE MEETING: Working Group is developing AC material – expected Spring 2000.]*

13. Is existing FAA advisory material adequate?

See #12 above.

14. If not, what advisory material should be adopted?

See #12 above.

15. How does the proposed standard affect the current ICAO standard?

The AVHWG is not aware of any..

16. How does the proposed standard affect other HWG's?

None affected.

17. What is the cost impact of complying with the proposed standard?

None, if the system complies with the FAA requirements.

18. Does the HWG want to review the draft NPRM at "Phase 4" prior to publication in the Federal Register?

Yes.

19. In light of the information provided in this report, does the HWG consider that the "fast Track" process is appropriate for this rulemaking project, or is the project too complex or controversial for the "Fast Track" process?

This project is appropriate for the "Fast Track" process.

■

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. _____; Notice No._____]

RIN: 2120-

Cockpit Instrument Systems on 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 cockpit instrument systems. The proposed action would revise the requirements for the display of essential information to the flightcrew by adopting the text of the current parallel requirements of the European Joint Airworthiness Requirements (JAR). It also would clarify the current application of the requirements and standardize certain terminology used. Adopting this proposal would eliminate regulatory differences between the airworthiness standards of the U.S. and the Joint Aviation Authorities of Europe, without affecting current industry design practices.

DATES: Send your comments on or before [Insert date 60 days after date of publication in the Federal Register.]

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 _____ 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. _____." 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: J. Kirk Baker, FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, Systems & Equipment Branch, ANM-130L, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5345; fax (562) 627-5210; e-mail kirk.baker@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 he 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 can get an electronic copy using the Internet by taking the following steps:

(1) Go to the search function of the Department of Transportation's electronic Docket Management System (DMS) web page (http://dms.dot.gov/search).

(2) On the search page type in the last four digits of the Docket number shown at the beginning of this notice. Click on "search."

(3) On the next page, which contains the Docket summary information for the Docket you selected, click on the document number of the item you wish to view.

You can also get an electronic copy using the Internet through the Office of Rulemaking's web page at http://www.faa.gov/avr/armhome.htm or the Federal Register's web page at http://www.access.gpo.gov/su_docs/aces/aces140.html.

You can also get a copy 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. Make sure to identify the docket number, notice number, or amendment number of this rulemaking.

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 we accept an ARAC recommendation, we proceed 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 we have 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.

We 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) and the first NPRM published under this program, Fire Protection Requirements for Powerplant Installations on Transport Category Airplanes (64 FR 36978, June 12, 2000).

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 Fast Track Harmonization Program. In this NPRM, the FAA proposes to amend § 25.1333(b), concerning cockpit instrument systems on transport category

airplanes. This project has been identified as a **Category 1** project under the Fast Track program.

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

The current standards ensure that, in the event of a failure condition, the flightcrew will be provided with the information necessary to continue to control the airplane safely. The standards also ensure that this information is presented without any increase in the flightcrew's workload.

What are the Current 14 CFR and JAR Standards?

The current text of 14 CFR 25.1333 (amendment 25-41) is:

"§ 25.1333 Instrument systems

For systems that operate the instruments required by Sec. 25.1303(b) which are located at each pilot's station--

(a) Means must be provided to connect the required instruments at the first pilot's station to operating systems which are independent of the operating systems at other flight crew stations, or other equipment;

(b) The equipment, systems, and installations must be designed so that one display of the information essential to the safety of flight which is provided by the instruments, including attitude, direction, airspeed, and altitude will remain available to the pilots, without additional crewmember action, after any single failure or combination of failures that is not shown to be extremely improbable; and

(c) Additional instruments, systems, or equipment may not be connected to the operating systems for the required instruments, unless provisions are made to ensure the continued normal functioning of the required instruments in the event of any malfunction of the additional instruments, systems, or equipment which is not shown to be extremely improbable."

The current text of JAR 25.1333(b) (Change 15, amendment 25/ 96/1) is:

"JAR 25.1333(b) Instrument systems

For systems that operate the instruments required by JAR 25.1303(b) which are located at each pilot's station--

(a) Means must be provided to connect the required instruments at the first pilot's station to operating systems which are independent of the operating systems at other flight crew stations, or other equipment;

(b) The equipment, systems, and installations must be designed so that sufficient information is available to assure control of the aeroplane in speed, altitude, heading and attitude by one of the pilots without immediate crew action after any single failure or combination of failures that is not assessed to be extremely improbable (see ACJ 25.1333(b)); and

(c) Additional instruments, systems, or equipment may not be connected to the operating systems for the required instruments, unless provisions are made to ensure the continued normal functioning of the required instruments in the event of any malfunction of the additional instruments, systems, or equipment which is not shown to be extremely improbable."

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

The main differences between the two standards are found in paragraph (b):

First, § 25.1333(b) specifically requires that, if any of the described failures occurs, one display of essential information for continued safe flight must be available to the flightcrew. "Essential information" in this case includes attitude, direction, airspeed, and altitude. However, JAR 25.1333(b) requires that, if any of the described failures occurs, sufficient information be provided to the flightcrew to assure control of the airplane's attitude, direction, airspeed, and altitude. The wording of the JAR

requirements implies that essential information could be provided in a way other than by means of just "one display."

Second, § 25.1333(b) requires that the essential information be available without any "additional" flightcrew action. JAR 25.1333(b) requires that the essential information be available without "immediate" crew action, implying that there may be some later action required by a flightcrew member.

Third, there is a difference between the standards in the terminology used for the same item: § 25.1333(b) uses the term "direction," while JAR 25.1333(b) uses the term "heading."

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

The requirements of § 25.1333(b) specify that only one display of essential information must be provided, and the FAA usually accepts demonstration of compliance with this requirement by analysis. However, the JAA requires that applicants demonstrate that the flightcrew will be provided with sufficient information necessary to assure the continued control of the airplane. This may require an applicant to perform a combination of analysis and actual demonstration to show compliance with this requirement. It may also entail the applicant providing more than only one display of the essential information.

There also is a difference in the way industry has demonstrated compliance with this section, specifically as it pertains to "direction indication." As stated in the introductory text of § 25.1333 (and the parallel JAR 25.1333), the requirements of the section apply to flight and navigation instruments whose installation is required by § 25.1303(b) ("Flight and navigation instruments"). Section 25.1303(b) lists the specific instruments that must be installed at each pilot station, and § 25.1303(b)(6) specifies that "a direction indicator (gyroscopically stabilized, magnetic, or non-magnetic)" is one of those required instruments. In light of that introductory text, it could be interpreted to mean that, in order to meet the requirements of § 25.1333(b), a third source of

gyroscopically stabilized, magnetic, or non-magnetic direction indication would have to be available to the flightcrew. This is not the intent of the regulation, and the current FAA-accepted method of compliance with § 25.1333(b) for a single display of direction has been the installation of "a direction indicator (non-stabilized magnetic compass)" as required by § 25.1303(a)(3).

In light of this, we find that clarification of the requirements of § 25.1333 is necessary. The intent of § 25.1333 is not to specify the type of direction indication, but to require only that a source of direction indication that meets the requirement of § 25.1303(a) or (b) must be available to the flightcrew. As explained below, we propose to revise the current rule to clarify this.

What Is the Proposed Action?

The FAA proposes the following changes to § 25.1333:

1. Paragraph (a): The introductory text [relating to systems that operate the instruments required by § 25.1303(b)] would be moved from the beginning of the entire section and placed instead at the beginning of paragraph (a).

2. Paragraph (b):

   - The phrase "additional crewmember action" would be changed to "additional flightcrew action." This is to clarify that only a member of the flightcrew would perform the required action.
   - The text would be revised to incorporate the text of the current JAR 25.1333(b) that requires providing "sufficient information" (instead of "one display"). However, it would retain the phrase "without additional flightcrew action."

3. Paragraph (c): The text would be revised to specify that this paragraph relates only to the instruments required by § 25.1303(b).

The JAA is planning to make these same changes to JAR 25.1333.

How Does This Proposed Standard Address the Underlying Safety Issue?

The proposed standard would continue:

- to address the need for sufficient information to be provided to the flightcrew for safe control of the airplane in the event of a failure condition, and
- to ensure that the flightcrew's workload was not increased.

As revised, the proposed standard would maintain the current level of safety while, at the same time, permit better design flexibility to integrate new technologies as they arise.

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

The proposed standard would maintain the current level of safety as mandated by the existing regulations. The specific proposed changes, as described above, would standardize terminology and clarify the intent of the rule.

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

The proposed standard would maintain the current level of safety and would not change current industry practice. Manufacturers of transport category airplanes are already satisfying both standards in order to certificate their airplanes in both the United States and Europe. By clarifying the intent of the rule and standardizing the terminology, the proposed action will facilitate consistent and reliable interpretation of the requirements.

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

One option considered was to revise JAR 25.1333(b) by adopting the text of § 25.1333(b); that is, change the requirement for providing "sufficient information" to providing "one display." However, this was rejected because the current JAR standard [and thus the proposed revised § 25.1333(b)] permits better flexibility of design in light of new technologies, while maintaining the same level of safety.

Another issue considered was the choice of appropriate terminology for the harmonized standard, specifically the use of either "direction" or "heading" in describing the required information to be provided to the flightcrew. ARAC has recommended to the FAA that the term "direction" be retained in the proposed FAA standard and that JAR 25.1333(b) be revised instead to replaee the term "heading" with "direction." This recommendation took several issues into consideration:

First, the term heading is defined as "the compass direction in which the longitudinal axis of an aircraft points." Direction is a much broader term, defined as "the course by which something moves, lies, or points." This means that heading is only one form of direction, but not necessarily the only form.

Second, graphical representation of aircraft direction is becoming more widespread, and may provide better situational awareness than today's conventional representation using heading as a primary or only direction source. Other information sources (i.e., position, database information, and inertial velocities) may provide more accurate and more integrated representations of aircraft direction, possibly resulting in more accurate control.

Finally, the term direction indicator is used in other sections of both 14 CFR and the JAR, such as § 25.1303. Many historical applications imply that a "direction indicator" is a gyroscopically stabilized (or heading) indicator. However, the use of only the term "heading" creates a more restrictive standard, possibly preventing the implementation of novel and improved design features intended for safer operation of the aircraft.

In consideration of these issues, we concurred with ARAC's recommendation that the term "direction" is more appropriate and has retained it in the proposed standard.

Who Would Be Affected by the Proposed Change?

Manufacturers of transport category airplanes (and possibly manufacturers of flightdeck instrument systems) would be affected by this revised standard. However, as

discussed previously, these entities are already satisfying both FAA and JAA standards in order to certificate their airplanes in both the United States and Europe.

Is Existing FAA Advisory Material Adequate?

We are developing advisory material, in the form of an Advisory Circular (AC), that relates to this proposed rule. When the AC is available, we will announce it in a separate notice in the Federal Register.

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, we have determined that the expected impact of this proposed rule is so minimal that the proposed rule does not warrant a full evaluation. We provide the basis for this 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 the requirements for the display of essential information to the flightcrew by adopting the text of the current parallel JAR requirements. It also would clarify current application of requirements and standardize certain terminology used. 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.

We consider 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. manufacturers of part 25 airplanes 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 we have 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

In accordance with the Paperwork Reduction Act of 1995 [44 U.S.C. 3507(d)], we have determined there are no requirements for information collection 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. We have 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 assessment or environmental impact statement. In accordance with FAA Order 1050.1D, appendix 4, paragraph 4(j), this rulemaking 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, we 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 communication 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 record keeping requirements, Safety, Transportation.

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. Revise § 25.1333 to read as follows:

§ 25.1333 Instrument systems.

(a) For systems that operate the instruments required by § 25.1303(b) which are located at each pilot's station, means must be provided to connect the required instruments at the first pilot's station to operating systems, which are independent of the operating systems at other flight crew stations, or other equipment.

(b) Equipment, systems, and installations must be designed so that sufficient information is available to assure control of the airplane in airspeed, altitude, direction and attitude by one of the pilots without additional flightcrew action, after any single failure or combination of failures that is not assessed to be extremely improbable; and

(c) Additional instruments, systems, or equipment may not be connected to the operating systems for the instruments required by § 25.1303(b), unless provisions are made to ensure the continued normal functioning of the required instruments in the event of any malfunction of the additional instruments, systems, or equipment which is not shown to be extremely improbable.

Issued in Renton, Washington, on

Transport Airplane Directorate
Aircraft Certification Service

#2

Date: 6/7/01 3:00 PM
Sender: Brenda Courtney
To: Gerri Robinson
cc: Effie Upshaw
Priority: Normal
Subject: Fwd:HWG Rvw, 25.1333(b) Cockpit Instrument
for the records.

Forward Header

Subject: HWG Rvw, 25.1333(b) Cockpit Instrument
Author: Kristin Carpenter
Date: 6/7/01 10:56 AM

Craig,
Attached are the draft NPRM and AC for 25.1333(b), Cockpit Instrument Systems. These documents have received concurrence from the FAA engineer,tech writer,and lawyer.

The Transport Airplane Directorate, the Office of Rulemaking and the Office of Policy and Planning (APO) have recently made agreements to further expedite our economic evaluation process. To expedite the process, APO developed the attached questionnaire to be filled out by the working group. We request the ASHWG complete the APO questionnaire. When completed, the working group should revisit the draft regulatory summary in the NPRM. The ASHWG should indicate whether or not they concur that the draft regulatory summary adequately reflects their cost/benefit determination. If the summary does not provide an accurate reflection, please provide recommendations for changes. If acceptable to TAEIG, the working group's cost/benefit analysis will be placed in the public docket in lieu of a complete regulatory evaluation prepared by the FAA. The NPRM will be processed with the summary as written or per the working group's recommended changes.

Per the Fast Track process, the working group receives 60 working days to review this document, if requested. Please have the ASHWG review the documents and provide their comments in a report to TAEIG, documenting any suggested changes to the NPRM and any remaining unresolved issues. Please also have the ASHWG prepare comprehensive responses to APO's cost/benefit questions for submittal to TAEIG as noted above.

Please note that this project is intended to be bundled with 25.1331 and 25.703(a),(b),(c) which are already in Phase 4 HWG review. Please complete the APO questionnaire relative to each of these projects.

Regards,
Kris

Aracques.doc

Aracques

APO-300
4/11/2001

Questions for ARAC to respond to regarding the costs and benefits of FAR Part 25 harmonization proposals

OVERVIEW

- Cost Discussion

Provide a discussion of what industry is anticipated to do differently (if anything) in meeting the proposed harmonized standard. Be as specific as possible, identifying any tests, analysis, demonstrations, etc. that would be eliminated, added or modified. The discussion should clearly state whether the harmonized standard would increase, decrease, or make no significant change in compliance costs. In support of this statement, the discussion should explain why costs are expected to decrease, increase or remain unchanged. To strengthen the argument, use whatever available data or cost estimates support the explanation and give the reader some sense of the magnitude of cost impacts.

The length of this discussion should be tailored to the complexity of the rule change. In simple cases, the discussion need not exceed a few sentences, but in every case the reader should be provided a clear and reasonable explanation of what the cost impacts are and why.

- Benefits Discussion

If industry would receive cost savings (for example, reduced certification costs because of reduced testing) from the promulgation of this rule, so state and identify the reasons for the cost saving.

Briefly discuss the ARAC's views on how the proposed harmonized standard would impact safety, compared to current industry practice.

If ARAC believes the existing level of safety would be maintained, so state. If ARAC believes that the existing level of safety would be enhanced, describe in a few short sentences the reason or reasons why. Whatever specific evidence, analyses or estimates that are available in support of ARAC's views should be included to strengthen this discussion.

Close this discussion with a statement that ARAC recommends the FAA proceed with this rulemaking.

Specific questions to be answered by the ARAC harmonization working group in the discussions on page 1. (Page 2 of 3).

- What is the current FAR standard?

- What is the current JAA standard?

- What is the proposed harmonization standard?

- The proposed harmonization standard will reduce manufacturer's cost because:
  1.
  2.
  3.

OR,

- The proposed harmonization standard will result in no change to manufacturer's cost because:
  1.
  2.
  3.

OR,

- The proposed harmonization standard will increase manufacturer's cost because:
  (In addition to stating the reasons for the cost increase, the working group should include a dollar cost estimate for each reason.)
  1.
  2.
  3.

- The ARAC working group recommends that the proposed harmonization standard become a FAA rule as the expected benefits exceed the expected costs for these reasons:
  (If the harmonization standard results in manufacturers' cost increasing, then, in addition to identifying the reasons, also quantify the expected dollar benefit for each reason.)
  1.
  2.
  3.

U.S. Department of Transportation
Federal Aviation Administration

Advisory Circular

Subject: COCKPIT INSTRUMENT SYSTEMS: ATTITUDE DISPLAY	**Date:** *DRAFT* May 2001	**AC No: 25.1333(b)-X**
	Initiated By: ANM-110	**Change:**

WORKING DRAFT -- NOT FOR PUBLIC RELEASE.

1. **PURPOSE.** This Advisory Circular (AC) describes an acceptable means for showing compliance with the requirements of §25.1333, "Cockpit Instrument Systems," of Title 14, Code of Federal Regulations (CFR) part 25, commonly referred to as Part 25 of the Federal Aviation Regulations (FAR). Part 25 contains the airworthiness standards applicable to transport category airplanes. The means of compliance described in this document provides guidance to supplement the engineering and operational judgment that must form the basis of any compliance findings relative to display system design standards required by § 25.1333(b).

2. APPLICABILITY

a. The guidance provided in this document is directed to airplane manufacturers, modifiers, foreign regulatory authorities, and Federal Aviation Administration transport airplane type certification engineers and their designees.

b. As of the issuance date, the guidance provided in this AC is harmonized with that of the European Joint Aviation Authorities (JAA). It provides a method of compliance that both the FAA and JAA have found acceptable.

c. Like all advisory circular material, this AC is not, in itself, mandatory, and does not constitute a regulation. It describes an acceptable means, but not the only means, for demonstrating compliance with the requirements for transport category airplanes. Terms such as "shall" and "must" are used only in the sense of ensuring applicability of this particular method of compliance when the acceptable method of compliance described in this document is used. While these guidelines are not mandatory, they are derived from extensive Federal Aviation Administration and industry experience in determining compliance with the relevant regulations.

d. This advisory circular does not change, create any additional, authorize changes in, or permit deviations from, regulatory requirements.

3. RELATED SECTIONS OF TITLE 14, CODE OF FEDERAL REGULATIONS (CFR), PART 25.

§ 25.1303	Flight and navigation instruments
§ 25.1309	Equipment, systems, and installations
§ 25.1333	Instrument Systems
§ 121.305	Flight and navigational equipment

4. BACKGROUND.

a. Paragraph (b) of § 25.1333 currently states:

> *"(b) The equipment, systems, and installations must be designed so that one display of the information essential to the safety of flight which is provided by the instruments, including attitude, direction, airspeed, and altitude will remain available to the pilots, without additional crewmember action, after any single failure or combination of failures that is not shown to be extremely improbable; . . ."*

b. The requirement of § 25.1333(b) ensures that there is sufficient information provided to the flightcrew for safe control of the airplane in the event of a failure condition. It also ensures that the flightcrew's work load will not be increased by requiring that essential information to be present without additional flightcrew action.

c. Section 121.305 relates to pilot usability of flight and navigation instruments. Paragraph (j) states that certain airplanes must have, in addition to two gyroscopic bank and pitch indicators (artificial horizons), a third artificial horizon installation. Paragraph (k) requires that this third installation:

> *"(1) Is powered from a source independent of the electrical generating system;*
>
> *(2) Continues reliable operation for a minimum of 30 minutes after total failure of the electrical generating system.*
>
> *(3) Operates independently of any other attitude indicating system;*
>
> *(4) Is **operative without selection** after total failure of the electrical generating system;*

(5) Is located on the instrument panel in a position acceptable to the Administrator that will make it plainly visible to and usable by each pilot at his or her station; and

(6) Is appropriately lighted during all phases of operation."

d. The following discussion provides information on an acceptable means of compliance to meet the requirements of § 25.1333(b) as they relate to those required by § 121.305(j) and (k).

5. ACCEPTABLE MEANS OF COMPLIANCE

a. **Attitude Display Systems:** If three displays are used to show compliance with § 25.1333(b), the reliability and independence of those displays should be confirmed by a suitable assessment in accordance with § 25.1309. Each display should have independent sensors and power supplies. The power supply to the standby display and its appropriate lighting should be such that the display is usable from each pilot station for not less than 30 minutes if a total failure of the generated electrical power causes the loss of both main instruments.

b. **Airspeed, Altitude, and Direction Display Systems:**

(1) The reliability and independence of the displays used to show compliance with § 25.1333(b) should be sufficient to ensure continued safe flight and landing appropriate to the intended operation of the airplane.

> **NOTE:** The time for which the display remains usable will be stated in the flight manual

c. **Alternative Parameters:**

(1) Historically, "sufficient information" to control attitude, airspeed, altitude, and direction has been provided by specific indicators of the state of each parameter. However, because control is considered to be the ability to change or maintain a given parameter to a desired value, it is assumed that these parameters will be available without flightcrew action.

(2) There may be alternative parameters in the cockpit that provide equivalent means to control attitude, airspeed, altitude, and direction, without displaying those parameters directly (for example, without display of standby airspeed, by using a suitable angle-of-attack display). For these alternative cases, applicants must show compliance with § 25.1333(b) by analysis and flight test.

Transport Airplane Directorate
Aircraft Certification Service

FAR/JAR 25.1331
INSTRUMENT USING A POWER SUPPLY

(Final Report)
(as agreed in AVHWG meeting#4 in Toulouse on jan,13th 2000)

A. FAR 25.1331(a)(2)

1. What is the underlying safety issue addressed by FAR/JAR?

Assures that the instruments required under FAR/JAR 25.1303 are available to the flight crew in the event the power source that is supplied to each instrument is lost due to failure. In addition the JAR assures that a failure of one power source does not affect the same instrument on both pilot stations.

2. What are current FAR and JAR standards?

Current FAR 25.1331:

(a)(2) Each instrument must ,in the event of the failure of one power source, be supplied by another power source. This may be accomplished automatically or by manual means.

Current JAR 25.1331:

(a)(2) Each instrument must ,in the event of the failure of one power source, be supplied by another power source. This may be accomplished automatically or by manual means. The failure of one power source must not affect the instruments of both pilot stations

3. What are the differences in the standards?

(a)(2). The JAR requires in addition the failure of one power source must not affect the same instrument of both pilot stations.

4. What, if any, are the differences in required means of compliance?

N/A for this paragraph

5. **What is the proposed action?**
Envelope on the JAR but include clarification for the same instrument.

6. **What should the harmonized standard be?**
(a)(2) Each instrument must ,in the event of the failure of one power source, be supplied by another power source. This may be accomplished automatically or by manual means. The failure of one power source must not affect the same instrument of both pilot stations.

7. **How does this proposed standard address the underlying safety issue (identified in #1)?**
No change in addressing the safety issue, see #1 above.

8. **Relative to current FAR, does the proposed standard increase, decrease, or maintain the same level of safety?**
The proposed standard may increase the level of safety by clarifying the requirement that the same type of instrument can not be affected on both pilot stations.

9. **Relative to current industry practice, does the proposed standard increase, decrease, or maintains the same level of safety?**
Maintains the same level of safety.

10. **What other options have been considered and why were they not selected?**
The FAR words were considered but not retained because the JAR supersedes FAR rule.

11. **Who would be affected by the proposed change?**
None because compliance with 25.1309 and the current practices comply with the JAR.

12. **To ensure harmonization, what current advisory material (e.g., ACJ, AMJ, AC, policy letters) need to be included in the rule text or preamble?**
None.

13. **Is existing FAA advisory material adequate?**
N/A.

14. **If not, what advisory material should be adopted?**
None.

15. **How does the proposed standard affect the current ICAO standard?**
The AVHWG is not aware of any..

16. **How does the proposed standard affect other HWG's?**
None affected.

17. **What is the cost impact of complying with the proposed standard?**
None.

18. **Does the HWG want to review the draft NPRM at "Phase 4" prior to publication in the Federal Register?**
Yes.

19. **In light of the information provided in this report, does the HWG consider that the "fast Track" process is appropriate for this rulemaking project, or is the project too complex or controversial for the "Fast Track" process?**
This project is appropriate for the "Fast Track" process.

B. FAR 25.1331(a)(3)

1 **What is the underlying safety issue addressed by FAR/JAR?**
Prevents the crew from using bad information by giving a visual warning when the data presented by an instrument to the crew becomes corrupted or lost.

2 **What are current FAR and JAR standards?**
Current FAR 25.1331:
(a)(3) If an instrument presenting navigation data receives information from sources external to that instrument and loss of that information would render the presented data unreliable, the instrument must incorporate a visual means to warn the crew, when such loss of information occurs, that the presented data should not be relied upon.

Current JAR 25.1331:
(a)(3) If an instrument presenting flight and/or navigation data receives information from sources external to that instrument and loss of that information would render the presented data unreliable, a clear and unambiguous visual warning must be given to the crew when such loss of information occurs that the presented data should not be relied upon.(see ACJ 25.1331 (a)(3).

3 **What are the differences in the standards?**
(a)(3) The JAR deals also with flight data and The FAR requires the instrument must incorporate a visual means while the JAR requires a clear and unambiguous warning .

4 **What, if any, are the differences in required means of compliance?**
There is not an AC but it shall be noted that the corresponding ACJ 25.1331(a)(3) allows, where practicable, incorporation of the warning in the instrument.

5 **What is the proposed action?**
Envelope on the FAR and the JAR:
- consider Flight data in addition to navigation data as stated by the JAR
- take into account the need for incorporation in the instrument of a visual means to warn the crew as stated by the FAR and make it clear and unambiguous as stated by the JAR.

6 **What should the harmonized standard be?**
(a)(3) If an instrument presenting flight and/or navigation data receives information from sources external to that instrument and loss of that information would render the presented data unreliable, a clear and unambiguous visual warning must be given to the crew, when such loss of information occurs, that the presented data should not be relied upon. The warning shall be incorporated in the instrument.

7. **How does this proposed standard address the underlying safety issue (identified in #1)?**
Same as stated on #1 above.

8. **Relative to current FAR, does the proposed standard increase, decrease, or maintain the same level of safety?**
Maintains the same level of safety.

9. **Relative to current industry practice, does the proposed standard increase, decrease, or maintains the same level of safety?**
Maintains the same level of safety.

10. **What other options have been considered and why were they not selected?**
None

11. **Who would be affected by the proposed change?**
None

12. **To ensure harmonization, what current advisory material (e.g., ACJ, AMJ, AC, policy letters) need to be included in the rule text or preamble?**
None because the new harmonized code itself includes the ACJ 25 1331(a)(3) which recommended incorporation of a visual means in the instrument to warn the crew.

13. **Is existing FAA advisory material adequate?**
N/A - there is no FAA advisory material.

14. **If not, what advisory material should be adopted?**
N/A

15. **How does the proposed standard affect the current ICAO standard?**
The AVHWG is not aware of any.

16. **How does the proposed standard affect other HWG's?**
None affected.

17. **What is the cost impact of complying with the proposed standard?**
None if the system complies with the current requirements.

18. **Does the HWG want to review the draft NPRM at "Phase 4" prior to publication in the Federal Register?**
Yes.

19. **In light of the information provided in this report, does the HWG consider that the "fast Track" process is appropriate for this rulemaking project, or is the project too complex or controversial for the "Fast Track" process?**
This project is appropriate for the "Fast Track" process.

[4910-13]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. _____; Notice No. _____]

RIN: 2120- AG92

FAR/JAR Harmonization Actions; Instruments Using Power Supply

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 instruments on the flight deck that use a power supply. This action would add a requirement that the failure of the same type of instrument cannot occur simultaneously on both the pilot's and co-pilot's station. 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.

DATE: Send your comments by [Insert date 60 days after date of publication in the Federal Register.]

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 _____ at the beginning of your comments, and you should send 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. _____." We will date-stamp the postcard and mail it back to you.

You also may send 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: J. Kirk Baker, FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, Systems & Equipment Branch, ANM-130L, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5345; fax (562) 627-5210; e-mail kirk.baker@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 sending such written data, views, or arguments, as they may wish. 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 sent 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 about 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 by 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 sending 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. The Joint Aviation Authorities (JAA) of Europe developed these 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 added costs to manufacturers and operators. These additional costs, however, often 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 preserve 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 several 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 helping to resolve 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 on 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 on 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 invites participation in working groups from interested members of the public who have 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 continues 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 costly and time-consuming for industry, the FAA, and the JAA. Industry has expressed a strong desire to finish the harmonization program as quickly as possible to relieve 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 on a method to achieve these goals. This method, titled "The Fast Track Harmonization Program," aims at expediting the rulemaking process for harmonizing not only the 42

standards that are currently tasked to ARAC for harmonization, but nearly 80 more standards for part 25 airplanes.

The FAA launched the Fast Track program on November 26, 1999 (64 FR 66522). This program involves grouping all 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. Occasionally, it may be necessary to incorporate parts of both the part 25 and JAR standard to achieve the final, more stringent standard. (This may call for each authority to revise 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).

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 § 25.1331(a)(2) and (a)(3) concerning instruments using a power supply. The proposed changes to each of these subsections are discussed separately below.

CHANGE 1: REVISE §25.1331(a)(2)

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

The current standards ensure that the flight and navigation instruments required by § 25.1303 ("Flight and navigation instruments") and installed in the flight deck of transport category airplanes are available to the flightcrew whenever the power source normally supplied to each instrument is lost due to failure. In addition, the requirements of the current JAR assure that a failure of one power source does not affect the same instrument on both pilot stations.

What are the Current 14 CFR and JAR Standards?

The current text of 14 CFR 25.1331(a)(2) is:

> *. . . (a)(2) Each instrument must, in the event of the failure of one power source, be supplied by another power source. This may be accomplished automatically or by manual means.*

The current text of JAR-25.1331(a)(2) is:

> *. . . (a)(2) Each instrument must, in the event of the failure of one power source, be supplied by another power source. This may be accomplished automatically or by manual means. The failure of one power source must not affect the instruments of both pilot stations.*

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

The difference between the two standards lies in the fact than the JAR contains an additional requirement, which states that the failure of the same type of instrument cannot occur simultaneously on both the pilot's and co-pilot's station.

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

Manufacturers in the U.S. who apply for type certification of their products by the JAA must ensure there are provisions in the type design to address the additional requirement contained in JAR 25.1331(a)(2).

What Is the Proposed Action?

This proposed action would revise § 25.1331(a)(2) to incorporate the additional requirement contained in the current JAR-25.1331(a)(2). In effect, this action proposes to adopt the "more stringent" requirements of the JAR.

How Does This Proposed Standard Address the Underlying Safety Issue?

The proposed standard continues to address the underlying safety issue by requiring that the flight and navigation instruments installed in the flight deck are available to the flightcrew in the event of failure of one power source normally supplied to each instrument. By incorporating the proposed additional requirement, part 25 will have an explicit requirement ensuring that, in case of a power failure, at least one of each required instrument is available at either pilot's station.

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

Taken literally, the proposed standard may appear to increase the level of safety by clarifying the requirement that the same type of instrument cannot be affected on both pilot stations. However, in reality, the proposed standard would maintain the same level of safety relative to the current regulations, since manufacturers are designing to comply with both the current part 25 and JAR-25 requirements.

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

There would be no practical differences in current industry practice resulting from the proposed standard. As stated above, applicants currently seeking certification of transport airplane designs by both the FAA and JAA are meeting the requirements of both sets of standards.

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

The only other alternative considered was to retain the text of the current part 25 rule. However, the FAA considers the proposed action to be the most appropriate way to fulfill harmonization goals while maintaining safety and without affecting current industry design practices.

Who Would Be Affected by the Proposed Change?

The proposed change could affect manufacturers and operators of transport category airplanes. However, since the proposed change does not result in any practical changes in requirements or practice, there would be a minimal effect.

Is Existing FAA Advisory Material Adequate?

The FAA does not consider that any new or additional advisory material is needed.

CHANGE 2: REVISE § 25.1331(a)(3)

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

The current standards prevent the flightcrew from using bad or incorrect information by providing a visual warning on the flight deck when the information presented by an instrument becomes corrupted or lost.

What are the Current 14 CFR and JAR Standards?

The current text of 14 CFR 25.1331(a)(3) is:

> *. . . (a)(3) If an instrument presenting navigation data receives information from sources external to that instrument and loss of*

that information would render the presented data unreliable, the instrument must incorporate a visual means to warn the crew, when such loss of information occurs, that the presented data should not be relied upon.

The current text of JAR-25.1331(a)(3) is:

. . . (a)(3) If an instrument presenting flight and/or navigation data receives information from sources external to that instrument and loss of that information would render the presented data unreliable, a clear and unambiguous visual warning must be given to the crew when such loss of information occurs that the presented data should not be relied upon. (see ACJ 25.1331 (a)(3)).

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

There are several important differences between the two standards:

1. JAR 25.1331(a)(3) addresses both flight data as well as navigation data; however, § 25.1331(a)(3) addresses only navigation data. In this regard, the JAR requirement is broader and, therefore, is "more stringent" than the part 25 requirement.

2. JAR 25.1331(a)(3) requires that the flightcrew be given a "clear and unambiguous warning" when the presented data is unreliable. However, § 25.1331(a)(3) requires that the flight deck instrument (presenting navigation data) must incorporate an actual "visual means" to provide a warning to the flightcrew when the presented data is unreliable. The JAR requirement that the warning be "clear and unambiguous" is more specific than the part 25 requirement and, therefore, is more stringent.

3. On the other hand, the requirement of § 25.1331(a)(3) to incorporate a "visual" means in the flight deck instrument to provide the warning is more stringent than

JAR 25.1331(a)(3) in this regard. However, the JAR standard does contain a reference to Advisory Circular Joint (ACJ) 25.1331(a)(3), and that document recommends that, where practicable, a visual warning be incorporated in the instrument.

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

Manufacturers in the U.S. who apply for type certification of their products by the JAA must ensure there are provisions in the type design to address the JAR requirements for:

- presentation of navigation data, and
- a "clear and unambiguous" warning.

Likewise, non-U.S. manufacturers applying for FAA type certification of their products must incorporate the part 25-required visual means in the flight deck instrument to warn the flightcrew.

What Is the Proposed Action?

This proposed action would revise § 25.1331(a)(3) to incorporate the text contained in the current JAR-25.1331(a)(3) that specifies instruments presenting "flight data" and that requires "a clear and unambiguous" warning be given to the flightcrew. In effect, this action proposes to adopt the "more stringent" requirements of the JAR.

How Does This Proposed Standard Address the Underlying Safety Issue?

The proposed standard continues to address the underlying safety issue by requiring that the flightcrew receive a warning whenever data presented on required navigation components is unreliable.

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

The proposed standard would preserve the same level of safety relative to the current regulations, since manufacturers are designing to comply with both the current part 25 and JAR-25 requirements.

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

There would be no practical differences in current industry practice resulting from the proposed standard. As stated above, applicants currently seeking certification of transport airplane designs by both the FAA and JAA are meeting the requirements of both sets of standards.

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

The only other alternative considered was to retain the text of the current part 25 rule. However, the FAA considers the proposed action to be the most appropriate way to fulfill harmonization goals while maintaining safety and without affecting current industry design practices.

Who Would Be Affected by the Proposed Change?

Manufacturers and operators of transport category airplanes could be affected by the proposed change. However, since the proposed change does not result in any practical changes in requirements or practice, there would be a minimal effect.

Is Existing FAA Advisory Material Adequate?

The FAA does not consider that any new or additional advisory material is needed.

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).

In conducting these analyses, the FAA has determined that this proposal has benefits, but no costs, and that it is not "a significant regulatory action" under section 3(f) of Executive Order 12866. This proposal 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 other determinations indicated above, is summarized in this section of the preamble. We request comments with supporting documentation with regard to the conclusions contained in this section.

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 § 25.1331(a)(2) and (a)(3) with the "more stringent" parallel sections of the JAR. The FAA has concluded that, for the reasons previously discussed in the preamble, the adoption of these JAR requirements into 14 CFR part 25 is the most efficient way to harmonize these sections. In doing so, the existing level of safety will be preserved.

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 both part 25 and JAR-25. Since future certificated transport category aircraft are expected to meet the existing JAR 25.1331(a)(2) and (a)(3) requirement, and because this rule simply adopts the same JAR requirements, manufacturers would incur no additional cost resulting from this proposal.

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

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 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 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. 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

In accordance with the Paperwork Reduction Act of 1995 [44 U.S.C. 3507(d)], the FAA had determined there are no requirements for information collection 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 assessment or environmental impact statement. In accordance with FAA Order 1050.1D, appendix 4, paragraph 4(j), this rulemaking qualifies for a categorical exclusion.

Energy Impact

The energy impact of the proposed rule has been assessed in accordance witb 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 on the issue of plain language, the FAA re-examined the writing style currently used in developing 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, Instruments using a power supply, 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 section 25.1331 by revising paragraphs (a)(2) and (a)(3) to read as follows:

§ 25.1331 Instruments using a power supply

(a) * * *

(2) Each instrument must, in the event of the failure of one power source, be supplied by another power source. This may be accomplished automatically or by manual means. The failure of one power source must not affect the same instrument of both pilot stations.

(3) If an instrument presenting flight and/or navigation data receives information from sources external to that instrument and loss of that information would render the presented data unreliable, a clear and unambiguous visual warning must be given to the crew, when such loss of information occurs, that the presented data should not be relied upon. The warning shall be incorporated in the instrument.

* * * * *

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