

Federal Aviation Administration – [Regulations and Policies](#)  
Aviation Rulemaking Advisory Committee

General Aviation Certification and Operations Issue Area  
Part 23 Emergency Propulsion-type Technologies Working Group  
**Task 1 – Certification of New Propulsion Technologies**

[Federal Register: September 10, 2003 (Volume 68, Number 175)]  
[Notices]  
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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Aviation Rulemaking Advisory Committee; General Aviation  
Certification and Operations Issues

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice; assignment of new tasks to the Aviation Rulemaking  
Advisory Committee (ARAC) and withdrawal of prior tasks.

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SUMMARY: This notice announces the withdrawal of four prior ARAC tasks,  
and describes two new tasks assigned to and accepted by the ARAC. This  
notice informs the public of the ARAC activities and invites public  
participation in the ARAC working groups.

FOR FURTHER INFORMATION CONTACT: Mr. David Showers, Manager, Standards  
Office, 901 Locust, Kansas City, Missouri 64106, (816) 329-4110,  
[david.r.showers@faa.gov](mailto:david.r.showers@faa.gov).

SUPPLEMENTARY INFORMATION:

Background

The FAA set up the Aviation Rulemaking Advisory Committee (ARAC) to  
give recommendations to the FAA Administrator on aviation-related  
rulemakings. The Secretary of Transportation determined the formation  
and use of the ARAC are necessary and in the public interest in  
performing duties imposed on the FAA by law.

In 1992, the JAA and the FAA committed to harmonizing, where proper  
and to the maximum extent possible, the FAR (Federal Aviation  
Regulations) and JAR (Joint Aviation Requirements) rules and associated  
materials. However, since the new ARAC tasks will not result in a  
change to the FAR (i.e., 14 CFR part 23) or the associated guidance  
material, formal harmonization with the JAR is not planned. The FAA  
will share the ARAC's recommendations and the FAA's actions on them  
with the JAA. Although the FAA is not currently planning rulemaking  
action as a result of these tasks, if such action is proper in the  
future, harmonization with the JAR will be undertaken.

New Tasks

The FAA assigned and the ARAC accepted the two tasks described in  
this section. Each task is to be done in two phases.

Task I: Develop safety standards suitable for all jet and high-  
performance airplanes up to 19,000 pounds, including those in the

commuter category.

This task is intended to create safety standards that would be available to address future part 23 jets and high-performance airplane configurations. It would provide industry with a better understanding of potential requirements before committing to a project involving

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these airplanes. The safety standards would include performance, systems, occupant protection, and other issues for jets and high-performance part 23 airplanes.

#### Task I: Phase 1

1. Define ``high performance'' as it relates to high-performance airplanes; and
2. Review 14 CFR part 23 as a benchmark and identify safety concerns that are not currently addressed for jet and high-performance part 23 airplanes. Give particular attention to commuter and other part 23 airplanes used in part 135 service.
3. As part of the evaluations, consider the following:
  - [sbull] Systems issues such as stick pushers and integrated flight controls
  - [sbull] Structures issues such as mach effects (compressibility) and bird strike
  - [sbull] Powerplant location issues
  - [sbull] Aircraft performance issues such as accelerate-stop distance, single-engine climb, mach buffet, stall speed
  - [sbull] Cabin safety issues, including Occupant Protection for Commuter Category Airplane Crashworthiness (Dynamic Seats), Fireblocking Provisions, Thermal/Acoustic Insulation
  - [sbull] Cockpit display issues (multifunction displays, primary flight displays)

#### Schedule Task I: Phase 1

The ARAC should complete phase 1 of task I and forward their recommendations to the FAA by March 10, 2004.

#### Task I: Phase 2

1. Recommend safety standards to address the safety concerns identified in phase 1 of task I, unless the project is withdrawn or changed by the FAA.

#### Schedule Task I: Phase 2

The ARAC should complete this task and forward their recommendations to the FAA by September 12, 2005.

Task II: Develop safety standards suitable for emerging propulsion-type technologies related to installing reciprocating engines in part 23 airplanes.

Task II would create safety standards that would be available to address installing equipment associated with known emerging propulsion-type technologies on part 23 airplanes. These standards would address technologies such as diesel engines, electronic engine and propeller controls, electronic engine displays, and so forth. They would give

industry information on the possible safety requirements in these areas before they committed resources to a related project.

#### Task II: Phase 1

1. Review 14 CFR part 23 as a benchmark and identify safety concerns that are not currently addressed for emerging propulsion-type technologies related to the installation of reciprocating engines in part 23 airplanes.
2. As part of the evaluations, consider the following:
  - [sbull] Single lever power control (SLP)
  - [sbull] Electronic engine control (EEC) and propeller controls
  - [sbull] Fuel quantity calibration and low-fuel warning systems
  - [sbull] Diesel engine installations, which include consideration of the way fuels are addressed in part 23
  - [sbull] Electronic engine displays
  - [sbull] Other technologies the Committee finds suitable

#### Schedule for Task II: Phase 1

The ARAC should complete phase 1 of task II and forward their recommendations to the FAA by March 10, 2004.

#### Task II: Phase 2

1. Recommend safety standards to address the safety concerns identified in phase 1 of task II, unless the project is withdrawn or changed by the FAA.

#### Schedule for Task II: Phase 2

The ARAC should complete phase 2 of task II and forward their recommendations to the FAA by September 12, 2005.

#### ARAC Acceptance of Tasks

The ARAC accepted the tasks and has agreed to the schedules for completing the tasks. The Committee will assign the tasks to the newly formed working groups under General Aviation Certification and Operations Issues.

#### Working Group Activity

The working group will serve as staff to ARAC and help in the analysis of the assigned tasks. ARAC must review and approve the working groups' recommendations. If ARAC accepts the working groups' recommendations, they will forward them to the FAA as ARAC recommendations.

The Part 23 Jet and High-Performance Airplane Safety Standards Working Group and the Part 23 Emerging Propulsion-type Technologies Working Group are expected to comply with the procedures adopted by ARAC. As part of the procedures, the working groups are expected to:

1. Recommend a work plan for completion of the task, including the rationale supporting such a plan for consideration at the next meeting of the ARAC on General Aviation Certification and Operations issues held following publication of this notice.
2. Give a detailed conceptual presentation of the proposed

recommendations before proceeding with the work stated in item 3 below.

3. Draft the appropriate documents, required analyses, and any other related materials or documents.

4. Provide a status report at each meeting of the ARAC held to consider general aviation certification and operations issues.

#### Participation in the Working Group

Each working group will be composed of technical experts with an interest in the assigned task. Working group participants should be prepared to devote a significant portion of their time and resources to the ARAC task. A working group member need not be a representative or a member of the ARAC. Individuals who want to become a member of one of the working groups should contact the person listed under the FOR FURTHER INFORMATION CONTACT section of this notice. They should describe their interest in the task, and state the expertise they would bring to the working group. All requests to take part in these tasks must be received by October 10, 2003. The co-assistant chairs, the co-assistant executive directors, and the working group chair will review all requests and advise which requests they can grant.

Individuals chosen for membership in a working group are expected to represent their part of the aviation community and actively participate in the working group (e.g., attend all meetings, provide written comments when requested, etc.). In addition, they are expected to keep their management chain and those they may represent advised of working group activities and decisions to ensure that the proposed technical solutions do not conflict with their sponsoring organization's position.

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

Meetings of the ARAC will be open to the public. Meetings of the working groups will not be open to the public, except those individuals selected as working group members. The FAA will make no public announcement of working group meetings.

#### Withdrawn Tasks

This notice also announces the withdrawal of four prior tasks assigned to the ARAC. Two of these tasks were

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published on March 21, 2001 (66 FR 14427; 66 FR 14428), one on June 6, 2001 (66 FR 30500), and one on August 22, 2001 (66 FR 44201).

A description of the withdrawn tasks follows.

#### Occupant Protection and Safety Standards

The FAA tasked the ARAC to review occupant protection standards to address criteria for improved occupant protection commonly used on part 23 airplanes, and develop requirements to improve the safety of part 23 airplanes. The ARAC's recommendations were to include an assessment of--

1. Flammability Standards for Seat Fireblocking Provisions;
2. Standardization of Emergency Landing Dynamic Conditions;
3. Thermal/Acoustic Insulation Flammability;

4. Airworthiness Certification of Airplanes Used in Cargo/Passenger Combination Operations;
5. Emergency Exit Markings;
6. Emergency Exit Access; and
7. Electric Cables and Equipment.

To consolidate FAA and industry resources, the FAA withdraws this task and includes it in new Task I described in this notice. Although the entire withdrawn task is not included in the new task, the FAA has determined that the intended results from the withdrawn task will be accomplished with new Task I.

#### Propulsion Certification Requirements

The FAA tasked ARAC to review part 23 standards to evaluate criteria for propulsion technologies used on part 23 airplanes and requirements that would improve the safety of part 23 airplanes. The ARAC recommendations were to include an evaluation of--

1. Turbofan/jet installations;
2. Single level power controls;
3. Electronic engine controls;
4. Fuel quantity calibration and low fuel warning for reciprocating engines;
5. New technology reciprocating engines (for example, diesel engines);
6. New technology powerplant displays; and
7. Various miscellaneous updates to part 23 powerplant requirements.

To consolidate FAA and industry resources, the FAA withdraws this task and incorporates it in new Task II described in this notice.

#### Static Directional and Lateral Stability

The FAA tasked the ARAC to review Sec. 23.177 and JAR 23 and make recommendations on harmonized changes to Sec. 23.177 for demonstrating positive dihedral effect in all landing gear and flap positions that would improve the safety of part 23 airplanes. The ARAC's recommendations were to include a draft notice of proposed rulemaking with preamble language, rule language, and any supporting legal analysis.

#### Miscellaneous Systems Standards

The FAA tasked the ARAC with evaluating the requirements for systems in the following CFR sections and make recommendations to address systems safety that would improve the safety of part 23 airplanes:

1. Revise Sec. 23.735 to clarify the requirement for operation of brakes after a single failure in the braking system in commuter category airplanes.
2. Revise Sec. 23.1301 by deleting paragraph (d); revise Sec. 23.1309 to include warning requirements, probability values, and failure conditions applicable to powerplant systems; make warning requirements compatible with other regulations; delete paragraphs (c) and (d).
3. Add a new Sec. 23.1310, Power Source Capacity and Distribution, from existing paragraphs 23.1309(c) and (d).
4. Revise Sec. 23.1311 to address redundancy requirements for

primary flight instruments; define ``indicator,'' the sensory cue requirements in paragraph (a)(6); delete the redundancy requirement in paragraph (b).

5. Review and revise Sec. Sec. 23.1326(b)(1) and 23.1322 to require the amber light to be illuminated when the pitot tube heater is ``off.``

6. Review and revise Sec. 23.1311 to call out required flight instruments as indicated in Sec. Sec. 23.1303 and 91.205.

The FAA withdraws these tasks to free-up resources that will allow the FAA and industry to focus on other priorities. Withdrawal of these tasks does not prohibit the FAA from issuing future notices on these subject matters or committing the agency to a future course of action.

Issued in Washington, DC, on September 5, 2003.

Tony F. Fazio,

Executive Director, Aviation Rulemaking Advisory Committee.

[FR Doc. 03-23022 Filed 9-9-03; 8:45 am]

BILLING CODE 4910-13-P

Recommendation – Not Available



FAA Action: Placed on the AVS "Do By Other Means" list, dated June 14, 2005.

[AE1]

Mr. Ron Priddy  
President, Operations  
National Air Carrier Association  
1100 Wilson Blvd., Suite 1700  
Arlington, VA 22209

Dear Mr. Priddy:

The Federal Aviation Administration (FAA) recently completed a regulatory program review. That review focused on prioritizing rulemaking initiatives to more efficiently and effectively use limited industry and regulatory rulemaking resources. The review resulted in an internal Regulation and Certification Rulemaking Priority List that will guide our rulemaking activities, including the tasking of initiatives to the Aviation Rulemaking Advisory Committee (ARAC). Part of the review determined if some rulemaking initiatives could be addressed by other than regulatory means, and considered products of ARAC that have been or are about to be forwarded to us as recommendations.

The Regulatory Agenda will continue to be the vehicle the FAA uses to communicate its rulemaking program to the public and the U.S. government. However, the FAA also wanted to identify for ARAC those ARAC rulemaking initiatives it is considering to handle by alternative actions (see the attached list). At this time, we have not yet determined what those alternative actions may be. We also have not eliminated the possibility that some of these actions in the future could be addressed through rulemaking when resources are available.

If you have any questions, please feel free to contact Gerri Robinson at (202) 267-9678 or [gerri.robinson@faa.gov](mailto:gerri.robinson@faa.gov).

Sincerely,

Anthony F. Fazio  
Executive Director, Aviation Rulemaking Advisory Committee

Enclosure

cc:

William W. Edmunds, Air Carrier Operation Issues  
Sarah MacLeod, Air Carrier/General Aviation Maintenance Issues  
James L. Crook, Air Traffic Issues  
William H. Schultz, Aircraft Certification Procedures Issues  
Ian Redhead, Airport Certification Issues

Billy Glover, Occupant Safety Issues

John Tigue, General Aviation Certification and Operations Issues

David Hilton, Noise Certification Issues

John Swihart, Rotorcraft Issues

Roland B. Liddell, Training and Qualification Issues

Craig Bolt, Transport Airplane and Engine Issues

## ARAC Projects that will be handled by Alternative Actions rather than Rulemaking

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| (Beta) Reverse Thrust and propeller Pitch Setting below the Flight Regime (25.1155)  |
| Fire Protection (33.17)  |
| Rotor Integrity--Overspeed (33.27)   |
| Safety Analysis (33.75)  |
| Rotor Integrity – Over-torque (33.84)  |
| 2 Minute/30 Second One Engine Inoperative (OEI) (33.XX )   |
| Bird Strike (25.775, 25.571, 25.631)   |
| Casting Factors (25.621)   |
| Certification of New Propulsion Technologies on Part 23 Airplanes  |
| Electrical and Electronic Engine Control Systems (33.28)   |
| Fast Track Harmonization Project: Engine and APU Loads Conditions (25.361, 25.362)   |
| Fire Protection of Engine Cowling (25.1193(e)(3))  |
| Flight Loads Validation (25.301)   |
| Fuel Vent System Fire Protection (Part 25 and Retrofit Rule for Part 121, 125, and 135)  |
| Ground Gust Conditions (25.415)  |
| Harmonization of Airworthiness Standards Flight Rules, Static Lateral-Directional Stability, and Speed Increase and Recovery Characteristics (25.107(e)(1)(iv), 25.177©, 25.253(a)(3)(4)(50)). Note: 25.107(a)(b)(d) were enveloping tasks also included in this project—They will be included in the enveloping NPRM) |
| Harmonization of Part 1 Definitions Fireproof and Fire Resistant (25.1)  |
| Jet and High Performance Part 23 Airplanes   |
| Load and Dynamics (Continuous Turbulence Loads) (25.302, 25.305, 25.341 (b), etc.)   |
| Restart Capability (25.903(e))   |
| Standardization of Improved Small Airplane Normal Category Stall Characteristics Requirements (23.777, 23.781, 23.1141, 23.1309, 23.1337, 25.1305)   |

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| ATTC (25.904/App 1)  |
| Cargo Compartment Fire Extinguishing or<br>Suppression Systems (25.851(b), 25.855, 25.857) |
| Proof of Structure (25.307)  |
| High Altitude Flight (25.365(d))   |
| Fatigue and Damage Tolerance (25.571)  |
|  |
| Material Prosperities (25.604)   |