

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

Occupant Safety Issue Area  
Cabin Safety Harmonization Working Group  
Task 1 – Stowage Compartments

# **Task Assignment**

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[Notices]  
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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).

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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  
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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.

#### Participation 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.  
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## **Recommendation**

**ARAC CSHWG Report**  
**FAR/JAR 25.787 (Category 1 Item)**

1 - What is underlying safety issue addressed by the FAR/JAR? [Explain the underlying safety rationale for the requirement. Why does the requirement exist?]

The prevention of injuries to occupants, caused by unrestrained stowage compartment contents, is the safety issue being addressed. This is to be accomplished by requiring specific design criteria for stowage compartments, to ensure that unrestrained compartment contents are not a hazard to occupants, escape facilities, and fuel systems under specified loading conditions.

2 - What are the current FAR and JAR standards? [Reproduce the FAR and JAR rules text as indicated below.]

**Current FAR text: § 25.787 Stowage compartments.**

(a) Each compartment for the stowage of cargo, baggage, carry-on articles, and equipment (such as life rafts), and any other stowage compartment must be designed for its placarded maximum weight of contents and for the critical load distribution at the appropriate maximum load factors corresponding to the specified flight and ground load conditions, and to the emergency landing conditions of § 25.561(b), except that the forces specified in the emergency landing conditions need not be applied to compartments located below, or forward, of all occupants in the airplane. If the airplane has a passenger seating configuration, excluding pilots seats, of 10 seats or more, each stowage compartment in the passenger cabin, except for underseat and overhead compartments for passenger convenience, must be completely enclosed.

(b) There must be a means to prevent the contents in the compartments from becoming a hazard by shifting, under the loads specified in paragraph (a) of this section. For stowage compartments in the passenger and crew cabin, if the means used is a latched door, the design must take into consideration the wear and deterioration expected in service.

(c) If cargo compartment lamps are installed, each lamp must be installed so as to prevent contact between lamp bulb and cargo.

**Current JAR text: JAR 25.787 Stowage compartments**

(a) Each compartment for the stowage of cargo, baggage, carry-on articles, and equipment (such as life rafts), and any other stowage compartment must be designed for its placarded maximum weight of contents and for the critical load distribution at the appropriate maximum load factors corresponding to the specified flight and ground load conditions, and where breaking loose of the contents of such compartments could-

(1) Cause direct injury to occupants;

- (2) Penetrate fuel tanks or lines or cause fire or explosion hazard by damage to adjacent systems; or
- (3) Nullify any of the escape facilities provided for use after an emergency landing, to the emergency landing conditions of JAR 25.561(b)(3).

If the aeroplane has a passenger seating configuration, excluding pilots seats, of 10 seats or more, each stowage compartment in the passenger cabin, except for underseat and overhead compartments for passenger convenience, must be completely enclosed.

(b) There must be a means to prevent the contents in the compartments from becoming a hazard by shifting, under the loads specified in paragraph (a) of this section. For stowage compartments in the passenger and crew cabin, if the means used is a latched door, the design must take into consideration the wear and deterioration expected in service.(See ACJ 25.787(b).)

(c) if cargo compartment lamps are installed, each lamp must be installed so as to prevent contact between lamp bulb and cargo.

3 - What are the differences in the standards and what do these differences result in?: [Explain the differences in the standards, and what these differences result in relative to (as applicable) design features/capability, safety margins, cost, stringency, etc.]

The JAR 25.787 uses three conditions for the application of JAR 25.561 (b)(3). These are: cause direct injury to occupants, penetrate fuel tanks or lines or cause fire or explosion hazard by damage to adjacent systems, or nullify any of the escape facilities. The FAR does not use the same conditions to limit the application of the regulation.

The FAR is less stringent than the JAR with respect to compartments located below, or forward, of all occupants since they are not required to meet the emergency landing conditions of § 25.561(b); all other stowage compartments must meet the emergency landing conditions of § 25.561 (b).

Conversely, the FAR is more stringent than the JAR with respect to stowage compartments not located below all occupants. The JAR limits the application of JAR 25.561 (b)(3) to the stowage compartments, the contents of which could cause direct injury to occupants. The FAR applies the emergency landing conditions of § 25.561 (b) to all stowage compartments not located below, or forward, of all occupants in the airplane.

It is possible to harmonize 25.787, except in reference to the effects of 25.561 on this harmonized rule. The portion affected by 25.561 would not be possible to harmonize at this time.

4 - What, if any, are the differences in the means of compliance? [Provide a brief explanation of any differences in the compliance criteria or methodology, including any differences in either criteria, methodology, or application that result in a difference in stringency between the standards.]

There is no difference in “methodology” for demonstrating compliance with the FAR and JAR regulations, except for those resulting from FAR and JAR differences in regard to affected locations, conditions and applicable loads, which require additional analyses and/or tests.

5 – What is the proposed action? [Is the proposed action to harmonize on one of the two standards, a mixture of the two standards, propose a new standard, or to take some other action? Explain what action is being proposed (not the regulatory text, but the underlying rationale) and why that direction was chosen.]

- Combine FAR and JAR regulations to address all stowage compartments in the passenger and crew compartments, and damage to fuel systems and escape systems from stowage compartments’ content:

- 1) Revise the JAR to include the FAR definition regarding the location of affected compartments and the application of JAR 25.561 inertia load factors.
- 2) Revise the FAR to require the application of load factors specified in FAR 25.561(b)(3) to those compartments where the content, if it broke loose, could:
  - cause direct injury to occupants,
  - penetrate fuel tanks or lines, or cause fire or explosion hazard by damaging adjacent systems, or
  - nullify any of the escape facilities provided for use after an emergency landing.

6 - What should the harmonized standard be? [Insert the proposed text of the harmonized standard here]

The FAR and JAR should reflect

(a) Each compartment for the stowage of cargo, baggage, carry-on articles, and equipment (such as life rafts), and any other stowage compartment must be designed for its placarded maximum weight of contents and for the critical load distribution at the appropriate maximum load factors corresponding to:

- (1) the specified flight load conditions, and
- (2) ground load conditions, and
- (3) the emergency landing conditions of § 25.561(b).

The emergency landing conditions need not be applied to:

- i. compartments located below all occupants in the airplane where breaking loose of the contents would not:

- Cause direct injury to occupants, or
  - Penetrate fuel tanks or lines or cause fire or explosion hazard by damage to adjacent systems, or
  - Nullify any of the escape facilities provided for use after an emergency landing,
- ii. compartments located forward of all occupants in the airplane if the breaking loose of the contents would not:
- Cause direct injury to occupants, or
  - Penetrate fuel tanks or lines or cause fire or explosion hazard by damage to adjacent systems, or
  - Nullify any of the escape facilities provided for use after an emergency landing,

then only the rearward load factor of the emergency landing conditions need be applied.

If the airplane has a passenger seating configuration, excluding pilots seats, of 10 seats or more, each stowage compartment in the passenger cabin, except for underseat and overhead compartments for passenger convenience, must be completely enclosed.

The other paragraphs remain the same.

7 - How does this proposed standard address the underlying safety issue (identified under #1)? [Explain how the proposed standard ensures that the underlying safety issue is taken care of.]

- By requiring additional stowage compartments to comply, and requiring some compartments to meet higher load requirements (retention of contents).

8 - Relative to the current FAR, does the proposed standard increase, decrease, or maintain the same level of safety? Explain. [Explain how each element of the proposed change to the standards affects the level of safety relative to the current FAR. It is possible that some portions of the proposal may reduce the level of safety even though the proposal as a whole may increase the level of safety.]

- Increases safety by applying the load conditions of 25.561(b)(3) to the design of stowage compartments, the contents of which, if it broke loose, could penetrate fuel tanks or lines, or cause fire or explosion hazard by damage to adjacent systems, or could nullify escape facilities provided for use after an emergency landing. However, the actual improvement in safety may be limited, inasmuch as the requirements contained in FAR 25.561(c) already address some of the same issues.

9 - Relative to current industry practice, does the proposed standard increase, decrease, or maintain the same level of safety? Explain. [Since industry practice may be different than what is required by the FAR (e.g., general industry practice may be more restrictive), explain how each element of the proposed

change to the standards affects the level of safety relative to current industry practice. Explain whether current industry practice is in compliance with the proposed standard.]

- Increases the level of safety through the application of emergency landing loads of FAR/JAR 25.561(b) to more compartments, resulting in the contents of the compartments being retained under higher loads in more cases than prescribed by the previous regulation.  
See response to question number 8

10 - What other options have been considered and why were they not selected?: [Explain what other options were considered, and why they were not selected (e.g., cost/benefit, unacceptable decrease in the level of safety, lack of consensus, etc.)]

- None

11 - Who would be affected by the proposed change? [Identify the parties that would be materially affected by the rule change – airplane manufacturers, airplane operators, etc.]

- Airplane manufacturers and modifiers, and stowage compartment manufacturers

12 - To ensure harmonization, what current advisory material (e.g., ACJ, AMJ, AC, policy letters) needs to be included in the rule text or preamble? [Does the existing advisory material include substantive requirements that should be contained in the regulation? This may occur because the regulation itself is vague, or if the advisory material is interpreted as providing the only acceptable means of compliance.]

- None

13 - Is existing FAA advisory material adequate? If not, what advisory material should be adopted? [Indicate whether the existing advisory material (if any) is adequate. If the current advisory material is not adequate, indicate whether the existing material should be revised, or new material provided. Also, either insert the text of the proposed advisory material here, or summarize the information it will contain, and indicate what form it will be in (e.g., Advisory Circular, policy, Order, etc.)]

- No - New advisory material needs to be developed to address this amendment.  
(Reference: AC 25-17)  
The new advisory material is expected to be consistent with the three conditions as contained in paragraph JAR 25.561(c).  
These conditions are similar to the conditions found in FAR/JAR 25.787.

14 - How does the proposed standard compare to the current ICAO standard? [Indicate whether the proposed standard complies with or does not comply with the applicable ICAO standards (if any)]

- No specific ICAO standard exists relative to this regulation.

15 - Does the proposed standard affect other HWG's? [Indicate whether the proposed standard should be reviewed by other harmonization working groups and why.]

- Yes : Structures as FAR/JAR 25.561 are not harmonized.

16 - What is the cost impact of complying with the proposed standard? [Please provide information that will assist in estimating the change in cost (either positive or negative) of the proposed rule. For example, if new tests or designs are required, what is known with respect to the testing or engineering costs? If new equipment is required, what can be reported relative to purchase, installation, and maintenance costs? In contrast, if the proposed rule relieves industry of testing or other costs, please provide any known estimate of costs.]

There are apparent administrative savings for the relevant Airworthiness Authorities and indirect for the general public which are associated with harmonization. The industry has an initial administrative burden associated with adaption to the relevant certification procedures, e.g. the need to review certification documents and standard publications and adapt necessary changes.

The industry would estimate the cost burden being at a neutral level for the harmonization of this paragraph.

17 - Does the HWG want to review the draft NPRM at “Phase 4” prior to publication in the Federal Register?

- Yes

18 – 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. Explain. [A negative answer to this question will prompt the FAA to pull the project out of the Fast Track process and forward the issues to the FAA’s Rulemaking Management Council for consideration as a “significant” project.]

- Yes. Technical agreement has been achieved after two meetings.

## **Recommendation**

FAA Action – Not Available