

Federal Aviation Administration  
Aviation Rulemaking Advisory Committee

Rotorcraft Issue Area  
Critical Parts Working Group  
**Task 1 – Critical Parts**

## **Task Assignment**

[Federal Register: January 20, 1995 (Volume 60, Number 13)]  
[Notices]  
[Page 4219]  
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DEPARTMENT OF TRANSPORTATION  
Federal Aviation Administration

Aviation Rulemaking Advisory Committee; Critical Parts Working  
Group

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

ACTION: Notice of establishment of the Critical Parts Working Group.

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

FOR FURTHER INFORMATION CONTACT:

Mr. Mark Schilling, Manager, Rotorcraft Standards Staff, 2601 Meacham Boulevard, Fort Worth, Texas, telephone number (817) 222-5110.

SUPPLEMENTARY INFORMATION: The Federal Aviation Administration (**FAA**) has established an Aviation Rulemaking Advisory Committee (ARAC) (56 FR 2190, January 22, 1991; and 58 FR 9230, February 19, 1993). One area the ARAC deals with is rotorcraft issues. These issues involve the airworthiness standards for normal and transport category rotorcraft in parts 27 and 29 of the Federal Aviation Regulations, which are the responsibility of the Director, Aircraft Certification Service, **FAA**.

Task

The Critical Parts Working Group is charged with recommending to ARAC new or revised requirements for a critical parts plan that would control the design, substantiation, manufacture, maintenance, and modification of critical parts. The products of this exercise are intended to be harmonized standards, acceptable to both the **FAA** and the Joint Aviation Authorities.

Specifically, the task is as follows:

Reveiw Title 14 Code of Federal Regulations, parts 27 and 29, and supporting policy and guidance material for the purpose of determining the course of action to be taken for rulemaking and/or policy relative to the issue of identification of the critical parts for consideration under design, production and maintenance, according to a critical part plan to be prepared by the manufacturer. Consider adding new Section 27.602 and 29.602 to Title 14.

ARAC recommendations to the **FAA** should be accompanied by appropriate documents. Recommendations for rulemaking should be accompanied by a complete draft of the notice(s) of proposed

rulemaking, including the benefit/cost analysis and other required analyses. Recommendations for the issuance of guidance material should be accompanied by a complete draft advisory circular.

ARAC working groups are comprised of technical experts on the subject matter. A working group member need not necessarily be a representative of one of the member organizations of ARAC. An individual who has expertise in the subject matter and wishes to become a member of the working group should write the person listed under the caption FOR FURTHER INFORMATION CONTACT expressing that desire, describing his or her interest in the task, and the expertise he or she would bring to the working group. The request will be reviewed by the assistant chair and working group leader, and the individual will be advised whether or not the request can be accommodated.

#### Working Group Reports

Each working group formed to consider ARAC tasks are expected to comply with the procedures adopted by ARAC and given to the working group chair. As part of the procedures, the working group is expected to:

A. Recommend time line(s) for completion of the task, including rationale, for consideration at the meeting of the ARAC to consider rotorcraft issues held following publication of this notice.

B. Give a detailed conceptual presentation on the task to the ARAC before proceeding with the work stated under item C below.

C. Give a status report on the task at each meeting of ARAC held to consider rotorcraft issues.

The Secretary of Transportation has determined that the formation and use of the ARAC are necessary 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 except as authorized by section 10(d) of the Federal Advisory Committee Act. Meetings of the Critical Parts 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 January 13, 1995.  
Chris A. Christie,  
Executive Director, Aviation Rulemaking Advisory Committee.  
[FR Doc. 95-1547 Filed 1-19-95; 8:45 am]  
BILLING CODE 4910-13-M

## **Recommendation Letter**

MAR 12 1998

Mr. Guy S. Gardner  
Associate Administrator  
for Regulation and Certification  
Federal Aviation Administration  
800 Independence Ave., S.W.  
Washington, DC 20591

Dear Mr. Gardner:

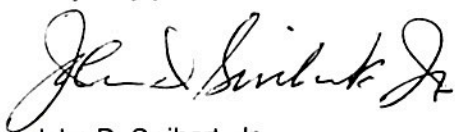
The Aviation Rulemaking Advisory Committee (ARAC) Working Group activity associated with Critical Parts has been completed. The results of their efforts were submitted to ARAC for review. The ARAC examined those results at a public meeting on February 18, 1998, in Anaheim, California, and approved them.

Accordingly, the ARAC hereby submits the following material and recommends that the draft NPRM be processed for publication:

- Draft NPRM
- Executive Summary
- Preliminary Regulatory Evaluation, Regulatory Flexibility Determination and Trade Impact Assessment.

The Working Group also developed proposed Advisory Circular (AC) material. That material is being forwarded to the FAA Rotorcraft Directorate for further action since they have been delegated AC responsibility by FAA Order 8000.51. A copy of the draft AC material is enclosed for your information.

Very truly yours,



John D. Swihart, Jr.  
ARAC Assistant Chair for Rotorcraft Issues

Enclosures

cc:  
Mr. R. E. Robeson, Jr., ARAC Chair  
Mr. Joseph Hawkins, ARAC Executive Director  
Mr. Mark R. Schilling, ARAC Asst. Executive Director  
Mr. Giffen Marr, Chair, Critical Parts Working Group  
Mr. Glenn Rizner, HAI

Ms. Angela Anderson, FAA, ARM-200

## **Acknowledgement Letter**



U.S. Department  
of Transportation

**Federal Aviation  
Administration**

800 Independence Ave., S.W.  
Washington, D.C. 20591

APR 2 1998

Mr. John D. Swihart, Jr.  
Aviation Rulemaking Advisory Committee  
Helicopter Association International  
7313 Janetta Dr.  
Fort Worth, TX 76180

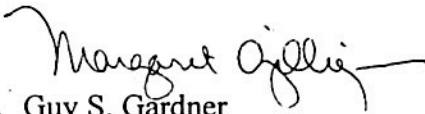
Dear Mr. Swihart:

Thank you for your March 12 letter forwarding the recommendations of the Aviation Rulemaking Advisory Committee (ARAC). The recommendations include a notice of proposed rulemaking (NPRM) concerning revisions to the type certification requirements for both normal and transport category rotorcraft, and proposed revisions to a related advisory circular.

The complete rulemaking package will be reviewed and coordinated within the Federal Aviation Administration (FAA) and, if appropriate, the Offices of the Secretary of Transportation and Management and Budget. The FAA will publish the NPRM for public comment as soon as the coordination process is complete. The proposed revisions to the advisory circular will also be made available to the public for comment when the coordination is complete. We will make every effort to handle these recommendations expeditiously.

I would like to thank the aviation community for its commitment to ARAC and its expenditure of resources in the development of these recommendations. More specifically, I would like to thank the members of the Critical Parts Working Group for their commitment to the ARAC process and prompt action on these tasks.

Sincerely,

  
Guy S. Gardner  
Associate Administrator for  
Regulation and Certification



## **Recommendation**

**[4910-13]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Parts 27 and 29**

**[Docket No. ; Notice No. ]**

**RIN**

**Harmonization of Critical Parts Rotorcraft Regulations**

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

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** This notice proposes changes to the type certification requirements for both normal and transport category rotorcraft. The changes would amend the airworthiness standards to define critical parts and to require a critical parts plan. The critical parts plan would establish procedures that would require the control of the design, substantiation, manufacture, maintenance, and modification of critical parts.

**DATES:** Comments must be received on or before [insert date 90 days after date of publication in the Federal Register].

**ADDRESSES:** Submit comments in triplicate to the Federal Aviation Administration (FAA), Office of the Chief Counsel, Attention: Rules Docket (AGC-200), Docket No. ; Room 915G, 800 Independence Avenue SW, Washington, DC 20591. Comments submitted must be marked Docket No. . Comments may also be sent electronically to the following internet address:

9-nprm-cmts@faa.dot.gov. Comments may be examined in Room 915G weekdays between 8:30 a.m. and 5:00 p.m., except Federal holidays.

**FOR FURTHER INFORMATION CONTACT:** Carroll Wright, Rotorcraft

Directorate, Aircraft Certification Service, Regulations Group, FAA, Fort Worth, Texas 76193-0111, telephone number (817) 222-5120.

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

Interested persons are invited to participate in the making of the proposed rule 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 notice are also invited. Substantive comments should be accompanied by cost estimates. Comments must identify the regulatory docket or notice number and be submitted in triplicate to the Rules Docket at the address specified under the caption "ADDRESSES."

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

All comments received on or before the closing date will be considered before taking action on this proposal. Late-filed comments will be considered to

the extent practicable. The proposals contained in this notice may be changed in light of the comments received.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must include a preaddressed, stamped postcard on which the following statement is made: "Comments to Docket No. ". The postcard will be date stamped and mailed to the commenter.

### **Availability of NPRM's**

Using a modem and suitable communications software, an electronic copy of this document may be downloaded from the FAA regulations section of the Fedworld electronic bulletin board service (telephone: 703-321-3339), the Federal Register's electronic bulletin board service (telephone: 202-512-1661), or the FAA's Aviation Rulemaking Advisory Committee Bulletin Board service (telephone: 202-267-5948).

Internet users may reach the FAA's web page at <http://www.faa.gov> or the Federal Register's webpage at [http://www.access.gpo.gov/su\\_docs](http://www.access.gpo.gov/su_docs) for access to recently published rulemaking documents.

Any person may obtain a copy of this NPRM by submitting a request to the FAA, Office of Rulemaking, ARM-1, 800 Independence Avenue, SW, Washington, DC 20591, or by calling (202) 267-9680. Communications must identify the notice number of this NPRM.

Specifically, the task is as follows:

Review Title 14 Code of Federal Regulations, parts 27 and 29, and supporting policy and guidance material for the purpose of determining the course of action to be taken for rulemaking and/or policy relative to the issue of identification of the critical parts for consideration under design, production and maintenance, according to a critical parts plan to be prepared by the manufacturer. Consider adding new Section 27.602 and 29.602 to Title 14.

The working group included representatives from the major rotorcraft manufacturers (normal and transport) and representatives from Aerospace Industries Association of America, Inc. (AIA), Association Europeene des Constructeurs de Material Aerospatial (AECMA), Transport Canada Aviation, JAA, the FAA Rotorcraft Directorate, and other interested parties. This broad participation is consistent with FAA policy to involve all known interested parties as early as practicable in the rulemaking process.

The working group presented its findings to the ARAC, which recommended to the FAA that a critical parts section be added to the airworthiness standards for both 14 CFR parts 27 and 29 (parts 27 and 29).

The FAA has evaluated the ARAC recommendations and proposes the changes contained in this notice.

### **General Discussion of the Proposals**

The objective of identifying critical parts is to ensure that critical parts are controlled during design, substantiation, manufacture, and throughout their service life so that the risk of failure in service is minimized by ensuring that the

critical parts maintain their critical characteristics on which certification is based. Although manufacturers currently have various methods to control critical parts, this proposal would require that the control process be formalized and submitted as part of the type certification process. This proposal to address critical parts in the regulations would apply to parts 27 and 29. A critical part would be defined as a part, the failure of which could have a catastrophic effect upon the rotorcraft, and for which critical characteristics have been identified which must be controlled to ensure the required level of integrity. The use of the word "could" in §§ 27.602(a) and 29.602(a) of the rule means that this failure assessment should consider the effect of flight regime (i.e., forward flight, hover, etc.). The operational environment need not be considered. The term "catastrophic" means the inability to conduct an autorotation to a safe landing, without exceptional piloting skills, assuming a suitable landing surface.

#### **Paperwork Reduction Act**

There are no requirements for information collection associated with this proposed rule that would require approval under the Paperwork Reduction Act of 1995 (44 U.S.C. § 3507(d)).

#### **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 Office of Management and Budget directs agencies to assess the effects of regulatory changes on international trade. In conducting these analyses, the FAA has determined that this rule: (1) will generate benefits that justify its costs and is not a "significant regulatory action" as defined in the Executive Order; (2) is not significant as defined in DOT's Regulatory Policies and Procedures; (3) will not have a significant impact on a substantial number of small entities; and (4) will not constitute a barrier to international trade. These analyses, available in the docket, are summarized below.

#### Cost/Benefit Analysis

The FAA estimates that any costs associated with the proposed rule would be negligible. Rotorcraft manufacturers already have many requirements (e.g., §§ 21.31, 21.33, 21.50, 21.139, 21.143, 27.1529, and 29.1529) to ensure the safety of the design manufacture, maintenance, inspection, and overhaul of rotorcraft parts. All manufacturers have some procedures in place to identify and control "critical parts," which may be called "flight safety parts," "critical parts," "vital parts," or "identifiable parts." This proposed rule would merely formalize these procedures into a Critical Parts Plan.

The JAA has indicated that it will amend the Joint Aviation Requirements (JAR's) by adopting the requirements in proposed §§ 27.602 and 29.602. The benefits of the proposed rule would be the formalization of the current critical

parts procedures to make them mandatory and the harmonization of the JAA and the U.S. requirements.

#### Initial Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (RFA) was enacted by Congress to ensure that small entities are not unnecessarily or disproportionately burdened by government regulations. The RFA requires a Regulatory Flexibility Analysis if a proposed rule would have a significant economic impact, either detrimental or beneficial, on a substantial number of small entities. FAA Order 2100.14A, Regulatory Flexibility Criteria and Guidance, establishes threshold costs and small entity size standards for complying with RFA requirements. Because this proposed rule formalizes existing requirements and current practices and would result in no more than negligible costs to rotorcraft manufacturers, the FAA has determined that it would not have a significant impact on a substantial number of small entities and a Regulatory Flexibility Analysis is not required.

#### International Trade Impact Assessment

The proposed rule would not constitute a barrier to international trade, including the export of American rotorcraft to foreign countries or the import of foreign rotorcraft into the United States. The JAA will harmonize their requirements with those in this proposed rule. There would be no cost (or cost savings) advantage to persons in either the United States or to JAA member countries.



## **Unfunded Mandates Reform Act**

Title II of the Unfunded Mandates Reform Act of 1995 (the Act), enacted as Pub. L. 104-4 on March 22, 1995, requires each Federal agency, to the extent permitted by law, to prepare a written assessment of the effects of any Federal mandate in a proposed or final agency rule that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of \$100 million or more (adjusted annually for inflation) in any one year. Section 204(a) of the Act, 2 U.S.C. 1534(a), requires the Federal agency to develop an effective process to permit timely input by elected officers (or their designees) of State, local, and tribal governments on a proposed "significant intergovernmental mandate." A "significant intergovernmental mandate" under the Act is any provision in a Federal agency regulation that will impose an enforceable duty upon State, local, and tribal governments, in the aggregate, of \$100 million (adjusted annually for inflation) in any one year. Section 203 of the Act, 2 U.S.C. 1533, which supplements section 204(a), provides that before establishing any regulatory requirements that might significantly or uniquely affect small governments, the agency shall have developed a plan that, among other things, provides for notice to potentially affected small governments, if any, and for a meaningful and timely opportunity to provide input in the development of regulatory proposals.

The proposed rule does not contain any Federal intergovernmental or private sector mandate. Therefore, the requirements of Title II of the Unfunded Mandates Reform Act of 1995 do not apply.

### **Conclusion**

For the reasons discussed above, including the findings in the Regulatory Flexibility Determination and the International Trade Impact Analysis, the Office of Information and Regulatory Affairs (OIRA) in conjunction with the FAA has determined that this proposed regulation is not a significant regulatory action under Executive Order 12866 and, therefore, is not subject to centralized regulatory review by the OIRA. In addition, the FAA certifies that this regulation will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. This proposal is considered to be nonsignificant under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). An initial regulatory evaluation of the proposal, including a Regulatory Flexibility Determination and Trade Impact Analysis, has been placed in the docket. A copy may be obtained by contacting the person identified under "FOR FURTHER INFORMATION CONTACT."

### **List of Subjects**

#### **14 CFR Parts 27 and 29**

Air transportation, Aircraft, Aviation safety, Rotorcraft, Safety.

## THE PROPOSED AMENDMENTS

In consideration of the foregoing, the FAA proposes to amend 14 CFR parts 27 and 29 as follows:

### PART 27 AIRWORTHINESS STANDARDS: NORMAL CATEGORY ROTORCRAFT

1. The authority citation for part 27 continues to read as follows:

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

2. Add a new § 27.602 to read as follows:

#### **§27.602 Critical parts.**

(a) *Critical Part* - A critical part is a part, the failure of which could have a catastrophic effect upon the rotorcraft, and for which critical characteristics have been identified which must be controlled to ensure the required level of integrity.

(b) If the type design includes critical parts, a critical parts list shall be established. Procedures shall be established to define the critical design characteristics, identify processes that affect those characteristics, and identify the design change and process change controls necessary for showing compliance with the quality assurance requirements of part 21 of this chapter.

\* \* \* \* \*

### PART 29--AIRWORTHINESS STANDARDS: TRANSPORT CATEGORY ROTORCRAFT

3. The authority citation for part 29 continues to read as follows:

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

4. Add a new § 29.602 to read as follows:

**§29.602 Critical parts.**

(a) *Critical Part* - A critical part is a part, the failure of which could have a catastrophic effect upon the rotorcraft, and for which critical characteristics have been identified which must be controlled to ensure the required level of integrity.

(b) If the type design includes critical parts, a critical parts list shall be established. Procedures shall be established to define the critical design characteristics, identify processes that affect those characteristics, and identify the design change and process change controls necessary for showing compliance with the quality assurance requirements of part 21 of this chapter.

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Issued in Washington, DC, on



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

800 Independence Ave., S.W.  
Washington, D.C. 20591

**MAR 1 1999**

Mr. John D. Swihart, Jr.  
Aviation Rulemaking Advisory Committee  
Helicopter Association International  
7313 Janetta Drive  
Fort Worth, TX 76180

Dear Mr. Swihart:

In response to a task announced in the Federal Register on January 20, 1995 (60 FR 4219), the Aviation Rulemaking Advisory Committee (ARAC) developed a notice of proposed rulemaking (NPRM) proposing changes to the type certification requirements for both normal and transport category rotorcraft. The changes would amend the airworthiness standards to define critical parts and to require a critical parts plan. The NPRM was published in the Federal Register on August 24, 1998, and the comment period closed on November 23, 1998. Comments received in response to the NPRM were considered to be non-substantive. Consequently, the final action will be developed internally by the Federal Aviation Administration (FAA).

Let me thank ARAC and, in particular, the Critical Parts Working Group, for its dedicated efforts in completing the task assigned by the FAA.

If you have any questions, please contact Mr. Mark Schilling at (817) 222-5110.

Sincerely,

Brenda D. Courtney  
Acting Director, Office of Rulemaking