

[4910-13]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 61**

**(Docket No. 28095; SFAR No. 73-1)**

**RIN: 2120-AG47**

**Robinson R-22/R-44 Special Training And Experience Requirements**

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

**ACTION:** Notice of proposed rulemaking

**SUMMARY:** This document proposes to extend the expiration date of Special Federal Aviation Regulation (SFAR) 73, and to amend the special training and experience requirements for pilots operating the Robinson model R-22 or R-44 helicopters in order to maintain the safe operation of Robinson helicopters. It also proposes special training and experience requirements for certified flight instructors conducting student instruction or flight reviews. This action is proposed to maintain awareness of and training for the potential hazards of particular flight operations for the continued safe operation of Robinson helicopters.

**DATES:** Comments must be received by December 22, 1997.

**ADDRESSES:** Comments should be submitted in triplicate to the Federal Aviation Administration, Office of the Chief Counsel, Attn: Rules Docket (AGC-200), Docket No. 28095, 800 Independence Avenue, S.W., Washington, DC 20591.

**FOR FURTHER INFORMATION CONTACT:** Robert J. O'Haver, Operations Branch, AFS-820, General Aviation and Commercial Division, 800 Independence Ave. SW., Washington, DC 20591; Telephone: (202) 267-7031.

**SUPPLEMENTARY INFORMATION:**  
**Comments Invited**

All interested persons are invited to comment on this proposed rule by submitting such written data, views, or arguments as they may desire, including comments relating to the environmental, energy, or economic impacts. Communications should identify the regulatory docket number, and be submitted in triplicate to the Federal Aviation Administration, Office of the Chief Counsel, Attn: Rules Docket (AGC-200), Docket No. 28095, 800 Independence Ave., Washington, DC 20591. Comments may also be sent electronically to the Rules Docket by using the following Internet address: 9-nprm-cmts@faa.dot.gov. All communications received will be considered by the Administrator. This proposed rule may be changed as a result of comments received from the public. All comments submitted will be available for examination in the Rules Docket in Room 915-G of the FAA Building, 800 Independence Ave., Washington, DC 20591. Persons wishing to have the FAA acknowledge receipt of their comments must submit a self-addressed, stamped postcard with the following statement: "Comments to Docket Number 28095." The postcard will then be dated, time stamped, and returned by the FAA.

#### **Availability of this proposed rule**

An electronic copy of this document may be downloaded, using a modem and suitable communications software, from the FAA regulations section of the Fedworld electronic bulletin board service ((703) 321-3339), the Federal Register's electronic bulletin board service ((202) 512-1661), or the FAA's Aviation Rulemaking Advisory Committee Bulletin Board service ((800) 322-2722 or (202) 267-5948). Internet users may reach the FAA's web page at <http://www.faa.gov> or the Federal Register's web page 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 document by submitting a request to the Federal Aviation Administration, Office of Rulemaking, ARM-1, 800 Independence Ave, SW, Washington, DC 20591, or by calling (202) 267-9677. Communications must identify the docket number of this proposal.

Persons interested in being placed on the mailing list for future rules should request from the above office a copy of Advisory Circular No. 11-2A, Notice of Proposed Rulemaking Distribution System, which describes the application procedure.

## **Background**

Part 61 of Title 14 of the Code of Federal Regulations (14 CFR part 61) details the certification requirements for pilots and flight instructors. Particular requirements for pilots and flight instructors in rotorcraft are found in Subparts C through G, and Appendix B of part 61. These requirements do not address any specific type or model of rotorcraft. However, the FAA determined in 1995 that specific training and experience requirements are necessary for the safe operation of Robinson R-22 and R-44 model helicopters.

The R-22 is a 2-seat, reciprocating engine-powered helicopter that is frequently used as low-cost initial student training aircraft. The R-44 is a 4-seat helicopter with similar operating characteristics and design features of the R-22. The R-22 is the smallest helicopter in its class and incorporates a unique cyclic control and rotor system. Certain aerodynamic and design features of the aircraft cause specific flight characteristics that require particular pilot awareness and responsiveness.

Since the R-22 was certificated, there have been 339 accidents in the U.S. involving R-22's. The FAA found that the R-22 met 14 CFR part 27 certification requirements and issued a type certificate in 1979; however, the R-22 has had a high number of fatal accidents due to main

rotor/airframe contact when compared to other piston powered helicopters. Many of these accidents have been attributed to pilot performance or inexperience, leading to low rotor revolutions per minute (RPM) or low "G" conditions that resulted in mast bumping or main rotor-airframe contact accidents. Its small size and relatively low operating costs result in its use as a training or small utility aircraft, and its operation by a significant population of relatively inexperienced helicopter pilots.

In its analysis of accident data, the FAA has found that apparently qualified pilots may not be properly prepared to safely operate the R-22 and R-44 helicopters in certain flight conditions. The additional pilot training, originally established by SFAR 73, continues to be needed for the safe operation of these helicopters.

### **Previous Regulatory Action**

To address the accident causes, on March 1, 1995, the FAA published SFAR 73 (60 FR 11256) which required certain experience and training to perform pilot-in-command (PIC) and/or certified flight instructor (CFI) duties. SFAR 73 was issued on an emergency basis without the usual public notice and comment; however, the FAA sought comment on the SFAR.

SFAR 73 will expire on December 31, 1997. Since its issuance, no accidents have occurred related to the low rotor RPM and/or tailboom/main rotor contact. Therefore, the FAA is proposing to extend, with a minor amendment, the provisions of SFAR 73.

### **Comments on SFAR 73**

Forty-six comments were received on SFAR 73 from various individuals, associations and businesses. These are discussed by topic below. One comment received from Helicopter Association International was rescinded at their request, and was later amended and replaced by them. One comment received made reference to the potential noise problem of low flying

helicopters; this comment had no relevance to the SFAR and is therefore considered to be outside the scope of the request for comment.

Twenty-one comments received in the docket supported the SFAR. One commenter expressed approval of the SFAR as an interim measure while engineering studies are completed. Two commenters suggested the SFAR was deficient or weak. Two commentors disagreed with the SFAR, stating that it was unnecessary or that they disagreed with the intent. The remaining commenters stated general support for the SFAR.

### **Scope of the SFAR**

Some commenters recommended removing the reference to Robinson helicopters, and/or stating that SFAR, particularly in the area of awareness training, should apply to all helicopters, not only Robinson helicopters. However, five comments were received refuting this position stating that the SFAR should apply only to Robinson helicopters; in addition, they suggested the intent of the FAA was to apply the SFAR across the board for all light helicopters.

*FAA Response:* It was the FAA's intent that SFAR 73 apply only to Robinson Helicopters in that the R-22 and R-44 are the only U.S. manufactured, light helicopters utilizing a two blade teetering rotor system, combined with a high tail rotor mount position that has a history of this common type of accident. Therefore, the SFAR is directed to the Robinson helicopter models R-22 and R-44.

### **Awareness Training**

One commenter noted that awareness training was not appropriate for beginning students and should not be required until just prior to solo and after 10 hours of dual instruction.

*FAA Response:* The FAA disagrees with this comment. Awareness training for helicopter operations should begin with the first flight. Students should be made aware from the outset of training of the hazards of abrupt control movements, rapid or abnormal control inputs, and the recognition of potential problems encountered in normal operations which could lead to an emergency. Such training is appropriate at all levels of proficiency, while the technical details surrounding such information increases in complexity and detail as understanding and experience increases.

Additionally, the subject matter of the training required by the SFAR pertaining to low, “G” maneuvers, rotor RPM control, and the dangers of mast bumping applies to all helicopters. Therefore, the FAA has made significant and permanent changes to various advisory material publications (e.g. practical test standards) as well as standards for certification.

### **Required Experience and Training**

Eight comments were received with regard to newly certificated flight instructors who had completed all, or the majority of their training in the Robinson helicopter. The commentors stated that those instructors who had received all their training in the R-22, even though they had a minimum time of 150 hours, should be authorized to conduct training (or continue to do so) in Robinson helicopters, if properly authorized and endorsed.

*FAA Response:* The FAA disagrees with this comment. While it is true that some newly certificated flight instructors who meet the minimum experience requirements established for certification may be eminently qualified to teach others, there are others whose skills may only meet minimum performance standards. Some who aspire to be flight instructors can and do

occasionally acquire a flight instructor's certificate with as little as 50 hours of actual rotorcraft time, and little more than 150 hours of total flight time. The accidents that precipitated the issuance of SFAR 73 were attributed to pilot performance or experience, leading to low rotor RPM or low "G" conditions that resulted in mast bumping or main-rotor/airframe contact accidents. In its analysis of accident data, the FAA has found that apparently qualified pilots may not be properly prepared to operate safely the R-22 and R-44 helicopters in certain flight conditions. As was stated in the preamble to SFAR 73, there is a clear relationship between pilot inexperience in the R-22 and R-44 helicopters and main rotor/airframe contact accidents. In 23 of the 30 fatal accidents, the pilot apparently manipulating the controls had less than 200 flight hours in helicopters or less than 50 flight hours in the model of Robinson helicopter they were operating.

### **Creditable Training**

Robinson Helicopter Company (RHC) and 15 additional commentors provided support for a RHC proposal to allow a reduction in the hours of dual instruction required by paragraphs 2(b)(1)(ii) and 2(b)(2)(ii) from 10 hours to 5 hours for those persons who had an experience level of more than 200 flight hours in helicopters.

*FAA Response:* The FAA agrees with this comment and incorporated it into this proposal. SFAR 73 was originally written to provide for adequate training of instructional and evaluator cadre by separating the two models of aircraft (R-22 and R-44), noting that the model R-44 had, at that point, not been marketed in the United States. At that time, it was determined

that 10 hours of dual instruction in each model would accomplish the goal of those who had been trained exclusively in one model of Robinson helicopter, the R-22 for United States pilots, and the Model R-44 for foreign operators. The 10 hour requirement could have been fulfilled by any dual flight instruction acquired in the appropriate model of aircraft over any period of time. The stipulation was that some dual flight instruction would entail the specific training provisions of the SFAR.

Since the R-44 is now being marketed in the United States, the training now entails transition or differences training, rather than initial training. The instruction provisions that applied to the model R-22, along with the acquired experience in that model of aircraft have provided a suitable increase in operational skills for pilots of the smaller aircraft which are applicable to the larger model R-44 aircraft.

For these reasons, the FAA determined that the safety aspects of the SFAR as they apply to flight experience in the model R-22 should be credited toward the flight experience requirements in the R-44.

### **The Proposed Amendment**

Prior to the issuance of SFAR 73, there had been 339 accidents involving the Robinson R-22 helicopters. Many of these accidents were related to the hazardous condition encountered in low “G” maneuvers resulting in main rotor/tailboom contact. The situation was so serious that on March 1, 1995, the FAA took corrective action and published SFAR 73 setting out specific training and experience requirements to perform PIC or CFI duties in the R-22 or R-44 Robinson helicopters.

Since the issuance of SFAR 73, there has been a dramatic drop in the accident rate of Robinson helicopters associated with low “G” maneuvers or main rotor/tailboom contact. Also in the interim, the FAA has taken steps to improve the airworthiness of the R-22 and R-44 through the issuance of a number of airworthiness directives.

With this remarkable decline in the accident rate, the FAA is proposing to extend the provisions of SFAR 73. As a result of the comments received on SFAR 73, there is a general consensus that the training is beneficial to those operating Robinson helicopters. Recognizing that there is a constant recurrence of training requirements to meet the ongoing influx of new rotary wing pilots, the FAA believes there is benefit to continuing the requirements of SFAR 73.

This proposal also provides a minor amendment to the previous provisions of SFAR 73 to clarify paragraph 2(b)(5) regarding the instructor experience required to conduct training in either the R-22 or R-44. The FAA has recognized that the R-44, which wasn’t operated in the U.S. in large numbers when SFAR 73 was originally promulgated, is being operated in greater numbers now. The FAA has also recognized that the R-44 is a more stable aircraft than the R-22. Therefore, the FAA is proposing to allow the crediting of up to 25 flight hours acquired in the model R-22 helicopter towards the 50 flight hour experience requirements of paragraph 2(b)(2)(i) for the R-44, and up to 5 hours of dual instruction received in the R-22 credited toward the 10 hour dual flight instruction requirement of 2(b)(2)(ii) for the R-44.

In addition, paragraph 2(b)(5)(ii) is clarified in this proposal. The FAA has received many inquiries as to the intent of this paragraph. Callers have mistaken the intent of the paragraph and concluded upon reading the SFAR, that instructors may be endorsed to provide flight instruction

in the R-22 or R-44 if they comply with paragraph 2(b)(1)(ii) or 2(b)(2)(ii) of the SFAR. They contend that the reference in paragraph 2(b)(5)(ii) to the experience requirements of 2(b)(1)(i) or 2(b)(2)(i) include the “or;” at the end of the sentence.

This was not the FAA’s intent; paragraph 2(b)(5)(i) specifically refers to a numbered line only. The FAA is proposing a change to paragraph 2(b)(5)(i) to provide clarification.

### **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 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 effect of regulatory changes on small entities and changes on international trade. In conducting these analyses, the FAA has determined that this proposal: (1) is cost-beneficial; (2) is not “a significant regulatory action” as defined in the Executive Order; (3) is not significant as defined in Department of Transportation’s Regulatory Policies and Procedures; (4) will not have a significant impact on a substantial number of small entities; and (5) will not constitute a barrier to international trade. All of these analyses have been prepared as a regulatory evaluation and are summarized below. A copy of the regulatory evaluation has also been placed into the docket.

## **BENEFITS**

The benefits of the proposed rule would be a reduction of the number of fatal accidents that occur in Robinson helicopters associated with low “G” maneuvers that can result in main rotor contact with the airframe. The estimated reduction in the number of accidents is expected from the increased level of safety related to specific flight training and awareness training requirements for all individuals operating Robinson R-22 and R-44 aircraft.

Between the years 1985 and 1994 there were a total of 43 fatal accidents involving Robinson helicopters, resulting in 63 fatalities. Accidents due to main rotor contact with the airframe accounted for 16 of the 43, or approximately 37 percent of the total accidents. There were 26 fatalities that resulted from those 16 accidents prior to the issuance of SFAR 73. The 26 fatalities represent 41 percent of all fatalities on Robinson helicopters prior to issuance of the SFAR. Since the SFAR was issued in 1995, however, there have been no accidents or fatalities involving R-22 or R-44 aircraft associated with low “G” operations or main rotor contact with the airframe. Although there is not yet sufficient historical data to statistically demonstrate that the almost three year period of no fatal accidents of this type is a result of SFAR 73, it is the judgement of the FAA after reviewing all available information that this is the case.

Assuming that SFAR 73 is effective at preventing the above types of rotorcraft accidents, the FAA has estimated the benefit associated with preventing these accidents. A value of \$2.7 million was applied to each statistical fatality avoided. This computation resulted in an estimate of approximately \$35.1 million in five year casualty costs. Also, the estimated value of the 16 destroyed aircraft was \$587,000. If this rulemaking helps prevent the recurrence of the 26

fatalities associated with low “G” maneuvers then expected safety benefits would be approximately \$35.7 million (present value, \$29.3 million) over five years, in 1996 dollars.

## **COSTS**

In this analysis, the FAA has estimated the cost of the proposed rule over the five year period from 1998 through 2002. All of the costs incurred as a result of changes to existing procedures will begin when the proposed rule becomes effective. Costs are computed in 1996 dollars and are discounted by seven percent. The Office of Management and Budget (OMB) requires using a discount factor of seven percent when calculating the present value.

The groups that incur costs from the proposed rule are rated pilots who aspire to be flight instructors or newly certificated flight instructors who desire to conduct student instruction or flight reviews in the Robinson model R-22 or R-44 helicopter. In addition, students that receive their instruction in the R-22 or R-44, such as pilots adding a rotorcraft rating and new rotorcraft students, will also incur costs from the proposed rule. All the cost estimates pertaining to the acquisition of a rotorcraft category rating are based on the minimum times required to receive the category rating, as published in 14 CFR Part 61.

### **Flight Instructor Costs**

Occasionally a flight instructor can acquire his or her certificate with as little as 50 hours of actual rotorcraft time and little more than 150 hours of total flight time. However, the SFAR established criteria for flight instructors who wish to continue to instruct or conduct flight reviews in a Robinson helicopter. The criteria were based on a combination of experience and training,

which require more than the minimum amount required for certification as an instructor. Further, the criteria were established to ensure that the instructors are knowledgeable and competent to conduct the awareness and flight training the FAA believes are necessary for Robinson helicopters. Therefore, no grandfathering was permitted for evaluators or flight instructors.

While it is still possible for an individual to obtain a flight instructor certificate for aircraft other than Robinson helicopters in the minimum published time, those aspiring a flight instructor certificate in the Robinson model helicopters will require an additional 50 hours of flight time. However, because some flight experience requirements in the model R-22 also apply to flight experience requirements in the R-44, a credit of up to 25 flight hours acquired in the model R-22 helicopter can apply to the 50 flight hour experience requirement for the R-44.

For a rated pilot to become certificated as a flight instructor in the R-22, the pilot will need an additional 50 flight hours in the R-22, at a cost of \$150 an hour, or \$7,500. Likewise, for a rated pilot to become certificated as a flight instructor in the R-44, the pilot will need an additional 50 flight hours (25 hours credit in the R-22) in the R-44, at an additional cost of \$300 an hour for 25 hours in a R-44 and \$150 an hour for 25 hours in a R-22, or a total of \$11,250 per person. However, for a person to become certificated as a flight instructor on both models of Robinson helicopters, the pilot will need 75 additional flight hours, 50 hours in the R-22 and 25 hours in the R-44. The added cost for 75 additional flight hours to become certificated in both the R-22 and the R-44 is \$15,000 per person. The FAA assumes that a rated pilot seeking to become a flight instructor would want to be certificated on both models of Robinson helicopters,

therefore the FAA has based the cost estimate to become a flight instructor on the 75 additional flight hours.

For several reasons, the FAA believes that only a small number of potential flight instructors will be affected by the proposed rule. First, most certificated flight instructors have been rated pilots for some time, and as a consequence, have far more than the minimum total flight time. In addition many pilots have an instrument rating, which requires significantly more flight experience. Second, most FAA-approved schools require flight instructors to have considerably more experience than the required minimums to become a flight instructor.

Finally, the FAA believes that the number of individuals seeking a new flight instructor certificate for a specific Robinson model helicopter is small relative to the total of new flight instructor certificates issued. To estimate the number of people seeking a flight instructor certificate for the Robinson model helicopters, the FAA determined the ratio of rotorcraft-only certificates held to the total airmen certificates held (less student and glider-only certificates). The ratio was then applied to the change in flight instructor certificates between 1995 and 1996.

These relationships may be summarized as follows:

$$\text{Estimate of Rotorcraft only Flight Instructor Certificate} = \Sigma IC_t - \Sigma IC_{t-1} * \Sigma RC_t / \Sigma PC_t$$

where:

$IC_t$  = instructor certificates held in time period t;

$IC_{t-1}$  = instructor certificates held in time period t-1;

$PC_t$  = pilot certificates held in time period t;

$RC_t$  = rotorcraft certificates held in time period t.

Applying the above formula, the FAA estimates that in 1996 there was the potential for 13 individuals to seek a flight instructor certificate based on the minimum requirements for a helicopter only rating. Based on the addition of 75 flight hours at an added cost of \$15,000 per

individual, the total cost for 13 people seeking a rotorcraft only flight instructor certificate in a Robinson helicopter is approximately \$189,000 annually. The estimated cost over the next five years is approximately \$900,000 (present value, \$800,000), in 1996 dollars.

### **Student Costs**

The costs encompass two classes of students: (1) pilots that currently have a class certificate who wish to add a rotorcraft rating, and (2) new students receiving rotorcraft only training. However, to be included in the cost estimate, students (new students or those adding a rotorcraft rating) must be receiving instruction in the Robinson model R-22 or R-44 helicopter.

New students receiving instruction in the Robinson helicopters would be required to receive an additional 5 hours of dual instruction. Because the small size, low purchase price, and low maintenance costs make the R-22 attractive to flight schools, the FAA assumes that new students will receive their instruction in the Robinson model R-22 helicopter. The added cost per student, assuming \$150 an hour for instruction in the R-22, will amount to \$750 (5 hours times \$150 an hour).

Estimation of the total added cost for all students receiving instruction in the Robinson helicopter was calculated in several steps. First, the FAA estimated the ratio of original rotorcraft certificates issued to original student certificates issued. That ratio was applied to the total student pilot certificates held in 1996, which produced an estimate of the number of student rotorcraft certificates held. The student rotorcraft certificates held was multiplied by an estimate

of the number of new students receiving instruction on Robinson helicopters. That estimate was then applied to the added cost per student to derive the total added cost for all students.

These relationships may be summarized as follows:

$$\text{Total Added Cost for all Students} = \{2 * H * C_{R-22} * [\Sigma \text{SPC} * \Sigma (\text{ORI} / \text{OSI})]\} / 3$$

where:

H = added hours;

C = added cost per hour;

SPC = student pilot certificates held;

OSI = original student certificates issued;

ORI = original rotorcraft certificates issued.

Applying the above procedure, the FAA estimates that approximately 4,000 new students will receive instruction in the Robinson R-22 model helicopter at an estimated cost of approximately \$3.0 million annually. The total new student costs are approximately \$14.9 million (\$12.2 million, present value) over the next five years in 1996 dollars.

Pilots that have a current class certificate who wish to add a rotorcraft rating and receive instruction in the Robinson helicopters will be required to take an additional 5 hours of dual instruction the same as new students. However, unlike the new students, the FAA assumes that a portion of the pilots seeking to add a rotorcraft rating will receive instruction in the Robinson model R-44. Therefore, in addition to estimating the total number of pilots seeking to add a rotorcraft rating in Robinson helicopters in general, the FAA estimated the percentage of those seeking a rating only in the R-44.

Experienced pilots who wish to add a rotorcraft rating to a current class certificate could receive more advanced instruction, or instruction in more advanced equipment, than a new pilot. For example, they could receive instruction in a larger, more sophisticated turbine helicopter, or

they could receive instruction to add the instrument rating to their class certificate. To determine the number of rotorcraft ratings that apply only to the R-44, the FAA multiplied the ratio of R-44s to the helicopter fleet by the added rotorcraft ratings for 1996. To estimate the added cost of instruction in the R-44, the number of R-44 ratings was multiplied by the number of required added hours of instruction, and by the R-44 cost per hour. As with the R-44, the added cost of the R-22 was estimated by applying the R-22 ratings to the added rotorcraft ratings for 1996. The number of R-22 ratings was multiplied by the number of added hours of instruction and by the R-22 cost per hour. Finally, the two products were added together to estimate the annual cost for pilots to add a rotorcraft rating using a Robinson helicopter.

These relationships may be summarized as follows: total added cost to add a rotorcraft rating =  $\Sigma ARR_t * (R44/F) * H * C_{R44} + \Sigma ARR_t * [(R-R44)/F] * H * C_{R22}$

where:

R = U. S. active Robinson fleet;

F = U. S. active helicopter fleet;

R44 = Robinson Model R-44 helicopter;

$ARR_t$  = added rotorcraft ratings in time period t;

H = added hours

C = added cost per hour.

Applying the above description, the total additional cost to receive instruction in a Robinson helicopter for the purpose of adding a rotorcraft rating to a pilot certificate is approximately \$448,000 annually. The estimated cost over the next five years is approximately \$2.2 million (present value, \$1.8 million) in 1996 dollars.

## **Cost Summary**

The proposed rule would impose costs to the those receiving instruction in Robinson model R-22 and R-44 helicopters. Before they could be certificated, affected individuals would be required to receive additional model-specific training and experience for each model of Robinson helicopter. Individuals affected by the proposal are rated pilots who aspire to be flight instructors or newly certificated flight instructors who desire to conduct student instruction or flight reviews in the Robinson model R-22 or R-44 helicopter, new rotorcraft students, and certificated pilots seeking to add a rotorcraft rating. Both the new student and the pilot seeking to add a rotorcraft rating must be receiving instruction in a Robinson helicopter to incur the added cost. The proposed rule would impose total estimated costs of approximately \$18.1 million (present value, \$14.8 million) over the next five years, in 1996 dollars.

All of the costs described in this analysis would be incurred voluntarily. These added costs are not being forced on any individual that wishes to receive rotorcraft training. If an individual wishes to avoid the additional costs of rotorcraft instruction delineated above, they can receive their instruction in a rotorcraft other than a Robinson model, and not incur any of the costs that are described in this analysis.

### **Comparison Of Costs And Benefits**

The proposal would require those who receive or provide instruction in a Robinson helicopter to incur additional costs related to specific flight training and awareness training. The addition of these proposed requirements would impose costs of approximately \$18.1 million (present value, \$14.8 million) over five years in 1996 dollars. Benefits from the proposed rule would be a reduction in the number of fatal accidents that occur in Robinson helicopters

associated with low “G” maneuvers that may result in main rotor/airframe contact. The estimated reduction in the number of accidents is due to the increased level of safety due to specific flight training and awareness training requirements for all individuals operating Robinson R-22 and R-44 aircraft. If the proposed action prevents the 26 fatalities that occurred during the past 10-year period, the estimated benefits would be \$71.4 million (\$50.1 million, present value). Since this SFAR will be in effect for only 5 years, the estimated benefits would be \$35.7 million (\$29.3 million, present value) for this rulemaking, resulting in benefits exceeding costs by a factor of about two.

### **Initial Regulatory Flexibility Determination**

The Regulatory Flexibility Act of 1980 (RFA), as amended, was enacted by Congress to ensure that small entities are not unnecessarily and disproportionately burdened by Government regulations. The Act requires that whenever an agency publishes a general notice of proposed rulemaking, an initial regulatory flexibility analysis identifying the economic impact on small entities, and considering alternatives that may lessen those impacts must be conducted if the proposed rule would have a significant economic impact on a substantial number of small entities.

This notice is to extend SFAR 73 published on March 1, 1995, which was issued on an emergency basis without the usual public notice period, but the FAA sought comments after issuance. No comments were received from small entities indicating that they would suffer a significant adverse economic impact. Further, the SFAR is limited to experience and training requirements to perform pilot-in-command and certified flight instructor duties, thereby impacting

individuals rather than entities. So in view of the above, the FAA concluded that this proposed rule, if extended, will not have a significant economic impact on a substantial number of small entities. The Agency, however, invites comments on this conclusion.

### **International Trade Impact Statement**

This proposed rule is not expected to impose a competitive disadvantage to either US air carriers doing business abroad or foreign air carriers doing business in the United States. This assessment is based on the fact that this proposed rule would impose additional costs only on those receiving instruction on Robinson helicopters. This proposal would have no effect on the sale of foreign aviation products or services in the United States, nor would it affect the sale of United States aviation products or services in foreign countries.

### **Unfunded Mandates Reform Act Assessment**

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

would 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.

This rule does not contain any Federal intergovernmental mandates, but does contain a private sector mandate. However, because expenditures by the private sector will not exceed \$100 million annually, the requirements of Title II of the Unfunded Mandates Reform Act of 1995 do not apply.

### **Federalism Implications**

The SFAR proposed herein will not have substantial direct effects on the states, on the relationship between the Federal government and the states, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12866, it is determined that this proposed rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

### **International Civil Aviation Organization (ICAO) and Joint Aviation Regulations**

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to comply with ICAO Standards and Recommended Practices to the maximum extent

practicable. The FAA has determined that this proposed rule does not conflict with any international agreement of the United States.

### **Paperwork Reduction Act**

The OMB control number assigned to the collection of information for this proposed rule is 2120-0021.

### **Conclusion**

For the reasons previously discussed in the preamble, the FAA has determined that this SFAR is not significant under Executive Order 12866. Based on the findings in the Regulatory Flexibility Determination and the International Trade Impact Analysis, the FAA certifies that this proposed rule 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 SFAR is not considered significant under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979).

### **List of Subjects in 14 CFR Part 61**

Aircraft, Aircraft pilots, Airmen, Airplanes, Air safety, Air transportation, Aviation safety, Balloons, Helicopters, Rotorcraft, Students.

### **The Proposal**

In consideration of the foregoing, the Federal Aviation Administration proposes to amend part 61 of Title 14 of the Code of Federal Regulations (14 CFR part 61) as follows:

#### **PART 61 - CERTIFICATION: PILOTS AND FLIGHT INSTRUCTORS**

1. The authority citation for part 61 continues to read as follows:

**Authority:** 49 U.S.C. 106(g), 40113, 44701-44703, 44707, 44709-44711, 45102-45103, 45301-45302.

2. Paragraphs 2(b)(2), 2(b)(5), and 3 of Special Federal Aviation Regulation (SFAR) No. 73 to part 61 are proposed to read as follows:

**SPECIAL FEDERAL AVIATION REGULATIONS**

\* \* \* \* \*

**SFAR No. 73 - ROBINSON R-22/R-44 SPECIAL TRAINING AND EXPERIENCE REQUIREMENTS**

1. \* \* \*

2. Required training, aeronautical experience, endorsements, and flight review.

(a) \* \* \*

(b) \* \* \*

(1) \* \* \*

(2) No person may act as pilot in command of a Robinson model R-44 unless that person:

(i) has had at least 200 flight hours in helicopters, at least 50 flight hours of which were in the Robinson R-44. The pilot in command may credit up to 25 flight hours in the Robinson model R-22 toward this 50 hour requirement; or

(ii) has had at least 10 hours dual instruction in a Robinson helicopter, at least 5 hours of which must have been accomplished in the Robinson model R-44 helicopter. Beginning 12 calendar months after the date of the endorsement, the individual may not act as pilot in command unless the individual has completed a

flight review in an R-44 within the preceding 12 calendar months and obtained an endorsement for that flight review. The dual instruction must include at least the following abnormal and emergency procedures flight training:

- (A) enhanced training in autorotation procedures,
- (B) engine rotor RPM control without the use of the governor,
- (C) low rotor RPM recognition and recovery, and
- (D) effects of low G maneuvers and proper recovery procedures.

(3) \* \* \*

(4) \* \* \*

(5) No certificated flight instructor may provide instruction or conduct a flight review in a Robinson model R-22 or R-44 unless that instructor:

- (i) Completes the awareness training in paragraph 2(a) of this SFAR,
- (ii) and for the R-22, has had at least 200 flight hours in helicopters, at least 50 flight hours of which were in the Robinson R-22, or for the R-44, has had at least 200 flight hours in helicopters, 50 flight hours of which were in Robinson helicopters. Up to 25 flight hours of Robinson model R-22 flight time may be credited toward the 50 hour requirement,

- (iii) Has completed flight training in an R-22, R-44, or both, on the following abnormal and emergency procedures:

- (A) enhanced training in autorotation procedures,
- (B) engine rotor RPM control without the use of the governor,
- (C) low rotor RPM recognition and recovery, and
- (D) effects of low G maneuvers and proper recovery procedures.

(iv) Been authorized by endorsement from an FAA aviation safety inspector or authorized designated examiner that the instructor has completed the appropriate training, meets the experience requirements and has satisfactorily demonstrated an ability to provide instruction on the general subject areas of paragraph 2(a)(3) of this SFAR , and the flight training identified in paragraph 2(b)(5)(iii) of this SFAR .

(c) \* \* \* .

(d) \* \* \*

3. Expiration date. This SFAR terminates on December 31, 2002, unless sooner superceded or rescinded.

Issued in Washington, D.C. on November 18, 1997.

/s/

Richard O. Gordon

Acting Director, Flight Standards Service