

Docket Number FAA-2002-13744 SFAR No. 73-1

I respectfully request that this comment be accepted into the public record for the following reason: Failure of the posting authority to clearly publish the date in which comments must be received as presented to the public on the government website: <http://dms.dot.gov/search/documents.cfm?documentid=201379&docketid=13744>.

COMMENT ONE:

Continuance of SFAR-73 in its present form is a violation of the Regulatory Flexibility Act of 1980 in that it has adverse economic impact on small entities and as such acts as a barrier to employment and free and open competition in the market place.

Discussion:

Many individual flight instructors either work for small aviation businesses or are independent business men or women.

Economic Impact: Prior to the implementation of SFAR 73 there were an estimated 5000 helicopter flight instructors throughout the nation. As the cost effectiveness of the Robinson line of helicopters becomes well known Robinson helicopters continue to capture market share of the training fleet available for initial training of helicopter pilots.

Flight instructors have a need to transition into a Robinson in order to remain employed. The requirement to have 50 hours in type either R22 or R44 creates an unnecessary financial burden on the individual flight instructor and/or small aviation company.

The average cost of rental and flight instruction of a Robinson R22 is between \$140.00 and \$180.00 per hour. In order to obtain the required 50 hours a flight instructor must pay between \$7000.00 and \$9000.00.

Of the 5000 helicopter flight instructors, that existed in this country prior to the implementation of SFAR 73, their may be an estimated 25% of them that have a desire to provide initial entry instruction and/or would be able to meet the under 200 LB weight limit imposed by the R22. The number is estimated at 1250 individual helicopter flight instructors that may be affected.

The total economic impact industry wide could be an estimated \$8,750,000.00 to \$11,250,000.00.

Example:

Helicopter Certified Flight Instructor John Doe worked for the USFS as a pilot/flight instructor. He provided training and evaluations of civilian pilots on contract to the Forest Service for fire duty and other resource work. He retired from government service at age 55 in 1997. He has many thousands of helicopters flying hours in all types. Upon retirement he desires to work for the local flight school training student pilots to fly helicopters. The local flight school operates Robinson R22 helicopters for initial entry training. John Doe goes to the airport to find out that he needs to spend

around \$9,000.00 to be eligible to train students in an R22. He is on a fixed income and chooses not to spend the money.

SFAR 73 has effectively barred John Doe from entering the job market. When a student pilot begins his helicopter training he cannot fly with an experienced flight instructor that has thousands of hours. He must fly with a turn around flight instructor. One, that has funded his own training, from Private through CFI. He most likely has less than 1000 hours of helicopter time.

COMMENT TWO:

SFAR 73 in its present form penalizes experienced helicopter flight instructors. It fails to recognize that flying experience in other helicopters with similar flight characteristics as valuable and qualifying experience.

Discussion:

Within the background statements of the Notice of proposed Rule making for SFAR 73 this statement is present. "Many of the accidents were caused by low rotor revolutions per minute (RPM) or low "G" conditions resulting in mast bumping or main rotor-airframe contact accidents. Aviation authorities attribute this to pilot error by inexperienced pilots."

The Robinson line of helicopters R22 and R44 have a main rotor system that is "free to teeter and cone" as described in the Pilots Operating Handbook. Many other helicopters have a similar type of main rotor system. One that is described as a see-saw or semi-rigid system. These helicopters all have similar flight characteristics and are prone to the phenomenon known as mast bumping if flown outside their flight envelop.

Some of these helicopters are the Bell 47, 204, 205, 206, 212, 214, 222, and their military equivalents. Hiller 12 and military versions.

All of these helicopters are prone to the low main rotor RPM conditions that factor into the mast bumping equation.

One design factor that contributes to loss of rotor RPM at altitude is the horsepower to weight ratio (HP: W) of the individual helicopter.

To examine the HP: W ratio of the various Robinson R22 models.

Model	HP	Gross Weight	Ratio
R22 Standard	150	1300	1:8.66
R22 A & Beta	160	1370	1:8.56
R22 Beta II	145	1370	1:9.44

To make a comparison of other helicopters HP: W ratio, I will use two models that I have the data available to me. The military version of the Bell 206A (OH58A) and the military of the Bell 205A (UH-1D).

Model	HP	Gross Weight	Ratio
OH58A (B206A)	317	3000	1:9.46
Note: HP: W ratio higher than any R22 model.			
UH-1D (B205A)	1100	9500	1:8.64
Note higher than the R22 Beta.			

Conclusion:

Comment one establishes that SFAR 73 imposes serious economic impact and barriers to employment on helicopter flight instructors that were certified prior to the ruling going into effect March 1.1995.

Comment two shows that the intent of SFAR 73 was to establish training requirements for inexperienced pilots. It further illustrates that there are helicopters that are or have been in common use that have less horsepower per pound available than the Robinson R22 and share common flight characteristics, primarily mast bumping.

By this illustration, I propose that a flight instructor with sufficient experience in other helicopters, with a similar designed main rotor system and a HP: W ratio (more pounds per HP) higher than a Robinson, have sufficient experience. These flight instructors and should not be subjected to the financial burden (economic impact) and the barrier to employment that SFAR 73 artificially imposes.

Recommendation:

That SFAR 73 be modified to read as follows: Exception for experience, helicopter certified flight instructors that received their initial helicopter CFI prior to March 1, 1995 and have at least 1000 hours PIC time in helicopters that have a two blade, teetering type main rotor system and a HP: W ratio equal to or less than (more weight per HP) the model of Robinson helicopter to be flown are waived from the 50 hour in type requirement imposed by this part (SFAR 73).

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