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U.S. Department of Transportation  
Docket Operations  
M-30  
West Building, Ground Floor  
Room W12-140  
1200 New Jersey Avenue, SE  
Washington, DC 20590

**Re: Docket No. FAA-2007-0378 Airworthiness Directives; Robinson Helicopter Company Models R22, R22 Alpha, R22 Beta, R22 Mariner, R44 and R44 II Helicopters**

The Aircraft Owners and Pilots Association (AOPA), representing more than 414,000 members, or two-thirds of the nation's general aviation pilots, submits the following comments to the Federal Aviation Administration's (FAA) request for comments on the Final Rule Airworthiness Directives; Robinson Helicopter Company Models R22, R22 Alpha, R22 Beta, R22 Mariner, R44 and R44 II Helicopters published in the Federal Register on Thursday, January 3, 2008.

AOPA asks that the FAA recognize that the flight manuals for the Robinson models specifically listed in this airworthiness directive (AD) were recently updated to include the preflight visual inspection required by this AD and a more robust description of the rotor blade construction used on the helicopters' rotor systems. The inclusion of the preflight visual inspection of the rotor blades now makes certain portions of the AD redundant. Portions of the AD that overlap with recent updates to the normal operating procedures outlined in the flight manual should be removed from the AD.

**AOPA Requests FAA Remove Preflight Blade Inspection and Maintenance Record Entry from AD**

*The FAA proposes an airworthiness directive for multiple Robinson helicopter models that would require a one-time visual inspection and "tap test" of the rotor blade skin. This AD also requires a visual inspection of the rotor blades before each flight and a record of each visual inspection to be made in the aircraft maintenance records.*

Explanation of proposed airworthiness directive: The proposed AD is a result of eleven reported incidents of blade debonding. Bond failure can be caused by the eroding of the protective coating on rotor blades or by corrosion. The eleven reported incidences of

blade debond cited in this AD were discovered during routine maintenance by a mechanic or by the pilot while in flight.

This AD requires that within ten hours time in service the rotor blades of the Robinson helicopter models specifically listed in the AD must be visually inspected and undergo a “tap test” to ensure the bonded areas of the rotor blades are free of separation, corrosion, or voids.

Following the initial inspection and tap test, the AD requires that prior to every flight a visual inspection of the rotor blades be performed and a record of the visual inspection be made in the aircraft maintenance records. The AD allows for a pilot with at least a private pilot certificate to perform the preflight visual inspection and make the required entry into the maintenance records.

*AOPA recommendation: AOPA recommends that the requirement for a preflight inspection of the rotor blades and subsequent entry in the aircraft maintenance records be removed for the AD.*

A revised flight manual was issued for the R22 and R44 model Robinson helicopters in April 2007. The FAA approved manual includes a newly added description of the construction of the helicopter’s main rotor blades and a discussion of the need to visually inspect the blades to ensure proper bonding.

This recent FAA approved update also includes an expanded normal preflight checklist and a specific “CAUTION” callout which includes instructions to the pilot on where and what to look for with regard to possible rotor blade debonding.

The revised flight manual text pertaining to the preflight visual inspection is located in Section 4 and states:

**CAUTION**

Verify erosion on the lower surface of blades has not exposed skin-to-spar bond line. Reference Rotor Systems description in Section 7.

Pilots are taught to perform a preflight inspection *prior to every flight*. This inspection is done to ensure the aircraft is airworthy prior to every flight. AOPA believes that the recent modifications made to the Robinson helicopter flight manuals were an appropriate way to ensure that visual inspections of the rotor blades are performed prior to every flight.

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Additionally, the federal aviation regulations (FARs) address to the pilot's responsibility to ensure airworthiness of an aircraft prior to flight. Specifically, FAR 91.7(a), titled Civil aircraft airworthiness, states "No person may operate a civil aircraft unless it is in airworthy condition." Operationally, airworthiness of an aircraft is determined through the pilot's preflight aircraft inspection. The preflight aircraft inspection is based on the checklists and guidance included in the FAA approved flight manual for the make and model being flown.

By updating the flight manual to include a visual inspection of the rotor blades during preflight, Robinson has taken direct steps to ensure the airworthiness of the rotor blades. Due to this change, the requirement listed in this AD for a visual inspection of the rotor blades prior to each flight is redundant and should be removed from the AD.

As pilots have been including a visual inspection of the rotor blades in their preflight inspections since April of last year there is no need to require that an entry be made in the aircraft maintenance record after each visual inspection is made. The record-keeping requirement tied to the preflight visual inspection does not enhance the safety of the rotor blades. Because this record entry places a burden on the pilots performing the visual inspection, yet does not provide a direct safety benefit to the pilot community, it should also be removed from the AD. If the FAA feels strongly that a maintenance record entry would some how provide a safety benefit, the impact of this requirement should be decreased and a maintenance record entry should only be required for the first flight of each day.

### **Summary**

The association appreciates the FAA's efforts to ensure the safety of the general aviation fleet and looks forward to a modified AD that recognizes the active steps already taken by Robinson to include visual inspection of the rotor blades prior to every flight in the flight manuals. Removing the AD requirement to perform a visual inspection prior to each flight and to make an entry in the maintenance records will reduce redundancy and burden on the pilot community while still ensuring the same level of safety as the original AD.

Sincerely,



Leisha Bell  
Manager  
Regulatory Affairs