

Sektion 2. Utlandstillverkad flygmateriel

TITEL: Ändring av flyghandbok

GÄLLER: Modell R22.

ÅTGÄRD: Utför åtgärder angivna i bifogad kopia av FAA AD 95-04-14.

TID FÖR
ÅTGÄRD: Före flygning om ej tidigare utfört.

UNDERLAG: FAA AD 95-04-14.

REFERENS: FAA AD 95-04-14.
Luftfartsinspektionens skrivelser L 1995-88-101203 daterade
1995-01-16, 1995-02-01, 1995-02-09 och 1995-03-10

UTGIVNINGS-
DATUM: 1995-04-06

LFS: 1995:20

Åtgärd enligt LVD utgör nödvändig förutsättning för ifrågavarende flygmateriels luftvärdighet. Referens BCL M 1.11.
Anteckning om åtgärd, som vidtagits i enlighet med LVD, skall införas i teknisk journal för berörd flygmateriel med hänvisning till ifrågavarande LVD-nummer. Angivet underlag refererar till senaste gällande revision/utgåva. LVD utges i luftfartsverkets författningssamlingar LFS.



AIRWORTHINESS DIRECTIVE

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U.S. Department
of Transportation
Federal Aviation
Administration

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Federal Aviation Regulations, Part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference FAR Subpart 39.3).

95-04-14 ROBINSON HELICOPTER COMPANY: Amendment 39-9166. Docket No. 95-SW-11-AD. Supersedes Priority Letter AD 95-02-03, issued January 12, 1995.

Applicability: Model R22 helicopters, certificated in any category.

Compliance: Required before further flight, unless accomplished previously.

To prevent main rotor (M/R) stall or mast bumping, which could result in the M/R blades contacting the fuselage causing failure of the M/R system and subsequent loss of control of the helicopter, accomplish the following:

(a) Insert the following information into the Model R22 Rotorcraft Flight Manual, revised February 4, 1993. Compliance with the Limitations section is mandatory. The Normal Procedures and Emergency Procedures sections are informational.

LIMITATIONS SECTION

(1) Flight when surface winds exceed 25 knots, including gusts, is prohibited.

(2) Flight when surface wind gust spreads exceed 15 knots is prohibited.

(3) Flight in wind shear is prohibited.

(4) Flight in moderate, severe, or extreme turbulence is prohibited.

(5) Adjust forward airspeed to between 60 knots and $0.7 V_{ne}$ but no lower than 60 knots upon inadvertently encountering moderate, severe, or extreme turbulence.

Note: Moderate turbulence is turbulence that causes: (1) changes in altitude or attitude; (2) variations in indicated airspeed; and (3) aircraft occupants to feel definite strains against seat belts.

NORMAL PROCEDURES SECTION

NOTE

Until the FAA completes its research into the conditions and aircraft characteristics that lead to main rotor blade/fuselage contact accidents, and corrective type design changes and operating limitations are identified, R22 pilots are strongly urged to become familiar with the following information and comply with these recommended procedures.

Main Rotor Stall: Many factors may contribute to main rotor stall and pilots should be familiar with them. Any flight condition that creates excessive angle of attack on the main rotor blades can produce a stall. Low main rotor RPM, aggressive maneuvering, high collective angle (often the result of high-density altitude, over-pitching [exceeding power available] during climb, or high forward airspeed) and slow response to the low main rotor RPM warning horn and light may result in main rotor stall. The effect of these conditions can be amplified in turbulence. Main rotor stall can ultimately result in contact between the main rotor and airframe. Additional information on main rotor stall is provided in the Robinson Helicopter Company Safety Notices SN-10, SN-15, SN-20, SN-24, SN-27, and SN-29.

Mast Bumping: Mast bumping may occur with a teetering rotor system when excessive main rotor flapping results from low "G" (load factor below 1.0) or abrupt control input. A low "G" flight condition can result from an abrupt cyclic pushover in forward flight. High forward airspeed, turbulence, and excessive sideslip can accentuate the adverse effects of these control movements. The excessive flapping results in the main rotor hub assembly striking the main rotor mast with subsequent main rotor system separation from the helicopter.

To avoid these conditions, pilots are strongly urged to follow these recommendations:

- (1) Maintain cruise airspeeds greater than 60 knots indicated airspeed and less than $0.9 V_{ne}$, but no lower than 60 knots.
- (2) The possibility of rotor stall is increased at high density altitudes; therefore, avoid flight at high density altitudes.
- (3) Use maximum "power-on" RPM at all times during powered flight.
- (4) Avoid sideslip during flight. Maintain in-trim flight at all times.
- (5) Avoid large, rapid forward cyclic inputs in forward flight, and abrupt control inputs in turbulence.

EMERGENCY PROCEDURES SECTION

(1) RIGHT ROLL IN LOW "G" CONDITION

Gradually apply aft cyclic to restore positive "G" forces and main rotor thrust. Do not apply lateral cyclic until positive "G" forces have been established.

(2) UNCOMMANDED PITCH, ROLL, OR YAW RESULTING FROM FLIGHT IN TURBULENCE.

Gradually apply controls to maintain rotor RPM, positive "G" forces, and to eliminate sideslip. Minimize cyclic control inputs in turbulence; do not over control.

(3) INADVERTENT ENCOUNTER WITH MODERATE, SEVERE, OR EXTREME TURBULENCE.

If the area of turbulence is isolated, depart the area; otherwise, land the helicopter as soon as practical.

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used when approved by the Manager, Rotorcraft Standards Staff, FAA, Rotorcraft Directorate. Operators shall submit their requests through an FAA Principal Operations Inspector, who may concur or comment and then send it to the Manager, Rotorcraft Standards Staff.

NOTE: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Rotorcraft Standards Staff.

(c) Special flight permits, pursuant to sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199), will not be issued.

(d) This amendment becomes effective on March 17, 1995.

FOR FURTHER INFORMATION CONTACT:

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