



**SUBJ:** MAIN ROTOR BLADES; Brinelled Main Rotor Blade Spindle Bearing

**SAIB:** 2023-01  
**Date:** 2/14/2023

*This is information only. Recommendations aren't mandatory.*

## **Introduction**

This Special Airworthiness Information Bulletin (SAIB) is being issued to alert owners, operators, maintenance technicians, and inspectors of an airworthiness concern for Robinson Helicopter Company R22/R22 ALPHA/R22 BETA/R22 MARINER rotorcraft due to potential wear on the main rotor blade (MRB) spindle bearings, part number (P/N) A159-3.

At this time, the airworthiness concern is not an unsafe condition that would warrant airworthiness directive (AD) action under Title 14 of the Code of Federal Regulations (14 CFR) part 39.

## **Background**

The FAA has seen an increasing trend in reports from local and international operators of premature wear/damage to P/N A159-3 MRB spindle bearings in R22-series helicopters. Investigation found brinelling of the bearings which can present itself as cyclic vibrations, increased cyclic force, or an unusual feeling in the controls that has been described as “notchy”/“jerky”/“gritty”. These conditions can become worse over the course of several flights. Brinelling can occur due to an overspeed of the rotor system; however, multiple reports have found brinelling without an observed overspeed event. A maintenance check for brinelling can be performed by removing the rotor blades and rotating the spindles by hand to check for smoothness (reference Robinson maintenance documents).

## **Recommendations**

The FAA recommends that all operators remain vigilant for any unusual control system vibration or unusual control system feel. If this is observed in flight, make a safe landing. If one or more of these conditions are observed, the FAA recommends checking the MRB spindle bearings in accordance with the appropriate maintenance manual prior to next flight. Finally, if brinelling or other abnormalities are observed on the spindle bearings, the FAA recommends submitting a service difficulty report (SDR).

## **For Further Information Contact**

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## **For Related Service Information Contact**

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