



SUBJ: Robinson R44 and R66 HeliSAS Autopilot/Garmin Primary Flight Display (PFD) Interface

SAIB: AIR-21-14
Date: August 24, 2021

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) alerts owners and operators of Robinson Helicopter Company R44-series and R66 helicopters equipped with the optional HeliSAS autopilot system that the system may fail to automatically disengage in the presence of a VHF NAV or glideslope flag indication on the PFD. The affected Robinson helicopters are limited to the R44-series and R66 equipped with both the HeliSAS autopilot and a Garmin PFD.

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

While conducting a practice ILS approach during a production flight test of a Robinson R66, the pilot noted a short duration glideslope flag indication on the PFD. The autopilot remained engaged but was not receiving vertical guidance to continue down the glidepath, so the helicopter remained in level flight. When the flag cleared a few seconds later, the helicopter was above the glidepath and the autopilot pitched down to recover.

The HeliSAS autopilot system is designed to disengage vertical guidance in the presence of a glideslope flag and lateral guidance in the presence of a NAV flag. The flag signals are sent from the Garmin PFD to the autopilot Flight Control Computer (FCC) via an interconnecting wire harness. The electrical signal sent by the PFD is such that a resistive load must be on the line for it to be properly interpreted. Some helicopters were manufactured without the appropriate resistors installed. Autopilot operations using GPS navigation are not affected because GPS status is communicated to the autopilot using different wires and signal types.

In August 2020 Robinson issued Service Bulletin SB-106 for the R44 series and Service Bulletin SB-37 for the R66, both dated August 21, 2020 with instructions to retrofit resistors to aircraft in the field.

Recommendations

We recommend that owners/operators of Robinson R44-series and R66 helicopters comply with R44 Service Bulletin SB-106 and R66 Service Bulletin SB-37, both dated August 21, 2020.

For Further Information Contact

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For Related Service Information Contact

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