

National Transportation Safety Board

Washington, DC 20594



Response to Petition for Reconsideration

April 6, 2026

Mr. Bradley G. Clark
President
Vertical Aviation Technologies, Inc.
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[REDACTED]

In accordance with Title 49 *Code of Federal Regulations (CFR)* 845.32, the National Transportation Safety Board (NTSB) has reviewed the petition for reconsideration and modification of probable cause of the aircraft accident involving a Hummingbird experimental amateur-built helicopter, N331PF, on May 31, 2024, in New Hill, North Carolina (ERA24LA244). The petitioner has met the requirements for the NTSB's review of his petition; specifically, as the president of the company that manufactures the kit for building the helicopter, he has a direct interest in the investigation and has offered claims that our report and the investigation's supporting documentation were erroneous. Based on our review of the petition filed on July 9, 2024, the NTSB grants the petition in part.

On May 31, 2024, during a local evening test flight, the pilot/builder was conducting a hover check in the experimental amateur-built helicopter. The purpose of the flight was to track the main rotor blades using light-emitting diodes (LEDs) affixed to the blade tips in an effort to address a main rotor vibration. The pilot reported that he became distracted by the LED lights during the maneuver and lost control of the helicopter, resulting in the helicopter coming to rest on its side. He reported no mechanical malfunction or anomaly with the helicopter.

The probable cause of the accident, which was approved on July 2, 2024, was as follows:

The pilot's failure to maintain control of the helicopter while hovering.

Petitioner's Claims

The petitioner requested that the NTSB modify the final report and probable cause due to "lack of factual information." Specifically, the petitioner identified

multiple items for correction in the final report and supporting documentation in the docket, including the FAA inspector's statements regarding inherent rotor system issues, the level of assistance the petitioner's company provided to the pilot/builder, the adequacy of the assembly and rigging instructions provided in the company's manuals, and the identification of the manufacturer of the amateur-built helicopter.

The petitioner asserted that the accident was due to a missing bolt on the lateral primary flight-control rod end and that he had photographic evidence to support this claim. According to the petitioner, the pilot/builder discovered after the accident that the bolt was missing and reinstalled it before the FAA inspector's initial arrival to the accident scene. According to the petitioner, the pilot told another Hummingbird operator that he may have omitted the nut from the bolt when installing the hydraulic system before the accident flight.

The petitioner provided two postaccident photographs of the helicopter on its side in the grass. One photograph (which was reportedly taken by the pilot/builder and provided to the petitioner by the insurance adjuster) showed the flight control rod end separated with the bolt missing, and the other showed the flight control rod end attached with the bolt in place.

The petitioner also asserted that inclusion of the FAA airworthiness inspector's statements in the accident docket, which referenced a video of the accident helicopter showing vibration and control issues and attributed the accident to inherent rotor-system issues and deficiencies in the assembly and rigging instructions, unfairly placed blame on his company and damaged the reputation of both his company and the Hummingbird helicopter design. He requested that the misrepresentation be corrected.

According to the petitioner, the accident helicopter did not conform to the Hummingbird 300L configuration due to substantial modifications performed by the pilot/builder without kit manufacturer guidance, including structural changes to the airframe, replacement of the quadricycle landing gear with a single nosewheel, and installation of a Robinson hydraulic flight-control system. The petitioner stated that these modifications adversely affected the helicopter's handling qualities and were performed contrary to his recommendations.

The petitioner also stated that the cyclic stick shake observed in video footage was caused by the pilot/builder's redesign of the cyclic trim system. He said that he personally re-timed the dampers on the accident helicopter and provided a rigging video and blade-tracking instructions to the pilot/builder.

The petitioner stated that his company's manuals contained sufficient guidance for performing damper, rigging, and blade-tracking tasks, noting that they were continuously updated with content derived from Sikorsky manuals originally

approved by the FAA. He also indicated that the manuals were recently reviewed by FAA Manufacturing Inspection District Offices personnel, who commented favorably on their level of detail. The petitioner also asserted that the final report incorrectly identified Vertical Aviation as the helicopter manufacturer. He noted that, consistent with FAA practice for amateur-built aircraft, the registered builder/owner is considered the manufacturer.

NTSB's Response

Regarding the petitioner's assertion concerning the FAA airworthiness inspector's statements in the public docket for the investigation, we acknowledge the petitioner's concern. We note that the statements cannot be substantiated and are not material to the accident sequence; we concur that their continued presence in the docket as currently available could unduly affect the manufacturer's reputation. Accordingly, the docket item has been amended to include only relevant portions of the FAA airworthiness inspector's statement.

Regarding the petitioner's assertion that the accident resulted from a missing bolt on the lateral primary flight-control rod end and that modifications made by the pilot/builder adversely affected the helicopter's handling qualities, we note that the pilot reported no control issues with the helicopter. We also note that the information the petitioner provided to support his claim did not contain independently verified evidence, as required by the regulations pertaining to petitions for reconsideration at 14 *CFR* 845.32(a)(3)(i), establishing when or by whom the missing-bolt photograph was taken, whether the pilot told another operator of possibly omitting the nut from the bolt, or whether the bolt was missing before the accident and then reinstalled before the FAA inspector's arrival.¹

Although both the FAA inspector who examined it and the petitioner reported deficiencies with the pilot's build that would be expected to adversely affect its handling characteristics, this evidence alone does not necessarily show that those effects were operationally relevant at the time of the accident, which occurred during a low hover.² Given the conflict between the pilot's postaccident statement, which did not indicate control issues, and the reported deficiencies with the pilot's build, it is not possible to determine the extent to which the pilot's modifications contributed to the accident.

Therefore, the probable cause statement will remain as originally approved; however, the report's analysis has been revised to include the FAA inspector's

¹ Although the petitioner stated that he and the other operator participated in a conference call with the NTSB investigator-in-charge to provide this information, there is no record of conversation document in the docket for this accident, and the investigator has since separated from the agency.

² According to the petitioner, these included the installation of nonstandard flight control components (from a different helicopter make and model) and other modifications from the original design.

examination findings, including that the build was modified from the original design, and a statement indicating that the extent to which the pilot's modifications contributed to the outcome could not be determined.

Concerning the petitioner's assertion that the final report incorrectly identified Vertical Aviation as the manufacturer, we concur that, consistent with FAA convention for amateur-built aircraft, the builder is considered the manufacturer. We have corrected this information in our accident database and revised final report.

Disposition

After review of the evidence, the petition for reconsideration of the NTSB's findings and probable cause in connection with the aircraft accident involving a Hummingbird experimental amateur-built helicopter, N331PF, on May 31, 2024, in New Hill, North Carolina, is granted in part. The analysis has been modified as shown in the attachment.

Chairman HOMENDY, Vice Chairman GRAHAM, and Members CHAPMAN and DELEEUEW concurred in the disposition of this petition for reconsideration.