

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



CEN22FA331

AIRWORTHINESS

Group Chair's Factual Report - Addendum 2

April 16, 2024

A. ACCIDENT

Location: North Fork, Idaho
Date: July 21, 2022
Time: 1644 mountain daylight time
Helicopter: Columbia Helicopters CH-47D, registration N388RA

B. AIRWORTHINESS GROUP

Group Chair	Chihoon Shin National Transportation Safety Board Washington, District of Columbia
Group Member	Ian Hansen Federal Aviation Administration Boise, Idaho
Group Member	Robert Roedts Columbia Helicopters Aurora, Oregon
Group Member	Ely Woods ROTAK Helicopter Services Anchorage, Alaska
Group Member	Jeffrey Hutchinson Boeing Ridley Park, Pennsylvania
Group Member	Jennifer McDuffie Honeywell Phoenix, Arizona
Group Member	Robert Van Horn United States Forest Service Ogden, Utah

C. SUMMARY

On July 21, 2022, about 1644 mountain daylight time, a Columbia Helicopters CH-47D, N388RA, was destroyed after it impacted the Salmon River and its riverbank near North Fork, Idaho. The pilot and copilot were the only occupants on board and were fatally injured. The helicopter was operated as a public use firefighting flight.

The operator, ROTAK Helicopter Services (ROTAK), was working under contract for the United States Forest Service (USFS) for the Moose Fire and had relocated the helicopter to the area on July 19, 2022; firefighting flights began on July 20, 2022. On the day of the accident, the pilots had completed about 1.5 flight hours and multiple bucket loads via a water bucket attached to the helicopter at the end of a 200-foot long line attached to the helicopter's cargo hook.

From July 23-29, 2022, members of the Airworthiness Group convened at the accident site to document the wreckage.

D. ADDITIONAL INFORMATION

1.0 Left Yaw/Right Roll Control Rod

During the on scene wreckage examination, the left yaw/right roll control rod, within the second stage mixing unit, was observed within the flight control wreckage.¹ The left yaw/right roll control rod was fractured at its forward end, behind the rod end threads, but remained connected to the aft rotor control bellcrank via its aft rod end (**Figure 1**). The forward rod end remained connected to the first stage mixing unit (**Figure 2**). The left yaw/right roll control rod exhibited signatures consistent with overload at its threads and did not exhibit evidence of corrosion on the fracture surfaces or the visible threads (**Figures 3 thru 5**). The left yaw/right roll control rod had a data plate affixed to the rod that showed part number (P/N) "145C3340-9 NEW" with a [manufacture] date of "05-26-2010" (**Figure 6**).²

¹ Additional details of the on scene wreckage examination can be found in the Airworthiness Group Chair's Factual Report in the docket for this investigation.

² US Army Aviation Safety Action Message (ASAM) No. H-47-11-ASAM-03, issued April 4, 2011, required control rods with P/N 145C3340-1, -2, -8, -9, -10, -11, and -12 suspected to not have corrosion protective coatings adequately coated within its interior surfaces to be replaced with a serviceable control rod, of the same P/N, that has the word "NEW" behind the P/N or with a manufacture date later than January 1, 2010. On October 22, 2012, the US Army issued ASAM No. H-47-13-ASAM-01 that had instructions similar to ASAM No. H-47-11-ASAM-03, but with the addition of control rod P/N 145C3340-7. On March 21, 2024, the US Army issued a Safety of Flight (SOF) message No. H-47-24-SOF-01 to require a one-time inspection to determine compliance with the intent of ASAM Nos. H-47-11-ASAM-03 and H-47-13-ASAM-01.

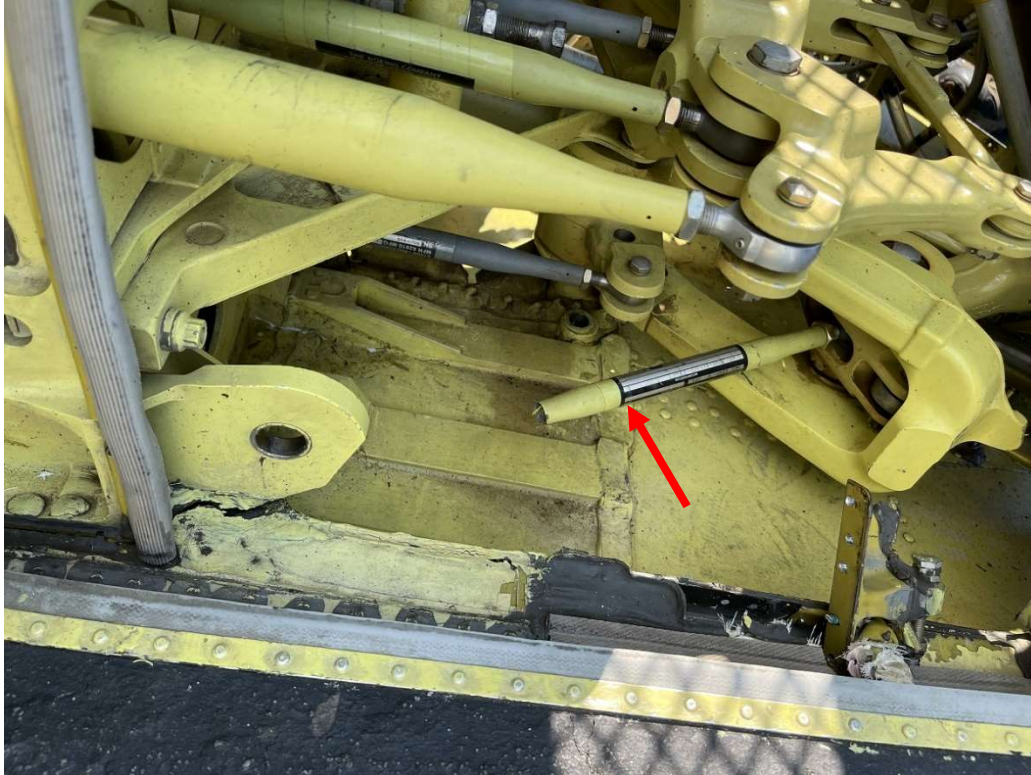


Figure 1. The red arrow points to the fractured left yaw/right roll control rod.



Figure 2. The red arrow points to the forward rod end of the left yaw/right roll control rod.



Figure 3. The fractured forward end of the left yaw/right roll control rod.



Figure 4. A closeup of the fracture surface of the left yaw/right roll control rod.
(Image courtesy of Honeywell)



Figure 5. A closeup of the fracture surface of the left yaw/right roll control rod.
(Image courtesy of Honeywell)

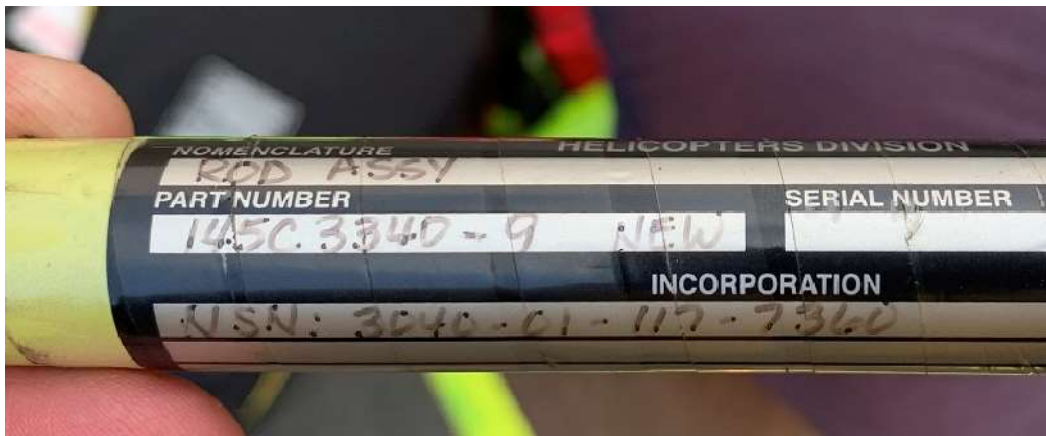


Figure 6. The data plate of the left yaw/right roll control rod.

Submitted by:

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