Aviation Investigation Final Report

Location:	Edgemont, South Dakota	**Accident Number:**	CEN25LA105
Date & Time:	February 27, 2025, 07:45 Local	**Registration:**	N6555C
Aircraft:	ROBINSON HELICOPTER COMPANY R44 II	**Aircraft Damage:**	None
Defining Event:	Cabin safety event	**Injuries:**	1 Serious, 1 None
Flight Conducted Under:	Part 91: General aviation - Aerial observation		

Analysis

The purpose of the flight was to survey and capture elk and was operated with the pilot and a non-flight crewmember, the gunner. The gunner's purpose was to tranquilize elk from the maneuvering helicopter as the pilot positioned the helicopter to match the speed of a target elk. The gunner, who was clipped into the helicopter with a safety harness, fell out of the helicopter while conducting the elk capture operation and sustained serious injuries. The pilot landed the helicopter without further incident.

A postaccident examination of the helicopter revealed that the anchor point for the front passenger seat restraint system separated and was still attached to the gunner's harness. Examination of the separation surfaces revealed deformation along the circumference of each end of the tubing.

The gunner was not using the helicopter's passenger seat restraint system when he fell out of the helicopter; rather, he was using a harness restraint system that was anchored to the vertical tube of the helicopter's supplemental shoulder harness guide system.

The pilot stated that the gunner selected and secured the anchor point for the harness before the flight and the gunner stated that the pilot selected and secured the anchor point.

According to the helicopter manufacturer, the anchor point utilized for the harness was not designed to sustain side loads, which resulted in its separation and the gunner falling out of the helicopter.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The pilot's failure to properly identify the proper anchor point for the supplemental harness and the crew's incorrect use of the restraint system structure as an anchor point, which resulted in the separation of the structure.

Findings

Personnel issues	Identification/recognition - Flight crew
Aircraft	(general) - Incorrect use/operation

Factual Information

History of Flight

Maneuvering-low-alt flying	Cabin safety event (Defining event)

On February 27, 2025, about 0745 central standard time, a Robinson Helicopter Company, R44 II, N6555C, was involved in an accident near Edgemont, South Dakota. The pilot was not injured and the non-flight crewmember was seriously injured. The helicopter was not damaged. The helicopter was operated as a Title 14 *Code of Federal Regulations* Part 91 aerial observation flight.

The purpose of the flight was to survey and capture elk and was operated with the pilot and a non-flight crewmember, the gunner. The gunner's purpose was to tranquilize elk from the maneuvering helicopter as the pilot positioned the helicopter to match the speed of a target elk.

The pilot reported that the helicopter was maneuvering about 30 ft above ground level during an elk capture and surveying flight. The non-flight crewmember, who was seated in the right-rear passenger seat, fell out of the helicopter and was seriously injured. The pilot immediately landed the helicopter without further incident.

According to the helicopter manufacturer, the C421-2 tube (vertical) and the C423-4 upper seatback support tube (horizontal) were part of the optional 5-point seat belt installation available for the front seats (Figure 1). The purpose of the C423-4 upper seatback support tube was to properly position and support the four shoulder harnesses for the front seat occupants. The purpose of the C421-2 tube was to transfer any downward loads applied to the upper seatback support tube to the C423-1 lower seatback support tube in the event of a hard landing. The manufacturer stated that it was not designed to sustain any side loads and does not require periodic maintenance or inspection other than overall condition.

Post-flight examination of the helicopter revealed that the anchor point (vertical tube, C421-2) used to secure the supplemental restraint system to the helicopter separated from the surrounding structure (Figure 2). The hollow vertical tube remained intact but exhibited deformation on the outer circumference of one of its ends. The other end exhibited less deformation to the tube, its plastic cap, and hardware.

Figure 1. Airframe restraint system

Figure 2. Separated vertical tube

The gunner reported that he secured the helicopter's shoulder restraints by tucking them behind the seat, and the lap belt was buckled and laid flat against the seat to secure it during the flight. He reported that the supplemental restraint system's anchor point is secured to the helicopter by the pilot before each flight in a designated position and that he "clips in" his end of the harness to the anchor point end of the harness before the flight. The gunner stated that the pilot had selected the harness anchor point. It was the same anchor point used on previous flights.

The pilot reported that he briefed the gunner that the helicopter's restraint system, which consisted of seat belts and shoulder harnesses, is the primary restraint and that any supplemental harness is secondary. He stated that he allows the gunner to place the anchor point for the supplemental restraint system at his or her discretion because it is not required by regulation.

Pilot Information

Certificate:	Commercial; Flight engineer; Flight instructor	**Age:**	40,Male
Airplane Rating(s):	None	**Seat Occupied:**	Right
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	5-point
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	Helicopter	**Toxicology Performed:**	
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	March 1, 2025
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	September 30, 2024
Flight Time:	(Estimated) 10041 hours (Total, all aircraft), 4041 hours (Total, this make and model), 9791 hours (Pilot In Command, all aircraft), 56 hours (Last 90 days, all aircraft), 41 hours (Last 30 days, all aircraft), 7 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	ROBINSON HELICOPTER COMPANY	**Registration:**	N6555C
Model/Series:	R44 II	**Aircraft Category:**	Helicopter
Year of Manufacture:	2005	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	10965
Landing Gear Type:	None; High skid	**Seats:**	4
Date/Type of Last Inspection:	January 25, 2025 Annual	**Certified Max Gross Wt.:**	2500 lbs
Time Since Last Inspection:	41 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	4192.5 Hrs as of last inspection	**Engine Manufacturer:**	Lycoming
ELT:	C126 installed, not activated	**Engine Model/Series:**	IO-540-AEA5
Registered Owner:	KIWI AIR LLC	**Rated Power:**	245 Horsepower
Operator:	KIWI AIR LLC	**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	K69A

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KCUT,5564 ft msl	**Distance from Accident Site:**	24 Nautical Miles
Observation Time:	05:53 Local	**Direction from Accident Site:**	14°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	5 knots / None	**Turbulence Type Forecast/Actual:**	Unknown / None
Wind Direction:	250°	**Turbulence Severity Forecast/Actual:**	Unknown / Unknown
Altimeter Setting:	30.2 inches Hg	**Temperature/Dew Point:**	-1°C / -8°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Rapid City, SD	**Type of Flight Plan Filed:**	None
Destination:	Rapid City, SD	**Type of Clearance:**	None
Departure Time:	07:00 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	South Dakota Game, Fish, and Parks NONE	**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	Unknown
Runway Used:		**IFR Approach:**	Unknown
Runway Length/Width:		**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	None
Passenger Injuries:	1 Serious	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Serious, 1 None	**Latitude, Longitude:**	43.3512,-103.74767(est)

Administrative Information

Investigator In Charge (IIC):	Maxon, Cory
Additional Participating Persons:	Todd Obritsch; FAA; Rapid City, SD
Original Publish Date:	September 3, 2025
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=199776