



Aviation Investigation Final Report

Location:	Titusville, Florida	Accident Number:	CEN23LA301
Date & Time:	July 10, 2023, 10:35 Local	Registration:	N21409
Aircraft:	Schweizer 269C-1	Aircraft Damage:	Substantial
Defining Event:	Loss of control on ground	Injuries:	1 Minor
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

After completion of a local solo flight, the student pilot was conducting the engine cooling shutdown procedure on the dry ramp when the helicopter suddenly became airborne, climbed about 30ft, and entered a nose down attitude impacting the ground. The helicopter came to rest upright, and the pilot was able to egress from the helicopter without further incident. The helicopter sustained substantial damage to the main rotor system, the tail boom, and the tail rotor system.

The student pilot reported that he had engaged both the cyclic and collective friction prior to completing other post flight activities. Postaccident examination of the helicopter showed the collective friction to not be fully engaged. The friction was found at an approximate 90-degree angle to the collective lever, which corresponds to the friction not being fully engaged. The helicopter pilot's flight manual states that the collective friction is to be on for the engine cooling shutdown procedure. No preaccident mechanical failures or malfunctions with the helicopter that would have precluded normal flight operation were reported.

Probable Cause and Findings

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

The student pilot's failure to maintain helicopter control while on the ground when his attention was diverted for post flight activities.

Findings

Personnel issues

Aircraft control - Student/instructed pilot

Factual Information

History of Flight

Standing	Loss of control on ground (Defining event)
----------	--

Pilot Information

Certificate:	Student	Age:	27,Male
Airplane Rating(s):	None	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	May 1, 2023
Occupational Pilot:	No	Last Flight Review or Equivalent:	June 16, 2023
Flight Time:	36 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Schweizer	Registration:	N21409
Model/Series:	269C-1	Aircraft Category:	Helicopter
Year of Manufacture:	2009	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	0365
Landing Gear Type:	Skid	Seats:	2
Date/Type of Last Inspection:	January 13, 2023	Certified Max Gross Wt.:	1750 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	4947 Hrs as of last inspection	Engine Manufacturer:	Lycoming
ELT:	Not installed	Engine Model/Series:	HIO-360-G1A
Registered Owner:	US AVIATION TRAINING SOLUTIONS	Rated Power:	180 Horsepower
Operator:	US AVIATION TRAINING SOLUTIONS	Operating Certificate(s) Held:	Pilot school (141)
Operator Does Business As:		Operator Designator Code:	HIAS

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KTIX,35 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	10:47 Local	Direction from Accident Site:	343°
Lowest Cloud Condition:	Scattered / 2800 ft AGL	Visibility	7 miles
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	9 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	240°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.02 inches Hg	Temperature/Dew Point:	33°C / 24°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Titusville, FL	Type of Flight Plan Filed:	None
Destination:	Titusville, FL	Type of Clearance:	None
Departure Time:		Type of Airspace:	Class D

Airport Information

Airport:	Space Coast Regional Airport TIX	Runway Surface Type:	
Airport Elevation:	34 ft msl	Runway Surface Condition:	Dry
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	28.514806,-80.799222(est)

Administrative Information

Investigator In Charge (IIC): Finne, Andrew

Additional Participating Persons: Best, Cory; FAA-FSDO; Orlando, FL

Original Publish Date: October 5, 2023

Last Revision Date:

Investigation Class: [Class 4](#)

Note: The NTSB did not travel to the scene of this accident.

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=192618>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).