



National Transportation Safety Board Aviation Accident Data Summary

Location:	Hemet, CA	Accident Number:	WPR14TA357
Date & Time:	08/28/2014, 1055 PDT	Registration:	N991SD
Aircraft:	AIRBUS HELICOPTERS AS 350 B3	Injuries:	2 Minor
Flight Conducted Under:	Public Aircraft		

Analysis

The flight instructor and pilot receiving instruction toward his commercial certificate worked for the Riverside County Sheriff's Department (RCSD) and were conducting a local instructional flight in the helicopter. However, the helicopter remained on alert status in the event of a need for response. The instructor reported that they started a maneuver to simulate a governor failure at 500 ft above ground level (agl) by switching the auto/manual switch to manual. With the switch in manual, the full authority digital engine control governor was disengaged, which required the pilot to use the twist grip throttle control on the collective to increase and decrease power. They then proceeded on an extended left downwind for 2.5 miles, and the pilot practiced manipulating the twist grip. The pilot then turned onto the base leg, turned from the base to final leg, started descending, and reduced the throttle input (rolled off the throttle). As the helicopter approached the runway threshold about 50 to 100 ft agl, the instructor noticed that the rotor rpm was decreasing a little more than he expected. He rolled the throttle on but noticed that the rotor rpm was not increasing. While the helicopter was about 50 ft agl and over the runway threshold, the flight instructor noticed that it was quickly descending and that the rotor rpm was continuing to decrease. His attempts to increase the rotor rpm by pulling aft cyclic and lowering the collective were unsuccessful. The helicopter then impacted the runway surface hard, rotated left 180 degrees, rolled over, and came to rest on its left side facing northeast. A postaccident examination of the airframe and engine revealed no evidence of mechanical malfunctions or failures that would have precluded normal operation.

The pilot was the first RCSD pilot to obtain only a private certificate from an outside vendor and then work on getting a commercial certificate with an RCSD flight instructor. There was no formal training syllabus, and the pilot did not know before the flight what maneuvers were to be performed. After completing in-flight simulated instrument work and with the helicopter still running on the ground, the instructor briefed the private pilot on the simulated governor failure maneuver; however, he did not demonstrate the maneuver in flight before he had the pilot perform it. Further, the instructor did not provide the pilot with an opportunity to adequately practice coordinating movements of the collective and the twist grip throttle before attempting a landing, likely because he had been talking to dispatch since the beginning of the maneuver.

It is likely that the instructor's failure to demonstrate the maneuver and to provide the pilot with adequate opportunity to practice manipulating the twist grip throttle before attempting a landing resulted in the pilot mismanaging the twist grip throttle during the final approach, which led to a decay in rotor rpm. Further, it is likely that the instructor's inadequate supervision and delayed remedial action during the final approach resulted in the unsuccessful performance of the maneuver.

Flight Events

Approach-VFR pattern downwind - Simulated/training event

Landing-flare/touchdown - Hard landing

Post-impact - Roll over

Probable Cause

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

The flight instructor's failure to adequately brief and demonstrate the simulated emergency procedure to the pilot under instruction and his delayed remedial action and inadequate supervision during the maneuver, which resulted in an excessive sink rate and a hard landing.

Findings

Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Prop/rotor parameters-Not attained/maintained - C

Personnel issues-Psychological-Attention/monitoring-Monitoring other person-Instructor/check pilot - C

Personnel issues-Task performance-Use of equip/info-Use of equip/system-Instructor/check pilot - C

Personnel issues-Action/decision-Action-Delayed action-Instructor/check pilot - C

Personnel issues-Task performance-Planning/preparation-(general)-Instructor/check pilot - C

Organizational issues-Support/oversight/monitoring-Training-(general)-Operator

Flight Instructor Information

Certificate:	Flight Instructor; Commercial; Private	Age:	44
Airplane Rating(s):	Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	Helicopter	Instructor Rating(s):	Airplane Single-engine; Helicopter
Flight Time:	2542 hours (Total, all aircraft), 1973 hours (Total, this make and model), 2440 hours (Pilot In Command, all aircraft), 95 hours (Last 90 days, all aircraft), 18 hours (Last 30 days, all aircraft)		

Student Pilot Information

Certificate:	Private	Age:	42
Airplane Rating(s):	Single-engine Land	Instrument Rating(s):	None
Other Aircraft Rating(s):	Helicopter	Instructor Rating(s):	None
Flight Time:	259 hours (Total, all aircraft), 77 hours (Total, this make and model), 141 hours (Pilot In Command, all aircraft), 121 hours (Last 90 days, all aircraft), 49 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	AIRBUS HELICOPTERS	Registration:	N991SD
Model/Series:	AS 350 B3	Engines:	1 Turbo Shaft
Operator:	County of Riverside	Engine Manufacturer:	Turbomeca
Operating Certificate(s) Held:	None	Engine Model/Series:	Ariel 2B
Flight Conducted Under:	Public Aircraft		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	KF70, 1512 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:	None	Wind Speed/Gusts, Direction:	3 knots / , 200°
Temperature:	32° C	Visibility	10 Miles
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Hemet, CA (HMT)	Destination:	Hemet, CA (HMT)

Airport Information

Airport:	Hemet-Ryan Airport (HMT)	Runway Surface Type:	Asphalt
Runway Used:	23	Runway Surface Condition:	Dry
Runway Length/Width:	4314 ft / 100 ft		

Wreckage and Impact Information

Crew Injuries:	2 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Latitude, Longitude:	33.734167, -117.022500 (est)		

Administrative Information

Investigator In Charge (IIC):	Howard D Plagens	Adopted Date:	04/20/2016
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=89975		

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