Aviation Investigation Final Report

Location:	Titusville, Florida	**Accident Number:**	MIA06CA013
Date & Time:	October 29, 2005, 11:15 Local	**Registration:**	N1567C
Aircraft:	Schweizer 269C-1	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

the helicopter landed hard during a practice autorotation. According to the pilot the accident practice autorotation was planned to the ground, and it was uneventful until he executed the flare. He stated that as he flared the helicopter, maintained the flare to get "the sink feeling", then came to a level attitude, and attempted to cushion the set-down, the helicopter "fell right through." He said the helicopter impacted the ground hard, incurring damage, because the sink rate was too great. According to the pilot, prior to the accident, there were no mechanical failures and malfunctions to the helicopter or any of its systems.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot-in-command's improper flare during a practice autorotative landing, which resulted in a hard landing.

Findings

Occurrence #1: HARD LANDING
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings
1. AUTOROTATION - SIMULATED - PILOT IN COMMAND
2. FLARE - IMPROPER - PILOT IN COMMAND

Factual Information

On October 29, 2005, about 1115 eastern standard time, a Schweizer 269C-1, N1567C, registered to and operated by Helicopter Adventures, Inc., as a Title 14 CFR Part 91 instructional flight, impacted the ground hard, during a practice autorotation, at Space Coast Regional Airport, Titusville, Florida. Visual meteorological conditions prevailed, and no flight plan was filed. The commercial-rated pilot and flight examiner were not injured, and the helicopter incurred substantial damage. The flight originated from Titusville, Florida, the same day, about 1030.

The pilot stated he was receiving his CFI checkride with a DPE. He further stated that having previously completed a practice autorotation to a power recovery, the accident practice autorotation was planned to the ground, and it was uneventful until he executed the flare. He stated that as he flared the helicopter, maintained the flare to get "the sink feeling", then came to a level attitude, and attempted to cushion the set-down, the helicopter "fell right through." He said the helicopter impacted the ground hard, incurring damage, because the sink rate was too great. According to the pilot, prior to the accident, there were no mechanical failures and malfunctions to the helicopter or any of its systems.

Pilot Information

Certificate:	Commercial; Private	**Age:**	29,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 2	**Last FAA Medical Exam:**	December 1, 2004
Occupational Pilot:		**Last Flight Review or Equivalent:**	
Flight Time:	250 hours (Total, all aircraft), 176 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Schweizer	**Registration:**	N1567C
Model/Series:	269C-1	**Aircraft Category:**	Helicopter
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	0203
Landing Gear Type:	Skid	**Seats:**	
Date/Type of Last Inspection:		**Certified Max Gross Wt.:**	
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Lycoming
ELT:		**Engine Model/Series:**	HIO-360 61A
Registered Owner:	On file	**Rated Power:**	
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	TIX	**Distance from Accident Site:**	
Observation Time:	10:53 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Few / 3000 ft AGL	**Visibility**	7 miles
Lowest Ceiling:		**Visibility (RVR):**	
Wind Speed/Gusts:	12 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	20°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.22 inches Hg	**Temperature/Dew Point:**	22°C
Precipitation and Obscuration:			
Departure Point:	Titusville, FL (TIX)	**Type of Flight Plan Filed:**	None
Destination:	(TIX)	**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	

Airport Information

Airport:	Space Coast Regional KTIX	**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Simulated forced landing

Wreckage and Impact Information

Crew Injuries:	2 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	
Total Injuries:	2 None	**Latitude, Longitude:**	28.514722,-80.799163

Administrative Information

Investigator In Charge (IIC):	Lovell, John
Additional Participating Persons:	Steve Brady; Orlando, Florida
Original Publish Date:	February 28, 2006
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=62762