



Aviation Investigation Final Report

Location:	Eagle Pass, Texas	Accident Number:	CEN14CA016
Date & Time:	October 23, 2013, 15:00 Local	Registration:	N1CR
Aircraft:	AMERICAN EUROCOPTER CORP AS350B3	Aircraft Damage:	Substantial
Defining Event:	Roll over	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The instructor pilot provided instruction to the private pilot and conducted practice autorotation landings. The instructor pilot demonstrated an autorotation and during the landing the helicopter slid on the skids for about 10-15 feet before the skids dug into the soft landing surface. The helicopter began to pitch nose down so both pilots applied aft cyclic and up collective. The helicopter continued to pitch nose down when the main rotor impacted the ground, which resulted in the helicopter rolling on its right side. The helicopter sustained substantial damage to the main rotor blades, fuselage, and tail boom. The instructor pilot reported no preaccident mechanical malfunctions or anomalies that would have precluded normal operation.

Probable Cause and Findings

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

The abnormal contact of the helicopter's skids with the landing surface, which resulted in a rollover.

Findings

Environmental issues (general) - Effect on equipment

Factual Information

History of Flight

Landing-flare/touchdown	Abnormal runway contact
Landing-flare/touchdown	Roll over (Defining event)

Flight instructor Information

Certificate:	Airline transport; Commercial; Flight instructor	Age:	55
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	3-point
Instrument Rating(s):	Airplane; Helicopter	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane single-engine; Helicopter; Instrument airplane; Instrument helicopter	Toxicology Performed:	No
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	July 22, 2013
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	February 18, 2013
Flight Time:	7536 hours (Total, all aircraft), 160 hours (Total, this make and model), 6969 hours (Pilot In Command, all aircraft), 57 hours (Last 90 days, all aircraft), 27 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Pilot Information

Certificate:	Private	Age:	43
Airplane Rating(s):	None	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	December 18, 2012
Occupational Pilot:	No	Last Flight Review or Equivalent:	April 11, 2013
Flight Time:	428 hours (Total, all aircraft), 363 hours (Total, this make and model), 390 hours (Pilot In Command, all aircraft), 16 hours (Last 90 days, all aircraft), 15 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	AMERICAN EUROCOPTER CORP	Registration:	N1CR
Model/Series:	AS350B3 B3e	Aircraft Category:	Helicopter
Year of Manufacture:	2012	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	7316
Landing Gear Type:	Skid	Seats:	6
Date/Type of Last Inspection:	October 21, 2013 Continuous airworthiness	Certified Max Gross Wt.:	4961 lbs
Time Since Last Inspection:		Engines:	Turbo shaft
Airframe Total Time:	192 Hrs as of last inspection	Engine Manufacturer:	Turbomeca
ELT:	Installed, not activated	Engine Model/Series:	Arriel 2D
Registered Owner:	FRIEDKIN COMPANIES INC	Rated Power:	
Operator:	FRIEDKIN COMPANIES INC	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KUVA,942 ft msl	Distance from Accident Site:	41 Nautical Miles
Observation Time:	14:55 Local	Direction from Accident Site:	31°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.13 inches Hg	Temperature/Dew Point:	26°C / 5°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Eagle Pass, TX (5TE0)	Type of Flight Plan Filed:	None
Destination:	Eagle Pass, TX (5TE0)	Type of Clearance:	None
Departure Time:	13:30 Local	Type of Airspace:	

Airport Information

Airport:	COMANCHE RANCH 5TE0	Runway Surface Type:	
Airport Elevation:	734 ft msl	Runway Surface Condition:	Dry;Vegetation
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:	None
Total Injuries:	2 None	Latitude, Longitude:	28.620555,-100.156387(est)

Administrative Information

Investigator In Charge (IIC):	Lindberg, Joshua
Additional Participating Persons:	Lindsay Cunningham; American Eurocopter Corporation; Grand Praire, TX Ryan Newman; Federal Aviation Administration; San Antonio, TX
Original Publish Date:	December 19, 2013
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.nts.gov/Docket?ProjectID=88292

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