National Transportation Safety Board
Aviation Accident Data Summary

Location:	Sherman, TX	**Accident Number:**	DFW05CA144
Date & Time:	06/01/2005, 0900 CST	**Registration:**	N62269
Aircraft:	Hughes 269A	**Injuries:**	1 Minor, 1 None
Flight Conducted Under:	Part 91: General Aviation - Instructional		

Analysis

A pilot applicant was demonstrating a simulated power failure from a two-foot hover to an FAA inspector when he lost control of the helicopter. The helicopter drifted aft and to the left before it impacted the ground and rolled on its left side. The FAA inspector's attempts to recover the helicopter were unsuccessful. According to the FAA Rotorcraft Flying Handbook, common errors when executing a power failure in a hover are; failing to use sufficient proper antitorque pedal when power is reduced, failing to stop all sideward and backward movement prior to touchdown, failing to apply up-collective pitch properly, resulting in a hard touchdown, failing to touch down at a level attitude, and not rolling the throttle completely to idle. In addition, "A helicopter is susceptible to a lateral rolling tendency, called dynamic rollover, when lifting off of the surface. For dynamic rollover to occur, some factor has to first cause the helicopter to roll or pivot around a skid, or landing gear wheel, until its critical rollover angle is reached. Then, beyond this point, main rotor thrust continues the roll and recovery is impossible. If the critical angle is exceeded, the helicopter rolls on its side regardless of the cyclic corrections made."

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be:
The applicant's failure to maintain directional control of the helicopter during a simulated power failure from a hover and the FAA inspector's delayed remedial action resulted in a dynamic rollover.

Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - NONMECHANICAL
Phase of Operation: HOVER - IN GROUND EFFECT

Findings
1. ENGINE SHUTDOWN - SIMULATED

Occurrence #2: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: HOVER - OUT OF GROUND EFFECT

Findings
2. (C) DIRECTIONAL CONTROL - NOT MAINTAINED - PILOT IN COMMAND
3. (C) REMEDIAL ACTION - DELAYED - FAA INSPECTOR

Occurrence #3: ROLL OVER
Phase of Operation: OTHER

Findings
4. DYNAMIC ROLLOVER

Pilot Information

Certificate:	Airline Transport; Flight Instructor	**Age:**	56
Airplane Rating(s):	Multi-engine Land; Single-engine Land	**Instrument Rating(s):**	Airplane
Other Aircraft Rating(s):	Helicopter	**Instructor Rating(s):**	
Flight Time:	8800 hours (Total, all aircraft), 300 hours (Total, this make and model)		

Pilot Information

Certificate:	Private	**Age:**	39
Airplane Rating(s):	Single-engine Land	**Instrument Rating(s):**	None
Other Aircraft Rating(s):	None	**Instructor Rating(s):**	
Flight Time:	860 hours (Total, all aircraft), 33 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	Hughes	**Registration:**	N62269
Model/Series:	269A	**Engines:**	1 Reciprocating
Operator:	Freedom Helicopters	**Engine Manufacturer:**	Lycoming
Air Carrier Operating Certificate:	None	**Engine Model/Series:**	HO-360
Flight Conducted Under:	Part 91: General Aviation - Instructional		

Meteorological Information and Flight Plan

Observation Facility, Elevation:		**Weather Information Source:**	Unknown
Conditions at Accident Site:	Visual Conditions	**Lowest Ceiling:**	
Condition of Light:	Day	**Wind Speed/Gusts, Direction:**	
Temperature:		**Visibility**	
Precipitation and Obscuration:			
Departure Point:	Sherman, TX (GYI)	**Destination:**	Sherman, TX

Airport Information

Airport:		**Runway Surface Type:**	
Runway Used:		**Runway Surface Condition:**	
Runway Length/Width:			

Wreckage and Impact Information

Crew Injuries:	1 Minor, 1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	N/A	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	

Administrative Information

Investigator In Charge (IIC):	Leah D Yeager	**Adopted Date:**	09/13/2005
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.		
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov, or at 800-877-6799. Dockets released after this date are available at http://dms.ntsb.gov/pubdms/.		