



MEMORANDUM OF RECORD

Eric Alleyne
Air Safety Investigator
Eastern Region Aviation

February 8, 2017

FAA Inspector: Michael.R.OHannesian

Subject: Accident Statement

On January 6, 2017, at approximately 16:00 Eastern Standard Time (EST), a Robinson helicopter Model 22 BETA, registration N7685H, serial number 3362, sustained substantial damage when the helicopter rolled over during flight.

The last annual inspection of the helicopter occurred on May 25, 2016, at 2453.4 aircraft total time.

The instruction flight was being conducted under the provisions of 14 CFR Part 91 and 61. The accident occurred approximately one hour into the planned lesson. The Certified Flight Instructor (CFI) was demonstrating low rotor operations at a hover on Delta Taxiway heading to the West. The CFI explained that helicopter was approximately at a three foot hover when he initiated the maneuver. Engine power was reduced by rolling the throttle in the direction of idle until the rotor RPM began to droop. The student was also "on the controls" following the instructor's movements. As the throttle was reduced the nose of the helicopter began to rotate to the left. The CFI input right anti-torque pedal to counter the rotation. This action failed to halt the rotation of the helicopter to the left. The right skid then contacted the taxiway causing the helicopter to bounce slightly and rotate to the right. The CFI explained that at this time he made the decision to apply full throttle and input collective to attempt to fly out of the situation. After the addition of throttle the helicopter continued a right nose rotation, at which point the helicopter departed the taxiway and moved into the adjacent grass where the aft left skid dug into the grass causing the helicopter to roll over onto its left side. Substantial damage occurred when the main rotors struck the ground. The tail boom severed approximately 36" from its mounting point. There is no evidence of main rotor to tail boom contact. Both tail rotors blades separated from the root approximately 3" from the tail rotor to yoke mount points. Tail rotor pitch control (P/C) links were undamaged and connected. A continuity check of the tail rotor controls was accomplished and continuity was confirmed. The tail rotor drive shaft was severed approximately 12" forward of the tail rotor gearbox. Both main rotor pitch controls separated from the swash plate leaving the P/C link intact and connected to the main rotor pitch horn. The lower portions of both main rotor P/C links were still connected to the severed swash place mount points. Cyclic continuity was confined up to the swashplate. Collective control continuity was not possible due to the controls being frozen. Disassembly of the aircraft did not take place. The CFI was asked if full right anti torque pedal was applied wen the initial left rotation occurred. He explained that he was not sure and added the student was also on the controls following his moments.