

S-97 Raider hard landing incident 8/2/2017  
Dave Walsh – Sikorsky Flight Test Technical Fellow

All pre-flight preparations for flight 15 were normal. As for all S-97 test flights, a full team was monitoring the flight in telemetry. Flight test engineers were assigned to monitor flight controls, powerplants, structures and dynamics. A test director (Mark Wilson) was coordinating between the TM room and the pilots in the aircraft. The TM crew is able to monitor the status of all systems in the aircraft. The test card was briefed with the pilots, TM crew, chase pilots, video crew and maintenance personnel early this morning. APU start and aircraft power up were normal. Engine start to ground idle was normal. Preflight checks of the propeller and Active Vibration Control (AVC) systems were completed with no issues.

Just prior to takeoff the crew of the chase aircraft radioed that they had a maintenance issues and had to shut down. While arrangements were being made the crew of the S-97 elected to taxi out to the runway from the start spot and wait there for the replacement chase. The taxi forward was done in the typical manner for the S-97, pull collective to ~80% airborne and then use forward cyclic to taxi. There were no unusual cautions or warnings in the aircraft or TM. The TM crew noticed on the overhead video that the aircraft had lifted off and immediately entered a divergent roll oscillation. All of the control system, structures and powerplant data showed a very unstable event. Within a few seconds the aircraft had landed hard. A minute later the crew exited the aircraft.

The Sikorsky emergency checklist was implemented and the scene was secured by the fire department. The TM crew secured all of the data and video. Statements were taken for all of the personnel in TM and were attached to the their individual flight cards.

  
A handwritten signature is present above a large black rectangular redaction box. The signature appears to be "D. Walsh".



blades slowly claim to a halt. I pilots called for "emergency" on the radio and within 2 minutes or less the SIKORSKY Fire department raced down the runway from the east near the control tower. I saw both pilot and co-pilot exit the "RAIDER" safely under their own power. The ground crew came running to the "RAIDER" to check on the pilots. I continued to video record until Steve Cizewski told me to get inside and bring my video camera gear and video media to his office.

Respectfully Submitted

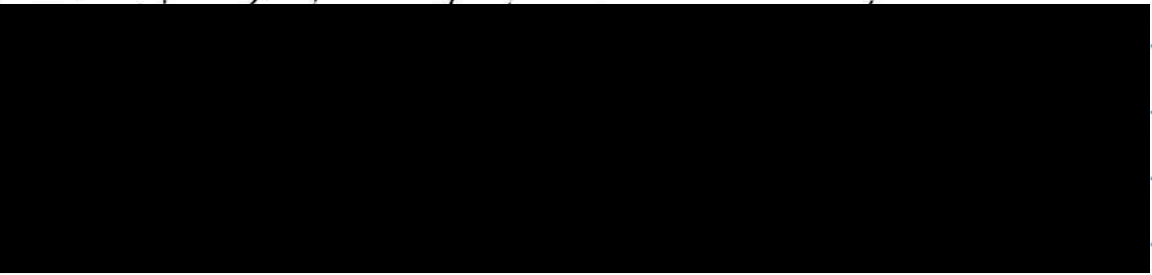


T2 Communications Inc.

8/2/17

Steven Thomas Kaeter  
T2 Communications  
Sikorsky Badge # C 78200

work  
home  
work  
home



I observed the aircraft taxi towards the runway through the viewfinder of my camera. it went past the double yellow lines, I was expecting it to go out on the runway and get into position for liftoff so I started to change body positioning when it started to lift off the tarmac prior to getting on the runway I swung my camera back on the aircraft and held the shutter down to get a couple shots as it lifted off I noticed it start to wobble side to side, black smoke was coming out the sides around the rotor head the blades were fragmenting it rocked violently before the pilots were able to get it on the ground and stop the rotation. I finished shooting and reported back to the hangar for accountability turned my camera in as requested.

S. Kaeter



Steven Hill - Crew Chief - [REDACTED]

- I gave pilot "check out" clear to taxi, marshalled him out, turned my back to walk back to power cart and heard the noise. I then turned around to see the impact. I then ran to aircraft and helped pilots out.

Steven Hill  
[REDACTED]