

Myself and Inspector Greg Thurston drove up to the location of the accident of N1401V, a Piper J3C-65, which was near the owners home, located @ MN86 (Sky Manor Aero Estates Airport) near Park Rapids MN.

The aircraft was still in the original spot where it crash landed. The owner Chris Hayes had covered it with a tarp, due to windows/windshield being broken out upon landing and expected snow. It did snow a few inches the day after the crash, so various small debris and parts around the aircraft were not visible, but did not effect the investigation.

After discussing what happened with the pilot, we started inspecting the aircraft. The pilot does have pictures that the takeoff roll, and was straight and uneventful before the snow covered his tracks. He reported the aircraft dipped the left wing hard and abruptly turned 90 degrees left from the runway as he reached tree top altitude of about 100-120ft AGL. Pilot reported no response from his control inputs trying to correct the turn. He then mentioned keeping full power in, as he was concerned about stalling and landing on a nearby hanger. He impacted pine trees at about 70-80 ft AGL, which significantly slowed the aircraft, enough that he heard the ELT going off in his headset. A large tree hit the left wing root area and folded the left gear backward. This spun the aircraft another 90 degrees as it plummeted fairly straight down, landing about 40-50 ft from the trees it broke off. Pilot reported it was about 238' from the center of the runway. Total distance was about 500-600ft airborne from liftoff to crash.

We first taking pictures of about a dozen angles from 20-30 feet away circling the aircraft, then closing in and taking pictures of the damaged areas. The last few feet of left wing tip was crumpled quite badly, and looked to be damage from the impact with the ground. The outboard end of the left aileron was folded downward at the last hinge point. The belly of the tail section was dented upward a few inches and had a gash in the fabric, presumably from the tree impact, although with the tail up in the air on ground impact, it could have buckled under its own weight. The underside of the right, wing especially toward the tip, had torn fabric in many spots from the trees. The 2 blade propeller had one blade bent 90 degrees back toward the tail on the right side of the engine, yet the left side was straight and in fairly good shape, indicating that it was not spinning when it hit the ground, and the damage was cause by the ground. The pilot said he thought it stopped when he hit the trees. The nose was pushed back and showed the engine cowl pushed back, and buckling of the skin around the header fuel tank, between the firewall and windshield, due to ground impact. The windshield was cracked and mostly missing, and the instrument panel was shifted aft.

At this time we verified continuity of the controls for the ailerons (travel was impeded by the bent left aileron) and the elevator, and rudder. All responded correctly and felt normal. The engine controls were not verified as they seemed stuck. We then had the pilot remove the top engine cowl, and observed that the engine mount had bent due to ground impact. There was a dent in the firewall from where the starter impacted it. The bottom cowl was not removable, so the engine controls may have been stuck due to ground impact.

At this point we observed the runway area and finished our discussion.

We did not find anything mechanically that would cause the abrupt turn, or hinder the ability to counter the motion.

The pilot offered to have us speak with his neighbor Frank, a witness. We then spoke to him, Frank Schafer, [REDACTED]. He did not see the impact but he did hear it. He was outside working and watched Chris take off. He then turned and continued to work. A few seconds later he heard a crashing noise as the aircraft hit the trees. He got on his ATV and headed over where he saw the aircraft on the ground and Chris was already out of the aircraft and walking. Frank stated the engine sounded normal until the extremely loud sound of the aircraft hitting the trees and then it went silent. The whole event from takeoff to crash was less than 10 seconds.

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