



RECORD OF CONVERSATION

Timothy N. Sorensen
Aviation Accident Investigator
Central Region

Date: April 21, 2020
Person Contacted: Gayla Maas
NTSB Accident Number: CEN20LA134 – Mesquite, Texas

Narrative:

Dr. Maas was present for the initial systems and cockpit familiarization visit, as well as the first and third flights. The accident occurred during the third flight. She was not present for the second flight. She noted that the first flight was postponed due to weather; a taxi test was conducted instead. During the initial familiarization visit, the pilot mentioned that there was some “slack” in the control stick; about ½” of play in each direction. He commented that it was not an issue for a routine flight, but he didn’t feel comfortable with it for a test flight of a new airplane. The pilot informed her that the “slack in the control stick” issue had been resolved before the first taxi test was conducted. She also noted that at the time of the initial visit the elevator trim did seem to be responding as expected. The pilot subsequently informed her that the electric trim did not work fully, but the manual elevator trim worked fine.

The second flight took place the Wednesday before the accident flight. That flight was planned for one hour, but the pilot only flew for about 45 minutes. He informed her that right rudder input was required for the entire flight and his leg had gotten fatigued, which was why he cut the flight short. He subsequently told her that the rudder trim was rigged opposite. For the accident flight, the pilot planned to takeoff with full right rudder trim to counteract engine torque. Dr. Maas verified full right rudder trim was set on the ground prior to engine start.

The pilot had commented that during the second flight he had added engine power after conducting a low approach and felt the engine did not develop full power. He did not plan to fly the airplane again until the issue was checked by the airplane builder. The pilot informed Dr. Maas that the builder had determined the alternator was inadvertently switched off and the airplane was then in “limp home mode,” resulting in less than full power.

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Gayla Maas (April 21, 2020)

During a high-speed taxi test in 2016, before the accident pilot was involved in the project, the airplane had gotten away from that pilot resulting in a taxiway excursion. The landing gear had collapsed causing damage to the airplane including a propeller strike. The damage had been repaired; however, landing gear was pinned down to prevent another collapse.

In preparation for the accident flight, two or three preflight inspections were conducted by various individuals associated with the airplane. The owner/builder had topped off the fuel tanks using red portable gas cans. The accident takeoff and initial climb appeared normal and the engine sounded normal during this timeframe. The airplane entered a right turn and subsequently leveled on crosswind. This was unexpected since the plan for the flight was to climb to 4,000 feet agl and proceed to the practice area. The airplane then entered a turn to downwind which appeared initially as a normal bank of 15° to 20°. However, about halfway through the turn the bank angle “steepened quickly” to about 60° to 70° right wing down. The airplane transitioned into a wings level descent; about a 45° to 50° nose down attitude. The airplane attitude did not appear to change. It subsequently descended behind a tree line. The engine “sputtered” once or twice while in the descent.

The pilot was excited to fly that day. He had no significant health issues and was flying under basic med. He had diabetes which was “well controlled” with diet and oral medications. He worked second shift at Lockheed from 4pm until midnight. He normally slept from about 1am until he naturally woke up, commonly about 8:00 or 8:30. He had been “sleeping well.” He had spent all of Saturday afternoon, the day before the accident, working on a glider project.

Dr. Maas stated that she holds an airline transport pilot certificate, with airplane single and multi-engine land and airplane single-engine sea class ratings. She also has type ratings for B-737 and DC-3 airplanes. The single-engine land and sea ratings are limited to commercial pilot and private pilot privileges, respectively. The DC-3 type rating is limited to commercial pilot privileges.

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Date: March 29, 2020
Person Contacted: Mike Vessels
NTSB Accident Number: CEN20LA134 – Mesquite, Texas

Narrative:

Mr. Vessels reported that he was at the airport most of the day with the airplane owner/builder. The pilot arrived about 1430. He seemed to be in a good mood, in good health, and ready to fly. He had only known the pilot about 7 weeks or so.

Both Mr. Vessels and the owner/builder had completed a preflight inspection of the airplane. The pilot also conducted a preflight inspection. No anomalies were noted, and the airplane appeared to be airworthy at that time. The engine started without difficulty and was allowed to warm up for about 15 minutes. The pilot taxied to runway 36 and sat for about 6 or 7 minutes, presumably to complete a runup and complete the before takeoff checklist. The takeoff appeared normal and the airplane was 400 to 500 feet agl at the time it was about two-thirds down the runway. The engine sounded good at that time.

The airplane subsequently entered a right turn (toward the east) and became established on a right crosswind. It appeared to be at or slightly above the designated pattern altitude of 1,200 ft msl. The airplane subsequently began a right turn (toward the south) to enter downwind. It rolled wings level for about 5 to 10 seconds before it entered another right turn. The turn appeared to be controlled at first but gradually got steeper as it progressed. About 90° through that turn (heading west), the bank angle was about 60° or 70° (right wing down). By the time the airplane reached 180° through the turn (heading north), the nose of the airplane was oriented “nearly straight down.” During the descent, the elevator appeared to be deflected trailing edge up. The airplane appeared to pitch up “just a little bit.” It appeared to be intact during the entire flight.

The accident flight was the third flight of the airplane. The first flight was conducted with no issues/anomalies. The second flight was the previous weekend; however, he was not present for that flight. He understood that there was a minor rudder trim issue, possibly the markings were incorrect. He

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Mike Vessels / March 29, 2020

noted that an adjustment to the seat belt was made before the flight. He added that less than one quart of water was purged on engine startup. He had attributed that to the fact that the coolant system was topped off before the flight and didn't think it abnormal in any way. Previously, the left main landing gear had collapsed during testing; the airplane was not damaged. To prevent any issues during a flight, the landing gear was locked into the down position and could not be raised. There had also been a tailwheel shimmy problem which was addressed by removing one link from the chain. To his knowledge, the issue was resolved. The airplane fuel capacity was 35 gallons total, split between the two wing tanks. The airplane had been fueled to capacity before the accident flight.

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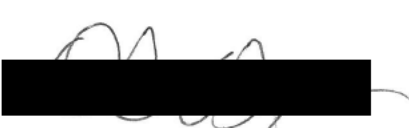
3-29-2020

To Whom it may concern,

I, Derek Dupree, witnessed the crash of 151JD on March 29, 2020. I'll describe what I saw to the best of my recollection.

At approximately 15:20 local, I heard the tower approve the aircraft for takeoff. I walked outside to watch the departure. Standing rampside at the terminal, I could hear the aircraft as it started its takeoff and departure but didn't have a visual on it until it was just past the halfway point of the runway. When I did finally have a visual on the aircraft, I noticed it was in a steep, aggressive climb out and appeared to be maintaining runway heading. Just past the end of the runway, the aircraft dipped its right wing and began making what appeared to be a steep, climbing right turn out. The aircraft maintained consistent throttle up until this point. It sounded as if he slightly reduced throttle for a brief moment, then re-applied. From my vantage point, the aircraft then appeared to try and enter a downwind leg, but seemed to enter a stall and rapidly began losing altitude. Midway through the stall, the airplane repositioned to an almost direct nose down position as if trying to regain airspeed in an attempt to recover. (I do not recall if it rolled into the nose down attitude, or "nosed over" into this position.) The airplane disappeared behind the trees in a nose down attitude. Approximately half a second to a full second after seeing the aircraft disappear, I heard the throttle being manipulated, followed by the impact and explosion. (There was a slight delay in what I was seeing vs. hearing due to the distance of the aircraft relative to my position.)

-Also worth mentioning: The plane's landing gear remained extended for the entire flight. They were never retracted.


Derek Dupree