



## MEMORANDUM OF RECORD

**Luke Schiada**  
**Senior Air Safety Investigator**  
**Eastern Region Aviation**

**October 13, 2012**

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**Subject:** ERA13FA017 – N290AL – Chuckey, TN

**Name:** Reginald Corkum  
(Owner/Builder)

Mr. Corkum was the owner and builder of the accident airplane. During our conversation, he stated:

He purchased the airplane as a kit 3 or 4 years ago and took it to the Arion Lightning factory, Shelbyville, Tennessee, to participate in a builder assist program, over the summer. The airplane was completed about 3 weeks ago and had been flown for about 20 hours, at the time of accident. Both Mr. Corkum and the accident pilot Jack Cooper received training in the airplane at Shelbyville. He estimated that the pilot had flown about 6 to 7 hours total in make and model split between the accident airplane and a demo model.

On the day of the accident, Mr. Cooper was planning to conduct a local flight to practice maneuvers like slow flight and stalls while the passenger would record information. During the preflight, it was noted that the airplane contained about 7.5 gallons and 8 gallons of fuel remaining in each respective wing tank. There was no discussion about weight and balance. The airplane did not have a checklist and this was one of the tasks that the pilot and passenger would be working on. Mr. Corkum was at his residence near the north side of the runway, when he heard the accident airplane departing. The engine sounded "fine" as if it was developing full power. He then observed the airplane about 10 to 20 feet above the ground in a nose up attitude. The airplane looked slow and was wobbling back and forth. The airplane drifted to the left of the runway and it continued to wobble or "zig-zig" back and forth. The airplane nosed down and was left wing low when it contacted the ground. He believed that the pilot may have been trying to avoid trees on located to the left of the runway when the airplane contacted the ground.

The airplane was equipped with 40 degrees of flaps and the normal takeoff procedure called for a 10 degree flap setting. The flap setting was controlled by a switch on the instrument panel and

electronically displayed on the PFD. The PDF flap display consisted of four boxes which would fill-in as the requisite flap setting was reached.

Mr. Corkum removed the PFD and engine monitor displays from the cockpit prior to the NTSB's arrival. He was not aware if the units were capable of recording any data. When asked, he stated that there were no USB drives connected to PFD.

He stated both occupants were wearing parachutes because the interior was not complete and they were using the parachutes to provide back support.



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**October 19, 2012**

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**Subject:** ERA13FA017 – N290AL – Chuckey, TN

**Name:** Mark Bravo

Mr. Bravo lived at the Hensley Airport and was a passenger in the accident airplane. He was interviewed over the telephone with his wife and attorney present. During our conversation, he stated:

He is currently an ATP rated airline transport pilot with about 17,100 hours of total flight experience. He estimated that he had about 1,500 hours in light airplanes, which included an RV-7A, which he built and has flown for about 500 hours.

The accident airplane was newly built in late September and had been flown for about 20 hours. It had been about 1 week since it was flown. The purpose of the flight was "feel the airplane out" and he planned to ride along and gather data points to put together a flight manual.

When he arrived at the airplane, the pilot and owner had completed a preflight inspection. He checked the fuel level which was about ½ tanks, and confirmed that the flight controls were free and correct. He also noted that the flaps were in the retracted position and he did not recall the pilot adding flaps prior to the flight.

He brought his mini-soft parachutes, which were worn during the flight. He estimated that they weighed about 10 pounds each. There was no discussion regarding weight and balance and assumed it was OK, with two occupants and half-tanks. He reported his weight as 190 pounds. He did not see a checklist and was not sure if there was one on the EFIS that the pilot could use.

They initially planned to depart from runway 19; however, during the engine run-up they experienced a 200 rpm drop and "a little" engine roughness when checking the right magneto. They elected to conduct a high speed taxi to the other end of the runway (01), and a subsequent check of the right magneto check was ok (about 100 rpm drop) and the engine seemed smooth.

The pilot applied full engine power and the airplane accelerated normally. The airplane lifted off about 800 to 1,000 feet down the runway without hesitation. He thought the rotation was faster than he expected and that the pilot may have over-rotated. He could not see any of the instrument readings on the EFIS display from his position. The airplane slowly climbed to an altitude of about 50 to 60 feet above the ground and was "wallowing." The pilot made a comment about the airplane "not feeling right." The airplane seemed to be in slow flight; with the wings rocking. It drifted off the left side of the runway and was heading toward trees and a residence when he elected to assume control of the airplane, which the pilot relinquished.

Mr. Bravo lowered the nose and started a right bank toward an opening in the tree line; however, the airplane's nose abruptly dropped to 45 to 60 degrees, and the airplane struck the ground.

Mr. Bravo's face struck the instrument panel and he came to rest in a partially standing position. He sustained a broken nose, facial injuries and a cut to his leg.

The pilot sustained paralysis from the chest down, and remains in the intensive care unit.

When specifically asked about the engine performance, Mr. Bravo stated that the engine sounded and felt like it was producing full power. He estimated that the airplane never got faster than 50 knots and reiterated that he could not see any instrument indications from his position in the cockpit.



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**Name:** Several individuals while at the Hensley Airpark

**John Moore:** Mr. Moore observed the airplane during the takeoff roll from runway 01. It appeared that the pilot over-rotated. The nose gear lifted off the runway and then settled back down. The pilot over-rotated again, and the airplane lifted off the ground. It then began to bank right and left in a nose high attitude. He lost sight of the airplane and did not see the impact. He stated that the engine noise was loud and constant.

**Walt Shipley:** Mr. Shipley observed the airplane during the takeoff roll from runway 1. He stated that engine "sounded like it was running fine." At first the nose gear barely lifted off the ground and then came up at a high angle of attack. The airplane climbed and then veered to the left. Its wings were rocking back and forth. It never climbed higher than about 50 feet and remained in a nose high attitude until the left wing dipped and the airplane struck the ground.

**Gene Cutman:** Mr. Cutman stated he observed the airplane "pitch-up real high" and flying "really slowly." The airplane drifted off the left side of the runway. It seemed like the pilot never had control before the airplane descended and struck the ground right wing first and cartwheeled. He did not hear any engine anomalies.



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**Name:** Nick Otterback

Mr. Otterback was a technical support representative for Arion Aircraft.

He was provided with photographs of the accident airplane and a post-accident measurement of the flap actuator jackscrew for evaluation.

Mr. Otterback stated that information was consistent with the flaps having been placed in the fully extended position prior to the impact. He did not believe that the impact could have forced the jackscrew to the fully extended position without breaking the flaps first. He added that the fully extended position of the flaps could vary between 35 to 40 degrees depending on rigging.

Mr. Otterback stated that he would search for and provide any factory training records for the accident pilot. He believed that the 6 to 7 hours of flight time that the owner reported that the accident pilot flew while at the factory, seemed correct.