

John Brannen
Senior Air Safety Investigator
AS-CEN

Date: January 30, 2025

Subject: CEN23LA361

Contact: Mark Ruff

Lt. Colonel in Air Force in 2005. Started training in 2006. Currently in Air Force part time and fly American Airlines. Also has CFI and instructs in Jet warbirds.

- Has about 15,000 hours total time
- 400 to 500 hours in high performance jet aircraft.
- Flew C-17 primarily in military
- Dan Filer's airplane was the only flying Mig 23. First flew with him in 2021. Was only person that flew with him after that time. Probably has about 15 hours in that specific airplane N23UB.
- L-39, Marchetti F-211, Tucanos. And other are what he instructs in.
- Day of accident the airshow briefing noted would be one of last acts and requested passes with various wing sweeps. Had about 3000 liters fuel. Took off and the right downwind. Takeoff was afterburner and was normal. Set up for banana pass with 45-degree sweep. Started descent, put wings into 45 deg. Pilot brought throttle to afterburner and immediately felt a deceleration. At this point they were approaching crowd center. Speed between 320-350 kts, and then felt deceleration. The pilot communicated there was a problem. Pilot came out of afterburner and then brought throttle back up, but there was no change. Mark stated we need wings to 16 deg. Pilot agrees but pilot does not

react. Mark then moved wings to 16 deg. At this point the altitude is peaking, and he begin feeling a stall buffet. He communicated with the pilot that they need flaps. The pilot brings in flaps to takeoff position. The pilot was trading altitude for airspeed. They discussed if they could make runway 27. At this time, they were 3-3.5 miles out and Mark did not believe they could make runway 27. They had a little discussion about what is in front of the airplane. Mark gave 5 second warning "we are going to have to get out". The sink rate was increasing. He noticed sink rate was steep and much steeper than a typical 3-degree glideslope. He realized they were approaching the bounds of the ejection seat envelope and seat is not a zero-zero seat (A zero-zero seat can operate at 0 altitude and 0 airspeed). They were back in the stall buffet. Mark called "eject, eject, eject". He pulled the ejection handles and canopies ejected then rear seat then front seat. A few seconds later they were in the water.

- Seat envelope for Mig23- he is unsure what the exact specs are. Off top of head, on normal 3-degree glideslope pilot must eject at/before 180 ft AGL.
- Said that if you look at picture of the engine nozzle in pictures just prior to during and after ejection the nozzles are drooping. Nozzles operate by fuel pressure and only time nozzles droop is when the engine is shut down on the ground. With properly operating engine the nozzles are symmetrical and in pictures they are not.
- There is a relevant checklist (Failure of automatic fuel control checklist)
- Recommends that there be a safety observer program. Normally an observer is not allowed at airshows because only required flight crewmembers are allowed. He sees benefit of having observers for safety.
- Airplane had 2 tail strike events previously.