

Botched Maneuver Caused Blue Angels Pilot's Death: Investigation

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This May 19, 2016, photo shows Marine Capt. Jeff Kuss at an air show in Lynchburg, Va. Matt Bell/The Register & Bee via AP



In this March 31, 2016 photo, Blue Angels pilot Capt. Jeff Kuss is interviewed at Naval Air Station Key West, Fla., prior to a Blue Angels show. (Rob O'Neal/The Key West Citizen via AP)

It all happened so fast that the other Blue Angels pilots, flying in a close six-jet pattern, barely had time to register something was wrong.

The elite demonstration team's flight surgeon, watching from the ground at the Smyrna, Tennessee, airport, noticed one of the aircraft in rapid descent.

"Kooch check alt," he radioed, using the call sign for the number six soloist, Marine Capt. Jeff Kuss.

Seconds later, observers on the ground saw a fireball as Kuss' F/A-18 Hornet hit the ground.

"Knock it off," came the radio order from the ground communications team, telling the other five aircraft to cease maneuvers and return.

A newly released Navy command investigation into the tragic June 2 crash that caused Kuss' death found it was the result of pilot error, an improper transition from a climb maneuver during pre-air show training.

The 46-page investigation, released to Military.com through a public records request, shows Kuss, 32, came out of the climb too low and too fast to avoid a crash, and while he did eject from his Hornet, it was not done soon enough to survive the impact.

It's a finding sure to raise questions among those familiar with the precision flight team, famous for their discipline, exacting training, and commitment to perfection.

Attempts to reach Kuss' widow, Christina Kuss, were unsuccessful.

The investigation found no alcohol or drugs in Kuss' system and no evidence of contributing pre-existing conditions that might have contributed to the crash.

The pilot gave no indications of being tired or stressed, the investigation shows, though investigators would later conclude his actions, including an out-of-character failure to sign a sheet noting his acceptance of his aircraft's condition ahead of the flight, indicated fatigue.

Weather may have played a role in Kuss' deviation from the planned maneuver sequence, however. Investigators found there were "multiple billowing clouds" near the end of the runway as Kuss took off.

In one of the few indications of a problem leading up to the tragedy, Kuss radioed Navy. Lt. Ryan Chamberlain, the lead solo, asking him if he thought it was possible to complete the high-performance climb with the clouds so near the projected flight path. Chamberlain responded that, yes, he thought Kuss could make it.

Kuss completed the near-vertical climb and transitioned into a risky low-altitude maneuver called a Split-S. He transitioned into the maneuver too low and too fast, less than 3,200 feet off the ground when the minimum required altitude was 3,500 feet, officials found.

Regulations state the optimum airspeed for the maneuver is 125 to 135 knots. Kuss was going 184 knots, according to the investigation.

His afterburners remained on during the maneuver -- another error -- and he continued to accelerate.

"The net effect of these deviations was that the aircraft was simply too low and too fast to avoid impacting the ground," the investigation states.

Kuss did not complete any kind of dive recovery procedure before the aircraft went down.

The Split-S is a maneuver with its own troubling history.

In 2004, the Blue Angels were training a new number six pilot in the maneuver when the team "experienced a mishap," according to the investigation. The pilot survived, but the aircraft was destroyed.

And in 2003, a Thunderbirds soloist ejected from his F-16 Fighting Falcon with less than a second to spare after an incorrect altimeter calibration caused him to pull out of a Split-S too low.

In his endorsement of the investigation, Naval Air Forces Commander Vice Adm. Mike Shoemaker concurred with the findings and directed that the Blue Angels conduct a series of safety measures to avoid further mishaps, including a complete stay on performing the Split-S maneuver until it is cleared by the chief of Naval Air Training in the future.

He called for a higher safety altitude for maneuvers for the remainder of the 2016 season and directed that all pilots make positive confirmation, over the radio, of their altimeter settings prior to takeoff.

Shoemaker also directed that all maneuvers and altitudes be assessed for impact to the team's flight demonstration, with a goal of adding additional safety measures and buffers.

He also called for adjustment to future seasons' schedules to allow for more regular breaks, rest for the team, and internal performance assessments.

The Smyrna Air Show, at which the Blue Angels had been scheduled to perform on June 4, would have been just six days after the completion of a two-day show in Wantagh, New York. The team had three show days within a four-day period prior to the tragic crash.

In a statement, Shoemaker praised Kuss' professionalism and dedication and mourned his loss.

"[Kuss] represented the best and brightest of Naval Aviation. His professionalism, expertise, and love of flying made him a valued member of the Blue Angels and the United States Marine Corps," he said. "Nonetheless, the Blue Angels' mission is always subject to some degree of risk. Our procedures to maximize safety and minimize risk must be robustly implemented and methodically reviewed."

On the Blue Angels team, Shoemaker said, there was tremendous unspoken pressure not to let teammates down or miss a performance -- a factor that could have played a part in Kuss' tragic death.

"We have well-established processes in the fleet for an aviator to 'take a knee' and tell the operations officer that he/she is not ready for a flight," he said, "and that freedom must extend to the Blue Angels as well."