

EXECUTIVE SUMMARY

AIRCRAFT ACCIDENT INVESTIGATION A-10C, T/N 80-0282, MOODY AIR FORCE BASE, GEORGIA 26 SEPTEMBER 2011

On 26 September 2011 at approximately 1448 local time, the mishap aircraft (MA), an A-10C, T/N 80 -0282, experienced dual engine failure during a Functional Check Flight (FCF) and impacted the ground approximately 20 miles northwest of Moody Air Force Base (AFB), Georgia. The Mishap Pilot (MP) ejected safely and sustained no significant injuries. The MA, operated by the 75th Fighter Squadron at Moody AFB, was destroyed upon impact with the loss valued at \$14,708,772.19. Environmental clean-up costs are estimated to be \$150,147.50. The MA impacted on private property consisting of a waste runoff site for an unused sand quarry. The impact left a 15-foot diameter crater, burned 5 acres of land, churned 1 acre of earth and destroyed 15 pine trees.

An FCF is flown to ensure airworthiness after major scheduled aircraft maintenance. At 15,000 feet, during the stalls and slat checks, the MP noted that the stall warning tones were not functioning properly. The MP elected to continue the FCF profile into the high altitude checks and under a combination of flight conditions of altitude, airspeed and angle of attack that could lead to an increased risk of aircraft stall and engine failure. There is no explicit guidance that prohibited the MP from continuing the FCF profile without a functional stall warning system. At 34,000 feet, the MP performed the high altitude checks. This was the first time the MP was performing checklist items in the aircraft at 25,000 feet and above. The MP slowed the MA for slat extension and looked over his right shoulder to observe the slats. Before the slats extended, the MP noticed the MA enter a stall with a slight right bank. The MP did an aircraft stall recovery; he then checked the engine gauges and noticed both were winding down. The MP followed the proper procedures to attempt to recover the engines and ultimately determined that both engines had completely failed. The MP then correctly executed the procedures for a dual engine failure. The MP attempted to restart the left and right engines multiple times without success. He continued his attempts until reaching an unpopulated area and ejected from the MA. Engineering analysis of external and internal engine parts, as well as the MP's testimony regarding the engine gauges, suggests that both engines seized while the MP flew the MA down to the optimum altitude for an APU assisted engine restart attempt. The MP's FCF upgrade training did not include the climb to 35,000 feet nor practicing the FCF checks at altitude. In addition, the MP had no experience and insufficient training about the intricacies and possible hazards of high altitude flight without a properly functioning stall warning system. Finally, the MP misprioritized his tasks by checking for slat extension over preventing the MA from stalling.

The board president found by clear and convincing evidence the cause of the mishap was the MA engines flaming out due to being flown under flight conditions where aircraft stall and engine failure were imminent; the engines never restarted, causing the MP to eject and the MA to impact the ground. Additionally, the board president found by a preponderance of evidence that the following factors substantially contributed to the mishap: (1) the MA engines failed to restart due to engine seizure; (2) there was insufficient guidance for the possibility of engine seizure after high altitude engine flameout; (3) there is no requirement for 35,000-foot checks during FCF upgrade training; (4) the combination of the MP's inexperience at flying above 23,000 feet and the MA's malfunctioning stall warning system; and (5) the MP misprioritized an FCF checklist item during the mishap flight over preventing the MA from stalling.

Under 10 U.S.C. § 2254(d), the opinion of the accident investigator as to the cause of, or the factors contributing to, the accident set forth in the accident investigation report may not be considered as evidence in any civil or criminal proceeding arising from the accident, nor may such information be considered an admission of liability of the United States or by any person referred to in those conclusions or statements.