

EXECUTIVE SUMMARY

AIRCRAFT ACCIDENT INVESTIGATION F-16D, 91-0469 SHAW AIR FORCE BASE, SOUTH CAROLINA 18 APRIL 2005

On 18 April 2005, at 1653L (2053Z), an F-16D serial number 91-0469, crashed five nautical miles southeast of Charleston Air Force Base, South Carolina, in an unpopulated marsh adjacent to the Ashley River. The F-16D, assigned to the 20th Fighter Wing, Shaw AFB, SC, was part of a two-ship training and familiarization flight. The mishap pilot (MP1) and passenger (MP2) both ejected safely. There were no significant injuries to MP1 or MP2, only minor damage to private land, and no civilian injuries.

The mishap mission was briefed as the second of two scheduled sorties—a two-ship Basic Fighter Maneuver mission off the coast of South Carolina. As the mishap aircraft (MA) crossed the coastline outbound, the mishap engine (ME) suddenly had a significant loss of thrust. MP1 attempted three engine restarts while maneuvering for a flameout approach. Once realizing the MA's inability to safely reach the runway, MP1 aimed his stricken aircraft toward unpopulated marshland and initiated a successful dual ejection.

There is clear and convincing evidence that the cause of the mishap was the ME's catastrophic failure and sudden lack of thrust due to High Pressure Turbine (HPT) blade failure. There is clear and convincing evidence that the HPT blade failure was caused by the required blade seals not being installed in the HPT rotor assembly during scheduled maintenance.

Though not a cause of the mishap, technical order discipline was not adhered to in two additional cases. Nosewheel tire kit equipment was not initially removed from the MA prior to taxiing for the flight, and MP1's survival kit was incorrectly rigged during a previous annual inspection.

The MA's gliding capability was hampered by external stores and headwinds enroute to the emergency divert airfield. The centerline tank remained attached to the MA, but did not significantly add to the MA's weight, drag, or inability to reach the divert airfield. The pilot flew around built-up areas until required for final approach, and then skillfully avoided urban terrain while ditching the stricken aircraft. The pilot's prioritization of preventing civilian loss of life or injury by avoiding populated areas during a flameout approach and then when ditching the unrecoverable aircraft is commendable.

Under 10 U.S.C. 2254(d), any opinion of the accident investigators 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 an aircraft accident, nor may such information be considered an admission of liability by the United States or by any person referred to in those conclusions or statements.