

## **EXECUTIVE SUMMARY**

### **AIRCRAFT ACCIDENT INVESTIGATION**

**F-16CM, S/N 93-0554  
BALAD AIR BASE, IRAQ  
12 NOVEMBER 2008**

On 12 November 2008, at 0531L, an F-16CM aircraft, serial number (S/N) 93-0554, on takeoff roll and during initiation of afterburner, experienced a catastrophic engine failure and aircraft fire. The Mishap Aircraft (MA) was deployed from the 20th Fighter Wing and assigned to the 55th Expeditionary Fighter Squadron, 332d Air Expeditionary Wing, Balad Air Base, Iraq. The MA was part of a two-ship close air support mission in support of Operation IRAQI FREEDOM.

During takeoff roll, the Mishap Pilot (MP) selected MIL power and observed normal aircraft operations and flight instrument indications. Shortly after selecting afterburner, the MP heard a loud pop, saw a bright light directly behind the cockpit and experienced an immediate loss of thrust. The MP initiated the appropriate critical action procedures and aborted the takeoff. The aircraft departed the runway near the approach end barrier at 1,800 feet and continued traveling forward and to the right. After traveling an additional 900 feet, the nose landing gear collapsed and the MA came to complete stop. After the MA came to a complete stop, the MP safely ground egressed from the MA and sustained no injuries.

After the MP's safe egress, fire engulfed the MA and some of the loaded munitions discharged. The MA was destroyed as the result of the fire, sustaining a total loss of approximately \$28.9 million. The fire was extinguished without injury to personnel or damage to equipment. The mishap caused no damage to private or other military property.

The Accident Investigation Board President found by clear and convincing evidence that the cause of this mishap was a catastrophic failure of the engine's second stage fan disk. An undetected subsurface crack in the second stage fan disk caused a portion of the fan disk to break free shortly after the MP selected afterburner. There are no required inspections that would have detected the subsurface crack. Pieces of the fan disk and other engine fragments pierced the aircraft fuel cell and severed hydraulic lines, causing loss of control and the fire that destroyed the aircraft.

*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 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.*