

EXECUTIVE SUMMARY

AIRCRAFT ACCIDENT INVESTIGATION, F-16C S/N 85-1469

114TH FIGHTER WING SOUTH DAKOTA AIR NATIONAL GUARD (SDANG)

JOE FOSS FIELD, SIOUX FALLS, SOUTH DAKOTA

28 OCTOBER 2005

On 28 October 2005, at 1031 hours local time, Mishap Aircraft 1 (MA1), F-16C S/N 85-1469, was struck by the Mishap Boom (MB) of Mishap Aircraft 2 (MA2), KC-10A S/N 83-0081, while conducting Air-to-Air Refueling (AAR). The F-16C Mishap Pilot (MP), of the 175th Fighter Squadron, 114th Fighter Wing, was not injured, and MA1 recovered without incident to Joe Foss Field, SD. MA2 recovered without incident to Alpena Combat Readiness Training Center, MI, and then returned to McGuire AFB, NJ, on 30 October 2005.

The Mishap Flight (MF) was a mission qualification upgrade sortie for the MP and included KC-10 AAR in the Lake Andes Military Operating Area (MOA). After the tactical portion of the flight, the Mishap Boom Operator (MBO) cleared the MP from pre-contact to the contact position for AAR. Sixteen seconds after being cleared to contact, the MP was directed by the MBO to move back four feet. Four seconds later the MB struck MA1 on the top right side of the fuselage next to the vertical stabilizer (tail). The damage to the F-16C is estimated at \$930,347. The damage to the KC-10 boom is estimated at \$75,230.

Shortly after the air-to-air refueling mishap, MA1 intentionally jettisoned an empty 370-gallon external fuel tank in accordance with emergency procedures. The fuel tank impacted the ground approximately 5 miles west of the Missouri River in an unpopulated area within the confines of the Lake Andes MOA. A recovery effort was unable to locate the tank. There is no known damage to civilian property as a result of the mishap.

After a careful and complete investigation, the Accident Investigation Board President determined that the cause of the mishap, supported by clear and convincing evidence, was the MBO's abrupt boom flight control stick inputs in reaction to MA1's two to four knot closure rate and elevated position within the AAR envelope. To avoid striking MA1's vertical stabilizer (tail), the MBO "jerked" back on the boom flight control stick, causing the MB to move rapidly up towards the underside of MA2. To avoid striking the underside of MA2, the MBO then pushed forward on the boom flight control stick causing the MB to swing down at a high rate of speed striking MA1. There is no evidence of a mechanical failure being a factor in the mishap.

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.