

**EXECUTIVE SUMMARY**  
**AIRCRAFT ACCIDENT INVESTIGATION**  
F-16CG, S/N 88-0457 and F-16CG, S/N 89-2072  
388 Fighter Wing (FW), 4 Fighter Squadron (FS)  
Hill Air Force Base (AFB), Utah  
18 December 2002

On 18 December 2002, at approximately 2121 Mountain Standard Time (MST), two F-16CG's assigned to the 4th FS, 388<sup>th</sup> FW, Hill AFB, UT, collided approximately 38 Nautical Miles (NM) northwest of Hill AFB during a night radar assisted trail recovery. The mishap aircraft (MA) were flying in the second element as #3 and #4 of a four-ship night vision goggle syllabus upgrade sortie. During the recovery, #4 (Mishap Pilot (MP) 2) obtained an undetected 110 knots (approximately 126 miles per hour) closure on #3 (MP1). Failing to recognize this closure until seconds prior to impact, MP2 collided with the lead aircraft (MA1), passing underneath and slightly to the left. After a brief discussion, MP1 assessed that a close pass rather than a midair collision had occurred, thus normal recovery procedures were continued to full stop landings. Impact damage to both aircraft was identified by the ground recovery crew, who shut down the MA in the de-arm area.

During recovery to Hill AFB from the Utah Test and Training Range (UTTR), MP1 directed MP2 to maneuver his aircraft behind MA1 and "call when established at 1.5 nautical miles." MP2 maneuvered 1 NM behind MA1 and called "saddled," a term indicating he was established at the proper position. While coordinating maintenance codes to notify ground crew of aircraft problems, MP2 called "code 3 for VVI" (vertical velocity indicator—the aircraft instrument that depicts rate of climb or dive). An exhaustive dialogue ensued between MP1 and MP2 over the next 52 seconds to specify the exact nature of MA2's system degradation. During the discussion, MP2 channelized his attention on the failed VVI and ceased to engage in the proper crosscheck procedure both inside and outside the cockpit. MP2 allowed his airspeed to increase 88 knots above the briefed standard, resulting in significant closure and eventual impact with his flight leader. Seconds prior to impact, at approximately 300 feet, MP2 looked up, saw MA1, and initiated a 0.7 G pushover bunt and 40 degree roll to the left. The majority of damage to MA1 was to the right and left ventral fins and the Electronic Countermeasures (ECM) pod. The majority of damage to MA2 was confined to the right Captive Air Training Missile (CATM) 120, the right wing tip, and the right leading-edge flap.

The primary cause of this mishap, supported by clear and convincing evidence, was MP2's failure to prioritize his responsibilities while performing a routine night recovery. He channelized his attention on analysis of the failed VVI and ceased all remaining crosscheck procedures required to maintain his formation position. Two additional factors, supported by substantial evidence, contributed to the mishap by combining to reduce the time and distance between MA1 and MA2 during the recovery mishap sequence. First, MP2 failed to achieve the briefed range of 1.5 NM during the recovery, contributing to reduced separation between MA1 and MA2. Second, MP1 failed to fly contracted airspeeds during recovery, slowing 23 knots below the briefed airspeed, thus contributing to the 110 knots of relative closure between MA1 and MA2.

*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.*