

# EXECUTIVE SUMMARY

## AIRCRAFT ACCIDENT INVESTIGATION

C-5A, S/N 69-000006

433d Airlift Wing, Lackland Air Force Base (AFB), Texas

2 November 2005

On 2 Nov 05, at 0420 Zulu, (2320 local time), the crew of a C-5A, S/N 69-000006, accomplished a night landing at Dover AFB, Delaware. The Mishap Crew (MC) flew a partial flap (40%) visual approach to runway 01 and touched down approximately 2,000 feet down the runway. Upon main landing gear contact with the runway, Mishap Pilot 1 (MP1) attempted to bring all four throttles into reverse idle and experienced difficulty placing the number 2 throttle into reverse. Almost simultaneously, Mishap Pilot 2 (MP2) attempted to deploy the ground spoilers and discovered that the handle was still locked. Therefore, MP2 had to reach across the center console to activate the ground spoiler manual release lever to unlock the handle. After deploying the ground spoilers, MP2 assisted MP1 with the number 2 thrust reverser and together, they were successful in getting all four engines into reverse thrust. Based on the review of data, the time delay in deploying the ground spoilers and thrust reversers was estimated at 8 to 10 seconds. Because of the delay in deploying spoilers and thrust reversers, MP1 was forced to apply moderate to heavy braking to bring the Mishap Aircraft (MA) to a safe taxi speed within the remaining runway distance. Once clear of the runway, the MA was taxied back to parking. Immediately upon deplaning, Mishap Flight Engineer 1 (MFE1) discovered a brake fire on the number 2 main landing gear. MFE1 quickly extinguished the fire with later assistance by Dover AFB Fire/Rescue services. The occupants of the aircraft included 12 personnel on the mishap crew (MC) and 74 passengers. All crew and passengers deplaned the MA safely with no injuries.

Based on clear and convincing evidence, the Board President determined that the primary cause of the mishap was pilot and crew error. Improper training or misapplication of a technique led to MP1's faulty decision-making in selecting to do a partial flap landing with an airplane well above normal landing weight at Dover AFB. That, coupled with the crew's subsequent delay in realizing and reacting to a "hot brake" condition was the cause of the brake fire incident. There is also substantial evidence to indicate that three other factors contributed to the mishap: (1) Training-lack of comprehensive training on partial flap landings, specifically under heavy weight conditions, unnecessarily narrowed the safety margin for this landing; (2) spin-up relay malfunction - wheel spin-up detection system delayed spoiler deployment causing MP1 to apply greater than planned braking applications to slow the aircraft; and (3) mission pressure - MC's desire to land and takeoff quickly at Dover AFB led them to improperly plan and react to the conditions encountered upon landing.

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.

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