

EXECUTIVE SUMMARY

AIRCRAFT ACCIDENT INVESTIGATION

MQ-1B, 06-3157, ALI AIR BASE, IRAQ

19 OCTOBER 2008

On 19 October 2008, at approximately 0235 Iraq local (L) time, an MQ-1B Predator aircraft, tail number 06-3157, crashed approximately 1½ miles from Ali Air Base (AB), Iraq while returning from a combat support mission in support of Operation IRAQI FREEDOM. The Predator was forward deployed from the 432d Wing, Creech Air Force Base, Nevada. At the time of the mishap, the Predator was being flown by the Launch and Recovery Element from the 332d Air Expeditionary Wing at Ali AB. The mishap aircraft (MA) and its armament of one Hellfire missile were damaged beyond economical repair upon impact, resulting in a loss of government property valued at \$3.7 million. There were no injuries and there was no damage to other government or private property.

Following an approximately 19.9 hour flight, the LRE Mishap Crew, took control of the MA for recovery at Ali AB. During the MA's base turn to the final landing approach, at approximately 800 feet Above Ground Level and 78 Knots Indicated Airspeed, the engine's Revolutions Per Minute (RPMs) unexpectedly spiked to 5,784 RPMs and then dropped to ~2,000 RPMs, and the MA's airspeed began to decline with a corresponding loss in altitude. The Mishap Pilot (MP) initiated emergency procedures but was unable to return the MA to controlled flight. Shortly thereafter, at 0235:47 L, the MA impacted the ground about 1 to 1½ miles short of the runway.

The Accident Investigation Board President found by clear and convincing evidence that the cause of the mishap was the failure of the quill shaft bearing which caused the variable pitch propeller quill shaft to engage and then turn with the propeller shaft, dramatically and uncorrectably altering the pitch of the propeller blades which impacted engine performance and aircraft control. In short, the bearing failure caused the propeller pitch to change to a reverse thrust setting at an extremely low altitude and made the aircraft unrecoverable. The bearing failure was attributed to the use of a bearing installation tool worn and used beyond the designed specifications which damaged the roller bearing case during installation.

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.