

MISHAP REPORT
(2nd Report)

*Final determination
Maintenance Error.*

271st Aviation Co.
CH47C S/N 74-22274
4 June 1980 1130 hours (local time)
DMZ Korea

Class B Aircraft Mishap

Aircraft was carrying a sling load to a hillside location. While on final the No. 1 engine reportedly exploded. The pilot dropped the sling load and made a forced landing in the landing zone. There was a fire in the area of No. 1 engine and this was extinguished by the crew.

There were no reported injuries or fatalities to any of the four crewmen on board.

The aircraft sustained damage to (1) forward and (3) aft rotor blades, aft rotor head, work platform, oil coolers and wire bundles were severed.

The No. 1 engine and its associated engine xmsn was expedited to CCAD for teardown analysis. Personnel from Lycoming, St. Louis, Ft. Rucker and Boeing Vertol were present for the teardown.

Examination revealed 3rd stage turbine blades pierced the combustion housing and penetrated the airframe. The 3rd and 4th stage turbine wheels along with the adjacent turbine shaft were missing and appear to have left the engine in about the 9 o'clock position. The power turbine shaft was failed at a point just forward of the No. 3 turbine wheel. Failure reportedly ultimate. The power turbine out put shaft had failed in (2) two places. The aft failure was a cup type failure just forward of the aft spline section and was reported as ultimate. The forward failure started in the forward spline area and terminated in a shaft separation just aft of the spline area. The fracture face is reported to have evidence of fatigue but the origin of the fatigue has not been identified.

Tear down of the associated engine xmsn did not reveal any apparent visual discrepancies.

CCAD is preparing to ship a number of the parts associated with the engine to AVCO Lycoming for continuing investigation.

RGO
R.G. G.

RGO/ybn
P31-62/X7937