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DEPARTMENT OF TRANSPORTATION
NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20591

NOV 14 1967

IN REPLY
REFER TO: CC-1-AS-96

Honorable William F. McKee
Administrator
Federal Aviation Administration
Department of Transportation
Washington, D. C. 20590

Dear General McKee:

The Board's investigation of a fatal accident involving a Brantly model 305 helicopter, N2219U, at Chamblee, Georgia, May 29, 1967, disclosed a fatigue failure in a main rotor blade torsion strap assembly which caused an inflight separation of one of the three main rotor blades. The FAA subsequently issued AD 67-19-1, by airmail, on June 9, 1967, which required replacement of all torsion strap assemblies that have more than 400 hours in service prior to further flight. It was further noted during this investigation that the six main rotor clevis bearings, P/N C2518, had incurred severe brinelling and that partial fractures of the rollers existed in all the clevis bearings although lubrication was present. Brantly subsequently issued Service Letter No. 305-67-3 on September 7, 1967, which covers rotation and lubrication of these bearings every 80 hours of operation.

The Board is currently investigating another fatal accident involving a Brantly 305, N2208U, which occurred on November 3, 1967, at Taswell, Indiana. This also was the result of an inflight main rotor blade separation resulting from a fatigue failure in the torsion strap assembly with attendant badly brinelled main rotor clevis bearings. The aircraft (S/N 1010) had a total time of 242 hours since new. Logbook information indicates a total of 172 hours on the main rotor clevis bearings with no indication, at this time, that Brantly Service Letter No. 305-67-3 was accomplished.

As a result of these two accidents the Board recommends that AD 67-19-1 be amended to require removal of the torsion strap assemblies at a selected time in service based on the indicated failure life in the most recent accident of 242 hours and that Brantly Service Letter 305-67-3 be made mandatory at some interval considerably less than the presently specified 80 hours until service experience indicates a proven interval extension.

Our investigators have discussed this action with cognizant FAA personnel from the Central Region and also personnel representing the manufacturer. Our Engineering Division personnel are available to provide you with any further information or assistance as desired and will notify your Flight Standards Service when the failed parts are received in our metallurgical laboratory for their inspection.

Sincerely yours,

Joseph J. O'Connell, Jr.
Chairman