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NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: August 19, 1980

Forwarded to:

Honorable Langhorne M. Bond
Administrator
Federal Aviation Administration
Washington, D.C. 20591

SAFETY RECOMMENDATION(S)

A-80-78 and -79

On July 18, 1980, a Bell 205A-1 helicopter, N6207N, equipped with fixed-type floats (inflated), was returning to the Arcola-Houston, Texas Airport on a flight from an offshore oil rig. Immediately after acknowledging airport advisories on the radio, the pilot, who was the sole occupant, reported that he was in trouble. When the aircraft wreckage was located 3 miles east of the airport, it was inverted and burned. The main rotor system was found 350 yards from the main impact area. The pilot was killed.

Examination of the wreckage by the National Transportation Safety Board revealed that a fatigue crack existed on the right forward cross tube (PN 205-050-114-9) where the support saddle fitting (PN 204-050-011-21) was riveted. The fatigue crack was located between two rivet holes. The remaining fracture in the cross tube diameter was caused by static overload. Separation of the float support in this area would have caused the float to swing outboard as it pivoted around the aft cross tube attachment and to expose a large flat plate drag area to the slip stream, which could have resulted in the pilot losing control of the helicopter.

Airworthiness Directive 76-14-03, Bell Amendment 39-2665, effective August 7, 1976, required that the cross tubes in the float kit installed on this model helicopter be removed before they had been operated 500 hours. The operator of the accident helicopter reported that the aircraft had been operated approximately 440 hours since the float kit had been installed.

The manufacturer reported that replacement cross tubes with clamp-on saddle support fittings are available and they estimated that there are still 35 or more float kits with the riveted saddle support fittings in service.

To prevent recurrence of this type of accident, the National Transportation Safety Board recommends that the Federal Aviation Administration:

> Issue a telegraphic airworthiness directive applicable to all Bell 205 and 212 helicopter models equipped with fixed float kits (PN 205-706-050-1 and -7), on which AD 76-14-03 has not been accomplished, to require an immediate one time x-ray or equivalent inspection of all cross tube inner diameters in the areas where the support saddle fittings are riveted for evidence of cracks. (Class I, Urgent Action) (A-80-78)

> Issue an airworthiness directive to require the removal of forward and aft cross tubes (PN 205-050-114-1, -3, -5, -7) and cross tube assemblies (PN 205-706-050-5 and -9) from all Bell Model 205A-1 and 212 helicopters within the next 50 hours time in service and replacement with clamp-on saddle support fittings. (Class I, Urgent Action) (A-80-79)

DRIVER, Vice Chairman, McADAMS, GOLDMAN, and BURSLEY, Members, concurred in these recommendations. KING, Chairman, did not participate.

By: James B. King
Chairman