

United States Department of Agriculture Forest Service Aviation Safety Alert

No. 2003-08

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Subject: Bell 407 Helicopter Stand Down

Area of Concern: Helicopter Operations

Distribution: USFS Aviation Operations

Discussion: Recently, Bell 407 helicopters have experienced a series of accidents resulting from power losses. One of the accidents occurred while the USDA Forest Service (FS) was supporting the NASA space shuttle recovery efforts in Texas. The FS has decided to issue an immediate stand down of exclusive use and call-when-needed contract Bell 407 helicopters.

The Bell 407 is equipped with a Full authority Digital Engine Control (FADEC) system. It is designed to enhance flight safety and reduce pilot workload. There are two main components to the system, the Electronic Control Unit (ECU) and the Hydromechanical Unit (HMU). Also, there is a Permanent Magnet Alternator (PMA), which provides electrical power to the ECU and its components.

The Bell 407 is equipped with Rolls-Royce Model 250-C47 B engine. Rolls-Royce has published four (4) Commercial Engine Bulletins (CEB) concerning the inspection/replacement of ECU/HMU components. These CEBs are identified as follows:

- Engine, Fuel and Control – On Time inspection of Power Lever Angle (PLA) Signal of the HMU CEB-A-73-6040 May 8, 2003
- Engine, Fuel and Control – Release of New Electronic control Unit (ECU) CEB-73-6036 March 17, 2003
- Engine, Fuel and Control – Hydromechanical Unit (HMU) – Incorporate screened P1 Nozzle CEB-73-6039 July 31, 2002
- Engine, Fuel and Control – Inspection of HMU Drive Splines CEB-A-73-6030 November 6, 1998

In light of the recent CEBs and accidents; aviation safety, contracting, and program managers representing DOI and USFS held a conference call on May 21, 2003 to discuss safety concerns involved with the Bell 407.

Since the Forest Service and DOI often operate over hazardous terrain and in mission profiles that afford limited response time in the event of a power loss, it was the unanimous agreement of the conferees that the FS should immediately suspend the use of all Bell 407 helicopters in ALL Land Resource Management activities.

Once vendors of Call-When-Needed and Exclusive Use contracted helicopters have completed all applicable inspection/overhaul/replacement of components identified in the CEBs, the contractor should send the documentation to the appropriate FS maintenance inspector for examination. The FS suspension of Bell 407 helicopters will remain in effect until a return to contract availability is issued.

Points of Contact:

Questions should be directed to Ron Hanks, National Aviation Safety and Training Manager (208) 387-5607 and Rick Willis, Branch Chief, Aviation Acquisition Management (208) 387-5669.

Requests for Technical information may be forwarded to: Tim McClintock, R-9 Maintenance Inspector (414) 297-3165.

Notification of each helicopter return to service must be forwarded to John Grogan, National Maintenance Inspector (208) 387-5624.

This Safety Alert has been coordinated with the DOI, Office of Aircraft Services (OAS).

/s/ Ron Hanks - USFS National Aviation Safety and Training Manager

/s/ Asher Williams – USFS National Aviation Operations Officer