SPECIAL AIRWORTHINESS INFORMATION BULLETIN

Aircraft Certification Service
Washington, DC

U.S. Department of Transportation

Federal Aviation Administration

SW-05-47
April 5, 2005

http://www.faa.gov/aircraft/safety/alerts/

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin alerts you, owners and operators of **Bell Helicopter Textron (Bell) Model 212, 412, and 412EP helicopters** with either of the following installed:

- AAI STC No. SH2820SO "Replacement of an Emergency Floatation Supply Bottle for Bell Helicopter Textron, Inc. 212, 412, 412EP Model Helicopters" or
- AAI PMA Reservoir Assembly, P/N 212-372-050.

Reference

Aeronautical Assemblies Inc. Alert Service Bulletin No. AA-05005 dated February 14, 2005

Background

On January 17, 2005, a failure of the Reservoir Assembly, P/N 212-372-050, occurred on a Bell Model 412 helicopter during nitrogen charging at a facility in Nelson, New Zealand, and was reported to us on February 10, 2005. The assembly adapter, P/N 212-371-02, of the reservoir assembly exploded and the pressurized nitrogen bottle jetted out of the nose bay of the helicopter and caused significant damage.

We have determined that the assembly adapter had inadequate fracture strength due to an excessive counter bore depth that produced an insufficient wall thickness for operating pressures. We have also determined that other reservoir assemblies could explode and cause significant damage and injury because the insufficient wall thickness could also exist on other reservoir assemblies.

Recommendations

To prevent any further failures or future injury, the following recommendations are provided:

- Before further flight and before the next Emergency Floatation Supply Bottle nitrogen charging, in accordance with Bell Service Instructions (Ref BHT-SI-212-25 or BHT-412-SI-2), vent the nitrogen from the Reservoir Assembly, P/N 212-372-050.
- Further flight is not recommended without doing the remaining steps, unless the Emergency Floatation system is not required for any further flight.
- Remove the valve assembly and air line from the adapter, P/N 212-371-002, and inspect the counter bore depth (dimension D) as shown in AAI ASB No. AA-05005 dated February 14, 2005. Contact Aeronautical Accessories, Inc. for a copy of ASB.
- If dimension "D" is found to be .850"+-.010" the adapter, P/N 212-371-002, is airworthy and the reservoir assembly, P/N 212-372-050, can be charged and returned to service in accordance with Bell Service Instructions (Ref BHT-SI-212-25 or BHT-412-SI-2.)

- If dimension “D” exceeds .860” the adapter, P/N 212-371-002, should be returned to Aeronautical Accessories, Inc. along with the reservoir assembly, P/N 212-372-050, and a replacement reservoir assembly will be supplied.
- Report all occurrences of excessive counter bore depth to the FAA (see contact information below)

For Further Information Contact

Mr. Marc Belhumeur, ASE, ASW-170, FAA Rotorcraft Certification Office, Fort Worth, Texas 76193-0170; phone: (817) 222-5177; fax: (817) 222-5783; email: Marc.Belhumeur@faa.gov.

For Copies of the Service Information, contact Aeronautical Accessories, Inc. at P. O. Box 3689, Bristol, Tennessee 37625-3689.