



FAA
Aviation Safety

SPECIAL AIRWORTHINESS INFORMATION BULLETIN

SUBJ: Engine Mounts: Allied Ag Cat Airplanes with Honeywell TPE331
Conversions; engine mount cracking and recommended visual mount
inspections.

SAIB: CE-16-02
Date: October 7, 2015

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) alerts owners, operators, certified repair facilities, and flight standards district offices (FSDOs), of an airworthiness concern related to **Allied Ag Cat Productions, Inc., (formerly Schweizer) Models G-164A, G-164B, and G-164C** with an engine conversion from a Pratt and Whitney R-985 or R-1340 radial engine to a Honeywell (Garrett) TPE331 series turboprop engine. Type Certificate Data Sheet (TCDS) No. 1A16 describes the Allied Ag Cat airplanes. The engine mounts supporting the Honeywell TPE331 engine have experienced fatigue cracking in the forward engine mount weld areas. Presently, there are only two engine mounts showing cracking.

At this time, the airworthiness concern is not an unsafe condition that would warrant airworthiness directive (AD) action under Title 14 of the Code of Federal Regulations (14 CFR) part 39.

Background

In the 1990s, some of the Allied Ag Cat Models G-164A, G-164B, and G-164C airplanes had Honeywell TPE331 engines installed with FAA Form 337 field approvals through local FSDO offices. Also, from 1990 on, other Allied Ag Cat airplanes were modified with supplemental type certificates (STC) to install the Honeywell TPE331 series turboprop engines. STCs SA7546SW, SA7769SW, SA7987SW, and SA4127WE have been issued by the FAA to approve the installation of the Honeywell TPE331 series turboprop engines. In 2015, there were two reports of engine mount cracking in Ag Cat airplanes that had been converted from a radial piston engines to the Honeywell TPE331 turboprop engine. At the present time, no engine mount fractures or failures have occurred due to the engine mount fatigue cracking in the forward engine mount weld areas. Also, no accidents or incidents have been reported due to engine mount cracking.

Recommendations

For owners and operators of Allied Ag Cat airplanes with a Honeywell TPE331 engine conversion, the FAA recommends the following:

1. Conduct a visual inspection of the engine mount weld areas within the next 10 hours, time-in-service (TIS).
2. After the removal of the engine cowling, clean any dirt or grease from the forward engine mount weld areas.
3. After covering the engine with a suitable waterproof sheet, use a detergent pressure wash or application of a mild solvent cleaner such as Varsol for cleaning the forward engine mount.
4. Repeat these visual inspections of the turboprop engine mount every 100 hours TIS.
5. We also recommend that you report any engine mount cracking to the FAA Aircraft Certification Office listed below.

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For Further Information Contact

Peter W. Hakala, Aerospace Engineer, Fort Worth Aircraft Certification Office, 10101 Hillwood Parkway, Fort Worth, Texas 76177; phone: (817) 222-5145; e-mail: peter.w.hakala@faa.gov.

Optional Contact

Scott Franke, Aerospace Engineer, Fort Worth ACO, phone: (817) 222-5178; e-mail: scott.franke@faa.gov.

Please report any engine mount cracking to Peter W. Hakala or Scott Franke at the Fort Worth ACO. Also, include in your reporting, the estimated number of operating hours with the turboprop engine conversion, the actual model and dash number of the Honeywell TPE331 engine, the Ag Cat airplane model and "N" number, the estimated crack length in inches, and your name, address, and telephone number. Also, include if your Ag Cat Honeywell TPE331 engine was installed as a Form 337 field approval or STC and list the STC number.