EASA Safety Information Bulletin

SIB No.: **2012-17**
Issued: **20 September 2012**

Subject: **High Cycle Fatigue Failure of Low Pressure Turbine Active Clearance Control Fuel Manifolds**

Ref. Publication: Federal Aviation Administration (FAA) Special Airworthiness Information Bulletin (SAIB) NE-12-29 dated 27 April 2012.

Applicability: CFM56-5B turbofan engines, all Models, all serial numbers. These engines are known to be installed on, but not limited to, Airbus A318, A319, A320 and A321 aeroplanes.

Description: The FAA has published the referenced advisory document (attached as pages 2 and 3 of this bulletin) to alert owners, operators and certificated repair facilities of all CFM56-5B turbofan engines that Low Pressure Turbine Active Clearance Control (LPTACC) fuel manifolds on those engines have experienced high cycle fatigue failure.

After reviewing the available information, EASA concurs with the advisory and the FAA recommendations contained therein.

This SIB is published to ensure that all affected owners, operators and certificated repair facilities of CFM56-5B turbofan engines, installed on aeroplanes registered in European Union Member States or associated countries, are aware of these recommendations.

Recommendation(s): See FAA SAIB, pages 2 and 3 of this SIB.

Contact(s): For further information contact the Safety Information Section, Executive Directorate, EASA. E-mail: ADs@easa.europa.eu.

This is information only. Recommendations are not mandatory.

FAA
Aviation Safety

SPECIAL AIRWORTHINESS INFORMATION BULLETIN

SAIB: NE-12-29

SUBJ: Engine Fuel Distribution – CFM56-5B LPTACC Fuel Manifold **Date:** April 27, 2012

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) alerts, owners, operators, and certificated repair facilities of all CFM International CFM56-5B turbofan engines that Low Pressure Turbine Active Clearance Control (LPTACC) fuel manifolds have experienced high cycle fatigue failure due to unbalanced loading caused by foreign object damage (FOD) or bird ingestion. This failure causes a fuel leak within an engine fire zone where fire detection and extinguishing systems are installed.

These engines are installed on, but not limited to, Airbus Industries A318, A319, A320, and A321 airplanes. At this time, the airworthiness concern is not an unsafe condition that would warrant airworthiness directive action under Title 14 of the Code of Federal Regulations (14 CFR) part 39.

Background

There have been 13 reported cases of LPTACC fuel manifold failures on CFM56-5B engines related to FOD or bird ingestion events. One case was coupled with a PS3 line failure that provided an ignition source which resulted in a controlled engine fire. In response, CFM International designed a more robust manifold that can withstand greater imbalance loads and significantly reduces the likelihood of failure. This new design was implemented in production engines at serial number 69V217 (Letter V in engine serial numbers refers to engine range 698/699). CFM International has issued CFM56-5B Service Bulletin 72-0696, revision 1, dated February 25, 2011, recommending replacement of the old LPTACC Fuel Manifold with the new one.

Although both the likelihood and non-hazardous consequence of further events do not warrant mandatory action, the FAA recommends that this modification be prioritized for incorporation, as it will minimize the risk of a fuel leakage following exposure of the engine to extremely high levels of vibration.

Recommendations

To prevent LPTACC fuel manifold failures, we recommend replacing LPTACC Fuel Manifold 336-401-402-0 with LPTACC Fuel Manifold 336-401-403-0 per CFM56-5B Service Bulletin 72-0696, revision 1 at your earliest convenience but before the end of 2015.

For Further Information Contact

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For Related Service Information Contact

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