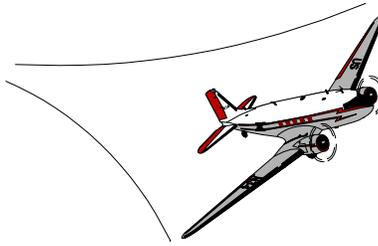


# SPECIAL AIRWORTHINESS INFORMATION BULLETIN



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

AIRCRAFT CERTIFICATION SERVICE  
800 INDEPENDENCE AVENUE, S.W.  
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This is issued for informational purposes only and any recommendation for corrective action is not mandatory.

## **Introduction**

The purpose of the Special Airworthiness Information Bulletin is to alert all operators of GE Aircraft Engines (GEAE) CT7 turboprop engines and Principal Maintenance Inspectors in the FAA Flight Standards District Offices (FSDO) of loss of stall margin with GEAE CT7-5A2/-7A/-9B/-9B1/-9B2/-9C/-9C3/-9D turboprop engines due to dirty compressors. It has been determined that dirt and other contaminants cause a reduction in engine stall margin which is recoverable by compressor washing. Reduction in stall margin cannot be directly determined by the operator, therefore, the FAA strongly recommends that they develop a compressor washing cycle that maintains compressor cleanliness.

## **Background**

A dual engine surge event occurred on GEAE CT7 engines that was attributed to loss of stall margin resulting from exceedingly dirty compressors. Both engines involved in the event had abnormally dirty compressors. A review of maintenance instructions at that time revealed that they did not provide recommended cleaning intervals or inspection requirements. As a result of this event, GEAE issued CT7 Operations Engineering Bulletin (OEB) Number 16, entitled Compressor Cleaning and its Effect on Stall Margin.

## **Recommendations**

By issuing this Special Airworthiness Information Bulletin, the FAA Engine and Propeller Directorate is alerting all operators of GEAE CT7 turboprop engines and Principal Maintenance Inspectors in the FAA Flight Standards District Offices (FSDO) of loss of stall margin with GEAE CT7-5A2/-7A/-9B/-9B1/-9B2/-9C/-9C3/-9D turboprop engines due to dirty compressors.

Reduction in stall margin cannot be directly determined by the operator, therefore, the FAA strongly recommends that they develop a compressor washing cycle that maintains compressor cleanliness. The FAA recommends that the following be performed:

Compressor cleaning as recommended in GEAE CT7 OEB Number 16. Each operator should establish an interval suitable for their operating environment and suitable for maintaining engine stall margin. The cleaning intervals should be established, and cleaning effectiveness verified, using the criteria outlined in OEB Number 16. This includes performing compressor visual and borescope inspections both before and after compressor cleaning.

To obtain a copy of GEAE OEB Number 16, contact the GE Customer Support Manager by phone at (781) 594-3140 or by fax at (781) 594-4805.

**For Further Information Contact**

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