OAS-43
(12/12)

Department of the Interior

ACCIDENT PREVENTION BULLETIN

Subject: Honeywell/Lycoming T-53 Series Engine Compressor Stator Vane Retaining Bolt

Area of Concern: Flight Safety

Distribution: All Aviation Activities

Discussion: During a recent inspection, an OAS Aviation Safety Compliance Specialist discovered the 5th stage compressor stator vane retaining bolt had backed out of its recessed mount hole. The only thing preventing the bolt from falling out was the engine bleed band. Upon further inspection, it was determined that the lock cup had been properly staked to the stator retaining bolt but had not been staked to the compressor housing (as required) which allowed the bolt to loosen. An inspection of the operator's second aircraft revealed the same discrepancy.

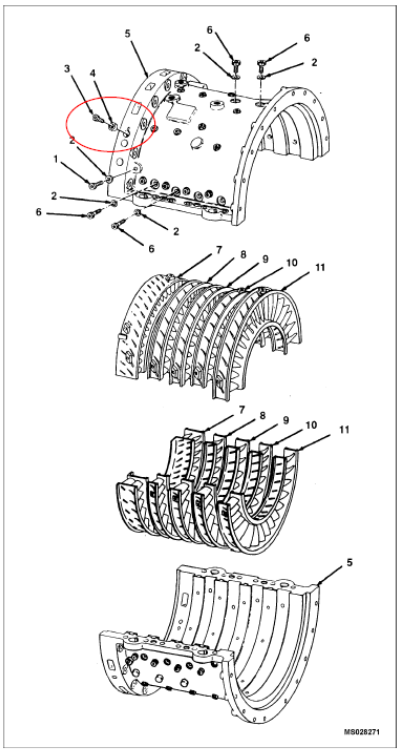
Both engines were overhauled in May of 2006 by an engine rework facility in Canada. Time Since Overhaul (TSO) of the engines were 1065.3 & 2095.8 hours respectively. This discrepancy brought concerns that this condition could be present in other aircraft with this particular engine type. Ultimately, this could allow the stator vane assembly to move and contact the rotating compressor. Compressor stalls could result from the bolt binding in the mount hole and preventing bleed band closure.

The OAS Aviation Safety Compliance Specialist discussed the findings with other agency aviation inspectors and discovered two similar instances within the last two years. One agency imposed a one-time inspection of all of their aircraft with this engine type.

The OAS Aviation Compliance Specialist has submitted a Service Difficulty Report (SDR) to the FAA and also contacted the engine rework facility. The rework facility stated they were aware of some complaints involving this issue but had no immediate plans to communicate the issue to all known T-53 operators.

Stator vane retainer bolt lock cup visible at the 8 o'clock position between the compressor case and the bleed band.

Retainer bolt and lock cup pictures in the 2 o'clock position. Hardware is also installed in the 4, 8, and 10 o'clock positions.



CASE AND VANE ASSEMBLY

Operators with this type of engine should inspect this area in order to prevent a possible engine malfunction.

For additional information, contact Brian Bogdon, OAS Aviation Safety Compliance Specialist at 208-334-9311.

/s/ Keith Raley
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