LAMBDA
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FOR IMMEDIATE RELEASE

FAA Grants STC for Low Plasticity Burnishing

Fretting Damage Is Mitigated in the CFM56-7

The first FAA Supplemental Type Certificate (STC) for Low Plasticity Burnishing (LPB®) has been granted to Delta Air Lines' maintenance division, Delta TechOps, to mitigate fretting induced fatigue cracking in the high pressure compressor section of the CFM56-7. The initial STC, SE03036CH, allows the use of LPB on the first stage blade. LPB was shown to increase the fatigue life of a damaged surface to more than ten times that of the undamaged baseline. The STC is the culmination of the collaboration between Delta TechOps and Lambda Technologies, the company that created LPB.

Significant performance and life improvements have been documented with the use of LPB in other applications. Thousands of engine and structural components have been treated with LPB in military applications. SBIR contracts with NAVAIR have led to full production to reduce processing costs for the P-3 Orion propeller bore, and to mitigate FOD in the F402 engine used in the AV-8B Harrier. With issuance of the STC, Delta TechOps can begin providing benefits to the commercial fleet's most popular engine.

LPB is a patented, proven surface treatment that provides a deep layer of compressive residual stress to mitigate fretting, corrosion pitting, stress corrosion cracking, or foreign object damage in the critical highly stressed areas of metallic components. LPB delivers significant fatigue life extension with minimal initial capital investment and low production costs. LPB is FAA accepted for the repair and alteration of aircraft components.

"Delta and the FAA have shown tremendous support throughout this process. We are very excited to have the STC issued and production underway," says John Cassidy, Quality Assurance Manager of Lambda Technologies. "LPB provides value to our customers in every aspect of maintaining aircraft. For critical, fatigue limited components, our technology provides longer-lasting, safer parts that require less inspection. With LPB, planes are in the air longer and cost less to maintain."

The engineered use of beneficial residual stress represents a new way of thinking about aircraft design and maintenance support. Inducing controlled beneficial compression into a part extends its fatigue life and increases damage tolerance without changing the material or design. All LPB processed parts are FAA sanctioned alterations of original OEM components and do not fall under the Parts Manufacturing Authority (PMA).

Lambda Technologies is an innovative company incorporating a premier materials research laboratory with a world-class engineering and production enterprise dedicated to the development and optimization of surface treatments to improve component performance. For additional information on Lambda Technologies or the LPB process, contact Kim Bellamy at (513) 561-0883 or visit www.lambdatechs.com.

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