



PRESS RELEASE

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Pictures available on request.

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Fatigue Crack Propagation Eliminated in Over 100 Commercial Landing Gear with LPB[®]

Cincinnati, OH - Low plasticity burnishing (LPB) has been applied to over 100 commercial landing gear since January 2016. During routine scheduled maintenance, a robotic LPB unit processes the main landing gear on the aircraft in a hangar setting. A layer of beneficial residual compression designed to arrest cracks up to 0.030 inches deep is introduced in fatigue susceptible areas while the gear remains on the aircraft, extending fatigue life and reducing inspection time and costs. Because cracks too small to detect with NDA are permanently arrested, the need of further inspection is eliminated. The process is fully automated and can be completed in one day during a routine maintenance cycle.

An FAA airworthiness directive previously required landing gear to be inspected every 450 landings, resulting in an estimated \$2 million in annual inspection charges alone. Supported by Lambda's residual stress design, measurement, and testing capabilities, the FAA issued an Alternate Means of Compliance (AMOC #11-036) allowing a one-time application of LPB to replace continuous repeated inspection. The result is a significant decrease in inspection costs and increased time in service. Facilities with this process implemented have seen a complete return on investment within approximately one year from installation of the equipment.

Accepted by the FAA in 2009 for the repair and alteration of commercial aircraft structural and engine components, Lambda Technologies' LPB provides a deep layer of compressive residual stress to mitigate fatigue, stress corrosion cracking (SCC) or foreign object damage (FOD) in the critical areas of metallic components without altering either the material or design. LPB treated parts remain original OEM equipment, but with improved life and performance. "LPB gives designers and engineers a new tool to use to their advantage in design. Now compression can be designed into the part to improve the performance of both new and existing parts", says Dr. N. Jayaraman, Director of Materials Research for Lambda.

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 Julie Prev y at (513) 561-0883 or visit www.lambdatechs.com.