



Press Release

For immediate release

Trelleborg Launches Next Generation Fire Seal for High Temperature Aircraft Engine Designs

Trelleborg Sealing Solutions launches the Ultra High Temp Seal. Its revolutionary makeup and design means aircraft manufacturers can develop engines that run more efficiently and, by achieving lower fuel consumption, more sustainably.

Quinn Collett, Airframe General Manager, says: “The hotter an engine runs, the more thrust is obtained from the same amount of fuel, making the engine more efficient with lower fuel consumption. Aircraft designers aim to run engines at continuously higher temperatures with the latest options operating at +600 °F and beyond, significantly higher than their predecessors.”

At these extreme temperatures, specialized fire seals help ensure the safety of passengers onboard. Used in the fuselage, pylons, thrust reversers and engine applications, they act as a barrier to prevent airflow from one area of a plane to another during normal operating conditions. This is an important function. However, even more crucially, they serve as a precaution in incidents that lead to fire. Then they act to contain the fire to one section of an aircraft and enable the airplane to land safely within a 15-minute period.

Collet continues, “Up until now, no high temperature fire seals existed that could operate up to +600 °F and also meet all fire seal requirements of customers. The Ultra High Temp Seal is completely unique. Its patent-pending design overcomes the inherent silicone characteristic of relaxation and compression set at elevated temperatures; a major cause of failure in a fire seal’s ability to perform against all requirements. This means that the Ultra High Temp Seal can successfully operate in high temperature aircraft engine applications.”

Trelleborg performed a full test program to prove the product’s capabilities at different compression loads. In heat soak tests, the Ultra High Temp Seal performed better than other fire seals. In all cases it was below a 15% permanent set target.

To manufacture the product, Trelleborg Sealing Solutions developed a proprietary methodology to integrate all components and make complex geometries. As the Ultra High Temp Seal eliminates the need for thermal protection of sealing elements, this provides a further weight saving and part count reduction, making assembly easier.



The Ultra High Temp Seal is proven to operate at a temperature range from -40 °C/ -40°F to up +315 °C/ +600 °F while meeting all customers' fire seal requirements. It is engineered to have a life time of 60,000 flight cycles (take off, flight and landing), dependent on application. The Ultra High Temp seal can also be a drop-in replacement for seals that do not currently meet all fire seal requirements, such as high temperature operation, or for customers seeking extended life than that provided by their existing seals.

The seal meets the requirements of US Federal Aviation standard AC20-135 Powerplant Installation and Propulsion System Component Fire Protection Test Methods and Standards and Criteria, as well as ISO 2685:1998 Aircraft – Environmental Test Procedure for Airborne Equipment – Resistance to Fire in Designated Fire Zones.

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For more information or high resolution pictures, please contact:

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About Trelleborg Sealing Solutions and Trelleborg Group

***Trelleborg Sealing Solutions** is one of the world's leading developers, manufacturers and suppliers of precision seals, bearings and custom-molded polymer components. It focuses on meeting the most demanding needs of aerospace, automotive and general industrial customers, including those from the pharmaceutical industry, with innovative solutions. Its network extends to over 25 production facilities and more than 50 marketing companies globally. The business area accelerates the progress of its customers through outstanding local support, an unrivalled product range including patented products and proprietary materials, a portfolio of established brands, unique process offerings, its ServicePLUS value chain solution and 'Ease of Doing Business' philosophy. www.tss.trelleborg.com*

***Trelleborg** is a world leader in engineered polymer solutions that seal, damp and protect critical applications in demanding environments. Its innovative solutions accelerate performance for customers in a sustainable way. The Trelleborg Group has annual sales of about SEK 37 billion (EUR 3.46 billion, USD 3.87 billion) and operations in about 50 countries. The Group comprises three business areas: Trelleborg Industrial Solutions, Trelleborg Sealing Solutions and Trelleborg Wheel Systems, and a reporting segment, Businesses Under Development. The Trelleborg share has been listed on the Stock Exchange since 1964 and is listed on Nasdaq Stockholm, Large Cap. www.trelleborg.com*