



## Cap Seals

### Deliver Exceptional Performance for Boeing Landing Gear Systems



More than 50 years ago, Greene Tweed entered the aerospace industry with sealing systems for landing gear. Since then, our passion for innovation, backed by highly skilled teams of researchers and engineers, has propelled Greene Tweed to the forefront of aerospace solutions. Today, our sealing systems can be found on 90% of commercial airplanes. And we service some of the largest customers in the aerospace industry, including Boeing Commercial Airplanes.

#### Customer

Boeing Commercial Airplanes

#### Application

Landing Gear Systems

#### Product

Greene Tweed PTFE Dynamic Cap Seals

Data presented in this case study is based on the May 2014 presentation from Boeing Commercial Airplanes Landing Gear Design Center: "Landing Gear PTFE Dynamic Cap Seals – History, Performance and Characteristics".

#### Challenge

The history between Greene Tweed and Boeing dates back over 50 years – when Greene Tweed began producing T-seals for landing gear systems in Boeing commercial aircraft starting with the B707 and B737 programs.

As industry standards and applications change over time, seal performance and service life can be affected. This requires new seal designs and solutions to be explored. Greene Tweed has worked closely with Boeing over the years to ensure that the sealing systems used in their landing gear stand up to the rigorous demands of their applications.

#### Solution

Through the redesign of their PTFE dynamic cap seal and full-scale testing that was conducted with Boeing, Greene Tweed confirmed that PTFE dynamic cap seals show exceptional pre-delivery and in-service performance.

#### Results

The following data shows in-service seal performance across several Boeing commercial fleets:

Boeing Commercial Aircraft In-Service Experience for main landing gear

- 5,780 aircraft deliveries
- Over 60 million fleet landings
- 99.99% cap seal reliability rate

As a result of this test data, Greene Tweed cap seals continue to be introduced on new Boeing models. Greene Tweed continues to work with Boeing's quality and engineering teams to ensure that seal service life remains consistent with Boeing's landing gear systems, and that Greene Tweed cap seals remain the top choice for Boeing commercial aircraft.

#### Greene Tweed

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