



# GE AVIATION & ETIHAD AIRWAYS PARTNERS ON GROUNDBREAKING GE 360 FOAM WASH JET ENGINE CLEANING SYSTEM

News / Airlines, Manufacturer



**GE Aviation and Etihad Airways have partnered to launch GE's 360 Foam Wash, a groundbreaking jet engine cleaning system, to optimise performance of Etihad's GE90 and GEnx-1B engines on its Boeing 777 and 787 fleets. Working with Etihad as a launch partner for the Etihad Greenliner programme to innovate, develop and test aviation decarbonization technologies, GE has awarded Etihad technical licenses to use GE's patented 360 Foam Wash system on its GE90 and GEnx-1B aircraft engines. These technical licenses allow Etihad Airways to perform the engine foam wash on its fleet of 777 and 787 aircraft completely in-house.**

**GE's 360 Foam Wash is an alternative to the water wash method, and restores engine performance leading to reductions in fuel consumption. The process involves injecting a specially-formulated, proprietary solution that removes dust and dirt particles in the engine. The system is self-contained, allowing it to be used inside maintenance hangars or outdoors.**

**As one of the first airlines to partner with GE on the development of 360 Foam Wash, Etihad marked several milestones in the technology's advancement. Etihad is the first airline to:**

- trial GE's Foam Wash with a GE90 engine on wing;
- receive a GE90 Foam Wash license; and
- receive licenses for multiple GE engine programs (GE90 and GENx).

The airline's collaboration in the trial process was important to the product's development, contributing to GE's data collection and analysis, and improving reliability of 360 Foam Wash equipment.

"GE Aviation shares a commitment to develop innovative solutions in aircraft engine maintenance with the team at Etihad Airways," said Jean Lydon-Rodgers, Vice President and General Manager of GE Aviation's After Market Strategic Solutions. "We are learning more about how our engines operate and how they respond in hot and harsh environments than ever before, and our longstanding relationship with Etihad has been integral to that process. The research that has gone into producing GE's 360 Foam Wash is a shining example of that."

During technology trials with its GE90 and GENx engines, the foam wash solution allowed Etihad to improve engine performance by reducing build-up of deposits in the engine, lowering engine exhaust temperatures, and improving engine compressor efficiency. These improvements led to reduced fuel consumption and increased engine time on wing.

Paul Kear, Senior Vice President Technical, Etihad Airways, said: "Our partnership with GE through the Etihad Greenliner programme is a prime example of industry collaboration that will have a significant impact on Etihad's efficiencies and provide a case study for the broader industry. Through 2021 alone, we expect to realise significant fuel savings and a reduction of more than 7,000 metric tonnes of CO2 for the combined GENx-1B and GE90 engine fleets, compared to water wash methods. This is just one example of how Etihad and GE can work together to enhance fuel efficiency of the engines that power the backbone of our fleet.

"Etihad's long-term commitment to net zero CO2 emissions by 2050 can only be achieved by working with partners across the industry to harness innovation and develop new technologies that will provide real, incremental benefits with a measurable impact on emissions. As we look towards the rest of 2021, there is potential to expand the scope of collaboration for our shared sustainability objectives."

Through the Greenliner programme, Etihad collaborates with industry leaders including Boeing and GE in a first-of-its-kind 'eco partnership,' spearheaded by a specially-themed Boeing 787 Dreamliner powered by GENx engines to test products, procedures and initiatives designed to reduce aircraft carbon emissions on its fleet of 787s.

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