

Electrical Environmental Control System of Liebherr Successful during First Flight of Clean Sky/Airbus Flight Lab

July 2016 – The new electrical environmental control system of Liebherr-Aerospace was successfully tested during the first flight of the Clean Sky/Airbus Flight Lab in June 2016. The success was celebrated during a ceremony organised by Airbus, in Toulouse (France) on July 7, 2016, with all partners involved.

On June 3, 2016, the Airbus Flight Lab, an A320, successfully completed its first flight in Toulouse within the scope of the “Systems for Green Operations (SGO) Platform”, a major research and innovation action founded by the Clean Sky Joint Undertaking under the EU Framework Program 7. The aim of the flight was to test the extensive on-board electrical systems under real conditions. One of these is the Electrical Environmental Control System (E-ECS) developed by Liebherr-Aerospace Toulouse SAS, Toulouse (France), Liebherr’s center of excellence for air management systems.

The E-ECS is a key element of the thermal and power management process for the more electrical aircraft. It is equipped with a new type of motorized turbo compressor (50 kW) which enables to use directly external air (bleed less) for air conditioning in an integrated approach. The power electronics ensure the speed control of the motorized turbo compressor and offer synergy capabilities with other electrical loads to optimize the overall electrical power consumption on board the aircraft.

Nathalie Duquesne, Director of R&T at Liebherr-Aerospace in Toulouse, explained: “With the flight test campaign of the Airbus Flight Lab we were able to validate the mechanical and electrical integration of our E-ECS in a single aisle aircraft platform. We can monitor the interaction between air intake and the turbo-compressors and evaluate the robustness and performance of our system in all operating conditions. The flight test campaign was successfully achieved on June 24, 2016, and the results meet our expectations and are very promising”

The E-ECS developed and manufactured by Liebherr-Aerospace will contribute to fuel burn reduction and greenhouse gas emissions contributing to the environmental objectives.

Liebherr-Aerospace is a leading supplier of systems for the aviation industry

Liebherr-Aerospace & Transportation SAS, Toulouse (France), is one of eleven divisional control companies within the Liebherr Group and coordinates all activities in the aerospace and transportation systems sectors.

Liebherr-Aerospace is a leading supplier of systems for the aviation industry and has more than five decades of experience in this field. The range of aviation equipment produced by Liebherr for the civil and military sectors includes flight control and actuation systems, landing gear and air management systems as well as gears and gearboxes. These systems are deployed in wide-bodied aircraft, single aisle and regional aircraft, business jets, combat aircraft, military transporters, military training aircraft, civil helicopters and combat helicopters.

Liebherr's aerospace and transportation systems division employs around 4,900 people. It has four aviation equipment production plants at Lindenberg (Germany), Toulouse (France), Guaratinguetá (Brazil) and Nizhny Novgorod (Russia). These production sites offer a worldwide service with additional customer service centers in Saline (Michigan/USA), Seattle (Washington/USA), Montreal (Canada), Hamburg (Germany), Moscow (Russia), Dubai (UAE), Singapore and Shanghai (People's Republic of China).

Captions

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Electrical environmental control system developed and manufactured by Liebherr-Aerospace

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