Safran unveils Add+, an engine demonstrator built using 30% 3D-printed components

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Safran introduces Add+, an engine technological demonstrator with 30% of its components made using additive manufacturing (3D-printed) techniques. The result of a partnership between several Safran companies, Add+ will enable 3D-printed parts to be used in Group production engines. Development started in early 2018 and assembly is now in progress. The demonstrator will be ground-run next autumn.

Etienne Hesse, R&T Project Manager and Add+ program coordinator at Safran Helicopter Engines says, “Add+ brings together 3D-printing expertise from across the Safran group. We started work on an existing engine model and redesigned almost 30% of its components using additive manufacturing techniques, with a view to integrating those components into serial production units. When we start ground runs, we will evaluate behavior of these new parts in operation”.

Based on an Arrius helicopter engine, Add+ evaluate major components made using Selective Laser Melting (SLM) techniques.

Since early 2018, experts have been working together at Safran’s facility in Bordes (France). Add+ makes use of additive manufacturing capabilities at Bordes, Saclay and Corbeil.
**Safran** is an international high-technology group, operating in the aircraft propulsion and equipment, space and defense markets. Safran has a global presence, with more than 92,000 employees and sales of 21 billion euros in 2018. Safran is listed on the Euronext Paris stock exchange, and is part of the CAC 40 and Euro Stoxx 50 indices.

**Safran Helicopter Engines** is the world’s leading manufacturer of helicopter engines, with more than 72,000 produced since being founded. It offers the widest range of helicopter turboshafts in the world and has more than 2,500 customers in 155 countries.

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