

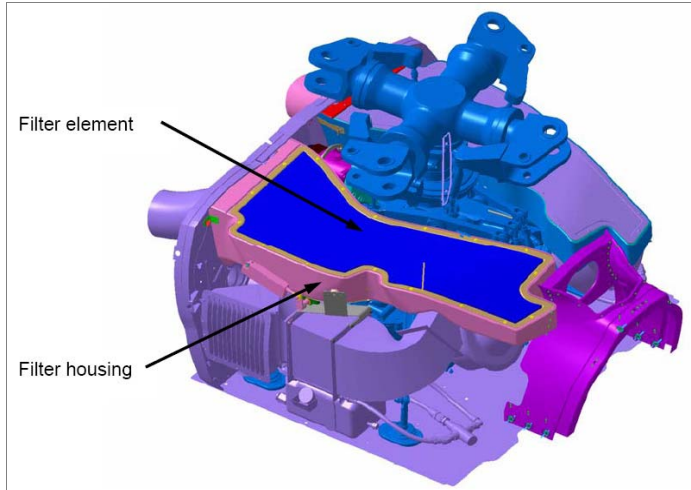
## **Eurocopter's EC145 Inlet Barrier Filter: Maximizing Performance While Minimizing Downtime**

Since its introduction in 2008, the Inlet Barrier Filter (IBF), offered for the class-leading Eurocopter EC145 twin turbine helicopter, has become an instant hit with pilots and Directors of Maintenance alike because it maximizes the EC145's performance while minimizing its downtime. The EC145's IBF is now in operation with civil operators, as well as with the U.S. Army's UH-72A Lakota fleet, and has proven itself in the toughest of operating environments.



Purpose-built for the EC145, this new-generation IBF consists of two separated filter frames on each side of the aircraft, including one filter element and a bypass door per engine side, which protect the inlet plenum chamber of EC145's Turbomeca Arriel 1E2 engines from sand, dust and potential causes of foreign objective damage (FOD). The IBFs offer a filter efficiency in excess of 99%, which helps to ensure that operators remain able to fully exploit the EC145's performance.

The IBF's filter media is comprised of a specific fabric, pleated between two layers of corrosion-protected wire cloth. This media is used to absorb an agent to trap and hold airborne particles, increasing protection for the EC145's engine compressors even during hard maneuvers. The filter media is easily cleaned with readily available cleaning agents and can be reused time and time again.



The EC145 IBF also incorporates a pressure switch that activates a caution light on the helicopter's Caution and Advisory Display (CAD) in the event of filter blockage or contamination, with individual cautions provided for each IBF. Should a second pressure loss limit threshold be reached, the pilot will be notified by the EC145's Warning Unit panel and by an audio warning, at which point the IBF's by-pass doors are activated by the pilot to permit unrestricted airflow to the engines.

The EC145's IBF consists of fixed provisions on the aircraft, plus removable provisions consisting of the four filter elements (two for each inlet), a carrying/cleaning case, and an initial supply of cleaning agents for the filters.

One of the initial users of the EC145's IBF was Travis County Star Flight in Austin, TX, which operates two EC145s in the air medical services (AMS) role. Travis County specified the development of an IBF as a condition of its purchase of the EC145s in 2005, and the first Travis County aircraft was fitted with IBFs at our Grand Prairie, TX, facility in September.



Stan Wedell, Director of Maintenance at Travis County Star Flight, reports that "Our experience with the use of the filters has so far been very positive. Compressor erosion and FOD were big concerns operating out of unimproved locations and conducting EMS scene calls. We feel that our erosion issues have been solved. In addition to the extension of compressor life, we are

noticing much cleaner engine oil and air systems with the absence of organic material previously found in oil filters.”

Stan continues: “One concern we had was how the installation of filters would effect engine performance. We have noticed no measurable change in available power. At a total weight of about 60 lbs, located near the main rotor system, weight and balance was not drastically affected. From a pilot’s point of view, the system is easily managed and requires little attention. Overall we have been very pleased with the IBF system,” he added.



Another customer that has incorporated the EC145’s IBF is the Suffolk County Police Department in Ronkonkoma, NY. Sgt. Brian Barrett, commanding officer of the SCPD’s aviation section, says, “Operating on Long Island, NY, we operate in a sand ridden environment. We are very happy to have had Eurocopter’s IBF system retrofitted on our EC145 helicopter. We are now able to perform Medevac operations on our barrier beaches, which were not possible prior to the installation.”

Sgt. Barrett continues, “The retrofit installation of the IBF was performed by American Eurocopter at their facility in Grand Prairie and they did a fabulous job. The installation was completed on time and American Eurocopter’s staff were more than helpful with our all of my units needs.”

For more details on the EC145’s Inlet Barrier Filter, or for pricing or ordering details, please contact Jeff Donahue, Manager of Aftermarket Sales at American Eurocopter (email: [jeff.donahue@eurocopterus.com](mailto:jeff.donahue@eurocopterus.com), phone: (972) 641-3735).