



Airbus Helicopters

Cleaner gearbox casings

Bearings and drive systems are amongst the key components of a helicopter. Airbus Helicopters has made efforts to reduce the particulate pollution of a number of its parts during the production stage in order to enhance the reliability of these components.



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OUR CUSTOMER

Corporate name
Airbus Helicopters

Business segment
The world's leading manufacturer of commercial helicopters.

Production
The Marignane site (13, France) has been the home of Airbus Helicopters for over 80 years. It produces the largest range of helicopters from light single-engine helicopters to transport aircraft of the Super Puma family.

Airbus Helicopters is constantly striving for quality improvement. One such area being addressed by the helicopter manufacturer is the particle cleanliness of a number of its production parts. It has primarily focused on gearbox casings (complex parts of approximately 1 m³ in volume) and the associated components. Its aim is to substantially eliminate any pollution particles and residues. The audit of the production process combined with the various particulate pollution measurements have enabled the manufacturer to implement a plan of action and investment which significantly improves the cleanliness of the gearbox casings.

Priority actions to be taken

To support it in this approach, the company called on Cetim which carefully examined the various steps in the manufacturing process in order to identify the main sources of pollution. At the same time particulate pollution measurements were carried out on a number of casings by Cetim's laboratory. Based on these measurements, the examinations conducted during the audit and the analysis of the particles trapped by the membrane filters set up at various locations in the workshops, Cetim's experts suggested priority actions to Airbus Helicopters to be implemented in order to achieve the cleanliness goals. *"We became more aware of the risks of pollution specific to the various part manufacturing steps. In addition, we learned about the existing barriers to cleanliness such as the surface treatment*

operations. The need for storage under appropriate conditions was also highlighted", stated Emmanuel Colombier from the gearbox design office in charge of cleanliness at the Airbus Helicopters. It was found that compliance with certain rules and the use of appropriate operating procedures could avoid the need for a dedicated clean room for the assembly process. However, in order to guarantee the target level of cleanliness, Airbus Helicopters invested in two items of cleaning equipment one of which is capable of accommodating its large casings.

Cetim's asset

The audit carried out on the entire part manufacturing and storage process combined with the particulate pollution measurements in the Cofrac certified laboratory (No. 1.1006 accreditation available on Cofrac.fr) makes it possible to determine the actions serving to achieve the target level of cleanliness.

