

► The splitter fairing of a turbofan has precisely the function which its name suggests: it splits the air coming from the fan into two flows, the bypass flow which generates most of the engine's thrust, and a second flow which passes through the core engine. The front edge of the component has an annular groove which is an exact fit and holds the stator vanes of the first stage of the low-pressure compressor. During operation, vibration is generated, causing this groove to sustain fretting from the stator vanes of the low-pressure compressor, which are constructed out of steel or titanium. As a result, up to 30 percent of these splitter fairings had to be scrapped in the past during the overhaul of type CFM56-5A, -5B, -5C and -7B engines.

In response to this unacceptably high scrap rate – the manufacturer does not offer any repair for such cases –

Lufthansa Technik has joined forces with its subsidiary, Lufthansa Technik Intercoat (LTI), and developed a procedure which finally solves this problem. To this end LTI has developed a special filler material which

has the properties that were sought for the new repair. The procedure appears quite simple at first glance: the annular groove is cleaned and then filled with the special material, Interfill®. The annular groove is then recessed again on a lathe.

This is the difficult process, as the splitter fairing is a flimsy component which is difficult to clamp in such a way that the required precision can be achieved. Since conventional means of clamping proved ineffective, the EPAR division developed a special jig for this purpose.

Customers save two-thirds of the cost of a new part

At the end of the procedure one is left with a groove that is completely coated with the special Lufthansa Technik Interfill®. As this material has excellent anti-friction properties and high abrasion resistance, a splitter fairing repaired in this way is better protected against damage caused by vibration contact than the OEM version, which in practice means a longer service life.

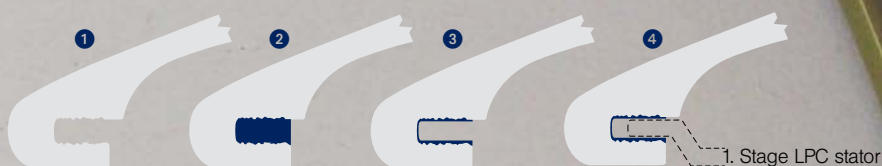
So far the EPAR division has repaired 20 components under aviation authority approval by FAA and EASA and the operational results have met all expectations. As of now the new repair procedure is therefore also available to external customers, who will be able to save two-thirds of the cost of a replacement splitter fairing by availing themselves of this repair. In parallel to this, the EPAR division is naturally also performing all standard OEM manual repairs of the splitter fairing, for example weld repairs at the rear end around the mounting holes. ◀

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CFM56 splitter fairing repair

“Better than new” by EPAR

With a newly developed repair for the CFM56 splitter fairing, Lufthansa Technik's Engine Parts and Accessories Repair business unit is once again demonstrating its outstanding competence: at the end of this highly efficient repair solution one is left with a product that shows a better wear resistance than the OEM part.



1. The disassembled splitter fairing shows fretting marks in the groove. 2. The groove is cleaned and filled with Interfill®. 3. After turning on a lathe, the groove has the perfect contour. 4. The anti-friction properties of Interfill® protect against damage.