

Lufthansa Aircraft Passes Engine Inspection with Flying Colors

Lufthansa Technik engineers trust **Mobil Jet Oil II** to protect vital engine components.

Lufthansa Technik operates one of the largest workshops for the repair and overhaul of commercial aircraft engines in the world, works directly with OEMs, and has supported over 25 million flight hours to date — so it's no surprise they rely on Mobil Jet Oil II, Mobil Jet Oil 387, Mobil HyJetV, and Mobilgreases 28 and 33.

But when it came to Lufthansa's fleet of Airbus A319-100s, they had their work cut out for them. Their short haul/domestic routes have an average flight time of just 1.24 hours, resulting in a high number of takeoffs, landings, and engine shutdowns, increasing stress on turbine oil.

The Inspection

ExxonMobil's relationship with Lufthansa includes visual inspections of CFM56 engines' oil wetted parts to demonstrate Mobil Jet™ Oil II is living up to its expectations. In one instance, operating short haul/domestic routes. This aircraft had logged 24,305 flying hours and reached 19,646 flying cycles with an average flight time of just 1.24 hours, resulting in a high number of high number of takeoffs and landings, and engine shutdowns and increasing turbine oil stress. The engine had been using Mobil Jet™ Oil II since its introduction. The inspection showed Mobil Jet™ Oil II technical benefits — on seal and adhesive compatibility as well as coking performances.

Results found no evidence of disbonding of Bearing #3, forward air-oil Teflon (PTFE) seal, or contact with rotating elements. Only moderate coking deposits were found in the oil supply line of the Bearing #5 located in the Turbine Rear Frame, and Bearing #4 (the highest temperature bearing) had minimal deposits. When the engines reached 19,646 flying cycles, they consumed an average of 0.2375 quarts of oil per hour.

Thanks to Mobil Jet™ Oil II technical leadership, the engines avoided premature seal disbonding and enjoyed increased component life and reliability.



Image courtesy of Lufthansa.

BRG #3
Forward air/oil
PTFE seal



BRG #4



BRG #5



The Impact

Mobil Jet Oil II offers clear advantages to CFM56 operators in both reliability and maintenance cost. This high number of cycles without removal was possible because Mobil Jet Oil II provided exceptional cleanliness, maintained seal integrity, and protected components from mechanical wear, controlling deposits and coking. Avoiding premature engine overhauls allows airlines to save up to \$75,000 per 1,000 cycles lost versus the overhaul cycle target.

For these reasons Mobil Jet™ Oil II remains the most used turbine oil on CFM56 engines recording more than 7 million hours of flying experience.

"It would be enough if ExxonMobil would simply supply a great product that prevents failures. But they also provide an in-depth support thru their expert technicians, who are able to help in case of unexpected problems. As a result, efficiency is increased across the board. ExxonMobil does an exceptional job for us, which makes it a lot easier for our team to provide an outstanding service for our customers."

— Dr. Marcus Windhaus, Senior Manager Corp. Procurement C&E
at Lufthansa Group

To learn how using **Mobil Jet Oil II** can help your business, visit exxonmobil.com/en/aviation/products-and-services/products/mobil-jet-oil-ii
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