Case Study

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IMPROVING AVIATION INSPECTION ACCURACY WITH LYNX EVO

For commercial airlines, punctuality and minimising delays are critical. Ensuring flights depart and arrive on time positively impacts customer satisfaction, operational efficiency, and financial outcomes.

Airlines face a range of operational challenges. Engine-related issues, in particular, have a direct impact on schedule reliability, making effective engine health monitoring essential.

Maintenance strategies vary across the industry. Some airlines outsource under “power by the hour” agreements to gain predictable costs and access to external expertise. Others maintain in-house teams to control quality, respond quickly, and manage turnaround times directly. Regardless of the approach, accurate inspection tools play a vital role in maintaining safety and minimising disruption.

The Challenge

One aviation company needed to strengthen its engine health inspection processes to meet rising regulatory demands and maintain on-time performance. While existing systems had served them well, growing expectations around inspection speed and reporting prompted them to explore more advanced solutions.

They needed a solution that would deliver precise measurements, detailed visual inspections, and fast, traceable reporting - supporting their mission to reduce delays and keep aircraft on schedule.

The Solution: Lynx EVO

The team invited Vision Engineering to present the Queen’s Award winning Lynx EVO as part of a competitive review. They were already happy with their existing Cobra and DynoCam systems, which had proven reliable and easy to use. That track record, combined with the capabilities of Lynx EVO and the service they had experienced, gave Vision Engineering an edge.

The Outcome

Technicians reported that installing two Lynx EVO systems gave them clearer visuals and faster inspections. The improved imaging quality and smart controls helped them detect fine detail quickly and work more confidently.

Every Master Control Device (MCD) now undergoes a full inspection using Lynx EVO, followed by XRF spectrum analysis to pinpoint affected components—including scratches as small as 1 mm on a ball bearing.

They then return to Lynx EVO to review, document and report findings. This step-by-step process supports investigation and sign-off when issues arise.

The installation of two Lynx EVOs has significantly enhanced their inspection capabilities with high-definition imaging and advanced features.

Lynx EVO transformed inspection and reporting processes across the team. Its high-quality optics and intuitive controls enabled technicians to work more efficiently—reducing the time needed to gather, interpret and share critical information.

Key benefits include:

- Faster information flow: Speeds up the collection, interpretation, and sharing of inspection data
- Efficient shift handovers: Enables easy communication between teams working across different shifts
- Ergonomic design: Supports long inspection sessions with reduced fatigue
- Trusted by technicians: Frequently demonstrated to visitors and stakeholders as a key part of the process

"With Lynx EVO, we have significantly reduced inspection time, thanks to its high-definition imaging and rapid analysis capabilities."

Why it matters for aviation

By adopting Lynx EVO, the team improved inspection accuracy, reduced delays, and streamlined workflows. The investment reflects a clear commitment to reliability and performance in aviation maintenance. By strengthening inspection processes, they reinforced operational standards and supported punctual, disruption-free operations.

Next steps

Explore how Lynx EVO can support your inspection and quality assurance goals on our website: https://www.visioneng.com/products/stereo-microscopes/lynx-evo/

Book a demo or speak to our team to find the right solution for your process by email: enquiries@visioneng.co.uk