

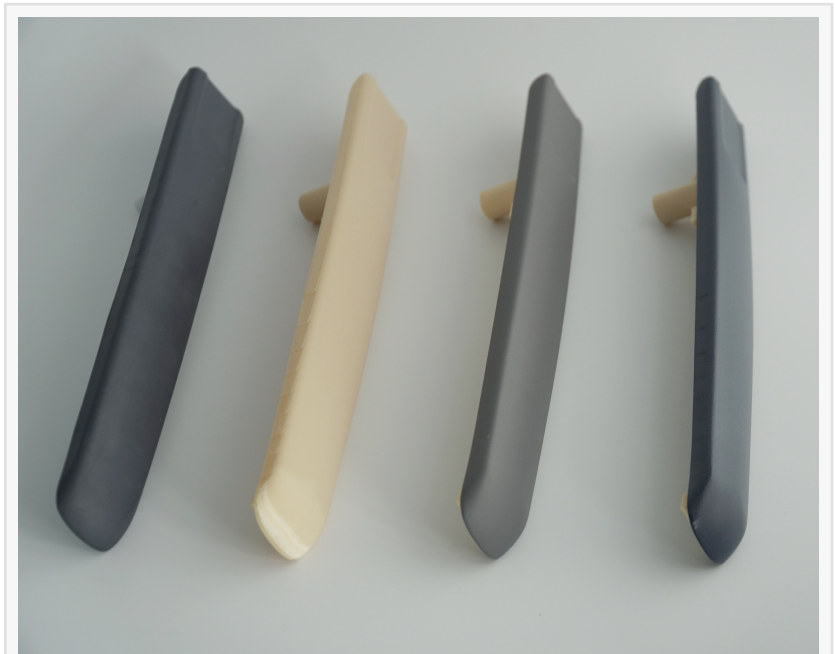
AM Craft Introduces 3D printed Arm Caps to LOT Polish Airlines 737 Fleet

Frequent breakage and part shortages led LOT Polish Airlines to seek a new solution for replacement parts.

RĪGA, LATVIA, February 4, 2025

/EINPresswire.com/ -- [AM Craft](#) proudly announces that LOT Polish Airlines has begun installing 3D printed arm caps on their Boeing 737 fleet which have been designed and manufactured by AM Craft.

LOT Polish Airlines is the flag carrier of Poland and one of the longest operating airlines in the world, with more than 80 aircraft serving destinations across Europe, Asia, and North America. Keeping this fleet in top condition is a high priority at LOT, but sourcing replacement parts has become increasingly difficult in the aviation market in recent years.



Top view of arm caps showing (left to right) the part being replaced, the unpainted 3D printed equivalent, and two colors of the final printed part.

“Over time, components experience wear and tear in a frequently used space like an aircraft cabin,” said Maja Margul, Continuing Airworthiness Junior Specialist at LOT Polish Airlines. “We maintain an inventory of spare parts to ensure timely replacements as needed. However, occasionally, parts wear out faster than anticipated, become unavailable from the original manufacturer, have extended lead times, or require design enhancements.”

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The AM Craft part was such an improvement that we replaced all the arm caps with the 3D printed version”

Maja Margul

That was the challenge that led LOT to seek a new solution for arm caps for the economy class seats on their 737 fleet. The original arm cap was produced in multiple steps with a rubber cap surface attached to an injection molded frame which was attached to the seat. Over time, the

interface between the rubber cap and the plastic frame is degraded and the cap will no longer stay in position on the frame - leading, in the worst case, to the cap coming off in a passenger's hand. Additionally, the plastic frame frequently breaks where it attaches to the seat. Procuring additional parts from the original supplier became difficult and LOT sought an improved alternative.

AM Craft offered LOT an innovative solution to this problem. AM Craft designed a new arm cap as a single 3D printed piece. This eliminated the interface issues between the two parts. AM Craft also redesigned the interface to the seat in order to reduce the risk of breaking in the location that the previous design had experienced. To achieve the expected finish and quality,

AM Craft utilized a specialized process of smoothing and painting the outward surface. This also allowed AM Craft to exactly color match the LOT Polish cabin interior.

"Originally, we intended to just replace the broken arm caps with replacements from the seat manufacturer, but the AM Craft part was such an improvement that we replaced all the arm caps with the 3D printed version," said Margul.

Since 3D printing does not require the high investment in tooling that injection molding or other traditional manufacturing processes might, AM Craft was able to offer a more cost effective low-to-mid volume price than a new design that relied on traditional manufacturing technologies would be able to achieve.

"LOT Polish Airlines has a long history of leadership in commercial aviation," said Didzis Dejus, CEO of AM Craft. "We are proud that we were able to leverage our expertise in design and certification of 3D printed aircraft components to solve their supply chain problem with these arm caps, and we look forward to helping them address additional challenges. For commercial aviation, 3D printing has clearly become a highly impactful technology while no one was looking."

AM Craft used Stratasys FDM® technology and ULTEM(TM) 9085 filament to produce the printed arm caps. Mankiewicz's ALEXIT® coating system was used by AM Craft to color match and



Bottom view of arm caps showing (left to right) the part being replaced, the unpainted 3D printed equivalent, and two colors of the final printed part.

AM Craft
Additive Manufacturing Services

cosmetically finish the arm caps.

In total, 1200 arm caps were produced by AM Craft for installation on Boeing 737s in the LOT Polish Airlines Fleet. AM Craft managed the certification of the arm caps and delivers them to LOT Polish Airlines with an EASA Form 1 Airworthiness Certificate.

About AM Craft

AM Craft is an end-to-end aviation supplier that leverages expertise in polymer additive manufacturing, design, airworthiness certification, and a distributed production methodology to ensure customers have the right part, at the right time, in the right location. AM Craft's distributed production methodology combines in-house design and manufacturing with independent local production partners under a unified certification umbrella to bring flight part production to the point of need. Headquartered in Riga, Latvia, AM Craft operates on four continents and serves a global customer base in the aviation industry. To learn more about AM Craft, visit www.am-craft.com or LinkedIn.

FDM is a registered trademark of Stratasys LTD, ULTEM 9085 filament is a trademark of SABIC, and ALEXIT is a registered trademark of Mankiewicz GmbH.

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