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AirMaintenance UPDATE

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AME & PAMA NEWS

THE AIRBUS A380: STILL THE BOSS

RAISING THE BAR: RUNNING ON EMPTY

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2. Satellite-based communications systems supporting Air Traffic Management Systems
3. Autonomous technologies
4. Advanced materials, such as lightweight carbon composites
5. Robust crew training and positive safety culture
6. Open exchange of safety data amongst airline and business aviation operators to improve processes

Another driver of increased safety is the work of the Commercial Aviation Safety Team (CAST). It focuses on operations in the U.S. but encourages government and industry partnerships worldwide and works with regional safety teams to improve safety through solutions tailored to region-specific challenges and goals. According to the FAA website: "CAST's work, along with new aircraft, regulations, and other activities, has virtually eliminated the traditional common causes of commercial accidents – controlled flight into terrain, weather, wind shear, and failure to complete checklists. As a result, the fatality risk for commercial aviation in the United States fell 83 percent from 1998 to 2008. CAST aims to reduce the U.S. commercial fatality risk by another 50 percent between 2010 and 2025." ■

(Global Aerospace provides aviation insurance worldwide.)

BRIGHT IDEAS

By John Fogel

Navigating aircraft lighting upgrades with cost-effectiveness in mind.

IN THE WORLD OF AVIATION MAINTENANCE, every decision counts, especially when it comes to upgrading older aircrafts with new lighting. From outfitting older fleets with halogen lights for landing and taxi to the choice of xenon for navigation lights or making the leap to LED, exterior lighting requires aircraft maintenance professionals to prioritize not only efficiency and cost-effectiveness but also adherence to industry standards. They must weigh the benefits against the costs to make informed decisions.

Management often grapples with the dilemma of selecting the most suitable lighting solutions while minimizing downtime and expenses. Keeping fleets up and running with cost effective lighting solutions is a key driver to meeting cost and performance goals. The process involves taking a cost-benefit analysis as well as meticulous research of the diverse options available. Let us delve deeper into the key considerations and options available for selecting safe, reliable aircraft lighting that meets government and industry standards.

One option in the search for quality aircraft lighting is purchasing products through an OEM's Illustrated Parts Catalogue (IPC). The IPC offers the assurance of meeting stringent specifications aligned with the aircraft's original equipment manufacturer (OEM) standards. This guarantees compatibility and reliability, both essential factors in aviation safety. By referring to catalogues such as a Boeing IPC or Airbus IPC, aircraft operators can confidently select lighting products endorsed by the OEM.

While the IPC route provides a stamp of authenticity, it is essential to acknowledge that it may not always be the most cost-effective option. OEM products can come with a price tag that warrants further research into other alternatives for the cost-conscious maintenance professional.

The other viable option for lighting products is with the FAA's Parts Manufacturer Approval (PMA), a compelling alternative. These FAA-approved parts undergo rigorous testing to ensure compliance with industry standards. From halogen to xenon and LED lighting, PMA-certified products provide a spectrum of options catering to diverse aircraft needs. These products are worth serious consideration as they meet the safety criteria as well as can be priced more affordably.

One of the primary advantages of PMA-certified parts lies in their affordability without compromising on quality. Manufacturers adhere to strict guidelines set by the FAA, encompassing design, testing and quality control processes. This entails comprehensive testing, including voltage-wattage assessments, vibration analysis, and photometric evaluations, ensuring optimal performance under varying conditions. Moreover, PMA products undergo other stringent quality control measures, including statistical process control (SPC) tests, to guarantee reliability and consistency. In adhering to established protocols and submitting comprehensive documentation to the FAA, lighting parts manufacturers demonstrate their commitment to quality and safety.

In addition, PMA products may leverage proprietary processes, resulting in enhanced durability, superior quality and extended lamp life. These innovations underscore the commitment of manufacturers to deliver cutting-edge solutions that redefine industry benchmarks. Through harnessing advanced technologies and manufacturing methodologies, PMA products offer a compelling value proposition for aircraft maintenance management professionals seeking optimal performance and longevity. ■

(John Fogel is Product Manager at Amglo, a manufacturer of specialty lamps since 1935.)