

Maintaining Mature Fleets

Ahead of its forthcoming Global MRO Procurement Expo at Olympia, London, on May 26-28, ap&m Europe explores some of the difficulties faced by airlines operating ageing aircraft fleets.



Some of the world's leading carriers – including Delta Air Lines, Southwest Airlines, Cathay Pacific Airways and Lufthansa – have an average fleet age of more than ten years. Many smaller operators' fleets are considerably older. So why do they choose to keep such mature aircraft flying?

The obvious driver is cost. For carriers weighing the pros and cons of acquiring new aircraft – whether through outright purchase or leasing agreements – the sheer scale of the financial commitment is undoubtedly the strongest argument in favour of continuing to maintain their existing fleets.

Isn't it the case, however, that aircraft have a fixed-term lifespan? Aren't those airlines with older fleets simply refusing to accept the inevitable? Adrian Ionascu, Contracts Director for Blue Air, who will be speaking at the ap&m summit in London in May, is forthright in countering such assumptions. "I'd really like people to think more about the philosophy of maintenance. I'd like to reiterate my belief that a mature fleet doesn't have to be considered an old fleet. With the right maintenance, good spares

and regular, thorough checks and servicing, we can carry on using these aircraft for a great many years.

"Good engineering will always remain good engineering – it just needs maintenance and servicing that is equally comprehensive."

What Ionascu refers to as the "right maintenance" is not, of course, necessarily as straightforward as it might sound. Larry Montreuil, Vice President of Asset Management and Business Development at Werner Aero Services, one of the sponsors of ap&m Europe, highlights some of the challenges involved. He points out that not only do maintenance costs typically rise in line with the age of an airline's fleet, but a lack of available replacement components can result in long waiting times. This, in turn, can potentially have a major impact on an operator's profitability, particularly if an aircraft has to be grounded.

Ionascu himself acknowledges that the maintenance cost for a fleet of 25-year-old aircraft is almost double

that for a five-year-old fleet. Much of this, including both parts and labour, results from unscheduled activity – the need for which is made apparent during scheduled inspections that reveal a component needs to be repaired, replaced or overhauled.

In addition, Montreuil says: "Older fleets generally require updates or modification to some parts of an aircraft which may result

Blue Air's Adrian Ionascu suggests a mature fleet does not have to be considered an old fleet.
AIRTEAMIMAGES.COM/DANIEL ALAERTS

The forthcoming ap&m Europe Expo is expected to attract more than 260 different MRO suppliers.

The maintenance cost of a 25-year-old aircraft is almost double that of a five-year-old.

in additional expenditures; they also require more structural inspections, increasing heavy maintenance costs. Ageing aircraft are susceptible to corrosion in floorboards and other areas that don't meet the eye. Life-limited structures such as landing gear and engine parts must also be factored in."

There is also the vitally important issue of passenger expectation and experience. To maintain customer loyalty, airlines operating mature fleets may well need to invest in cabin upgrades, including new or refurbished seating, Wi-Fi technology and modern entertainment systems. As Montreuil notes: "We all like to fly on new aircraft."

In short, maintaining mature fleets can present some daunting challenges. But how does one assess those challenges against the capital cost or lease payment savings the operators of such fleets benefit from? Peter van Oostrum, director aircraft remarketing for Fokker Services, is well placed to comment. "After ceasing the production of aircraft in 1996, aftermarket support became our primary business. We started with the Fokker fleet but now derive more than 50% of our business from other aircraft types. The support of what are known as Out of Production Aircraft [OPA] definitely brings challenges, from making sure that availability of parts is secured to

"We all like to fly on new aircraft."

Larry Montreuil, VP Asset Management and Business Development, Werner Aero Services





The decision by one airline to retire its mature aircraft can provide the critical components other operators need to keep their fleets in service.

Life-limited structures such as landing gear and engine parts are critical to the viability of older aircraft types.



Many airlines are upgrading the cabins of their mature fleets to ensure they continue to meet passenger expectations.



Some of the world's leading carriers have an average fleet age of more than ten years. ALL PHOTOS LUFTHANSA UNLESS STATED

dealing with wear and corrosion and ageing electronics.

"The big advantage, however, is that we have knowledge of a complete aircraft, its systems and components and how it all fits together. With this knowledge, we constantly focus on solutions that matter to our customers: maximising aircraft availability and enhancing the asset value of the aircraft. Another example is our ability to redesign parts, or the production methodology, to install a new supply chain when the original part becomes obsolete. In summary, with our OEM [original equipment manufacturer] knowledge we can do anything that's needed to enhance the operational and economical life of an aircraft."

Van Oostrum's point about having an in-depth knowledge of the aircraft is important, and not solely applicable to an OEM or former OEM servicing its own aircraft. As he says, half of Fokker Services' business now comes from other manufacturers' aircraft, particularly Canadian firm Bombardier. "Bombardier and Fokker Services entered

into a strategic alliance to offer guaranteed availability of serviceable components, and flight-hour-based component repair and overhaul services. It allows Dash 8, Q100, 200 and 300 aircraft operators to better manage their life-cycle costs, improve parts availability and enhance aircraft despatch availability. Our alliance shows the commitment to support these aircraft for many years to come."

This point is echoed by Montreuil. Commenting on the advantages for airlines that decide to keep mature aircraft flying, he cites the "high proficiency level of pilots, crew, ground crews, maintenance and all support roles on how to operate the aircraft safely, efficiently and hopefully profitably". He also highlights how airlines can



maintain their existing infrastructure "including GSE [ground support equipment], hangars, tools, test equipment, software, suppliers, manuals, training and inventory".

The benefits that can be derived from experience gained over time are highlighted by van Oostrum. "As fleets get older there are many more opportunities to analyse hangar check findings from operators in a full range of operating environments. These have enabled us to escalate base maintenance task intervals, typically by 20-30%. Such increased task intervals obviously yield operators a lot more flexibility in planning while lowering maintenance costs on a unit basis. This has taken various shapes, such as increasing the technical life on the Fokker 50 main landing gears by 20% or 12,000 landings and increasing the Fokker 70/100 12-year check interval to 16 years."

The simple fact that so many airlines choose to maintain mature fleets suggests there must be a compelling economic case for doing so. However, there are many factors to be weighed up and what works successfully for one operator may not be a viable or profitable option for another. Different airlines have different needs – something GE Aviation's Nathan Hoening is particularly aware of in connection with the engine market. "As we enter into the mature phase of the CF6-80C2, an interesting dynamic has emerged with some aircraft types

"There is no reason why mature aircraft can't keep flying just as well as younger aircraft."

Adrian Ionascu, Contracts Director for Blue Air

The next ap&m Europe Expo will be held at Olympia, London on May 26-28.



retiring – for example the Airbus A300, Boeing 747 and McDonnell Douglas MD-11, while others continue in new production and have a long life ahead such as the 767. This creates a broad range of customers with varied needs. Some of them want solutions to manage their fleet through retirement or lease return while others are looking for sustainable solutions that will enable them to manage the cost of ownership through another ten to 20 years."

Ionascu suggests that "with good quality parts, good MRO and accurate documentation, there is no reason why mature aircraft can't keep flying just as well as younger aircraft". However, it is also true that the time will come when, depending on the specific business model adopted by a particular airline, serious consideration needs to be given to phasing out a fleet of older aircraft.

Typically, that time will come when the cost of maintaining such a fleet, taking all factors into account, outweighs its value as an inventory of spare parts. Given that the availability of components is one of the criteria to be considered, there is a certain irony in this. The decision by one airline to take its mature aircraft out of service helps make it possible for another operator to keep its mature aircraft flying. **AVI**

For more information visit:
www.apmexpo.com