RISING DEMAND FOR MATURE ENGINES SIGNIFICANTLY IMPACTS AVIATION INDUSTRY VALUATIONS AND LEASE RATES

The rising demand for mature engines can significantly impact the aviation industry, driving up valuations and lease rates. This impact is due to various factors, including decreased production of new engines, their proven performance and familiarity, and economies of scale in operational costs. Understanding this impact is crucial for stakeholders in the aviation industry, as it can influence decision-making and strategic planning. Here are the details.....


Anca Mihalache

How is the economic landscape in Europe influencing the engine leasing and trading markets?

Anca Mihalache, Managing Director, AERO CARE - Despite the fact that inflation is very high in Europe, people still want to travel for holidays, business and meeting friends and family. During the summer season all aircraft are flying so finding an aircraft for ACMI is almost impossible. This relates in parallel to the engine market. At AERO CARE we note that here are very few engines available for trade currently, and those that are available for lease can only be operated for a very short period of time.

Patrick Biebel, Managing Director, MTU Maintenance Lease Services - If we use passenger air traffic to gauge the economic landscape, then we are seeing healthy growth in the air travel sector, especially as the market is entering the summer travel season. In its April analysis of the global air passenger market, IATA reports an 11-percent growth in total revenue passenger-kilometers (RPK) compared to the same period in 2023, led by a strong international traffic (+15.8 percent). Ticket sales for May and June were up 12.5 percent over last year, as well. However at a European level passenger traffic in 2024 is about the same as 2023. This is due to two main reasons, Europe had recovered faster than most regions (2024 traffic is more than double 2020 levels) and the European fleet is a very strong market for the A320neo family, so it has been impacted by the GTF fleet management plan. However, it is important to put the A320neo problems in perspective: since the end of 2020 over 1,400 narrow-body aircraft in Europe have returned to service and the European aviation market is doing well. Consequently, leasing demand is high and with few retirements, there is a good seller's market when it comes to aircraft or engine trading. On the cargo side, Europe is also doing well. Cargo flying is up 7 percent compared to 2023, largely due to 9-percent growth in the European wide-body cargo fleet since last year, with slightly slower growth of 6 percent in the European narrow-body fleet. This seems to reflect a slight softening in the narrow-body freighter market, compared to the robust growth seen in wide-body cargo activity. The three largest European cargo fleets are the 737-800 (77 aircraft), 777F (62 aircraft) and the 737-400 (51 aircraft). MRO and trading demand for the CFM56-3 that powers the 737-400 has declined markedly as these aircraft are increasingly being replaced by the 737-800 fitted with CFM56-7B engines. Demand for leasing and MRO on the 777F's GE90-110B engines is very high, but with few aircraft being retired, engine trading opportunities are rare.

Bruce Ansell, Technical Manager Engine Division, APOC Aviation - I don't see the European economies as a major issue in these markets, the largest influence is global and that is the rising cost of acquiring or maintaining an engine. At APOC we understand that these are being driven by the issues with the Leap & GTF engines, and shortage of good, mature engines to backfill the demand.

What impact is increased demand for mature engines and unscheduled removals of new generation engines having on engine valuations and lease rates?

Anca Mihalache - Lease rates for some engines are even higher than the previous peak level of 2019 and others are rising fast. The delays facing OEMs with new engines and airframes are increasing operators' demand for mature engines to keep their fleet flying. Whilst market expectations were that the demand for mature engine leases would decrease, today's reality is exactly the opposite. AERO CARE notes that the situation is the same for the engine valuations. Due to limited availability and supply chain blockages affecting certain parts that the engine MRO shops need to complete shop visits, part-out values for engines have notably increased.


Bruce Ansell

Patrick Biebel - Pricing on most engines has gone back to pre-COVID levels on the rent side and well above COVID levels on the maintenance reserves side. This is due to the escalation applied by OEMs in the last years and in connection with high inflation.

There is a strong MRO demand for the mature narrow-body engines, such as the V2500 Select and CFM56-5B/7B, combined with tight capacity, which is leading to growing lease rates. For the V2500-A5, many of the older Airbus A320s which it powers are flying beyond the expected lifetimes due to the GTF fleet management plan for the PW1100G-JM. This situation is driving up the lease engine demand for V2500s because the aircraft are not being phased out as originally planned and engine maintenance cannot be avoided any longer. Similarly, production delays for 737MAX aircraft are forcing 737NG operators to seek bridge solutions for the CFM56-7B engines, such as leasing, short-build MRO or engine exchanges. However, with few 737NGs being retired at the moment, it is difficult to find green-time engines to facilitate exchanges.

We are experiencing the same growing lease rates on the popular CF34-10E regional jet engines and the GE90 Growth, the latter also being affected by very few retirements.

Bruce Ansell - We are seeing huge inflationary pressures on lease rates for new generation engines. The acute shortage, caused by airworthiness directives and groundings, has provided those lessors with newgen assets readily available to be able to charge much higher rates. New engines are now on a waiting list for many operators. At APOC we detect that mature engine demand has increased dramatically, and this is compounded by unavailability of key components, probably due to the OEMs prioritising the parts required for the nextgen engines.

How long is the current rise in the engine leasing and trading markets expected to last?

Anca Mihalache - If we are talking about older engines, I expect lease rates to peak in 2025 and continue to be high until 2027. But that timeline depends on the newer engines, if the current production issues are resolved quickly, older engines will start to retire faster.

Patrick Biebel - Given the current buoyant state of the passenger and cargo markets, plus the ongoing supply-side problems for new generation fleets, it is likely that the leasing and trading markets will remain hot for at least three years. It is possible that lease rates may fall back from their current heights a bit earlier than 2027, but they are unlikely to fall back below 2023 levels for a considerable period of time.

Bruce Ansell - We expect to see the market starting to cool in 2027-8 as the nextgen engines complete their inspection & repair requirements.

What steps can stakeholders take now to prepare for future market requirements cost-effectively?

Anca Mihalache - Efficient planning within the engine MRO shop is the most important factor. From the perspective of securing and booking the work scope slots and also from the parts side. The OEMs have stopped producing certain parts for the end of life engines, or if they do still manufacture, they have very long lead-times. The USM market is in very high demand and and certain times of the year, it is very hard to find specific parts. So careful planning in advance, working in tandem with operators and lessors, is key to ensuring the shop visit is a successful one.

Patrick Biebel - Having an adequate level of spare engines is a prudent way to minimize or avoid operational disruptions. However, an airline does not necessarily have to keep spares, if it is cost prohibitive with respect to its size and financial situation. MTU has good solutions for it in the form of long-term MRO contracts for customer fleets with embedded leasing options, as provided by the MTUPlus intelligent services, for instance. We also have packaged MRO-lease solutions for single or unscheduled events. This allows airlines and other engine operators to get lease engine support quickly when an unscheduled event does occur. At MTU Maintenance Lease Services, we are often able to deliver a lease engine in less than 24 hours from the time of the request, if available. That means, the airline is able to react to an unscheduled event as if it had a spare available at its own facilities, even when considering the time required to remove the unserviceable engine.

Bruce Ansell - They can take note of the expected timeline for engine requirements, and also be acutely aware of any forthcoming service visit requirements, these are likely to be increasingly expensive with the maintenance shops fully booked and suffering from component shortages and the ongoing difficulty in attracting and retaining qualified labour resource.

How are engine MROs managing the increased need for services, including engine storage, parts availability, and shop throughput?


Patrick Biebel

Anca Mihalache - In AERO CARE's experience the MROs are now at a point where, if they cannot find certain parts in the USM market (for example HPT Blades), they will turn to the OEM and buy them new. This will only serve to increase the part-out value of the engine, despite the fact that most likely the engine will be built with 5000 or 7000 cycles remaining. I think the biggest issues the engine shops have are specialist personnel (but most of them have training schemes in place and the situation is getting closer to being resolved), and the lack of USM. Careful planning is once again a priority.

Patrick Biebel - It is important to be as flexible as possible. Thanks to MTU's global footprint, we are able to utilize our infrastructure to the customer's advantage, whether they need scheduled MRO, emergency or on-site maintenance, fleet and asset management, engine exchanges and leasing, or end-of-life solutions. We store ready engines and used serviceable material (USM) at a number of facilities

around the globe and as of this year, we can also lease out engine stands for transportation purposes.

In terms of parts availability and thrust supply, at MTU Maintenance Lease Services, we are actively seeking out assets across the globe on an on-going basis, so that we can cover market demand for lease engines and to keep adequate stock levels of material for MTU's MRO network. We also have extensive in-house repair capabilities at our locations in Germany, Serbia, Canada and Malaysia, which makes us less reliant on the persistently tight parts market.

On the one hand, our customers benefit from having readily available solutions when they need it, and other hand, our network benefits in that it can get its hands on serviceable material reliably and in a timely manner.

Bruce Ansell - The engine MROs are increasing prices, making parts availability a customer responsibility. The scheduling does appear to be slipping to the right, usually caused by lack of materials or delays in having components repaired. At APOC we haven't seen storage as an issue so far, although we are expecting this to impact if any further service visits are stalled.

How are lessors responding to the increasing demand for older engine models?

Anca Mihalache - Demand is very high for narrowbody engines. Lessors are doing their best both to increase the fleet of leased engines but also to buy engines that can go through a shop visit and return on the leasing market. Lessors know that the demand of older engines will stay steady for years to come.

From a leasing perspective, older engines are very profitable now. Commonly, an engine with green time and with a lease attached will have many bidders on it and sell at even higher prices than in 2019. The question is whether the residual value, after the green time lease, will remain as high as it is now. This remains to be seen.

Patrick Biebel - They see it as an investment case with higher lease rates and prolonged certainty around residual values for old equipment. Which means they stay invested longer than planned and/or even expand their engagement. However, the problem arises when they want to buy older engine models. Getting access to this equipment proves tough because markets for good, serviceable equipment are dry and/or prices are highly inflated. MTU can solve this problem and we have been able to double the size of our engine pool, despite this market environment, by following the following strategies:

1. Building up our own engines with the help of MTU's MRO network, its vast technical expertise and using our own used serviceable material (USM).

2. Buying equipment in bigger packages, that is, differing engine-aircraft combinations, regardless of OEM. We are able to, for example, source packages comprised of engines for wide- and narrow-body aircraft and at different stages of their lives. This means, we can optimally monetize fresh engines, half-life engines and teardown engines, putting us at a great competitive advantage and making MTU a differentiator in the market.

3. Providing access to our lease platform for investors and aircraft lessors that do not have their own engine leasing capability and capacity. In that case, we offer to manage the engines in our pool and manage the lease process for them.

Bruce Ansell - The bigger lessors have been moving out of the mature engine market and have left the smaller lessors to compete in this field. We have seen a lot of engines being built for 3-4k cycles to last a few more years, these are the engines which historically would have been parted-out, and hence providing much needed USM. However, with the extended service visit times these engines are now being traded as-is and passing on the service visit requirement, or carrying out module swaps to make the engine serviceable. APOC perceives that it is currently more economically advantageous to buy an aircraft with good engines for removal, than it is to buy individual engines from the market. Some lessors are either teaming up with others, or starting their own part-out business to support this.