

# ENGINE LEASING SOARS AMID SUPPLY CHAIN STRAINS AND DIVERGING MRO STRATEGIES

The market remains buoyant, with lease rates up by single to low double digits across most tradable engine types. Freight Trends learnt that the MRO sector continues to face post-pandemic challenges, including supply chain, labor, and regulatory issues. Lessors are still placing out-of-production aircraft, and MRO workscopes vary significantly—some stakeholders opt for minimal build standards, while others aim for half-life or better. Additionally, airlines are increasingly pursuing sale-and-leaseback deals to shift MRO responsibilities to lessors. Here are the details .....

## How would you describe the engine leasing market's performance over the past 12 months?

**Patrick Biebel, Managing Director, MTU Maintenance Lease Services** - The market has been very strong over the past year, which is due to a number of factors. For one, there are on-going delays in production ramp-ups and deliveries of new aircraft and engines. In combination with longer turnaround times at MRO shops throughout the industry, it translates into strong demand across our entire portfolio and frequent extensions of short-term leases. In fact, lease-out times have been doubling recently.

Secondly, the market in North America has softened lately, but it is being offset by the Asia-Pacific region with robust demand, where we have our Singapore office. Again, production and certification delays, such as with the Boeing 777X, force operators to utilize their older generation equipment longer than originally anticipated.

Finally, airlines have also been increasingly opting for selling and leasing their engines back in, as a way to transfer the MRO responsibility to the lessor. This is a perfect fit for our company, since MTU Maintenance Lease Services is able to

provide the full range of fleet management services in conjunction with the MTU Maintenance network, which would include analysis, planning and execution of asset management and maintenance strategies.

**David Rushe – VP, Global Business Development & Origination, Magellan Aviation Group** - The market has been buoyant with single-low double digit percentage lease rate rises across most tradable engine types. The MRO network still faces the post-pandemic challenges with supply chains, manpower and regulatory challenges. Lessors are still extending lease placements on out of production aircraft. We have seen a pronounced divergence in MRO workscopes from the propensity of some stakeholders to pursue short build standards, whilst others will maintain the half life and above build targets on engines.

**Pascal Parant, Group Chief Commercial & Marketing Officer – Vallair** - It's been like a casino. Green time has been heavily utilised, and we're now reaching the limits. At Vallair we observe that turnaround times (TATs) are increasing for both



Patrick Biebel

current-generation (CG) and new-generation (NG) engines. Demand is extremely high. New-generation engines are now considered golden assets with exceptional value. Anyone who invested in engines 24 months ago is significantly wealthier today.

Some airlines are even leasing entire aircraft just to access their engines, as this remains a more cost-effective solution than leasing spare engines alone. This trend is likely to continue until the next crisis hits - and when that happens, those who invested at the wrong moment could face painful consequences.

**Tony Ramage, Director of Origination & Trading (APAC) – EirTrade Aviation** - In a word – robust. Strong market demand for leased engines has been evident for a number of years but this has increased more recently, especially given the ongoing supply-chain challenges that are impacting several engine types on both single-aisle and widebody aircraft.

This continued demand for both previous (for example CFM56, V2500, CF6, PW4000) and current (for example CFM LEAP, PW GTF) engines translates into firm



monthly lease rentals and longer-term commitments. Furthermore, at EirTrade Aviation we are also seeing demand from airlines for previous generation engines on shorter-term lease, often to cover scheduled or unscheduled engine shop visits.

Appetite from engine lessors to secure incremental assets from airlines in addition to direct orders from OEMs also remains strong.

**Anca Mihalache, Managing Director AERO CARE** - At Broward Aviation Services we see a steady high demand for narrow body engines and the market is still unable to supply the right quantity of engines needed. Availability is tight - lease rate factors are the proof of this. We anticipate the cost of engine leasing will remain high for the next two years at least.

#### How are OEMs supporting lessors and airlines during the transition to next-generation engines?

**Patrick Biebel** - From an MTU perspective, however, we see that customers are affected by various delays and we are working together with them to find cost-efficient solutions, so that they can continue to operate their current equipment. We have a full spectrum of integrated leasing and MRO services, including targeted worksopes and life-extension worksopes such as module exchanges. In addition, we offer engine exchanges, engine fleet management and, as mentioned already, short- and medium-term leasing.

**David Rushe** - Indications are that CFM have pursued a more open MRO strategy, which has helped deal with the shop backlogs imposed by some teething issues on the LEAP. This reflects the CFM56

network. On the PW1000G side, the OEM has maintained more control of the product and there seems to be less options out there for shop visits and pooling of engines.

**Tony Ramage** - Airframe and engine OEMs have a vested interest in maximising both the life and value of current generation aircraft and continue to provide support for previous generation engines.

Given the viable economic life of aircraft, there tends to be a natural displacement as the oldest units are finally retired and previous generation equipment is acquired by airlines or is placed on a third or fourth run lease. There is existing expertise in the market to support ongoing maintenance and overhaul of older engine types and engine OEMs are also showing flexibility, for example in allowing Used Serviceable Material to be utilised during engine shop visits.

Naturally, engine OEMs also want to support lessors and airlines as they introduce next-generation engines and this can take the form of spare engines, access to engine pools or lease engines, and fixed cost support such as flight hour agreements (though this is becoming less common).

In anticipation of an influx of next-generation engines requiring scheduled shop visits, EirTrade is also witnessing OEMs broaden their MRO networks to ensure that there is sufficient capacity and expertise to provide the requisite support.

**Pascal Parant** - CFM is still producing -5B and -7B engines, and every unit is absorbed immediately upon availability. OEMs have every reason to continue supporting current-generation engines. Profitability for these programmes typically comes during the third shop visit, and the aftermarket is where OEMs achieve their margins. So, they're doing their best to



David Rushe

support it.

That said, vulnerabilities in the supply chain—such as raw material shortages (particularly titanium), labour scarcity, and pressure on tier-3 suppliers - continue to pose serious challenges.

#### Do you expect engine values to dip soon due to durability and supply chain challenges?

**Patrick Biebel** - The only condition in which we see a dip, would be improvements in the supply chain. Current conditions cause the opposite. Engine values are very high right now because of strong demand and limited supply. There is a gap in new aircraft deliveries, so in order for lost production volumes to catch back up, the supply chain must improve so that production ramp-ups can proceed according to plan. This will take a substantial amount of time, so it could be years until the overall market is rebalanced again.

With demand staying as strong as it is, I expect a stabilization at an elevated engine value point, rather than a dip in it. One reason is that in the past, anticipated price hikes had already been factored in to a certain extent, so higher values were always an expectation. Secondly, during the recent period of uncertainty, there had been operators under pressure who were more willing to pay higher prices, but the operators don't exist in similar numbers any more. The impact of these drivers has been fading away and that might put some downwards pressure on pricing.

**David Rushe** - No, the opposite in fact. Spare engine supply remains low single digits on the legacy narrowbody types, with perhaps some oversupply on lower thrust baseline models. Values will continue to creep upwards.

**Tony Ramage** - Not in the near future. Engine values have increased consistently over time and now represent the most significant cost element of new aircraft. EirTrade continues to witness very strong demand from the market for both previous



Credit - Vallair



and next-generation engines. Given the significant new aircraft production shortfall that exists, and the ongoing challenges of increasing airframe and engine production rates, we expect to see sustained demand which will translate into steady engine values.

Furthermore, given the current demand for engine shop visit slots at MROs, EirTrade anticipates that demand for spare engines with green-time remaining will also remain robust as airlines seek to maintain operational capability whilst awaiting shop visit slots.

**Pascal Parant** - As long as passenger demand stays strong, current-generation engines will continue flying, and teething issues with new-generation engines remain unresolved, engine values will remain high. However, the moment Vallair does



Pascal Parant

see the early signs of an economic downturn, engine values will likely be among the first to fall.

I recall a Pratt & Whitney executive once saying they were hoping for the next crisis just to clear out the supply chain log jam. I'm not advocating for that, of course - but I do believe this situation will persist until the next downturn arrives. When? It's hard to say - I don't have a crystal ball - but the last major crisis was in 2019, and the typical cycle is around eight years. We should stay alert and proactive to better anticipate when that downturn comes.

**Anca Mihalache** - Not in the near term. In fact, engine values — especially for the legacy engine types like CFM56 — remain strong due to the limited supply in the marketplace of new models like LEAP which is causing shop visit delays. Operators are holding onto the legacy engines longer to meet their operational

requirements with new routes and increased passenger demand. At Broward Aviation Services we are definitely impacted by a shortage of engines for teardown so parts are also at a premium which is having a knock-on effect at the MRO shops.

**How are lessors managing the transition from current-generation to next-generation engines?**

**Patrick Biebel** - At MTU Maintenance Lease Services, we are still very heavily invested in current generation equipment. It's a market which will exist for a long time to come, and from a strategic point, this is a great match to our operations, since our lease portfolio mirrors the MTU network's MRO portfolio. That way, we can best cater to our existing customer base.

We also run a very strong, hands-on asset management business, in which we leverage MTU's technical expertise to generate additional value through teardowns and parts remarketing. Older generation engines are, of course, better suited for this.

As part of a global MRO network, we usually follow suit with leasing and asset management for any new engine programs. The prime case was the recent announcement that MTU Maintenance Dallas will become a LEAP Premier MRO location and a GBSA-licensed service provider for GENx. We have also stepped into these markets, as well, to match the network portfolio and we are one of the few lessors who offer short-term leasing on these new generation engines.

**David Rushe** - There are challenges for sure, not least expertise and developing the knowledge base. The OEM engagement has been greater than in the past. Some lessors are very much focussed on dual generation strategy, with the yields on legacy tech engines being more dependable.

**Tony Ramage** - Both aircraft and engine lessors continue to experience very strong demand for current-generation products. Given the current state of OEM order books and the sustained demand for new aircraft pushing availability into the next decade, airlines are looking to secure or retain capacity to ensure viable interim fleets. Many lessors have reported significantly earlier engagement from lessees facing lease expiries within existing fleets.

Another market dynamic that we have observed at EirTrade is that leased aircraft, which would previously been considered as feedstock for freighter



Anca Mihalache

conversions, are remaining operational for much longer in a passenger role. This is also impacting the overall availability of candidate aircraft for teardown which would see material returned to the market.

**Pascal Parant** - The transition to new-generation engines remains difficult, depending largely on how the OEM approaches aftermarket access. If the aftermarket is restricted and your only option is to enter into a full-support agreement, or you're locked into a narrow MRO network, it may be wiser to wait until conditions evolve.

However, established lessors with strong OEM relationships already have the leverage they need. It's vital for them to enter the new-generation market to continue growing and meet customer expectations. For current-generation engines, the market is favourable - off-lease engines, whether with green time or run-out, can be sold at premium prices. For instance, the run-out CFM56 market is reaching prices as high as \$4.5 million or more.

**What role do PMA and DER parts play in reducing maintenance costs today?**

**Patrick Biebel** - We are unable to comment on this, since we don't pro-actively use such parts at MTU Maintenance. Though we would note that the principle motivation for using such parts is cost reduction. And MTU has many other levers and excellent material management to ensure it minimizes cost for customers. This can range from new parts and in-house OEM repairs to used serviceable material (USM). The asset managers at MTU Maintenance Lease Services acquire and funnel teardown engines into our network, where they are taken apart by MTU's specialized teardown teams and generate significant volumes of USM. We use the USM to support our global MRO operations and third parties thanks to strategically placed parts warehouses at MTU Maintenance Dallas and Zhuhai, as well as in Amsterdam. Since COVID, we have been investing heavily into teardowns, which besides having a cost-

saving effect, allows us to have USM that our vendors may not be able to cover otherwise.

**David Rushe** – The availability of USM material has somewhat neutralised the cost gains from PMA/DER until recent years. Tightness of USM availability has put PMA/DER back to prominence as a way to secure material and negotiate the repair shop backlogs. However, PMA still remains focussed on non critical parts and Magellan would see most presence in older, operated owned aircraft. Non PMA/DER statements are still required on critical engine components by the vast majority of our USM customers.

**Tony Ramage** – The use of PMA and DER parts has, for a long time, been a contentious issue, especially in the context of engines. Market acceptance of PMA / DER components has grown, particularly for areas such as the replacement of non-critical cabin parts, but their use in critical (e.g. rotating) areas of engines, remains restricted.

With the ongoing challenges that airlines and lessors are facing in terms of MRO slot availability and extended turnaround times once inducted, this is an area that is under constant review at EirTrade and within the market as a whole.

**Pascal Parant** – It really depends on where the PMA part is installed. If it's located outside of critical pathways, it can – and should – be considered. These parts can be easily removed during the next aircraft transition, especially if the airline owns the aircraft.

However, to protect the remarketability of their assets, many lessors now specify “no PMA, no DER” policies. For airlines that own their aircraft and operate in PMA/DER-friendly jurisdictions, these parts can be very cost-effective. They often reduce both turnaround times and costs. Of course, this may come at the expense of the aircraft's residual value. That said, if you look at what happened with 30-year-old MD-80s, airlines that embraced these solutions saved considerable money – far more than what the aircraft were ultimately worth at the end of their lives.

**Anca Mihalache** – PMA and DER parts are becoming more widely accepted, especially among operators that are always looking to reduce costs and TATs. For the narrow body engines, using PMA and DER parts represents a good way to control costs and, more importantly, manage scarcity of supply. At Broward Aviation Services we

know is said that engines that use PMA/DER parts, might be a harder sell when the part-out becomes an option. But from my experience, outside Tier 1 airlines, the acceptance of non-OEM parts is growing.



Credit - MTU Maintenance

**Where do you see the engine leasing market heading in the next 5-10 years amid economic shifts?**

**Patrick Biebel** – I would say that the volume of engines in the lease market is much higher than what a balanced market would otherwise display. If there were a significant market drop, the impact would be equally significant, especially in the short-term leasing area. The short-term lease market can be very rewarding, but this comes with its own risk profile, so you need to be able to mitigate cycles and market fluctuations. It makes sense to have a strategy which encompasses the entire engine lifecycle, so that an engine generates value at every stage of its life: leasing, fleet management, comprehensive MRO and end-of-life provisions, including tear-downs and parts remarketing. This is what MTU Maintenance Lease Service does thanks to its role in the MTU network, which supports our commercial know-how with its technical expertise. Additionally, we manage risk or exposure by embedding leasing options within MRO contracts, as a way to insure ourselves against market volatility.

**David Rushe** – Values will continue to have single digit rises with the most prominent demand being for latest tech or upgraded engines. We are some time off from universal “fixes” for some of the new tech engines. I would be confident in demand for legacy engines being strong into the early 2030s.

**Tony Ramage** – The role of aircraft and engine lessors as a risk-mitigant in airline fleet planning will continue to develop. Furthermore, the access to capital that such lessors have, combined with their

need to grow portfolios, will ensure that there is continued demand for the purchase and leaseback of engine (and aircraft) assets. This translates into ready liquidity for airlines yet to make a financing decision on new equipment deliveries.

Given the capital cost of modern aircraft engines, EirTrade believes that it is also possible that mainstream aircraft lessors will look to develop and expand their ownership of engines as a subset of their overall asset base. Existing engine lessors will also continue to expand.

**Pascal Parant** – Maybe it's the engineer in me, but I like to think in terms of equations. Engine prices are climbing every year. New-generation narrow-body engines are now over \$20 million; even new current-generation engines exceed \$16 million. Meanwhile, aircraft lessors have broken

through the 50% market share threshold. Airlines, on the other hand, are increasingly focused on routes, cash preservation, and profitability.

If we set aside short-term economic cycles, the long-term outlook is clear: engine leasing will continue to grow. The high cost of entry will limit the number of players. The market will likely continue to be a mix of long- and short-term leasing, shared between OEMs and established independent players like ELFC, SES, and Willis Lease. We may see new opportunistic entrants, but it will be very difficult for them to gain meaningful market share against the incumbents.

Lastly, it's important to remember that engines are fluid—they can easily be moved across the globe. But maintenance challenges like foreign object damage (FOD), early failures, harsh operating environments, or airworthiness directives can quickly turn a promising deal into a costly nightmare – especially for those who are not true specialists or who simply pretend to be.

**Anca Mihalache** – At Broward Aviation Services, we expect that legacy engines will see a decrease in leasing demand as these engines reach retirement age. Green-time availability will slowly decrease. At the same time, leasing activity for new-generation engines is expected to grow exponentially. We also see the demand for long term leases being higher than green time leasing for the mid-future. Airlines are focused on fleet modernisation to control fuel costs and for sustainability, so engine lessors will need to reposition their engine portfolios accordingly.