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MRO Management

MOVING AHEAD

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FLEXIBLE SOLUTION
Strong demand and fierce competition in engine leasing

SMOOTHING THE PROCESS
MRO software companies continue to roll out innovations

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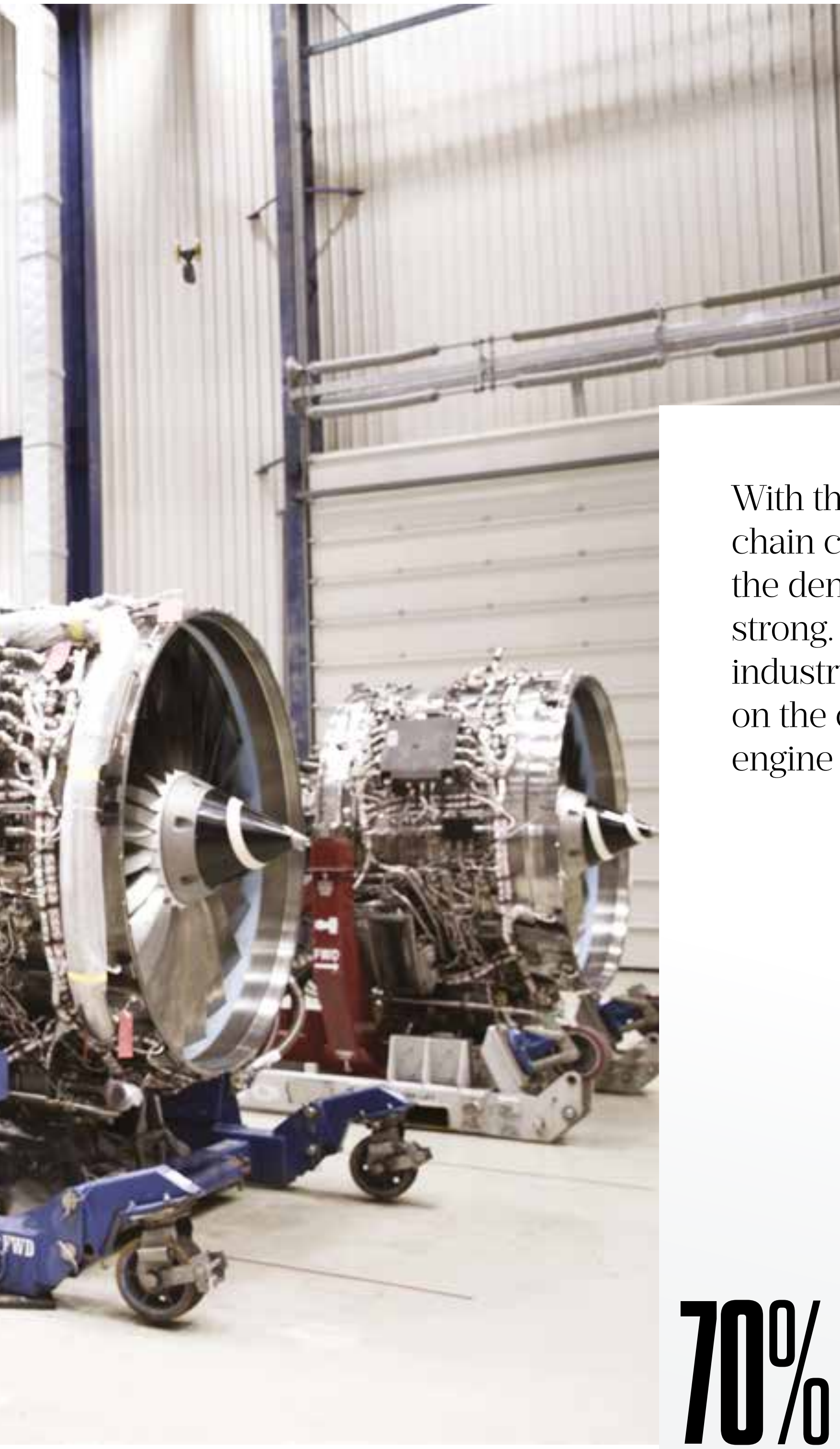
Why investing in people will reap rewards in 2023

STRONG DEMAND, FIERCE COMPETITION



With the current ramp-up, supply chain constraints and shop congestion, the demand for lease engines is very strong. ***Mario Pierobon*** reached out to industry experts to provide an update on the current landscape of the aircraft engine leasing market

In 2022, the global active fleet of engines that forms MTU's engine portfolio grew by over 3,000 – and many will soon need shop visits

70%

With the pent-up demand for engines, the traditional dry leasing routines have come back, and we are seeing the rates going back to 70 per cent of pre-pandemic levels

According to Patrick Biebel, managing director of MTU Maintenance Lease Services, short-term leases last from a few weeks up to a few years and provide an operator with a replacement engine when an engine is either unserviceable, or the operator wants to avoid the cost of an engine shop visit and just needs thrust for a defined period of time.

Many airlines are leasing rather than purchasing engines, as they can avoid the high capital costs associated with buying engines and it can provide more flexibility in terms of fleet and risk management, affirms Wasim Akhtar, director of engines at AJW Group. "With the pent-up demand for engines, the traditional dry leasing routines have come back, and we are seeing the rates going back to 70 per cent of pre-pandemic levels," he says.

According to Biebel, the short-term leasing market has recovered quickly from the downturn and further strong growth is predicted for 2023. "Many airlines avoided shop visits in 2020 and 2021, but MRO activity came back strongly in 2022," he says. "We had anticipated this uptick in activity, both in our MRO and leasing arms, and we were well prepared in terms of expanded facilities, personnel and material, including significant increase of assets in our lease pool to cope with the strong momentum of the recovery."

At the beginning of the Covid crisis, many airlines were able to delay shop visits by swapping engines between aircraft in their fleet and MTU worked closely with its customers to understand their engine requirements,

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> "Airlines are asking for power-by-the-hour agreements, which were on the rise during the low utilisation Covid times"

including conducting planning, forecasting and scenario analysis using the company's in-house developed 'CORTEX' software tools, explains Biebel.

"As airlines needed shop visits again, we had the expertise to execute the most appropriate maintenance strategy, tailor work scopes and select the right engines in order to minimise the costs for the operators, while matching their operational needs," he comments. "This is important as some operators need a full performance restoration while others just need enough thrust to keep their fleet flying a bit longer than originally planned while they wait for new production aircraft to be delivered."

The competition in the engine leasing market is fierce among large and smaller players alike, according to Akhtar. "It is important to note that as the number of engines needing to be overhauled goes up, the short-term engine leasing market and the demand for the used serviceable materials (USM) grows with it, in line with the surging demand for travel. The demand for USM material will drive the retirements, which will allow the asset owners to exit their legacy engines on a higher note," he says.

New and complementary services

Despite the recovery, several operators still have relatively weak finances and are even keener than before to avoid cost and cost uncertainty, according to Biebel. "We are helping operators to manage their engines more efficiently via our Technical Asset Management Services (TAMS) teams, who can optimise an airline's shop visit forecasting and spare engine prediction using proven software developed-in house by MTU," he says. "TAMS personnel can also provide work scope advice and engine module swap management as well as logistics support including engines, stands and parts storage. We also provide support to airlines and asset owners when an engine moves from one operator to another. This can include engine preservation, start or end of lease inspections and pre-purchase engine inspections."

According to Akhtar, airlines are asking for power-by-the-hour (PBH) types of engine leasing agreements, which were on the rise during the low utilisation Covid times. "The airlines are also seeking thrust support, meaning the lessor is responsible for the keeping the fleet powered. If an engine fails an inspection or is removed from the operation as per the planned removal, the lessor is required to provide a like-for-like engine to keep the airline powered," he says.

In an era of rising interest rates, the increasing cost of capital is putting pressure on margins. In the long term though, inflation results in higher residual value, which is beneficial for asset owners, explains Biebel. "Especially now that shop visit turnaround times (TAT) are extended and spare parts escalation have seen double digits, it is for many lessors

25%

Engine maintenance costs are mainly driven by material costs, with labour contributing only about 15-25 per cent of the cost, depending on the engine age and work scope

attractive to engage in engine exchange solutions which provide the right engine for the right mission at the right point in time without TAT and cost uncertainty," he says.

This can make an engine exchange a more attractive option for the lessor. "They take an engine in a known condition for a fixed price from us and we add the lessor's old engine to our teardown pool," states Biebel. "We then use our expertise to optimise the value of the engine through a combination of green time leasing, overhauling the engine or parting it out – including salvaging serviceable modules where possible."

These parts and/or modules can either be sold to third parties or consumed within MTU's own asset pool. "An engine exchange may also be attractive to a lessor later in a lease if there is a mismatch between the life required to complete the lease on the aircraft. In this scenario, a stub-life exchange engine or a green time lease could be more cost efficient than investing in a full shop visit," he explains.

As many aircraft have remained in storage so far, aircraft lessors have also explored ways in which they can generate cash from these idle assets, according to Biebel. "One way has been to remove engines and lease them to other operators, specifically from aircraft with limited remarketing prospects, like an A319 or older airframes due for heavy maintenance. Although this sounds simple, short-term engine leasing is resource intensive and requires dealing with many logistical and technical challenges for which aircraft lessors are not always set up for," he says. "We have developed strategic relationships with several aircraft lessors to bring these idle assets back to work, which provides thrust to many of the MTU customers to smoothen their ramp-up and returns cash to the asset owners."

Engine maintenance cost

Aircraft engine maintenance has also evolved recently, due in part to technological advancements, according to Akhtar. "The use of computerised systems allows for more accurate and efficient maintenance and reduces the need for costly repairs. Furthermore, the development of more durable engine parts has led to a decrease in the frequency of replacements," he says.

Engine maintenance costs are mainly driven by material costs, with labour contributing only about 15-25 per cent of the cost, depending on the engine age and work scope, highlights Biebel. "OEM annual price escalation has tended to be in the 3-5 per cent range until recently, but some of the latest OEM catalogue price rises are now in double digits. The prices for used serviceable material have also risen due to high demand and scarce supply, but not to the same extent as for new parts. This strengthens the case for repairing rather than replacing parts, whenever possible," he says.

As the airline industry recovers, with more aircraft returning to service, the demand for shop visits has increased, explains Biebel. "In 2022 alone, the global active fleet of engines that forms MTU's engine portfolio grew by over 3,000 engines and many of these engines will soon need shop visits," he reports. "We retained our personnel and we have expanded our shop capacity at all our network sites during the pandemic. In addition, MTU is utilising significant amounts of used material which our leasing and asset arm started to acquire well in advance of the demand ramp-up."

Another factor to consider is the competition in the market; many companies and OEMs are now providing extended warranties and free services over longer periods, which helps to reduce maintenance costs, affirms Akhtar. In line with this, AJW has expanded its services into sectors such as aircraft remarketing and leasing, to accommodate and adapt to the changing environment in the industry.

As technology and the industry evolve, so do business strategies, and this is encouraging as it demands business evolution and moves the aerospace and aviation industries forward.

1. The short-term leasing market has recovered quickly from the downturn
2. Further growth is predicted for 2023

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