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ENGINE SPECIAL REPORT

TRAINING

The benefits of CBT
in pilot skills development

18

E-JET E2

Charting the triumph of
Embraer's E-Jet revamp

22

GREEN SKY

Is aviation becoming
a social pariah?

42

DOING MORE WITH LESS

For those airlines which have leased aircraft fleets and limited cash reserves, green-time engine leasing is an attractive option. However, as *Alex Preston* discovers, the effects of the past two years are still being felt

The reduction in the number of parked aircraft as flight schedules return to pre-Covid levels may be good news for passengers, but its consequence is being profoundly felt elsewhere in the industry.

“The pressure on lease rates and engine values is increasing,” states Alex Vella, chief operating officer of Lithuanian-based Magnetic Leasing. “However, due to the postponement of shop visits and increased TAT (turnaround time) to get engines through the shop, demand is starting to outstrip supply.” At a time when airlines are expanding their short-haul networks with new holiday season routes, Vella warns that, “We are expecting summer 2023 to see a shortage of narrowbody engines on the market.”

It’s an overall sentiment shared by others in the industry. For Wasim Akhtar, director of engines, AJW Group, the negative impact of Covid on the global supply chain is still being felt across the



3

aviation industry worldwide. “There is still a lack of available resources – not only serviceable used material but manpower resources too,” he explains. “There has been an exodus of qualified people and technicians out of the aviation industry into other industries, which has affected the level of qualified personnel available to service components.”

The result of this and a lack of part availability have led to high turnaround times for part processing and an increase in maintenance costs across multiple MRO sectors. “The industry needs to recoup the financial losses incurred due to Covid. By changing their business and MRO strategies, companies are looking at low-cost alternatives to new components and engines,” asserts Akhtar. He adds, “The trend toward green-time engine leasing opens the door for growth in engine services across the globe, and also moves the aviation industry closer to a more sustainable way of doing business.”

Panacea?

But what is green-time engine leasing, and can it be a panacea for airlines and aviation alike? “Green-time is the remaining life of an engine assuming no continued use at end of life,” says David Archer, head of general aviation and aftermarket value at aviation consultancy IBA. “The idea being that a mature engine which may not be economically viable to repair can still contribute value by ‘burning off’ the remaining life through a shorter lease.”

Or as Akhtar bluntly puts it: “Green-time engine leasing involves harvesting engines from newly retired aircraft tear-downs and using them with their useful life left, which could be anywhere between three and 36 months.”

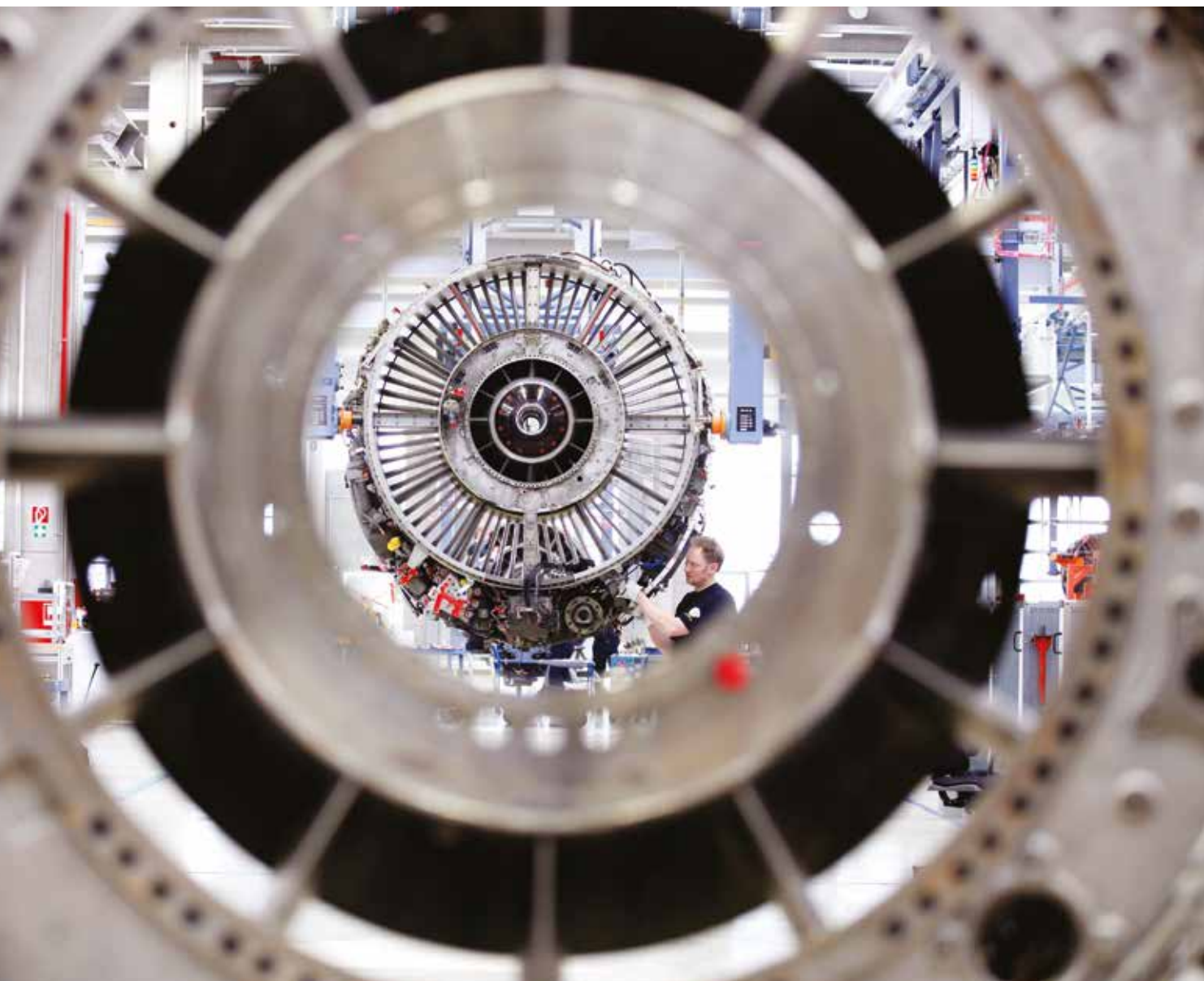


1

He explains that having these engines with remaining time-on-wing allows the airlines to conserve cash and avoid hefty end-of-lease shop visits, or to bridge the gap in their operation when engines are undergoing any repair or downtime. “Airlines who own their assets could also be interested in green-time engines as it gives them flexibility, reducing downtime, and saving on maintenance costs,” he says.

According to Vella, green-time engine leasing is a popular option for airlines that wish to avoid or postpone an expensive shop visit. “They can lease in an engine that is suitable for the remaining time they envisage the aircraft to remain operational or for long enough to keep the aircraft flying before committing to the significant cash outlay of the overhaul.”





2

GREEN-TIME ENGINE LEASING OPENS UP GROWTH ACROSS THE GLOBE

Financial considerations are at the heart of this scenario, as Vella explains. The operator will pay the engine lessor a fixed rent lease rate plus maintenance reserves for the hours and cycles operated. If an engine becomes unserviceable earlier than planned, a lessee could normally return the engine. In this case, they pay minor or no compensation to the lessor, as green-time engine leases usually contain no obligation to redeliver the engine in a

serviceable condition. (Excluding rare situations where the lessee has misused the asset or failed to perform the correct maintenance during the lease term).

User community

On the question of what type of airline customer is best positioned to take advantage of green time engine leasing, there is no definite list of airlines says Akhtar. “The subject is a very broad one, and hence it will vary depending on whether you’re discussing it with an airline or a lessor. Based on our experience, it will be the tier 2 and tier 3 airlines that work on utilising green time engines from the open market rather than going through engine repairs, which can be costly and time consuming.”

Archer agrees. “Most likely you are looking at operators of mature assets such as 737 Classic or early 737/A320s as examples where it is not worth investing in increasingly costly maintenance.” Typically, that means airlines with engines with between one to three years of life remaining before a shop visit is required, and sometimes even a little less, such as one summer season. Says Vella: “This fits within the optimal period that an airline would be better served financially by leasing in a green-time

1. Wasim Akhtar, director of engines, AJW Group
2. Green-time engine leasing can contribute to sustainability
3. Alex Vella, Magnetic Leasing’s COO



2

engine versus investing in a major overhaul of the existing engine.”

When looking at the most suitable engine candidates, Archer says the list is extensive. “Older examples include CFM56-3C, RB211-524, PW4000-94/100/112 and CF6-80C, but we are also now moving to the point that newer CFM56-5B, CFM56-7B and V2500-A5 are mature enough to see levels of this behaviour particularly as maintenance costs rise at such rapid rates.”

When an airline decides to enter into a green-time engine lease agreement, there are a number of specialists ready to assist carriers with flexible leasing solutions and support to meet the needs of individual customers.

As engine stock is constantly being refreshed, Vella says that when dealing with brokers/dealers, airlines will want to know “the commercial elements such as rent and reserve rates and understand the engine’s technical condition.” The redelivery conditions required at the end of lease are also assessed.

Engine life

Archer adds further considerations: “What limits are on the Life Limit Part (LLP) stack, how much exhaust gas temperature (EGT) margin remains at desired thrust, any inspection intervals that could disrupt operations – in general, an understanding of the remaining life of the engine and any potential issues that could impact its operation.”

That said, such conversations could be moot due to the current constraints

“OEM CURRENT PRICES WENT UP AT RECORD LEVELS IN 2023”

the market faces. “At present, we see a significant increase in TAT for major shop visits,” says Vella. “There is a shortage of labour as many experienced people left the industry during Covid. This has impacted not only maintenance facilities but also part repair facilities.”


The point is picked up by Akhtar: “There are also technical challenges facing maintenance teams dealing with Entry into Service (EIS) issues for newer technology engines. Lack of training and maintenance resources for technicians leaves maintenance companies unable to develop skills and technician knowledge for the newer engines. As a result, companies continue to service older legacy engines and are unable to move forward into servicing current technology engines, which results in these engines not coming to the market.”

“Looking at mature engines, the most obvious difficulty will be in material supply but this of course then feeds into cost,” according to Archer. New material will be too costly but, as fleets mature and increased levels of green-time leasing take place, the supply of good used material becomes very limited as has been experienced by a number of markets. This puts upward pressure on material and engine values if they are in good condition.”

Vella agrees, pointing out that, “as for the parts, they are in lower supply, with fewer engines disassembled in the past two years and higher scrap rates due to less experienced staff in repair shops.” He notes that OEM current low prices (CLP) went up at record levels for 2023; for example, the CFM56 & V25 LLP prices escalated by 12-13 per cent. Historically, these were around 6-7 per cent.

In general, as the market avoided shop visit events, there was significant increasing green-time demand, consuming large amounts of the remaining usable engines and material. “The lack of supply has led to stronger values and lease rates which in turn make green-time leasing less attractive,” says Archer. “However, OEM price escalation behaviour in the past year will likely help to counteract this.”

However, Akhtar offers a different perspective. “Before the pandemic, the demand for aircraft engines exceeded supply, resulting in costs related to the sale and leasing of engines soaring. As the travel industry was strong at the time, most airlines had the equity to fund new engines and did not see the need to lease green-time engines. Moving on two years, a significant decrease in global travel left airlines financially vulnerable and watching their bottom line, forced to retire fleets early. The result – a stock of healthy spare engine supplies.

“Having a good supply of cheaper, serviceable engines with favourable lease rates now available, the trend among airlines is to save costs by delaying the replacement or restoration of ageing engines and opting instead for the green-time engine leasing opportunities that are available.” 

1. David Archer, head of general aviation and aftermarket value at IBA

2. Parts are in low supply due to fewer engines disassembled in the past two years

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