

It has been a challenging period in commercial aviation for **Neil Russell**, chief executive officer for Aero Norway. But with a new facility designed to provide high-quality MRO services for CFM56 engines, it's full power ahead, as he explains

Eight Questions

Question 1: What are the challenges the industry faces currently and how is Aero Norway seeking to overcome them?

The main challenges are parts supply and component/part repair capacity. Both issues have increased turnaround time for maintenance, repair and overhaul (MRO) services across the aviation industry. There are many reasons why this has happened, but the primary causes include the COVID-19 pandemic, the war in Ukraine and production issues on the newer engine types. The good thing is that not all parts are delayed and not all repair suppliers face significant problems, but it's enough to affect the whole industry cumulatively.

There are several ways to mitigate the worst of these challenges. You can offer customer exchanges, but those require you to have some stock of the parts – increasing the inventory you hold. We try and work with our repair suppliers to discuss the needs and parts that are more urgent, and the supplier can offer exchanges, too. As we are independent, we can move to different suppliers or have multiple sources for the same parts.

When it comes to parts, Aero Norway is always looking at the used serviceable market to reduce costs. However, we are also experiencing issues with consumables and expendables. There, it's essential to have an accurate forecast to predict the engine types we see

coming in and plan for the future. For the CFM56-3 engine, which is an older engine type, there is a resurgence in DER (Designated Engineering Representative) and PMA (Parts Manufacture Approval) parts where new or used parts are hard to find.

Question 2: The demand placed on MRO engine support companies since the pandemic has increased tenfold. What plans did Aero Norway have to meet this demand, did they work and what did you learn?

As the pandemic unfolded, we focused on the CFM56-3 engines for cargo over two weeks and opened three extra 'hospital' repair bays. Since the world of aviation opened back up, our focus at Aero Norway has been chiefly about changing direction back to newer engine types, like the CFM56-5B and 7B, and undertaking heavier engine worksopes. We did not let any staff members go during the pandemic, so it was easy for us to change back to standard work patterns. We learned that, as a repair facility, we can be extremely agile and make such changes quickly. This has led us to understand this as a key strength of our business.

Question 3: When a client first approaches Aero Norway to work on their engines, can you explain the initial process discussed during those

early meetings regarding tailored requests?

The main thing is to listen first and try to understand what the customer wants to do. During that time, you can ask questions to increase that understanding. Then, you give the customer options to see what suits them the best. Typically, those options are based on past experience or customer collaboration to develop new solutions.

Question 4: Aero Norway focuses mainly on the CFM 56 engine and its series. Are there plans to look beyond this model at newer powerplants?

It's only natural that we would go towards the new Leap engines manufactured by CFMI. The Aero Norway facility has been overhauling CFM56 engines since 1990 – we are an accredited repair station. So moving along with CFMI models makes sense. CFMI has an open network repair philosophy similar to the CFM56, so we hope to develop that further in time.

Question 5: There's a massive push for commercial aviation, including support companies, to become more 'green' moving forward. How is Aero Norway achieving this goal and what changes are being made?

On the product/service side, I think we tend to forget that, as an MRO, we already operate in a 'green' field. We refurbish used products to produce



OPPOSITE:
The CFM56 variants are the backbone of engine MRO at Aero Norway
Siv Sivertsen/Aero Norway

BELOW:
With an engine throughput of circa 120 per annum, Aero Norway aims to keep about US\$26 million of stock to remain a cost-effective operator
Siv Sivertsen/Aero Norway



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Neil Russell, CEO,
Aero Norway

much better fuel burn efficiency than they had on the wing previously, reducing the amount of fuel used. During that process, we try to repair and reuse as much as possible. When we can't, almost all the waste material – about 97% – can be recycled, and that raw material can be fed back into new parts production. Also, parts can be replaced with previously used serviceable material. So, the focus is on repair, used serviceable material and how you recycle.

The Aero Norway business itself has a focus on reducing waste, water

usage and energy consumption. Our facility uses biofuels in a typical heating agreement within the airport area, and the electricity in Norway comes mostly from renewable sources. We have various new technologies in our cleaning and non-destructive testing (NDT) areas that significantly reduce waste and water usage. We can always do more and we have an environmental team passionate about taking further steps to improve. Our environmental targets are based on the UN Sustainable Development Goals.

Question 6: What are the differences, if any, between supporting flagship airlines, low-cost carriers, aircraft lessors and OEMs, and what are the challenges of each?

They all have different needs and requirements. In general, flagship airlines tend to have large fleets which are either leased or owned. They can have tailored maintenance programmes for their engines that need to be incorporated into the shop processes. Their maintenance programmes are built up over a long time,

based on experience. Large-build engines are a significant investment and have long, useful lives, so large airlines need engines to perform that whole time.

Low-cost airlines are similar but may not have their own maintenance programmes, so they base their requirements on the CFM workscope planning guide. A large majority of their engines can be leased, so the workshops can vary to meet lease return requirements. These operators can also have large build engines, half-life engines or need worksopes to match the life on major modules – for example, LPT swaps or rebuilds.

Lessors can have varied workshops depending on the customer to whom they deliver the engine. Lessors also want to know and inspect serviceable parts with conditions very close to limits, as they may replace the part as a precaution. This is due to the airline's acceptance inspection for the engine/aircraft delivery, which can be very meticulous.

OEM requirements combine a mix of their customers' needs. The challenges can come down to paperwork requirements for replacement parts. The operators own most CFM56-3 engines, so the Part M requirements for required documentation are much less than those required for a leased engine.

Question 7: There is talk of a global shortage of trained engineers within the industry, which has impacted MRO companies. How is Aero Norway hoping to counter this?

Aero Norway has always had an apprentice programme where we guarantee a job if they pass the course. This helps us backfill retirees and develop a stream of talent onto the shop floor. We also backfill internally as much as possible, which means we have ex-mechanics in almost every function of the company – for example, half of our engineering team are former -mechanics.

Question 8: How do you spend your downtime from Aero Norway? Any hobbies or interests?

Norway has an amazing natural landscape, so it offers plenty of outdoor pursuits. I mostly like to go hiking in the mountains or along the coast. I try to find time to play golf in the summer, and in the winter I ski. The weather can change quickly here, so I try to spend some time in the gym, and I try to squeeze in some sea or lake kayaking. Most of these activities help me relax, except for golf, which can be infuriating! I also like to read as often as possible, especially when travelling; this year, I've been reading mostly non-fiction books. **AI**

