



STEVE STRIKE, OUTBACK PHOTOGRAPHICS

Restarting the fleet

With the peak northern summer approaching and vaccines offering hope, airlines are preparing to bring their aircraft back in service, but a lack of planning and decision-making could cause headaches in the MRO world as **Michael Doran** discovers.

AT THE START OF 2020 the global fleet of commercial airliners numbered around 26,000 and while numbers fluctuate, aviation consultant NAVEO estimated that in mid-November 39 percent, or 10,000 aircraft, were parked as a result of the COVID-19 pandemic's effects on aviation.

Many airlines have already retired aircraft with the balance of their parked fleet in different levels of readiness, available to return in line with the growth in passenger demand. Those decisions were made long ago, but with so much uncertainty surrounding travel restrictions, airlines are holding off committing to any firm return-to-service (RTS) programmes.

What is concerning MROs is this lack of certainty and how that may limit their ability to meet the RTS demands when they arrive. The tasks are well documented by the OEMs, from how aircraft and engines are to be stored to how they are to be reactivated and, apart from the MAX rectifications, most are well-established MRO practices. With close to half of the grounded 737 MAX aircraft awaiting delivery, the impact their rectification works will have on the MRO landscape remains to be seen.

Airbus has developed a 'Return-To-Service App' for Airbus and non-Airbus aircraft that allows airlines to visualise the status and the maintenance forecast for each aircraft and create an RTS plan.

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Airlines select a tentative RTS date and an assumed utilisation for each aircraft and the app will analyse the associated impact in terms of man-hour, costs and critical works.

Vallair has broad aviation operations with locations in Luxembourg and Chateauroux and Montpellier in France. Its MRO activities include light and heavy checks, passenger to cargo conversion, painting, parking, storage, return to service and aircraft disassembly. Vallair mainly focuses on A320, B737 and ATR aircraft with parking slots for 50 single-aisle aircraft at Chateauroux, although it did host the British Airways A380 fleet for a time, and a further 20 narrow-bodies at Montpellier.

With aircraft tentatively returning to operations, Vallair is seeing RTS activity pick up, but Head of Commercial Malcolm Chandler says aircraft are still coming in from a mix of end of lease returns and lessor repossessions. "We have a lot of aircraft that were put into storage pre-COVID, mainly from airline failures and we've had more come in," he told Asian Aviation. "I don't think we've seen the really big repossessions or big failures yet and I think there's more to come in Europe."

Vallair takes in aircraft for a mix of short-term parking for up to 12 weeks through to long-term storage of a year or more. Depending on the storage programme in place and the instructions from the continuing airworthiness management organisation (CAMO), tasks are done periodically to keep the programme active. Chandler says it's the way they are looked after during parking that determines their road back into service and that the RTS process is a set of standard MRO operations.

"From short-term parking it involves removing all the protective covers, checking and purging the pitot static systems, checking the oxygen systems, removing any interior coverings on seats and carpets and a general visual around the exterior for any damage," he explained. "There might be an engine idle run with checks of the fuel system but it's all fairly standard with each CAMO having its own small variation in how it's done. The CAMO issues us the work-pack and we would complete that work and issue the Certificate of Release to Service (CRS)."

Concurrently with the RTS programme, the owner or operator will elect to do any other maintenance that has fallen due, such as C-checks or replacing life-limited components before taking the aircraft back. However if the owner has found a new home for it the process may involve a heavy check, full paint strip and re-spray, cabin reconfiguration, new carpet plus any other modifications they need for operating in a particular area.

If an aircraft is close to a major six or 12-year check, the owner will have to have that done as the airline will not want to induct a new aircraft and then have to ground it for eight weeks of maintenance soon after.

"We are seeing stored aircraft going into service and we recently sent a former Thomas Cook A321 down to Africa and another that came out of a repossession in Romania which is going to Asia in February," says Chandler. "We've got a couple of A320 Neos transferring in January, one a 2000 model and two which are a year old, so it's a broad spectrum."

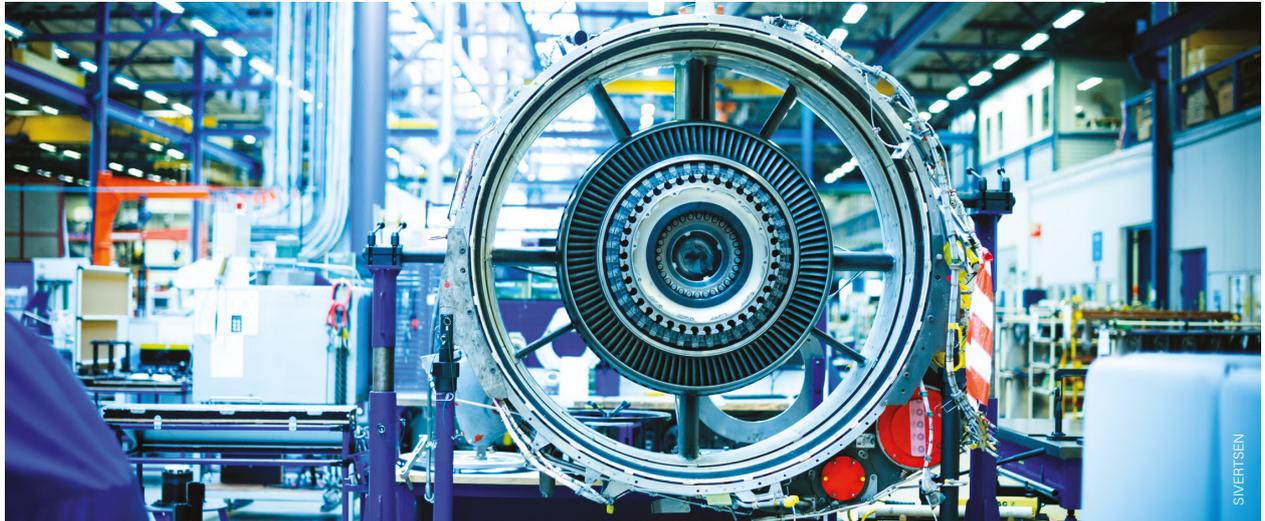
When an aircraft is certified as ready for return a ferry flight is organised, either by the airline operator or a specialist ferry flight business, who will organise everything including the crew, fuel, flight planning and insurance. "Normally they do a quick up and back down to exercise all the systems and make sure everything is operating correctly so any issues can be attended to by the MRO before the ferry flight. Now, due to COVID more than anything else, typically it's a hired-in crew by the operator," Chandler said.



▲ *Vallair's Malcolm Chandler says the way aircraft are parked determines their road back into service.*

Aero Norway specialises in the complete range of MRO services for CFM56 variants, such as the -3, -5B and -7B. Pre-COVID it was servicing around 100 engines a year and was developing its on-wing programmes where teams would go to the customer and perform lighter worksopes, such as changing engine modules. Returning aircraft engines to service after parking is not a major activity for engine MROs but the COVID related grounding means some older engines are being retired earlier than expected, which is creating work for the sector.

Aero Norway Customer Support Manager Kenneth Johnston says their usual workload of scheduled engine servicing has dried



▲ It takes around 4-5 hours to preserve and pack an engine at Aero Norway.

up and with the COVID restrictions on moving technicians to other countries on-wing MRO is off the agenda. "At the moment we're primarily doing repair work needed on engines being returned that do not meet the specified requirements of the lessor," Johnston tells *Asian Aviation*. "It could be anything like a repeat inspection or something being monitored and although it's serviceable it can't be returned in that condition."

Similar to aircraft, engines need to be maintained in storage and Johnston says that it is not difficult to do and if it's done correctly there should not be any issues with the engine on its return to operations. "The biggest issue is to make sure the engine is preserved internally, and the OEMs have issued advisories to operators to help them understand what they can and cannot do," Johnston says. "If you're not going to preserve them they need to be run at least once a month as it's catastrophic to let the oil system and bearings become overdue causing a lot of work when you want to return to service."

It takes around four to five hours to preserve and pack an engine and they can then be stored for a year in Aero Norway's climate-controlled facility, giving owners some time to find a new home for them. "It's obviously simpler to do it in the shop to when it's on an aircraft and running it every month reduces the MRO work for RTS, which is ok if the operator still has the engineers and ground crew to support doing this," Johnston adds. "To get an aircraft back into service quickly takes a huge amount of time and effort and all the industry redundancies and furloughs will have an impact on that."

The major issue for MROs is the unpredictability on a return to service which makes planning a scheduled workload and the resources required almost impossible. For newer aircraft and engines the MRO demands are less of a challenge but assets returned due to lease-end or repossessions do require MRO before they can be redeployed.

"There is no forward planning so everyone will want things done yesterday when it takes off again but the capacity just won't be there," says Johnston. "It's really important for the airlines to be closely monitoring the market and predicting what they are going to need when things do pick up again." →



▲ Aero Norway's Kenneth Johnston says engines need to be run at least once a month if they are not in preservation state.