

# MRO

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# Getting to grips with aircraft redelivery operations

The pandemic has seen a steep rise in the number of aircraft transitions.  
*Photo: Vallair*

**Keith Mwanalushi** scrutinises aircraft redelivery scenarios to identify the conditions and considerations under a lease agreement and the challenges that exist in the current environment.

For many MROs and aftermarket specialists the combination of travel restrictions and different quarantine requirements at different locations has produced a challenging environment for aircraft redeliveries. Martin Pankov, Head of Lease Redelivery Support at AJW Group sees that due to the uncertainty of flight profiles and when passengers will return to the air, AJW are seeing a brief pause in redelivery activities. "Given reduced air travel, lessors are unwilling to take back their assets and many airlines have instead negotiated low to no rent fees for the time the aircraft is grounded."

Pankov observes the current focus continues to be on asset recovery and storage, as well as negotiations. "Lessees face manpower shortages and travel restrictions with large airlines using their leverage to negotiate out hence many open sale and lease back opportunities. Usually, early returns have



Martin Pankov, Head of Lease Redelivery Support at AJW Group

significant financial implications for the lessee, as lessors do not need the assets presently."

He says AJW are seeing a trend on buy-out deals for lease return conditions; "however, customers need to be cautious as we expect a drop in the fair market value of some components which will cause friction between lessors and lessees. AJW can assist both lessors and lessees to uncover and match to true market intelligence," Pankov suggests.

With these challenges caused by the COVID pandemic, at TRAX, the specialists in MRO and airline fleet management software solutions, they believe that technology will play an important role in improving efficiencies, processes, and lowering of costs. As a result, TRAX accelerated its development of some products aimed at assisting their customers with their

The current focus continues to be on asset recovery and storage.  
Photo: Vallair



Malcolm Chandler, Head of Commercial and Marketing at Vallair

“If the aircraft were to lose its records, it would have no value at all.”

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response to the pandemic and its effect on their operations. This was a driving force for the creation of the eContent Control App for technical records and lease returns.

“Aircraft redelivery services are an integral part of fleet management, which is our specialty,” states Ricardo Fong, eMobility Development Manager at TRAX. He says there is a very fluid market situation now in the leasing sector with the return of even more aircraft, and in some cases the selling of owned aircraft and leasing back (SLB deals). “Our customers already have the required technical data residing in the TRAX eMRO system, but they needed to step up their game and reduce redelivery times.” Fong continues saying enhanced digitisation via the eContent Control app greatly streamlines the process by providing accurate and easily accessible data, eliminating the need to scan documents, and facilitates the extraction of printed reports.

Malcolm Chandler, Head of Commercial and Marketing at Vallair echoes similar experi-

ences with delays and the deferral of lease start dates by operators caused by the current environment as operators are in a stronger position than the lessors; he says the lessors must accept these delays, which has a knock-on effect on the MROs. “Work planning is becoming increasingly difficult. This is impacting on us on an hourly basis – as soon as plans are lined up, everything changes. This sometimes results in delays of six to eight weeks. The knock-on effect of the pandemic on our MRO team is that we have no sub-contractors on site and are down to our permanent staff. It is certainly a challenging time requiring us to be responsive and reactive,” he states.

The inability of technical representatives to travel has required companies to rely more heavily on redelivery service providers based in countries where redeliveries are occurring, remarks Jim Geer, SVP, Asset Management Group at GA Telesis.

Geer observes that the situation has led to more cooperation between lessors, lessees, and other redelivery service providers who need assistance in cases where their internal teams usually have travelled. “Here at GA Telesis, we have seen an increase in requests for our own redelivery services provided by both, other aircraft owners and airlines due to their inability to travel into the United States or avoid a quarantine to do so. The pandemic environment has also produced a need for airlines and ferry crews to get creative to minimise, if possible, the burden

placed on the flight crews after ferrying aircraft to their final redelivery destination.”

Clearly, the demands of the industry today, and in part exacerbated by the COVID-19 pandemic, has seen a steep rise in the number of aircraft transitions. From a technology perspective, Mihai-Aurel Mazare, the Senior Product Owner at SWISS-AS notes that MRO software must ensure that it meets the needs of the OEM’s, operators and lessors and play its part in the process. “The future will bring a new AMOS programme dedicated to the aircraft transfer management projects. Its objective is to support and streamline customers’ aircraft transition processes even further.”



Ricardo Fong, eMobility Development Manager at TRAX



Jim Geer, SVP, Asset Management Group, GA Telesis

Mazare further explains that one of its envisioned features is to aid the mapping of the incoming aircraft data and automatically align it with the receiver's maintenance requirements data. "Another priority of the new programme is augmenting airworthiness engineers' decision making for the fastest, most cost efficient and seamless integration of the asset in their fleet. Think about an AMOS programme that will be able to determine the optimal content of a bridging work package, thus minimising the ground-times, maintenance and overhead costs."

#### Obligations and conditions

In terms of redelivery conditions, clarity is paramount under a lease, in terms of the main obligations of the lessee and the lessor for the maintenance status of the aircraft. Typically, everyone wants to see the aircraft ready and cleared one C-check ahead but, in bulk aircraft deals with possible repossession and new start-up relationships, at AJW they have seen significantly shorter periods, according to Pankov.

Fong at TRAX says ERP and MRO systems, such as eMRO and eMobility suite by TRAX, have full data digitisation for all components that allows for the level of detailed history needed for lease return agreements. He explains: "For example, life limited parts have full back-to-birth traceability records and compliance information resides in the eMRO system. Having a completely digitised integrated engineering, maintenance, financials, logistics and records system can potentially replace the need for outsourced or in-house dedicated aircraft or engine redelivery teams by allowing existing technical records teams to prepare a lease return package quickly and easily."

Fong reports that one TRAX customer that uses the eContent Control app reported 60% to 80% savings on the lease return process that represents \$100,000 per aircraft in savings. He says additional savings include a 60% reduction in offsite physical data storage, and 80% reduction in human errors due to digital records and better auditing.

Fong continues: "Airlines and MROs are increasingly digitising their transactions, yet many lag behind in 100% digitisation. It is not unusual for TRAX to work with an operator to implement the eMRO system and still encounter the use of Excel spreadsheets and documentation outside of the maintenance system of record they are replacing.

"Another challenge is the lack of standardisation for digital data exchange in the aviation industry. There are organisations that are taking initiatives to foster industry-wide standards, such as ATA e-Business Forum and others. TRAX participates in these working sessions and includes efficient data transfer options such as Spec 2000," Fong adds.

Adherence to the storage procedures is paramount too, comments Chandler from Vallair. He says even whilst the aircraft is in storage, there are repeat tasks and inspections to be done, these include fuel water checks, desiccant inspections, and changes, checks for build-up of foreign objects such as birds' nests which can often be found in the flight controls and ensuring all bungs and air intake blanks and covers remain in good condition. "In addition to this, we would be constantly carrying out general visual inspections for leaks in hydraulics, and fuel, as well as ensuring that all ground support equipment is properly secured so there is no chance of damage to the aircraft due to equipment being blown in the strong winds associated with airfields."

Geer from GA Telesis reminds that typically, the lessee has a set of maintenance status obligations defined as minimums. He explains that the purpose of these minimums is to allow the lessor to deliver the aircraft to the next lessee in a condition that enables the new operator to avoid significant maintenance events during the first year or two of their operation. "In other cases, there are return conditions described only for reference purposes that drive a financial calculation, which results in a payment from lessee

to lessor if these reference conditions are not met or from lessor to lessee if these reference conditions are exceeded."

In some leases, Geer further adds that both concepts exist with the minimum requirements providing a "floor" beneath the reference conditions, which the lessee cannot go below. "Provided all of these conditions are met, the lessor is then obligated to accept the aircraft's redelivery and, in most cases, return the lessee's security deposit."

#### Records review and aircraft values

Aircraft records are the value and airworthiness of the aircraft, highlights Vallair's Chandler. "If the aircraft were to lose its records, it would have no value at all. Potentially this would mean that any aircraft whose records have been lost would be scrapped due to the cost of replacing the engines and landing gear alone."

Unless the records are correct, Chandler says the aircraft cannot move on until the records are in order, which could mean a component change, reinspection or redoing an existing repair – all of which are expensive and time consuming. "The records are imperative. If we receive an aircraft as a repossession, we will go through the applicable paperwork and the remainder would be checked on an inventory basis – for a typical aircraft, a ship set of records would be around 30 to 40 boxes."

The records review is a process that is crucial for every aircraft. Normally this would include collection of all data of interest to determine the current maintenance and airworthiness status of the aircraft, identification of the discrepancies against a given regulation or an agreement delivery clause, determining



Mihai-Aurel Mazare, the Senior Product Owner at SWISS-AS

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The records review is a process that is crucial for every aircraft.  
Photo: Win Air

the relevant corrective actions and reporting all findings and data of interest in a comprehensive report. “It is impossible really to put a time frame on it as it depends on the aircraft age and the quality of the stored records, so in reality this could take anywhere between one and twelve weeks,” Chandler states.

Mike Cazaz, CEO and President at Werner Aero Services notes that the records review can be a time-consuming process especially if the aircraft or asset has a varied history - as the demand in the aftermarket for back to birth documentation is becoming more prevalent. “Missing one piece of information, if it is an LLP, could impact the value of an entire aircraft (or engine) and the ability to market the aircraft as a flyer in the future. It is especially critical in a case of operators’ bankruptcy as any potential future problems with documentations will not be able to resolve since there will be no organisation to address that with,” he highlights.

Pankov from AJW stresses that the records review is the most important task for each party implicated in the chain of events from lessee redelivery to lessor possession, to new lessee acceptance. He says the proper completion of the task by the lessee’s team gives precious time for the procurement and the onsite team to avoid unnecessary delay. “The lessor’s records team is equally important to avoid any undue financial exposure on the lessor’s side for any findings identi-

fied from the next lessee. Any gaps in the due diligence process may indeed devalue the asset or render a deal void, leaving the aircraft susceptible to further maintenance. The next lessee could also have exposure from improperly carried out records review during their operation or even at redelivery. We often find customers requiring immediate supply of parts that could have been properly planned in advance.”

AJW offer a full lease redelivery service ensuring that lease returns are managed effectively with cost transparency and comprehensive processes.



Mike Cazaz, CEO at Werner Aero Services

To meet the expectations of the industry, Mazare from SWISS-AS says AMOS relies on complex and dependable functionalities to ensure maintenance records traceability and correctness. “These combined with the standardised format of Spec2500 provide substantial advantages over paper-based process,” he indicates.

AMOS Spec2500 export allows users to generate comprehensive aircraft records data sets with ease and great flexibility, he tells. Mazare continues saying multiple export configuration options are available for each chapter, permitting a highly tailored output to satisfy any particular asset records review use case – “This flexibility and the high data quality speeds-up the records review process. High levels of data quality and consistency are not only essential in performing aircraft transitions in the best possible manner, with the least waste of time and effort, but are crucial in retaining assets’ value and marketability.”

The records required to lease an aircraft are often different from the level of documents necessary to sell the same asset. To maximise the value of an aircraft over its complete life cycle, one also needs to be familiar with the level of records required to sell the parts from the aircraft, which may again be different. MRO’s and aftermarket specialists such as GA Telesis are involved in all these activities.