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Europe prepares for a comeback

LRU Management

Shifting demands
for a changing market

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LRU fuel pump inspection.
Photo: AFI KLM E&M

LRUs: shifting demands and shifting solutions

The need for LRU services decreased dramatically over the past year as airlines operated reduced flying schedules. **Keith Mwanalushi** speaks to industry experts to see how the pandemic affected the management of these components.

The MRO industry has seen some significant changes with the management of Line Replaceable Units (LRUs) during the pandemic. From an aftermarket perspective several different scenarios are playing out. On the airframe LRU side of the industry, Jason Reed, President, Flight Solutions Group (a division of GA Telesis) says there was a dramatic drop in purchasing from the airlines and a shift towards "AOG only" purchasing or a "repair only" mentality. "Some airlines informed us that their purchasing dropped 80% on those LRU types. For engine LRUs, those items still had a lesser but continuous flow since maintenance shops continued running at about 50% of routine restorations."

In a different light, many Power-by-Hour (PBH) providers had to manage

their pools in a vastly different manner knowing that airlines wanted rate reductions due to the lack of flying hours, Reed states. "In that light, many providers put a full stop to all LRUs going out for repair to avoid costs and maximise the profitability of their programmes."

Many operators, service providers, MROs and stockists have been seeking to reduce their costs to the absolute minimum. The conditions facing airlines created the need for flexibility and pragmatism in an aftermarket that was suddenly heavily disrupted. Chas Richardson, Commercial Manager, AJW Group explains that with many operators seeking suspensions, amendments and even terminations of their aftermarket support contracts, AJW has seized the opportunity to offer solutions that are



Chas Richardson, Commercial Manager at AJW Group



The pandemic has had the effect of reducing the market value of serviceable LRUs.
Photo: AJW



Allan Pennycuik, VP Operations at AJW Technique

flexible and fair. "Offering short-term contract suspensions, 'pay-as-you-go' stop-gap solutions and the opportunity to evolve the commercial framework of the service provision as flying resumes has been particularly successful for AJW."

In the component MRO world, Allan Pennycuik, VP Operations at AJW Technique saw that the immediate change was to put a hold on component

maintenance, and only send LRUs for repair in line with operational requirements. "Many airlines, with a proportion of their fleet parked, elect to take LRUs from non-flying aircraft, in effect delaying the maintenance on unserviceable components," he adds.

As airlines then restart flying and ramp up their flying schedules, AJW Technique have seen a significant increase in volumes from certain customers, in support of aircraft resuming more regular operations. "We have been able to adjust skills and capacity in response to these changing requirements, ensuring we are able to support our customers with optimal turnaround times in active cells," says Pennycuik.

The pandemic has had the effect of reducing the market value of serviceable LRUs, so again AJW have seen an increase in the number of LRUs declared BER (Beyond Economical Repair). Pennycuik expects values to

bounce back at some point, but in the meantime, AJW is being flexible and support operators with exchange units at attractive prices.

At Spairliners, they are currently seeing a counterbalance between moderate restart of airline activity and therefore still reduced demand for components, as well as the challenges of returning to a smooth and efficient supply chain, mainly due to the reduced transportation opportunities.

"The intra-Europe travel is currently at a plateau, which allows for some additional time for the supply chain to get back on track, in-line with the slowly recovering demand for components," observes Benoît Rollier, Managing Director and CFO at Spairliners.

Rollier anticipates a higher availability on the Used Serviceable Material (USM) market with surplus coming from activities such as teardowns from retired aircraft which is lowering the prices for such components globally. "For us as a

component support provider, we find increasing attractiveness in replacing unserviceable parts instead of repairing them. Hence, we can now leverage a range of options, such as repair or parking the unserviceable unit for the time being. Also, scrap and replace for each LRU on a case-by-case basis in order to optimise costs. This makes the management of LRUs globally an exciting and innovative business.”

Clearly, airlines and MROs are still focused on liquidity preservation and reduction of working capital requirements, such that they are holding far less inventory than prior to the Covid-19 pandemic. “This is especially true with high value LRU components,” mentions Daniel Moreno, Senior Airframe Manager at Kellstrom Aerospace. For distributors of factory new condition LRUs, Moreno reckons it is more important than ever to have material available from stock because the quantity of AOG and critical requirements is greater than ever, and customers simply cannot wait for factory lead times. “With respect to USM component leasing, this has increased in popularity; although leasing is typically synonymous with whole aircraft, engines, and landing gears. Component leasing allows for more liquidity for an airline operation whilst having access to a larger pool of options to cover both planned and unplanned line maintenance,” says Moreno.

Exchange activity is on the increase versus outright purchase as operators are forced to continually reduce inventory holding, notes Mark Shimizu, Head of Inventory and Sales at AerFin. “LRU exchanges provide the operators



Benoît Rollier, Managing Director and CFO, Spairliners



Daniel Moreno, Senior Manager Airframe, Kellstrom Aerospace

“Component leasing allows for more liquidity for an airline operation whilst having access to a larger pool of options.”

Daniel Moreno, Senior Airframe Manager, Kellstrom Aerospace

with immediate access to low-cost inventory available off the shelf and defer the repair cost until the core unit is returned to the vendor and processed through the MRO workshop.”

Shimizu adds that whilst there is a high volume of serviceable components currently held by numerous parts suppliers, the reduction in component demand has put a pause on many suppliers speculatively launching unserviceable components for recertification. AerFin are continually investing in additional components to be launched for repair and overhaul from high-quality reputable repair vendors

to ensure there is maximum coverage to operators of their core platforms.

Optimise LRU maintenance to minimise spares inventory

AFI KLM E&M say in order to reduce the stock of spare parts and LRUs, it is important to share this stock as much as possible with all the customers for whom they provide LRU maintenance. “From a technical point of view, it is also important to have a common maintenance policy for all the LRUs we manage,” comments Mario Fernandes Abade, AFI KLM E&M Engine Accessories Unit Manager. He says it is necessary to minimise the return time of unusable LRUs back to the repair shop.

An obvious solution is to pool stocks with other operators through a pool service such as the one AFI KLM E&M offers its customer. “In addition to the proximity to the operator and therefore the speed with which we can respond to a request, this solution not only reduces inventory costs but also allows our

customers to benefit from our expertise as an airline-MRO in areas such as pool sizing, optimisation of technical standards, repair management and sourcing," Fernandes Abade continues.



Mike Cazaz, CEO at Werner Aero Services

Mike Cazaz, CEO at Werner Aero Services agrees that the best solution for an operator is to sign up with a pooling provider to access its pool. "With a pool option the need to hold inventory on hand is minimal and hence the upfront capital expense is limited. A pooling option provides the operator the ability to better predict operating costs, reduced overhead expense, management of the risk of the supply chain vulnerability and improved cash flow."

At the Flight Solutions Group they see the European market as the region that tends to maximise cost management of LRUs as a whole. Reed says that market is exchange driven with minor costs on exchange fees plus repair costs as a way forward to optimisation. "Many other regions continue purchasing high dollar LRUs, ending up with higher stock values. Having those higher stock values is a significant risk due to asset values and associated part values dropping dramatically over the last 18 months. We saw some LRUs which were previously

near \$400K in value daily now only selling for under \$200K at best. With heavy teardowns scheduled over the next three years, those inventory values will not come back anytime soon; thus, exchanges are the way to go."

Not only that, but Reed also continues saying for those that wish to maximise their cash flows, having pre-arranged agreements in the aftermarket is a better way to carry those parts. "If an airline typically predicts usage of 10 specific LRUs a year, they could rely on aftermarket providers to bulk purchase all 10 of those units in advance, and at a discount, in exchange for a guaranteed yearly buy commitment. This maximises cash flows for the airline yet satisfies their guaranteed demand at the same time."

AJW offer several supply chain support solutions to customers to facilitate optimal inventory management based on fleet and size of operation. For example, exchange solutions for smaller fleets where volumes do not justify extensive inventory ownership. "We also offer shared strategic customer pools, with multiple user access to a defined stock holding in a region or geographic zone. This allows a service-level guarantee of LRU availability, with the stock holding cost spread across several customers to achieve economies of scale," states Richardson.

Additionally, Pennycuik adds that AJW Technique offer specific programmes for time-controlled units, escape slides being a prime example. "Slides are time controlled on a calendar basis, so overhauling them before they are required for installation results in the burning of on-wing or green time. With several customers, we have established direct links with their planning teams and are able to provide overhauled slides 10 to 14 days ahead of the required aircraft installation date via a joint-forecast and fulfilment model. This enables our customers to maximise on-wing time and optimise inventory," he says.

Aircraft do not fare well while they are inactive, requiring daily, weekly, and monthly checks to keep them in airworthy condition. These checks can sometimes

lead to unscheduled replacement of LRUs and components while they are grounded prompting the operator to either replace company owned stock or rely on readily available components in the market. Kellstrom Aerospace indicated that they offer clients a variety of cost-saving options to optimise inventory including rotatable exchange pools and onsite consignment inventories.

Operators have further options to optimise maintenance of LRUs in order to minimise spare parts inventory, such as negotiating with various component workshops to repair and hold units sent to shop. "These LRU's can be called off as and when required, further improving cashflow by being invoiced only when the component is required," says Shimizu at AerFin.

There is also a growing demand for leasing of LRU's versus owning or further investing in own assets. Shimizu says AerFin offer cost effective leasing of fast turning inventory at multiple onsite locations worldwide to keep up front investment at a minimum for operators.



Jason Reed, President, Flight Solutions Group

He adds: "As operators are now experiencing such uncertainty in forecasting future flight hours, they have been seeking alternative solutions



“LRU exchanges provide the operators with immediate access to low-cost inventory.”

Mark Shimizu, AerFin

Mark Shimizu, Head of Inventory and Sales, AerFin

moving away from the more traditional Power by the Hour solution looking for more flexible programmes which accommodates unforeseen fluctuations in flight hours whilst protecting maximum coverage.”

OEM relationships

Airlines often face challenges where some LRUs are only available from OEMs, for instance some engine components. Operators will likely look for solutions to navigate around such complexities. The increased availability on the USM market creates a significant leverage for operators and third-party component suppliers, especially in times of lower demand and for mature aircraft types, suggests Rollier from Spairliners – “In addition to that, suppliers can apply innovative solutions to retrieve spare parts from scrapped units in order to repair others, thus again staying independent of the OEM and minimising costs.

“We are clearly in a virtuous cycle that fosters recycling concepts rather than

injecting new components into the loop during times of low activity. And even when activity picks up and returns to the high levels of the past, we are convinced that such good practices will survive, for better leverage on costs as well as improved sustainability.”

In order to maintain a certain dependence on these critical LRUs and to obtain the best price conditions for spare parts and repair of sub-assemblies, AFI KLM E&M works closely with OEMs to provide the best added value to its customers. Karim Daoud-Almadowar, Head of Costing and Pricing Components explains that this cooperation can take various shapes or forms, such as licence agreements, in-house repair developments and strategic partnerships. “One of the main advantages we offer is our capacity to integrate the full scope of the aircraft in order to streamline the component support. And finally, it is necessary to keep the momentum of developing DER repairs on major parts. This allows us to improve the renewal

rate and reduce the share of purchasing new parts.”

Cazaz at Werner Aero Services is of the view that airlines must get together and protest the monopoly and unfair trade that some OEMs have created, he says that is of course the long-term solution but in the short term the solution is to sign up to pool access with a pool provider who can guarantee TAT of LRUs.

At AJW they continue to work very closely with all the key OEMs to ensure they can support their products via licensing agreements, without compromising the OEM strategy. “This enables us to find win-win solutions to establish relevant capabilities in partnership with the OEMs, ensuring essential support on piece parts and technical data for AJW Technique. Furthermore, as a group, AJW have put significant focus on consolidating core spend into clear and sustainable OEM-centric contracts,” concludes Pennyquick.