



Fit for the part

Component support contracts are increasingly sought after by regional and low cost airlines. **Keith Mwanalushi** takes a closer look at them and the supply and repair of aircraft parts

Accessibility to aircraft parts is crucial
(photo: Lufthansa Technik)

The global aircraft component MRO market is expected to grow at a CAGR of around 2.5% during the period 2016 to 2021, according to industry estimates. This growth is driven by the growing need for scheduled and unscheduled maintenance, increasing air traffic, integration of IT for predictive maintenance of aircraft parts, and aviation regulation to maintain safety standards.

Accessibility to aircraft parts is vital, especially for the turnaround demands of low cost operators and smaller regional carriers with a limited fleet. "It is crucial for a small or regional carrier to demonstrate the ability to support a high degree of reliability across its fleet," agrees Abdol Moabery, President and CEO at GA Telesis, which provides nose-to-tail component solutions.

GA Telesis has several component solution programmes that provide support to airlines with anything from five, 50 or 500 aircraft in their fleet. Moabery says the company's Strategic Nacelle Access Pool (SNAP) programme provides an airline with a complete ready-to-go nacelle system that can be positioned around the world and delivered 24/7. "We also recently announced our launch of ACCESS (Aircraft Control Exchange Support Solutions) to support the Airbus A320, A330 and Boeing 737NG fleets where, similar to SNAP, we provide around the clock access to a complete set of flight surface controls to our customers."

However, GA Telesis' most comprehensive support programme is called Intelligent Global Engine and Airframe Replenishment (iGEAR).

Daniel Kraft, Head of Business Development Strategy for Aircraft Component Services at Lufthansa Technik, says smaller airlines often have a sharp focus on operation. "Driven by cost efficiency, many of them choose to outsource technical services in bigger packages rather than working in-house or managing a complex structure of many small scale agreements. For these operators, it's crucial to have a reliable technical partner integrating multiple services," he explains.

Lufthansa Technik provides component services for all major civil aircraft types. As operators' requirements are very different, Kraft says their services range from the repair of a single component to long-term all-inclusive service packages. "Our global spares network with numerous stock locations all over the world enables us to serve any airline in a fast and reliable way. The repair of components is performed in our facilities located in Germany, the US and China," he states.



Kraft: We are open towards alternatives for parts and repairs
(photo: Lufthansa Technik)

The AJW Group is a world leading specialist in the supply, exchange, repair and lease of commercial aircraft spare parts, with a global fleet of over 1,000 aircraft under contract. "Our customer service teams are available 24/7 to support spares requirements for all modern Airbus and Boeing aircraft," Ian Smith, AJW Aviation's recently appointed Vice President, Commercial, tells *Low Cost & Regional Airline Business*. "Our tailored solutions range from ad-hoc trading in terms of component sales, loans and exchanges through to full power-by-the-hour (PBH) contracts and everything in between."



Smith observes a significant shift towards PBH contracts in the US market (photo: AJW Aviation)

He stresses that component support contracts suit low cost carriers (LCCs) and regionals particularly well. "If you look at the reasons why airlines contact us for these contracts, PBH contracts allow them, for a fixed price per flying hour, to effectively manage cash flows and risk." He says LCCs in particular are very focused on managing risk and a PBH contract helps them do just that. "LCCs manage their overheads very closely and try to keep headcount as low as possible and this is what these kind of contracts do. You pass that function on to a component support specialist who manages that part of your business for you and it means that the airline doesn't need the asset base or internal resource themselves to manage that element," Smith explains. ▶

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Daniel Kraft, Lufthansa Technik



Component support contracts are increasingly important for airlines
(photo: Lufthansa Technik)

Those comments are echoed by Vincent d'Andrea, Senior Vice President, Component Product at AFI KLM E&M, saying investment in inventory on behalf of airlines is of benefit to them. "I think this is a good driver for small regional carriers and even larger LCCs. The level of inventory that you need to support even a small fleet is very significant and more and more airlines are seeking PBH solutions."

AFI KLM E&M deals with component solutions for varied aircraft types including repairs on all of the Airbus and Boeing products and on regional aircraft services on ATR, E-Jets and specific repairs on Bombardier aircraft.

“ It’s a long-term partnership we started 11 years ago and we renewed it last year both for the 777 and 737NG and we have extended this to the 737MAX ”

Vincent d'Andrea, AFI KLM E&M

AFI KLM E&M and Transavia extended their long-term 737NG rotatable components maintenance and pooling services agreement, dedicated to its Amsterdam-based fleet. The agreement comes under the Component Services Programme (CSP) jointly operated by AFI KLM E&M and Boeing as the optimum response to the specific requirements of 737NG aircraft fleets.

"It's a PBH programme for the 737NG," declares D'Andrea. "It's a long-term partnership we started 11 years ago and we renewed it last year both for the 777 and 737NG and we have extended this to the 737MAX."

Working with Boeing, D'Andrea states that the CSP works in proposing to the market a single solution for pool availability and repairs.

When asked if there was a similar arrangement with Airbus for the A320 Family, D'Andrea says there was no such agreement with Airbus in place. "We support the current generation and A320neo independently."

In 2015 AJW commenced the industry's largest single-source supply chain solution for easyJet with a cost-per-flight-hour contract. "We support the whole of

easyJet's fleet of just over 250 aircraft and climbing, on a nose-to-tail basis," says Smith.

Typically, AJW provides logistics support for the repair and overhaul of everything from engine generators, fuel pumps and starter motors, as well as the provisioning of nuts, bolts, rivets, oils and greases. Smith says: "It's our biggest support contract, probably the biggest individual airline support contract anywhere in the world. We are progressing well and have a strong relationship with easyJet."

AJW is seeing more and more American carriers considering the use of component support deals. "Historically, those American markets tended to be more self-sufficient, they were inclined to invest in spare parts themselves and manage the repair of those parts.

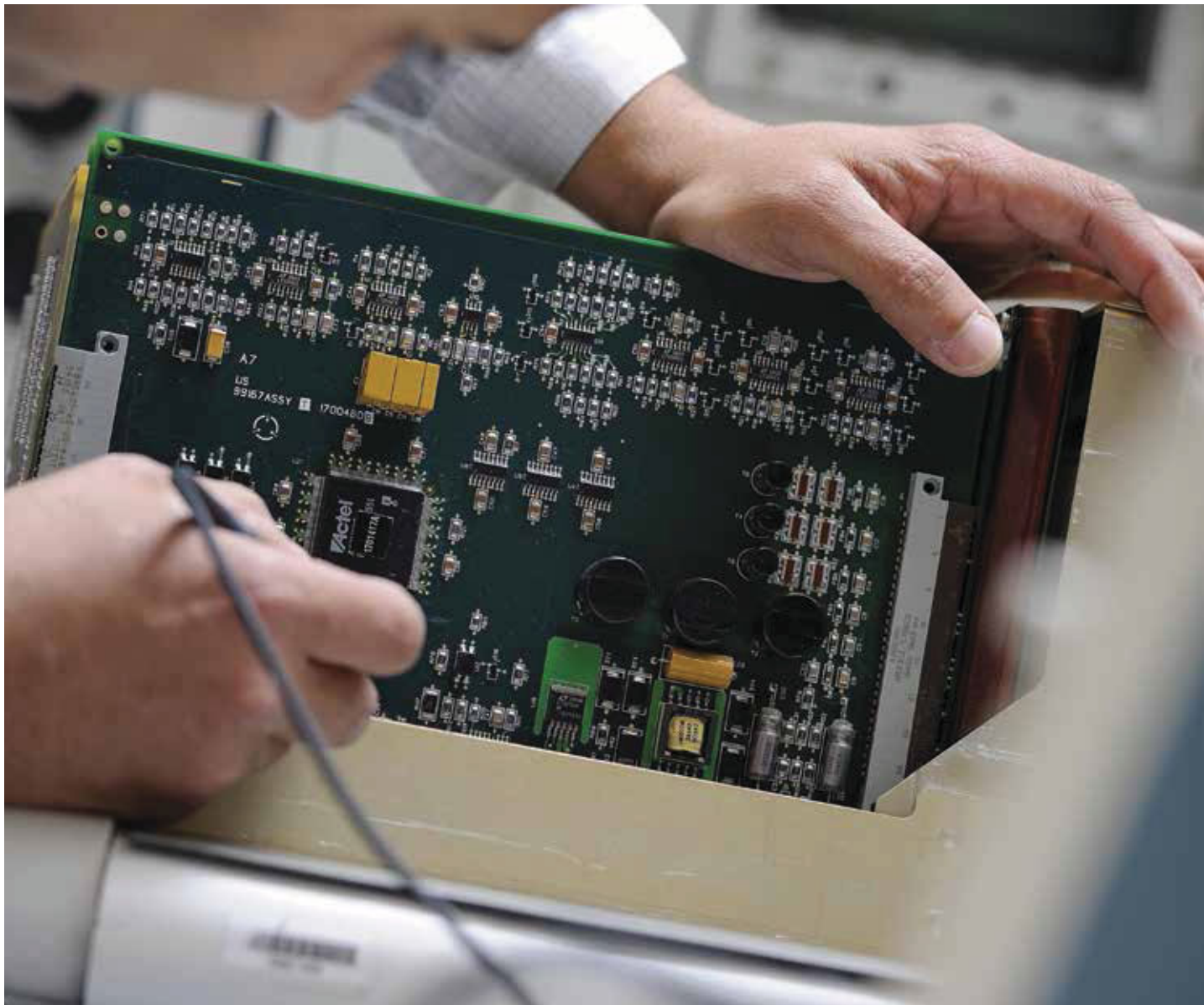
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"We are seeing a significant shift towards power-by-the-hour type contracts and we are already supporting airlines in this region," Smith continues.

At no time in history has the industry seen this scale of new-generation aircraft being introduced to the market, many of them requiring new methods of repair and overhaul. ►

A320 component repair
(photo: AFI KLM)



GA Telesis is already supporting the new generation of narrowbodies, says Moabery. "Development of these programmes started about two years ago and the company's first support agreement will commence in 2017 for the A320neo." He confirms that several announcements will come in the next 12 months or so for support of both A320neo and 737 MAX fleets, but also for the A350 and the 787 widebodies.

When looking at Airbus and Boeing's new narrowbodies, Kraft from Lufthansa Technik sees a large component commonality with their respective predecessors; up to 85% in the case of the A320neo.

"This is a great chance for operators to seamlessly introduce these new generation aircraft without having to set up a new component supply chain," he states.

In terms of repair, Kraft notes that the large commonality allows utilisation of existing repair capability and replacement of defective parts with serviceable used material basically directly with entry-into-service. "This comes along with a positive effect on maintenance cost in comparison to the entry-into-service of other aircraft types."

D'Andrea from AFI KLM E&M also sees the commonality between current and new-generation aircraft but highlights the ability of newer aircraft to do their own health monitoring. "These aircraft provide a lot of data and the key subject is to be able to understand these signals given by the aircraft and the components."

An airline connected MRO has advantages as D'Andrea sees it: "Being an airline we do get that data, being an MRO we are able to open and repair the components and we are able to associate the signal to the failure mode of that component."

AFI KLM E&M recently launched a service called PROGNOS, a range of solutions based on exploiting the data from aircraft systems with a view to improving maintenance models and processes. "Our mission is to move from the traditional way of providing availability and repairs, to be more involved in the operation of our customers," says D'Andrea.

AFI KLM E&M capitalises on the vast amount of data generated by Air France and KLM fleets to develop its PROGNOS solutions and verify their operational

Component commonality with new generation types is significant *(photo: Airbus)*



relevance and performance before sharing such innovations with its customers.

D'Andrea adds that as an airline MRO they have the leverage to move to predictive maintenance because they know perfectly well what airline operations mean.

Over the years there has been much discussion over the use of Parts Manufacturer Approval (PMA) parts. These are parts not affiliated with any OEM and Designated Engineering Representative (DER) repairs – the individual repair practices that restore a broken part or component to the initial design requirements.

In general, Lufthansa Technik is open to alternatives for parts and repairs. "However, they have to fulfil highest standards on safety, operator cost impact, and reliability," stresses Kraft.



D'Andrea: The level of inventory to support even a small fleet is very significant" (photo: AFI KLM E&M)

Moabery feels PMAs are a viable cost-saving solution in certain areas, but at GA Telesis, 'we prefer to use genuine OEM parts for the repair of our components'. While the current trend is for airlines to consider using PMA in certain parts of the aircraft, Moabery thinks that there can be a material degradation in value if PMA parts are used in key parts of the aircraft, especially as it relates to the engines. "In the case of DER however, there are certainly cases where over time, through repair development we find a better way of doing things and through careful collaboration with the airlines and the regulatory authorities we come up with new methods of doing things better," he says.

Smith says AJW responds to the customer's requirements, explaining that while some are adamant

not to use PMA parts and can't accept DER repairs, other operators are more flexible in terms of their usage and AJW will respond to those specific requirements. When it comes down to their own tag, where quality and longevity are all important, the story is cleaner cut.

"AJW has the benefit of its own component MRO facility in Montreal, Canada, which has allowed the organisation to enhance its strategy of working with the OEMs," explains Smith. "Wide spanning licensing agreements combined with seamless maintenance offerings – whether direct from the OEM or just powered by OEM piece parts at AJW Technique – has seen long standing, symbiotic relationships begin to form." AJW Technique now has agreements in place with all key manufacturers that keep them competitive beyond what PMA is able to achieve because both parties have understood the need to retain a dynamic foothold in the aftermarket. As a Canadian-based maintenance centre, AJW Technique achieved Design Approval Organisation (DAO) back in 2013. This is very similar to the FAA certified DER repair options becoming increasingly common throughout the market. AJW Technique puts a strong focus on ways to enhance CMM repair schemes to maximise on wing time and therefore reduce total cost.

Airlines and MROs need to manage their costs and AJW is continually seeking ways to help its customers do just that. "Whilst we see a general trend of increasing use of PMA parts, there is also the rapidly growing utilisation of used serviceable material. Due to our continuing day-to-day parts trading activity we have a very strong feel for material market values and therefore what the most cost effective supply solution is in any particular situation," Smith says.

AFI KLM E&M also engages with PMA and DERs in agreement with the OEM but more of the latter than the former. "Competition to the market is very good for the customer," D'Andrea remarks. "Our strategy is either to partner with the OEM to develop solutions with PMA and DER but also we are very involved in managing surplus from other activities."

Looking ahead, Moabery tells *Low Cost & Regional Airline Business* that GA Telesis' component solutions group will leverage its \$200 million inventory to provide consistent programme-based engine supply chain solutions, as well as airframe flight hour rotatable repair and exchange support, both of which can be tied to an engine services agreement with comprehensive engine overhaul and maintenance. As part of iGEAR programmes, GA Telesis Composite Repair Group, Component Repair Group Southeast and GA Telesis Engine Services divisions provide repair services to reduce inventory ownership costs for airlines in need of customisable repair management solutions. ■