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With a maintenance technician shortfall looming large and recovery from the Covid crisis continuing, *Jason Holland* assesses the outlook for the MRO industry in the Americas

The aerospace industry in the Americas is vast and varied, and features some of the world's biggest hubs of companies and related organisations. These include the Boeing-influenced Washington state; Quebec in Canada; Florida; Oklahoma; and Sao Paulo in Brazil, the home of Embraer. Within these hubs, and across the Americas, are a plethora of commercial aviation MRO companies varying in size and capabilities, but all playing an important role in the maintenance landscape.

The big aircraft and engine manufacturers such as Boeing, GE Aviation and Pratt & Whitney naturally have a major influence on the MRO market, as do the likes of AAR – the largest independent third-party MRO in the Americas – and companies such as Delta TechOps, StandardAero, STS Aviation Group, Ascent Aviation Services, Aviation Technical Services, AJW Technique and Avianor in North America. In Latin America, some of the biggest MROs are MRO Holdings/Aeroman and Mexicana. In addition to those companies headquartered in the region, global companies such as Lufthansa Technik, ST Engineering and HAECO also have subsidiaries and joint venture companies in the Americas.

Despite this breadth of capability and opportunity, one major long-term challenge faces the MRO industry in the Americas – a shortage of qualified maintenance technicians. We spoke to a few of the above-listed companies to assess the current MRO landscape in the region and how it has been affected by the Covid-19 crisis.

“Overall the industry is recovering well from the effects of the pandemic, with the outlook for the remainder of 2022 looking positive,” says StandardAero's president of Airlines & Fleets Lewis Prebble. He notes data from Airlines for America (A4A) and the International Civil Aviation Organization (ICAO) indicating the domestic US airline market has recovered close to 2019 levels of activity, with international demand back to within 25 per cent of pre-Covid levels.

“This has, in turn, driven a recovery in demand for MRO services – including heavy engine shop events – as operators seek to catch up with deferred maintenance and to prepare for what is hoped to be a strong summer season,” he adds.

“That's not to say that operators don't face headwinds: the recent rise in oil prices has pushed Jet-A prices well above pre-Covid levels, necessitating higher ticket prices. Personnel shortages also continue to be an issue for many operators, not least those regional carriers who have seen employees – both air crew and technicians – tempted away by mainline carriers offering higher wages. However, the overall recovery trend is positive, with the International Air Transport Association (IATA) forecasting North American passenger numbers to reach 94 per cent of 2019 levels this year, ahead of a full recovery in 2023.”

STS Aviation Group's CEO PJ Anson describes the past six months as a “bit chaotic”. “Limited MRO facility resources, coupled with significant MRO labour shortages, seem to have caused a bit of panic in the industry,” he says. “The amount of travel uncertainty coming into this year has led to many operators holding off on securing maintenance slots until they knew what their flying schedules were going to be. Unfortunately, that has left many operators on the outside looking in as the available maintenance slots have been spoken for by operators who foresaw the shortages of MRO resources coming.”

AAR's vice president sales & marketing for the Americas Carl Glover and senior vice

president repair and engineering services Brian Sartain note that MRO businesses “whose primary exposure is to domestic narrowbody fleets had recovered to pre-pandemic levels by early 2022”; however, businesses that had exposure to widebody international fleets “remained at least 30 per cent depressed”. They add: “With many operators rushing to get their narrowbodies back in the air, many hangars were at capacity. For the rest of the year, we expect demand to continue to increase as international travel recovers in the summer.”

In a wider context, AJW Group's SVP strategic material & asset management Conrad Vandersluis notes that the global aviation industry is “bracing itself for a decade of growth that we expect will test the industry's resilience, not only from the pandemic and associated



The International Air Transport Association is forecasting North American passenger numbers to reach 94 per cent of 2019 levels this year, ahead of a full recovery in 2023



1. A CFM56-7B fan inspection is performed at StandardAero facilities
 2. STS Aviation Group provides aircraft maintenance, engineering, recruiting and component services to the global aviation industry – with about 30-40 per cent of its revenue coming from international origins

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complications of travel restrictions and supply chain challenges, but also a reduced labour force too small to support the expected growth trajectory. Add in the industry challenge of meeting the COP26 climate change ambitions with no immediate alternative to fossil fuels that substantially cut emissions, and it will be a turbulent decade of growth for the industry.”

Vandersluis notes that the changes in fleet, predicted growth and the elevated number of aircraft retired that were due to enter a period of intensive MRO expense directly impacts the component maintenance market, in which Montreal, Canada-based AJW Technique specialises. “It is now forecast that by 2024, MRO demand should reach pre-pandemic levels but at varying rates round the world. For instance in China the MRO demand has already surpassed pre-pandemic figures but Western Europe is not expected to see full recovery until 2025.”

As well as the factors noted, Russia’s invasion of Ukraine has had many

knock-on effects, increasing economic and general uncertainty. Prebble says there is a potential fivefold impact for the MRO industry. “Firstly, the imposition of sanctions on Russia has led to a ceasing of customer activity in Russia and Belarus,” he explains. “Secondly, the conflict has had a ‘chilling’ effect on air travel in Europe, as noted by IATA, with European bookings down by eight per cent the week

after 24 February. Any impact on travel demand risks a downstream impact on demand for MRO services.

“Thirdly, the impact of the conflict on oil prices places further cost pressure on operators, who were already facing significant increases on Jet-A prices. Oil prices surged to a 14-year high following the invasion, and airlines are now passing these increases onto passengers through increased ticket costs, which could impact demand.

“Fourthly, the industry’s supply chain is now facing an impact due to Russia being a prime producer of raw materials such as titanium. Finally, with lessors facing a potential US\$10 billion impact as Russia moves to nationalise the 500+ aircraft that local operators have leased from Western companies, it’s possible some of the big names in the leasing industry may seek to minimise costs by postponing MRO work wherever possible.”

Anson describes the situation of leasing companies losing access to their aircraft in Russia as “scary”. He says:

“I am not sure how it is all going to play out, but rest assured that it will end up costing us all in the end. The loss of carriers to transverse airspace over Russia will have an impact on many routes and operators of the same.”

Americas advantages

Speaking more generally, AAR’s Glover and Sartain think there are many advantages for MRO companies to be based in the Americas. “Our location in the Americas allows us to stay close to some of the world’s largest carriers that are constantly innovating,” they say. “Our global headquarters and warehouse located near Chicago O’Hare alongside our facilities in Atlanta and Jacksonville allows us to react quickly and dispatch parts immediately worldwide for AOG support.”

But they add that although AAR is headquartered in the Americas, the company is a global solutions provider

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Since 2015, StandardAero has made 10 acquisitions, most recently PTS Aviation and Signature Aviation’s ERO business, which includes Dallas Airmotive and H+S Aviation

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1. AJW Technique has the ability to process 35,000 units a year across 6,000 separate part number lines
2. AAR's global headquarters is located near Chicago O'Hare, while in the Americas it also has facilities in Atlanta and Jacksonville allowing the company "to react quickly and dispatch parts immediately worldwide for AOG support"

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decades, North America does still remain the largest commercial aviation market in terms of installed fleet, with South America further extending the Americas' advantage in this regard. The Americas also still represents by far the largest business and general aviation market, this segment also being of great importance to StandardAero.

"Finally, the service culture which is ingrained across North America is closely aligned with StandardAero's DNA: as a 'can do' company that's always ready to go the extra step to keep our customers flying, we pride ourselves on the customer service focus of our employees, and on the consistently high scores that we achieve in customer satisfaction surveys. While we maintain this customer-focused culture across all of our locations globally, it perhaps comes most naturally to our teams in the USA and Canada, thereby facilitating our recruitment and training."

Differentiated offerings

Glover and Sartain see AAR's main competitors in the aircraft MRO segment in the Americas as being ST Aerospace, Aeroman and Aviation Technical Services. "We differentiate ourselves by having the largest number of licensed mechanics as a percentage of our workforce of the industry and that allows us to provide superior quality, turnaround time performance and lowest total cost," they say. "In addition, our locations at major destination airports like Miami and Indianapolis allow our customers to have the most efficient crew swaps and aircraft scheduling"

Anson says that STS does not "see anyone out there" as a direct competitor on a group level. "The very thing that differentiates STS Aviation Group also limits the number of organisations we would view as direct competitors," he



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with MRO, warehousing, sales & engineering staff in the Americas, the Middle East, Europe and Asia. As an example of this global reach, the pair state: "Alongside our component shops, AAR's landing gear & wheel and brake shop in Miami, Florida has extensive in-house capability so we are able to support Americas and international customers from that facility with full domestic capabilities."

Prebble notes too that while StandardAero is a globally focused MRO provider, with facilities and customers worldwide, "there are obvious benefits to having our headquarters in the Americas" - in its case in Scottsdale, Arizona. "Firstly, four of the big five engine OEMs that we support are located in the Americas, namely CFM International, GE Aviation, Honeywell Aerospace and Pratt & Whitney Canada, with the fifth OEM - Rolls-Royce - also having a major local presence. This in turn facilitates effective communications, coordination and - not least - logistics, thereby helping us to offer the most efficient and responsive level of service to our customers," he says.

"Secondly, despite the rapid growth of the Asia Pacific market in recent

A big challenge to MRO growth is the availability of maintenance labour



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says. “Each of our service offerings (line maintenance, MRO heavy maintenance and modifications, OEM component sales, recruiting services and engineering support) have their own competitors within their own specific industries, but the true competitive advantage of our company is realised when we bring the full-enterprise value to our customers. This is done on a global scale, and that is where the true strength of STS Aviation Group comes to light in our customers’ eyes.”

Prebble does not name any companies specifically as direct competitors but says StandardAero will compete with “airline MRO shops, independent authorised MRO shops, and so-called ‘gray shops’ which lack OEM approvals”. StandardAero’s service offering to customers is differentiated in a variety of ways, he adds. “We are one of the world’s largest independent providers of aerospace MRO services, but we operate strictly as an OEM-authorised service provider,” he says. “This means that customers are able to rely on the quality of our support, while avoiding any potential concerns that could arise from using an MRO facility run by a competing airline.”

Prebble notes too that StandardAero supports a broad range of engines and APUs, meaning that in many cases the company is able to provide support

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AJW Group manages a streamlined vendor supply chain of 60 primary repair workshops with 700 approved facilities and spends US\$400 million annually on almost 100,000 repair orders

for the operator’s entire fleet, thus simplifying MRO logistics. In-house component and engine capabilities mean that StandardAero can offer a range of service options, “further enabling our ability to offer customised solutions tailored to our customers’ operations”.

AJW Group’s Vandersluis says the last two years of sector turmoil “has changed the dynamic in the industry”, and is driving far closer strategic alliances between companies such as AJW Group and its airline, aircraft manufacturers, component OEM and MRO partners.

“We managed a streamlined vendor supply chain of 60 primary repair workshops with 700 approved facilities

and spend US\$400 million annually on almost 100,000 repair orders,” he says. “Our prime objective is to deliver improved cost and reliability efficiencies for customers and strive for optimum efficiency and profitability whilst keeping our customers at the core of everything we do. That means working with partners that understand our business, exchange reciprocal work based on core competencies and collaborating to innovate and collectively expand. We forge great working relationships with our suppliers, viewing them as partners not competitors.”

AJW Group expanded its global MRO footprint last year with the opening of AJW Technique Europe, which operates as a centre of excellence for aircraft batteries and will expand into a series of other capabilities to complement the repair services offered at AJW Technique in Canada.

In light of the accelerated replacement of ageing aircraft, the company is also focused on developing its technical capabilities for next-generation equipment, and this resulted in the company’s investment in a sole distributorship agreement with Honeywell for the Boeing 737 MAX ADIRU, the A320neo ADIRU and a suite of Boeing 787 components. “This has also allowed us to

1. StandardAero has nine overhaul-level facilities on five continents worldwide, backed up by 18 service centre facilities and global field service technicians
2. STS Aviation Group is expanding its global line maintenance network and its MRO capability footprint
3. AAR says its location in the Americas allows it “to stay close to some of the world’s largest carriers that are constantly innovating”



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increasingly develop our in-house MRO capabilities at AJW Technique,” says Vandersluis. “The Honeywell product lines are current production aircraft types which are being delivered with significant backlog of deliveries going forward which will require the support that the AJW Group can offer.”

We see potential for consolidation and the pace of this may pick up

Future challenges

The companies interviewed for this article agree that the biggest challenge to MRO growth in the Americas is the availability of qualified maintenance technician labour in the post-pandemic economy. STS’ Anson goes so far as to say that the tight labour market is such a large challenge “that it is the only challenge at this time”. Supply chain challenges exist too, of course, but are “quite a way behind the labour shortages we are experiencing” in terms of significance, he clarifies.

Prebble explains that prior to the Covid crisis, the industry knew that it was facing a near-term wave of retirements, and the pandemic served to accelerate this process, “with many technicians taking advantage of early retirement options as the industry reduced its workforce in response to reduced demand for MRO services. Now that the recovery is taking hold, the industry is finding it difficult to ramp-up hiring as quickly as desired due to the reduced pool of available talent, aggravated by strong demand from the airlines who are also ramping up their recruitment efforts.”

All this highlights the importance of “encouraging and nurturing” new talent through direct relationships with technical colleges and other higher education institutions, he thinks.

Might the Covid crisis also lead to an upswing in partnerships, joint ventures or consolidation in the region? AAR’s Glover and Sartain note: “Despite the predictions of consolidation and potential failures of smaller businesses, the demand for aircraft MRO services as the industry recovers has prevented many of these things from happening. We see some potential for new partnerships and consolidation and believe the pace of this activity may pick up in the coming years.”

AAR has recently announced some contractual partnerships with some larger OEMs, for example, whereby the company is supporting their products and services globally in support of the recovery in demand for their products and services. “These agreements align with AAR’s unique market presence in both supply chain, component and

aircraft maintenance activities,” say Glover and Sartain.

AJW Group expects to see MROs join forces and consolidate to right-size to customers reduced budget strategies, according to Vandersluis. “We also expect to see an increase in partnerships formed,” he says. “This month AJW Group was recognised as Honeywell’s ‘Global Channel Partner of the Year’, which recognises Honeywell’s most trusted partners. Honeywell Channel Partners are chosen for their unique market reach, commitment to growth, and strong track record of performance, integrity, and compliance and whose innovation and performance exemplify those of Honeywell and who consistently go above and beyond to support global airline and MRO customers.”

Prebble thinks there are two reasons why we might see a continued upswing in partnerships, at least. “Firstly, the continued globalisation of the market encourages local partnerships – whether simple teaming arrangements with sales intermediaries, or more substantive joint ventures with fellow MRO providers – in order to ensure that the needs of local customers are fully appreciated and serviced,” he states.

“Secondly, the quickening pace of new product introduction – a trend which many industry analysts believe may accelerate in the wake of the pandemic – will likely find OEMs having to focus their attention on technology development and certification. This will in turn increase the importance of ‘life-of-type’ partnerships with experienced MRO providers, enabling OEMs to be assured that their legacy operators will continue to receive the same high level of support that they’re used to receiving.”



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