LANDING GEAR OVERHAUL DEMAND SOARS AS OPERATORS SEEK SPARE ASSETS TO MAINTAIN FLEET OPERATIONS

In recent years, demand for landing gear overhauls has grown significantly due to limited MRO capacity and ongoing shortages of spare parts, leading to extended turnaround times across all platforms. As a result, operators increasingly rely on spare assets for loan and exchange to maintain fleet operations. Freighter Trends learnt that this trend is expected to persist, with strong demand particularly evident in the Asia-Pacific region—especially Mainland China—as well as in North America and Europe. OEM support plays a crucial role in enabling MROs to meet standard turnaround times by providing necessary spare parts, repair instructions, and technical expertise. Here are the details .....

How has global demand for landing gear overhaul evolved in the past few years?

Chen Yi Yu, Director Gamp; General Manager, HAECO Landing Gear Services - Since 2021, demand for widebody and narrowbody landing gear overhauls has significantly increased. A strong post-COVID rebound in travel and air freight, along with long aircraft delivery wait times, have led operators to extend the service life of older planes. This trend is expected to continue, driving further demand for landing gear overhauls in the coming years.

Andy Wheeler, Divisional Vice President & Managing Director – AMETEK MRO/AEM - AMETEK MRO/AEM has experienced a significant surge in demand over the past few years, driven primarily by the global recovery and expansion of the aviation sector. This growth is largely attributed to the steady increase in air travel, as passenger volumes continue to rebound and surpass pre-pandemic levels.

Karolis Jurkevičius, VP Landing Gear & Major Assets – APOC Aviation : In the past few years, demand for landing gear overhauls has increased significantly. Limited MRO capacity and high shortages of spare parts has influenced turnaround times across all landing gear platforms. This has caused an increased need for spare assets to loan and exchange so operators could continue flying. APOC Aviation believes that a few key drivers for this include:

Increased passenger numbers as global air traffic recovered beyond pre-COVID levels.

OEM delivery delays which slowed down fleet renewal and kept older aircraft in service longer.

Supply chain disruptions, which constrained material and component availability.

As a result, operators have been forced to extend the operational life of old fleets. Instead of retiring aircraft as planned, they are scheduling additional shop visits, this in turn will put further pressure on MRO slots and spare landing gear availability for several years.


Chen Yi Yu

How is the shift towards next-gen aircraft impacting landing gear overhaul strategies?

Chen Yi Yu - The overhaul process for next-gen aircraft necessitates advanced technologies, like high-velocity oxygen fuel (HVOF) thermal spray coating, which are not widely available. As a result, MRO service providers must invest in new equipment and training to effectively service these aircraft.

Andy Wheeler - As the aviation industry embraces the shift to next-gen aircraft, AEM is stepping confidently into the future. Recognising the evolving needs of airline fleets, the team has been working behind the scenes to realign its strategy with the changing landscape. The Company is taking a proactive approach by exploring the acquisition of key strategic assets that will strengthen its ability to support modern aircraft platforms. At the same time, AEM is forging deeper partnerships with OEMs, helping them scale up their MRO capabilities to meet the demands of new technologies and supporting them with the offload of legacy aircraft. This dual focus on innovation and

continuity reflects AEM's commitment to being a reliable partner in a rapidly transforming industry.

Karolis Jurkevičius - As the first next-gen deliveries started around 12 years ago, there is no significant increase in Airbus evolution or Boeing MAX landing gear shop visits at this moment. However, in the next few years, the team at APOC predict demand will increase significantly, with the highest demand expected in 2029 for the A320neo (more than 1,000 legs to be overhauled) and in 2034–2035 for the A321neo (more than 1,300 legs to be overhauled).

How do turnaround times (TATs) for landing gear overhauls compare today versus 5 years ago?

Chen Yi Yu - Global supply chain issues from the COVID pandemic have significantly impacted the aviation industry, especially in the engine and component sectors, including landing gear. To mitigate these challenges, HAECO has collaborated closely with partners to anticipate material needs. Through effective communication and planning, we have maintained turnaround times (TATs) for landing gear at levels comparable to pre-pandemic standards.


Andy Wheeler

Andy Wheeler - For older aircraft undergoing their second or even third landing gear overhaul, TATs tend to be longer due to the increased complexity and extent of repair work required. These units often exhibit greater wear and corrosion, necessitating more detailed inspections, additional part replacements, and extended processing time to ensure compliance with safety and performance standards.

Karolis Jurkevičius - As mentioned earlier, TAT for overhauls has increased due to OEM supply chain issues. MROs cannot complete the overhaul within the "standard" TAT, and sometimes it is extended to twice the forecast time or even longer. For example, the latest OEM supply issues with A330 enhanced gear spares have caused TAT to increase in some cases from 60 days to as much as 360 days.

Which regions are driving the highest demand for landing gear maintenance services today?

Chen Yi Yu - Robust demand for landing gear services is currently observed in the Asia-Pacific region, particularly in Mainland China, as well as in North America and Europe.

Andy Wheeler - While most enquiries received by AEM originate from Europe, we are also seeing a steady rise in interest from operators across Africa and the Middle East. This growing international demand highlights AEM's expanding global footprint and the increasing recognition of its capabilities in landing gear maintenance and support services.


Karolis Jurkevičius

Karolis Jurkevičius - The USA and Asia (China specifically) because these markets have the largest fleets in operation.

How important is OEM support in managing landing gear overhaul programs?

Chen Yi Yu - Close collaboration with OEMs is vital for effective landing gear overhaul programs. Their support ensures timely delivery of parts and prompt responses to repair requests. Early engagement with OEMs is also crucial for developing overhaul capabilities for next-gen aircraft. HAECO is proud to have established long-term partnerships with leading OEMs to provide top-tier landing gear services to our airline customers.

Andy Wheeler - OEM support plays a critical role in the effective management of landing gear overhaul programmes. Beyond ensuring timely availability of spare parts, close collaboration with the OEM is essential when addressing concessions and out-of-scope repairs. This partnership enables the recovery and return-to-service of components that might otherwise be deemed unserviceable and scrapped, helping to reduce costs, preserve inventory, and maintain operational efficiency.

Karolis Jurkevičius - OEM support is a key factor for landing gear repairs to be completed within the standard TAT. OEMs provide the spare parts, repair instructions, and technical support


Credit : HAECO

that are necessary for MROs to complete the overhaul on time. However, at APOC we observe that, due to ongoing global supply chain issues, OEMs are struggling to manufacture and deliver spare parts, which often leads to significant TAT extensions. As a result, operators and MROs are more and more forced to look for alternatives such as exchanged assets or used serviceable material (USM) to keep fleets operational.

Are you seeing increased demand from leasing companies looking to extend asset life cycles?

Chen Yi Yu - We have noted an increased demand for landing gear services aimed at extending aircraft life cycles due to delivery delays. However, our primary focus remains on serving airline operators and OEMs, resulting in comparatively fewer inquiries from leasing companies.

Andy Wheeler - AEM has received interest from leasing companies seeking to extend the operational life of their assets. However, the more consistent demand tends to come from aircraft operators who require landing gear overhauls as part of lease return conditions. These overhauls are often time-sensitive and critical to meeting contractual obligations, making AEM's services particularly valuable in supporting smooth transitions and maintaining asset value.

Karolis Jurkevičius - Yes. APOC's research shows that the current market situation indicates all operating aircraft retirement ages will increase due to growing passenger numbers and backlog orders for new aircraft. Retirement ages will hold at around 25–26 years, with some aircraft being extended beyond that.

What growth do you foresee in landing gear MRO demand over the next 3-5 years?

Chen Yi Yu - HAECO Landing Gear Services offers a wide range of inspection, repair, modification, overhaul, and exchange & leasing services for landing gear, with authorized capabilities for various aircraft models, including Boeing 737, 747, 767, 777, 787, Airbus A320, and Embraer E190/E195. We anticipate stable and robust demand for widebody landing gear overhauls in the next 3 to 5 years. However, we expect a decline in demand for narrowbody landing gear around 2029 or 2030 due to reduced aircraft deliveries during the pandemic.

Andy Wheeler - The global market is poised for substantial growth in the coming years, and AEM is proactively investing to meet this rising demand. A key focus area is the expansion of our chrome plating capacity, which is essential for supporting increased landing gear overhaul volumes. This investment is being made in parallel with close collaboration with the local authority and the environmental agency to ensure robust emissions monitoring and compliance with evolving environmental standards. These efforts reflect AEM's commitment to both operational excellence and sustainable growth.

Karolis Jurkevičius - Landing MRO demand in the next few years should increase between 15% up to 20 %