Supply chain issues have had significant negative impacts on airlines: driving-up leasing costs, increasing the average fleet age to 15 years (from 13 in 2015), cutting the fleet replacement rate to half the 5-6% of 2020, and reducing the efficiency of fleet utilization (using larger aircraft than needed on some routes, for example), IATA said this summer.

By Ian Harbison

Supply Chain Bottlenecks, Shortages, Disruptions Continue

The International Air Transport Association (IATA) expects severe supply chain issues to continue to impact airline performance into 2025, raising costs and limiting growth.

IATA quantified the scale of the challenges facing airlines because of supply chain issues in its latest airline industry outlook:

- Average age of the global fleet has risen to a record 14.8 years, a significant increase from the 13.6 years average for the period 1990-2024.
- Aircraft deliveries have fallen sharply from the peak of 1,813 aircraft in 2018. The estimate for 2024 deliveries is 1,254 aircraft, a 30% shortfall on what was predicted going into the year. In 2025, deliveries are forecast to rise to 1,802, well below earlier expectation for 2,293 deliveries with further downward revisions in 2025 widely seen as quite possible.
- The backlog (cumulative number of unfulfilled orders) for new aircraft has reached 17,000 planes, a record high. At present delivery rates, this would take 14 years to fulfil, double the six-year average backlog for the 2013-2019 period. However, the waiting time is expected to shorten as delivery rates increase.
- The number of "parked" aircraft is 14% (approximately 5,000 aircraft) of the total fleet (35,166 as at December 2024, including Russian-built aircraft). While this has improved recently, parked aircraft remain 4 percentage points higher than pre-pandemic levels (equivalent to some 1,600 aircraft). Of these, 700 (2% of the global fleet) are parked for engine inspections. We expect this situation to persist into 2025.

"Supply chain issues are frustrating every airline with a triple whammy on revenues, costs, and environmental performance. Load factors are at record highs and there is no doubt that if we had more aircraft they could be profitably deployed, so our revenues are being compromised. Meanwhile, the aging fleet that airlines are using has higher maintenance costs, burns more fuel, and takes more capital to keep it flying. And, on top of this, leasing rates have risen more than interest rates as competition among airlines intensified the scramble to find every way possible to expand capacity. This is a time when airlines need to be fixing their battered post-pandemic balance sheets, but progress is effectively capped by supply chain issues that manufacturers need to resolve," said Willie Walsh, IATA's director general.

Specifically, IATA noted that persistent supply chain issues were at least partially responsible for two negative developments:

- Fuel efficiency (excluding the impact of load factors) was unchanged between 2023 and 2024 at 0.23 liters/100 available tonne kilometers (ATK). This is a step back from the long-term (1990-2019) trend of annual fuel efficiency improvements in the range of 1.5-2.0%.
- Exceptional demand for leased aircraft pushed leasing rates for narrow body aircraft to levels 20-30% higher than in 2019.

"The entire aviation sector is united in its commitment to achieving net zero carbon emissions by 2050. But when it comes

Willie Walsh, IATA

Mark Shimizu, AerFin

to the practicality of actually getting there, airlines are left bearing the biggest burden. The supply chain issues are a case in point. Manufacturers are letting down their airline customers and that is having a direct impact of slowing down airlines' efforts to limit their carbon emissions. If the aircraft and engine manufacturers could sort out their issues and keep their promises, we'd have a more fuel-efficient fleet in the air," said Walsh.

One company caught in the middle of this is U.K.-based AerFin. Specializing in aviation asset management, it buys, sells, leases and repairs aircraft, engines and parts to maximize the value for owners and provide a lower-cost supply of material to airline, lessor and MRO customers.

Right now, says Mark Shimizu, SVP EMEA, engine material leads demand — especially hot-section parts and engine LRUs — because OEM lead times and pricing pressure keep operators looking for certified Used Serviceable Material (USM) to keep aircraft flying and to reduce engine shop-visit costs. Life Limited Parts (LLPs) are particularly sought after thanks to the high cost-saving potential from procuring components with specific hours and cycles remaining to help operators align engine build goals.

High-use, flight-critical LRUs on the airframe side — avionics, pneumatics/air systems, hydraulics and flight-control actuators — also remain priority items because of their impact on dispatch reliability.

Landing gear and APU material also see steady pull because they are lifecycle-driven and it is expensive to defer maintenance. USM shortens downtime compared with waiting on new.

In principle, lower-failure structural items and many cabin/interior parts should be more stable because failure rates are lower and maintenance is more predictable. In practice, the opposite can occur. With fewer aircraft disassemblies taking place, these event-driven structural items are becoming harder to source, and new-buy lead times are extreme. Cabin interior items can suffer the same issue. Operators are facing indefinite lead times in some cases for repairs of various flight surfaces, so USM — where available — is key to circumnavigating the delay.

Piece parts from cooler sections of engines, which experience lower levels of scrap exposure due to reduced heat and degradation, are typically more reliable and therefore less exposed to bottlenecks. The greatest pressure remains where turnaround times, OEM pricing and utilization collide — engines and high-failure LRUs. This reinforces the need for a robust, reliable supply chain that can identify and secure these dependable parts ahead of surges in demand, ensuring operators have continuity even when high-stress components face extended lead times.

The most active source of UMS at the moment is from strategic teardowns. In fact, AerFin has just acquired a fifth A320neo, from EMPAviation Trading, with the continued collaboration of a Middle Eastern investor. Like the previous five aircraft, it has completed a six-year maintenance check and full interval shop visits on both engines. The airframe is planned for disassembly in Asia to support existing customer base in the region. The engines are available for purchase.

He says AerFin differentiates itself through acquisition and purchasing at scale, buying whole assets to unlock material in volume. This ability to execute at fleet level sets it apart from much of the market and allows it to feed high-quality USM into the supply chain faster and more predictably. Inventory purchases to build breadth and responsiveness across our hubs.

Repair and refurb

Mark Shimizu continues: "AerFin's repair management is key to turning material faster and stabilizing flow for operators. By leveraging strategic relationships and Tier-1 vendor partnerships, we can launch high-volume repair campaigns that secure favorable pricing and turnaround times. Our scale in repair activity gives us the agility to keep material moving and customers flying when market constraints tighten."

He adds that this is a global issue driven by a supply-led market. AerFin supports a variety of regional, narrowbody and widebody aircraft and their complementary engine types. Engines operated in hot-and-harsh environments can face higher maintenance costs because Exhaust Gas Temperature (EGT) margins degrade faster and OEM manuals can impose stricter limits in these conditions.

AerFin mitigates these pressures with strategically located stock — Gatwick, Newport, Miami and Singapore — to support operators locally and compress lead time.

Of course, short supply and extended lead times have driven higher fair-market values, particularly for engine material and critical LRUs. While USM prices are increasing, they still offer considerable cost savings compared with new. The continually rising price of whole assets inevitably cascades to USM prices.

Those increases have been significant with engine hot-section components and scarce LRUs with long OEM turnaround times showing the most acute inflation, reflecting where downtime risk, and willingness to pay to avoid it, is highest. CFM HPT blade parts are among the highest-demand items on the market, with production delays and high scrap rates intensifying pressure. Engine LRU pricing continues to rise as engine disassembly volumes remain limited. Early teardowns are helping to ease these pinch points by bringing fresher, durable parts into the pool sooner.

He describes the solution to the problem as "use the difficulty": accelerate strategic teardowns across all asset types — from A320neo to A330, E-Jet, 777, 737, CFM56-5B, CFM56-7B, V2500 and CF6 — to unlock high-quality USM earlier, reduce OEM dependence and cut operator downtime. In addition, make supply programmatic by combining teardown-fed USM, repair management and, where appropriate, green-time engine leasing to bridge peaks in demand. Partnering with key strategic customers allows AerFin to provide integrated supply solutions in this constrained market.

Positioning inventory close to the need means AerFin's extensive stock can be spread globally without impacting availability in any specific region, while planning dynamically with customers by sharing live TATs, FMVs, utilization and vendor performance can secure critical material ahead of events.

He believes normality will return progressively as OEM capacity

Boeing says anticipating parts needs by using a tailored approach based on unique mission requirements is the backbone of their total lifecycle management approach. This approach brings efficiencies, cost savings and increased capabilities in everything from parts and repairs to delivery and analysis, the company says. Boeing chart.

improves and as more mid-life assets feed USM through structured teardowns. The aftermarket remains structurally strong for the medium term, so the pragmatic path is to stabilize now with programmatic USM, repair management and targeted leasing rather than waiting for a single step change. IBA released its second engine value update for 2025 in September, and it echoes Shumizi's views.

Values for narrowbody engines increased through 2025. The new generation LEAP-1A and PW1100G are prime examples of engines showing strong market value performance despite well-publicized engine performance-related issues. Most discussed are Pratt & Whitney and aircraft-on-ground (AOG) occurrences related to powdered metal issues on their GTF engines. However, recent reports point towards increased material availability aimed at improving AOGs.

The current generation of engines, such as the CFM56-5B/-7B and V2500-A5, have benefited from showing year-on-year market value increase as operators continue to acquire and lease engines to maintain their flight schedules. This year has been one of both increased transaction pricing and lease rates. The CFM56-7B market finds itself in a situation with a distinct lack of availability, and both market values and lease rates are above the long-term trend. This is partly due to elevated levels of operator retention of the 737NG amid variant delays and FAA production ramp-up restrictions on the LEAP-1B powered MAX. There is a similar situation with 777-300ER due to 777X delays.

Moving to the regional engine market, this is seen as relatively stable for turbofans and turboprops. However, the instability can have serious consequences for smaller operators.

The U.K. Civil Aviation Authority recently published its 2Q2025 Aviation Trends report, which showed that, of 20 airlines surveyed, Blue Islands was the least reliable, with only 55% of flights arriving on time or less than 15 minutes late.

The airline operates a fleet of four ATR 72-200s and one ATR72-600. It had been forced to restrict operations in late May after the ATR 72-600 arrived that month, almost four months late due to an extended lease transition maintenance turnaround time. In addition, a newly installed Pratt & Whitney Canada PW124B engine on one of the 72-200s experienced FOD problems. Extended delays in accessing the required parts and maintenance services meant the airline needed to access an alternative new engine.

The airline not only suffered a financial hit, but it also ran a huge risk of reputational damage. It operates from hubs in Guernsey and Jersey in the Channel Islands. Those communities rely on air travel to access services not available locally. That means reliability is a paramount requirement when selecting an airline and Blue Islands does not have a monopoly. The good news is that, in August, of 863 flights, 74% arrived on time and 99% of the schedule was completed.

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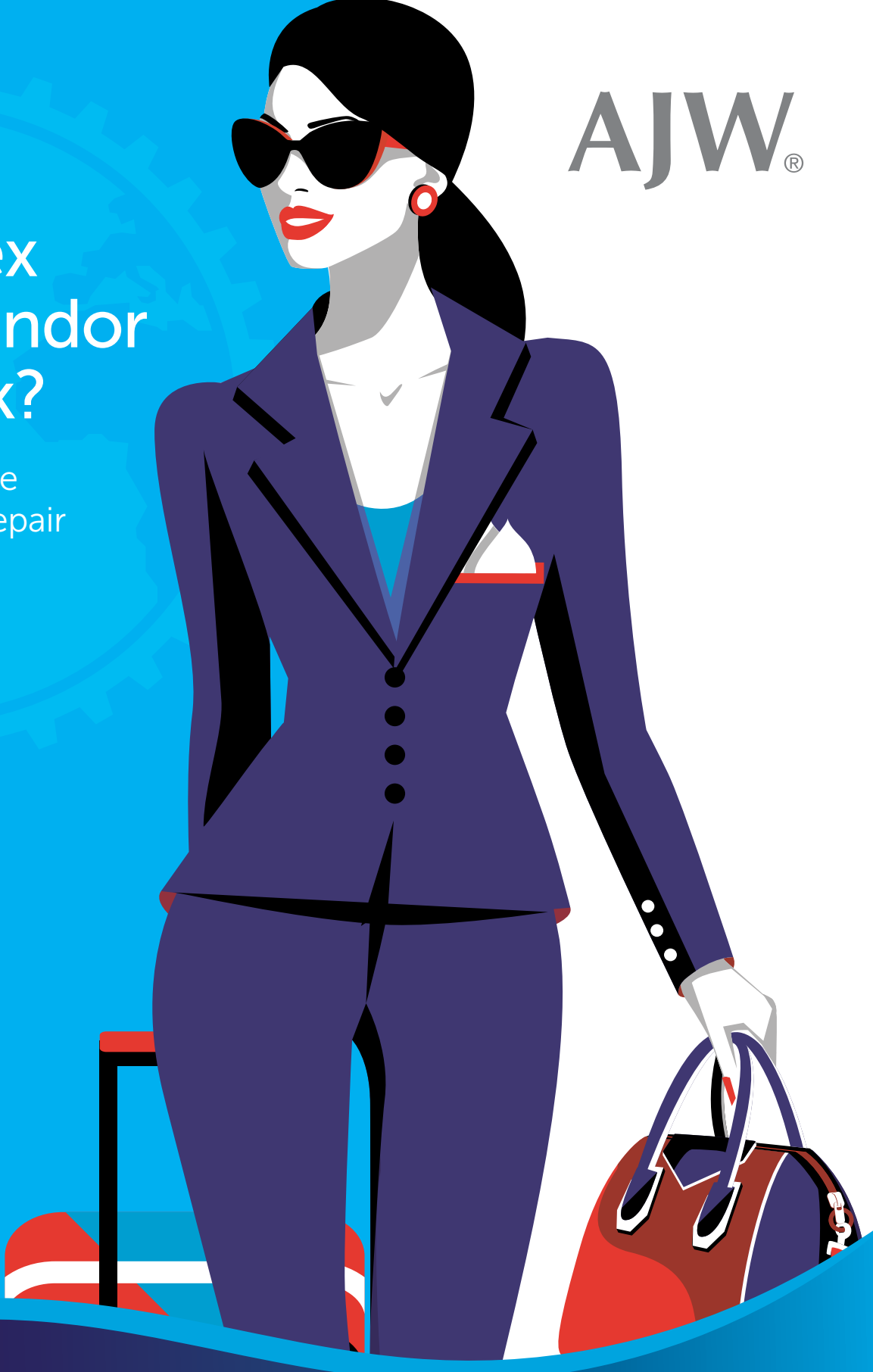

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