



The 2026 Cost Squeeze in Aircraft MROs

Reading the Super-Cycle from the Shop Floor Up

An Industry Analysis for MRO's decision-makers.

June 2026



Executive Summary

If you have been working in MRO for any length of time, 2026 will not feel like a brand-new chapter. It feels like the same chapter we have been reading since 2022, just with the volume turned up. Demand is still climbing. Capacity is still tight. Engines are still the choke point. And of course, technicians are still in short supply. What has changed is the price tag attached to all of it, and the growing recognition that this is no longer a cyclical story... It has become structural.

Global MRO spending reached roughly \$136 billion in 2025, an 8% jump over the \$126 billion recorded in 2024, and is on track to approach \$193 billion by the end of the decade (*Oliver Wyman*). That is close to double the 2019 baseline. *AeroDynamic Advisory* puts the contrast more starkly: total spending has risen roughly 40% since 2019 while global capacity has grown only about 10%, meaning **costs are climbing roughly four times faster than the underlying flying**. *Aviation Week's* forecasting team now sees engine work alone claiming a 53% share of the \$139 billion 2026 commercial aftermarket, up from 46% just two years ago.

This paper compresses the main cost forces into a single read, drawing on *IATA*, *Oliver Wyman*, *Bain & Company*, *McKinsey*, *Boeing*, the *U.S. Bureau of Labor Statistics*, the *Aviation Technician Education Council*, and the specialist trade press. The picture is a market that is financially healthy at the top line but operationally stretched almost everywhere else: a market that rewards capacity, punishes inefficiency, and increasingly separates the digitally mature from everyone else.

- **Global MRO spending:** \$136B in 2025, approaching \$193B by 2030 (*Oliver Wyman*).
- **Engine share of aftermarket:** 53% in 2026, up from 46% in 2024 (*Aviation Week*).
- **Supply-chain cost penalty in 2025:** \$11B+ — \$3.1B in additional maintenance, \$2.6B in engine leasing, \$1.4B in surplus inventory (*IATA / Oliver Wyman*).
- **Average fleet age:** 15.1 years globally — a historic high (*IATA*).
- **Engine TAT vs. pre-pandemic:** +35% for legacy engines, +150% for new-generation engines (*Bain & Company*).
- **Global AMT shortfall by end of 2026:** ~22,000 technicians, projected to triple by 2029 (*McKinsey*).



1. The Super-Cycle and Why Engines Are Driving It

The MRO market crossed its pre-pandemic peak in 2023 and has not looked back. Oliver Wyman puts 2025 global spend at \$136 billion, with the trajectory pointing toward \$193 billion by 2030. Precision Aviation Group's air-transport-specific view (\$97 billion for 2026, up from \$91 billion in 2025) and IBISWorld's U.S. figure (\$29.9 billion) both point the same way. Three things are keeping the cycle running: airlines are flying older airframes harder because new ones are not arriving fast enough; new-generation engines are surprising everyone with how often they need shop time; and the supplier base is still recovering its own capacity. Nothing on the demand side eases in 2026, and the supply side cannot scale fast enough to catch up before the back half of the decade.

Inside that broader spend figure, engines are the dominant story. Aviation Week now projects engine work absorbing 53% of 2026 commercial aftermarket revenue, up from 49% in 2025 and 46% in 2024 — a two-year shift in mix that no one would have predicted at this pace. Bain & Company's headline metric tells you why: industry-wide engine shop turnaround times are up roughly 35% versus pre-pandemic for legacy engines, and more than 150% for new-generation engines. Total engine maintenance spending crossed \$62 billion in 2025. Wait times for shop slots have stretched to between two and six months, and EngineStands.com data shows new-generation narrowbody stand utilization more than doubled between 2023 and 2025, with LEAP-1A stand usage up 179%.



The LEAP and GTF problem

Both new-generation narrowbody engines entered their first overhaul windows just as airlines needed them flying — and neither is behaving as planned. Pratt & Whitney expects 600 to 700 GTF engines to require mandatory inspections through 2026 because of powder-metal contamination in turbine and compressor disks. Some of those inspections will take 250 to 300 days per engine. LEAP shop visits are forecast to climb from roughly 500 in 2025 to about 2,000 per year by 2030; CFM and its network are scaling authorized shops, but the ramp cannot match the pace of demand. Meanwhile, CFM56 and V2500 fleets are flying years longer than planned because replacement aircraft are not arriving. EngineStands.com reports CFM56-5A/B stand usage rose 60% year-on-year in 2025. Legacy engines stay in shops, USM demand spikes, and the piece-part recycling flow that normally lubricates the supply chain dries up.

The contract-structure response is already visible. Operators are locking in capacity through long-term, fleet-wide agreements — Delta TechOps (MRO Holdings) signed an eight-year exclusive CFM56-5B arrangement with IndiGo; AFI KLM E&M extended APU support with Air Canada for 15 years; Lufthansa Technik took on more than 40 CFM56 overhaul events from China's Juneyao Group. Slot certainty is now worth more than price flexibility, and the deals being signed today will define competitive positioning well into the 2030s.

2. Supply Chain and the Aging Fleet: A Compounding Problem

IATA's December 2025 analysis, prepared with Oliver Wyman, put hard numbers on what the industry had been describing for two years. The supply-chain bottleneck cost airlines more than \$11 billion in 2025: \$3.1 billion in additional maintenance costs tied directly to constraints, \$2.6 billion in extra engine leasing because shops are holding engines longer, and \$1.4 billion in surplus inventory because nobody trusts the parts flow. Lead times that used to run 4 to 6 weeks now stretch routinely to 20 to 40 weeks, and in some cases beyond. Bain's reading is that demand for new OEM parts outpaces supply by 10% to 20%. The result: engine turnaround times are dictated by parts flow, not by shop capacity. You can have a hangar slot, a test cell, and a fully staffed crew, and still wait three months for a single disk.

New for 2026 is the trade tariff line. IATA noted that tariffs on metals and electronics linked to US-China trade tensions have worsened some bottlenecks and raised maintenance costs directly. The AOG Technics fraud aftermath has added another layer, forcing sector-wide tightening of parts traceability and pushing the cost of compliance, inspection, and verification higher across the board. IATA's December release called explicitly for reducing dependence on OEM-driven licensing models and facilitating access to alternative sourcing (DER repairs, PMA parts, third-party licensed repair). Expect that tension to intensify as airlines press MRO partners to lower per-event cost.

The aging-fleet picture makes all this worse. IATA puts the average global fleet age at 15.1 years, a historic high. Passenger fleet: 12.8 years. Cargo: 19.6 years. Widebody: 14.5 years. Delivery shortfalls now exceed 5,300 aircraft. The order backlog has crossed 17,000 aircraft, equivalent to almost 60% of the active fleet; historically that ratio sits at 30% to 40%, and at current production rates the backlog represents nearly 12 years of work. Airbus exited 2025 at 54 A320s per month against a 75/month target for 2027; Boeing was approved at 42 737s per month against a 57/month aspiration for 2026. IATA does not expect the structural mismatch to normalize before 2031 to 2034. For MRO providers, the math is straightforward: good top-line news, bad operational news. The work is there. The challenge is doing it inside a system that is already at capacity.





3. Labor and Capacity: The Twin Constraints

For the third year running, Oliver Wyman's MRO survey ranks labor shortage as one of the top two cost disruptors. McKinsey's March 2026 analysis puts the global aviation maintenance technician shortfall at roughly 22,000 full-time employees by the end of 2026, projected to nearly triple to roughly 60,000 (about 20% below need) by 2029. Boeing's 2025 Pilot and Technician Outlook calls for 710,000 new maintenance technicians globally over the next 20 years; Airbus's Global Services Forecast lands at 705,000. The Aviation Technician Education Council reports that 27% of FAA-certificated mechanics in North America are over age 64, with a median age of 54, and that roughly 5,000 fewer new mechanics entered the industry through the pandemic years than would have under normal conditions.

The wage response is already well underway. The U.S. Bureau of Labor Statistics reports a 2024 median annual wage of \$78,680 for aircraft mechanics and service technicians, with the top decile clearing \$120,000 when overtime and shift differentials are included; avionics technicians earned a median of \$81,390. BLS projects 5% employment growth from 2024 to 2034 — faster than the 4% all-occupation average — with roughly 13,100 annual openings. Globally, labor costs increased 7.3% in 2023, and nothing suggests that pace has slowed. MROs are responding with signing bonuses, retention pay, accelerated wage progression, and Part 147 school partnerships, but none of it closes the gap quickly. McKinsey's argument is that hiring alone cannot solve the problem: AMT wrench times across the industry currently sit between 15% and 45% and bringing the bottom half up to top-quartile productivity could mitigate more than 80% of the projected 2029 shortfall.

On the capacity side, Astute Analytica's January 2026 read describes the market as a definitive seller's game, with hangar utilization hovering near 100% and shop slots booked out 18 to 24 months. Engine MRO capacity is forecast to fall short of demand by roughly 17% cumulatively through the end of the decade. Airlines unable to secure slots pay a readiness premium, that is, higher rates for expedited work, surge labor, and out-of-network capacity. Independent MROs, which now hold roughly 49% of the commercial MRO services market, benefit from the ability to assemble mixed-fleet capacity in ways OEM-tied networks cannot. Investment is flowing, Pratt & Whitney committed more than \$100 million to expand U.S. MRO capacity with a 40% increase in GTF work at West Palm Beach; Safran announced a €1 billion program to roughly quadruple LEAP capacity; GE Aerospace is targeting up to a 30% cut in LEAP turnaround times, but the lead time from groundbreaking to certified shop output means the gap will not close before 2028 or 2029 at the earliest.

4. Digital Maturity, Regulation, and Where Growth Is Headed

Oliver Wyman's survey shows about 85% of operators and roughly half of MROs investing in AI in some form: inventory forecasting (46%), repair and reliability analysis (37%), PO/invoice automation (36%). But only about 6% of MROs have implemented digital tools at scale. The other 94% are running on disconnected systems and institutional knowledge held by exactly the technician cohort retiring fastest. That gap is no longer theoretical: it shows up in wrench-time numbers, parts forecasting accuracy, planner-to-technician ratios, and time-to-proficiency for new hires. McKinsey argues that better planning, parts staging, and shift alignment with aircraft arrivals can raise wrench time by 10 percentage points or more before any AI spend enters the picture. Getting back to operational basics is the first lever; digital tools amplify it.

On the regulatory side, EASA's Part-IS information security requirements entered into force in February 2026, requiring Part 145 MROs to implement formal information security management systems — new policies, new roles, new audit cycles, tighter OT/IT integration on the shop floor. FAA is moving in the same direction. FL Technics' CEO framed the shift plainly: software issues can now disrupt operations faster than mechanical failures, and MROs need to respond to cyber incidents with the same urgency they bring to airworthiness events. Sustainability compliance (waste management, eco-friendly materials, ESG reporting) is adding a further layer; none of these items moves the cost needle dramatically on its own, but together they represent a new and rising fixed-cost line.

Regionally, the growth story is firmly in Asia-Pacific and the Middle East. India will show the fastest MRO demand growth at a 7.1% CAGR; the Middle East follows at 5%. China will add the most aircraft of any single market over the next decade. Government-backed capacity investment in both regions is capturing an increasing share of heavy maintenance and engine overhaul work. Europe is seeing relatively slow growth in 2026, except for Eastern Europe, where low-cost carrier expansion is driving demand. For MRO specialists planning capacity investment, the direction is clear: build where the fleet is growing.



5. What This Means for MRO's decision-makers

The 2026 cost story is not really about any single line item. It is about the way several stresses are compounding. Labor shortage lengthens turnaround time, which drives up engine leasing cost, which drives up inventory holding cost, which drives up the readiness premium operators pay to secure slots. Each piece feeds the next. That is why headline MRO spend is climbing four times faster than capacity, and why the market has entered a period where structural constraints — not cyclical ones — determine pricing power and operational performance.

Where the leverage sits right now

- Engine MRO is the single largest cost segment and the single biggest source of operational risk. Any commercial or operational decision should start there.
- Long-term capacity agreements are worth more than transactional price flexibility. The deals being signed in 2026 will define competitive position into the 2030s.
- Parts and USM access is the binding constraint on turnaround time. Investment in piece-part repair, DER and PMA capability, and USM sourcing has direct, measurable payback.
- Digital maturity is now a profit driver. The 6% of MROs operating at scale on digital tools will pull steadily ahead of the other 94% over the next three years.
- Workforce productivity is the only realistic lever for closing the technician gap. Hiring and training matter but raising wrench time from the bottom half to top-quartile levels is the bigger opportunity

What to watch through the rest of 2026

- **LEAP shop visit volumes** — the ramp from ~500 visits in 2025 toward 2,000 per year by 2030 starts in earnest this year.
- **GTF inspection throughput** — Pratt & Whitney's West Palm Beach expansion and powder-metal inspection backlog clearance will set the tone for 2027.
- **Airbus and Boeing production rates** — every aircraft not delivered is one more year on an existing airframe.
- **Tariff policy and metals pricing** — small shifts have outsized effects on parts cost and lead time.
- **Technician pipeline** — Part 147 graduation numbers and apprenticeship enrollment are leading indicators of the 2028–2029 labor picture.
- **Part-IS audit findings** — the first EASA Part-IS audit cycle will set compliance investment expectations across the sector.

Operators and providers that build their cost strategy around structural recognition — rather than waiting for normalization — will be holding better positions when the next generation of capacity finally comes online. That normalization, on current evidence, is not coming before 2031 at the earliest.

Sources Cited

This paper draws on the following primary sources.

- International Air Transport Association (IATA). Aerospace Supply Chain Bottlenecks Continue to Constrain Airlines. Press release, December 9, 2025.
- Oliver Wyman. Global Fleet and MRO Market Forecast 2026–2036. February 2026.
- Oliver Wyman, prepared for IATA. Analysis of additional airline maintenance costs from supply chain constraints, December 2025.
- Aviation Week Network. Early 2026 Outlook Shows MRO Market Momentum Increasing. February 2026. Includes AeroDynamic Advisory data.
- Aviation Week Network. Demand Is Soaring For Commercial Engine Maintenance, Repair Slots. August 2024.
- Bain & Company. Aircraft engine maintenance and repair to peak in 2026, worsening capacity shortage for commercial aviation. Press release, July 2024, and subsequent analysis.
- McKinsey & Company. Solving the aviation maintenance technician shortage. March 2026.
- Boeing. 2025 Pilot and Technician Outlook (2025–2044).
- Airbus. Global Services Forecast (2024–2044).
- Aviation Technician Education Council (ATEC). Pipeline Report, 2024 edition (produced with Oliver Wyman).
- U.S. Bureau of Labor Statistics. Occupational Employment and Wage Statistics for Aircraft Mechanics and Service Technicians (49-3011) and Avionics Technicians (49-2091), 2024 data.
- Astute Analytica. Commercial Aircraft MRO Market report, January 2026.
- Future Market Insights. Air Transport MRO Market Size, Trends & Outlook 2026 to 2036, January 2026.
- IBISWorld. Aircraft Maintenance, Repair & Overhaul in the US, Industry Analysis, January 2026.
- Precision Aviation Group. Aviation Market Outlook for 2026.
- FL Technics. CEO commentary on MRO trends defining aviation in 2026, March 2026.
- Aviation Pros. Inside the New Engine Market Reality for MROs, including EngineStands.com data, 2026.
- Interama. Engine MRO market analysis, November 2025.
- Veryon. What 2026 Demands from Maintenance Leaders, CEO commentary, May 2026.
- EASA. Part-IS (Implementing Regulation (EU) 2023/203) — Information Security Requirements, in force February 2026.
- GE Aerospace. Smart Factory investment announcement, Singapore engine repair facility, February 2024.