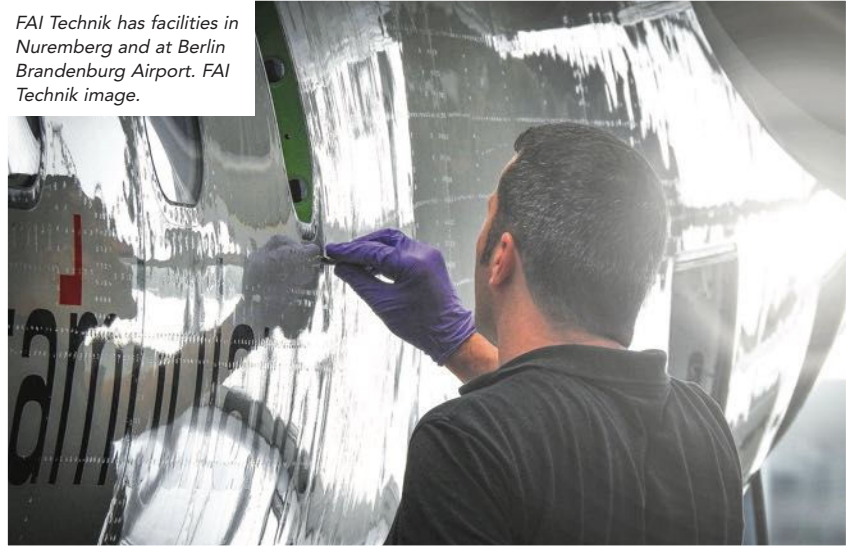




FAI TECHNIK WANTS TO BE A FLEXIBLE, EFFICIENT MAINTENANCE PROVIDER, PARTNERS WITH MUMTALAKAT



FAI Technik has facilities in Nuremberg and at Berlin Brandenburg Airport. FAI Technik image.



air ambulance) but there has been a switch to longer range operations and a restructuring, including the retirement of nine Learjet 60s. As a result, Global Express operations saw revenue increase by 22.24% in 2023 over the previous year, with the US becoming the top destination country (from number 10 in 2021). Newark and Los Angeles were in the top seven destination cities last year.

Longer flights mean more flight hours, around 11,000 in 2023, accelerating maintenance requirements. These are further boosted by the company's active promotion of aircraft availability. Most flights are one way, so, as soon as a booking is made, details of where and when the aircraft is next available are put online for brokers to see. In this way, 80% of flight time is utilized for carrying passengers, which is higher than some other major charter operators' live utilization. The same method is used for air ambulance flights, also with success.

In fact, the highest utilization still comes from the air ambulance Challenger fleet. As an example, between Auust 6-16, one flew Nuremberg-AI Ain-Bangkok-Tokyo-Anchorage-Toronto-Puebla, Mexico-St John's-Nuremberg, racking up around 46 flight hours and covering 23,389 Great Circle miles, just short of the Earth's circumference at the Equator. This is fairly typical, requiring flight crew and medical crew changes en route as duty times expire.

Facilities

FAI Technik has a 14,000 m² carbon-neutral operation with 70 people in three hangars in Nuremberg and a further 30 people in over 3,400 m² of hangar space and another 1,300 m² of workshops, stores and offices at Berlin Brandenburg Airport.

Nuremberg can carry out heavy checks on all types of aircraft. About 50% of the work is for third party, helping towards expected 2024 revenue of €30 million, with VistaJet Malta being a frequent customer, while also being a competitor on the spot charter market.

In fact, it recently carried out a 7,800-landings check on a Challenger 604, one of the most extensive for the type. This involves removal of most of the main aircraft parts and components, including engines, APU, thrust reversers, interior, forward and aft fuselage fuel tanks and the majority of flight controls, much of which is not involved in the 48-and 96-month



AI Technik is a 100% subsidiary of FAI Aviation Group Holding, which has been in business for more than 30 years and, since 2017, has had a partner in Mumtalakat, the sovereign wealth fund of the Kingdom of Bahrain.

The primary aim of the company is to support sister company FAI rent-a-jet which has five Bombardier Global Express and one Challenger 604 for charter work (the largest Bombardier fleet in Germany) and five Bombardier Challenger 604s and four Learjet 60s for air ambulance operations.

At its highest point, the fleet totaled 29 aircraft (including



Project Pearl was a recent FAI cabin reconfiguration, avionics upgrade and a new and dramatic exterior paint scheme on a Global Express. FAI Technik images.



checks. Non-destructive tests (NDT) such as X-ray, ultrasonic, eddy current and magnetic, comprise up to 30% of the inspection tasks.

Engine overhauls are subcontracted to Lufthansa Technik Aero Alzey and Pratt & Whitney in Germany and to other overhaul facilities in the U.S.

The Berlin facility opened in February 2023, operating from Beechcraft Berlin Aviation's former base which filed for insolvency in spring 2022. Over 90% of the former workforce was reemployed by FAI. It offers line and base maintenance for Hawker HS125 series, Beechcraft Premier 1/1A and King Air series aircraft as well as line maintenance checks up to 1C for Gulfstream models including G280, G450, G500, G550, G650 and G650ER (although demand is very low at the moment). Additionally, there is an AOG-team for Learjet and Bombardier to support FAI's own fleet.

Design Projects

The company also undertakes its own design projects but uses a network of specialist partners with Part 21G/J production/design approvals to turn its concepts into a certifiable reality. Two frequently used Part 21J partners are S4A in Spain and QCM in Switzerland. A similar network is used for material and equipment suppliers for cabin reconfigurations.

One of those cabin reconfigurations was Project Pearl, a nine month project in 2020 that also included 60-, 120- and 240-month maintenance inspections on a Global Express. It was led by German designer Tim Callies, who is well known for Airbus ACJ, Boeing BBJ and Bombardier Global Express interiors. It introduced the Collins Aerospace Venue cabin management system and Honeywell Ka-band Ultra High Speed Internet. A 12-seat cabin featured two tone-leather seating, with two three-seat sofas covered in fabric from Armani. Additional modifications and upgrades included new cabinetry, cobalt black metal plating, granite tabletops, a wine cooler, coffee maker and oven in the galley and heated stone floors in the galley and toilet area. This was complemented by a dramatic exterior paint scheme.

On the air ambulance side, the Challenger 604 presents a significant challenge for crews when loading and unloading a patient due to the height of the door sill. Without suitable loading aids, this process also involves various risks for the patient.

Before the COVID-19 pandemic, FAI had a stairlift for all Challenger 604s, which was carried as needed. With the increased use of Portable Medical Isolation Units (PMIU) during the pandemic, it became necessary to have a fixed loading aid on each aircraft. However, procuring additional stairlifts was not possible due to the lack of availability on the market.

This prompted FAI, in collaboration with a metalworker, to quickly design and manufacture an aluminium loading ramp. Within just two weeks, the first prototype was adapted and optimized for the Challenger 604. Two weeks later, the first operational version was available and in use. Subsequently, three more loading ramps were acquired. A ramp is now deployed on every Challenger mission. This is important as there are occasions when a patient is transferred to another aircraft to continue their journey, what the company calls a "wing to wing."

The ramps, with a total length of 600 cm and a width of 60 cm, consist of four individual parts that are assembled before use. They offer a number of advantages:

- Smooth transfer of patients from the ambulance to the air ambulance (and vice versa) using a stretcher, without unnecessary movement or lifting of the patient.
- The stable construction and non-slip surface ensure maximum safety for patients and medical staff.
- Flexible use due to easy assembly and disassembly thanks to the modular design.
- In addition to patient transfer, the ramp also facilitates the safe loading and unloading of medical equipment or PMIU.

Once on board the aircraft, the patient is moved to a Spectrum Medical Module 2800-XXX Med Base for the flight. Depending on their condition, they will need a range of medical support devices. These are mounted on another FAI design, the Med-Wall, which was developed over a period of almost two years, once again in collaboration with a metalworker. During this phase, several prototypes were created, tested, and continuously refined.

The focus was on various aspects:

- Lightweight construction.



FAI designed their Med-Wall, for medical transports. The wall was developed over a period of two years in collaboration with a metalworker and provides safe and secure access to a range of medical support devices. FAI Technik image.

- Universal applicability across all aircraft types.
- Secure and practical mounting of medical devices.
- Effective illumination of the treatment area.
- Functional use of infusion systems (including infusion holders).
- Safe storage of oxygen bottles with direct access.
- Optional mounting of non-standard equipment.
- Sufficient power supply.

The final prototype was approved for all aircraft types via a minor change and all FAI air ambulance aircraft have been equipped with a uniform setup that ensures the highest standards of safety and functionality.

Challenges

Siegfried Axtmann, FAI's chairman and founder, says much lower business aircraft production rates, compared to those of commercial aircraft, is one of the biggest challenges to finding spares, further hindered by equipment suppliers tending to stop production soon after the OEM stops. Small numbers also lead to delays as the suppliers wait until they have an economical batch size to start repairs. In the case of windscreens (which have seen a 100% increase in price) and lavatories, this has even led to aircraft being temporarily grounded.

As a result, to ensure stock availability, FAI started to tear down aircraft a few years ago. At present, it has 2.5 Learjet 60s, two Challenger 604s and a Global Express disassembled in stock. This also provides another revenue stream, as it can sell parts and lease engines and APUs to other operators.

Another challenge, he adds, is finding personnel to

expand, as every MRO is looking for engineers at present. The company is reaching out to schools and universities to attract new recruits. **AM**

Boosting Business

An unusual boost to the charter business has come from the McLaren Formula 1 team, which is part of the McLaren Group, owned by Mumtalakat. The FAI logo has appeared on the car since 2020, this year being found just in front of the rear wheels and front center of the helmet of driver Lando Norris and, recently, also on the helmet of second driver, Oscar Piastri.

McLaren Racing CEO Zak Brown, Norris and Piastri all use FAI to travel between races, with 46 flights last year, so the company's aircraft have been showing up on the Netflix series 'Drive to Survive' and the drivers' social media, prompting increased interest and demand.



McLaren Racing images.



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