Freighter Conversions

TWO SIDES OF THE STORY

The current downturn is affecting narrowbody conversions but the widebody market is showing a more positive picture.

Conversion companies adapted quickly to the high demand for freighters during the pandemic, now four years on, orders have almost disappeared with many looking back on the Covid period as a “once in a lifetime event”.

In today’s era of high inflation, freight demand is subdued meaning airlines are flying less freight and requiring fewer narrowbody aircraft than before.

“We are seeing a virtual stop in new orders and inquiries at the moment, and I believe the conversion sector will be slow for the next 1.5 to 2 years,” said Robert Convey, SVP – Sales and Marketing at Aeronautical Engineers (AEI), the oldest operating conversion company in the business.

“Once we recover I estimate the B737-800 conversion rate would be between 35 and 45 per annum for us and Boeing combined. For now, we are simply

trying to keep the conversion lines busy as business has all but dried up, the demand is not there.

“We've seen a historic number of conversions that I will argue we will never see again – a once in a lifetime event. It was a perfect storm between Covid and great demand and online ordering. It all came together; we will never see those kind of volumes.”

As a result, AEI is still working through a backlog of 34 aircraft to be converted at one of their five conversion centres in the US and China.

“AEI is used to dramatic swings in demand which is why we keep our operations lean,” says Convey.

A silver lining, however, for AEI, which has an array of lessor and operator clients on its books, is recently winning an order for Air Inuit for one freighter and two Combi 800s. “In short, we were able to convert their newer -800s and Boeing was not,” he says.

While the shift in consumer spending from durable goods to leisure travel is partly responsible for the decline in demand for narrowbody freighters. Convey says there are other factors at play such as an oversupply of -800s over the past three years and the Pratt & Whitney Geared Turbofan (GTF) engine problems that continue to limit feedstock and dramatically increase pricing.

“Planes that should have been coming out of service and going to us or being scrapped, are remaining in service, being extended three to five years on leases, [with] monthly lease rate payments being increased so the value of those planes instead of going down are going up. So even if somebody wanted to do a lot of conversions at the moment, you’re competing with passenger airlines that are willing to pay a lot more money for that aircraft to get their planes,” explains Convey.

"We are seeing a virtual stop in new orders"

Robert Convey, ... »

Robert Convey,
Aeronautical Engineers

Delays caused by GTF repairs to aircraft such as the A321neos are pulling many narrowbodies back into passenger service.

"There are analysts estimating it could be until 2027 before those problems are solved and aircraft are all returned to service and production is back to normal – another three years, so we're in for a bit of a bumpy ride."

Brian McCarthy, VP of Marketing and Sales, at Mammoth Freighters, says extended passenger operations for longer periods than expected may cause higher flight cycle accumulation while burning precious engine life-limited parts (LLPs) which can "hurt conversion candidacy" or market acceptance of the asset.

"The heavy widebody market runs on a different track because of the lengthy pre-planning time required for production slots. In contrast, the narrowbody market is much more volatile or sensitive to the market swings. Narrowbody deals run on shorter fuses and 'deal perishability' tends to run parallel to asset value swings and rapid shifts in feedstock availability, depending on passenger market demand," he says.

Business has never been better for Mammoth Freighters since it was founded in 2020. It is currently working on 35 aircraft, six 777-300ERs and 29 777-200LRs, with additional orders on the rise. Cargojet, Jetran and DHL are among its customers.

It is in the process of certifying two prototypes: the -200LR and -300ER with the -300LRs also "in the build process" at Aspire MRO in Fort Worth, Texas.

McCarthy says the 777 is a more fuel-efficient freighter and will replace 747s and MD11s over time and the 300ER offers 24% more volume than a 777F and 14% more volume than a 747-400.

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"Demand for heavy widebodies is gaining momentum"

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Mammoth Freighters

He believes mid-size regional widebodies appear abundant for the foreseeable future, creating a softening for demand of 767- 300s but the A330 appears to be maintaining a good backlog of conversion activity.

“Demand for heavy widebodies is gaining momentum as operators plan for the predicted fleet replacement cycle that is upon us. 2024 should produce a substantial increase in activities for converters of 777s as we approach final build and certification of the two main programmes. Mammoth is feeling a level of urgency growing,” says McCarthy.

Road vs air

Interestingly, McCarthy, states that we may be seeing a paradigm shift in how commodities are delivered to the end consumer by truck rather than by air. High inventory levels in warehouses around every airport city in the world

suggests a greater trends towards trucking and softening demand for narrowbody aircraft further.

“We can see that ‘gobs’ of Amazon and Walmart type distribution, fulfillment and warehousing have sprung up at nearly every major metropolitan area and airports all over America, and this leads me to believe that inventory levels are growing so substantially that trucks will be adjusting inventory levels for the majority of common products and that air transportation will only be reserved for the most timesensitive and high value and high yield cargo movements,” he says.

He believes the trend going forward will be more consolidation of timesensitive cargo into larger aircraft rather than having multiple operators flying to the same destination with identical and underutilised aircraft. This will not only bring substantial costsavings and reduce carbon emissions but ensure cargo will be moved on the mode of transportation that it belongs on.

He explains, “We must recognise that there is a profound difference between integrator models (DHL/FedEx/ UPS, etc.) and the positioning of inventory by the likes of Amazon and Walmart as just two examples. Leading up to this latest softening of demands, we were in a world where express cargo had become general and general cargo had become express. This is typical in a soft market where operators “top off” underutilised aircraft with low yield cargo. That said, I absolutely see a future where consumers will pay a premium for time definite services as everyone tightens up their models.

“If the e-commerce giants are shifting tactics with much more warehousing, hubs and trucks, this could explain the very soft demand for narrowbody lift we are seeing. The amount of narrowbody aircraft demand is in direct relation to the delivery commitment made to end customers. If consumers can benefit from longer fulfillment commitments with lower pricing, and the same customer base is conditioned for longer fulfillment commitments (say three to four days), then we may see further erosion in the need for narrowbody aircraft if trucks can hit a four-day delivery commitment.”

Challenges

The supply chain remains fragile to any world calamity reemerging, continues McCarthy.

“The inflation and escalation of aerospace labour and materials is a major concern for all converters, and this is making conversions more and more expensive as those cost increases have not really subsided,” he says.

When asked what makes Mammoth unique compared to other conversion companies, he replies, “Mammoth has assembled a team of individuals that is somewhat unprecedented in the field of converters. This is why Mammoth has been able to move so quickly as they bring both fleet types through build and certification. We think our designs will prove to be the smartest and the most optimised and efficient of all competitors playing in this fleet type.

“We are building a freighter for tomorrow’s cargo and our larger cargo door demonstrates this. In ten years, we will see a dwindling supply of 747 nose loaders for special mission and outsized cargo and the Mammoth 777 and Airbus A350 will be the only products that adequately respond to this need.

“Mammoth is dedicated to producing the lowest operating weight of all 777 freighters which translates to lower fuel burn in a world that must continue this practice at every turn. Mammoth has no intention of selling operators the same cargo conversion that they bought 10 or 20 years ago.”

AIR CHINA CARGO RECEIVES FIRST A330P2F CONVERSION

Air China Cargo has taken delivery of the first Airbus A330P2F – the first A330 aircraft converted by EFW’s partner Ameco.

The first A330 aircraft was converted at the Chengdu facility at the end of the first quarter of 2023, with a second aircraft inducted for conversion.

It was part of a contract between EFW and Air China Cargo to redeliver eight A330P2F converted freighters.

All A330 conversion candidate aircraft are owned by Air China Cargo.

“We are glad about the re-delivery and that Air China Cargo will operate Airbus converted freighters for the first time. We are looking forward to seeing soon

an A330P2F with the Air China Cargo livery on its air freight mission," said Jordi Boto, CEO of EFW.