



# P-to-F ALL ACTION AROUND NARROWBODY CONVERSIONS

— Reji John

In the passenger to freighter conversion market all the action is around narrowbody conversion programmes and the leaders in the segment are all optimistic.

In the aircraft passenger to freighter (P-to-F) conversion market it all depends on which end of the market you look at to be either optimistic or pessimistic. While there is a lot of action around narrowbody conversion, there is very little in the widebody conversion segment. In fact forecasts by both Boeing and Airbus on the widebody conversions have been extremely conservative. However, leading P-to-F players are positive on the potentials in the narrowbody sector.

At the Paris Air Show early this year aircraft lessor GE Capital Aviation Services (GECAS) announced an order with Aeronautical Engineers, Inc for up to twenty 737-800 passenger-to-freighter conversions. Under this, GECAS plans to convert up to 20 of its Boeing 737-800NG passenger aircraft into freighters. AEI will perform the conversions at its facilities in the US and China, said a statement from the company. A global leader in the P-to-F



*When we secure a launch customer the final phase (Phase 2) of the programme will be completed. Phase 2 will take 14 months to complete i.e. launch now would have the first converted aircraft in service in Q4 2016.*

**Cliff Duke, LCF Conversions**

business, AEI is the oldest conversion company in existence today.

"The GECAS order for 20 AEI B737-800SF's is significant because GECAS is known in the industry as the leader in new conversion programmes," said Robert T Convey, Senior Vice President for Sales & Marketing at AEI. AEI launched its B737-800SF programme in April 2014 and it expects to have the FAA STC at the end of 2017.

The announcement of the joint conversion programme for the A330P2F between Airbus, STA and EFW was done in 2013. "Meanwhile we have finished the major milestones in engineering and successfully passed the Critical Design Review early this year. So EFW with its partner STA is well in development schedule. Early next year we will start the prototype conversion for the A330-300P2F with STC to be ready in 2017. The entry into service of the A330-200P2F will be mid of 2018," said Thomas Centner, Director for sales, Aircraft Conversion at EFW, an Airbus and ST Aerospace Company.

According to Centner, the success of all freighter conversions programmes is primarily and fundamentally based on the basic aircraft which simply needs to be an attractive baseline to cut metal for freighter conversion. Both the A330-200 and the A330-300 are fulfilling this requirement very well, offering up to 30 percent more volume compared to the previous A300-600 freighter generation

and offering a fuel-burn advantage of up to 20 percent per tonne of payload. The payload capabilities are also offering up to 30 percent better payload.

"We are in a plan and have contracted the launch for the A330-200P2F with Egyptair. Currently we are in very close talks on the prototype of the A330-300P2F," confirmed Centner. "We are currently converting the final batch of another 6 A300-600 until next year for a Chinese customer. Thereafter we will continue with the next generation A330 and A320/A321 aircraft conversions," added Centner updating the production line up.

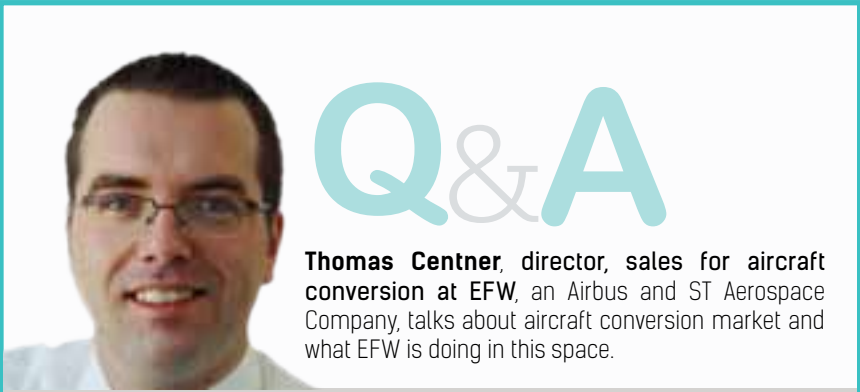
PEMCO, which does not provide specific information related to their order book, however confirmed that demand for all their four of the 737 including 737-300F, 737-300QC, 737-400F and 737-400C remain robust.

"Our services are well sought out in the industry as we provide benefits our competitors cannot match. Our production lines continue to keep up with the demand, providing on-time deliveries and preparing for additional demand already in the order book," said George Fedeanis, PEMCO's Director of Sales.

The Combi product from PEMCO is very unique based on its ability to provide a combination of passengers (up to 72) and a Class C freight compartment (4 pallets) on the same deck while providing the highest level of system safety. "Because this is a niche airplane, demand is not the same as pure freighters and therefore we forecast approximately two units per year," said Fedeanis.

It is a fact that in the P-to-F market all action is around the small or mid size segment and not in the large aircraft segment. "The narrowbody sector is leading the conversion market and AEI is leading this sector. Widebody conversions have completely stopped and there are a few medium wide body conversions being performed on 767s," said Convey of AEI.

Even though Fedeanis agrees to the fact that the medium to small freighter conversions continue to dominate the overall conversion marketplace, however he said, "demand for large aircraft will always be there based on the nature of the product and how it serves the long-haul airfreight segment."



**Thomas Centner**, director, sales for aircraft conversion at EFW, an Airbus and ST Aerospace Company, talks about aircraft conversion market and what EFW is doing in this space.

**What are your thoughts on the global market's appetite for both new production freighters and converted freighter products?**

Traditionally new built freighters make sense at higher utilizations whereas the business case usually turns into aircraft conversions at medium to low utilization. Therefore Airbus and EFW offer both – the A330F (the production built freighter) and P2F (the converted freighter) to the market. The customer can choose the best fitting product.

**What is your freighter conversion order book look like right now?**

We are in plan and have contracted the launch for the A330-200P2F with Egyptair. Currently we are in very close talks on the prototype of the A330-300P2F.

**What is your forecast for converted freighters in the next 10 years?**

In 10 years from now we will hardly find any conversions of the aging 757-200. For the same reason the 767-300 conversions will come to an end soon. Until then the A330-200 and -300P2F program will have developed to the new star amongst medium widebody conversions. The large numbers of A350 and 787 passenger aircraft will provide a constant flow of used aircraft at the right age for modification. Together with the A321 and the A320 which will at the same time be able to offer thousands of aircraft in suitable age for conversion, the Airbus family will have gained significant market share in the formerly Boeing dominated narrowbody segment. Here I strongly believe that we will see a similar pattern of market share movement towards Airbus as we have seen in the passenger market years ago.

**Are you up to speed with the demand or do you have backlog of conversion orders?**

We are currently converting the final batch of another 6 A300-600 until next year for a Chinese customer. Thereafter we will continue with the next generation A330 and A320/A321 aircraft conversions

**In the freighter conversion market are all action around only the small or mid size segment and not in the large aircraft segment?**

As we know there used to be large freighter conversions in the past, just to remember the 747's or MD-11's, but the business dried out for some time. It's hard to predict whether large aircraft conversions will return and this may also be very much dependent on to developments in world's economy and fuel pricing, which is currently also on the crossroads.



*While belly capacity exists, quite often for a variety of reasons it remains unused. To that point, and although competition is fierce, I believe there will remain a demand for highly efficient dedicated freighters who provide effective, guaranteed next day service to many parts of the world*

**George Fedeanis**, PEMCO

"At least in the current market aircraft conversions make sense in the small and medium size segment. Especially I do believe that the market we approach (the Express Market) has been and will continue to develop positively," observed Centner.

The wide body freighter conversion market, (estimated by Boeing and Airbus to now be worth \$600m per annum (30 conversions pa x \$20m pa), continues to be under threat certainly in the conventional P-to-F format of retrofitting pax airframes with large main deck cargo doors. The 2010 OEM forecasts of 50 wide-body conversions pa have slowly moved to the current 30pa and Cliff Duke of LCF Conversions thinks these numbers are still way too high.

Cliff Duke and the Eolia Group have developed an alternative conversation



**How has the introduction of increasing number of widebody passenger aircrafts with almost mini-freighter bellyhold capacity on many important trunk routes affected the conversion industry?**

Needless to say that there is a strong impact in the general cargo segment, but this is not the case in the express market or in the ultra-long range or outsize cargo segment. As we focus on express operators and their contracting partners we believe that the impact of this trend is not affecting us that dramatically.

**With the increase in intra regional trade, do you foresee a greater demand for small and mid-sized P2F converted freighters?**

We believe that both segments require future airlift. Traditionally narrowbody aircrafts are well suited to introduce and develop new routes with relatively low risk and investment needs. Once the demand is growing (and we see this on many routes in emerging markets as we have seen in the Western markets before) medium widebodies become the choice for future growth. Therefore the new Airbus Freighter family including A320-200P2F, A321-200P2F, A330-200P2F, A330-300P2F and last but not least A330-200F provide opportunities for the typical market entry, for growth scenarios at established routes and to open new markets with modern and efficient equipment.

programme, Low Cost Freighter (LCF) Conversions, to accommodate what they believe will be a more limited, niche-market demand focused on affordable, low capital cost, low-utilisation widebody lift.

The LCF vision is not to alter the certified limits of the passenger airframe; according to them the third generation widebodies have significant capabilities already built in. Duke believes the LCF approach of targeting a low-cost niche can succeed in the changing widebody freighter market, which he claims could become dominated by expensive OEM P-to-F conversion and new-build programmes. The LCF concept avoids the high research and development costs associated with installing large cargo doors. Freight is loaded through the aircraft's standard belly cargo doors, and is raised or lowered between the main and lower decks using two internal lift platforms.

The LCF conversion will be available for all third-generation widebodies, including the

Hungry for  
a lot of cargo!

For P2F please contact  
sales.efw@efw.aero  
or +49 351 83392175



“The narrowbody sector is leading the conversion market and AEI is leading this sector. Widebody conversions have completely stopped and there are a few medium wide body conversions being performed on 767s.”

Robert T. Convey, AEI



A330, A340 and 777 families. Typical gross structural payloads for LCF conversions would be 62t for a HGW A330-300, 66t for an A340-300 and 77t for a 777-200ER. The end result is what Duke describes as a cabin modification which opens up a number of options for the airframe as an alternative to passenger-only operations. According to him, the most attractive feature his conversion programme offers is the ability to match and sometimes better the competing traditional P-to-F programmes in terms of payload/range at conversion process in the order of \$5 to \$6 million, while retaining flexibility for additional alternative cargo/passenger configurations. LCF has spent the last four years developing the concept. With one-third of the certification work now completed, the company hopes to attract operators who see the benefits that such a flexible, cost-effective platforms could generate.

“LCF has made a substantial investment in the LCF programme and to date one third of the LCF Boeing and Airbus STC development programmes are completed. When we secure a launch customer the final phase (Phase 2) of the programme will be completed. Phase 2 will take 14 months to complete i.e. launch now would have the first converted aircraft in service in Q4 2016,” said Duke.

“Early next year we will start the prototype conversion for the A330-300P2F with STC to be ready in 2017. The entry into service of the A330-200P2F will be mid of 2018.”

Thomas Centner, EFW

Another factor that is redefining the air cargo market, particularly impacting all cargo carriers, is the introduction of increasing number of widebody passenger aircrafts with almost mini-freighter bellyhold capacity on many important trunk routes. “While e-commerce is changing the way we behave, and keeping in mind that belly freight capacity accounts for just over 50 percent of all freight transported today, most airlines concentrate on what they do best and that is moving passengers and their luggage quickly and efficiently. While this belly capacity exists, quite often for a variety of reasons it remains unused. To that point, and although

competition is fierce, I believe there will remain a demand for highly efficient dedicated freighters who provide effective, guaranteed next day service to many parts of the world,” reasoned Fedeanis of PEMCO.

Convey of AEI do agree that this had a very significant impact on the medium and wide body conversion market but has not had any impact on the narrow body sector. “The reason for this is that narrow body freighters fly routes that wide body passenger aircraft do not fly. This is either due to sector length or runway length and or airport infrastructure,” he added.

Centner of EFW also thinks that there is a strong impact in the general cargo segment but the impact is not very significant in the express market or in the ultra-long range or outsize cargo segment. “As we focus on express operators and their contracting partners we believe that the impact of this trend is not affecting us that dramatically,” he said.

Duke of LCF Conversions is still very optimistic about his conversion programme and getting a launch customer and he is willing to wait even if it is very long. “Our programme is still very much alive and we are working on a number of campaigns at the moment but don't know when we will be able to secure a launch customer and complete the programme - it maybe months, it maybe years - we can wait,” said Duke with lots of optimism.

“My competitors with their expensive marketing and development teams trying to replicate the past by developing solutions that are not appropriate for the 3rd and 4th generation pax airframes today probably cannot afford to wait so long as their costs (investment) builds up - signs are they are quietly heading for the exits,” Duke added. ■