

# Challenging the (conversion) status quo

*It may seem unrealistic in today's market; taking a new, unconventional and as yet unproven wide-body freighter conversion concept to a market that continues to see existing freighters parked, new-build freighter deferrals and cancellations, not to mention an existing wide body conversion market practically in moth balls. But for Low Cost Freighter (LCF) Conversions the offering provides a viable and much cheaper option than currently available.*

In a recent update on the programme, Low Cost Freighter (LCF) CEO, Cliff Duke said: "We continue to plug the LCF concept and are increasingly confident LCF will be a player in the next generation of wide body freighter conversions (A330/340 and B777). The concept involves converting wide body passenger aircraft into freighters by installing lifts between the belly hold and the maindeck without any further airframe alteration.

"I know this makes us the ultimate optimists in these dark days in the freighter world where currently it's more cancellations (A330F and B747-8F) and no P2F orders (A330 or B777). All of which points to the fact that this may indeed be time for some change!"

Indeed the whole concept has instantly transformed the debate into a David and Goliath type story with Duke and his colleagues at LCF pitted against the behemoths, Boeing and Airbus, who according to Duke, have been predictably dismissive of the concept. "The facts are that the industry is now changing – the move to more focus on belly cargo is one facet of this change.

"Hoping to dominate the conversion market by locking up the market and replicating the tired old conversion format of the past 30 years may not prove to be a very profitable adventure for the OEMs. In contrast LCF is going to offer flexible, affordable third generation wide body freighter solutions and challenge the status quo. We will ensure that turning 15-20 year-old third generation wide body airframes into freighters capable of carrying 60-80 tonnes, does not turn into a \$60 million+ investment festival (read nightmare!)" he said.

## Giving cargo a lift

LCF Conversions was formed by the Eolia Group which was established in 2003 to undertake B747-400 conversions through a joint venture company called PSF Conversions. The basic idea with this new venture is to take third generation medium wide-wide body passenger aircraft and convert them into freighters



at a fraction of the cost of undertaking a conventional full passenger-to-freighter maindeck conversion.

"LCF will make a mark in the >50 tonne and <100 tonne segment with its 'niche' products. Hopefully over time the niche connotation will change to main stream," Duke said, adding that the LCF products "match, or better the payload/range on offer from the OEM competition."

Conventional P2F conversions require two key elements that significantly push the cost up – the installation of a large cargo door in the fuselage to enable access to the main deck, and strengthening of the maindeck. This involves the lengthy and costly process of recertifying the aircraft as a freighter.

"We don't change any of the certified passenger parameters because the regulatory authorities are very concerned, particularly the US Federal Aviation Administration (FAA) that when you start putting loads in different parts of airplane you really have to demonstrate critical load cases, such as landings and that you really understand where the stress is being distributed around the aircraft, so it's a very complex thing that requires a lot of modelling."

"On an A340-300 if we just use the floor running loads on the maindeck of passenger planes we can get 44 tonnes without strengthening anything. We can get 40 tonnes on the lower deck which is 84 tonnes which means we get 1.3 times the 65 tonne capacity of the airframe without doing anything to the passenger certification." Cargo pallets and ULDs are moved to the maindeck courtesy of two ingenious lifts equipped with a translating floor that collapses to allow pallets and ULDs to be loaded into the lifts.

The A340-300 and -600 is at the forefront at the moment because it is becoming available at very low prices, somewhere around nine million and the aircraft offers the advantage of an enormous 5,500-mile range at full payload – enough to fly from Frankfurt to Hong Kong.

Duke added that the B777-200 is also on offer with a 71 tonne payload (78 tonnes for the B777-200ER). "In addition and this applies particularly to the B777, in this generation of passenger airplanes they're not manufactured as 'freighters later' meaning there is no plan for them to become freighters, as a result they are built with a very light structure and they're freighters underneath – they are 'virtual freighters' – with a belly capacity of 50 tonnes."

For point of comparison Duke notes that the EFW-ST Aerospace plan for A330 P2F conversions will see a freighter with 65 tonne maindeck and 40 tonne belly capacity but the maximum payload capacity of the aircraft is around 60 tonnes.

## Long-term game

"This is a long game – 20 years or more," said Duke, "as we are only just starting to see feedstock (A340's and A330-300 Low Gross Weight aircraft) coming onto the market at prices which would justify conversion." And he adds there are some 3,000 third generation wide body airframes out there with new build passenger airframes still in production.

Duke is confident that in terms of pricing LCF can deliver the conversions at their target prices of US\$6.5 million for the A340 and US\$7.5 million for the B777 GMF – a fraction of the published target OEM conversion prices of \$20 million for the A330-300 and a mid-30 million price tag for the B777-200ER.

Duke is also optimistic that the company has a long-term solution as well, because of the fact that the fourth generation aircraft are manufactured using composite materials which means it will be more difficult to cut holes in the fuselage for cargo doors. ✦