

Freighter Conversion's Split Personality

[Aviation Week & Space Technology Jan28, 2013](#) , p. 35

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The market for turning passenger aircraft into freighters differs dramatically for narrowbodies and widebodies

Printed headline: Divergence In Conversion

The freighter conversion business begins 2013 with a clear division: The market for narrowbody conversions is dynamic and growing, while the market for widebody aircraft has stagnated.

The market's current status is belied by the statistics for 2012, when conversions were almost evenly split between the aircraft types. The 64 conversions included 28 widebody and 33 narrowbody aircraft, with the other three on turboprops, the Aviation Week Fleets database shows.

Twelve of those 28 widebody aircraft, however, were [Airbus A300-600s](#) converted for [European Air Transport](#) , which has been replacing its old A300-200s. There might not be much of a customer base after that, and the feedstock is dwindling: only about 60 passenger A300-600s are in active service outside of European Air Transport .

[Boeing](#) converts [747-400](#) and [767-300ER](#) aircraft, and the manufacturer completed its 50th 747-400 conversion in mid-2012—a big milestone for an offering that began only seven years earlier. But Boeing has not delivered another 747-400 since then and does not have any orders pending, although a couple of carriers have expressed an interest.



Moscow-based Atran Air Cargo's recent acceptance of two 11-pallet [Boeing 737-400SFs](#) (converted by Aeronautical Engineers Inc.) reflect the demand of conversion of the aircraft type. Credit: Lans Stout

Several factors are contributing to the slowdown, including higher jet fuel prices, troubled economies and a year-over-year contraction in global cargo traffic for four of the past five years, including 2011 and 2012. That has created a surplus of capacity and led carriers to park their least-efficient large aircraft.

“We're at a time in the industry when we've seen a contraction in those long-haul markets, especially out of Asia going to North America and Europe—traditional bastions of the widebody freighter,” says Brian Hermesmeyer, [Boeing Commercial Airplanes](#) ' marketing director for freighter conversions.

“A conversion program is successful when airfreight demand and airframe feedstock for conversion are in line,” says Jonathan Lesieur, airline marketing director for Airbus Americas.

“Most of the older aircraft that are actually available for conversion today are not cost-efficient with today's fuel prices, [even] as the demand for passenger widebodies is high. Thus, there are not that many widebody airframes with the right economics or the right age available for conversion.”

Boeing also notes that 767s have retained more of their residual value than expected because of production delays with the [Boeing 787](#) , [Airbus A380](#) and [A350](#) . The 767s will become more likely candidates for conversion when their residual value goes down.

New passenger aircraft with larger cargo holds also have lessened demand. The big-bellied passenger jets are not a complete replacement for freighters; for example, the unpredictability of the freight side of the business does not always jibe with the necessary predictability of passenger schedules. Nonetheless, the aircraft are having an impact.

Aengus Kelly, CEO of aircraft lessor AerCap, notes that the payload on the [777-300ER](#) is so good that it functions as a quasi-freighter for some carriers. Boeing says a 777-300 can carry as much as 20-25 tons of cargo.

“Demand for pure freighters from certain airlines is less because of how good that airplane is,” Kelly says.

Hermesmeyer believes the 747-400 market could be reinvigorated as soon as the second half of 2013, if a late-year 2012 upturn in cargo volumes continues. He also notes that 747-400 residual values have dropped, and should continue to decline, which could make the aircraft appealing to smaller carriers currently using the -200 or -300.

Companies converting narrowbodies, however, have no need to wait or hope. Their future is now.

“We have not seen this kind of demand in years,” says Robert Convey, vice president of sales and marketing for Aeronautical Engineers Inc. (AEI), a Miami-based conversion specialist. AEI's internal studies estimate a “bow wave” of demand for narrowbody conversions of about 30 aircraft a year for the next 10 years, based on expectations about growth and retirements of aircraft such as Boeing 727s and [737s](#).



Aeronautical Engineers Inc. plans to market conversions of the MD-80 as a less expensive alternative to the [Boeing 737](#) .*Credit: Aeronautical Engineers*

Dublin-based Aergo Capital, citing a rise in worldwide demand for Boeing 737 Classic conversions, signed a deal with Tampa, Fla.-based Pemco World Air Services in late October to convert as many as 20 Classic aircraft under a new subsidiary called Aergo Cargo Solutions. That includes six -400s and perhaps four -300s currently in Aergo's fleet.

Conversions are just beginning on the first three 737-400s , which will be delivered to [Colt Aviation](#) in Sao Paulo, and Sawyer says the company plans to complete deals for two more conversions by the end of January. The Aergo-Pemco deal originally focused on -400s, which can carry more weight than

the -300s. But Sawyer says airlines are expressing a lot of interest in the -300 because of their cost and generally younger age, so Aergo is on the hunt for more of them as well.

AEI has two 737-400s in conversion and 13 more under contract to work on, as well as two 737-300s that will be delivered this year. But, simultaneously, AEI also is marketing the MD-80 as an alternative that can be converted for several million dollars less per aircraft than the Classics while carrying a similarly sized payload of 12 88 X 108-in. pallets, eight 125 X 88-in. pallets or eight 125 X 96-in. pallets.

AEI is expecting [FAA](#) supplemental certification this month that will let it begin production on the first of 20 orders, and it anticipates 200 more over the next 10-15 years.

Convey says the company also will launch its [Bombardier CRJ200](#) Large Cargo Door conversion program in a few weeks with 25-35 firm orders, primarily from GE Capital Aviation Services and some large operators. Obtaining certification for the aircraft is expecting to take about two years, which means it will not be carrying cargo for anyone until 2015.

The number of initial orders has AEI projecting that it could end up with more than 100 orders for the CRJ200 .

But what interests AEI most about the CRJ200 program—which it sees as providing a niche-market freighter primarily used for long, thin routes in emerging markets—is its value as a stepping-stone for conversion of the larger CRJ700 , which AEI believes will have an even bigger market.

Everyone in the conversion and cargo business is looking ahead to the next big sellers, and the CRJ700 could be one of them. But the biggest prize in the narrowbody market is Boeing's 737NG aircraft.

Airlines want it—AEI foresees a 30-year market for the freighters, and Aergo sees its 737 Classics conversion program as a stepping-stone to a partnership with Pemco on the NGs—but prices on the 737-700s and -800s must first come down. Boeing also will have to decide to go ahead with a conversion program, which is not an easy decision for an aircraft still popular and in production.

Boeing already is looking into 737NG conversions and is hoping to decide before the end of the year whether it would perform them itself or license the engineering data to a third party such as AEI to do the design work, get it certified, market the aircraft and pay the airframers a royalty. But Hermesmeier says a conversion program for the -700s and -800s might not become viable until 2017 or beyond.

“With conversions, it always comes down to residual value,” he says. The -800s hold a higher residual value than the -700s, but freight operators seem to want the -800's higher capacity.

Regional needs could accelerate the NG conversion availability. For example, China's domestic express market for freight is growing rapidly, often with 737 Classics, but the country is pushing the implementation of performance-based navigation to alleviate the pressure on its air traffic control system. Many of the -300s and -400s are not equipped for that, so Chinese freight operators could be faced with a choice of upgrading the avionics or ordering a later-generation aircraft.

“Forcing functions” like that, Hermesmeier says, “are the kinds of things we look at” in deciding on the timing.

In the widebody market, Airbus, [ST Aerospace](#) and [EADS EFW](#) (Dresden, Germany-based Elbe aircraft works) finalized an agreement last May to collaborate on the launch of an [A330](#) conversion program. The partners do not expect the first converted aircraft to be ready for service until 2016, but Airbus regards that as good timing. By then, it believes, there will be an adequate number of 15-20-year-old airframes—the typical conversion age for widebody aircraft —that are ready to be retired from passenger service as A350s come on line.

Boeing sees its 767 as having strong potential, with medium widebodies—as well as narrowbodies—needed to accommodate what it foresees as the highest growth market: regional freight in places such as Brazil, Africa, domestic China and Southeast Asia. Boeing sees evidence of that regional marketplace demand in its November 2012 agreement with Guggenheim Aviation Partners to convert three 767-300ERs with blended winglets to freighters for delivery this year.

Then there is the wild card: an unorthodox “low-cost freighter” conversion option proposed by LCF Conversions for third-generation medium widebodies such as the [A340](#) and 777-200 and -300. Under its concept, cargo can be loaded on conventional pallets and containers through the existing lower deck cargo doors, then moved to the main deck if necessary on platform lifts. That avoids the complication and expense of installing a conventional large freight door.

The concept was greeted with a lot of skepticism initially, but LCF claims is now has a “foot in the door” and is having “material discussions” with potential customers.

“Clearly, we are trying to launch a new concept freighter program into a market which is facing its worst downturn in decades,” the company acknowledges, noting the oversupply of freighters and increased capacity provided by passenger aircraft belly cargo. But it adds: “We are confident that once demand returns we will be in the running.”

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2012 Freighter Conversions

