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New conversions making progress

Several passenger-to-freighter modifications for several Boeing aircraft are in the process of completing their STCs. These are due to be awarded in 2003 and 2004. This is in parallel to a fall in values of aircraft, and so could trigger a wave of new conversions.

Various passenger-to-freighter (P to F) modification programmes are making progress, with several of them likely to be awarded their supplemental type certificates (STCs) either this year or early in 2004. All the P-to-F programmes currently being developed are for Boeing aircraft. EADS-EFW already holds STCs and has been converting A300-600s and A310-200/-300s for several years. Freight modification programmes for the A320 and A321 have yet to be developed, but this may start in about five years when the first delivered A320s approach an age of 20 years.

The Boeing aircraft which have P to F modifications being developed for them are the 737-300, 757-200, 767-200, and 747-400.

Three companies developing 737-300 STCs are Bedek Aviation, Pemco and AEI. Bedek Aviation is developing the STC for the -300 and expects to complete this in about May 2003. Bedek has secured an order from GECAS for 25 conversions, plus options on up to 100 more. Bedek has already started work on converting the first 737-300. A separate STC would be required for the 737-400, but this could be completed relatively easily. It would, however, require an aircraft to be worked on as an integral part of the STC process. Bedek says it may start the process of developing a STC for the 737-400 in about mid 2005 when it expects demand for the first 737-400 freighters to materialise.

Pemco is another facility offering 737-300 conversions. Pemco's STC is the only one for the 737-300 that has Chinese approval.

Pemco has recently won an order from GECAS to modify six aircraft, with options for another four. Like Bedek, Pemco could develop a STC for the 737-400 relatively easily.

Both conversions would provide an aircraft that would accommodate eight 125-inch X 88-inch X 82-inch containers on its maindeck. Once underfloor volume is taken into consideration, the 737-300 would have a similar volume to the 727-100F.

A converted 737-400 would be able to accommodate nine of the same containers. Once underfloor volume has been considered, the 737-400 would have a higher volume than the 727-100F, but smaller than the 727-200F.

There are large numbers of 737-300s on the market, and values have fallen to about $6 million in some cases. Values and the conversion list price of about $2.5 million means the total cost of making a 737-300 serviceable as a freighter will be in the region of $11 million; since additional maintenance will also have to be performed.

This total cost means it would be economic for lessors and investors to acquire and convert used 737-300s, considering the lease rate of $150,000 that the market would probably bear for the type. The 737-300 would also be economic at this lease rate for low utilisation operations *(see The options for 727F replacement, page 46)*. The 737-300 is also the only new generation, small jet freighter available, and is well positioned to replace large turboprops and smaller jets, as well as provide service to unserved routes and services.

Values of 737-400s have now fallen down the region of about $9-11 million. The total cost of making an aircraft serviceable as a freighter would therefore probably only be $14-16 million. Like the 737-300, this total cost would make conversion of the 737-400 economic in relation to the lease rate of about $170,000 the market will probably bear for the type. This suggests demand for 737-300 and -400 freighters will increase over the next few years. This depends, however, on freight airlines showing interest in the type.

After years of theorising, freight airlines could soon be faced will real choices for replacing their ageing fleets. The options to them could include the 737-300/-400, 757-200, 767-200 & 747-400, as well as the already-available A310-300, A300-600, DC-10 and MD-11.

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Precision Conversions and Structural Integrity Engineering (SIE) are both continuing with development of their STCs for the P-to-F modification of the 757-200. Both companies are sourcing their initial aircraft, which they both expect to induct into the conversion later this year. Both STCs should be completed at the end of 2003 or early 2004. Both companies have also selected their conversion facilities. Precision Conversions will use Goodrich Aviation Technical Services's facility, Everett, north Washington state. SIE has selected ATC Lasham, UK as its facility.

To date Boeing holds the only STC for the 757-200. This has a list price exceeding $8.5 million, and accommodates 14 125-inch X 88-inch X 82-inch containers on its maindeck.

Conversions by Precision Conversions and SIE will accommodate 15 of the same containers. Both companies are offering modifications at a list price of $4.5 million, including the freight handling system.

The 757 is in a similar position to the 737-300/-400, with values declining fast. Some aircraft are thought to have market values of less than $10 million, with about 10% of the global fleet currently parked. No transactions have actually been completed. Book values are still high, and are in excess of market values. This means owners would have to be prepared to take a large write-off in book value if they were to sell their aircraft for conversion. Lessors may be forced to convert their aircraft if they are unable to re-lease them in a passenger configuration. There is still an excess of 757s in passenger operation, and some owners and lessors are being forced to accept renegotiated lease rates far less than originally agreed terms.

A market value of $10 million or less would mean the total cost of making the 757 serviceable as a freighter would probably be less than $20 million, once the additional costs of maintenance were taken into account.

There are several 767 P-to-F programmes in development. Bedek Aviation is developing its own STC for the 767-200, with a large freight door. This should be completed by the end of 2003. Bedek has a firm order from GECAS for 15 767-200 conversions.

Aeronavali is undergoing discussions with Boeing about the terms of a partnership. This will involve Boeing's conversion STC. The 767-200 will provide an alternative to the A310 and A300-600, which so far have had a monopoly in their size class. Market values of 767s are high, since few operators have taken the decision to retire them. This has made conversion uneconomic, although values are now falling to a level which would make conversion viable. The 767-200 would make a suitable DC-8 replacement.

Development of several STCs for the 747-400 are underway. This aircraft would provide similar volumetric payload to the 747-100/-200, combined with the cash operating cost advantages of the -400 series. These would be a two-man flightdeck, and low fuel burn and maintenance costs.

The list price for a 747-400 P-to-F modification would probably have a list price in the region of $20 million. The 747-400 is in a similar situation to the 757, with an excess of 747-400s in the passenger fleet pushing market values down to the economic zone of convertibility. These values are theoretical, since no transactions have actually taken place. The book values of aircraft are much higher, and so may prevent, to an extent, owners and lessors actually converting aircraft for a few years. There is, however, an excess of passenger aircraft, with several sub-fleets of major airlines parked. There is also a large potential market for converted freighters. Part of this would be to replace a large number of ageing 747-100s and -200s. AC

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