

Aeronavali secures further FedEx DC-10 & MD-11 contracts

While the freighter conversion contracts for older types seem to be reducing in number, a wave of new modifications is about to start. There are three new 737 and two new 757 programmes on the horizon. Conversion of A300-600s and A310-300s is already underway.

Aeronavali of Italy has secured more freight conversion and modification work from FedEx. Despite cancellation of further conversions to freighter for the MD-10 programme, Aeronavali has secured a contract to install the new two-man flightdeck on 52 DC-10-10/-30Fs.

This installation is an integral part of the MD-10 conversion. The aircraft were modified to freighter by Aeronavali, but were intended to later have the flightdeck installation performed by SR Technics at its facility in Palmdale, California.

However, SR Technics has been forced to close its Palmdale facility since the collapse of the SAir Group in October 2001, which left 52 modified DC-10s without the new flightdeck installation. Aeronavali has since taken the contract. This coincides with the opening of a new hangar at its Venice plant, with the capacity to accommodate two 767s simultaneously, or one DC-10/MD-11.

This contract has been awarded to Aeronavali, even though it will not perform further conversion to freighter for any more DC-10s for FedEx. FedEx halted conversion of further DC-10s with the fall in A310 market values. The build

cost of an A310 freighter made it uneconomic to convert further DC-10s.

The value of A310s has fallen below \$8 million. This, combined with a conversion cost at a list price of about \$7.5 million, has made the aircraft a more economic choice than the DC-10-10, despite its market values being in the region of \$4 million.

In addition to the DC-10F flightdeck installations, FedEx has also awarded Aeronavali a contract to modify a further four MD-11s to freighter, taking the total number of MD-11s converted for FedEx to 19.

EADS-EFW gets more A300-600Rs

Further to its contract with Intrepid Aviation to convert up to 25 A300-600s and A310-300s, EADS-EFW has secured a contract to modify two A300-600Rs for European lessor Alize.

The two aircraft are ex-Korean Air A300-600Rs. The number of A300-600s available for conversion is limited to the

build volume of about 160 passenger aircraft.

Intrepid Aviation concluded a sale and leaseback deal with Korean Air for its fleet. This leaves a decreasing number of aircraft left as conversion candidates.

BAE Systems is also planning to launch an A300-600 conversion programme, but few aircraft are available. The 160 passenger aircraft are limited to the major fleets operated by Saudia, Lufthansa, Thai, China Airlines, China Eastern, Egyptair, Japan Air System and American. There are few signs that any of these fleets will be retired in the next few years. American's aircraft are tied into lease arrangements and Lufthansa has actually expanded its fleet with used aircraft from Emirates. Like other airlines, Lufthansa finds the A300-600 an economic aircraft and has no plans to retire it. There are few replacement alternatives.

Only China Airlines, with a fleet of 12, is considering larger types to replace the A300-600.

Both EADS-EFW and BAE Systems will need to convert at least 15 aircraft to achieve the experience necessary to reduce the number of man-hours to make the conversion economic.

Pemco cures 737 mod

Following several years of bad publicity surrounding its 737 freight conversion modification, Pemco is due to receive the supplemental type certificate (STC) for its new 737 passenger to freighter modification at the end of March 2002 from the Federal Aviation Administration (FAA).

Aircraft converted under Pemco's original STC suffered cracks in the area of the freight door. This resulted in



Aeronavali has secured four further MD-11 conversions for FedEx, and will install two-man flightdecks on aircraft left by the closure of SR Technics' Palmdale facility.

Pemco expects to have the STC for its re-designed 737 freighter conversion programme issued by April 2002. While it holds the only 737-300 conversion STC, AEI and Bedek are close behind and expect to have their STCs within 12 months

airworthiness directives being issued which required structural inspections. Pemco has redesigned the conversion with a new finite element modelling (FEM) system. This has been used to test and prove the structural integrity of the new freight modification, thereby minimising the risk of cracks appearing in the door area.

Pemco will offer the modification at a list price of \$2.3 million, which includes a freight handling system and window blanking. Pemco's original 737 modification is the only conversion available to date. The new conversion will still make Pemco the only current 737 modification provider, although the modification currently being developed by Bedek Aviation will be used by GECAS to modify a large number of aircraft. Bedek's conversion programme will not be awarded its STC until 2003.

Boeing is also developing a 737-300/-400 conversion with Goodrich Aerospace.

After Pemco, the next 737-300 freighter modification closest to receiving its STC is Aeronautical Engineering Inc (AEI). AEI already has an STC for the 737-200, but this is being updated with an FEM. AEI's first 737-200 conversion did not use an FEM, but the system for the new STC is complete. AEI has found that few items in the 737-200 conversion require changes.

A conversion for the 737-300 will be added to the STC in the process. AEI has completed its engineering work and plans to submit its STC for the FAA's review by the end of March 2002. As it is a case of reviewing changes to the existing STC, AEI president Charles Perry expects the FAA to issue the new STC in about July 2002.

As a consequence of this expected timetable, AEI hopes to induct the first 737-300 for conversion by April 2002, and make any changes required by the FAA during the modification. The first aircraft could then be converted by AEI in the second half of 2002.

AEI is targeting a conversion price, including installation of a freight handling system and window blanking, of \$1.7 million. One change to the original conversion is the use of new skins in the freight door area. Conversions will be performed at Commercial Jet's facility at Miami International Airport.



757 modifications progress

Two 757 passenger to freighter modifications, independent of Boeing's conversion, are progressing at similar speeds. These are being developed by Structural Integrity Engineering (SIE) and Precision Conversions. Both companies expect to induct their first aircraft and receive STCs at similar dates.

SIE is in the process of developing a 757 freighter modification with 15 container positions. Plans are to induct the first aircraft in the last quarter of 2002 and receive the STC in the first quarter of 2003, with delivery of the first aircraft to its launch customer shortly afterwards.

SIE's conversion will be marketed at about \$4.5 million, including a freight handling system and window blanking. This will be about half the list price of Boeing's modification. SIE is expecting to announce a launch customer by the middle of 2002.

Precision Conversions is a joint venture between The Erickson Group and Wagner Aeronautical.

Wagner Aeronautical has already developed an STC for the 727 and constructed an FEM for the 757 and is using it to design the modification for the aircraft. Wagner has used reverse engineering from structural repair manuals and measurements from the aircraft to develop its FEM. Its president Bill Wagner explains that testing on an

aircraft is required to prove the FEM and the modification design. The company already has experience of three validation tests on freight modifications, including the 737 and 727.

Precision Conversions is hoping to induct its first aircraft in late 2002, and receive its STC in the first quarter of 2003. Like the modification designed by SIE, Precision Conversions' STC will have capacity for 15 container positions. This compares to Boeing's modification which accommodates 14 containers. Precision Conversions is also aiming for a structural payload in the region of 70,000lbs.

Precision Conversions has not yet finalised its list price, but is aiming for it to be 50-60% lower than Boeing's conversion. This will be in the region of \$4-5 million, including a freight handling system and window blanking.

Precision Conversions has contracted consultants SH&E to conduct a forecast of the market demand for 757 freighters. SH&E estimates a market for 600 aircraft over the next 20 years. This figure includes about 380 units to replace 727-200s and another 220 aircraft to accommodate traffic growth, which SH&E has conservatively estimated at 2% per annum.

In addition to Boeing, SIE and Precision Conversions, there are other companies considering developing 757 passenger to freighter modifications. These include Pemco, although no engineering work has been done to date. GECAS is also considering entering the 757 conversion market, but has not selected a modification. 