

# Airbus launches A318

Airbus has launched the 107-seat A318 after securing firm orders from four customers. Rumours are that Northwest is about to commit to a \$2 billion deal as the first step to replace its DC-9s. Lufthansa could be another customer. Will this now be the final death knell for the 717?

After securing orders from Air France and Egyptair, Airbus has launched the A318. The aircraft will have its final assembly at Hamburg.

The delay in Air France's announcement apparently comes after negotiations were made to provide customers with the option of having a CFMI alternative to the Pratt & Whitney PW6000 offered so far.

Other potential customers are British Airways and Lufthansa, while as *Aircraft Commerce* was going to press Northwest had apparently signed a deal worth \$2 billion, equivalent to about 70 aircraft.

The A318 has already secured firm orders from TWA and International Lease Finance Corporation. The A318 has a 107-seat capacity and so competes with the 717. It also has extensive commonality with the rest of the A320 family, except for powerplants. The aircraft also has cross-crew qualification (CCQ) with all other Airbus fly-by-wire aircraft. This has spread CCQ to between 10 types, including four different A340 variants.

The A318's extensive commonality further pushes the compulsion of Airbus operators to become solely supplied by the manufacturer. The A318 therefore makes a lot of sense to Air France,

Northwest and BA. Air France has ordered the aircraft to replace its 737-500s and to add to its large A319/20/21 fleet. Northwest has acted similarly, and will use the A318 as a DC-9 replacement to complement its A319/20 fleet. It would also be a likely choice for Lufthansa, Air Canada, United, America West, and US Airways; all of which have aircraft of about 100 seats that could be replaced and are already customers for the A320 family.

Other major A320 customers which could conceivably have a need for an aircraft the size of the A318 are Iberia, TAP, Alitalia, Swissair, Sabena, Canadian, SAA, Aer Lingus and British Midland.

However, the A318 is heavy, as a result of its shrink from the A319 and ultimately the A320, and so the strength of its commonality benefits means it will not only pose serious problems for the 717, but also for the Avro RJX and the other proposed 90-seat plus regional jets.

The A318 is being offered with the PW6000. A development of this powerplant with a geared fan, the PW8000, could be offered. As a consequence of its high bypass ratio, the PW8000 would offer large reductions in fuel burn. The engine would also have fewer parts and so lower maintenance

costs than a conventional turbofan. This led to speculation that Airbus could use the PW6000 as the first stage to providing the A319/20/21 with PW8000 power. This would give the aircraft a competitive edge over the 737NG family.

CFMI, the A320's largest engine supplier, maintains that the PW8000's benefits are small compared to its higher weight and drag. CFMI now has its own study engine which could be used as an evolution to the current CFM56 selection. The TECH56 engine would be rated in the 20,000lbs to 35,000lbs thrust range and would be developed to reduce operating and ownership costs.

The engine would use swept wide chord fan blades and a twin-annular pre-swirl combustor as two of its innovations. CFMI aims to reduce fuel burn by 15-20%, maintenance costs by 15-20%, noise by 20 decibels below Stage 3 limits and emissions by 40-50% below current ICAO limits.

TECH56 will be a conventional two-shaft engine and CFMI says it can achieve all the same advantages as the PW8000 without the higher weight and drag.

## Hushkit debate

Following a month's delay in ratifying its proposed ruling of preventing further Stage 3 modified aircraft entering Europe, the European Union (EU) is now likely to ratify the ruling on 29 April.

There had been renewed confidence in various sectors of the air transport industry that the ruling would be dropped after the Europeans had found a face-saving way of scrapping it. The proposal has caused a barrage of protest from hushkit and re-engining modification suppliers, from airlines – and also a threat from the US government (which includes the banning of Concorde from US airspace).

Apart from objections that the ruling is biased towards US products and that there is no environmental basis for implementing the ruling, the US is ultimately opposed because it is independent of ICAO standards. Europe has embraced ICAO standards until now, as have all other global regions and nations. The US fears that if Europe ratifies its rule and adopts different standards from ICAO, then it will lead to further regionalisation all over the globe.

*Air France's A318 order has been sufficient for Airbus to launch the programme. Airbus is offering the aircraft with the PW6000, but Air France is apparently pushing for CFM56-5B power, or a derivative of the engine. It is likely that use of the PW6000 will encourage the launch of a new A320 family powered by the geared fan PW8000.*





This will make the logistics of operations impossible with certain aircraft types in some areas and possible in others. Such an enlarged situation would cause the industry severe operational problems.

The EU has met with the US government and made the concession of adjusting the proposed minimum bypass ratio, which would have biased several re-engining programmes had the original ruling been passed. The EU may also agree with the US to adopt proposed provisions for Stage 4/Chapter 4 noise standards, which would in later years redress the balance.

Other concessions the EU has made relate to the issue of transferability, whereby some Stage 3 modified aircraft may be allowed to be imported into the EU under some form of grandfather rights.

If the ruling is passed then one re-engining supplier is considering filing a lawsuit against the EU. This would be on the basis that the EU's proposed ruling must be reasoned and proportionate. Proportionate refers to the EU ruling that provides for larger gains than incurred costs; the proposed lawsuit suggests that the ruling would incur significant costs for the industry, while delivering little or no gain.

## Russia reviews fleet

Following the submission of its annual report to the government, Russia's Federal Aviation Service (FAS) set up a collegiate to examine the question of replacement of the ageing aircraft fleet in

service with Russia's 299 holders of air operator certificates.

The collegiate, which included experts from the FAS, airlines, industry, overhaul facilities and research bodies, established that the number of serviceable (or restorable) aircraft with the operators as of 1st January 1999 was 7,352, consisting of:

Airliners (jet & turboprop)	1,709
Cargo (jet & turboprop)	753
Short range/feeder liners	2,549
Helicopters	2,341

These include 54 foreign and 23 new generation Russian aircraft.

Some 70% of the fleet is termed as 'near the end of its service life'. In the past five years, some 2,735 aircraft, including 234 airliners, have been retired and in 1998, just 59.2%, had been airworthy. The remainder needed maintenance or an overhaul before they could operate again.

Declining traffic of the past eight years has meant there has not been a major need to add new aircraft. Now many aircraft are getting to the point where they will be difficult or uneconomic to restore.

The collegiate decided that civil aviation would be a very important factor in the development of Russia in the short- to medium-term.

The poor economic climate has meant that many airlines have difficulty in maintaining their fleet to an acceptable standard.

The low utilisation of Russian types is attributed to their poor technical

*Even with further life extensions, Russia's aircraft fleet is soon due to fall below the size required to carry current traffic. The fall in traffic is expected to level soon and then climb again. A Russian ministry economics report has said that about 760 new aircraft will be required between 1999 and 2005.*

condition and lack of work due to the fall in passenger and cargo volumes. Another complication is that, with these conditions now fairly standard, maintenance man-hours (MH) per flight hour (FH) are much higher than those of comparable western aircraft.

Ilyushin's designers have looked closely at this question. They anticipate that maintenance work schedules could be revised to reduce the amount of specified work by some 30%, and also to increase time between overhauls by some 500 hours; 5-10% depending on type.

They also intend to widen substantially the list of equipment allowed to be non-serviceable and so reduce the need to delay or cancel flights. If some relatively minor inspections were conducted, times between overhaul could be further extended. With some research it would even be possible to replace the current rigid (in terms of time and FH/cycle) system of maintenance with one working on the principle of 'on-condition'.

Between 1999 and 2005, withdrawals from service are expected to include:

Airlines	358
Cargo transports	364
Regional aircraft	1,303
Helicopters	691
Total	2,716

While the available fleet in 1998 could have flown some 90 billion revenue passenger kilometres it in fact only flew some 55 billion. By 2002, the current fleet, after expected retirements, could only achieve a maximum 63 billion. The FAS expects traffic to level out this year before beginning to grow again. This would further stimulate the need for more aircraft.

It is realised that Soviet aircraft were conservatively given short lives and that operational lives, already extended by 25-33%, could be stretched further with suitable research. To achieve worthwhile results, re-engining and new avionics fits would be needed, as well as improved after-sales service. These would be needed to meet higher ICAO and commercial requirements anyway.

A ministry of economics report to the collegiate indicated that 761 aircraft plus 187 helicopters will need to be built in Russia to meet airline needs between 1999 and 2005. **AC**