

# 747-200/-300 fleet analysis

While the 747-200/-300 have an image of being old aircraft, there are several low-time, high specification aircraft that can provide start-up airlines with high capacity at a low acquisition cost.

Of the 476 747-200 and -300s built, 280 are still in service, mostly with tier-one operators like Japan Airlines (JAL) and Northwest Airlines, and major cargo carriers.

The most desirable -200Bs are those with JT9D-7Q, JT9D-7R4G2 and CF6-50E2 engines which allow the aircraft to operate at the highest MTOW of 833,000lbs. Aircraft that have accumulated fewer than a total of 80,000 flight hours (FH) and 15,000 flight cycles (FC) are also the most desirable. This makes it possible to operate the aircraft for at least another 4,000FC before Section 41 termination modification would be required. This is equal to between six and eight years' operation at typical rates of utilisation. Airlines are likely to retire aircraft at this stage, since the cost of completing Section 41 would not be economically attractive.

Airlines and potential purchasers and operators also have to consider the timing and requirements of other modifications and heavy maintenance. Many may not want to perform a D5 check, and so will retire the aircraft just prior to reaching this point. This will be due at about a total time of about 100,000FH, while a D4 check will occur at about 80,000-82,000FH total time and a D3 check due at about 60,000-65,000FH.

All -300s have the highest MTOW of 833,000lbs, but the most desirable are those equipped with CF6-50E2/-80C2 and JT9D-7R4G2 engines.

Of the 395 -200Bs built, 212 remain operational. Of the 81 and -300s built 69 remain operational. The remaining aircraft have been retired, destroyed or stored.

## -200B

The early years of the passenger -200B saw a significant number of deliveries followed by another peak in 1979-1981. By 1982 190 aircraft were delivered, most of which are now subject to Section 41 termination (see 747-200/-

300 modification programmes, page 10) assuming 1,000 cycles a year. Increasingly, however, termination of Section 41 is considered normal, rather than the exception.

Of 57 the-200Bs that remain operational, the majority are powered by engines that permit the highest MTOW of 833,000lbs. The most numerous of this group are 22 JT9D-7Q-powered aircraft. Many of these are high-time aircraft, with only two that have accumulated about 15,000FC or less, but these two have in excess of 80,000FH.

There are only five aircraft with JT9D-7R4G2 engines, and four are operated by Northwest and the fifth by Japan Airlines. All five have 9,700-12,100FC.

There are just four civilian aircraft with CF6-50E2 engines which were built in the mid-1980s. There are 11 RB211-524-powered aircraft. Many are low-time aircraft, but are generally less desirable because of their high empty weight.

A few other aircraft are powered by the JT9D-7A/-7AW/-7J. These have limited gross weights are high-time aircraft.

## -200SCD

About 75 aircraft with side cargo doors (SCD) are in operation. These are a mixture of Combi aircraft and Combi and passenger aircraft that have been modified to freighter. The largest number, 37, are equipped with CF6-50E2 engines, and have been the most desirable with freight operators. Only 11 of these aircraft have accumulated less than 15,000FC and so could operate for at least another four or five years before coming due for a D5 check.

Another 22 are powered by JT9D-7Q and -7R4G2 engines. These are operated by Northwest, Japan Airlines, Air China, UPS, Kalitta Air, and Tradewinds. Most of the -7R4G2-equipped aircraft have accumulated less than 15,000FC and are desirable, while many of the -7Q-powered aircraft are high-time aircraft.

## -200F

Just over 60 -200Fs are in operation. This includes 10 high-time aircraft equipped with JT9D-7A/-7F/-70A engines. Of the more desirable types, there are also 17 aircraft with -7Q engines. These are mainly high-time aircraft operated by JAL, Northwest, El Al, and MK Airlines.

There are also eight aircraft with -7R4G2 engines. These are relatively low time, with between 9,000FC and 15,000FC. Some of these are operated by JAL and Northwest, as well as by Air China, Dragonair and Korean Air.

The largest group is the 24 aircraft equipped with CF6-50E2 engines. Fifteen of these have accumulated less than 15,000FC and 80,000FH, making them some of the most desirable 747-200s still in operation. Many of these aircraft are operated by Nippon Cargo, Lufthansa Cargo and Air France.

Only four -200Fs are powered by the RB211-524, and these are operated by Cathay Pacific and Saudia.

Only five Convertibles remain in operation, and four are powered by the CF6-50E2.

## -300 & -300 Combi

Most -300s were delivered from 1985 to 1987. Of the 81 built, 56 were standard -300s and 21 were Combis, including the first -300 built for Swissair which is now retired. Only four of the -300s have been converted to freighters, most by TAECO.

The -300 fleet is dominated by the JT9D-7R4G2, which powers 27 of the 53 aircraft that remain operational. Most of these are low-time aircraft which have accumulated 11,000-13,000FC and 55,000-85,000FH. This fleet is dominated by aircraft operated by JAL and Corsair. Smaller numbers are operated by Air Atlanta Icelandic, Phuket Airlines and Korean Air.

The other large fleet of -300 passenger aircraft are the 21 powered by the RB211-524. These are operated by either Qantas or Saudia, and have accumulated 13,000-17,000FC and 55,000-75,000FH.

A few -300s are powered by the CF6-80C2B1, the engine's first application on the 747 family. Five aircraft with these engines operate with Thai Airways and Iberia.

Another 14 -300s are the Combi variant. This is split between six aircraft with JT9D-7R4G2 engines and eight with CF6-50E2 engines. These are all low-time aircraft, and operators include Dragonair, Korean Air, Air France and Surinam Airways. There are also two low-time CF6-80C1B12-powered -300 Combis operated by Air India.

