

# 737-300/-400/-500 fleet analysis

**Most 737-300/-400/-500s remain in service. Aircraft are in operation with a wide variety of weight specifications & engine variants.**

**O**f the 1,988 737-300s, -400s and -500s built, more than 1,872 are still in service.

Analysis of the fleet shows that there are a good number of quality aircraft in operation.

Of the nearly two thousand aircraft built, 1,113 were the -300, 486 were the larger -400 and 389 were the smallest -500. There are 1,045 -300s active, 467 -400s active and 360 -500s active.

Of the stored aircraft, 50 are -300s, only five are -400s and 26 are -500s. Most of the stored -300s are United Airlines aircraft, with between 40,000 to 45,000 flight hours (FH) and 26,000 to 30,000 flight cycles (FC). They are all CFM56-3C1 powered and have a maximum take-off weight (MTOW) of 130,000lbs. The stored -400s have a total time of about 35,000FH and 20,000FC and are lessors' aircraft. The stored -500s are mainly United aircraft again, and are similarly CFM56-3C1 powered. They have an average time of 35,000FH and 25,000FC, and are the 123,500lbs MTOW variant.

The largest fleets of all variants (-300/-400/-500) belong to America West, China Southern Airlines, Continental Airlines, Delta, EasyJet, KLM, Lufthansa,

Garuda, Southwest Airlines, THY Turkish Airlines, United Airlines, US Airways and Varig.

Some airlines have already begun to replace their 737-300/-400/500s with 737NGs or A320 family types, although the global 737-300/-400/500 fleet shows no real sign of decline overall. There is some activity in conversion of some older aircraft to freighters, but there has been a surge in demand for passenger-configured aircraft over the past year and supply has diminished.

## -300 series

Of the 1,113 737-300 series aircraft built, 1,045 remain in service. Fifth of the remainder are stored. Most are ex-United Airlines aircraft.

The first -300 built was line number 1001, built for USAir, in January 1984. The last to be manufactured was for Air New Zealand in November 1999: line number 3130.

Southwest Airlines has the largest fleet, with 194 aircraft built between 1984 (line number 1037) and 1997 (line number 2932). The fleet is predominantly powered by the CFM56-3B1 and has a 130,000lbs MTOW and 6,291 US

Gallons (USG) fuel capacity. About half of these have accumulated more than 40,000FH, with the oldest at 65,140FH and 63,612FC. The remainder average about 30,000FH and 29,000FC. They are all configured with 137 seats in an economy layout.

Half of all active -300s are powered by the CFM-3B1, with 23% (256 aircraft) equipped with the -3B2 and just 27% (294 aircraft) with the higher rated -3C1. In terms of seat configurations, 576 are in a two-class 120- plus eight-seat configuration. Another 288 are in normal economy 134- to 140-seat configuration, and 186 are in ultra-high density 148-seat layout.

The 67 highest gross weight aircraft at 139,500lbs MTOW, powered by -3C1s, are operated largely by Aegean, Air New Zealand, America West, EasyJet, Southwest and Garuda. These aircraft were mainly produced after 1990 and include some of the first -300QC conversions. Most -300s have lower MTOW of 130,000lbs to 135,000lbs.

There are large fleet operators and mid-sized secondary operators like Airasia, bmiBaby, Comair, DBA, Frontier Airlines, GOL, Hainan, Jetconnect, Norwegian Air Shuttle, Pace Airlines, PIA, Philippine Airlines, Rio Sul, Shangdong Airlines and Shenzhen Airlines. There is also a plethora of small scheduled airlines and charter operators, or airlines with small sub-fleets.

## -300 Freighter

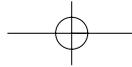
By 2005, 52 737-300s had been converted to freighters, but the number being converted is increasing. The youngest aircraft converted was built in 1997, and operates with Air Austral.

Pemco completed conversion of the first quick change 737-300QC in 2003. Pemco also converts to pure freighters as the 737-300SF. One major operator is Europe Airpost. Other freighter operators include Bluebird Cargo (IAI Bedek and Pemco -300SF), Channel Express (-300SF from IAI Bedek), China Southern/China Post (Pemco -300QC), TNT Airways (-300SF from IAI Bedek) and Yangtze River Express Airlines (Pemco -300QC).

Kitty Hawk became the first 737-300SF operator in North America, taking delivery in early 2005.



*The majority of 737s are -300s. Half of these are powered by the CFM56-3B1, while just less than 300 are equipped with the -3C1 engine. Many -300s have now reached mature age.*



There are almost 500 active -400s, and most of these are powered with the -3C1 engine. The -400 is the variant in highest demand on the used market.

## -400 series

Of the 486 737-400 series aircraft built, 467 are still active. Five of the remainder are stored. The first -400 aircraft built was for the now defunct Piedmont Airlines (line number 1487) in January 1988. The last was built almost 12 years later in December 1999 for CSA Czech Airlines, and remains with it in service.

USAirways has the largest fleet of -400s. All 46 of these aircraft are CFM56-3B2-powered, have the lower MTOW of 142,500lbs, and are equipped with 144 seats in a two-class configuration. These aircraft represent some of the older -400s with total time exceeding 40,000FH and 20,000FC. Malaysian is close behind with 38 aircraft, all with an average total time of 27,000FH and 27,000FC.

Other major -400 operators are Air One, Alaska Airlines, British Airways, CSA Czech Airlines, Garuda, Japan Transocean Air, KLM, Malaysian Air System, Olympic, Qantas and THY Turkish. Most of the -400 fleet are 'middle aged', with two-thirds of the fleet having a total time of up to 40,000FH and 20,000FC. About a third of the fleet is the high gross weight 150,000lbs MTOW variant, with the other three lower weight variants being equally represented.

Most -400s are powered by the CFM56-3C1. In detail, 383 -400s have the CFM56-3C1, and 65 have the -3B2. Only 18 have the -3B1 variant, all of which are operated by Alaska Airlines. Most 737-400s are configured in a two-class 144- to 150-seat layout. Only 50 are in the high-density 170 seat, all-economy layout.

Secondary -400 operators include Aegean Airlines, Aerosvit Airlines, Air Algerie, Air Europa, Air Gabon, Blue Panorama Airlines, China Xinhua Airlines, Hainan Airlines, JAL Express, JAT Airways, Lion Airlines, MNG Airlines, TUI Airlines Belgium, and Virgin Express.

Some carriers have started to phase the -400. Lufthansa has disposed of all its -400s. BA has phased out six relatively young aircraft. Aer Lingus has two of its original six, both of which are aircraft with less than 35,000FH and 25,000FC. Malaysian Airlines has reduced its fleet by three aircraft. Its remaining aircraft



have interesting potential for acquisition.

Alaska Airlines is to have four of its 737-400s converted to a fixed 70-passenger/four pallet configuration. One aircraft will be retrofitted to full cargo configuration. The aircraft will replace the airline's retiring 737-200s.

## -500 series

The smallest of the classic 737s, the -500, was introduced as the last member of the family. Of the 389 737-500 series aircraft built, 360 are still active. Of the remainder, 26 are stored or inactive.

The first -500 aircraft built was for Southwest Airlines, line number 1718, in May 1989. The last was line number 3116, built in June 1999. Most -500s have stayed with their original operator.

Because it is a shrink of the original -300, the trip costs of the -500 are the lowest for the family. These make it an attractive aircraft for small operators, or start-ups, which wish to take a lower risk on filling aircraft on new or thin routes. It is also a good aircraft to serve point-to-point routes in markets like the US.

The largest fleet of -500s by far is Continental Airlines with 64, all of which are currently active. Half are fitted with the lower rated CFM56-3B1 engine and the remainder have the newer, higher rated CFM56-3C1. They are all the low gross weight basic version with a MTOW of 115,500lbs, and have a 5,307USG fuel capacity and 104-seat, two-class configuration.

They were all built after December 1993 and have an average total time of about 30,000FH/23,000FC. Aircraft range from 16,000FH/9,000FC up to 31,500FH/16,500FC.

United has the next largest fleet, with

38 of the heavier 123,501lbs MTOW -3C1 powered variant, again with a 104-seat, two-class layout. These all have a total time of about 37,000FH/27,000 FC, and six are in storage. Four of United's aircraft have been sold to Canjet Airlines.

Other large -500 fleets are with Air France, All Nippon Airways (ANA), BA (all used), China Southern Airlines, CSA Czech Airlines, Lufthansa, SAS Norway (Braathens) and Southwest Airlines.

Airlines that have phased them out, or are beginning to phase them out, are SAS Norway (Braathens), Maersk and Malaysian.

There are 111 aircraft with the lowest MTOWs between 108,000lbs and 115,500lbs. Another 211 aircraft have intermediate MTOWs between 116,500lbs and 124,500lbs. There are another 62 aircraft with highest MTOWs between 127,500lbs and 133,500lbs.

One-third of the -500 fleet are equipped with the lowest thrust CFM56-3B1, and two-thirds with the highest thrust -3C1 variant. Only three ANA aircraft have the CFM56-3B2.

Secondary -500 operators include small regional carriers and some start-up low-cost carriers in Europe. The -500 also forms a small part of larger mixed 737 fleets. Operators include Aerolineas Argentinas, Air Baltic, Bmibaby, Britannia Airways, DBA, Estonian Air, Garuda Indonesian Airways, Hapag-Lloyd Express, LOT Polish Airlines, Luxair, Maersk Air, Royal Air Maroc, VARIQ and Xiamen Airlines.

While not many are readily available, there are a number of low- to middle-aged aircraft that would be interesting for start-up or small airlines increasing aircraft size. CFM56-3C1-powered aircraft are most attractive. [AC](#)