Commercial aircraft of the world

BOEING 737-300

principal changes from 737-200

Wing tip flutter boom

Modified slat aerofoil

Lengthened & repositioned nose
undercarriage strut

The 737-300 will fly in November 1984

(48,410kg), although landing weight is still 114,0001b (51,820kg).
The fuselage of the 737-300 combines a 44in (11m) plug ahead of the wing and a 60in (l-5m) plug to the rear. This allows 17-20 more seats according to layout. The proposed 737-400 would retain the CFM56, although it could move to the -2K2 stan-dard, but add a further 60in (T5m) plug in the forward fuselage and a 40in (lrn) extension aft to allow a further 18 seats. The wing would again be revised, mainly at the tip and along the trailing edge. The -500 would take the -400 airframe and add new pylons and new technology engines such as the 25,0001b powerplant still being discussed by Pratt & Whitney and Rolls-Royce. Boeing suggests the -400 with 148 seats could have a fuel burn per seat up to 28 per cent below the base-line 110-seat -200, while the -500 could be 37 per cent below.

Programme Status: 737-100/200: Orders,
978. Delivered, 895. Production rate, eight per month.
737-300: Orders 25. Options, 50. De-livered, 0. Production rate not set.

747. The latest in the top-of-the-line 747 series, the extended upper deck -300, was rolled out on September 21 for a maiden flight on October 5. Powered by the 54,7501b thrust JT9D-7R4G, the first 747-300 will be delivered to Swissair in March next year. The aircraft has come a long way since the original -100 was flown for the first time in February 1969, but it remains unchallenged as the largest available com-mercial transport. The -300 (no longer de-signated the SUD or EUD) will become the standard passenger model and orders currently stand at 18. Total 747 orders have now reached 595 with 560 delivered. New orders are, however, only being placed in ones and twos. The production rate reached its peak in 1980 with 76 units rolled out; in 1983 it will be down to about two per month. Like most manufacturers of widebodies, Boeing has a number of unsold aircraft and early delivery posi-tions are available. Nevertheless, if you need the sort of lift capability that only a new 747 can provide, you will have to be

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prepared to find about $100 million for a mid-1980s delivery.
Keeping track of the 747 family remains
a major undertaking, with ten models avail-able with three ranges of engine covering the RB.211, CF6, and JT9D. The all-passen-ger group comprise the SP, SR, -100B,

-200B and -300. Passenger/cargo options cover the -200 Convertible, -200B Combi, and -300 Combi. The two pure freighters at the moment are the -200F and -100SF

The -300 option leaves the overall di-mensions and gross weight unchanged, bu the upper deck of the aircraft is stretched 280in (711cm) to the rear, expanding the capacity of the upper cabin from 32 to 69 seats in a six-abreast economy layout. Available on all 747 models except the SP, 747F, and 747C, the new upper deck in-creases capacity by up to 17 per cent for a 2 per cent increase in operating empty weight.

Other internal changes complement the new option. An aft straight stairway re-places the forward spiral staircase of the -200; it is envisaged that the upper deck will be used for economy seating, and the aft stair allows the segregation of first-class and economy-class passengers to b maintained. Two top-hinged doors, the same size as the main-deck exits, replace the existing Type 1 upper-deck exits. In-creased capacity is particularly important for the Combi version of the 747, and Boeing points out that a -300 Combi in 12-pallet configuration will carry as much cargo as a narrowbodied freighter, to-gether with the passenger load of a DC-10.

Boeing claims that a combination of im-provements— greater passenger capacity resulting from higher seating density and the new upper deck, detailed aerodynamic and systems improvements, and third-gen-eration engines such as the P&W JT9D-

737-300 MAI N DAT A

737-300 737-200
Passenger capacity at 32in (81cm) pitch 140 120
Powerplant CFM56-3 JT8D-17
Thrust (Ib/kN) 20,000(89-9) 16,000 (71 2)
Overall length 109ft 7in (33 4m) 100ft 2in (30 53m)
Span 94ft 10in (28-9m) 93ft (28 3m)
Weights (lb/kg)
Max take-off (standard) 124,500 (56,473) 117,000 (53,070)
Max take-off (optional) 130,000(58,968) 128,600(58,333)
Max landing 114,000(51,710) 105,000(47,600)
Take-off field length at standard gross weight 7,150ft (2,180m) 6,475ft (1,970m)

737-40 0

principal changes from 737-300
737-500 same,but with new-technology engines

New Slat

. 60 in. Body Extension

Tail Skid

Chord Extension

of T.E. Devices

Wing Tip
Extension

FLIGHT International, 23 October 1982