

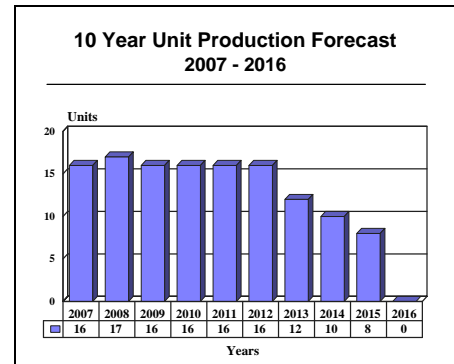
ARCHIVED REPORT

For data and forecasts on current programs please visit
www.forecastinternational.com or call +1 203.426.0800

Airbus A340 - Archived 4/2008

Outlook

- Orders for 15 aircraft in 2006
- Difficulty in competing with 777, particularly with regard to operating costs, has led to lower sales
- Airbus uncommitted to upgrading the design, and production is likely to end by 2016



Orientation

Description. Very long-range, four-engine, advanced-technology, widebody commercial transport aircraft.

Sponsors. The governments of France, Great Britain, Germany, and Spain.

Status. Production, further development.

Total Produced. Airbus delivered 338 A340s through 2006, and sold 401.

Application. Intercontinental-range passenger transportation. Military potential as troop/cargo transport, tanker, airborne early warning, and electronic warfare/reconnaissance aircraft.

Price Range. A340-300, \$158 million; A340-500, \$182 million; A340-600, \$185 million – all in 2006 dollars.



AIRBUS A340

Airbus A340

Source: Airbus

Contractors

Prime

Airbus France	http://www.airbus.com , 316 Route de Bayonne, Toulouse, 31060 France, Tel: + 33 5 61 93 55 55, Prime (Flight Control Primary Computer; Final Assembly)
----------------------	--

Subcontractor

Acc La Jonchere	http://www.acc.fr , 5 Rue Des Ateliers, BP 203, Compiègne Cedex, 60202 France, Tel: + 33 33 0 3 44386666, Fax: + 33 33 0 3 44386667, Email: acc@acc.fr (Nacelle Duct Assembly from Rohr Europe)
Aeronca Inc, A Magellan Aerospace Company	http://www.aeroncainc.com/ , 2320 Wedkind Dr, Middletown, OH 45042-2390 United States, Tel: + 1 (513) 422-2751, Fax: + 1 (513) 422-0812 (Nacelle Centerbody; Nacelle Forward Nozzle Assembly; Nacelle Liner)
Airbus Deutschland GmbH	http://www.airbus.com , Kreetslag 10, Hamburg, 21129 Germany, Tel: + 49 40 7437 0, Fax: + 49 40 7434422 (Fuselage Section; Rear Upper Portion of Fuselage Center Section; Tail; Vertical Stabilizer; Wing Less Wing Box & Wing Assembly; Interior)
Airbus France	http://www.airbus.com , Rue de l'aviation, Zone aéroportuaire Nantes-Atla, Bouguenais, 44340 France, Tel: + 33 2 51 19 70 00, Fax: + 33 2 51 19 71 00 (Aft Center Lower Fuselage Section; Wing Carry-Through Structure; Center Fuel Tank)
Airbus France	http://www.airbus.com , Bd Des Apprentis BP 91751, Saint Nazaire, 44617 France, Tel: + 33 2 28 54 80 00 (Forward Fuselage, Lower Half)
Airbus UK	http://www.airbus.com , New Filton House, Filton, Bristol, BS99 7AR United Kingdom, Tel: + 44 117 969 3831 (Wing)
Aircelle	http://www.aircelle.com , Route du Pont VIII, BP 91, Gonfreville-l'Orcher, 76700 France, Tel: + 33 2 35 55 47 00, Fax: + 33 2 35 53 35 06, Email: aircelle.csc@snecma.fr (Nacelle Lower Door)
Aircraft Braking Systems Corp	http://www.aircraftbraking.com , 1204 Massillon Rd, Akron, OH 44306-4186 United States, Tel: + 1 (330) 796-4400, Fax: + 1 (330) 796-9805 (Wheel & Brakes)
Alcoa Fastening Systems, Aerospace Products	http://www.alcoa.com , 900 Watson Center Rd, Carson Operations, Carson, CA 90745 United States, Tel: + 1 (213) 830-8200 (Huck-Clinch Blind Rivet)
Alenia Aeronautica	http://www.alenia-aeronautica.it , 45, Via Campania, Rome, 00187 Italy, Tel: + 39 06 420881, Fax: + 39 06 42824528 (Tail Cone)
Becker Flugfunkwerk GmbH, Becker Avionics Systems	http://www.becker-avionics.de , Bldg B108, Baden Airpark, PO Box 1980, Rheinmuenster, 77836 Germany, Tel: + 49 49 7229 305294, Fax: + 49 49 7229 305241, Email: info@becker-avionics.de (Audio Intercom System - Standard)
Bombardier Aerospace	http://www.bombardier.com , 400 Côte-Vertu Rd W, Dorval, H4S 1Y9 Quebec, Canada, Tel: + 1 (514) 855-5000, Fax: + 1 (514) 855-7401 (Aft Pressure Bulkhead; Floor & Lateral Shell Beam; Floor & Lateral Shell Frame; Keel Beam; Nose Bottom Fuselage; Nose Landing Gear Door; Pressurized Lateral Floor)
CFM International Inc	http://www.cfm56.com , Mail Drop Y7, PO Box 15514, Cincinnati, OH 45215 United States, Tel: + 1 (513) 552-3272, Fax: + 1 (513) 552-3329, Email: geae.csc@ae.ge.com (CFM56-5C1/C2/C4)
Cerberus Guinard	BP 20, ZI 617, Rue Fourny, Buc Cedex, F-78531 France, Tel: + 33 01 308 46652, Fax: + 33 01 395 61364 (Smoke Detection System)
Chemetall GmbH	Trakehnerstr 3, Frankfurt, D-60487 Germany, Tel: + 49 69 7165 0, Fax: + 49 69 7165 2936, Email: peter.haenel@chemetall.com (Sealants)
Corse Composites Aeronautiques	ZI Du Vazzio, Ajaccio, F-20090 France, Tel: + 33 95 29 04 00, Fax: + 33 95 29 04 33 (Fuselage, Wing, Internal Fitting Components)
Diehl BGT Defence GmbH & Co	http://www.diehl-bgt-defence.de , Alte Nussdorfer Strasse 13, Überlingen, 88662

Airbus A340

KG	Germany, Tel: + 49 75 51 8901, Fax: + 49 75 51 89 2822, Email: gerhard.dussler@bgt.de (APU Engine Controls)
Draegerwerk AG	Moisinger Allee 53/55, PO Box 1339, Lubeck, W-2400 Germany, Tel: + 49 451 8820, Fax: + 49 451 882 2080 (Emergency Oxygen System)
EADS Deutschland GmbH, Division HQ	http://www.eads.com , PO Box 801109, Munich, 81663 Germany, Tel: + 49 89 607 0, Fax: + 49 89 607 26481 (Vacuum Lavatory)
EADS Sogerma Services	PO Box 109, Rochefort, 17303 France, Tel: + 33 46 87 2550 (Upper Shell Structure - Section 15)
ELDEC France	18, Rue du 35eme Regiment d'Av, Bron, 69500 France, Tel: + 33 478 261010, Fax: + 33 472 377230 (Proximity Switch)
Eaton Aerospace Fluid Power	http://www.aerospace.eaton.com , 5353 Highland Dr, Jackson, MS 39206-3449 United States, Tel: + 1 (601) 981-2811, Fax: + 1 (601) 987-5261 (Landing Gear Hydraulic Motor; Auxiliary Electric Motor Driven Pump; AC Driven Hydraulic Pump; Engine Hydraulic Pump)
ELDEC Corp	http://www.eldec.com , 16700 13th Ave W, PO Box 97027, Lynwood, WA 98046-9727 United States, Tel: + 1 (425) 743-1313, Fax: + 1 (425) 743-8234, Email: info@craneaerospace.com (Landing Gear & Gear Door Prox Sensor)
Fonderie Messier	http://www.honsel.com , Z.I. du Touya, Arudy, 64260 France, Tel: + 33 59 82 59 82, Fax: + 33 59 05 67 49 (Cast Aluminum Door Hinge)
General Ecology Inc	151 Sheree Blvd, Exton, PA 19341 United States, Tel: + 1 (610) 363-7900, Fax: + 1 (610) 363-0412, Email: info@generalecology.com (Versa Pure Drinking Water System)
Goodrich Aerostructures	http://www.aerostructures.goodrich.com , 850 Lagoon Dr, Chula Vista, CA 91912-0878 United States, Tel: + 1 (619) 691-4111, Fax: + 1 (619) 691-3030 (Nacelle for CFM56-5C2)
Goodrich Aerostructures Group	http://www.aerostructures.goodrich.com , 22, Chemin de la Crabe, Toulouse, 31300 France, Tel: + 33 65 61 30 59 59, Fax: + 33 5 61 30 59 00 (Nacelle & Thrust Reverser System)
Goodrich Fuel & Utility Systems	http://www.fus.goodrich.com , 100 Panton Rd, Vergennes, VT 05491 United States, Tel: + 1 (802) 877-2911, Fax: + 1 (802) 877-4111 (Fuel Utilization & Management System)
Goodrich Sensor Systems	http://www.sensors.goodrich.com , 14300 Judicial Rd, Burnsville, MN 55306-4000 United States, Tel: + 1 (952) 892-4000, Fax: + 1 (952) 892-4800 (Ice Detection System)
Hartwell Corp	900 S Richfield Rd, Placentia, CA 92870 United States, Tel: + 1 (714) 993-4200, Fax: + 1 (714) 777-4419, Email: info@hartwellcorp.com (Structural Components, Latches, Rods, and Integrated Systems)
Hispano-Suiza	http://www.hispano-suiza-sa.com , 18 Blvd Louis-Seguin, Colombes, 92707 France, Tel: + 33 1 4130 5010, Fax: + 33 1 4130 5412 (Accessory Drive Gearbox; Thrust Reverser with Rohr)
Honeywell Aerospace, Aircraft Landing Systems	http://www.honeywell.com/sites/aero/Landing-Systems.htm , 3520 Westmoor St, South Bend, IN 46628 United States, Tel: + 1 (219) 231-2000, Fax: + 1 (219) 231-2020, Email: alscommunications@honeywell.com (Aluminum Alloy Wheels - Option; Carbon Brakes - Option)
Honeywell Aerospace Electronic Systems	15001 NE 36th St, PO Box 97001, Redmond, WA 98073 United States, Tel: + 1 (425) 885-3711, Fax: + 1 (425) 885-2061 (ACMS Digital Memory Unit)
Honeywell Commercial Aviation Systems	http://www.cas.honeywell.com , 21111 N 19th Ave, Phoenix, AZ 85027 United States, Tel: + 1 (602) 436-2311 (Advanced Flight Management System)
Honeywell Engine Control Systems	http://www.honeywell.com/sites/aero/Engine_Controls.htm , 2525 W 190th St, Torrance, CA 90504-6099 United States, Tel: + 1 (310) 323-9500, Fax: + 1 (310) 512-2221 (Aileron Elevator & Rudder Actuator; Flight Control Actuator Package)
HTL/KIN-Tech Division	http://www.pacificscientific.com , 1800 Highland Ave, Duarte, CA 91010-2906 United States, Tel: + 1 (626) 359-9317, Fax: + 1 (626) 357-2107, Email: marketing@htl.pacsci.com (Fire Extinguisher)
Icore International Ltd	http://www.icoregroup.com/contacts.html , Leigh Rd, Slough, SL1 4BB United Kingdom, Tel: + 44 1753 574134, Fax: + 44 1753 823674, Email: information@icore.zodiac.com (Electrical Wired Harness Components; Conduits; Backshells)

Airbus A340

Korean Air - Aerospace Division	http://www.koreanair.com , 1370 Gonghang-dong, Gangseo-gu, Seoul, 157-712 Korea, Republic of (South), Tel: + 82 2 2656 3920, Fax: + 82 2 2656 3917 9 (Forward Upper Center Fuselage; Latecoere Components)
Labinal	http://www.labinal.com , 9, avenue Franklin, BP 218, Saint Quentin Yvelines, 78051 France, Tel: + 33 1 30 85 43 00, Fax: + 33 1 30 85 43 73, Email: communication@labinal.com (Wiring & Cable Assembly)
Latecoere	http://www.latecoere.fr/ , 135, rue de Periole, Toulouse Cedex, F-31079 France, Tel: + 33 5 6158 77, Fax: + 33 5 6158 76 (Upper Section - T-15; High Temp Composite Upper Thrust Reverser Door; Electronic Cabinet)
Liebherr-Aero-Technik GmbH	Pfaenderstr 50/52, Postfach 1363, Lindenberg, Germany (Air Brake Actuator; Slat Actuator System; Flap & Slat Power Control Unit; Secondary Flight Control; Environmental Control System)
Liebherr-Aerospace Toulouse SAS	408, Avenue Des Etats-Unis, B.P. 2010, Toulouse, 31016 France, Tel: + 33 561 352828, Fax: + 33 561 352800 (Engine Bleed Air Control System)
M.C. Gill Corp	http://www.mcgillcorp.com , 4056 Easy St, El Monte, CA 91731 United States, Tel: + 1 (626) 443-4022, Fax: + 1 (626) 350-5880, Email: info@mcgillcorp.com (Bulk Cargo Flooring)
Mannesmann Rexroth GmbH	Jahnstr 3 5, PO Box 340, Lohr Am Main, 8770 Germany, Tel: + 49 092 52182461, Fax: + 49 092 52182157 (Air Brake Actuator; Spoiler Actuator)
Mecanique Generale De Precision	Bp 9 - Route D'Ennordres, Aubigny Sur Nere, 18700 France, Tel: + 33 48 58 06 61, Fax: + 33 48 58 20 84 (Pylon & Wing Fastener)
Messier-Dowty Inc	http://www.messier-dowty.com , 574 Monarch Ave, Ajax, L1S 2G8 Ontario, Canada, Tel: + 1 (905) 683-3100, Fax: + 1 (905) 686-2914 (Centerline Landing Gear)
Messier-Dowty International	http://www.messier-dowty.com , Zone Aéronautique Louis Breguet, BP 10, Velizy Villacoublay, 78140 France, Tel: + 33 1 46 29 18 00, Fax: + 33 1 46 29 18 03 (Nose Landing Gear; Steering & Brake Control; Landing Gear Computer; Valve)
Messier-Dowty Ltd	http://www.messier-dowty.com , Cheltenham Rd, Gloucester, GL2 9QH United Kingdom, Tel: + 44 1452 712424, Fax: + 44 1452 713821 (Main Landing Gear; Landing Gear Control Computer)
Michelin Air X Dept	PI Des Carnes Decheaux, Clermont-Ferrand Cedex, France (Air-X Radial Tire)
Michelin Aircraft Tyre Dept, Europe, CIS, Middle East and Africa	http://www.airmichelin.com , 23 place des Carnes-Dechaux, Clermont-Ferrand, 63040 Cedex 1, France, Tel: + 33 0 4 73 32 76 36, Fax: + 33 0 4 73 32 76 44 (Radial Tire)
Moog Inc	http://www.moog.com , Jamison Rd, East Aurora, NY 14052 United States, Tel: + 1 (716) 652-2000, Fax: + 1 (716) 687-4457 (Aileron Actuator)
Nord-Micro AG & Co OHG	Victor-Slotosch-Strasse 20, Frankfurt/Main, 60388 Germany, Tel: + 49 6109 303 0, Fax: + 49 6109 303 233, Email: mail@nord-micro.de (Bleed Valve; Cabin Pressure Control System; Landing Field Elevation Selector; Negative Relief & Safety Valve)
Oregon Metallurgical	530 34th Ave SW, Albany, OR 97321-0177 United States (Titanium Mill Products for Pylon Assembly)
PPG Industries Inc	http://corporateportal.ppg.com/ppg/ , 1 PPG Plz, Pittsburgh, PA 15272-0001 United States, Tel: + 1 (412) 434-3131 (Cabin Windows - Alternate Original Equipment; Windshield)
Parker Aerospace Hydraulic Systems Division	http://www.parker.com/ead/cm1.asp?cmd=1021 , 2220 Palmer Ave, Kalamazoo, MI 49001-4165 United States, Tel: + 1 (269) 384-3400 (Thrust Reverser Actuator System)
Pechiney Rhenalu	6, Place De L'Iris, Paris La Defense 2, Courbevoie, 92400 France, Tel: + 33 46 91 40 00, Fax: + 33 46 91 40 67 (Aluminum Plate, Sheet, Extrusion)
Permal Gloucester Ltd	125 Bristol Rd, Gloucester, GL1 5TT United Kingdom, Tel: + 44 1452 5282, Fax: + 44 1452 5074 (Permaglass WFT/3 Fire Resistant Cargo Lining)
Ratier-Figeac	Route de Cahors, BP 2, Figeac, 46101 France, Tel: + 33 5 6550 5050, Fax: + 33 5 6534 2363 (Passenger Door Damper & Actuator System; Horizontal Stabilizer Actuators for Lucas; Spoiler Servo Actuator; Steering Control Side Stick; Pedestal Assembly)

Airbus A340

Rogerson Aircraft Corp (Rogerson Aircraft Controls)	http://www.rogerson.com , 2201 Alton Pkwy, Irvine, CA 92606 United States, Tel: + 1 (949) 660-0666, Fax: + 1 (949) 660-7965 (Vacuum Lavatory)
SKF Aerospace France	http://www.skf-aerospace.fr , 1 avenue Marc Seguin, PO Box 29, Saint-Vallier-sur-Rhône, 26 241 Cedex, France, Tel: + 33 4750 34040, Fax: + 33 4750 34000 (Angular Control Electro-Mechanical Actuator; Bearings for Flap Extension Mechanism; Carbon Fiber Strut; Central Wing Box Carbon-Fiber Rod; Rudder Trim; Side-Stick Transducer Unit; Speed Brake Control Unit; Throttle Control System)
Saft	http://www.saftbatteries.com , 12, rue Sadi Carrot, Bagnolet, 93170 France, Tel: + 33 1 49 93 1918, Fax: + 33 1 49 93 1950, Email: jill.ledger@saftbatteries.com (Battery)
Sierracin Corp	http://www.sierracin.com , 12780 San Fernando Rd, Sylmar, CA 91342-3796 United States, Tel: + 1 (818) 362-6711, Fax: + 1 (818) 362-0603 (Passenger Window)
Sitec Aerospace GmbH	Schopfgraben 1, PO Box 4, Miesbach, 8120 Germany (Fuel & Water Valve)
Smiths Aerospace Mechanical Systems - Aerostructures	Kings Avenue, Hamble-Le-Rice, S031 4NF United Kingdom, Tel: + 44 2380 453371, Fax: + 44 2380 744042 (Wing Leading Edge; Chemically Milled Components - Unspecified)
Smiths Aerospace Mechanical Systems - Flight Controls	http://www.smiths-aerospace.com , Wobaston Rd, Wolverhampton, WV9 5EW United Kingdom, Tel: + 44 1902 397700, Fax: + 44 1902 394394 (Hydraulic Flap System)
Snecma	http://www.snecma.com , 10, allée du Brévent, CE1420 Courcouronnes, Evry, 91019 France, Tel: + 33 1 69 87 09 00, Fax: + 33 1 69 87 09 02 (CFM56-5 - 50% Partner with GE)
Société Anonyme Belge de Constructions Aéronautiques (SABCA)	http://www.sabca.com , Chaussée de Haecht, 1470, Haachtsesteenweg, Brussels, 1130 Belgium, Tel: + 32 2 729 5511, Fax: + 32 2 705 1570, Email: sabca.secr@sabca.be (Tail Cone)
Stratoflex Products Division	http://www.parker.com/stratoflex , 220 Roberts Cut-Off Rd, PO Box 10398, Fort Worth, TX 76114 United States, Tel: + 1 (817) 738-6543, Fax: + 1 (817) 738-9920 (Hydraulic Hose)
Sumitomo Precision Products Co Ltd	http://www.spp.co.jp , 1-10 Fuso-cho, Amagasaki, Hyogo, 660 Japan, Tel: + 81 6 6481 3922, Fax: + 81 6 6489 5801 (Main Landing Gear Retract Actuator; Structural Components)
Technofan	http://www.technofan.com , 10, place Marcel Dassault, ZAC du Grand-Noble - BP 30053, Blagnac, 31702 France, Tel: + 33 61 30 92 00, Fax: + 33 61 30 02 04 (Ventilation System)
Thales Avionics SA	http://www.thalesgroup.com/avionics/ , 1 ave Carnot, Massy, 91883 France, Tel: + 33 1 69 75 50 00, Email: contact.info@thales-avionics.com (Flight Management & Guidance & Safe Computer; Secondary Flight Control Computer; Smoke Detection Controller; Warning & Maintenance Computer)
Vought Aircraft Industries Inc - Aerostructures Nashville	http://www.voughtaircraft.com , 1431 Vultee Blvd, Nashville, TN 37217 United States, Tel: + 1 (615) 361-2000 (Wing Top Skin Stringer Assembly; Outboard Wing Lead Edge; Flap Track Fairing; Outboard Wing Flap; Spoiler)
Whittaker Safety Systems Division	2731 Systron Dr, Concord, CA 94518-1355 United States (Fire Detection System)
Wyman-Gordon Co	http://www.wyman-gordon.com , 244 Worcester St, Box 8001, North Grafton, MA 01536-8001 United States, Tel: + 1 (508) 839-4441, Fax: + 1 (508) 839-7500 (Titanium Wing Structural Forgings)
Zahnradfabrik Friedrichshafen AG	http://www.zf.com , Graf von Soden Platz 1, Friedrichshafen, 88046 Germany, Tel: + 49 07541 77 0, Fax: + 49 07541 77 908000, Email: postoffice@zf.com (Flap Rotary-Drive Actuator)

Comprehensive information on Contractors can be found in Forecast International's "International Contractors" series. For a detailed description, go to www.forecastinternational.com (see Products & Samples/Governments & Industries) or call + 1 (203) 426-0800.

Contractors are invited to submit updated information to Editor, International Contractors, Forecast International, 22 Commerce Road, Newtown, CT 06470, USA; rich.pettibone@forecast1.com

Airbus A340

Technical Data

(A340-500/600)

Design Features. Low-swept-wing design shares fuselage cross-section of A300/A310 and high degree of commonality with A330, including fuselage and wing. Features advanced fly-by-wire flight controls, multi-function displays, integrated avionics, new structural materials and production processes, the Airbus-patented tail-plane trim tank, and an advanced quick-change passenger cabin.

	<u>Metric</u>	<u>U.S.</u>
Dimensions		
Length	67.51/74.96 m	221.5/245 ft
Height	17.75 m	58.25 ft
Wingspan	63.3 m	208.15 ft
Weight		
Operating empty weight	170,900/177,700 kg	376,770/391,760 lb
Max TOW	368,000/365,000 kg	811,300/804,675 lb
Max payload	54,100/67,200 kg	119,270/148,150 lb
Performance		
Range, -500, 313 passengers	16,019 km	8,650 nm
Range, -600, 380 passengers	13,890 km	7,500 nm
Cruise speed	Mach 0.83	Mach 0.83

Propulsion

A340-200/300	(4)	CFM International CFM56-5C2 high-bypass, twin-shaft turbofans rated 138.7 kN (31,200 lbst) each on early, lighter versions; CFM56-5C3 engines rated 144.5 kN (32,500 lbst) each on higher-gross-weight aircraft.
A340-300 Combi	(4)	CFM56-5C4 engines rated 151.2 kN (34,000 lbst) each.
A340-300X	(4)	CFM56-5C4 engines rated 151.2 kN (34,000 lbst) each.
A340-500	(4)	Rolls-Royce Trent 500 fans, 236 kN (53,000 lbst) each.
A340-600	(4)	Rolls-Royce Trent 500 fans, 249 kN (56,000 lbst) each.
A340-8000	(4)	CFM56-5C4 engines rated 151.2 kN (34,000 lbst) each.

Seating

-200	262 in three-class layout; 303 in two classes.
-300	295 in three-class layout; 335 in two classes; with below deck seating, up to 393.
-500	313 in three classes.
-600	380 in three classes.

Variants/Upgrades

A340-200. Initial variant, typically seats 239. Fuselage is six feet shorter than -300, but other technical features are the same. Underfloor cargo hold for 26 LD3 containers or nine standard 88-inch x 125-inch freight pallets.

A340-300. Typically seats 295 in three classes, max range 7,200 nautical miles (13,350 km). Longer (+4.26 m) fuselage. Underfloor cargo hold for 32 LD3 containers or 11 pallets.

A340-300X. Heavier -300, entered service in 1996. Max TOW increased to 271 tons for more fuel. New

landing gear for weight increase, main wingbox is strengthened.

A340-8000. One built. Range, 8,000 nautical miles; 260 seats.

A340-500. Lower-capacity (313 seats), longer-range, 8,670-nautical-mile (16,100 km) version shares max commonality with -600 model. Launched with the -600 in 1997.

A340-600. Stretched by 20 frames, a re-engined version of basic -300 offers 380 seats (85 more than the

Airbus A340

-300 model) and range of 7,750 nautical miles (14,360 km).

A340M. Proposed militarized variant of A340-300 to carry 300 troops, 20 tons of cargo. A tanker version with 125 tons of fuel off-load capability was planned but none have been built.

A340 Light. Proposed version of A340-300, certificated for a 235-ton (238,760 kg) max TOW, rather than the 257-ton (261,112 kg) MTOW of standard

A340-300. Only physical change would be derated CFMI engines that burn less fuel.

A340-600 HGW. Launched in mid-2003, the -600 High Gross Weight (HGW) model boasts a 17,600-pound increase in max gross weight. Airbus expects the HGW to ultimately become the standard -600 model.

A340-500 Higher Weight Version. Certification of the new variant of the ultra-long-range A340-500 was expected in early 2007.

Program Review

Background. The four-engine, long-range A340, launched with the A330 in June 1987, was specifically designed to replace long-range, low-capacity Douglas DC-8s and some intercontinental-range L-1011s and DC-10s on long/thin routes where passenger densities do not justify use of the Boeing 747. It is also a good entry-level aircraft for airlines getting into the markets previously served only by the 747.

The 239-passenger A340-200 offers a range of 7,000+ nautical miles, while the stretched (by 14 ft) -300 carries 295 passengers over 7,200 nautical miles.

Airbus subsequently introduced the extended-range A340-500 and the stretched, higher-capacity A340-600 variants (see **Variants/Upgrades**, above, for details).

Benefits of Commonality. The A330 and A340 share a high degree of commonality. They have the same cockpit, fuselage, and wing (less engine installation differences and some structural mods). They also have

commonality among their landing gear (auxiliary center-line gear on A340), tail section, and hydraulic, electrical, and pneumatic systems (again, less engine installation differences). The A340-200 airframe is eight frames shorter than that of the A330-300 and A340-300.

High-Gross-Weight Version Certificated

Launched in 2003 by Qatar Airways and Emirates, the A340-600 HGW first flew in 2005 and received certification in mid-2006. A similar HGW version of the -500 model is due to be certificated in 2007.

The consortium has also considered the creation of an A340-600 “Enhanced” model that would use advanced technology from the A350 program, but as of early 2007 the company had shown little enthusiasm for the investment in resources that would require at a time when it is focusing on the A380 and A350 airliners and the A400M military transport.

Significant News

Lufthansa Further Expands Airbus A340-600 Long-Range Fleet – Lufthansa German Airlines is expanding its Airbus long-range fleet with an order for seven additional Airbus A340-600 aircraft. The A340-600s will have about 300 seats in a three-class configuration and will be delivered from early 2008. The order doubles the number of three-class A340-600s in Lufthansa’s fleet. Lufthansa plans to use the aircraft on high-passenger-demand, long-haul routes out of Frankfurt and Munich, to destinations like the U.S. West Coast and Asia. (Airbus, 12/06)

Emirates Cancels Order for 18 A340s – Following up on the suspension of delivery of an 18-aircraft order estimated to be worth \$2 billion, Emirates Airlines canceled its order for A340-600s in November 2006. The new aircraft were to be delivered over the course of 2009-2011. (*SpeedNews*, 11/06)

New Model of A340-600 Certificated by EASA – Airbus has received certification for the latest version of the long-range A340-600 from the European Aviation and Safety Agency (EASA). This concludes a successful four-month test campaign following the aircraft’s first flight in November 2005. The A340-600 has typical seating of 380 passengers in three-classes and adds 250 nautical miles (463 km) more range to the type, for a range of up to 7,900 nautical miles (14,600 km). Meanwhile, certification of the new variant of the ultra-long-range A340-500 was expected in early 2007. (Airbus, 4/06)

Kingfisher Grows its Airbus Fleet with Purchase of Five A340-500s – Kingfisher Airlines, the carrier headquartered in Mumbai, India, signed a contract for five Airbus A340-500s and an option for five more. The

Airbus A340

aircraft are scheduled for delivery in 2008. The aircraft are the latest high-gross-weight versions, allowing higher payloads to be transported. (Airbus, 4/06)

Finnair Orders A350s and A340s for Future Long-Haul Fleet – Finnair has ordered three new A340-300Es, to sustain the strong expansion of its Asian traffic. The A340-300Es (“E” for Enhanced) will accommodate 268 passengers. The A340-300E features the latest flight deck equipment and is equipped with CFM International CFM56-5C4/P engines, bringing lower fuel burn and emissions. (Airbus, 3/06)

Market Intelligence Service Subscribers: For additional news, go to the online E-Market Alert page located in the Intelligence Center at www.forecastinternational.com and click on the links to the products you subscribe to.

Funding

Sponsoring governments provided 100 percent of A340 development funding to Airbus. Total estimated cost to develop and certify the A330/340 combination is \$2.5 billion in 1987 dollars and \$5.35 billion in 1993 dollars.

Contracts/Orders & Options

(as of February 2007)

Operator	Designation	Qty.	Phase
Aerolineas Argentinas	A340-600	6	On Order
Air Canada	A340-600	3	On Order
Air Mauritius, Ltd	A340-300	2	Option
Emirates	A340-500	10	Option
Emirates	A340-600	18	On Order
Etihad Airways	A340-600	4	On Order
Finnair, Oyj	A340-300	3	On Order
Iberia Lineas Aereas De Espana, SA	A340-600	7	Option
Kingfisher Airlines, Ltd	A340-500	5	On Order
Kingfisher Airlines, Ltd	A340-500	5	Option
LAN Airlines, SA	A340-300X	2	On Order
Lufthansa	A340-600	10	On Order
Qatar Airways Co WLL	A340-600	1	On Order
Qatar Airways Co WLL	A340-600	8	Option
Thai Airways International, Public Co, Ltd	A340-500	1	On Order
Thai Airways International, Public Co, Ltd	A340-600	1	On Order
Virgin Atlantic	A340-600	6	On Order
Virgin Atlantic	A340-600	13	Option

Timetable

<u>Month</u>	<u>Year</u>	<u>Major Development</u>
Mid	1987	A330/A340 launch announced
	1991	Certification of CFM56-5C1 engine
Oct	1991	Roll-out and first flight
Dec	1992	A340-200/300 receives JAA certification
Feb	1993	FAA certification and initial delivery to Lufthansa

Airbus A340

<u>Month</u>	<u>Year</u>	<u>Major Development</u>
Late	1995	Expected launch of stretch and heavy derivatives
Mid	1997	Launch of A340-600/500
Dec	2002	European, FAA certification of A340-600
Mid	2002	European certification of A340-500
	2006	Certification of A340-600 HGW version
	2007	Anticipated certification of A340-500 HGW version

Worldwide Distribution/Inventories

(as of February 2007)

Operator	Designation	Qty.
Aerolineas Argentinas	A340-200	4
Air Canada	A340-300	3
Air Canada	A340-300X	7
Air Canada	A340-500	2
Air China	A340-300X	6
Air France	A340-300	3
Air France	A340-300X	15
Air Jamaica	A340-300X	1
Air Madrid	A340-300	3
Air Mauritius, Ltd	A340-300	4
Air Mauritius, Ltd	A340-300X	3
Air Namibia (the National Airline of Namibia)	A340-300	1
Air Tahiti Nui	A340-300X	5
Airbus Asset Management	A340-600	1
Austrian Airlines	A340-300X	2
Brunei Government	A340-200	1
BWIA West Indies Airways, Ltd	A340-300	2
Cathay Pacific Airways	A340-300X	15
Cathay Pacific Airways	A340-600	3
China Airlines, Ltd	A340-300X	6
China Eastern Airlines, Corp Ltd (CAAC)	A340-300X	5
China Eastern Airlines, Corp Ltd (CAAC)	A340-600	5
ConViasa	A340-200	1
EgyptAir	A340-200	3
Emirates	A340-300X	8
Emirates	A340-500	10
Etihad Airways	A340-300X	1
Etihad Airways	A340-500	4
Finnair, Oyj	A340-300	1
France Air Force	A340-200	1
France Air Force	A340-300	1
Gulf Air	A340-300	4
Gulf Air	A340-300X	4

Airbus A340

Operator	Designation	Qty.
Iberia Lineas Aereas De Espana, SA	A340-300	4
Iberia Lineas Aereas De Espana, SA	A340-300X	14
Iberia Lineas Aereas De Espana, SA	A340-600	13
Jet Airways (India), Ltd	A340-300	3
Kuwait Airways Corp	A340-300	4
LAN Airlines, SA	A340-300X	4
Lufthansa	A340-300	11
Lufthansa	A340-300X	18
Lufthansa	A340-600	14
Malaysia Airlines (MAS)	A340-300	1
Mandarin Airlines, Ltd	A340-300X	1
Mesaba Airlines (Northwest Airlink)	A340-200	1
NAS - National Air Services, LLC	A340-600	1
Pantheon Airlines (Olympic)	A340-300	1
Pantheon Airlines (Olympic)	A340-300X	3
Philippines - Philippine Airlines	A340-300X	4
Qatar Airways Co WLL	A340-600	3
Qatar Amiri Flight	A340-200	1
Qatar Amiri Flight	A340-500	1
Royal Jordanian	A340-200	5
SAS - Scandinavian Airlines	A340-300X	7
Singapore Airlines Ltd	A340-500	5
South African Airways, (Pty) Ltd	A340-200	6
South African Airways, (Pty) Ltd	A340-300X	3
South African Airways, (Pty) Ltd	A340-600	9
Srilankan Airlines	A340-300	3
Srilankan Airlines	A340-300X	2
SWISS-Swiss International Airlines	A340-300	1
SWISS-Swiss International Airlines	A340-300X	8
TAP Portugal	A340-200	3
TAP Portugal	A340-300	1
Thai Airways International, Public Co, Ltd	A340-500	3
Thai Airways International, Public Co, Ltd	A340-600	5
THY Turkish Airlines	A340-300	4
THY Turkish Airlines	A340-300X	3
Virgin Atlantic	A340-300	3
Virgin Atlantic	A340-300X	3
Virgin Atlantic	A340-600	18
Virgin Nigeria Airways, Ltd	A340-300	2

Market Intelligence Service Subscribers: The Airline Inventories, Orders and Options appendix provides instructions on how to access an online database of up-to-date listings. Use this database to obtain detailed, current information.

Forecast Rationale

Airbus reported 15 A340 orders for 2006, down from the 28 posted in 2004 and the same as ordered in 2005.

The company began 2007 with a firm order backlog of 43 aircraft, and market demand for the A340 is relatively weak. By comparison, in 2006 Boeing sold 77 of its 777, the primary competitor to the A340, and 153 in 2005.

A340 Losing Out to 777

Put bluntly, the A340 has been taking a beating from the 777, and Airbus has not yet offered carriers compelling new reasons to select its four-engined aircraft over Boeing's design. Industry feedback indicates that the 777 offers lower operating costs and better overall economics, and although Airbus is aware of the problem, the "maturing" of the A340 program is just one of several major issues the company faces right now. With the A400M, A380, and A350 XWB programs already on Airbus' plate, and the creation of the A320 successor high on its list of things to do, we believe that Airbus will not commit the resources to come up with an all-new big twin to replace the A340.

The possibility exists that the company will build a "cleaned-up" A340 that offers reduced operating costs using a combination of engine upgrades and aerodynamic/weight-reduction measures, but during 2006

company officials showed little enthusiasm for committing resources to such a move.

Emirates Airline was a major proponent of an upgraded A340. The company already operates 16 A340s and had ordered another 18, with 10 options for delivery in 2009-10. But the company canceled the order in the last quarter of 2006, and it is possible the airline wanted to move away from the type without a firm commitment by Airbus to improving the A340's efficiency. We think this move is significant and that other carriers will be equally unwilling to wait for Airbus to clarify its intentions toward the A340.

The planned A350-900 and -1000 will offer competition to the 777, and there are signs that Airbus is ready to allow Boeing to assume control of the market segment between the A350-1000 and A380 as it focuses on bringing the A350 to market. Although Airbus may not wish to cede any market segment to Boeing, the pressure of completing other projects may leave it little choice in the matter.

We are therefore projecting the production of 127 A340s during the 10-year forecast period. We expect demand for the A340 to continue to fall, and for Airbus to let A340 production ebb until the line falls silent around 2016.

Ten-Year Outlook

ESTIMATED CALENDAR YEAR PRODUCTION

Aircraft	(Engine)	High Confidence Level				Good Confidence Level				Speculative				Total 07-16
		thru 06	07	08	09	10	11	12	13	14	15	16		
AIRBUS (Consortium)														
A340-200/300(a)	CFM56-5C2/C3	145	0	0	0	0	0	0	0	0	0	0	0	0
A340-300X(b)	CFM56-5C4	96	2	4	2	2	0	0	0	0	0	0	0	10
A340-500(c)	TRENT 500	25	2	6	4	6	7	8	6	4	4	0	0	47
A340-600(d)	TRENT 500	71	12	7	10	8	9	8	6	6	4	0	0	70
A340-8000	CFM56-5C4	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Production		338	16	17	16	16	16	16	12	10	8	0	0	127

(a)A340-200 discontinued in March 2002 after 28 deliveries.

(b)May include some military variants.

(c)Includes HGW variant from 2009.

(d)Includes HGW variant.