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USA

EXECUTIVE OFFICE

PO Box 189
Vienna, VA 22183 – USA
Tel: +1-240-582-0119
Fax : +1-202-618-6267
enquiries@avmarkinc.com

PUBLISHING OFFICE

523 Stephens Avenue
Missoula, MT 59801 – USA
Tel: +1-406-274-3521
mrmotomontana@msn.com

EUROPE

AVMARK ESPAÑA

Gran Via de les Cortes
Catalnes 712, 6, 5
Barcelona 08013
SPAIN
Tel: +34-93-245-0659
enquiries@avmarkinc.com

LATIN AMERICA

AVMARK-SLEM S.A.

Avda. Carlos Julio Arosemena Km 2.5
C.C. La Linea, Oficina 3
Guayaquil
ECUADOR
Tel: +593 4 222 0640
Fax: +593 4 220 6726
Cell: +593-9-979-2586
enquiries@avmarkinc.com

ASIA & ASIA-PACIFIC

AVMARK ASIA-AMS

70 A Boat Quay
Singapore 049859
Tel: +65-65-38-38-35
Fax: +65-65-38-38-10
enquiries@avmarkinc.com

Market Comment

The 2011 Dubai Airshow. Two Gulf carriers ordered 50 777-300ERs, 50 A320neo and five A380 aircraft at the show. Kuwaiti lessor, **ALAFCO** purchased 50 A320 neo airplanes as well. **IATA** said the Gulf Region currently accounts for less than 8 percent of global traffic, but after the **Airshow**, its airlines account one fifth of the world's commercial jet backlog. The carriers' outstanding orders are valued at \$82.7 billion at list prices. It is probable that Gulf carriers have over-ordered long-haul widebodies. The region has 25 percent of all **Airbus** and **Boeing** twin-aisle planes on back order, as well as 92 of the 180 A380s on backlog. **Emirates** placed the single largest deal in **Boeing** history, when it ordered 50 777-300ERs worth \$18 billion and optioned 20 more. The airline will also take delivery of one A380 per month for the next 48 months. **Qatar Airways'** Chief Executive Officer **Akbar Al Baker** warned the airline industry that his airline may operate 190 planes by 2020 and that it is emulating **Emirates** and building a long-haul hub in the Middle East. **Qatar** is paying \$6.4 billion for the 50 A320 neo jets and five A380s. **Etihad Airways**, the third largest airline in the region is also adding new widebodies and routes, but it did not place an order at **Dubai Airshow**.

Led by **Emirates**, the airlines have turned the United Arab Emirates into a hub for international traffic. Travelers can connect many of the world's cities with a single stop in the UAE. **Emirates** developed Dubai as an inter-continental hub in 1996, and it has seen its passenger numbers jump 500 percent in a decade. It has grown into the world's largest airline in terms of international traffic. It flies currently to 114 cities in 67 countries. Dubai is investing tens of billions of dollars in infrastructure, including the **Burj Khalifa**, the world's tallest skyscraper. The Emirate will open the world's largest airport in the mid-2020s. The **Al Maktoum International Airport** will eventually accommodate 160 million travelers a year, which is more than twice the 70 million passengers that London's **Heathrow** can handle. **Airbus** CEO **Tom Enders** said. "The Middle East will remain a strong growth area for the next 20 odd years."

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At the 12th Dubai Airshow, Airbus Announced 211 Orders and commitments worth \$20.5 billion at list prices. The manufacturer sold 130 A320neo jets and five A380s worth \$13.7 billion and signed a Memorandum of Understanding (MoU) for 76 A320 Family aircraft, worth \$6.8 billion. **Qatar Airways'** order for 50 A320neo and five A380 aircraft (worth \$6.4 billion) led the **Airbus** sales. Lessors, **ALAFCO** and **American Capital Group** ordered 50 and 30 A320neo Family aircraft respectively, worth a combined \$7.3 billion. **Spirit Airlines** committed to buy 30 standard A320s with Sharklet wingtips and 45 A320neo aircraft, list priced at \$6.7 billion. **Comlux - The Aviation Group** signed a MOU for its first ACJ321, valued at \$99.7 million. This was **Airbus'** first sale of the ACJ321 type. **Comlux** will operate all four versions of the single-aisle corporate jets, the ACJ318, ACJ319, ACJ320 and the ACJ321. At \$20.5 billion in sales, the **2011 Dubai Airshow** was the second best for **Airbus**, after a four year slump. **Airbus** sold 163 aircraft worth more than \$28 billion in 2007. Since the launch of the type in December 2010, sales and commitments of the A320neo Family had reached 1,420. The neo is the fastest selling commercial jet aircraft in history. Eighteen customers ordered 243 A380s by the end of November.

Boeing Sold Nearly \$20 Billion in Aircraft at the 2011 Dubai Airshow. Sales were led by **Emirates Airline's** order for 50 777-300ERs and options for another 20. The firm order was valued at \$18 billion at list price. **Qatar Airways** bought its seventh and eighth 777 Freighters, which were list priced at \$560 million (\$230 million each). **Boeing** has sold 202 777s, making 2011 the best-selling year for the program since its launch in 1990. **Oman Air** became the newest customer for the 787 Dreamliner when **ALAFCO** transferred six Boeing 787-8s to the airline. **Boeing** forecast that airlines in the Middle East will need an estimated 2,520 airplanes worth \$450 billion over the next 20 years. **Boeing** displayed a wide variety of military aircraft as well as the 787 Dreamliner, a **flydubai** 737-800 and a **Qatar Airways** 777-200LR. More than 800 787s are on order by more than 50 airlines and two have been delivered.

Engine Sales at the 2011 Dubai Airshow. **General Electric** sold \$6 billion worth of GE90-115B engines and a service contract to **Emirates** to power 50 777-300ERs. **Cargolux** signed a \$1 billion agreement to buy GENx-B2 engines for its fleet of 747-8 freighters. **GE** also signed new engine orders and service

agreements with **Air China**, **Cathay Pacific**, **Qatar Airways** and several other airlines, worth \$6.8 billion. The manufacturer intends to build a \$120 million engine overhaul facility in Dubai. **Rolls-Royce** signed more than \$1 billion in orders during the show.

Airbus Orders

Airbus Sold 148 Airliners in November and delivered 45 A320, 11 A330 and three A380 aircraft. The deliveries represent a new record for the manufacturer. Sales were particularly strong at the **2011 Dubai Airshow**, where Kuwait-based international aviation lease and finance company, **ALAFCO**, as stated, ordered 50 A320neo jetliners. This was **ALAFCO's** largest order to date and nearly tripled the lessors A320 Family orders to 76. **Qatar Airways** ordered 50 A320neo Family aircraft, including six A319neos, 30 A320neos, and 14 A321neos. United States-based global aircraft leasing company, **Aviation Capital Group**, purchased 30 A320neo aircraft during the month. **Transaero** became the first Russian A320neo customer when it ordered eight of the jetliners. By the end of the month, **Airbus** booked 1,196 firm orders for the A320neo Family from 21 customers. **Hawaiian Airlines** ordered five more A330-200s for a fleet total of 18. The new A330s will replace the carrier's current 767-300ERs. **BOC Aviation** contracted to buy its first A330-300 and immediately delivered it to **Aeroflot**. **Qatar Airways** placed a repeat order for five A380s; the airline had five on order already. **Airbus'** backlog stood at a record 4,453 airplanes on November 31, consisting of 3,348 A320 Family jetliners, 925 aircraft in the A330/A340/A350 XWB families, and 180 A380s.

Airbus delivered its 7,000th aircraft in December, just 23 months after the delivery of **Airbus'** 6,000th aircraft. The milestone airplane is an A321 which was handed over to **US Airways**, the airline that operates the largest fleet of **Airbus** aircraft in the world, consisting of 93 A319s, 72 A320s, 63 A321s and 16 A330s. **Airbus** delivered its first aircraft, an A300B2, to **Air France**, in 1974. The 1,000th Airbus, an A340-300 went to **Air France** in 1993. The 2,000th aircraft was built six years later in 1999 and three years later, the 3,000th plane entered service. The 4,000th delivery was scheduled in 2005. It took **Airbus** only two years to hand over its 5,000th aircraft, an A330-200 to **Qantas** in December 2007. In January 2010, an **Emirates** A380 was the 6,000th Airbus to be delivered. **Airbus** plans to build up to 42 A320 Family aircraft, seven or eight A330s and up to three A380s per month in 2012, which means it will deliver its 8,000th Airbus in approximately 19 months, or July/August 2013.

Airbus is building nearly two new aircraft per day. It delivered 45 A320 Family jetliners, 11 A330s (including a new A330-200F freighter), and one A380 each to **Emirates**, **Korean Air** and **Qantas**. As of the end of November, **Airbus** delivered 477 aircraft to 84 customers in 2011, 16 more deliveries than in the first 11 months of 2010.

Russia's Second Largest Airline, Transaero Airlines, ordered eight A320neo aircraft. The airline signed a Memorandum of Understanding (MOU) for the airplanes at the **International Aviation and Space Salon MAKS-2011** in August. The A321neo aircraft will replace **Transaero's** Boeing 737s on its medium-haul domestic and international route system. The airline has not selected the engine yet. More than 8,100 A320 Family aircraft have been ordered and more than 4,800 delivered to more than 340 customers and operators worldwide.

Honolulu-Based Hawaiian Airlines ordered five A330-200s, and reserved purchase rights for three more, adding to the 13 A330s that were ordered in 2010. The airline has taken delivery of one A330 and has leased four others. **Hawaiian** will add the A330-200s to its fleet over the next four years. The A330s will replace its 767-300ER fleet and be used for expansion. The airline recently launched a Honolulu-New York route, taking advantage of the A330-200's 6,000 nautical mile range. All of **Hawaiian's** A330s will be powered by **Rolls-Royce** Trent engines. By the end of November, **Airbus** delivered 441 A330-200s and had a backlog of 132 firm orders.

Mexican Low-Cost Carrier, Volaris, signed a Memorandum of Understanding (MOU) for 30 A320neo and 14 standard A320 Family aircraft. **Volaris** will be the first Mexican airline to order the A320neo when the contract is signed. The engine selection will be announced at a later date. The airline was founded in 2006 and has become the third largest carrier in Mexico. It currently operates 24 A319s and nine A320s, and has a backlog of 15 more A320s.

Qatar Airways signed a firm contract for 50 A320neo Family aircraft and optioned an additional 30. The airline split the order and will take delivery of six A319neo, 30 A320neo, and 14 A321neo aircraft. The planes will be powered by **Pratt & Whitney** PW1000G engines. **Qatar** also doubled its A380 orders to 10. Previously **Qatar** ordered 32 A320s and six A321 directly from Airbus, and leased one A320 and six A321s. The last four of the 32 A320s on order will be fitted with Sharklets. **Qatar Airways** ordered two A380s in 2003, and it also added three more orders in 2007. The airline currently operates three A300s, 24 A320s, 12 A321s, 29 A330s, and four A340-600s; it has 60 A350s on order.

The Aviation Capital Group (ACG) leasing company purchased 30 A320neo Family aircraft at the **Dubai Airshow**. The lessor now has ordered 98 A320 Family aircraft. **ACG** will choose the engines at a later date.

Airbus Orders, Deliveries and Backlog November 2011

NOV ORD	NOV DEL	NOV CANX	TOTAL ORD	TOTAL DEL	BACK LOG
			A318		
-0-	1	-0-	82	76	6
			A319		
6	3	-0-	1,480	1,318	162
			A320		
118	34	-0-	5,473	2,827	2,646
			A321		
14	7	-0-	1,216	682	534
			A330		
6	11	-0-	1,184	828	356
			A340		
-0-	-0-	-2	377	375	2
			A350		
-0-	-0-	-0-	567	-0-	567
			A380		
5	3	-0-	243	63	180
This Month			This Year		BL
149	59	-2	1,378	477	4,453

Airbus sold 11,438 aircraft and delivered 6,985 as of November 31, 2011.
Total orders, deliveries and backlog include cancellations and order changes.

Spirit Airlines signed a Memorandum of Understanding (MOU) for 45 A320neo aircraft and 30 standard A320s. The engine selection will be announced later. **Spirit** will use the airplanes to grow its services in the U.S., Caribbean and Latin America. The airline already operates 35 A320 Family aircraft.

Comlux The Aviation Group committed to buy one ACJ321, which is the first order for **Airbus'** largest single-aisle corporate jet. The ACJ321 will be outfitted by **Comlux America** and will be powered by CFM56-5B engines. The airplane features the widest, tallest and longest cabin of any business jet and it is compatible with the ACJ318, ACJ319 and ACJ320. **Comlux** will be the first company to operate all four of **Airbus'** corporate jets (the ACJ318, ACJ319, ACJ320 and ACJ321).

ALAFCO's 50 A320neo Family aircraft were valued at \$4.6 billion at list price. The 30 options were to be finalized by end of 2011. The contract signed at the **2011 Dubai Airshow** confirmed an initial agreement for 30 A320neo aircraft made at the **Paris Airshow** in June. **ALAFCO** previously ordered a total of 26 A320s of which 25 have been delivered to date.

Republic Airways Holdings, the parent company of **Frontier Airlines**, confirmed its MOU for 60 A320neo and 20 A319neo aircraft in December. The MOU was announced at the **Paris Airshow** in June. **Frontier** currently operates eight A318s, 41 A319s, and 14 A320s. **Republic** selected CFM LEAP-X engines for all 80 of their A320neo Family aircraft. **Airbus** now has 22 customers with 1,245 firm orders and commitments for the A320neo Family.

American Airlines split its 130 A320 Family order in December, by buying Airbus A319 and A321 variants, but the numbers to be ordered were not released. The order was announced in July 2011. The Airbuses are scheduled for delivery between 2013 and 2017. **Airbus** will install CFM56-5B engines on the A319s and the A321s will be fitted with V2500-A5 engines. All 130 A319s and A321s will be financed through lease transactions. **American** ordered its first CFM engines when it bought 737-800s in 1996, and it has more than 300 CFM56-7B-powered 737 in service or on order.

The Airbus Global Market Forecast (GMF) said Latin America will require 2,028 new 100+ seat passenger aircraft by 2030. The market requires 1,653 single-aisle, 334 twin-aisle and 41 very large aircraft that will be worth an estimated \$197 billion. Latin America's GDP is growing at an average

Airbus' Latest Global Market Forecast (GMF) reported that Middle Eastern carriers will require 1,882 new passenger and 39 new freighter planes between 2011 and 2030. The passenger airplanes were valued at \$336.3 billion and the wide-body freighters were list priced at \$11.1 billion. The major manufacturers expect to sell 779 single-aisle aircraft, worth \$57.3 billion; 801 twin-aisle aircraft, valued at \$179.8 billion, and 302 very large aircraft, priced at \$99.2 billion. The freighter market was split between 13 twin-aisle aircraft and 26 very large aircraft. **Airbus** predicts that 440 new passenger planes will replace ageing aircraft, and the other 1,442 aircraft will be necessary for growth. The new airplanes will cause the fleet to grow from 800 aircraft today to some 2,260 by 2030. The manufacturer said the strong demand for new aircraft was driven by fleet expansion and replacement; also an increasing urbanization and the growth of mega cities. Several airlines are promoting the region as a geographical hub and tourist destination. Modern long-haul aircraft are capable of linking every major city around the world with the Middle East. Traffic in the region is growing at an average of 6.4 percent per year, which is well above the world average 4.8 percent over the next 20 years.

annual rate of 5 percent, and the region's middle class is expected to surge 75 percent in the next 20 years. Airline traffic will follow suit and grow by more than 6 percent per year in the next 20 years. The region's traffic is expected to triple by 2030. **Airbus** said Europe and North America will remain the most important long-haul markets at 31 and 25 percent of the market, respectively, while interregional and domestic traffic will account for 35 percent of the total market by 2030. It was estimated that Brazil will require 501 single-aisle aircraft, 174 twin-aisle aircraft and 26 very large aircraft (estimated to be worth \$82 billion) by 2030. The country's international and domestic air travel has more than doubled in the last decade, and Brazil's gross domestic product should leap by 144 percent. Mexico will need 371 single-aisle and 41 twin-aisle aircraft in the next two decades, worth some \$30.5 billion. International traffic to and from Mexico City grew by almost 90 percent in the last decade. Colombia has a demand for 102 single-aisle and 33 twin-aisle aircraft, worth an estimated \$13.7 billion. The country's domestic air traffic grew nearly 80 percent since 2000 and the international market more than doubled in the last eight years. Latin America and the Caribbean airlines operate more than 400 Airbus aircraft and have ordered 600, with nearly 300 still in backlog. Globally by 2030, some 27,900 new aircraft, valued at \$3.5 trillion, will be required to satisfy future robust market demand.

Airbus Sharklet A320 First Flight. **Airbus** completed the first flight of the Sharklet wing-tip devices on the prototype A320 (SN 001) in late November. This begins the early flight-test campaign to capture data for fine-tuning the Sharklets; the test data will be used for certification and performance validation. The devices are expected to be certified and delivered to the first customers of the retrofit in 2012.

The Airbus Global Market Forecast (GMF) stated that the U.S. and Canada will require 5,901 new 100+ seat passenger aircraft over the next two decades. The airlines will also need 414 new freighter aircraft as well. The new aircraft are estimated to be worth \$648 billion. The North American market will drop to the third rank behind Asia-Pacific and Europe in world traffic by that time. **Airbus** forecasted that revenue passenger miles will grow by 3.3 percent; it has grown by 11 percent over the last 10 years. Currently, more than 25 percent of the total world revenue passenger miles are carried on U.S. and Canadian airlines, **Airbus** said. The region has the highest number (41 percent) of existing aircraft that will need to be replaced in the coming decades. The **GMF** shows a need for approximately 1,140 twin-aisle aircraft and the rest will be single-aisle aircraft. So far, the region's airlines have favored frequency over capacity and have spurned very large aircraft. **Airbus** has sold 3,100 aircraft to North American airlines and U.S.-based leasing companies, and there is a backlog of some 1,000 aircraft. Airlines in the region operate more than 1,100 Airbus airplanes.

Airbus Forecast that Nordic airlines will require 424 new passenger aircraft between 2011 and 2030, valued at \$38.6 billion. The airlines will need 365 single-aisle aircraft and 59 new twin-aisle aircraft. Around half of the new aircraft requirement for the region will be for the replacement of older less eco-efficient aircraft, and half will be for new aircraft as air travel continues to grow to and from the Nordic countries. According to **Airbus**, the Nordic region consists of seven countries where 50 airlines operate 302 passenger aircraft.

Boeing Orders

Boeing Sold 96 New Jets in November, including 28 737s, a record 62 777s, and six 787s. The manufacturer has sold 9,162 737s, 1,357 777s and 821 787s as of November 31. **Boeing** delivered 27

737s, three 747-8Fs, two 767-300ERs, and seven 777s during the month. At the **Dubai Airshow**, **Emirates** ordered 50 777-300ERs, a new record in terms of dollar value. **Qatar Airways** bought two 777Fs and **Oman Air** picked up six 787-8 orders from **ALAFCO**. An **Unidentified Customer** ordered eight 777-300ERs and **Boeing Business Jet** sold one 737-800BBJ to a VIP Customer. Also during the month, **Aviation Capital Group** ordered 20 737-700s, and **Turkmenistan Airlines** bought two 777-200LRs. The **United States Navy** placed a “low-rate initial production” order for another seven 737-800A/P-8A Poseidon maritime surveillance aircraft. **Singapore Airlines** was the previously unidentified customer for eight 777-300ERs that were ordered in September.

Boeing’s Sales in December were considerably greater. In the first week, **Air Lease Corp.** ordered four more 737s and four 787s; **Virgin Australia Airlines** bought one 737. In the second week, **Boeing** picked up 251 new orders. **Southwest Airlines** signed the launch order for the 737 MAX when it bought 208 737s. **Etihad Airways** joined its rival Gulf airlines and bought more widebodies—10 787s and two 777s.

Federal Express will renew its widebody freighter fleet with the purchase of 27 767Fs and two 777Fs. An **Unidentified Customer** bought two 777s. At the end of the year, an **Unidentified Customer** ordered two more 767s. **Air France/KLM** confirmed its \$5.0 billion order for 25 787-9 Dreamliners. The first airplanes will be delivered to **KLM** in 2016.

The U.S. Navy Awarded a \$1.7 Billion low-rate initial production (LRIP) contract for seven additional P-8A Poseidon maritime surveillance aircraft to **Boeing** in early November. In January, the manufacturer won its first LRIP order for six P-8As. The Navy intends to purchase 117 Boeing 737-based P-8A anti-submarine warfare, anti-surface warfare, intelligence, surveillance and reconnaissance aircraft to replace its P-3 fleet, **Boeing** said. In 2012, the defense contractor will provide aircrew and maintenance training for the Navy as well as logistics support, spares, support equipment and tools. **Boeing** has assembled and flown the first LRIP plane in July. It will be put into operation in 2013. **Boeing** built six flight-test and two ground-test aircraft under the **U.S. Navy System Development and Demonstration** contract awarded in 2004.

Boeing November 2011 Orders, Deliveries					
NOV ORD	NOV DEL	NOV CANX	TOTAL ORD	TOTAL DEL	BACK LOG
737					
28	27	-0-	9,162	6,970	2,192
747					
-0-	3	-0-	1,524	1,424	100
767					
-0-	2	-0-	1,057	1,013	44
777					
62	7	-0-	1,357	977	380
787					
6	-0-	-6	821	2	819
This Month			This Year		BL
96	39	-6	634	426	3,535
Boeing sold 21,451 aircraft and delivered 17,916 as of November 31, 2011.					
The Current Program includes sales and deliveries of 737s, 747s, 767s, 777s and 787s.					
Sales totals are net, minus cancellations.					

Aviation Capital Group (ACG) placed a firm order for 20 Next-Generation 737-800s and committed to buy 35 737 MAX airplanes. The new 737 MAX will be powered by **CFM LEAP-1B** engines. **ACG** has ordered, or has committed to acquire a total of 151 Boeing airplanes, including 111 737NGs, 35 737 MAX aircraft, and five 787 Dreamliners. The lessor acquired 15 737NG delivery positions from an airline in 2006. **ACG** is a commercial airplane leasing company and was founded some 22 years ago.

Singapore Airlines announced that it ordered eight additional 777-300 Extended Range (ER) airplanes worth \$2.4 billion at list price. The orders were entered onto **Boeing's Orders & Deliveries** website in September and attributed to an unidentified customer. **Singapore Airlines** has ordered 85 Boeing 777s, including 27 **General Electric** GE90-powered 777-300ERs. The airline operates 12 **Rolls-Royce** Trent powered 777-300s, and 46 **RR**-powered 737-200ERs.

At the 2011 Dubai Airshow, Qatar Airways ordered two 777 Freighters, valued at \$560 million at list prices. The new order will increase the airline's 777 Freighter fleet to eight. **Qatar Airways** currently operates 28 Boeing 777s, including 16 777-300ERs, three 777 Freighters, and nine 777-200LRs. The airline currently operates 100 aircraft to more than 100 destinations, and plans to serve more than 120 destinations with 120 aircraft by 2013. The 777 Freighter is based on the long range 777-200LR, which **Qatar Airways** operates on ultra long-haul passenger routes to Australia, and North and South America.

Oman Air, the Sultanate of Oman's flag carrier, ordered six 787-8 Dreamliners. With the help of **Boeing**, the airline transferred six existing Dreamliner orders from Kuwait-based leasing company **ALAFCO**; the lessor ordered the planes in July 2007. **Oman Air** was founded in 1993 and is based in Muscat. It flies to 41 destinations in the Levant, Europe, East Africa and Asia.

Dubai-based Emirates Airline purchased 50 777-300ERs at the **Dubai Airshow** and optioned another 20. The firm order was valued at \$18 billion and was **Boeing's** single largest commercial airplane order by dollar value. The 20 options were valued at \$8 billion at list price. The November 777 orders helped to make 2011 the best-selling year for the 777 program. The previous annual record of 154 orders was set in 2005. **Emirates** currently has the world's largest fleet of 777s, with 97 leased or owned 777s in service. It has a backlog of 90 777-300ERs from the current and previous orders. The airline operates every model in the Boeing 777 family, including the 777-200, -200ER, -200LR, -300ER and 777 Freighter. **Emirates** took delivery of its first 777-200 in 1996 and it has deployed its 777s on short, medium and long-haul routes.

2011 Was a Good Year for Boeing. It sold 921 new aircraft, but lost 116 existing orders, ending the year with 805 net orders. The manufacturer booked firm orders for 625 737NG and 737 MAX aircraft, seven 747-8s, 42 767s, 202 777s and 45 787s. Customers cancelled purchases of 74 737NGs, eight 747-8s, two 777s and 32 787s.

Boeing Delivered 128 commercial and three military jets in the fourth quarter. The manufacturer handed over 91 next generation 737s and one 737 AEW&C to airlines and the **South Korean Air Force**, respectively. Boeing delivered nine 747-8F freighters and two 787 Dreamliners. This was far short of the 30 aircraft that it previously forecasted for service entry. Twenty 777s were accepted by airlines. **Boeing** delivered six commercial and two military 767s in the quarter. The manufacturer delivered 372 commercial and three military 737 aircraft, nine 747-8Fs, 20 civilian and three military 767s, 73 777s, and three 787s during 2011, for a total of 483 aircraft.

Lion Air, the Jakarta, Indonesia-based low-cost carrier signed a commitment to buy 29 737-900ERs and 201 737 MAX aircraft in November. The agreement includes purchase rights for another 150 airplanes. When finalized, the 230 airplane deal (worth \$21.7 billion at list price) will be the largest commercial airplane order ever in **Boeing's** history by both dollar volume and total number of airplanes, the manufacturer said. The details of the agreement are being finalized and the firm order will be posted on the **Boeing Orders and Deliveries** website when it is signed. **Lion Air's** options and purchase rights for the additional 150 737s are valued at more than \$14 billion (\$93.333 million each) at current list prices. The commitment was signed at the **East Asia Summit** in Bali, Indonesia, while President **Barack Obama** was watching. **Airbus** complained that the order was a result of **U.S. Government** influence and not fair competition. The complaint tends to ignore the fact that **Lion Air** was the launch customer for the 737-900ER in June 2005, and currently operates 53 737-900ERs, and has another 125 Next-Generation 737s on order. It would be tough for **Airbus** to break into that market. **Boeing** plans to deliver the first 737 MAX aircraft in 2017. **CFM International** said **Lion Air's** order for the LEAP-1B engines was worth more than \$5.3 billion.

FedEx Express ordered 27 767-300 Freighters and also exercised existing options for two additional 777 Freighters in December. The new 777 Freighters will support **FedEx's** growth in the international cargo market. The 767 Freighters will be about 30 percent more fuel-efficient than the MD-10 widebody cargo jets they are replacing. **FedEx** could have bought new A330Fs or may have converted older A330s into freighters but it chose new 767-300Fs instead. The 767 Freighter is based on the 767-300ER and will be able to carry approximately 58 tons of revenue cargo on medium and long-haul routes. The 777 Freighter can fly 4,900 nautical miles with a full payload. **FedEx** is the largest operator of 777 freighters and currently operates 17 777Fs and has orders and options for another 41 aircraft. The first three 767 Freighters will join the freight carrier's fleet of more than 690 airplanes in fiscal 2014. They will be delivered at a rate of six per year from 2015 through 2018. **FedEx** delayed delivery of 11 777s that are on order. Seven airplanes scheduled for 2013 and 2014 will now be delivered late in the decade. The most recent 777 orders will be filled at the very end of **FedEx's** 777F delivery schedule. The new 777s will replace MD-11Fs on international services.

The Federal Aviation Administration (FAA) certified the 747-8I passenger jumbo jet in November. **Boeing** was granted an amended type certificate (ATC) for its 747-8 Intercontinental. This was the third Boeing commercial aircraft to be certified in 2011. The **European Aviation Safety Agency (EASA)** approved the airplane for service in mid-December. **Boeing** will deliver the first 747-8I to the **Kuwaiti Royal Family** as a VVIP transport in January. Other early deliveries will go to the ruling families of **Qatar** and the **United Arab Emirates**. **Lufthansa** will be the first airline to operate the 747-8I and will put it into service in early 2012. The 747-8I is 250 feet long and has a 225-foot wingspan. It can carry 467 passengers in a typical 3-class airline configuration. The plane is list priced at \$333 million and is powered by **General Electric** GENx-2B engines. **Boeing** sold nine VIP-configured 747-8Is to private customers, including two to **Kuwait**, two to **Qatar**, one to the **UAE**, and four to unnamed customers. **Lufthansa** ordered 20 airliners in 386-seat configuration, while **Arik Air** and **Korean Air** ordered two and five 747-8Is, respectively. **Air China** is waiting **Chinese Government** approval to confirm its provisional order for five 747-8Is. **Hong Kong Airlines** committed to buy 15 aircraft at the **Paris Air Show** in June.

Boeing Sold 200 777s this Year—A New Record.

The 777s is currently the most popular long-range widebody on the market. The 777-300ER is list priced at \$298 million each. The 200 new orders are worth approximately \$60 billion, which takes the sting out of the fact that **Airbus** outsold **Boeing** in the single-aisle market by 1,307 to 551, or nearly 2.4 to one, as of December 17. **Boeing** announced that **China Southern Airlines** and **Hong Kong Airlines** each ordered six 777s. The sales were previously listed as “unidentified.” **Boeing** reported that it sold six 777Fs each in June and September 2011. It is highly probable that the Chinese airlines were the purchasers.

Southwest Airlines became the launch customer of the new 737 MAX airplane when it placed its firm order for 150 of the type and optioned 150 more. The low-cost carrier also ordered 58 Next-Generation 737-800s. The **Southwest** order was worth nearly \$19 billion at list prices and it was the third “largest order in **Boeing’s** history” that the company had announced in the last two months of 2011. The airline did not announce which MAX model it had ordered. The 737 MAX 8 and the larger 737 MAX 9 were list priced at \$95.2 million and \$101.7 million, respectively. The carrier will receive steep discounts off the list price due to its huge purchase. **Southwest** will retire the last of its 737-300s and -500s with the new 737 MAX when the first ones are delivered in 2017. The last of the order will be filled by 2022. The 150 options are due for delivery by 2027. **Southwest** operates the world’s largest fleet of 737s (194 737 Classics and 372 737-700s) and has another 92 737NGs on backlog from previous orders. The airline also has options for 92 737NGs, due for delivery from 2014 through 2017. These numbers do not include **AirTran Holdings**, which was purchased in May and has yet to be integrated into **Southwest’s** operation. The airline will retire older planes on a tail for tail basis through 2014, as it receives new ones. **AirTran** operates 88 Boeing 717s and 52 737-700s. **Southwest** wants to retire the 717s before their leases are scheduled to expire between 2018 and 2014. The new jets will be fitted with **CFM International** LEAP-1B engines, worth \$4.7 billion. **Boeing Commercial Airplanes** President and CEO **Jim Albaugh** said, “**Southwest** is a special **Boeing** customer and has been a true partner in the evolution of the 737. Throughout our 40-year relationship, our two companies have collaborated to launch the 737-300, 737-500 and the Next-Generation 737-700. As launch customer for the 737 MAX, **Southwest**, **Boeing** and the 737 continue that legacy.” With the **Southwest** order, the 737 MAX has orders and commitments for more than 900 airplanes from 13 customers. **Boeing** expects to book 1,400 to 1,500 firm commitments for MAX aircraft by the end of 2012, Mr. **Albaugh** said. The Next-Generation 737 family has won orders for more than 6,600 airplanes and **Boeing** has delivered more than 3,800 of them, the manufacturer said.

Boeing Predicted that Middle Eastern Airlines Will Need 2,530 New Airplanes by 2030. The manufacturer forecast that the region’s airlines will need an estimated 1,160 single-aisle jets, and 1,110 twin-aisle airliners over the 20-year period. **Boeing** sees a market for 180 very large airplanes and only 80 regional jets. The whole market would be valued at \$450 billion. The current fleet of 1,040 airplanes would grow to a projected 2,710. Thirty-four percent of the new planes would replace current aircraft and 66 percent of the jets will be used for the expansion of services. **Randy Tinseth**, **Boeing’s** commercial airplanes vice president said, “The collective capacity of **Emirates Airline**, **Etihaad Airways** and **Qatar Airways** has grown by an average of 23 percent annually over the past decade, and we expect this trend to continue well into the future. All three airlines base their growth strategies on the principle that newer, more efficient airplanes will provide a competitive advantage over their rivals from Europe and Asia.”

Etihad Airways ordered 10 787-9 Dreamliners and two 777 Freighters in December. The order was valued at \$2.8 billion at list prices. **Etihad** also optioned, and reserved purchase rights for 25 more 787s. The airline previously ordered 31 787-9s, 18 777-300ERs and one 777F. **Etihad** will take delivery of its 41 787-9s from late 2014 through 2019. The 777Fs will be operated by the **Etihad Crystal Cargo** subsidiary. The flag carrier also has 20 A320s, 25 A350-1000s, and 10 A380s on backorder. **Etihad** is controlled by the Emirate of Abu Dhabi and competes with **Emirates** and **Qatar Airways** for traffic that passes through the region's hub cities. The airline was founded in 2003 and it currently operates scheduled flights to 84 passenger and cargo destinations across Europe, the Middle East, Africa, Asia Pacific and North America.

Air Lease Corporation (ALC) finalized an order for four 787-9 Dreamliners in December. It also exercised options for four 737-800s. The orders were provisionally placed at the **Paris Air Show** in June and are list-priced at \$1.2 billion. **ALC** previously ordered 74 737-800s and five 777-300ERs. The **ALC** order increased the number of 787-9s on order to 270 airplanes. **Boeing** has sold 825 787-8 and 787-9 aircraft as of late December.

Transaero signed an agreement to buy four Boeing 787s as part of its recent fleet-renewal program. The Russian airline has not selected the engines for the 262-seat airliners. The 787s will be used to replace 767s. **Transaero** placed an firm order for eight A320neos in November and has tentatively agreed to buy Airbus A380s and Boeing 747-8s.

Regional Report

Petroleum Air Services (PAS), Cairo, Egypt, ordered its first CRJ900 NextGen regional jet and it optioned a second. These will be the first CRJ Series aircraft to operate in Egypt. The order for the 88-seater is valued at \$42 million at list price and if the option is taken up, the contract would be worth \$85 million. **PAS** was established in 1982 and operates helicopter and fixed wing charter and air-taxi services primarily for the petroleum industry. The company rents its equipment to tour operators for services within Egypt and to international destinations within the region. It currently flies four de

Chinese & Russian Aircraft

China Aircraft Leasing Company (CALC) signed an agreement to purchase 20 Comac C919s. **CALC** is the fourth company to buy the C919 this quarter and the 10th customer for the aircraft since **Commercial Aircraft Corporation of China's (COMAC)** launched it last year. The Chinese manufacturer's backlog now stands at 215. The value of the order was not released at the signing ceremony in Hong Kong on December 8. In the fourth quarter, China's **Bank of Communications Financial Leasing** ordered 30 aircraft, while **Sichuan Airlines** bought 20 and **ICBC Leasing** purchased 45. **COMAC** said the design for the fuselage, tail, and wings have been completed. The first C919 is due to fly in 2014 and the type will enter service in 2016. The C919 is a direct challenge to the A320neo and the 737 MAX in the Chinese domestic market. **Boeing** forecast that Chinese airlines will need 3,550 narrowbody aircraft by the end of 2030. **COMAC** forecasted that it will sell more than 2,000 C919 aircraft to the world's airlines by 2036. The new C919 is powered by **CFM International's** LEAP-1C engine. **CFM** and **COMAC** signed an agreement in June that stated **CFM** will be the sole overseas supplier for an integrated propulsion system (engine, nacelle, thrust reverser) and that the LEAP-X1C engine will be the sole Western powerplant for the new 150-passenger short-to-medium range airplane.

Havilland Dash 7s and five Bombardier Q300 turboprops. **Bombardier** has sold 1,709 CRJ series aircraft, including 266 CRJ900 and CRJ900 NextGen aircraft, and has delivered more than 1,650.

Atlasjet Havacilik A.S., Istanbul, Turkey, signed a Letter of Intent (LOI) to buy 10 CS300 jetliners, and optioned an additional five. The firm order will be worth \$776 million (\$77.6 million each at list price) and the five options will be valued at \$404 million (\$80.8 million each at list price) when the contract is signed. **Atlasjet** is the first low-fare carrier and the tenth customer to order the CSeries aircraft. The airline was founded in 2001, and currently operates 17 aircraft on domestic and international services. **Bombardier** has booked firm orders for 133 CSeries airliners from **Republic Airways** (40 CS300 aircraft), **Deutsche Lufthansa** (30 CS100 aircraft), **Lease Corporation International Group** (17 CS300 and three CS100 aircraft), **Korean Air** (10 CS300 aircraft), and **Braathens Aviation** (five CS100 and five CS300 aircraft). **Bombardier** also has orders from two unidentified carriers for 10 CS100 aircraft each, and an additional three CS100s from another unidentified airline. The CSeries aircraft program has also booked options for 119 aircraft and purchase rights for 10 aircraft, as well as an LOI for up to 30 CSeries aircraft from **Ilyushin Finance**.

BOC Aviation signed a contract to buy 15 EMBRAER 190s. They will be delivered from the fourth quarter of 2012 through 2014. **BOC Aviation** is the latest lessor to order **Embraer's** E-Jets. **BOC Aviation** is a leading Asian aircraft leasing company and has 179 **Airbus** and **Boeing** aircraft in its portfolio. The company now has 73 aircraft on firm order.

CIT Group Inc. ordered 10 E-Jets for delivery through 2015. The lessor can choose between the EMBRAER 190 or EMBRAER 195 models. **CIT** took purchase rights for another 20 E-Jets as well. The planes can be configured in one or two classes, seating from 98 to 122 passengers in a four-abreast configuration, and can fly up to 2,400 nautical miles (4,450 kilometers) nonstop. **CIT** owns or finances a fleet of approximately 300 commercial aircraft.

Aeroflot recently took delivery of its third and fourth Sukhoi Superjet SSJ100s. It put its third SSJ (SN 95010) on international routes linking Moscow to Oslo, Norway, and Budapest, Hungary. The SSJs also fly to neighboring countries in the Commonwealth of Independent States. The first production SSJ100 was delivered to **Armavia airlines** (Armenia) in April; there are now five SSJ100s in service with **Armavia** and **Aeroflot**.

Precision Air Services, Tanzania, contracted to purchase four ATR 42-600s and one ATR 72-600 in a deal list-priced at \$98 million (\$24.5 million each at list price). Delivery of the 50-seat ATR 42-600s will start in late 2012, and the larger 70-seat ATR 72-600 will be delivered in 2014. **Precision Air Services** currently operates two ATR 42-300s, two ATR 42-500s, and five ATR 72-500s. It will become the largest operator of ATR aircraft in Africa when the new airplanes are delivered. **Precision Air Services** was established in 1993 and offers services to all the major towns in Tanzania and cities in Kenya, Uganda, and the Comoros Islands. **ATR** had a record sales year and booked 148 firm orders and 72 options. The orders were list priced at \$4.9 billion. It has a record high backlog of 270 aircraft, worth \$6.1 billion, which represents approximately four years of production.

NordStar Airlines ordered three more ATR 42-600s in November. The Russian airline ordered two ATR 42-600s in September and optioned an additional two. It now has five firm orders and two options;

these airplanes are worth approximately \$132 million (\$26.4 million each) at book value. The airline ordered four ATR 42-500s, and optioned three in 2010; those four planes have been delivered.

Skywest Airlines will lease five more ATR 72-600s from the Singapore-based leasing company **Aviation PLC**. The aircraft will be operated on behalf of Australian carrier **Virgin Australia**. **Skywest Airlines** has already contracted to acquire four ATR 72-500s and four ATR 72-600s. The -500s have been delivered and the first of the ATR 72-600s are due in 2012. The latest five ATR 72-600s will be delivered from early 2013 through early 2014. The contract included eight options and was list priced at more than \$295 million (\$22.7 million each).

Air New Zealand ordered seven ATR 72-600s and optioned five more aircraft in October. The contract, including options, was valued at more than \$270 million (\$22.5 million each) at list price. The first of the 68-seat ATR72-600 aircraft will be delivered to **Air New Zealand** in October 2012. Deliveries will be completed in 2016. The airline's subsidiary carrier, **Mount Cook Airline**, currently operates 11 ATR 72-500 aircraft.

Order Changes and Cancellations

Airbus Order Shuffle. **CSA—Czech Airlines** dropped seven A319 orders and added seven A320 orders in November. **LAN Airlines** exchanged three A319s in favor of three A320 orders. **LAN** now has ordered 32 A319s and 111 A320s. An undisclosed customer transferred its A320 order to **Air Berlin**. **Virgin America** sold one A320 delivery position to **Jackson Square Aviation (JSA)** and leased the plane from **JSA** when it was delivered in November. **Lufthansa** transferred three A321s to its U.K. subsidiary, **bmi**. **Kingfisher Airlines** cancelled two of its four A340-500 orders. It is quite probable that the last two A340 orders will be cancelled as well. **Kingfisher** is in financial difficulty and **Airbus** announced that it was stopping production of the plane on November 10. The demise of the A340 came one month and 20 years after the A340's first flight.

Lao Aviation cancelled its two COMAC ARJ21 orders and bought two A320s in their place. The A320s were delivered in October and November.

Dubai Aerospace Enterprise (DAE) cancelled five of its 15 747-8F orders in October and ordered five new 777Fs in their place. The 777Fs will be leased to **Emirates**. **Boeing** may lose **DAE's** remaining 10 747-8F freighter orders as well. Several people close to the lessor said that **Dubai Aerospace** intended to order the smaller 777F freighter instead. If **DAE** switches to the 777F, it will wipe out nearly 10 percent of **Boeing's** 747-8 backlog. It will also hit the manufacturer in the pocket book. The 747-8F is list priced at about \$333 million, and the 777F sells for \$280 million, so **Boeing** will lose nearly half a billion dollars in lost revenue.

Cathay Pacific Airways will delay the delivery of two Boeing 747-8F freighters that were due in 2012; the planes will be delivered in 2013. **Cathay** will still receive four 747-8Fs in November and December. The international air-cargo carrier said it needed to slow the growth of its capacity from a planned 17 percent down to 10 percent in 2012. The airline forecast slowing demand for its services, but **Cathay** will still build a new cargo terminal in Hong Kong that may open in 2013.

ALAFCO transferred six of its 787-8 Dreamliner orders to **Oman Air** in November. **Oman Air** officially placed a new order that was offset by the Kuwaiti leasing company's cancellation.

Engine News

American Airlines ordered **CFM International** CFM56-5B engines to power the A319s that it ordered in July. The aircraft are scheduled for delivery between 2013 and 2017. The airline has been a **CFM** customer since it ordered the Boeing Next-Generation 737-800 in 1996. **American** has more than 300 CFM56-7B-powered 737NGs in service or on order. **CFM** said the CFM56-5B engine has been chosen to power approximately 57 percent of all A320 aircraft in service or on order. **American** chose the new CFM56-5B Performance Improvement Package (PIP) configuration, which recently entered service. The PIP provides a 0.5 percent improvement in fuel burn due to new high-pressure turbine blades, as well as changes in the manufacturing of the fan and compressor blades and vanes.

CFM International **Boasted at the Dubai Airshow** that it booked orders and commitments for nearly 2,660 LEAP engines at a list price value of more than \$32 billion. The LEAP-X will power the Airbus A320neo, Boeing 737 MAX, and COMAC C919. As of mid-November the company received orders for 930 LEAP-1A engines to power 455 A320neo aircraft. **Air Asia** is the largest customer with orders and commitments for 300 A320neos. **Boeing** decided that the LEAP-1B would be the sole powerplant on its new 737 MAX when it launched the airplane in August 2011. **American Airlines** placed a provisional order for 100 planes that month; **Boeing** has received commitments for approximately 600 more aircraft since then, for a total of 1,400 engines. The LEAP-1C is the exclusive powerplant for the new 150-passenger COMAC C919. **COMAC** has received commitments for 165 aircraft, to date. The LEAP-X engine is scheduled to enter service in 2016 on the A320neo, C919, and on the Boeing 737 MAX in 2017.

Boeing 737 MAX Engines. The manufacturer selected a 68-inch fan diameter for **CFM International** LEAP-1B engines. **Boeing** had to optimize the engine design between a larger and more efficient fan and a smaller fan that would be easier to install on the redesigned airframe. The program is on schedule, **Boeing** said. The new jet's configuration milestones are being met. The company is negotiating with customers and partners to optimize the engine core architecture. During 2012, the engine design will be optimized for the new 737, and the finalized configuration for the airplane will be scheduled for 2013. First flight for the 737 MAX will be scheduled in 2016 with deliveries to customers beginning in 2017, the manufacturer said. **CFM** and **Boeing** had been working together for several years to evaluate engine configurations for both re-engined airplanes, as well as potential new aircraft to replace the Next-Generation 737 family. The company launched the 737 MAX program in August 2011. Since then, **Boeing** has received commitments for more than 900 LEAP-1B-powered 737 MAX airplanes from 13 customers worldwide.

Southwest Airlines formally launched the **CFM International's** LEAP-1B engine on the 737 MAX when it ordered 150 airplanes. The airline also ordered another 58 CFM56-7BE-powered 737-800s. The total engine order was valued at approximately \$4.7 billion at list price. The new airplanes will begin delivery in 2017. **Southwest** launched the CFM56-3 engine as the sole powerplant for the 737-300 in 1981. In 1993 the airline launched the CFM56-7B as the sole powerplant on the Next-Generation 737-700. Today the airline is **CFM's** largest commercial customer operating a fleet of more than 700 CFM56-powered 737s.

Air Namibia, the national airline of Namibia, selected **CFM International's** CFM56-5B (PIP) engine to power two new Airbus A319 aircraft that it intends to buy. The airline signed a Memorandum of Understanding (MOU) with **Airbus** in October 2011. The A319s are scheduled for delivery in 2012.

The engine order is list priced at approximately \$40 million. **Air Namibia** has operated CFM-powered aircraft since the early 1990s, and it currently flies four A319s and 737-500s, as well as two four-engined A340-300s.

Comlux, Switzerland, ordered CFM56-5B (PIP) engines worth approximately \$20 million for the new Airbus ACJ321 that it bought in November. The aircraft will be delivered in 2013. **Comlux** was the first carrier to operate all four of **Airbus'** single-aisle corporate jets, the ACJ318, ACJ319, ACJ320, and A321; all are powered by the CFM56-5B.

Garuda Indonesia chose the CFM International LEAP-1A engines, in December, to power the 10 A320neo aircraft that it ordered in August. The first planes were scheduled to be delivered in 2017. The engine order was valued at approximately \$220 million at list price. The airline selected the CFM56-5B (PIP) to power 15 standard A320s as well. The A320s and A320neo aircraft will be operated by **Garuda's** low-cost subsidiary **Citilink**. **Garuda Indonesia** started to operate CFM56 engines when it acquired 737-300s in the late 1990s. The airline now has approximately 75 CFM-powered 737 aircraft in service or on order.

Republic Airways Holdings finalized its \$2.0 billion order for LEAP-1A engines which will power **Frontier Airlines'** 20 A319neo and 60 A320neo aircraft. The airline has signed a **Rate per Flight Hour (RPFH)** agreement with **CFM** to support a total of 172 LEAP-1A engines. The engines have comprehensive services and support agreements valued at approximately \$3.9 billion over the 18-year term. **CFM** will guarantee engine maintenance costs on a dollar per engine flight hour basis.

JetBlue Airways agreed to buy 86 PW1100G-JM PurePower geared turbofan engines from **United Technologies Corp.'s Pratt & Whitney** unit. The engines will be installed on the 40 Airbus A320neo jets that the airline ordered in October. **JetBlue** was

Rolls-Royce won a \$350 million contract from **Hawaiian Airlines** for Trent 700 engines to power five A330-200s. The contract included **TotalCare** long-term services support. The latest batch of A330s were ordered in November and will be delivered from 2013 to 2015. **Hawaiian** currently operates five A330-200s and has 18 on order.

Rolls-Royce will provide Trent 700 engines to **AviancaTaca** for four A330F freighters, as well as a **TotalCare** long-term engine services and support contract. The A330Fs will be operated by **AviancaTaca's** subsidiary, **Tampa-Cargo**. The order was subject to final contractual agreement. **AviancaTaca** currently operates seven Trent-powered passenger A330s; three more are scheduled for delivery in 2012.

Saudi Arabian Airlines ordered Trent 700 engines, in December, worth up to \$500 million, for the four A330-300s that it bought in June. The airline optioned four more. **Rolls-Royce** will provide **TotalCare** support as well. These A330s will enter service starting in 2013, and join **Saudi Arabian's** existing fleet of eight Trent 700 powered A330s.

Rolls-Royce will provide Trent XWB and Trent 1000 engines for the 12 A350 XWB and eight 787 Dreamliners that **THAI Airways International** ordered.

Oman Air ordered Trent 1000 engines for the six 787-8 Dreamliners that it ordered in November. **Oman** was the first Middle Eastern airline to choose the Trent engine for its 787s. **Rolls-Royce** said its engines were selected for eight of the last nine 787 Dreamliner engine competitions. **Oman Air** currently operates seven Trent 700-powered A330 aircraft, which are supported by a **TotalCare** long term service agreement.

the first U.S. airline to buy the PW1100G-JM for the A320neo. The engines are list priced at approximately \$12 million each so the whole order was valued at \$1.03 billion. Airlines usually negotiate hefty discounts on large orders. The contract included a long-term PureSolution maintenance service agreement. The airline's first A320neo aircraft will be delivered in 2018. **JetBlue's** current A320s are powered by V.2500 engines that are made by **International Aero Engines**, a joint venture which includes **Pratt & Whitney**. **P&W** now has firm engine orders for 410 A320neos.

General Electric Aviation received a \$900 million order from **Etiihad Airways**, Abu Dhabi, for GENx-jet engines to power 10 Boeing 787-9 Dreamliners and GE90 engines for two Boeing 777 freighters. The airline ordered 35 GENx-powered 787 Dreamliners in 2009. The first GENx-powered Dreamliners are slated to enter service early next year. **GE** has won orders for 1,300 GENx engines from 46 customers; the GENx engine uses technology developed for the large-fan GE90 engine.

Air Lease Corporation (ALC) Signed Lease Agreements for 13 additional aircraft in November. From its new aircraft order backlog, it will lease two EMBRAER 175s to **Belavia** (Belarus), four ATR 72-600s to **Passaredo** (Brazil), and two Airbus A320-200s to **S7 Airlines** in Russia. The lessor leased four used 737 NG aircraft as well, including 737-800 (SN 33980) to **Caribbean Airlines** (Trinidad & Tobago), 737-800 (SN 33982) to **Transaero** (Russia), 737-800 (MSN 30285) to **Jeju Air**, and 737-800 (SN 30392) to **Sun Country** in the U.S. **ALC** purchased the following two aircraft with leases in place: 737-800 (SN 34896) which is leased to **Spicejet** (India), and A320-200 (SN 2539) which is leased to **Interjet** (Mexico). Recently, **ALC** concluded the following five lease deliveries from its order book: A320-200 (SN 4869) was leased to **SriLankan Airlines**, A330-200 (SN 1256) was leased to **Vietnam Airlines**, A330-200 (SN 1260) was leased to **Air China**, EMBRAER E175 (SN 17000330) was leased to **Alitalia**, and EMBRAER E190-100LR (SN 19000487) was leased to **Air Astana**.

Leasing Companies

FLY Leasing acquired two 737-800s, for a total of approximately \$62 million. The airplanes were leased to **Air China** and **Korean Air**. The purchase was financed from **FLY's** unrestricted cash and new bank debt. **FLY** also sold one 777-200ER that was on lease to **KLM** and a **SpiceJet**-leased 737-800. Both aircraft were sold for a total of \$139 million, which represented a premium to their net book value, a different way of saying that **FLY** earned a book profit on the deal.

International Lease Finance Corporation (ILFC) agreed to purchase 15 new Boeing 737-800 Next Generation aircraft from **American Airlines** and then lease them back to the airline. The aircraft are scheduled for delivery in 2011 and 2012. **AMR** Chief Financial Officer **Bella Goren** said, "We are pleased to establish a strategic relationship with **ILFC**. This transaction, which will provide financing for 15 of our new 737-800 aircraft, is an effective means for diversifying our funding sources and we look forward to a long-term partnership with **ILFC**." The agreement was signed shortly before **AMR** filed for bankruptcy. **ILFC** took delivery of its 425th 737 aircraft in November. It was leased to **Korean Air** and represented the 690th **Boeing** aircraft to be delivered to **ILFC** in its nearly 40-year relationship with the manufacturer. **ILFC** is **Boeing's** largest lessor customer and **Boeing's** fourth largest customer overall including airlines, **ILFC** said.

GE Capital Aviation Services (GECAS) will lease two new A330-300s to **China Airlines**. Delivery of the first aircraft is scheduled for the fourth quarter of 2013. The aircraft come from **GECAS'** existing order book with **Airbus**.

Jackson Square Aviation (JSA) closed a \$435 million secured term loan, providing the Company with a committed, long-term debt capacity for eleven next-generation aircraft. Financing for the facility was provided by **DVB Bank SE**, **Norddeutsche Landesbank**, and **Citibank**, **JSA** said.

Royal Bank of Scotland Group (RBS), which was bailed out by the **British Government** during the financial melt down in 2008, has offered to sell its aircraft leasing unit. **RBS** was asking \$8 billion for **RBS Aviation Capital**; it received the highest bid from the **China Development Bank Corp**. The other bidders were **Sumitomo Mitsui Financial Group**, Japan, **Macquarie Group**, Australia, and **Wells Fargo & Co**. If the bid is accepted, the sale will be finalized in 2012. The **China Development Bank** is owned by the **Chinese Government**, and is primarily concerned with supporting infrastructure projects in China. Recently it offered loans to Sub-Saharan Africa and Venezuela. The **Royal Bank of Scotland Group** has sold or wound down more than £150 billion or \$233 billion of assets since 2009. The sale of **RBS Aviation Capital** will be the largest single asset the bank has sold since receiving the government bailout. The government currently owns 83 percent of the bank and is anxious to get its money out of the investment. **RBS** is the fifth largest airplane lessor after **GECAS**, **ILFC** and others. **RBS** owns, manages, or has ordered, 372 aircraft. The leasing portfolio was valued at just over \$8 billion. **Goldman Sachs** has been advising **RBS** about the sale.

Delta Air Lines agreed to buy 3 percent of **GOL Linhas Aereas Inteligentes SA** for \$100 million. **GOL** is Brazil's second-largest airline by market value and **Delta** is the world's second-biggest carrier. The tie up with **GOL** gives **Delta** a substantial foothold in Brazil. U.S. airlines earn their highest yields on routes between the U.S. and Latin America. **American Airlines** and **United Continental** are already well established in the North-South American market. In August, **Delta** invested \$65 million in **Grupo Aeromexico SAB** to tighten their cooperation on flights between the countries. **Delta** has a seat on the Board of Directors on each airline. The Latin American airlines gain access to **Delta's** worldwide route system adding value to their domestic networks. Each airline will be able to take reservations for passengers flying on either airline, but **GOL** will not join the **SkyTeam** global marketing alliance. **GOL** will save millions of dollars per year after it transfers two leased 767-300ERs to **Delta**. They were withdrawn from service earlier this year,

Airline News

International Airlines Group (IAG) hopes to close on its purchase of **bmi—British Midland** from **Lufthansa** by the end of March, 2012. They expect regulators to approve of the deal despite objections from **Richard Branson's Virgin Atlantic Airways**. **Virgin** protested to the anti-trust authorities to stop the deal because it would "tilt the competitive landscape dangerously" toward **British Airways**, the airline said. "**BA** is already dominant at Heathrow and their removal of **bmi** just tightens their stranglehold at the world's busiest international airport," Mr. **Branson** said. **IAG** chief executive **Willie Walsh** said he wanted the deal completed by March, but he was not taking anything for granted. "It will be decided by the competition regulators, not by **Richard Branson**. I do not take any note of anything he says." **Bmi** presented a "unique" opportunity that **IAG** couldn't pass up, even amid tough economic conditions, Mr. **Walsh** said. He said that **IAG** would work with regulators to clear any anti-trust

problems. **Lufthansa** agreed on a purchase price of £172.5 million (\$271 million) and will suffer significant loss on the deal, since it bought **bmi** for about £350 million. **Bmi** reported €223 million (\$291 million) of operating losses after **Lufthansa** bought it 2009. The German airline will retain **bmi's** defined pension benefit scheme through a U.K. holding company. **IAG** warned that there will be a "significant price reduction" if **Lufthansa** fails to sell the **bmi Regional** and low-cost **bmi baby** units before the transaction closes in March. **Lufthansa** is trying to sell **bmi Regional** to investors. **Lufthansa** will be happy to dispose of a "substantially loss-making subsidiary" the airline said. **IAG** will add up to 56 daily slot pairs, representing 8.5 percent of London's **Heathrow Airport's** slots. **IAG** already controls 44.5 percent of **Heathrow's** capacity. Mr. **Walsh** said that **bmi** would be restructured and "regrettably that means there will be some job losses." **IAG** will cancel **bmi's** longer routes but may keep the **bmi** brand for shorter routes. Many of the slots will be used for new **British Airways'** services to China, Indonesia, Korea, and Vietnam.

Kingfisher Airlines grounded 15 **Airbus** airplanes because it was unable to meet maintenance and overhaul expenses. The active fleet shrank from 69 in December 2010, to 40 airplanes this month, India's press reported. This comes on the heel of more bad news. **AerCap** repossessed two A320s; the airline delayed delivery of its A380s, and cancelled two A340 orders. It will probably cancel its last two A340s as well. The airline dropped from second to fifth place among Indian airlines recently. On the up side, its November traffic numbers were better than previous months' passenger statistics. The nation's largest bank, the **State Bank of India** heads a consortium of **Kingfisher's** lenders, and said the banks are trying to help by lending more funds to the cash-starved airline. Further, India's press reported that Indian conglomerate **Sahara** plans to lend the airline more than 2.5 billion rupees. Earlier this year, the **State Bank of India** and other lenders converted 13 billion rupees of **Kingfisher** debt into preferred shares and loaned the airline up to another 12.1 billion rupees. **Kingfisher** has not made a profit in the last 16 quarters and its market share is eroding as it deletes flights. More than 100 of its pilots have quit and many suppliers, including airports and oil companies, stopped extending credit to the airline. The problem is that Indian airlines still engage in overly aggressive price competition in the face of the rising costs of jet fuel and other expenses. Things are so

Etihad Airways is buying another 26.22 percent of **Air Berlin**. The German low-cost carrier will issue new shares at a price of €2.31 (\$3.00) each. Abu Dhabi-based **Etihad** will become the largest single shareholder and will hold 29.21 of the stock. It will acquire two seats on **Air Berlin's** Board of Directors. Over the next five years, **Etihad** will invest up to \$255 million in **Air Berlin** to support its fleet development and future network growth. The two airlines will start to codeshare and blend their frequent flyer program. They will also apply for antitrust immunity so they can coordinate their and sales, marketing and route systems. **Air Berlin** will move from Dubai to Abu Dhabi and will offer four A330 flights a week between Berlin and Abu Dhabi. Each partner extolled the virtues of the partnership. **Air Berlin** chief executive **Hartmut Mehdorn** said that Abu Dhabi will become its new gateway to Asia and Australia, while **Etihad** chief executive **James Hogan** said his airline gains access to 33 million new passengers and a broad and complementary European market. This is **Etihad's** first equity investment in another airline and it now has a portfolio of 34 quality airline partners. The two airlines combined carry more than 40 million passengers a year, operate 233 aircraft, and employ 18,000 people. Mr. **Hogan** said, "We estimate each airline could achieve incremental revenues of between €35 million and €40 million just in the first year, and we believe the partnership has enormous potential to unlock a range of efficiencies."

bad at **Kingfisher** that its owner, billionaire **Vijay Mallya**, has pledged its brand, office furniture and other assets against a debt of about \$1.2 billion. Only one of the country's six major airlines has been profitable. **Kingfisher** and **Jet** lost a combined 63 billion rupees in the last three years. State-owned **Air India** needed 32 billion rupees in government bailouts due to its losses. Combined, all the airlines in India are expected to lose about \$2.5 billion in the year ending March 2012.

JetBlue Airways bought 16 slot pairs, eight at New York's **LaGuardia Airport**, and eight at **Washington National Airport**, which were sold through an **FAA** auction. **JetBlue** will take over the slots in 2012 and they allow the carrier to double its services at both airports. The slots became available when the **FAA** approved the **Delta/US Airways** slot swap in late 2011; it forced the airlines to give up some slots to competitors.

LAN Airlines SA's planned \$3.2 billion acquisition of **TAM SA** was approved by Brazil's anti-trust regulator, **CADE**, clearing the final regulatory hurdle for the formation of the world's second-largest airline. Approval was contingent only limiting some flights and fares between Santiago and Sao Paulo. The Chilean antitrust body imposed conditions on the merger that **LAN** will appeal to that country's Supreme Court. The all-stock transaction is expected to close in the first quarter of 2012. The **LAN-TAM** merger will have an \$11 billion market value and will make the combined airline the second largest in the world after **Air China** in terms of dollar value. **LAN** is Latin America's biggest airline by value and it gains almost half of Brazil's airline traffic and access to the region's largest economy. The combined airline will fly to 115 cities in 23 countries. **LAN** is currently in the **oneworld** airline alliance, while **TAM** is a member of the **Star Alliance**. The merged airlines will decide which alliance to stick with by mid-2012. Both airlines will

International Air Transport Association (IATA) Reports August Traffic Growth.

Nov 2011 vs. Nov 2010	RPK Growth	ASK Growth	Pax Load Factor	FTK Growth	AFTK Growth
Africa	2.6%	1.3%	66.2%	-1.7%	1.0%
Asia/Pacific	2.4%	5.4%	73.3%	-7.2%	-2.1%
Europe	4.9%	5.3%	75.4%	-4.6%	1.6%
Latin America	8.8%	11.4%	75.5%	3.3%	4.0%
Middle East	9.8%	10.4%	73.7%	4.7%	13.4%
North America	-1.2%	-1.0%	77.9%	-0.8%	2.1%
Industry	4.0%	5.2%	74.6%	-3.8%	1.9%

Year to Date 2011 vs. 2010	RPK Growth	ASK Growth	Load Factor	FTK Growth	AFTK Growth
Africa	2.6%	4.8%	67.1%	-1.2%	3.3%
Asia/Pacific	4.1%	6.4%	76.0%	-4.8%	0.5%
Europe	9.5%	10.2%	79.1%	1.4%	6.5%
Latin America	10.4%	9.1%	77.4%	5.9%	5.2%
Middle East	8.7%	9.6%	75.3%	7.9%	13.8%
North America	4.2%	6.3%	80.7%	2.2%	7.8%
Industry	6.9%	8.3%	77.5%	-0.5%	5.3%

RPK: Revenue Passenger Kilometers measures actual passenger traffic

ASK: Available Seat Kilometers measures available passenger capacity

PLF: Passenger Load Factor is the percent of **ASKs** used. In comparison of 2009 to 2008, **PLF** indicates point differential between the periods compared

FTK: Freight Tonne Kilometers measures actual freight traffic

AFTK: Available Freight Tonne Kilometers measures available total freight capacity

continue to operate independently under their own brand names for the immediate future.

Xiamen Airlines formally accepted the opportunity to join the global airline alliance **SkyTeam**. China's sixth largest airline begins the process which will lead to full entry into **SkyTeam** by late 2012. The addition of **Xiamen** strengthens the alliance in the southeast China region.

US Airways Added SkyWest Airlines as a Regional Partner. **SkyWest** started operating as **US Airways Express** from Phoenix on December 16. Services will grow from the current six daily flights to approximately 49 flights to 19 destinations by spring 2012. The regional will eventually fly 14 50-seat Bombardier CRJ200 regional jets. They will replace **Mesa Airlines'** CRJ200 and Dash 8 services.

International Air Transport Association (IATA) Posts December Jet Fuel Prices. The organization updates its global average jet fuel price each week. On December 23, the average price of fuel was \$2.94 per gallon. The prices have been trending downward since the first of the year. **IATA** said fuel prices dropped by 3.1 percent over the past month. This is a blessing for hard pressed airlines. Prices are still 14.6 percent higher than they were in December, 2010. The global airline industry will pay \$127.5 billion for fuel in 2011. This is down \$1 billion from the July 1 estimate. **IATA** said that every \$1 increase in the price of a barrel of oil adds \$1.6 billion in costs to airlines.

Bankruptcy of the Month

AMR Corp. Filed for Chapter 11 Bankruptcy Protection on November 29. **American Airlines** was the only major U.S. carrier to avoid bankruptcy in the last decade, until now. **AMR**, the parent of **American Airlines**, succumbed to a mountain of debt caused by rising fuel and labor costs. It will conduct normal business operations while it restructures its debt, costs and other obligations. The company blandly said in a statement released to the public, "We took this action in order to achieve a cost and debt structure that is industry competitive and thereby assure our long-term viability and ability to continue delivering a world-class travel experience for customers." It is probably not a coincidence that **American's** chairman and CEO **Gerard Arpey** retired and **Thomas W. Horton** was named to those posts. Mr. **Horton** said, "This was a difficult decision, but it is the necessary and right path for us to take – and take now – to become a more efficient, financially stronger, and competitive airline." The airline will address its cost structure, including labor costs, he said. **American** suffered from a very substantial cost disadvantage when compared to its larger competitors, all of which restructured their costs and debt through Chapter 11. The airline had become increasingly untenable given the economic uncertainty, revenue instability, volatile and rising fuel prices, and intensifying competitive challenges, Mr. **Horton** explained. The airline holds \$24.72 billion in assets and \$4.1 billion in cash. It listed liabilities of \$29.55 billion.

AMR Corp. worked fast. The U.S. bankruptcy judge agreed that the airline could buy 32 Boeing planes, including 737-800s, 777-200ERs and 777-300ERs that were scheduled for delivery in 2012. **American** will also precede with the purchase of 460 Airbus A320s and Boeing 737s with deliveries starting in 2013. The airline intends to cut its seating capacity by 2 percent in 2012. It quickly filed to set aside leases of 20 MD-80s and four Fokker 100s. Most of the planes have been grounded already. **American** listed the four Fokker 100s, 46 MD-80s, one Boeing 737-800 and one Airbus A300 as aircraft in storage in its last quarterly filing. The airline told the court, "These same aircraft and engines have little if any marketable value and are no longer necessary to the debtors' operations." Storing the unused aircraft is

“nothing more than a cash drain” on the business. The A300, F.100s, and MD-80s were delivered in the 1980s and early 1990s. The 737-800 listed as “stored” may be the airplane that slid off the runway at Kingston, Jamaica, and was written off.

AMR Corp. has \$4.1 billion in cash, which is seen as a shield against the possibility of an unfriendly takeover. **US Airways Group** is seen as the most likely suitor. Since **American** has a substantial bankroll, it will probably not need to apply for debtor-in-possession loans from banks. The loans would make the airline vulnerable to outside influence. If **American** merges with another carrier, it intends to do so from a position of financial strength and not weakness.

Astraeus Airlines ceased operations in November. The U.K. airline foundered because its summer revenue fell short of expectation and it suffered from “a number of technical issues.”

Jade Cargo Suspended Operations in late December. All six 747-400F freighters were grounded because the airline did not have enough money to buy fuel for them. China’s **Shenzhen Airlines** owns 51 percent of **Jade Cargo** while **Lufthansa Cargo** holds 25 percent, and German bank **DEG** owns the remaining 24 percent. **Lufthansa** said **Jade Cargo** was undercapitalized and it is negotiating with the **Bank of China** and **Shenzhen Airlines** about new funding. The German airline complained that cargo companies struggle to earn a profit even though China is the world’s second-largest economy.

Cargo Pallet

Precision Conversions delivered the third full-15 cargo position 757-200PCF freighter to **Cargo Aircraft Management (CAM)**. The 757 (SN 25042) was built in 1991 and operated by **United Airlines**; the PW2037 powered 757-200PCF was leased to **Capital Cargo International Airlines**. **CAM** will also take delivery of the new **Precision Conversions** 757-200PCC Combi in the second half of 2012.

Aeronautical Engineers (AEI) reported that **Varig Logistics** took delivery of its second AEI 737-400SF 11-pallet Passenger-to-Freighter conversion. The aircraft is a high gross weight 737-400 (SN

Labor and Management

Boeing’s International Association of Machinists (IAM) voted overwhelmingly to approve a five year contract that commits **Boeing** to build the 737 MAX in Renton. The union members will get a 2 percent increase in wages each of the five years, but will have to pay more for health care. The rank and file also received a \$5,000 ratification bonus just before Christmas. **Boeing** won five years of labor peace and the withdrawal of its complaint to the National Labor Relations Board that **Boeing** was union-busting at its new 787 plant in South Carolina. Both sides see the contract as a win-win. Washington State Governor **Chris Gregoire** reported that the decision to build the MAX at Renton will provide jobs for 8,000 workers and will result in another 12,000 indirect jobs. The MAX production will account for \$500 million in tax revenue each year. **Boeing** expects to build the 737 MAX well into the next decade. The first MAX will be delivered in 2017 and Next Generation 737 production will wind down shortly after then. **Boeing** may have to build another factory to produce the MAX, because it wants to manufacture up to 60 airplanes, including 40-45 737s per month. **Boeing** faces the expiration of its contract with some 25,000 engineers and technical workers represented by the **Society of Professional Engineering Employees in Aerospace**, in October 2012.

25595) that was built in 1992. It was converted from passenger to freighter configuration at **Flightstar Aircraft Services** in Jacksonville, Florida. **Varig Logistics** leased the 737 from **Aviation Capital Group (ACG)**.

DHL ordered five more A300-600R P2F freighters from **EADS EFW**; the five aircraft were acquired from **Japan Airlines**. **DHL** has now ordered 18 P2F conversions from **EFW**. The modification facility handed over the first two of the 18 A300-600R P2Fs to **European Air Transport/DHL** in November. **EADS EFW** in Dresden delivered the second A300-605R P2F (SN 643) to **RUS Aviation/Global Jet**.

Airbus SAS is negotiating to have **Singapore Technologies Aerospace Ltd.** convert passenger A330 jets into freighters. At the **Dubai Airshow**, **Qatar Airways** said the plane maker might license **ST Aero** to undertake conversion work on its A330 fleet. **Qatar's** CEO **Akbar Al Baker** said the carrier planned to convert 15 A330s into freighters by 2016. If **Airbus** can not meet **Qatar's** schedule, the airline may use converted 767Es instead. **Qatar Airways** ordered two 777F freighters at **Dubai** to increase its cargo capacity.

Evergreen International Airlines will add a 747-400BCF Boeing Converted Freighter to its freighter fleet in 2012. The plane will be the 50th 747-400 passenger jetliner to be modified to a freighter by **Boeing**. The actual conversion work was contracted with **Taikoo Aircraft Engineering (TAECO)** in Xiamen, China. **Evergreen International Airlines** currently operates one 747-400 Freighter and nine 747-200 Freighters.

Technical

Airbus SAS sued **Aviation Partners** to avoid paying patent royalties for wing tips. The lawsuit asked the federal court to declare that the **Aviation Partners, Inc. (API)**'s patent was invalid and that **Airbus** did not infringe on the patent. The winglets reduce drag on an airplane. **Airbus** developed "Sharklet" wingtips for its A320 Family aircraft to reduce fuel burn by 3.5 percent. **Aviation Partners** owns a patent issued in 1994 for a "blended winglet," and claimed that **Airbus** had infringed on the patent. "API's threats are a significant hindrance to **Airbus** and, without an early resolution, place **Airbus** at a competitive disadvantage," the European manufacturer said in its complaint. **Aviation Partners Boeing (APB)** is **Aviation Partners'** joint venture with **Boeing**, and makes winglets for Boeing aircraft.

Military Market

The Royal Australian Air Force (RAAF) took delivery of its third Airbus Military A330 MRTT multi-role tanker/transport in November. All three MRTTs were converted from a commercial A330-200 into a military tanker/transport by **Qantas Defense Services** at the **Australian MRTT Conversion Centre** at **Brisbane Airport**. The fourth MRTT entered **RAAF** fleet service in December. The plane is the first A330 to be converted into an MRTT by **Airbus Military** in Spain. The fifth and final aircraft was delivered to Brisbane for conversion in October and will be delivered next year.

Airbus Military began final assembly of the first series production A400M in November. The plane (SN 7) will be delivered to the **French Air Force** at the end of 2012 or the beginning of 2013. The fuselage and wings were joined at the **Airbus Military** facility at Seville, Spain. The nose and tail stabilizers will be installed shortly.

The Australian Government intends to purchase 10 Lockheed-Alenia C-27Js worth an estimated \$950 million. The package that Australia requested includes: 10 C-27J aircraft; 23 Rolls-Royce AE2100D2 engines; 12 electronic warfare self-protection suites; 12 AAR-47A (V)2 missile warning systems; 12 ALE-47(V) threat adaptive countermeasures dispensing systems; 12 APR-39B(V)2 radar warning receivers; 13 AN/APN-241 radars; 44 AN/ARC-210 warrior very high frequency/ultra-high frequency communication Systems; 12 KY-100 Units; and 12 HF 9550 Radios. The prime contractor **L3 Integrated Systems Group** will also provide: 12 APX-119 identification friend or foe (Mode 4) systems; 14 Blue Force Trackers; 12 portable flight mission planning systems; and support and test equipment, as well as spares, repair parts, personnel training and training simulators, **L3** said.

The First MB 145 Airborne Early Warning and Control (AEW&C) Aircraft took to the air in December. The **Indian Government** ordered three of the airplanes. The flight was deemed a success, and it took place at **Embraer's** headquarters in São José do Campos. The MB 145 AEW&C is based on the Embraer ERJ 145 regional jet. The military plane features an in-flight refueling system, SATCOM capability, a significant increase in electrical and cooling capacities, and a comprehensive set of aerodynamic and structural changes. These improvements will allow the installation of the advanced electronic systems currently being developed by **India's Defense Research & Development Organization (DRDO)** with **CABS (Centre for Airborne Systems)** as the nodal agency, **Embraer** said. The first one will be delivered to the **Indian Air Force** in late 2012.

Lockheed Martin will develop a cheaper variant of the C-130J Super Hercules called the C-130XJ. It will be offered to foreign and U.S. customers that do not need certain advanced features of the standard J-model, including its enhanced cargo handling system, **Lockheed** said. The **U.S. Forest Service** and **South African Air Force** are potential buyers of the C-130XJ. The manufacturer will also propose the new variant to the **U.S. Air Force** as a replacement for the C-27J Spartan. The C-130XJ will be powered by **Rolls-Royce** AE2100 turboprop engines and fitted with a **Honeywell**-based avionics suite, like the standard model. The C-130XJ will not have an automated cargo handling system, so the XJ's crews will have to manually load and lock cargo to the floor of the aircraft. **Lockheed Martin** is proposing the next generation C-130NG, which will feature a new nose, tail and winglets to the Hercules airframe. The manufacturer said it can offer the winglets in the short term but the C-130NG will be offered in two decades. The C-130XJ and C-130NG represent the latest versions of the 57-year-old Hercules design. **Lockheed** hopes it can keep the C-130 in production for the next 15-20 years.

The Mexican Air Force took delivery of its sixth new C295 aircraft that it ordered from **Airbus Military**. The aircraft will be used to transport troops and for medical evacuation (MEDEVAC), or it can carry up to nine tonnes of palletized or bulk cargo. The **Mexican Air Force, Navy, and Federal Police** have acquired ten C295 (including this latest delivery), seven CN235 (six of them in Maritime Patrol version), and ten C212 (eight of them in Maritime Patrol version). To date, **Airbus Military** has sold 86 C295s to 14 different operators.

AIRCRAFT DELIVERIES & SALES Jet Aircraft

A318 & A319. A VIP customer took delivery of the second ACJ318 completed this year. Also in November, ACJ318-112 (SN 4878) was flown to Tulsa for interior outfitting for its customer, **Son Air**. **Airbus** delivered only three A319s in November. All three -111s (SN 4859, 4875 & 4910) were delivered to **Aircraft Purchase Fleet** and leased to **Alitalia**.

A320. **Airbus** delivered a record 33 A320s in November. Fourteen of them were delivered to leasing companies. **Aviation Capital Group** leased three -214s (SN 4891, 4913 & 4941) to **Avianca**

Brazil/Oceanair. **Peach Aviation**, Japan's first low-cost carrier, leased its first -214 (SN 4887) from **GECAS**; **Peach** will lease nine more 180-seat A320s from **GECAS**. The airline was established by **All Nippon Airways (ANA)**, **Innovation Network Corporation** of Japan, and **First Eastern Investment Group** in Hong Kong. It is based in **Kansai Airport**, Osaka, and will start operations in March 2012. **GECAS** leased -214 (SN 4907) to **AirPhil Express**, -214 (SN 4909) to **Spring Airlines**, and -214 (SN 4928) to **China Southern Airlines**. **BOC Leasing** leased the first of two -232s (SN 4884) to **Air New Zealand**; the second -232 (SN 4926) is due in December. **BOC Leasing** leased -214 (SN 4937) to **Vueling Airlines**. **Air Lease Corporation (ALC)** leased -232 (SN 4912) to **China Southern Airlines**, and -214 (SN 4915) to **SriLankan Airlines**. **Virgin America** leased one -214 (SN 4894) from **Jackson Square Aviation (JSA)**. **Aerdragon Aviation Partners** leased -214 (SN 4833) to **Juneyao Airlines**, and -232 (SN 4905) to **Sichuan Airlines**. **Qantas** leased -232 (SN 4914) to **Jetstar Asia**, and -232 (SN 4922) to **Jetstar Airways**. In Asia, **Lao Airlines** received its second -214 (SN 4639). It and its sistership were intended for delivery to **Afriqiyah Airways**, Libya. **AirAsia Philippines** accepted -216 (SN 4889). **China Eastern Airlines** took delivery of three Tianjin-built -214s (SN 4769, 4775 & 4799). **Shenzhen Airways** bought one -232 (SN 4920) and **Uzbekistan Airlines** received -214 (SN 4952). In Latin America, **Airbus** delivered three -214s (SN 4895, 4921 & 4943) to **LAN Airlines**, two -214s (SN 4924 & 4933) to **Interjet**, Mexico, and -232 (SN 4944) to **TACA International**. In the U.S., **JetBlue Airlines** accepted -232 (SN 4904), and **Spirit Airlines** received -232 (SN 4902). **Air Berlin** took delivery of -214 (SN 4917), and **Air France** received -214 (SN 4908). **Gulf Air** bought -214 (SN 4865).

Finnair will return four A320 Family aircraft to lessors at the end of the lease periods in the autumn 2012. The fleet reduction is part of the airline's €140 million savings program that will optimize the airline's flight schedules and network. **Finnair** expects a significant boost in narrowbody aircraft utilization as a result of this move.

Scandinavian Airline System (SAS) secured a five-year \$74 million refinancing of four A321-200s. The financing of two aircraft closed this fall and the remaining deals will close in the second half of 2012. **Deutsche VerkehrsBank AG (DVB)** is security trustee for the transaction. **SAS** is refinancing loans that are maturing in 2011 and 2012.

A321. **Airbus** delivered seven A321s in November, including two -231s (SN 4881 & 4916) to **Lufthansa** and -212 (SN 4901) to **Air France**. **Vietnam Airlines** acquired -231 (SN 4863) and **Sichuan Airlines** accepted -231 (SN 4923). **Saudi Arabian Airlines** took delivery of -211 (SN 4925). **US Airways** received its 58th -231 (SN 4932) — the 7,000th Airbus to be delivered. The airline operates the world's largest Airbus fleet with 223 A320 Family aircraft and 16 A330s in service; another 93 aircraft are on order.

A330 & A340. Airbus delivered a record 11 A330s in November, including three to **CIT Leasing**. The lessor leased the third -202 (SN 1258) to **Jetstar Airways**, one -243 (SN 1261) to **Garuda Indonesia**, and one -302 (SN 1274) to **EVA Air**. **Air Lease Corporation** leased -223 (SN 1266) to **Vietnam Airlines**. **China Eastern Airlines** accepted its sixth -243 (SN 1262). Airbus delivered the second of four A330-223Fs (SN 1148) to **Malaysia Airways** at the **Dubai Airshow**. The plane is operated by **MASKargo**. **BOC Aviation** bought newly delivered -343E (SN 1264) from **Aeroflot**. The **Rolls-Royce** Trent 772B-powered A330 was long-term leased back to the Russian flag carrier. **BOC Aviation** has now leased 14 aircraft to **Aeroflot** and has 179 aircraft in its portfolio. **Thai Airways International** accepted its 21st -343E (SN 1263), and **Air Caraibes** received its third and final -323E (SN 1265). **Egyptair** resumed acceptance of new aircraft with the delivery of two -343Es (SN 1230 & 1238). The airplanes were stored at Toulouse in May and August, respectively.

Asia's Largest Carrier by passenger numbers, **China Southern Airlines**, wants to fly its A380s on overseas routes by early 2012. The airline received its first A380 in October and is flying it on domestic routes. Its second of five -841s (SN 36) ordered, was delivered on December 17. **China Southern** is China's largest domestic airline, but it wants to increase overseas services to meet demand for international travel (rising 13 percent this year) by the expanding Chinese middle class. The airline faces increasing domestic competition from high-speed trains and the numerous start-up carriers. **Air China** and **China Eastern Airlines** are also expanding their fleets and overseas capacity to capture some of the 65 million Chinese travelers who will go abroad this year.

A380. Airbus delivered three A380s to repeat customers in November, including the 16th -861 (SN 083) to **Emirates**. The Dubai flag carrier sold the plane to **Doric Asset Finance**, manager for German closed-end fund **SKY CLOUD III**, for \$234 million, **Doric** said. A banking consortium led by **NordLB** provided a long-term loan for up to \$144 million. The A380 is leased for 12 years and is the 11th A380 and 26th aircraft that **Doric** manages. **Doric's** portfolio is valued at \$4.1 billion. The manufacturer delivered the fifth of 15 -861s (075) to **Korean Air** and the 11th of 20 -842s (SN 063) to **Qantas Airways**. Airbus expects to deliver 25 A380s in 2011 and plans to deliver at least 30 in 2012. The manufacturer is solving the production problems that have slowed its output for several years. The A380 is plagued by inefficiencies caused by low volume production and the extreme complexity of building custom interiors for each customer. **Airbus** said the A380 will break even in 2015 on an operating basis, however, it will take longer to pay for research and development costs.

Boeing 737NG. Boeing delivered 27 737s in November, up slightly from October's 24 deliveries. It delivered two 737s each to several airlines including two -86J/Ws (SN 36121 & 37752) to **Air Berlin**, two -823/Ws (SN 31133 & 40768) to **American Airlines**, two -87L/Ws (SN 39151 & 39152) to **Shenzhen Airlines**, and two -8FE/Ws (SN 40997 & 40998) to **Virgin Australia Airlines**. Lessors received eight -800s. **GECAS** leased -86N/W (SN 36828) to **Royal Air Maroc**, -86N/W (SN 3619405) to **Skymark Airlines**, and one -86N/W (SN 36827) to **Jet Airways**. **Jet** also leased -8AL/W (SN 37961) from **BOC Aviation**. **Aviation Capital Group** leased one -8V3/W (SN 38102) to **COPA Airlines**. **Korean Air** leased -8BK/W (SN 38129) from **CIT Leasing**, and -8Q8/W (SN 38323) from **ILFC**. **Malaysian Airline System** leased -8FZ/W (SN 39322) from **BBAM**. **China Eastern Airlines** accepted the only -700 (-79P/W SN 39720) to be delivered in November. **Air China** received -89L/W (SN 40030), and **China Southern Airlines** accepted -81B/W (SN 38963). **TUI Travel** leased -8K5/W

SN 37261) to **Thomson Airways**. **Turkish Airlines** added it 50th -8F2/W (SN 40975) to its fleet. **Ethiopian Airlines** accepted -860/W (SN 40961), and **SpiceJet** received its 23rd of 53 -8GJ/Ws (SN 37362) that it ordered. **Qantas** bought its 54th -838/W (SN 34187) of 69 on order. **GOL Airlines** took delivery of its 63rd -8EH/W (SN 35846). The airline sold it to **AWAS** for lease back. This was the third of five -800s that **GOL** will sell and lease-back with **AWAS**. The last one is due in early 2013. **Boeing** delivered one -9GPER (SN 37287) to **Lion Air** and the second -9Y3ER (SN 40889) to **Somon Air**. The **Somon** aircraft was the 100th 737-900ER to be delivered. **Boeing** has booked 414 orders for the type from 16 customers. The 737-900ER replaces the larger single-aisle Boeing 757, and is capable of operating more than 90 percent of the 757's routes – at a much lower operating cost. The -900ER typically seats 180 passengers in a two-class layout, but can carry up to 220 passengers in a single-class configuration.

BOC Aviation took delivery of its 50th Next-Generation 737, a 737-800, in December; the lessor committed to acquire 100 of 737NGs. **BOC** ordered 74 new aircraft from **Boeing** and acquired another 65 Boeing aircraft through purchase and leaseback transactions. **BOC** leased the 737 to **WestJet**, Canada, which operates a fleet of 91 737NG aircraft.

Boeing Business Jets delivered a 737-700BBJ (-7ZH SN 38751) to **Nanshan Jet** of Yantai, China, in December. This is the first BBJ for **Nanshan Jet** and the first aircraft the company will operate on its own. Previously its seven jets were operated by **Air China** and were offered for charter services for corporations, government agencies and private individuals in China. **Nanshan Jet** chose **Lufthansa Technik's** U.S. Subsidiary, **BizJet International**, to install a 28-passenger corporate interior at its Tulsa, Oklahoma facility. **Boeing** delivers BBJs without interior or paint so that they can be customized to suit the customers' specific needs and tastes. Three of four BBJ orders and

Boeing delivered the 7,000th 737 to come off its production line to Dubai-based **flydubai**, on December 16. The airplane was **flydubai's** 21st -800 and it has another 30 on order. Orders for the 737 and 737 MAX have passed the 9,300 mark and the backlog has grown to more than 2,300. **Boeing** said it took 4 years 8 months time between the 4,000th and 5,000th deliveries, while the gap between the 5,000th and 6,000th delivery fell to 3 years and 2 months. The 7,000th delivery is just 2 years and 8 months after the 6,000th. With 737 production rates increasing incrementally to a record 42 airplanes a month in the first half of 2014, the gap will continue to close. The manufacture has been building 35 737s per month and expected to ramp up production to 38 per month in the second quarter of 2013, and 42 per month in the first half of 2014.

Boeing delivered the 200th 737 fitted with the Boeing Sky Interior to **Norwegian Air Shuttle ASA** in late December. It was the airline's 18th 737 that featured the 787 inspired cabin; **Norwegian** operates 30 standard 737 NGs. The first plane with the Sky Interior was delivered in October 2010. So far, 65 airlines and leasing companies have ordered the new interior.

The Boeing Company delivered the second Peace Eye 737 Airborne Early Warning and Control (AEW&C) aircraft to the **Republic of Korea Air Force (ROKAF)** in December. Peace Eye No. 2 was the first aircraft to be modified into an AEW&C configuration by **Korea Aerospace Industries (KAI)** at Sacheon, Korea. The plane has been based at **ROKAF Base Gimhae**. Another two aircraft are being modified by **KAI** and will be delivered to the **ROKAF** in 2012. **Boeing** has been building more 737-700 based AEW&C aircraft for the governments of Australia and Turkey.

three of seven deliveries this year were to customers in China. 2012 is expected to be equally as strong for BBJ in the region, **Boeing** said.

Boeing 747. **Boeing** delivered the second and third of 10 ordered -867Fs (SN 39238 & 39239) to **Cathay Pacific Airways**. The first of nine -8Fs (-87UF SN 37561) was handed over to **Atlas Air Worldwide Holdings**. The freighter was delivered to **Atlas Air's** 49 percent subsidiary, **Global Supply Systems (GSS)**, which will operate it for **British Airways World Cargo** through a five-year wet-lease agreement. **BA World Cargo** will lease three -8Fs from **GSS** and use them on long-haul routes to cargo hubs in Asia, Africa, India, and the United States. **Atlas Air** expects to receive two additional 747-8Fs in mid-2012, two in the fall of 2012, and two in the first half of 2013. All **Boeing's** new 747-8 Freighters are powered with GE's GENx-2B engines.

Kalitta Air purchased one new -4HQERF (SN 37304) from **Wells Fargo Bank Northwest, NA**, owner trustee for **HSB Nordbank**. The plane was officially delivered to **LoadAir Cargo** in November 2009. The airplanes were immediately flown to the desert for storage, so **Kalitta** is the first airline to operate the plane and the plane is the first new one that the airline has purchased. The -400F entered service in mid-December. **Kalitta Air** is based at **Willow Run Airport**, near Detroit, Michigan. The airline operates seven -400Fs and 15 -200F aircraft.

Boeing 757. **Macquarie AirFinance** leased -23N (SN 27971) to **Air Astana**, Kazakhstan. The 757 will be deployed on routes from Almaty to Bangkok, Beijing, Hong Kong, Kuala Lumpur, Seoul, and Vietnam. **Air Astana** also leases two A320-200s from **Macquarie**.

Boeing 767. **Boeing** delivered one -346ER (SN 40370) to **Japan Airlines** and **LAN Airlines** accepted its 21st -316ER (SN 40591) in November. **JAL** has one more 767-300ER on order and **LAN** has 11 -300ERs on backlog. **Air Seychelles** wants to return two of its three -300ERs (SN 26328 & 29386) to **ILFC**. The airline returned -205 (SN 23057) and -219ER (SN 24150) to **ILFC** in November as it shifted from a "loss making" long-haul route system to one that featured more services to South Africa and Mauritius.

Boeing 777. **Boeing** delivered seven 777s in November, including two -FS2s (SN 37732 & 37733) to **Federal Express**. **Guggenheim Aviation Partners** leased -FHT (SN 37138) to **TNT Airways**, Belgium. Also, **Emirates** took delivery of -31HER (SN 38986). The Dubai-based flag carrier has 30 -300ERs in service, and another 40 on order. **Biman Bangladesh Airlines** accepted its second -3E9ER (SN 40123) as part of the airlines' fleet replacement and modernization program. The airline plans to operate its two 777s on new long-haul routes. **Air New Zealand** received -319ER (SN 39041) and **Korean Air** bought -3B5ER (SN 37649) from **Boeing**.

Bombardier delivered CRJ900LR NG (SN 15275) to **Pluna** in November. Also, **Air Nostrum/Iberia Regional** accepted CRJ1000 NG (SN 19019). **Yamal Airlines**, Tyumen, Russia, bought three CRJ200LRs (SN 7567, 7470 & 7573) from **Eurowings**.

Embraer delivered two EMBRAER 170-200s (SN 17000326 & 17000328) to **Flybe** and E175 LR (SN 17000331) to **Air Lease Corporation (ALC)** for lease to **Alitalia**. **Fuji Dream Airlines** also received E175 (SN 17000332) in November. **Embraer** delivered seven EMBRAER 190s in November, including

three E195s (SN 19000475, 19000484 & 19000491) to **Azul Linhas Aereas**, and two E190s (SN 19000461 & 19000481) to **Republic Airlines**. They were leased to **Frontier Airlines**. **Tianjin Airlines** received E190 (SN 19000480) and **JetBlue Airways** accepted E190 (SN 19000480). **BOC Aviation** purchased four new E195s from **Azul Linhas Aéreas** and long-term leased them back. Two of the aircraft have been delivered and the remaining two are scheduled for delivery by second quarter next year. This was **BOC's** first deal involving **Embraer** aircraft. In December, **Embraer** delivered two EMBRAER 190s to China's **Hebei Airlines**. The order was confirmed in December and the planes were delivered immediately. The purchases of another eight jets were subject to the **Chinese Government** approval. The E190s will be used to establish a hub network within Hebei Province from its capital Shijiazhuang. As E190s are delivered, services to other provincial capitals will be added. To date, **Embraer** has logged 153 firm orders for commercial and executive jets from China, including 85 E190s. The Company has delivered 46 ERJ 145s, 55 E190s (counting the current two jets), and three executive jets. Embraer is the leader in China's regional aviation market, holding a significant 76 percent share, the manufacturer said.

McDonnell Douglas. SAS agreed to sell a total of 13 MD-82, MD-83 and MD-87 aircraft and an additional 12 JT8D-219 engines to **Sunrise Asset Management**, which is an affiliate of **Allegiant Air**, Las Vegas, Nevada. The aircraft and engines will be handed over to **Allegiant** from late 2011 through February 2013. SAS is phasing out its MD-80s and replacing them with 737NGs and A320s. When this deal closes, SAS will have sold 45 MD-80s to **Allegiant**. This may be the largest transfer of used aircraft between two unaffiliated airlines in history.

Aircastle Limited purchased MD-11 freighters and leased them back to **EVA Airways**. The acquisition was financed by **DVB Bank SE**, as Structuring Agent and Co-Lead Arranger, and **Chinatrust Commercial Bank Co, Ltd.**, as Co-Lead Arranger.

Turboprops

ATR delivered the second ATR 42-500 (SN 849) to Ecuador's flag carrier **TAME** in November. The airline has another one on order. **Air Lease Corporation (ALC)** took delivery of its first two ATR 72-600s (SN 967 & 971) and leased them to Brazil's **TRIP Linhas Aéreas**. **TRIP** will lease four more ATRs from **ALC**. This is the 90th aircraft in **ALC's** fleet since the company was founded in February 2010. **ALC** expects to own 100 aircraft by year end, the company said. **Caribbean Airlines** took delivery of its first ATR 72-600 (SN 968). Earlier this year, the Trinidad and Tobago flag carrier ordered nine ATR 72-600s, worth approximately \$200 million. **Caribbean Airlines** will replace its fleet of five 50-seat Dash 8Q-300s. Also **UTair** took delivery of two ATR 72-500s (SN 976 & 980), and **Flybe Nordic** received ATR 72-500 (SN 977). **Aviation Airframe Holdings**, Singapore, leased ATR 72-500 (SN 979) to **Skywest Airlines** for operation on behalf of **Virgin Australia**. **Skywest Airlines** will take delivery of another two ATR 72-500s in December and four ATR 72-600s in 2012.

Bombardier delivered Dash 8Q-402 NextGen (SN 4388) to **Jazz Air** for operation for **Air Canada Express**, in November. **Porter Airlines** accepted two new Q400 NGs (SN 4390 & 4391), bringing the company's fleet to 26. Porter, one of the largest operators of Q400 aircraft, ordered the two airplanes in March – the contract was worth \$61 million. **Porter** has four outstanding options for Q400 NextGen aircraft which it anticipates exercising within two years, the airline said.

EADS-CASA. Airbus Military delivered the first of seven CN-235s to the **French Air Force**. The air force already operates 19 CN-235s for personnel and cargo transport. The last of the seven aircraft will be delivered by the end of 2012, **Airbus Military** said. The **French Air Force** placed a €225 million (\$302 million) contract for the CN-235s in April 2010. The planes are an interim lift until the A400Ms are delivered after 2013. The **Ghana Air Force** took delivery of C295 (SN 081) and the **Egyptian Air Force** received C295 (SN 083) in November.

Antiques and Other Junque

Airstream International Group has arranged the sale of MD-82 (SN 49215) on behalf of the U.K. **Civil Aviation Authority**, to **Thameside Aero Spares Limited**. The aircraft was previously operated by **ItAli Airlines** and will be used as an evacuation trainer before it is disassembled for parts and scrap.

Apollo Aviation Group bought four A340-313Xs (SN 235, 239, 280 & 292) in December, that were leased to **Olympic Airlines** from the **Greek Government**. **Apollo** was the highest-bidder for the planes, but the government did not release the prices paid for the aircraft. The A340s were grounded in September 2009, when the state-owned **Olympic Airlines** ceased operations. **Apollo Aviation** was founded in 2002, and calls itself “an alternative investment manager.” It has more than 120 aircraft, worth more than \$800 million under lease management. The company also disassembles commercial aircraft and engines and consigns the usable material to several aviation parts distributors. In 2010, **Apollo Aviation** disassembled 36 airframes and 73 engines, including one A318, a A321, and 747s, 757s, 767s, and one 777: They had an average age of 15 years. The group currently has two ex-**Air-India** A310-304Fs and two ex-**Air France** 747-428M Combis available for sale or lease.

Av-Air in Chandler, Arizona, purchased ex-**United Airlines** 747-422 (SN 24380). It will be parted out at **Evergreen Maintenance Center** in Marana.

Accidents and Safety

From Aviation Safety Foundation

2011 Was the Second Safest Year on Record in terms of fatalities and the third safest in terms of number of accidents, the **Aviation Safety Network** reported. A total of 507 people lost their lives due to 28 multi-engine airliner accidents. By the end of 2011, there were a remarkable 80 consecutive days in which there were no fatal airliner accidents – the longest period in modern aviation history. Of the 507 fatalities, 14 were people who were on the ground. The 19 passenger airliner accidents were relatively high when compared with the ten-year average of 16 accidents, while the number of fatalities were more than 250 fewer than the ten-year average of 764 fatalities. The African region accounted for 14 percent of all fatal airliner accidents while the continent accounts for only 3 percent of the world’s departures. The good news is that the number of accidents in Africa are trending downward. The other hot spot for airliner accidents is Russia, which suffered six fatal accidents. The worst accident of the year was an **Iran Air** Boeing 727 crash that killed 77 people.

Sriwijaya Air Boeing 737-4Q8 (PK-CKN, SN 26281) ran off the runway at **Yogyakarta-Adisutjipto Airport**, Indonesia, on December, 20. Several of the 131 passengers and crew were injured in the evacuation, but no one was killed. The airplane landed during a strong rain and failed to stop on the runway. It went off the side onto the grass and the right main gear and the nose gear collapsed.

Kyrgyzstan Tupolev 134A-3 (EX-020, SN 61042) landed hard at **Osh Airport**, Kyrgyzstan, and broke into pieces and caught fire on December 28. All six crew members and 19 of the 82 passengers were taken to hospital for medical treatment.

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Since its establishment in 1962, AVMARK has been providing consulting management services to all sectors of the aviation community. From offices in Washington DC and Singapore, together with associates based in United States (North America), Ecuador (South America), Spain (Europe), Congo (Africa), New Delhi (India and Asian Market), we serve a worldwide clientele. Our staff is comprised of professionals with extensive, successful careers in technical, commercial and managerial areas of aviation enterprises; combining real world operational experience with sophisticated analytical tools to provide our clients with the most effective solutions to their problems.

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Sample of Avmark Publication

SMALL TRANSPORT AIRCRAFT CATALOG

STA is designed as an easy to use reference guide to compare the operating and cost parameters of 35 regional jet and turboprop aircraft. Information includes development history, current production status, configuration and operating performance and costs as reported to the DOT. Pictures of each aircraft are also included.

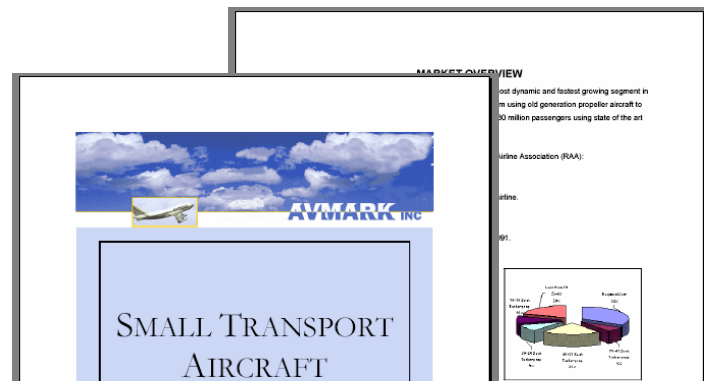
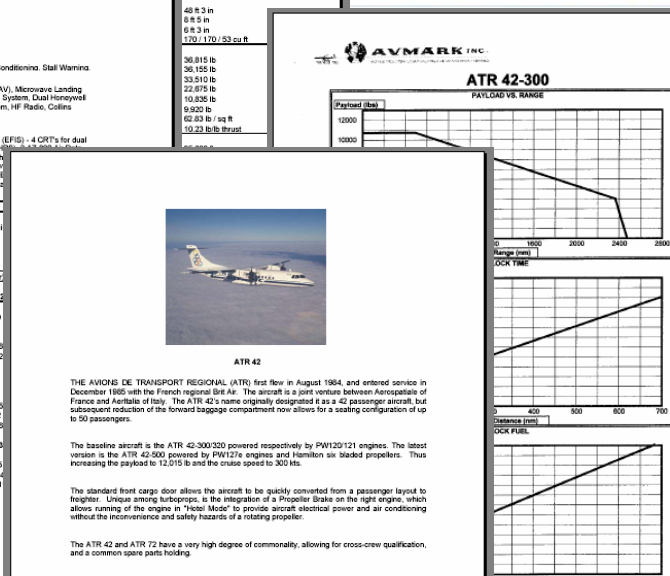
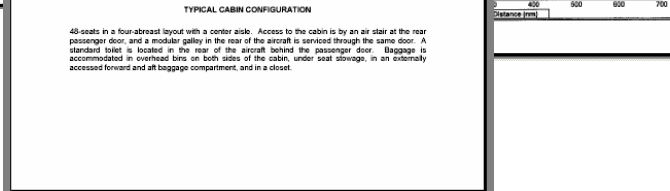


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ATR 42-300		
In Service: 1985	Orders: Out of Production	Deliveries: 284
Specifications		
Accommodations	Passengers*	40
Cabin Attendants	Pilots	2
Powerplant	2 Pratt & Whitney PW120 Turboprops	1,800 SHP / 1,342 kW
Wingspan	28.7 m	94 ft 6 in
Length	24.8 m	81 ft 4 in
Height	6.8 m	22 ft 3 in
Wing Area	170 / 170 / 53 sq ft	1828 / 1828 / 571 sq ft
Max. Ramp Weight	36,815 lb	16700 kg
Max. Takeoff Weight	36,155 lb	16400 kg
Max. Landing Weight	33,510 lb	15200 kg
Max. Ramp Weight	22,875 lb	10375 kg
Max. Landing Weight	10,835 lb	4915 kg
Max. Ramp Weight	9,920 lb	4500 kg
Max. Landing Weight	62.83 lb / sq ft	30.7 kg / sq m
Max. Ramp Weight	10.22 lb / sq ft	4.9 kg / sq m

ATR 42-300		
Standard Equipment:	Right engine Propeller Brake, Airsearch Air Conditioning, Stall Warning	
Optional Equipment:	KLN 90A GPWS, FMS, Area Navigation (RNAV), Microwave Landing System, VLF/Omega Long Range Navigation System, Dual Honeywell AZ-800 Digital Air Data Computers, FA System, HF Radio, Collins Avionics in place of King Avionics, CAT II	
Avionics:	EDZ 800 Electronic Flight Instrument System (EFIS) - 4 CRT's for dual Altitude and Heading Reference Systems (AHRS) - 2 CRT's for dual Computers (ADC), 1 DPE-400 Autopilot, Flight Director, Dual King Gold Crow Dual King Gold Crow VHF Nav, Radar, DME, Radio Altimeter, Honeywell P-800 Weather Radar	
Price List		
Years Built	Base (\$ mil)	
85-96	3.0	
Direct Operating Costs (\$ per block hour)		
Utilization (Block Hours / Year)		
Average Stage Length (nm)	100	300
Flying Operations	\$180	\$180
Flight Crew, Salaries / Expenses	\$173	\$162
Fuel, Oil, Taxes	\$3	\$3
Other		
Aircraft Costs		
Insurance	\$3	\$3
Maintenance	\$476	\$419
Depreciation	\$62	\$62
Rentals	\$318	\$318
Total Direct Operating Costs	\$905	\$833
Cost per Available Seat Mile - \$	12.33	9.85
Cost per Airplane Mile	\$5.67	\$4.44
Cost per Seat Block Hour	\$18.67	\$16.1



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TRANSPORT AIRCRAFT VALUES (TAV)

TAV reports current fair-market values by year of build and projects the future value of 116 transport category aircraft. The future values are based on an economic model that projects the values based on the earning stream of approximately 130 different types of aircraft for their useful lives. The model takes into account the operating cost and characteristics of each aircraft, worldwide and future traffic volumes, fare levels and current and future fleet compositions. The values are presented in both constant and then-current dollars.

Select Aircraft Type

Available Aircraft

- Airbus A300B4-600R
- Airbus A300B4-600RF
- Airbus A310-200
- Airbus A310-200F
- Airbus A310-300
- Airbus A310-300F
- Airbus A318
- Airbus A319-100
- Airbus A320-100
- Airbus A320-200
- Airbus A321-100
- Airbus A321-200
- Airbus A330-200
- Airbus A330-300
- Airbus A340-200
- Airbus A340-300**
- Airbus A340-500
- Airbus A340-600
- Airbus A350-800
- Airbus A350-900
- Airbus A380-800
- Avro RJ-100
- Avro RJ-70
- Avro RJ-85
- RAe 111-200/300/400/500

Picture



Selected

Airbus A340-300

Description

Widebody 4 Engine Passenger

Manufactured

1992 To 2006

Values

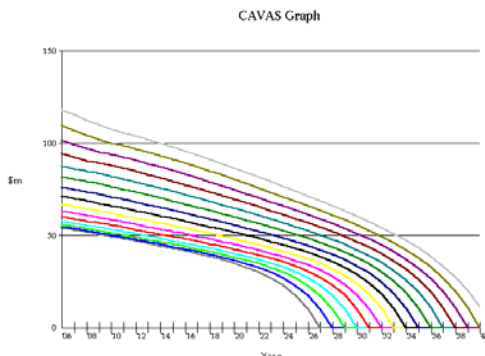
\$54.00m \$118.00m

Estimated Life

35 years File No. 013

Search Term

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CAVAS Figures

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
2006	54.00	54.61	55.83	57.66	60.10	63.54	66.80	71.07	72.94	81.43	87.52	94.23	101.54	109.47	118.00
2007	52.83	53.49	54.73	56.34	58.98	62.01	65.42	69.85	74.86	80.37	85.92	92.18	99.12	106.73	115.25
2008	51.69	52.36	53.61	55.43	57.85	60.94	64.43	68.69	73.65	79.18	84.76	90.49	96.97	104.20	112.39

Profit & Loss Report

Aircraft Type: Airbus A340-300

Period	1	2	3	4	5
REVENUES (US\$)					
Passengers	49,328,754	49,270,739	49,212,559	49,154,213	49,095,701
Freight & Mail	8,879,176	8,868,733	8,856,261	8,847,758	8,837,226
Other Revenue	986,575	985,415	984,251	983,084	981,914
TOTAL OPERATING REVENUE	59,194,505	59,124,887	59,055,070	58,985,055	58,914,841
VARIABLE EXPENSES					
Fuel	6,918,975	6,917,743	6,916,470	6,915,177	6,913,846
Landing Fees	3,021,823				
Enroute Charges	392,440				
Pax Commissions	7,399,313				
Freight Commissions	1,331,876				
Food & Supplies	3,999,194				
Passenger Liability Insurance	379,590				
TOTAL VARIABLE COST	23,443,212				
SEMI-VARIABLE EXPENSES					
Crew Salaries & Expenses	5,177,760				
Maintenance & Engineering	587,650				

Profit & Loss Report

Aircraft Type: Airbus A340-300

Period	1	2	3	4	5
FIXED EXPENSES					
Station Overhead	346,597	345,923	345,249	344,575	343,901
Maintenance Burden	176,295	351,824	526,586	700,581	873,810
Other Overhead	0	0	0	0	0
TOTAL FIXED COST	522,892	697,747	871,835	1,045,156	1,217,711
TOTAL OPERATING COST	31,464,497	32,186,749	32,903,601	33,618,052	34,329,104
General and Admin. Allocation	1,573,225	1,609,287	1,645,180	1,680,903	1,716,495
TOTAL COST	33,037,722	33,796,036	34,548,781	35,298,955	36,045,599
OPERATING PROFIT OR LOSS	26,156,782	25,329,851	24,506,290	23,686,100	22,869,282
D-CHECK ADJUSTMENT					
Cumulative Hours	4,830	9,650	14,459	19,257	24,045
Cumulative Dollars	315,000	0	0	0	0
ADJUSTED CASH FLOW	25,841,782	25,329,851	24,506,290	23,686,100	22,869,282
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