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Market Comment

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Record Sales and Deliveries During the Great Recession. The lingering economic doldrums in the U.S., the euro-zone debt crisis in Europe, price inflation in China and the roller-coaster fuel prices around the world have not dampened the airlines' enthusiasm to buy new airplanes. The fact that both major manufacturers launched newish narrowbody projects helped considerably to inflate the sales totals.

Airbus Boasted of New Records. The European manufacturer delivered 534 commercial aircraft to 78 existing customers and 10 new ones, marking the 10th year in a row with a production increase. Deliveries include a new record for 421 A320 Family aircraft (20 more than in 2010), 87 A330 Family (same as in 2010) and 26 A380s (up from 18 in 2010). In December alone, **Airbus** delivered a record four A380s. **Airbus Military** also delivered a record number of 26 new aircraft—20 **EADS CASA** turboprops and six A330 MRTTs. **Airbus** booked 1,608 new orders, worth \$169 billion, making 2011 the most successful year in the company's history. Cancellations lowered the sales total to a net increase of 1,419 commercial aircraft, worth \$140 billion at list prices. It still beat the previous sales record of 1,458 gross and 1,341 net orders set in 2007. **Airbus** claimed 54 percent of the commercial jet market, when measured by value, and 64 percent measured by volume. Despite challenging markets, **Airbus Military** sold five new CN235 and C295 aircraft. During the year, **Airbus** booked 1,226 firm orders for its re-engined A320neo Family aircraft, making the type "the fastest selling airliner ever". They also sold 122 standard A320 Family aircraft. Net commercial orders also included 19 A380s and 85 A330s, while **Airbus** suffered a net loss of two A340 and 31 A350 XWB orders. The company ended the year with a commercial jet backlog of 4,437 aircraft valued at over \$588 billion at list prices. This equalled seven years of production. The military backlog stands at 214 aircraft, including 174 A400Ms, 22 A330 MRTTs, and 18 light/medium turboprops. **Airbus** is increasing production to 42 single-aisle planes per month by the end of 2012, and up to 10 widebody A330 planes by 2013. The A380 production will remain stable – at three per month. The manufacturer intends to build 570 aircraft in 2012.

Airbus admitted that its record order intake resulted from its strategic decision to launch the A320neo. The quick succession of mega orders

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prompted **Boeing** to launch its 737 MAX. Next year will not be so glittery for **Airbus**. Chief Executive Officer **Tom Enders** told the press that he expects total orders to drop to the 600 to 650 aircraft range, now that many airlines have loaded up on A320neo orders. Without the A320neo, the single aisle sales would have been lackluster. It netted only 122 A320 Family sales, although some airlines would have bought standard A320s if the A320neo was not offered. Twin aisle widebody sales were not anything special either. **Airbus** sold 109 new A330/A350s, but lost 14 A330s, two A340s and 41 A350s, more than half the number of new sales. The A380 program lost a third of the 29 new orders. The manufacture shut down the A340 program in 2011, after losing all of the **Kingfisher** backlog. Two VIP A340-500s were completed last year and are still in storage awaiting delivery.

Boeing Had a Pretty Good Year. The manufacturer booked 921 commercial airplane orders in 2011, fueled by a launch order for 150 737 MAX aircraft and several record breaking widebody orders. The new orders were offset by the loss of 116 previous sales for a net increase of 805 airplanes. **Boeing's** twin-aisle 777 program received 202 orders, a new record for a single year's sales. The 777 leads the twin-engine widebody market with a total of 1,363 orders. Two American mega carriers ordered 100 737 NGs each. The launch of the 737 MAX brought a deluge of more than 1,000 orders and commitments from 15 customers. The company delivered 477 airplanes and ended the year with a strong backlog of 3,771 unfilled commercial orders. **Boeing** planned to deliver approximately 30 more widebody 747s and 787s that were built and sitting on the ramp at Everett, but production glitches and cancellations kept them on the ground. **Boeing Commercial Airplanes** President and CEO **Jim Albaugh** said, "Our goal in 2012 is to ensure that 787 production is stable and reliable, while maintaining focus on execution as we deliver an increasing number of airplanes across all our programs." Also, "The 737 MAX will be a key part of our customers' future fleet needs. As our current commitments become firm orders and we add even more customers, I have no doubt that 2012 will be the 'Year of the 737 MAX'," he said. The manufacturer will increase 737 production to 38 airplanes per month, from the current 35 per month rate in December. Production of the 777 will rise 8.3 airplanes per month from the current seven per month. **Boeing** will also increase 787 production to 3.5 per month in the second quarter and to five jets per month by the end of 2012. When the South Carolina factory comes on line, it will eventually build five per month as well.

Boeing Chief Executive **Jim McNerney** projected that **Boeing** will deliver 585 to 600 jets in 2012, up 115 to 130 from 2011's total, and more than **Airbus'** plan to deliver 570 new aircraft. The manufacturer intends to move more than 40 partially completed 787 Dreamliners that are on the flight line in Everett, to long patient customers. Mr. **McNerney** said the company intends to deliver a total of 35 to 43 Dreamliners and an equal number of 747-8s in 2012. Two-thirds of the 787 deliveries will come from the planes that were parked and must undergo extensive modification before they can be delivered. He said the modifications were required because of engineering changes that emerged from flight tests. **Boeing** reported that it earned more than \$5.8 billion in profit and generated \$4 billion of cash, ending the year with more than \$11 billion in cash. The company forecasted that its revenue will rise to between \$78 - \$80 billion in 2012.

Airbus Chief Operating Officer **John Leahy** admitted that the 777 was the current industry leader. He said, "I've got to give them credit on the 777, if you need lift in the long-range widebody market now, that's the plane." But, he said, "The day we deliver the first A350-1000, the 777-300ER will become obsolete." Fortunately for **Boeing**, that day is about five years in the future. **Airbus** will deliver the first A350s in mid-2014, giving **Boeing** two years to build down its backlog of 865 787s. **Boeing** won more than 76 percent share of the twin-engined widebody market, having grossed 202 orders for 777s and 45 787 orders, not to mention 42 orders for the 767 (most were for freighters and KC-46 tankers). **Airbus** sold 99 A330s and only 10 A350 XWBs while losing 57 combined orders for their planes. Mr. **Leahy** expects **Boeing** to outsell **Airbus** this year as customers confirm their 850 commitments for the 737 MAX.

Airbus Orders

Airbus Sold 217 Airliners in December and delivered 44 single-aisle airplanes, nine A330s and a record four A380s during the month. The manufacturer sold 1,608 new airplanes but lost 189 existing orders for a net total of 1,419 sales – a new record. **Airbus** delivered a record 534 new jetliners during the year, up

Airbus Orders, Deliveries and Backlog December 2011

DEC ORD	DEC DEL	DEC CANX	TOTAL ORD	TOTAL DEL	BACK LOG
			A318		
-0-	-0-	-2	80	76	4
			A319		
20	1	-0-	1,500	1,319	181
			A320		
184	33	-29	5,612	2,860	2,752
			A321		
1	10	-1	1,100	692	408
			A330		
2	9	-0-	1,186	837	349
			A340		
-0-	-0-	-0-	377	375	2
			A350		
-0-	-0-	-14	555	-0-	555
			A380		
10	4	-0-	253	67	186
This Month			This Year		BL
217	57	-46	1,419	534	4,437

Airbus sold 11,479 aircraft and delivered 7,042 as of December 31, 2011.

Total orders, deliveries and backlog include cancellations and order changes.

from the 510 provided in 2010. In December, **Airbus** won 10 A380 orders from **Hong Kong Airlines** and sold 174 new A320neo Family aircraft. **Frontier Airlines** led the month's orders when it confirmed its commitments for 20 A319neo and 60 A320neo aircraft that were announced during the **Paris Airshow** in June 2011. **Spirit Airlines** ordered 45 A320neo jetliners, while an unidentified customer booked 35 A320neo aircraft. Mexican low cost carrier **Volaris** purchased 14 A320neo and 30 A320 jetliners, and **Comlux** ordered the first ACJ321, in December. **Intrepid Aviation Group** ordered two passenger A330-200s, bringing the A330 Family order book to 1,186. **Airbus** has sold 1,226 A320neo Family aircraft to 23 customers, for a total of 8,292 A320 Family aircraft. The A380 program reached 253 sales.

Airbus delivered 26 A380s in 2011, an average of more than two per month. The manufacture completed 44 A320 family jetliners in December and delivered its 7,000th aircraft, an A231, to **US Airways** (the largest operator of the type). **Airbus** delivered 421 A320 Family aircraft, and 87 A330s, an average of 35 A320s and 7.25 A330s per month.

Hong Kong Airlines confirmed a Memorandum of Understanding (MOU), it signed at the **Paris Airshow** in June, 2011, to buy 10 A380s. They were valued at about \$3.8 billion at list prices. The Chinese airline expects to receive its first A380 in 2015, and it will commence long-haul services to destinations including Paris, London and Sydney, with the planes. It is possible that Hong Kong will take over A380 production slots that were abandoned when **Qantas** delayed delivery of six A380s that were due after 2014. The order is good news for **Airbus** because it offsets the potential cancellation of five A380 orders by India's **Kingfisher Airlines**. The manufacturer sold 12 other A380s to new customers **Asiana** and **Skymark Airlines** in 2011 and another seven to repeat customers, **Lufthansa** and **Qatar Airlines**. Airbus lost 10 existing orders during the year.

Mexican Low Cost Carrier Volaris signed a purchase agreement for 14 standard A320s and 30 A320neo aircraft in December. **Airbus** said this was the largest single commercial aircraft order, and the first purchase of the A320neo to be placed by a Mexican airline. **Volaris** will make its engine selections at a later date. The airline operates 24 A319s and 10 A320s, and has a backlog of an additional 14 A320s. They are all powered by **IAE V2500** engines. **Volaris** started operations in 2006, and quickly grew into one of the top three airlines in the country. The 44 new aircraft will support the airline's expansion and fleet renewal plans.

Republic Airways Holdings, the parent company of **Frontier Airlines**, confirmed a MOU for 20 A319neo and 60 A320neo 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.

Comlux The Aviation Group bought the first ACJ321, the first A321-based corporate jet to be sold by **Airbus**. The ACJ321 will be delivered to **Comlux America** in 2013, which will install an executive interior in the plane. It will be powered by **CFM International** CFM56-5B (PIP) engines. The Airbus ACJ321 features the widest and tallest cabin of any business jet, as well as even more floorspace and baggage capacity than today's ACJ318, ACJ319 or ACJ320, **Airbus** said. All the ACJs are powered by CFM56-5B engines.

Airbus Sold 91 Jetliners in January. Sales were lead by **AviancaTaca's** purchase of 33 A320neo aircraft and 18 A320 Family jetliners. This is confirmation of **AviancaTaca's** Memorandum of Understanding announced during the **2011 Paris Airshow**. **Spirit Airlines** finalised its order for 30 standard A320s in January. The airline ordered 45 A320neo aircraft in December. Existing customers, **Tibet Airlines** and **BOC Aviation** added three A319s and two A320s, respectively and a new customer, **Air Namibia** ordered two A319s. **Etihad Airways** placed a repeat order for two A330-200F freighters. The new freighters will join two A330-200Fs in operation with **Etihad Crystal Cargo**. **Air Lease Corp.** ordered its fourth A330-300.

Airbus delivered 37 aircraft during the month, 22 fewer than were delivered in December. It handed over two A319s, 24 A320s and one A321, as well as five A330-200s, one -200F, three -300s, and the 15th A380 to **Singapore Airlines**.

Spirit Airlines finalized its firm order for 45 A320neo aircraft and 30 A320s in late January. The low-cost carrier signed a Memorandum of Understanding (MOU) for the A320neos at the **2011 Dubai Airshow**. **Spirit's** order for 45 A320neo aircraft was booked in December, 2011, and the A320 order was placed in January. The airline has not yet announced its engine selection, but its current fleet of 37 A320 Family aircraft was powered by **IAE V2500** engines. The airline was founded seven years ago and it previously ordered 20 A319s and 20 A320s; nine of them have been delivered. The other 26 airplanes in its fleet are leased. The new aircraft will be used on **Spirit's** growing network of flights in the United States, Caribbean, and Latin America.

AviancaTaca, and its subsidiary **AeroGal of Ecuador**, ordered 33 A320neo and 18 standard A320 Family aircraft in January. The order stems from a MOU signed during the **Paris Airshow** in June, 2011. The new aircraft will support **AviancaTaca's** expansion into new markets in Latin America, while keeping the airline's fleet among the youngest in the region, **Airbus** said. The manufacturer said the sale was the largest from a single Latin American airline in terms of number of aircraft. As of January,

Airbus Orders, Deliveries and Backlog January 2012

JAN ORD	JAN DEL	JAN CANX	TOTAL ORD	TOTAL DEL	BACK LOG
			A318		
-0-	-0-	-2	80	76	4
			A319		
32	2	-0-	1,519	1,321	198
			A320		
52	24	-0-	5,668	2,884	2,784
			A321		
4	1	-0-	1,113	693	420
			A330		
3	9	-0-	1,189	842	347
			A340		
-0-	-0-	-0-	377	375	2
			A350		
-0-	-0-	-0-	555	-0-	555
			A380		
-0-	1	-0-	253	68	185
This Month			This Year		BL
91	37	-0-	91	37	4,437

Airbus sold 11,570 aircraft and delivered 7,079 as of January 31, 2012.

Total orders, deliveries and backlog include cancellations and order changes.

AviancaTaca had placed firm orders for 190 **Airbus** aircraft; it has taken delivery or leased 88 A320 Family aircraft and eight A330s.

Etihad Airways signed a firm order for two additional A330-200F freighters in January. The flag carrier of Abu Dhabi was a launch customer and the launch operator of the A330-200F. It took delivery of its first A330F at the **Farnborough International Airshow** in 2010. This order will increase **Etihad's** A330F fleet to four. The A330-200F freighters are operated by the airline's cargo business, **Etihad Crystal Cargo**.

Cathay Pacific Airways ordered six more A350-900s, costing \$1.63 billion at list prices (\$272 million each). Asia's third-largest airline in terms of market value previously ordered 30 A350s and contracted to lease two more from **ILFC**. The new long-haul planes will be used for flights to Europe and replace older, less-efficient A340-600s and 747-400s. **Cathay** will take delivery of its first A350-900s in 2014, and the ones ordered in January will be delivered in 2016 and 2017, the airline said.

Norwegian Air Shuttle AS signed a Memorandum of Understanding (MOU) in January, to buy 100 A320neo aircraft. This made the fourth largest low-cost airline in Europe the latest customer for the A320neo, and a new customer for **Airbus**. The airline optioned another 50 A320neos. The A320neos will support **Norwegian's** growth and modernization strategy. **Norwegian** operates a network across Europe and to North Africa and the Middle East. It is rapidly expanding its low cost operations and intends to enter the long-haul Far Eastern market when it takes delivery of the first of six Boeing 787s in 2013. The new aircraft will feature a single class cabin layout, seating approximately 180 passengers. **Norwegian's** engine decision will be announced at a later date. The airline also ordered 22 Next Generation 737-800s and 100 737 MAX8 aircraft. The 222 planes on firm order are worth \$21.54 billion at list price. The first A320neos will be delivered in 2016.

February Orders. BOC Aviation has exercised options for two A320 aircraft to be delivered in the fourth quarter of this year. The lessor took delivery of its 100th A320 family aircraft in February and leased it to **South African Airways**.

Air Namibia has ordered two new A319s, confirming a Memorandum of Understanding (MOU) signed with **Airbus** in October 2011. The A319s are scheduled for delivery in 2012. The Namibian flag carrier is a new customer for **Airbus**; it already operates two leased A319s on regional routes, and two A340-300 aircraft on its international route between Windhoek, Namibia, and Frankfurt, Germany. The new A319s will seat 112 passengers in a two class layout.

ALAFCO—Aviation Lease and Finance Company finalized its order for 35 A320neo Family aircraft. The A320neos are scheduled for delivery between 2019 and 2021. The Kuwait-based international aircraft leasing company selected CFM International LEAP-1A engines to power the 35 Airbuses. The firm engine order was valued at \$840 million at list price. **ALAFCO** now has a backlog of 85 A320neos, after having signed an order for 50 A320neos at the **2011 Dubai Airshow**.

Drukair, the flag carrier of the Kingdom of Bhutan, signed a (MOU) to buy a third A319 aircraft fitted with Sharklet wingtips. The airline is based in Paro, which is one of the world's most challenging airports. At 7,000 feet altitude, the airport is surrounded by mountains. **Drukair** air crews operate by Visual Flight Rules only, so the airline needs a high performance and responsive aircraft. The A319 is the largest aircraft operating out of Paro. **Drukair** will deploy the new aircraft to increase capacity on existing regional routes as well as to open up new services to Singapore and Hong Kong.

Airbus Announced That Its A330 Production reached a rate of nine per month in January, a new record for **Airbus** twin-aisle widebody production. The manufacturer plans to ramp up production to 9.5 aircraft monthly. The build-rate was increased to meet international demand for the popular passenger and freighter aircraft; A330s are assembled in Toulouse, France. The A330 is also the basis for the military A330 MRTT multi-role aerial refueling tanker transport. As of year-end 2011, **Airbus** had booked orders for 1,186 A330s, of which 837 had been delivered, and 349 were on backlog.

Airbus Increased the Average List Prices of its aircraft by 3.9 percent as of January 1, 2012. The manufacturer raised the price of the A320neo Family by an average of 6.1 percent. “Our new pricing reflects the strong demand for our modern, eco-efficient aircraft families,” said **John Leahy, Airbus** Chief Operating Officer—Customers. “With competition amongst carriers heating up, any tool that helps cut their costs will pay handsome dividends. The A320neo offers a 15 percent fuel cost savings, making it the blue-chip single-aisle aircraft investment by anyone’s standards.” **Airbus** has sold almost 11,500 aircraft and delivered more 7,000 of them since 1974.

Boeing Orders

Boeing Sold 287 New Jets in December, including 150 737 MAX aircraft to **Southwest Airlines**. The very-successful low-cost carrier also ordered 39 737-700s and 19 737-800s. Express package carrier **FedEx** ordered its first 27 767-300Fs and picked up two 777F options, for a total of 29 aircraft. **Etihad Airways** picked up another two 777F freighters and 10 787-9s, for a total of 41 787 orders. At the end of the month, **Boeing** announced that an unidentified customer (**Air France/KLM**) ordered 25 787-9s, worth \$5 billion. The first airplanes will be delivered to **KLM** in 2016. **Virgin Australia Airlines** contracted for its 96th 737-800. **Air Lease Corp.—ALC** ordered four 737-800s and four 787-9s in early December. One unidentified customer bought two 767-300ERs and another unnamed customer purchased two 777Fs. **Boeing** delivered aircraft from its whole product line in December, including a record 40 737s, as well as three 747s, one 767, six 777s, and one 787.

FedEx Express ordered 27 767-300 Freighters and also exercised existing options for two additional 777 Freighters

Boeing December 2011 Orders, Deliveries					
DEC ORD	DEC DEL	DEC CANX	TOTAL ORD	TOTAL DEL	BACK LOG
			737		
213	40	-0-	9,375	7,010	2,365
			747		
-0-	3	-0-	1,524	1,427	97
			767		
29	1	-0-	1,086	1,014	72
			777		
6	6	-0-	1,363	983	380
			787		
39	1	-0-	860	3	857
This Month			This Year		BL
287	51	-0-	921	477	3,771
Boeing sold 21,738 aircraft and delivered 17,967 as of December 31, 2011.					
The Current Program includes sales and deliveries of 737s, 747s, 767s, 777s and 787s.					
Sales totals are net, minus cancellations.					

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. The first three 767 Freighters will be handed over in fiscal 2014. 767Fs will be delivered at a rate of six per year from 2015 through 2018. The most recent 777 orders will be filled at the end of the decade and will replace MD-11Fs on international services.

Boeing's Year End Order Book

Type	Gross Orders	Net Orders	Deliveries	Unfilled Orders
737	625	551	372	2,365
747	7	-1	9	97
767	42	42	20	72
777	202	200	73	380
787	45	13	3	857
Total	921	805	477	3,771

Southwest Airlines launched the new 737 MAX airplane when it ordered 150 of the type and optioned 150 more. The low-cost carrier also ordered 39 Next-Generation 737-700s and 19 737-800 NGs. The **Southwest** order was worth nearly \$19 billion at list prices and was the "largest order in **Boeing's** history," when it was placed in December. The airline did not announce which MAX model it had ordered. The 737 MAX8 and the larger 737 MAX9, were list priced at \$95.2 million and \$101.7 million, respectively. **Southwest** will retire the last of its 737-300s and -500s when the first of the new 737 MAX aircraft are delivered in 2017. The firm order will be filled by 2022, and the 150 options are due for delivery by 2027.

Etihad Airways ordered 10 787-9 Dreamliners and two 777 Freighters in December, valued at \$2.8 billion at list prices. **Etihad** also optioned and reserved purchase rights for 25 more 787s. The airline has now ordered three 777Fs, 18 777-300ERs, and 41 787-9s. **Etihad** will take delivery of its 787-9s from late 2014 through 2019. The 777Fs will be operated by the **Etihad Crystal Cargo** subsidiary.

The Air France-KLM Group confirmed that it ordered 25 787-9 Dreamliners in December. The planes are worth more than \$5 billion (\$200 million each) at list prices. A preliminary agreement was first announced in September, 2011. The first of the composite airplanes will enter service with **KLM** in 2016. The group also optioned a further 25 of the widebodies when it signed the contract. The 787-9 is slightly larger than the 787-8 and will carry 250-290 passengers on routes of 8,000 to 8,500 nautical miles (14,800 to 15,750 kilometers). This order raised the number of 787-9 orders to 305 and the total 787 orderbook to 860 units from 59 customers worldwide. **Air France** operates 74 Boeing aircraft and **KLM** operates 114 of them. The combined airline has one of the world's largest 777 fleets, with 62 in service and nine on order. **Air France-KLM** still intends to order Airbus A350s for operation by **Air France**. The firm order is delayed due to negotiations with the A350's engine provider **Rolls-Royce**.

Boeing Revealed Previously "Unidentified

Customers" in January. **Air Lease Corporation (ALC)** ordered four 787-9 Dreamliners and exercised options for four 737-800s in December. The orders were provisionally placed at the **Paris Air Show** in June and are list-priced at \$1.2 billion. **Boeing** announced that **China Southern Airlines** ordered six 777Fs in September and **Hong Kong Airlines** ordered six 777Fs in June 2011.

Orders for the 737 MAX Led January Sales. **Boeing** announced the sale of 100 737 MAX8s and 22 737-800 NGs to **Norwegian Air Shuttle**. **Virgin Australia Airlines** ordered its 97th 737-800 and **Jet Airways** bought another 17 737-800s. **Japan Airlines** contracted for 10 787-9s. The flag carrier also

has 35 787-8s on order. The first will be delivered in March. New sales totaled 150 in January, but **Boeing** lost two 777 orders, bringing the net total to 148. The new sales were valued at \$15.2 billion, at list prices, and the cancelled 777 orders were list priced at \$560 million. **Boeing** delivered 28 737s, one 747, two 767s, five 777s, and two 787s in January.

European Budget Carrier, Norwegian Air Shuttle ordered 100 737 MAX8s and 22 Next-Generation 737-800s, and reserved purchase rights for an additional 100 737 MAX8 aircraft. The firm order is valued at \$11.4 billion (\$93.44 million each at list prices) and represents the largest-ever **Boeing** order from a European airline the manufacturer said. **Norwegian** is the first European airline to confirm an order for the 737 MAX. With the **Norwegian** order, the 737 MAX has orders and commitments for more than 1,000 airplanes from 15 customers. The Next-Generation 737 family has orders for more than 6,300 aircraft. The airline also ordered 100 Airbus A320neo airplanes. The airline said the total order for 222 airplanes was worth 127 billion Norwegian crowns (\$21.54 billion). The commitment for 372 airplanes represents the largest order by a European airline to date. The first of the LEAP-engined aircraft will be delivered in 2017. **Norwegian** is one of the largest 737 operators in Europe and has 14 737-300s and 48 737-800s in service. It ordered the first of a total of 100 737-800s in August 2007 and has taken delivery of 33. The airline also ordered three 787s in February 2005, and agreed to lease two 787-8s from **ILFC** with delivery in 2013. The airline started regional Scandinavian operations with 737s in September 2002.

Air Astana, the Kazak flag carrier, signed a contract to purchase four 767-300ERs and three 787-8s valued at \$1.3 billion at current list prices. As of mid-February, the order had not yet been finalized and had not been posted to the **Boeing Orders & Deliveries** website. It was the largest single order for commercial airplanes in Kazakhstan's history. The 767s will be delivered in 2013 and 2014, and the 787s will arrive in 2017 and 2019, the airline said. The winglet equipped 767s will replace its two 767-300ERs leased from **ILFC** and several of its five leased 757s. The airline ordered four A320s and two A321s in mid-2008 and will take delivery this year. Late last year, it ordered two EMBRAER 190s to

Boeing January 2012 Orders, Deliveries

JAN ORD	JAN DEL	JAN CANX	TOTAL ORD	TOTAL DEL	BACK LOG
737					
140	28	-0-	9,515	7,038	2,477
747					
-0-	1	-0-	1,524	1,428	96
767					
-0-	2	-0-	1,086	1,016	70
777					
-0-	5	-2	1,361	988	373
787					
10	2	-0-	870	5	865
This Month			This Year		BL
150	38	-2	148	38	3,881

Boeing sold 21,886 aircraft and delivered 18,005 as of January 31, 2012.

The Current Program includes sales and deliveries of 737s, 747s, 767s, 777s and 787s.

Sales totals are net, minus cancellations.

join its fleet of three leased E190s. They will also be delivered in 2012. The airline is 51-percent owned by Kazakh's sovereign wealth fund **Samruk-Kazyna** and 49 percent by **BAE Systems**.

Lion Air, Jakarta, Indonesia, finalized its firm order for 201 LEAP-1B-powered 737 MAX-9s and 29 CFM56-7B-powered Next-Generation 737-900ERs in February. The order was announced in November, 2011, and it included purchase rights for 150 airplanes. **Lion Air** will be the first Asian airline to fly the 737 MAX and the first in the world to take delivery of the 737 MAX-9. **Boeing** said the 230 airplanes were list priced at \$22.4 billion, and that the deal was **Boeing's** largest commercial airplane order to date in terms of dollars and number of airplanes. The engine order is valued at more than \$5.4 billion.

Boeing Builds 35 737s Per Month. The manufacturer achieved its goal of producing 35 Next-Generation 737s per month. This demonstrates that the production system has been operating successfully. In January, **Boeing** delivered the first airplane built at the new rate to **AWAS Aviation Services**; it was leased to **Norwegian Air Shuttle**. The company will focus on stabilizing the production rate at 35 a month for 18 months. It is making investments that will allow the build rate to grow to 38 737s a month in the second quarter of 2013, and 42 a month in the first half of 2014.

Boeing Posts its Fourth Quarter and Year 2011 Financials. The company reported that its fourth quarter revenue rose 18 percent to \$19.555 billion (from \$16.55 billion in 2010), due to the increased commercial airplane deliveries. Its fourth-quarter net income rose 20 percent to \$1.393 billion from last year's fourth quarter net of \$1.164 billion. Net income for the full year increased 21 percent to \$4.018 billion on revenue of \$68.735 billion. This included the impact of the favorable tax settlement and a tax charge resulting

Boeing expects to deliver between 35 and 42 787s in 2012. **Boeing** is building 2.5 787s per month now. It plans to ramp up production to 3.5 in the second quarter and to five per month by early 2013. If the increases are implemented as planned, **Boeing** will assemble a total of 37 to 40 787s this year. The manufacture intends to complete a similar number of 747-8s. Last year, **Boeing** handed over nine 747-8 Freighters and three 787s in 2011. The company has approximately 45 nearly-completed 787s on the ramp near the Everett widebody plant, so the production rates will differ from **Boeing's** delivery rates this year. Two-thirds of this year's deliveries will be aircraft that have already been assembled or will still require significant re-work. The remaining one-third of the 787s to be handed over to customers will be free from expensive, post-certification re-work, **Boeing** CEO **Jim McNerney** said. The company should achieve that goal by July and Airplane #63 will be the first "right to preflight" aircraft. **Boeing** started the final assembly of Airplane #57 in late January. **Boeing** expects to deliver the first **General Electric** GENx-1B-powered 787 to **Japan Airlines** by the end of March. It was delayed by technical troubleshooting problems in Airplane #35 which flew for the first time on January 25. That airplane will be delivered to **Air India** later this year. **Boeing** started 787 production in the new South Carolina plant and will activate the Everett "surge assembly line" by September. When everything is moving smoothly, 787 production will double again to 10 per month by the end of 2013. The company expects to deliver 66 planes in 2013, and 119 in 2014. The manufacturer intends to leverage its buying power by combining purchases on common commodities such as raw material and fasteners to bolster profitability. This will happen when production hits its stride. **Boeing** will build two 747-8s per month rate during 2012. It has started assembling the 747-8 Intercontinental passenger plane alongside the 747-8 Freighter.

from health care legislation. In 2010, the company earned \$3.307 billion from revenues of \$64.306 billion. **Boeing** Chairman, President, and CEO **Jim McNerney** said, “Strong fourth-quarter operating performance, record revenue and backlog, and expanded earnings and cash flow capped a year of substantial progress for **Boeing** in 2011. Major accomplishments of our team during the year included certifying and delivering the first 787s and 747-8s, winning the **U.S. Air Force** tanker program, launching the 737 MAX, and securing both an important U.S. missile defense contract and a key agreement for F-15s to Saudi Arabia.” The company’s operating margin rose 0.8 points to 8.5 percent from 7.7 percent in 2011. Operating cash flow increased 36 percent to \$4.0 billion, and the backlog grew to a record \$356 billion, including \$103 billion of orders during the year. The company estimates that its 2012 revenue will grow to between \$78 billion and \$80 billion; the operating cash flow may rise to more than \$5.0 billion. Mr. **McNerney** said, “We enter 2012 with renewed momentum, and proven business and product strategies. With a record backlog and intense focus on productivity, we are well positioned to deliver growth and increased competitiveness, even as we face constrained U.S. defense spending and pension headwinds. Our priorities for the year are to continue with disciplined increases in production rates for our commercial airplane customers, and to build on our strong position in defense, space and security with aggressive pursuit of growth in core, adjacent and international markets.” The **Commercial Airplanes** unit increased fourth quarter deliveries by 10 percent to 128 from 116 in the same quarter of 2010. It delivered 477 airplanes during 2011, up 3 percent from the 2010 total of 462. **Commercial Airplanes’** revenue rose 31 percent from \$8.184 billion in the fourth quarter of 2010 to \$10.695 billion in 2011, on higher delivery volume and from the delivery of more widebodies. The yearly revenue rose 14 percent to \$36.171 billion in 2011 from 2010’s \$31.834 billion. The operating margin was 9.2 percent, reflecting lower R&D costs partially offset by the dilutive impact of initial 787 and 747-8 deliveries and higher period costs **Boeing** said. During the fourth quarter, the first 747-8 Freighters were delivered and the 747-8 Intercontinental was certified by the **FAA**. The company and the **International Association of Machinists & Aerospace Workers** agreed to a four-year contract extension. By year-end, airlines placed more than 1,000 orders and commitments for the 737 MAX, and the plane was officially launched by a 150-plane order from **Southwest Airlines**. **Boeing** booked 379 net orders during the quarter and 805 during the full year. Backlog remains strong with 3,771 airplanes valued at a record \$296 billion the company said. **Commercial Airplanes** expects to deliver between 585 and 600 airplanes in 2012; the production line is sold out. These numbers include between 70 and 85 787 and

Boeing to Build the 737 MAX Next to the 737 NG Line. The manufacturer is planning to build the new 737 MAX at the Renton factory. A spokesman for the **Machinist Union** said the MAX assembly line will probably be placed between the two 737 NG lines that are currently running at **Boeing’s** narrowbody plant near Seattle. He said there was plenty of room and that the space now holds engines, tail parts and other items that are installed on 737s moving down the adjacent line. Those assemblies can be moved elsewhere within the building. The two lines are currently producing 35 737s per month. **Boeing’s** 737 output will have to reach 60 planes a month if it intends to capture more than half the 23,000 unit narrowbody jet market over the next 20 years. The company will also increase 737 NG production above 42 per month in 2014. The 737 MAX production will start in 2016 and the first deliveries are scheduled for 2017. It is assumed that the 737 MAX will supplant the commercial 737 NG in 2017 or 2018; most of the factory will be dedicated to building the MAX. The **U.S. Navy’s** P-8A is built on the 737 line and completed in an adjacent building. Fifteen customers have ordered and committed for more than 1,000 of 737 MAX airplanes.

747-8 deliveries, split equally between the types. **Commercial Airplanes** expects 2012 revenues between \$47.5 billion and \$49.5 billion with operating margins between 8.5 and 9 percent. **Boeing Military Aircraft (BMA)**'s fourth-quarter revenue increased to \$3.9 billion due to Airborne Early Warning & Control (AEW&C) mix and higher KC-767 International Tanker deliveries (partially offset by fewer C-17 deliveries). Operating margins increased to 9.5 percent, reflecting strong execution across various programs. Fourth-quarter 2010 included charges for higher costs on the AEW&C program. During the quarter, the **U.S. Government** and **Saudi Arabian Government** reached agreement on the purchase of 84 new F-15SA aircraft and upgrades to an additional 70 F-15Ss. Additionally, **BMA** was awarded the P-8A low rate initial production lot II production award from the **U.S. Navy**, **Boeing** said. **Boeing's** total 2012 R&D costs are forecast to be between \$3.3 billion and \$3.5 billion. Capital expenditures for 2012 are expected to be approximately \$2.0 billion.

Regional Report

PrivatAir, Geneva, Switzerland ordered five CS100 airliners and took options on an additional five in January. The firm order was valued at approximately \$309 million (\$61.8 million each) at list price, and could increase by another \$325 million (\$65 million each) if the five options are exercised. **PrivatAir's** CSeries aircraft will be operated in an all-business class configuration. The airline was founded more than 30 years ago to provide private charter and private airline services. It operates a large fleet of commercial and business aircraft and performs exclusively business class flights on behalf of several major European airlines. The manufacturer said that **PrivatAir** is the eleventh customer to buy the CSeries 100- to 149-seat aircraft and that it will capture a significant portion of that market segment over the next twenty years. With the **PrivatAir** order, **Bombardier** booked 138 firm orders. Several other customers are **Braathens Aviation**, **Deutsche Lufthansa**, **Korean Air**, **Lease Corporation International Group**, **Republic Airways**, and two unidentified airlines. The **Bombardier** program has also booked options for 124 CSeries aircraft, purchase rights for 10 aircraft, and Letters of Intent for up to 45 CSeries aircraft.

Bombardier sold five Dash 8-Q400 NextGen airliners in February to an airline that requested to remain unidentified. Based on the list price, the transaction is valued at approximately \$160 million (\$32 million each). The Q400 NextGen aircraft seats between 70 and 80 passengers, and uses 30 to 40 percent less fuel. It produces 30 to 40 percent fewer emissions than similar-capacity, older jets.

Bombardier Aerospace delivered 245 aircraft in the 11-month fiscal year ending December 31, 2011. In the last fiscal year (February 1, 2010 to January 31, 2011), it delivered 256 aircraft. This was in line with the forecast of 240 aircraft deliveries, although with a different mix of aircraft. **Bombardier** received 249 aircraft orders, net of cancellations, compared to 201 net orders in the previous fiscal year. **Bombardier** delivered 163 business jets, 78 commercial aircraft and four amphibious aircraft in 2011, compared to 155 business jets, and 97 commercial aircraft for the previous fiscal year. The company sold 191 business jets, 54 commercial and four amphibious during the year, compared to 107 bizjets and 93 commercial aircraft in 2010. "The recurring fluctuations in the world economies in 2011 created a mood of caution in many sectors, and the resulting uncertainty continued to challenge the civil aviation industry," said **Guy C. Hachey**, President and Chief Operating Officer, **Bombardier Aerospace**. "However, with our comprehensive portfolio of business, commercial and amphibious aircraft, we are well positioned to meet the long-term needs of our customers."

Bombardier booked firm orders for 418 Q400 and Q400 NextGen aircraft, and has delivered 389 of them to nearly 40 operators as of December 31, 2011.

Garuda Indonesia signed a firm order for six CRJ1000 NextGen regional jets on February 10, and took options on another 18. The whole deal could be worth \$1.32 billion (\$55 million each) at list price. The airline's firm order is valued at approximately \$297 million (\$49.5 million each). The CRJ1000 NextGen aircraft are powered by CF34-8C engines, and the first one entered service in 2010. **Bombardier** sold 1,715 CRJ Series aircraft and delivered 1,661 as of December 31, 2011. CRJ Series aircraft are in service with more than 60 airlines worldwide and have logged more than 31 million flight hours.

China Express Airlines is the previously undisclosed Chinese customer that ordered six CRJ900 NextGen aircraft in October, 2011. They also placed a conditional order for six CRJ900s and optioned another five. Based on list price, the firm orders are worth \$264 million (\$44 million each) and the five options will be valued at \$233 million (\$46.6 million). **China Express** is China's first private regional airline, and it is based in Guiyang, Guizhou. It currently provides regional passenger services with a fleet of five 50-seat CRJ200s. The airline said its CRJ900s will support the growing capacity demand on its larger routes. **Bombardier** predicted that over the next two decades, China will grow to become the world's second largest market for new commercial aircraft deliveries after the United States. **Bombardier** forecasted a demand for almost 2,400 commercial aircraft in the 60 – 149 seat segment in China. It said it is working closely with local airlines, suppliers, and stakeholders, to assist in fleet and infrastructure expansion.

Odyssey Airlines is reported to be one undisclosed customer for ten CSeries jets. The start-up airline is based in London and plans to fly the CSeries to New York in all-business class configuration. **Odyssey** plans to compete with **British Airways'** twice-daily all-business A318 flights from **London City Airport**. The westbound A318s need to stop for fuel in Ireland. **Odyssey** expects that the CSeries jets will be able to fly non-stop in both directions. The airline plans to target high-yield business professionals who want to skip the hour journey to **Heathrow** or **Gatwick**, as well as the long lines when they get there. The business plan may be flawed though, two business-class only airlines, **Maxjets** and **Silverjet** have already failed in 2007 and 2008 respectively. Those two may have been killed off by the recession, which is supposed to be over now. **Odyssey Airlines** was incorporated in the U.K., in September 2010. The CSeries is due to enter service in late 2013 and **Odyssey** is not likely to take delivery before 2014 or 2015.

Embraer Delivered 105 Commercial and 99 Executive Jets in 2011. The manufacturer delivered 32 commercial and 50 bizjets in the fourth quarter of 2011. The company sold 124 E-Jets family aircraft, which represents an increase of 28 percent over the 2010 totals. At the end of the year, the firm order backlog stood at \$15.4 billion. **Embraer** delivered two ERJ-145s and one EMBRAER 170 (E170) in 2011. It delivered seven EMBRAER 175s (E175), 18 EMBRAER 190s (E190) and seven EMBRAER 195s (E195) in the fourth quarter. During 2011, the manufacturer delivered 10 E175s, 68 E190s and 24 E195s, as well as 83 light jets and 16 large executive jets. In the fourth quarter, **Embraer** sold 45 E-Jets, including 15 E190s to **BOC Aviation**, 10 E190s to **CIT Group**, six E190s to **GECAS**, and two E190s to **Hebei Airlines**. **Jetscape** bought one E195 and **Azul** ordered 11 of **Embraer's** largest E-Jets.

In 2012, LAM-Linhas Aereas de Mocambique ordered two more EMBRAER 190s and optioned an additional two. The planes will join the two E190s in **LAM's** fleet in the second half of 2012. **Jetscape** switched one E190 order for a larger E195. **Bulgaria Air** ordered nine E190s for delivery in the 2012-2014 period.

ATR's Best Year Ever. The regional aircraft manufacturer booked firm sales of 157 planes and another 79 aircraft were optioned. The company sold 13 ATR 42s and 144 ATR 72s to raise the backlog to a record high of 224 aircraft – equaling three years of production and worth an estimated \$5 billion. **ATR** said its 2011 results are due to the structural changes in the regional transport market which confirmed the dominance of turboprop aircraft on regional routes. ATR aircraft now represent more than 80 percent of regional airplane sales in 2011. Ten new customers bought ATRs in 2011, many of which will replace first-generation regional jets or non-ATR turboprops. Leasing companies accounted for more than 20 percent of **ATR's** sales, showing that ATRs are attractive to aircraft lessors. **ATR** delivered 54 aircraft, including 10 ATR 72-600s. The manufacturer will ramp up production to 70 aircraft in 2012 in order to meet the strong demand for ATRs. Production should increase to more than 80 units in 2013. As deliveries increase, **ATR** should see its revenue to increase to \$2 billion per year, from the current \$1.3 billion. **ATR** launched its **ASTRE (ATR Spares Total Re-Engineering)** program to develop new customer services and to optimize management of the spare parts stock. **ASTRE** offers better responsiveness in terms of customer support and reduces aircraft downtime for maintenance, repair and overhaul.

GE Capital Aviation Services (GECAS) ordered two additional ATR 72-600 turboprop aircraft, and optioned two more. **GECAS** placed its first order for 15 ATR 72-600s at the **Paris Airshow** in June. The leasing company now has 17 ATR on firm order and options for another 17. **GECAS** will take delivery of its first new aircraft in late 2012. Three

2011 ATR Orders

AIRLINE	AIRCRAFT
Lion Air / Wings Air	5 ATR 72-500s
Lion Air / Wings Air	13 ATR 72-600s
GECAS	17 ATR 72-600s & 17 options
Nordic Aviation Corp	2 ATR 72-500s
Nordic Aviation Corp	10 ATR 72-600s & 10 options
AZUL	10 ATR 72-600s & 10 options
UNI AIR	10 ATR 72-600s
TRIP	9 ATR 72-600s & 12 options
Skywest	4 ATR 72-500s
Skywest	9 ATR 72-600s & 13 options
Air New Zealand	7 ATR 72-600s & 5 options
Precision Air Services	4 ATR 42-600s
Precision Air Services	1 ATR 72-600
NordStar Airlines	5 ATR 42-600s & 2 options
TAME	3 ATR 42-500s
Israir	2 ATR 72-500s
Air Lease Corp.	2 ATR 72-600s
MAS / Firefly	2 ATR 72-500s
Air Lease Corp.	2 ATR 72-600s
Borajet	1 ATR 72-500
UNDISCLOSED	1 ATR 42-600
UNDISCLOSED	40 ATR 72-600s & 10 options
TOTAL	157 orders & 79 options

2011 ATR Deliveries

AIRLINE	AIRCRAFT
NordStar Airlines	4 ATR 42-500s
TAME	2 ATR 42-500s
TOTAL	6 ATR 42-500s
Lonrho	1 ATR 72-500
Cebu Pacific	1 ATR 72-500
Borajet	1 ATR 72-500
UTair	14 ATR 72-500s
Lion Air / Wings Air	7 ATR 72-500s
Nordic Aviation Corp	2 ATR 72-500s
Finncomm	3 ATR 72-500s
Skywest	4 ATR 72-500s
Israir	2 ATR 72-500s
MAS / Firefly	3 ATR 72-500s
TOTAL	38 ATR 72-500s
Alenia	1 ATR 72-600
AZUL	3 ATR 72-600s
Royal Air Maroc	2 ATR 72-600s
Air Lease Corp.	2 ATR 72-600s
Caribbean Airlines	2 ATR 72-600s
TOTAL	10 ATR 72-600s

of its ATR 72-600s will be leased to Brazilian regional carrier **TRIP Linhas Aéreas** and **Jet Airways** in India agreed to lease five airplanes. **GECAS** currently owns or manages a portfolio of more than 1,750 aircraft, including regional, narrowbody and widebody aircraft.

Lion Air ordered 27 additional ATR 72-600s at the **Singapore Airshow**. The planes will be operated by **Lion Air's** regional subsidiary **Wings Air**. The airline switched 13 of its ATR 72-500 orders to the -600 type by the end of 2011. **Wings** will become the largest operator of ATR aircraft with a total fleet of 60 aircraft (20 ATR 72-500s and 40 ATR 72-600s) when it receives the last one at the end of 2015. **Wings Air** introduced its first ATRs in January 2010 and currently operates 16 ATR 72-500s. The next 44 ATR 72-500/600s to be delivered to **Wings Air** will be used to develop new routes, but some aircraft will replace and complement **Wings Air's** MD-80s and **Lion Air's** 737-900ERs (thus adding new frequencies to the network).

Order Changes and Cancellations

Etihad Airways cancelled six of its 25 A350-1000 orders. The airline retained options and purchase rights for 25 A350-1000s. **Etihad** did not give the reasons for the cancellation and said it had confidence in the A350 XWB program. **Airbus** delayed the first A350-1000 deliveries by three years from 2014 to 2017.

American Airlines' Order for 130 A321s was removed from the official **Airbus** orderbook as of December 31. The order was officially placed on July 20, but disappeared from the year-end **Orders, deliveries and Operators** list. In December, the press reported that the order would be split between the Airbus A319 and A321 variants, and that **American** would order CFM56-5B engines for the planes. The Airbuses were scheduled for delivery between 2013 and 2017. All 130 of the A320 Family aircraft were to be financed through lease transactions, but the orders were not transferred to a leasing company. **American's** parent **AMR Corp.** entered Chapter 11 bankruptcy in November, and U.S. bankruptcy law allows the court to reaffirm or cancel the \$40 billion order. **Airbus'** auditors chose not to include the **American** order in the 2011 sales total due to that uncertainty. **Airbus** reported sales of 1,216 A321s in November; the total dropped to 1,100 as of December 31, 2011. **American** officially ordered

Airbus Order Shuffle. Private customer(s) exchanged dropped orders for two A318 Elite and two A319ACJ business jets. **Airbus** now has four A318 Elites and eight ACJs on backlog. **Sichuan Airlines** added orders for two A319s, four A320s and two A321s. The planes were originally ordered by China's aircraft procurement agency, **CASCG**, as A320s. **CIT** also exchanged three A320 orders for three A321s. The leasing company has purchased 134 A320s and 17 A321s. **Virgin America** transferred a fourth A320 to **Jackson Square Aviation** and took immediate delivery of the plane through a sale/lease back transaction. **US Airways** switched nine A320 orders for the larger A321. The airline now has ordered 48 A320s and 99 A321s. **US Airways** is the largest airline customer for the A321, while **ILFC** has purchased the most A321s at 115 orders. The number of A320 orders from "undisclosed customers" rose from seven in November to 21 in December. **Hong Kong Airlines** exchanged four A330-200 deliveries for four larger A330-300s. The airline has order nine of each type. **Intrepid Aviation Group** switched one of its 20 A330-200F freighter orders to an A330-200 passenger plane when it ordered two new A330-200s in December. **Airbus Executive and Private Jets** customers switched one A350-800 order to the A350-900 type and cancelled six A350-900 orders.

100 Next-Generation 737-800s in July and provisionally ordered the 737 MAX. The 737NG orders are still listed on **Boeing's Orders and Deliveries** web site.

Boeing Order Changes. **China Eastern Airlines** is announcing orders for 737-700s and -800s as they take delivery. It is believed that the airline has outstanding orders for 14 -700s and 14-800s that are still listed under the "unidentified customer" category. **Shenzhen Airlines** also appears to have 14 -700s on order that are listed as "unidentified." **Hainan Airlines** claimed 10 -800 orders and **Shandong Airlines** announced eight -800 orders that were previously unidentified. **Boeing's** January 2012 **Orders and Deliveries** web site shows that **China Eastern** has outstanding orders for two -700s and one -800, while **Hainan** has eight -800 orders, **Shandong** has seven -800 orders, and **Shenzhen** has six outstanding -800 orders. The manufacturer has 31 -700s and 136 -800s orders in the "unidentified" category. Only some of those orders were placed by Chinese airlines. All of **AirTran Airways'** 41 outstanding 737-700 orders were transferred to **Southwest Airlines** in December. **Southwest** picked them up as 28 -700s and 13 -800s. **Southwest** exchanged 21 -700s for 21 -800 orders in December. The low-cost carrier also announce one -700 order that was placed in February 2011. **Alaska Air** switched orders for three -800s to the -900ER model.

Kingfisher Airlines, India, said it cancelled "a plane order". The airline's spokesman did not give details, but **Avions de Transport Regional – ATR** said it canceled **Kingfisher's** 38-plane order, because the carrier missed progress payments. The airline grounded half of its fleet of 27 ATRs due to a lack of parts. **ATR** said it did not think **Kingfisher** was in a position to take additional planes and that there were still issues with the continuity of pre-delivery payments. **ATR** and **Kingfisher** had negotiated for two years over the plane deliveries and **Kingfisher** didn't ask for the cancellations **ATR** said. The airline said it scrapped low-cost services and had delayed Airbus A380 deliveries. **Airbus** said the airline still had orders for 15 A330s, five A350, and five A380 superjumbos. Its last two A340-500 orders were cancelled in October. The airlines' two other A340-500 orders were transferred to the **Airbus Executive and Private Jets** category early last year. The current orders are worth about \$6 billion at list prices. The company said **Kingfisher** was current on its payments for the Airbus.

Engine News

Norwegian Air Shuttle became the first European customer for the LEAP-1B engine in January. The airline ordered 100 Boeing 737 MAX aircraft and 22 CFM56-7BE-powered 737-800s. **CFM** values the total engine order at approximately \$2.9 billion at list price. **Norwegian** currently operates a fleet of 48 CFM56-7B-powered 737-800s, and now has another 78 Next Generation 737s on order. **Norwegian** is the third-largest low-cost airline in Europe and carried nearly 16 million passengers in 2011. **Boeing** launched the 737 MAX program with the LEAP-1B in August 2011. Since then, **Boeing** has received commitments for more than 1,000 LEAP-1B-powered 737 MAX airplanes from 15 customers worldwide.

Korean Air ordered **Pratt & Whitney** PW4170 Advantage70 engines in January, to power the five new Airbus A330-200s that it ordered in May, 2011. The sale of 10 PW4170 engines was worth approximately \$200 million at list price. **Pratt & Whitney** said the Advantage70 is now offered as a new engine and as an upgrade kit for existing PW4168 engines. "The upgrade includes a suite of technology enhancements that can be incorporated into a fleet during engine overhaul. Advantage70

technology delivers superior engine performance, including a 2 percent thrust increase, more than 1 percent reduction in fuel consumption, increased durability, and reduced maintenance costs,” the manufacturer reports.

Go Airlines—GoAir, a leading Indian low-cost carrier, selected Pratt & Whitney PurePower PW1100G-JM engines for the 72 A320neo aircraft that it ordered last year. The first will be delivered in 2016. The agreement covers the purchase of 144 PW1100G-JM engines and should include a **Pure Solution** maintenance package.

Fiji’s Flag Carrier, Air Pacific purchased Trent 700 engines to power three Airbus A330-200s that it ordered in October, 2011. At list prices, the sale is worth \$210 million to **Rolls-Royce**. The contract includes long-term **TotalCare** service support.

Cebu Pacific’s eight leased A330s will be delivered with **Rolls-Royce** Trent 700 engines and the first will be delivered in mid-2013. **Rolls-Royce** will provide the Philippines low-cost airline with long-term **TotalCare** service support for the A330s. The contract will be worth up to \$280 million.

CFM International (CFM) sold 1,500 commercial, military and spare CFM56 engines and received commitments for 3,056 LEAP engines in 2011. The more than 4,500 engines were valued at \$51.7 billion at list price. **CFM** achieved record production rates for the CFM56 product line. The company delivered more than 1,300 engines in 2011, up from the 1,250 engines built in 2010. **CFM** will ramp up production to more than 1,600 engines in 2014. The company expects announcements of more A320neo, 737 MAX, and C919 sales in the early months of 2012. **Airbus** announced orders for 465 LEAP-1A-powered Airbus A320neos, for a total of 930 engines. **Boeing** booked commitments for 948 LEAP-1B-powered Boeing 737 MAX airplanes fitted with 1,896 engines. **COMAC** sold 115 COMAC C919s, to be delivered with 230 LEAP-1C engines. The 3,056 LEAP engine commitments were list priced at approximately \$36.7 billion. **CFM** sold 394 CFM56-5B engines, 1,012 CFM56-7B engines, and 94 military engines and commercial spares, worth \$15 billion.

Leasing Companies

AerCap Holdings N.V. announced that it sold its **AeroTurbine** subsidiary to **International Lease Finance Corporation (ILFC)** in 2011. It also signed new lease agreements for 31 aircraft, and delivered 30 aircraft under contracted lease agreements. The lessor bought 13 new aircraft and sold 26 airplanes. During the year, **AerCap** signed \$1.5 billion of debt facilities agreements. Over the last three years, the lessor arranged for approximately \$5 billion in financing. In the fourth quarter, **AerCap** agreed to lease 10 aircraft and delivered five aircraft to lessors. It purchased two new aircraft and entered into firm call options on three A320neo sale and leaseback transactions. **AerCap** completed the sale of 15 aircraft and agreed to sell one undelivered aircraft. The lessor arranged \$417 million of debt facilities. In the quarter, **AerCap** signed agreements to lease three new A320s to **AirFrance**, two used A320s to **Atlasjet**, two new 737-800s to **American Airlines**, one new 737-800 to **Sunwing Airlines**, and two used 737-800s to **PT Sriwijaya**. New aircraft were leased an average of 137 months, and the average lease term for used aircraft was 74 months. **AerCap** delivered two new 737-800s to **American Airlines**, through a sale/lease-back, two used A320s to **PT Garuda Indonesia**, and one used A319 to **Bangkok Airways**. The lessor agreed to purchase and lease-back three A320neo aircraft. During the fourth quarter, **AerCap** sold nine used aircraft from its owned portfolio, including three 737-500s, two 737-400s, and four MD-83s. The lessor sold six aircraft from its managed portfolio, including one A320,

one 737-300, and four 737-500s; it agreed to sell another 737-300 during the quarter. At year's end, **AerCap** had 348 aircraft in its owned or managed portfolio.

AWAS, Dublin, Ireland, agreed to purchase and leaseback four Airbus A320-200s with **IndiGo** (India's largest low cost airline). The airline ordered the planes for delivery in the first half of 2012. The first was delivered in February. **AWAS** mandated **KfW IPEX-Bank** to arrange financing and be sole lender of two of the A320-200s.

BOC Aviation will lease two new A320-200s to **South African Airways** which are scheduled for delivery in the first quarter of this year. The A320s will be powered by IAE V2527-A5 SelectOne engines. This is **BOC's** first transaction with **South African** and it looks forward to further deals with them in the future. **BOC Aviation** has a portfolio of 177 modern aircraft and has 71 aircraft on firm order; another two are on committed purchase and leaseback.

International Lease Finance Corporation (ILFC) completed 296 lease transactions for 2011. These transactions include extensions and placements from **ILFC's** existing fleet and sale-leasebacks of 20 aircraft (worth more than \$800 million) the lessor said. **ILFC** currently has over 180 customers in more than 80 countries, and it is the world's largest independent aircraft lessor in terms of owned aircraft. It has commitments to purchase 252 new fuel-efficient aircraft and has reserved the right to purchase another 50 aircraft; it has more than 1,000 owned or managed aircraft in its portfolio.

ALAFCO has had another year of record breaking performance. It saw its assets rise by 8 percent and shareholders' equity rose 39 percent over the fiscal year. The unprecedented financial results were as a result of the growth in leasing activity in regional and international markets. It also is due to amending some aircraft purchase agreements with manufacturers the lessor said. **ALAFCO** has 16 airline customers and saw its lease portfolio grow from 40 to 48 aircraft because the company took delivery of eight new aircraft last year. **ALAFCO** leased two A320-200s to **Saudi Arabian Airlines**, three 737-800s to **Ethiopian Airlines**, two 737-800s to **Okay Airways**, and one 737-800 to **Caribbean Airlines**. During the year, the lessor ordered six A350-900 XWBs, list priced at \$1.6 billion, and 50 A320neo aircraft, valued at \$4.5 billion at list prices. In the fiscal first quarter of the year, **ALAFCO** contracted to lease one A350-900XWB to **Thai Airways International** for 12 years, and lease three A320-200s to Vietnam-based **Vietjet Air**. The A320s will be delivered this spring.

Royal Bank of Scotland Group will sell its **RBS** aviation leasing unit to **Sumitomo Mitsui Financial Group** for about \$7.3 billion. This is the biggest sale of **RBS** assets since the **U.K. Government** bailed out the bank in 2008. The Dublin-based lessors' sale should close by the beginning of the fourth quarter. **Sumitomo Mitsui Financial Group** will have a portfolio of 206 aircraft and another 87 on order for delivery by 2015. The Tokyo-based group outbid the **China Development Bank Corp.** and **Wells Fargo & Co.** **RBS** cut 4,800 jobs and sold non-core assets worth more than £60 billion (\$92.25 billion). The bank plans to sell or close its cash equities, mergers advisory, corporate broking and equity capital markets operations.

Airline News

Cebu Pacific Air announced it will lease up to eight A330-300s for long-haul flights to Australia, the Middle East, Europe, and the United States. The largest budget carrier in the Philippines intends to

expand into new markets from its base in the Philippines. The airline hopes to launch the services by the third quarter of 2013. President **Lance Gokongwei** said, "The A330-300 will give us the lowest cost-per-seat, allowing us to drive long-haul fares 35 percent lower than those currently offered by other airlines." **Cebu Pacific Air** intends to offer affordable direct flights to the approximately 11 million Filipinos who live and work overseas. The airline currently operates 10 A319s, 19 Airbus A320s, and eight ATR-72 500 aircraft, which have an average fleet age of 3.6 years. **Cebu Pacific Air** ordered seven A320s and 30 new A321neos in June. The airline's 23 A320s and 30 A321neo aircraft will be delivered from 2012 to 2021. It needs to raise between \$150 million and \$160 million from bank financing to buy the four new A320s that will arrive this year. The European Union banned Philippine airlines from serving Europe in April 2010 due to safety issues, but **Cebu Pacific Air** expects the ban to be lifted before the end of the year (in time for **Cebu Pacific Air** to launch its planned services).

Etihad Airways and **Seychelles Government** signed a Memorandum of Understanding to buy 40 percent of **Air Seychelles** for \$20 million. The deal is part of a strategic partnership between the two airlines. **Air Seychelles** has been struggling financially and cancelled its flights to Paris, London, Rome and Milan due to weak demand for its European services. The airline said it was restructuring its fleet and repositioning to turn into a regional airline. **Joel Morgan**, the Seychelles minister of home affairs, environment, transport and energy, said, "The aviation industry is under enormous pressure right now, with small airlines especially vulnerable to global economic instability and continuing oil price volatility. In this context, consolidation offers the best possible solution for **Air Seychelles**." This deal follows **Etihad's** purchased 30 percent of **Air Berlin** for \$95 million. **Etihad's** \$20 million investment in **Air Seychelles** will be matched

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

Dec 2011 vs. Dec 2010	RPK Growth	ASK Growth	Pax Load Factor	FTK Growth	AFTK Growth
Africa	-0.7%	0.2%	68.9%	-1.8%	0.9%
Asia/Pacific	3.7%	5.9%	74.7%	-5.0%	1.3%
Europe	9.8%	10.3%	76.4%	2.1%	5.5%
Latin America	8.8%	11.1%	75.2%	1.5%	10.1%
Middle East	11.7%	11.0%	77.1%	10.8%	14.9%
North America	1.0%	1.4%	80.5%	-1.1%	2.1%
Industry	6.4%	7.4%	76.2%	-0.8%	4.5%

Year to Date 2011 vs. 2010	RPK Growth	ASK Growth	Load Factor	FTK Growth	AFTK Growth
Africa	2.3%	4.4%	67.2%	-1.2%	3.1%
Asia/Pacific	4.1%	6.4%	75.9%	-4.8%	0.6%
Europe	9.5%	10.2%	78.9%	1.5%	6.4%
Latin America	10.2%	9.2%	77.2%	5.5%	5.6%
Middle East	8.9%	9.7%	75.4%	8.2%	13.9%
North America	4.0%	6.0%	80.7%	1.5%	6.8%
Industry	6.9%	8.2%	77.4%	-0.6%	5.2%

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

by a \$20 million capital injection by the government. **Etihad** will also provide a \$25 million shareholder's loan to meet the airline's working capital requirements and support network development **Etihad** said. The Abu Dhabi airline will manage **Air Seychelles** for the next five years. **Etihad** will offer daily flights between Abu Dhabi and Mahé and provide new services to the islands.

Conviasa, Venezuela's state airline will order 20 E-Jets from **Embraer** and buy four used Airbuses. The country's President **Hugo Chavez** said the new planes will be used to modernize and expand the airline's fleet. Mr. **Chavez** told the audience on his weekly **Alo Presidente** television program that the airline optioned to purchase up to 20 **Embraer** E-Jets for \$814 million. The deal will be financed by Brazil's **Banco Nacional de Desenvolvimento Economico e Social**. **Conviasa** agreed to buy four long-range **Airbus** planes from an United Arab Emirates airline for \$60 million a plane, according to Mr. **Chavez**. It is possible that **Conviasa** will buy four A340-300s from **Emirates**, four A340-600s from **Qatar Airways**, or four A340-500s from **Etihad Airways**.

WestJet Airlines, Canada's second largest airline, may launch a short-haul service with a fleet of up to 40 turboprops in 2013. The carrier is based in Calgary, Alberta, and currently operates a fleet of 97 737NGs, and has another 38 737NGs on order for delivery through 2018. The airline can return 35 leased 737s as the new planes are delivered. It proposes to spend more than \$1 billion to found a sister company to operate the regional airline. **WestJet's** employees will vote on the proposal this winter. The airline is negotiating with **Bombardier** to buy Dash 8Q-400 Next Gen turboprops. The press reported that the airline favored the Dash 8, in part because the **ATR** production line was sold out. It is rumored that **Kingfisher Airlines** cancelled its order for 38 **ATR** 72s which may give **ATR** the opportunity to compete for **WestJet's** order. **Bombardier** said it was talking to **WestJet** and that it could deliver some Q400s by the 2013 launch date. It is speculated that **WestJet** could

Deutsche Lufthansa reached a non-binding agreement to sell its low-cost carrier **BMibaby** with an un-named U.K. group in February. The German flag-carrier needs to unload its ownership of the U.K. budget airline in order to sell **bmi-british midland** to **International Airlines Group (IAG)** for the £172.5 million (267 million) asking price. **IAG** said it would pay less if **BMibaby** remained part of the package. **BMibaby** contributed to **bmi's** €154 million operating loss in the first three quarters of 2011. **Lufthansa** will save money if it can pay someone to take the LCC off its hands rather than shutting it down. One analyst estimated it would cost £60 million to shut down **BMibaby** and pay off its staff and lessors. **Lufthansa** wants to sign an agreement this quarter so that it can close the **bmi** sale to **IAG** by the end of March. The new owner of **BMibaby** is expected to use the airlines brand name and stick to the planned 2012 summer schedule. The LCC is based in Castle Donington, central England, and operates a dozen 737-300s and two 737-500s. **Lufthansa** is also selling **bmi's** more financially solvent regional airline, **BMI Regional**. A group of Scottish investors have expressed interest. They founded a regional airline in the 1990s. **BMI Regional** operates from Scottish cities to Manchester with a fleet of 19 Embraer ERJ-135 and ERJ-145 regional jets.

International Air Transport Association (IATA) Posts January Jet Fuel Prices. The organization updates its global average jet fuel price each week. On January 20, the average price of fuel was \$3.07 per gallon. Prices headed upward again, rising by 4.9 percent in the month. **IATA** said fuel prices are 15.4 percent higher than they were in January, 2011. The global airline industry will pay \$129.5 billion for fuel in 2012. **IATA** said that every \$1 increase in the price of a barrel of oil adds \$1.6 billion in costs to airlines. The fuel price rise will cost airlines an additional \$32 billion this year.

offer to buy **Porter Airlines**. This would give **WestJet** an instant Dash 8 fleet and **Porter's** regional hub at **Billy Bishop Airport**, in downtown Toronto. Purchasing **Porter** would also eliminate one of the two regional competitors, leaving only **Air Canada Regional**, with its high cost structure, to contend with. **WestJet** forecast that the regional unit would tap a C\$2 billion market. **WestJet** operates domestically in Canada and flies to sun spots in the U.S., Mexico, and the Caribbean. It wants to find new sources of revenue. It sees an opening in serving small markets, where revenues are high. It could also serve thin trans-border routes. The short-haul airline would be able to offer direct service between cities such as Regina, Saskatchewan, and Winnipeg, Manitoba. There is also a huge underserved market for non-stop flights between the northern states and southern Canada. There are no direct flights from Calgary to any northern cities between Seattle and Minneapolis.

Bankruptcy of the Month

Spanair Ceased Operations on January and grounded all its airplanes after its majority share holder, the **Catalan Government**, refused to invest any more money into the company. A possible "white knight," **Qatar Airways** ended negotiations to buy a stake in the loss-making airline. The **Catalan Government** cited Spain's recession and the failed talks with **Qatar Airways** as reasons for pulling the plug. The regional Spanish governments were under enormous pressure to cut costs to help the central government cut its deficits this year to ease the euro-zone debt crisis. **SAS Scandinavian Airline System** owned 10.9 percent of the airline. It said it would write off outstanding debts and receivables from **Spanair** worth approximately €165 million (\$216.7 million) as well as a reserve of €28 million in guarantees and costs, for a total of €193 million (\$250.5 million) related to its holding in **Spanair**. The airline had more than 2,000 employees and was looking at its options including seeking bankruptcy protection from creditors. **Spanair** was Spain's fourth-largest airline and it had struggled for years to compete with the low-cost carriers operating in the country, including **Vueling** and **Ryanair**. It was the third Spanish airline to

American Airlines will eliminate 13,000 of its 73,800 employees as it plans to cut operating costs by \$2 billion and boost revenue by \$1 billion. The company plans to terminate its four employee pension plans as well. Chief Executive Officer Tom Horton told labor leaders, "There is no avoiding the fact that the cost reductions will be deep, and there is no sugarcoating the effect on our people." The airline expects to save up to \$1.25 billion from labor cost cuts. **American** plans to fire 4,600 mechanics and maintenance workers, 4,200 baggage handlers and other airport ramp workers, 2,300 flight attendants, 400 pilots and 1,400 management and support staff. The airline expects to boost revenue by adding 20 percent more flights from its hub airports and to better match aircraft size to specific routes. The airline reported losses for the last four years and it lost \$904 million during its first month under bankruptcy protection. **American** took a \$713 million non-cash charge to reduce the value of some of its 124 757-200s. The airline made \$10.2 million lease payments to keep 19 **Bombardier** CRJ700 regional jets it uses for **American Eagle** flights. The bankruptcy court approved **American's** plan to take delivery of 32 new 737-800s. At year's end, the airline's cash and short-term investments totaled \$4 billion, down \$100 million from November. Its December revenue was \$2 billion, while its total disbursements were \$2.19 billion, and liabilities were \$8.63 billion. **American** reported \$24.7 billion in assets and \$29.6 billion in debt when it filed for Chapter 11 on November 29, 2011.

cease operations since 2006 when **Air Madrid** shut down; **Air Comet** followed in 2009. **Iberia**, **Vueling Airlines**, and **Air Europa**, each offered special fares to stranded **Spanair** passengers.

Malev Hungarian Airlines, the state-owned Hungarian flag airline was founded in 1946, and ceased operations on February 3. The government withdrew financing and **Malev** became the second airline victim of euro-zone austerity a week after **Spanair** collapsed. The airline owed 60 billion forint (\$270 million), and the **European Commission** ruled against further state support. **Malev** was a member of the **oneworld** airline alliance that included **British Airways**, **Iberia**, **Finnair**, and six full members. **Ryanair** said it will base four 737-800s and 2,000 workers at **Liszt Ferenc Airport** in Budapest. It launched services on February 17 to 31 destinations and hopes to carry 2 million people a year. Budapest-based low-cost carrier **Wizz Air** said it will invest 25 billion forint to expand capacity at the airport. **EasyJet** and **Air Berlin** also fly to Hungary. All may not be lost for **Malev** because **HNA Group**, parent of **Hainan Airlines**, may restart negotiations on a possible bid to buy the bankrupt carrier. **Malev** operated 18 737NGs and four Dash 8Q-400s, and put one 767-200ER in storage in 2009. The 737s and Q400s were leased from **ILFC**.

Cargo Pallet

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.

Aeronautical Engineers (AEI) was selected by an undisclosed customer to convert one 1993-model 737-300 into a 737-300SF 10 Pallet Passenger to Freighter. **Commercial Jet** is performing the freighter modification in Miami, Florida. **Commercial Jet** is an **AEI Authorized Conversion Center**.

At the Dubai Airshow, **Qatar Airways** 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 767Fs instead. **Qatar Airways** ordered two 777F freighters at **Dubai** to increase its cargo capacity.

Global Aviation Holdings, the parent of **North American Airlines** and **World Airways**, filed for Chapter 11 protection on February 5. Three-fourths of **Global Aviation's** revenue was derived from flying soldiers and cargo to Iraq and Afghanistan for the U.S. military. The U.S. withdrawal from Iraq, defense spending cuts, and high debt and labor costs were cited as reasons for filing bankruptcy. The Pentagon now plans to reduce spending by \$487 billion over the next decade. The airline group's revenue fell to \$775.1 million from \$877 million last year. It lost \$60.3 million in 2011 while the group lost \$6.9 million in 2010. The company had assets of \$589.8 million and \$493.2 million of debts. **Global Aviation** said it was burdened by excess debt, high labor and fixed costs, excess aircraft and an overleveraged balance sheet. The group had banked on a \$71.3 million damage award against **FedEx Corp.** The **FedEx** award was thrown out by a federal appeals court in December. **Global Aviation** is based in Peachtree City, Georgia, and employs 1,782 people. The airline group plans to operate normally during the bankruptcy, and to continue to pay vendors and suppliers. The company is 92.5 percent owned by an affiliate of **MatlinPatterson Global Advisers**, which bought **Global Aviation's** predecessor **ATA Holdings** out of bankruptcy in 2006. **World Airways** was founded in 1948 and **North American** started operations in 1989.

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**. To date, **EADS EFW** has converted more than 170 A300-600s and A310s into freighter aircraft for 39 customers.

Military Market

The French Air Force intends to order A330 MRTT—Multi Roll Tanker Transports from **Airbus Military** in 2013, the country's defense minister said. The A330 MRTTs will be delivered in 2017 and will replace aging aircraft. The minister declined to say how many airplanes will be purchased. The air force operates 11 Boeing C-135FR and three KC-135 tankers. The planes were delivered in the early 1960s. **Airbus** has sold 28 A330 tankers to four countries, Australia, Saudi Arabia, the United Arab Emirates, and the United Kingdom.

British Prime Minister David Cameron announced that the **RAF** will buy its eighth C-17A military transport aircraft from **Boeing**. The **Ministry of Defense** is cutting its budget by 8 percent over the next four years, so it found enough money to buy the £200 million plane. The C-17 is needed to have enough air capacity to evacuate civilians from war zones the Prime Minister said. The **RAF** uses the seven C-17s to airlift heavy bulk cargo. It has 22 Airbus A400M airlifters on order for delivery from 2015.

Airbus, ST Aerospace and EADS EFW signed an Memorandum of Understanding at the **Singapore Airshow**, to form a strategic partnership to develop the A330 Passenger-to-Freighter (P2F) conversion program. This agreement, if confirmed, will launch the project and will allow **Airbus** to offer the A330P2F to customers. **ST Aerospace** will lead the A330P2F engineering development. **Airbus** and **EADS EFW** will then lead the industrial phase, and most of the conversions will be performed at **EADS EFW's** facilities in Dresden, Germany. **EADS EFW** will also become the European center for **ST Aerospace's** global maintenance, repair and overhaul operations. The partners will convert both the A330-200 and the A330-300s into freighters. The "larger A330-300P2F will be particularly suitable for integrators and express carriers thanks to its high volumetric payload capability with lower-density cargo. Complementing this will be the A330-200P2F which will be optimized for higher-density freight and longer range performance," **Airbus** said. The first A330-300P2F should enter service in 2016. The manufacturer forecasted a need for 2,700 freighters over the next 20 years. Nearly half of these will be mid-sized freighters and 900 of them will be converted from passenger planes. The A330P2F freighter conversion program will enhance and sustain A330 Family residual values by extending the economic lives of A330 airframes, the manufacturer reports. The oldest 100 A330s were delivered between 1993 and 1995 and are now being retired by first tier carriers. More than 830 A330s are now in service with over 90 operators, and another 340 are on order.

AIRCRAFT DELIVERIES & SALES Jet Aircraft

A318 & A319. Airbus delivered only two ACJ318 Elite aircraft in 2011, and it has only four more in backlog. The manufacturer could wrap up the A318 program this year. In December, it delivered only one A319, an ACJ319-115 (SN 4956) was handed over to **Sany Group**. **Comlux** reported that it received a new ACJ319 under management contract for an undisclosed customer. The aircraft is available for VIP charters and joins an ACJ318. The planes are managed and operated by **Fly Comlux** in Moscow, Russia. In February, **LAN Airlines** accepted -112 (SN 5005) and **Germanwings** received -132 (SN 4998).

A320. Airbus delivered 33 A320s in December, for the second time in two months. Three airlines in the Asia/Pacific region took delivery of two A320s each. **Tiger Airways** accepted two -232 (SN 4918 & 4931), **IndiGo** received two -232 (SN 4947 & 4954), and **AirAsia** took delivery of two -216s (SN 4969 & 4979). The later airplane is operated by **Thai AirAsia**. **IndiGo** sold -232 (SN 4954) to **RBS** and leased it back. **Qantas** leased -232 (SN 4922) to **Jetstar Airways**, and **Peach Aviation** leased its second of 10 -214s (SN 4936) from **GECAS**. **GECAS** leased -214 (SN 4927) to **Cebu Pacific Air**. **Hainan Airlines** leased -232 (SN 4825) to **Tainjin Airlines**, and **Spring Airlines** received -214 (SN 4809). **China Southern Airlines** took delivery of -232 (SN 4836), and **China Eastern Airlines** accepted -214 (SN 4831). All four airplanes were assembled in China. **China Southern** also leased -214 (SN 4982) from **Air Lease Corp.**, and bought -214 (SN 4964) from **Air Berlin** immediately after the German carrier took delivery. **Air China** accepted -214 (SN 4963). **BOC Aviation** leased another -232 (SN 4936) to **Air New Zealand**. **BOC** took delivery of a -200 but did not lease it out yet. In the Americas, **TAM** bought two -214s (SN 4953 & 4974). **Virgin America** leased one -214 (SN 4948) from **RBS**, and a fourth -214 (SN 4959) from **Jackson Square Aviation (JSA)**. **Spirit Airlines** leased -232 (SN 4951) from **NAS Investments**. **Volaris** accepted -233 (SN 4950), and **TACA International** received -233 (SN 4944). **Avianca** took delivery of

British Aerospace. **Minden Air** converted former **Jazz** BAe 146-200 (SN E2111) into a water bomber and rolled it out of its plant in January. **Minden** is now ground testing the borate delivery systems. The plane will be flight tested soon. The company bought the 146 from **BAE Systems** in January 2009. **Minden** bought a second ex-**Jazz** 146-200 (SN E2106) for conversion. **Minden** and **Tronos** originally intended to convert ex-**Air Wisconsin** BAe 146-200 (SN E2033), but that project was abandoned and the aircraft scrapped. **Minden's** air tanker will have a 3,000 gallon internal retardant tank. **Neptune Aviation** was awarded a one-year contract to operate its BAe 146 air tanker (SN E2049) for the **US Forest Service's (USFS)**. The plane, known as "Tanker 40" was converted over a year ago and underwent a long series of flight tests. It fought fires in Texas and California this autumn under a temporary contract. **Neptune** currently operates a half dozen 1950s-era Lockheed P2V Neptune water bombers and it intends to replace them with the 146 air tankers.

Qinetiq, a U.K.-based defense, technology and security company, purchased Avro RJ100 (E3368) from **Falko**, an aircraft asset manager. Starting this quarter, the RJ100 will support research and development trials and flight test training for the **U.K. Government**. It will replace a turboprop-engined Hawker Siddeley 748 Andover and a BAC One-Eleven jet.

-214 (SN 4939). It was sold to, and leased-back from **Aircol 24. Aviation Capital Group** leased -214 (SN 4942) to **Avianca Brazil/Oceanair**. **Airbus** delivered -214s (SN 4972) to **LAN Airlines**. In the Middle East, **Airbus** delivered -214 (SN 4955) to **Saudi Arabian Airlines**, and -214 (SN 4958) to **Air Arabia**. **Etihad Airways** took delivery of -232 (SN 4934) and **Qatar Airways** accepted -232 (SN 4930). **Nouvelair Tunisie** took delivery of -214 (SN 4623) that was stored at Toulouse since February, 2011. **Avolon** announced that it delivered its fourth A320 to **AirAsia** and the fifth A320 to **IndiGo Airlines**, India.

IndiGo, India's largest low cost airline took delivery of a -232 in February. It was sold to **AWAS** and leased back. The two companies entered into a sale and leaseback agreement for four new A320s in late 2011. The planes were ordered by **IndiGo**; another three aircraft will be delivered in the first half of 2012.

Andes Líneas Aéreas, Argentina, wet-leased two A320s from **Vueling**, Spain. The lease was arranged by **Avinco**, Monaco. The airline also operates MD-80s.

A321. **Airbus** delivered 10 A321s in December, including a record five -231s (SN 4935, 4940, 4957, 4960 & 4966) to **US Airways**. The airline has taken delivery of 63 A321s and has another 36 more on order. It operates more A321s than any other airline in the world, surpassing **Lufthansa** with 56 and **China Southern** with 57 A321s. **Vietnam Airlines** acquired two -231s (SN 4945 & 4971), and **Air China** received -232 (SN 4949). **Saudi Arabian Airlines** took delivery of -211 (SN 4962) and **Lufthansa** bought its 56th -231 (SN 4976). **Airbus** delivered only one A321 in January, a -231 (SN 4994) to **Lufthansa**.

Airbus Delivered 24 A320s in January. **GECAS** received three -214s and leased two (SN 4984 & 5007) to **AirPhil Express/Philippines Airlines**, and one (SN 5016) to **Go Air**, India. **AirAsia** took delivery of two -216s (SN 4980 & 4989). **AirAsia** transferred the first to **Thai AirAsia** and the second to **AirAsia Philippines**. In China, **Spring Airlines** accepted two -214s (SN 4978 & 4983), **Shenzhen Airlines** took delivery of two -232s (4986 & 5002), and **Juneyao Airlines** received two -214s (SN 4840 & 4981). **Hong Kong Airlines** accepted its first of 30 -214s (SN 2970), **China Eastern Airlines** received -214 (4844) and **Air China** took delivery of -214 (4985). Elsewhere in Asia, **Airbus** delivered one -232 (SN 4965) to **IndiGo**, -232 (SN 4973) to **Tiger Airways**, and -214 (SN 4993) to **Cebu Air**. In the Middle East, **Middle East Airlines** bought the 5,000th A320 Family aircraft to be produced, -232 (SN 5000). This was the seventh and last A320 that **MEA** ordered. **Qatar Airways** received -232 (SN 4930). In the U.S., **Virgin America** leased one -214 (SN 4999) from **Aviation Capital Group** and the first of two -214s (SN 4991) from **AWAS**. **Spirit Airlines** took delivery of -232 (SN 4996). Elsewhere, **British Airways** acquired -232 (SN 4975) and **BOC Aviation** leased -232 (SN 4990) to **South African Airways**. **GE Capital Aviation Services Limited (GECAS)** purchased and leased-back two new -200s with **TACA**. The A320s came from **TACA's** order book. This quarter, **Airbus** is increasing A320 Family production from 38 to 40 per month.

A330 & A340. **Airbus** delivered nine A330s in December, including one -243 (SN 1275) to **Airbus Military** for conversion into an A330 Multi Role Tanker Transport for operation by **AirTanker**; it will enter service with the **UK Royal Air Force**. **China Eastern Airlines** accepted its seventh -243 (SN 1267). **Aircastle** leased -243 (SN 1271) to **South African Airways**, **CIT Leasing** leased -302 (SN 1274) to **EVA Air**, and **Guggenheim Aviation Partners** leased -302 (SN 1272) to **China Airlines**.

Aeroflot accepted -343E (SN 1270) and **Thai Airways International** took delivery of its 22nd -343E (SN 1269). **Egyptair** received -343E (SN 1246), which had been stored for several months. The airline has one more sitting on the ground awaiting delivery. **Hong Kong Airlines** took delivery of its first of nine -343Es (SN 1255) and leased it to **Hainan Airlines**.

Aerolineas Argentinas leased three A340-313Xs (SN 123, 126 & 128) from two investment funds managed by **ICON Capital Corp.**, for six years. **Cathay Pacific Airways** recently returned the A340s to **ICON**.

A380. **Airbus** delivered a record four A380s in December. **Emirates Airlines** bought two -861s (SN 086 & 090) for a total of 20 in its fleet. **Qantas** received its 12th -842 (SN 074) and **China Southern Airlines** accepted its second of five -841s (SN 036). **Airbus** delivered a record 26 A380s during 2011, up from 18 deliveries in 2010. Sixty-seven A380s had been delivered to date. **Singapore Airlines** took delivery of its 15th -841 (SN 76) in mid-January. **Qantas** will return -842 (SN 014) to service in March. It was damaged by an engine failure on November 4, 2010.

In January, Airbus Delivered Nine A330s, including five -200s, one -200F and three -300s. **Hong Kong Airlines** accepted its seventh of nine -243s (SN 1277). This -200 features an all-premium class layout with luxurious accommodation for just 116 passengers. The aircraft will be used on new non-stop services to London. **Avolon** leased one -243 (SN 1279) to **Avianca**, and **Air Lease Corporation** leased -202 (SN 1283) to **Alitalia**. **Air China** and **China Eastern Airlines** each acquired one -243 (SN 1282 & 1280 respectively). **Airbus** delivered one -223F (SN 1164) and one -323E (SN 1281) to **Malaysia Airlines**. **Guggenheim Aviation Partners** leased -302 (SN 1278) to **China Airlines**, and **Swiss International Airlines** bought -343E (SN 1276).

Boeing 717. New Spanish low-cost airline, **Volotea** announced a long-term lease deal for an unspecified number of 717-200s on February 15th. **Volotea** took delivery of its first -2BL (SN 55185) from **Boeing Capital Corporation** at the time the lease was announced. The airline will launch its European point-to-point service with an all-717 fleet by Easter. The next 717 will be handed over in March. **Volotea's** 717s will be configured in an all-coach, 125-seat layout.

Boeing 737NG. **Boeing** delivered a record 40 737s in December. After a several month hiatus, **Ryanair** took delivery of eight -8AS/Ws (SN 34993, 34994, 34995, 34996, 34997, 34998, 34999 & 35043). The airplanes were completed in September and October and stored at Marana until delivery in December. **Boeing** delivered two 737s each to several airlines, including two -823/Ws (SN 31135 & 40769) to **American Airlines**, two -9GPERs (SN 37288 & 38310) to **Lion Air**, two -82R/Ws (SN 38174 & 38175) to **Pegasus Airlines**, two -838/Ws (SN 34189 & 39359) to **Qantas**, and two -7H4/Ws (SN 36679 & 41777) to **Southwest Airlines**. **Turkish Airlines—THY** accepted one -8F2/W (SN 40976) and two -9F2ER/Ws (SN 40973 & 40974), and **Virgin Australia Airlines** received three -8FE/Ws (SN 38708, 38709 & 41004). **GECAS** leased a third -86N/W (SN 36831) to **Royal Air Maroc**, and two -86N/Ws (SN 36830 & 38032) to **Garuda Indonesian**. **Air China** received -89L/W (SN 40031), **China Southern Airlines** accepted -71B/W (SN 38914), **Hainan Airlines** took delivery of -84P/W (SN 38148), and **Malaysia Airlines** received -8H6/W (SN 40134). **Boeing** delivered **flydubai's** 21st -8KN/W (SN 40250), and it was the 7,000th 737 to come off **Boeing's** production line. **SpiceJet** received its 24th of 53 -8GJ/Ws (SN 37363) that it ordered. In Europe, **Air Berlin** took delivery of -86J/W (SN 37761), **TUI Travel** leased a new -8K5/W (SN 37262) to **Thomson Airways**, and

Norwegian Air Shuttle ASA received -8JP/W (SN 39010). It was sold to, and leased-back from **DY3 Leasing**. In North America, Canadian LCC, **Westjet**, leased -8CT/W (SN 37962) from **BOC Aviation**. The **United States Navy** took delivery of -8FV (P-8A Poseidon, SN 40809), and **Boeing Business Jets** delivered 737-700BBJ (-7GJ/W SN 41658) to **SpiceJet Private**.

Used 737 Transactions. **Macquarie AirFinance** leased two -85Fs (SN 30478 & 30750) to **Aerolineas Argentinas**. The planes were built in 2001 and most recently leased to **Air Berlin**. These are the first -800s to be operated by the Argentine flag-carrier which has a fleet of 14 -500s and 14 -700s, as well as 10 A340s, three 747-400s, and three MD-80s. **UTair Aviation**, Russia, leased two -800s and five -500s from **CJSC Sberbank Leasing**. The 5-year finance lease deal is valued at more than \$100 million. **Avinco** arranged the sale of an ex-**Air Berlin** -800 (SN 30498) to **Transaero**. The 1999-era plane was owned by a Japan-based fund which was managed by **FGL Aircraft Ireland Limited (FGLAI)**.

Boeing 747. **Boeing** delivered the fourth of 10 ordered -867Fs (SN 39243) to **Cathay Pacific Airways** in December. The second and third of nine -87UFs (SN 37568 & 37569) were handed over to **Atlas Air Worldwide Holdings'** 49 percent owned subsidiary, **Global Supply Systems (GSS)**. The planes are operated for **British Airways World Cargo** through a five-year wet-lease agreement. **Global Supply** returned two -47UFs (SN 29252 & 29256) to **Atlas Air** after the new -87UFs were delivered. **Atlas Air** financed the purchase of its remaining six 747-8Fs with an \$865 million term-loan from **Apple Bank for Savings**. The loan was guaranteed by the **Export-Import Bank of the United States**; the \$865 million probably represented 85 percent of the airplanes' actual purchase price. The financing will consist of six separate 12-year term loans and the aircraft will be delivered between mid-2012 and mid-2013.

Boeing Delivered 28 737NGs in January. **Ryanair** received four -8AS/Ws (SN 34982, 40286, 40287 & 40288). **Japan Airlines** took delivery of two -846/Ws (SN 39190 & 40356), **Lion Air** accepted two more -9GPERs (SN 37289 & 38311), and **Pegasus Airlines** bought two -82R/Ws (SN 38176 & 40725). **AWAS** leased two -8JP/Ws (SN 39419 & 39420) to **Norwegian Air Shuttle** and **GECAS** leased one -86N/W (SN 39394) to **Travel Service** and one -86N/W (SN 39395) to **Solaseed Air**. **ILFC** leased -8Q8/W SN (SN 38824) to **Korean Air**, **Aviation Capital Group** leased -8HX/W (SN 38103) to **Shandong Airlines**, and **BBAM** leased out one -800. **Boeing** delivered -8U3-BBJ2 (SN 41706) to the **Indonesian Air Force**. **Virgin Australia Airlines** received -8FE/W (SN 38711) and **flydubai** accepted its 22nd -8KN/W (SN 40251). **TUI Travel** leased new -8K5/W (SN 37264) to **Thomson Airways**. In China, **Shandong Airlines** took delivery of -85N/W (SN 38637), **China Southern Airlines** accepted -81B/W (SN 38916), **Hainan Airlines** received -84P/W (SN 38149), and **Xiamen Airlines** bought -85C/W (SN 38386). **Boeing** delivered three -800s to U.S. airlines, including -890/W (SN 35203) to **Alaska Airlines**, -823/W (SN 33221) to **American Airlines**, and -924ER/W (SN 31650) to **Continental Airlines/United Airlines**.

In January, AirBridgeCargo Airlines (ABC) took delivery of the first of five new 747-8HVF freighters (SN 37581) that are on order, and it has options for another five airplanes. The subsidiary of the **Volga-Dnepr Group** already operates two 747-200Fs, one -300F, and eight -400F freighters. The new 747-8F freighter is 18 feet longer than the preceding 747-400F and can carry 16 percent more revenue cargo volume – equaling four additional main-deck pallets and three additional lower-hold pallets. **Boeing** delivered the first 747-8HTF (SN 37132) to **Korean Air** in February. **Korean Air** plans

to operate the 747-8 Freighter on its trans-Pacific route with stops in Osaka and Narita, Japan, Los Angeles and San Francisco. Korea's flagship carrier is the first Boeing customer to order both variations of the new 747-8 airplane and is also a key supplier partner on this new airplane program **Boeing** said.

Boeing 767. Japan Airlines received of the only 767 to be delivered in December — the airline's 32nd and final -346ER (SN 40371). In January, **All Nippon Airways** took delivery of its 32nd and penultimate -381ER (SN 40897), and **United Parcel Service—UPS** accepted its 45th -34AERF (SN 37945); it has 14 more on order.

Boeing 777. Boeing delivered six 777s in December, including three -31HERs (SN 38989, 41071 & 41072) to **Emirates**. The Dubai-based flag carrier has 33 -300ERs in service, and another 37 on order. **Air China** received one -39LER (SN 38668), and **China Southern Airlines** accepted its sixth -F1B (SN 37314). **GECAS** leased -36NER (SN 38696) to **British Airways**. In January, **Saudi Arabian Airlines** took delivery of its first two of 12 -368ERs (SN 41048 & 41050). At the delivery ceremony, **Saudi Arabian Airlines** announced its order for another eight 777-300ERs valued at \$2.4 billion at list prices. This order was previously accounted for on **Boeing's Orders and Deliveries** website in November, 2011. The flag carrier owns and operates 23 Boeing 777-200ERs. **Air New Zealand** accepted its fifth and last -319ER (SN 40689). **Emirates** received its 34th 31HER (SN 41073), and **Etihad Airways** took delivery of its ninth of 18 -3FXERs (SN 39684) on order. **Korean Air** accepted its first of five 777-FB5 Freighters (SN 37630) in February. It is the first airline in the world to operate both the 747-8F and 777F Freighters. The 777 Freighter will be used to open new markets in Europe, including Vienna, Frankfurt and London.

Uzbekistan Airways took delivery of the first of four -300ERs in February. The airline ordered the 767-300ERs in 2008, and also has two 787-8s on order. The delivery coincides with the airline's 20th anniversary. The airline was founded from **Aeroflot's** Uzbekistan division on January 28, 1992. Operations started on May 31, 1992, with a flight from Tashkent to London using Soviet-made aircraft that were acquired from **Aeroflot**.

GECAS leased one -300ER to **MEGA Maldives Airlines**. The airline started operations in 2010 from its base in **Male' International Airport** to Hong Kong and other cities in Asia. It is a new customer for **GECAS** and it currently operates two aircraft on a scheduled and charter routes.

Boeing 787. **All Nippon Airways** took delivery of its third -881 (SN 34514) on the last day of the year. It was flown to Japan in the first week of 2012 and was put on the Tokyo-Frankfurt route. In mid-January, **All Nippon Airways** received two -881s (SN 34486 & 34508) that were supposed to be delivered in December. **Boeing** employees worked through the traditional Christmas break to finish the airplanes, but did not have enough time to complete all of the pre-delivery modifications.

Bombardier delivered two CRJ900LRs (SN 15276 & 15277) to **Estonian Air** in December and January respectively. **Suncor Energy Oil Sands**, Canada took delivery of CRJ900LR (SN 15271) in January. **Air Nostrum/Iberia Regional** accepted CRJ1000 NGs (SN 19020 & 19021) in December and received another CRJ1000 (SN 19022) in January.

Embraer delivered EMBRAER 170-200s (SN 17000327 & 17000329) to **Flybe** in December. **Embraer** delivered two EMBRAER 190-100 ECJ Lineages (SN 19000159 & 19000438) in December, and delivered E190 ECJ Lineage (SN 19000203) to **OT Global Holdings** in January. **Tianjin Airlines**

received E190 (SN 19000489), and **Azul Linhas Aéreas** leased two E195s (SN 19000491 & 19000498) from **Orinoco Funding**. **TRIP Linhas Aereas** accepted E190 (SN 19000493) and leased two E190s (SN 19000495 & 19000406) from **Air Lease Corp. (ALC)**. **ALC** leased E190 (SN 19000503) to **Alitalia**. **Hebei Airlines** received two E190s (SN 19000497 & 19000502) in December. **Aerolittoral** took delivery of E190 (SN 19000499), and **Lufthansa Cityline** accepted E195 (SN 19000500). In January, **JetBlue** received E190 (SN 19000504).

Sukhoi Superjet. Aeroflot Russian Airlines put its fifth Sukhoi Superjet 100 aircraft (SSJ100) in operation in January. The airliner is named after the famous **Aeroflot** pilot **Dmitry Barilov**. The SSJ100 (SN 95015)) was leased to **Aeroflot** by **VEB-Leasing JSC** on financial lease contract. It is designed to carry 87 passengers in a two-class (12 - business class and 75 - in economy class) layout. **Aeroflot** has ordered 30 SSJ100. The five planes average 9 to 11 flight hours per day.

Finnair subleased four EMBRAER 170s to **Estonian Air** as part of **Finnair's** narrowbody fleet optimization plan. The Finnish flag carrier is trying to save €140 million per year by right sizing its fleet. The sublease period begins in the first quarter of 2012 and ends during 2015.

Turboprops

ATR delivered the second ATR 72-600 (SN 972) to **Azul Linhas Aereas**, and the second of nine ATR 72-600s (SN 973) to **Caribbean Airlines** in December. **Nordic Aviation Capital** received another two ATR 72-500s (SN 978 & 986). They were sold to **Avation** and leased to **Skywest Airlines**, Australia. **UTair** accepted three -500s (SN 981, 983 & 984). **Borajet** took delivery of -500 (SN 982) and **Wings Abadi Airlines** bought -500 (SN 985). In January, **TAME Ecuador** took delivery of ATR 42-500 (SN 854). **Air Lease Corp.** accepted ATR 72-600 (SN 987) and leased it to **TRIP Linhas Aereas**.

Bombardier delivered two Dash 8Q-402 NextGens (SN 4394 & 4397) to **Jazz Air** for operation for **Air Canada Express** in December. **SpiceJet** accepted Q400 NGs (SN 4389), and **Wideroes Flyveselskap** received Q400 NG (SN 4392).

EADS-CASA. Airbus Military delivered C295 (SN 082) to the **Mexican Air Force**, and two C295 (SN 084 & 085) to the **Egyptian Air Force** in December. The **U.S. Coast Guard** took delivery of C235/HC-144A (SN C202) in January.

Accidents and Safety

From Aviation Safety Foundation

Transporte Aéreo Militar – **TAM** Xian MA60 (FAB-96, SN 0503) was substantially damaged when it made a gear up landing at **Guayaramerin Airport**, Bolivia, on January 9, 2012. None of the 21 people on board were injured. The MA60 landed on its belly in March, 2011, and was repaired.

A Remarkable Two Month period without an airliner fatality ended on January 30, with the crash of a **TRACEP** Antonov 28 (believed to be 9Q-CUN, SN 1AJ006-11) near Namoya, Democratic Republic of

Congo. All five occupants died when the plane plunged into the forest. The previous fatal crash was November 23, when a **Susi Air** Grand Caravan crashed during a cargo flight in Indonesia.

Maldivian Air Taxi float-equipped de Havilland Canada DHC-6 Twin Otter 200 (8Q-MAT, SN 146) made a water landing at **Male International Airport's** sea plane base and the right hand wing dipped into the water as the plane came to stop. None of the 15 passengers and crew were seriously injured. The aircraft was substantially damaged.

The United Nations International Civil Aviation Organization called for more detailed labeling of lithium batteries that are being shipped by air. The **Dangerous Goods Panel** at the **UN's ICAO** meeting agreed to new standards, which may lead to more stringent U.S. rules for battery shipments. The U.S. currently can not impose tougher rules than are set by **ICAO**. The **Congress** kept the **Department of Transportation** from tightening its regulations because the electronics industry objected to what could lead to higher consumer costs. Lithium batteries can spontaneously burst into flames. Authorities suspect burning batteries caused two **UPS** cargo-jet accidents since 2006. In the first, a fire broke out in the cargo hold of a **UPS DC-8-70F**. The three crew were able to land the plane and escape. Their two fellow pilots in a **UPS 747-400F** were not so lucky. That airplane caught fire minutes after it left Dubai in September, 2010, and crashed before it could land again. When lithium batteries catch fire, the flames cannot be suppressed by cargo compartment extinguishers. The new regulations are scheduled to go into effect on January 1, 2013, if they are approved.

AVMARK CAPABILITIES

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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AVMARK's Transport Aircraft Values (TAV); reports current fair market values by year of build and projects the future value of all transport category aircraft.

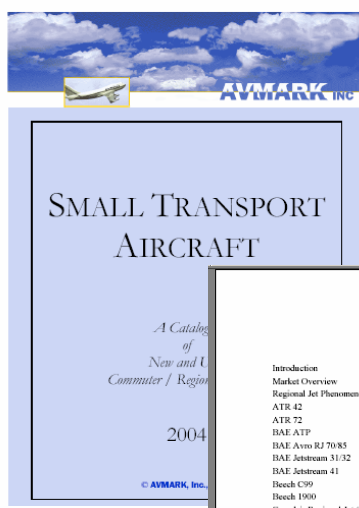
AVMARK's Historic Jet and Turboprop Values; summary of the then current fair market values as published in the AVMARK Newsletter for all jets and turboprops in service.

AVMARK's Small Transport Aircraft Catalogue (STA); designed as an easy to use reference guide to compare the operating and cost parameters of 35 regional jet and turboprop aircraft.

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.



SMALL TRANSPORT AIRCRAFT
A Catalog of New and Used Commuter / Regional Aircraft
 2004
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MARKET OVERVIEW

Most dynamic and fastest growing segment in the world, the regional jet market is replacing old generation propeller aircraft to serve 50 million passengers using state of the art technology.

Online Association (RAA):

Online:

99%:

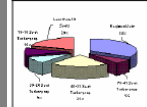


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Dornier 228	70
Dornier 328	74
Dornier 328JET	78
Dornier 728JET	82
de Havilland DHC-6	86
de Havilland DHC-7	90
de Havilland DHC-8 100/200	93
de Havilland DHC-8 300	100
de Havilland DHC-8 400	104
Embraer 120 Brasília	108
Embraer Regional Jet (ERJ) 135/140/145	112
Embraer 170	121
Memo	124
Fokker 50	128
Fokker 70	132
Let 410/420	136
Seab 340	140
Seab 2000	144
Shorts 330	148
Shorts 360	152

ATR 42-300

In Service: 1985 Orders: Out of Production Deliveries: 284

Specifications	
Accommodations	40
Passengers*	40
Pilots	2
Cabin Attendants	1
Powerplant	1,800 SHP / 1,342 kW
2 Pratt & Whitney PW120 Turboprops	4 blades
Wingspan	24.8 m
Length	24.8 m
Height	6.8 m
Wing Area	170 / 170 / 53 sq ft
Max. Ramp Weight	36,815 lb
Max. Takeoff Weight	36,155 lb
Max. Landing Weight	33,510 lb
Max. Ramp Weight	22,875 lb
Max. Landing Weight	10,835 lb
Max. Ramp Weight	9,920 lb
Max. Landing Weight	62.83 lb / sq ft
Max. Ramp Weight	10.22 lb/cu ft

Standard Equipment: Right engine Propeller Brake, Airsearch Air Conditioning, Stall Warning.

Optional Equipment: KLN 90A GPS/W, 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 attitude and heading reference systems (AHRS), 4 CRT's for dual attitude and heading reference systems (AHRS), 4 CRT's for dual attitude and heading reference systems (AHRS), 4 CRT's for dual attitude and heading reference systems (AHRS).

Price List

Years Built	Base (\$ mil)
85-96	3.0

Direct Operating Costs (\$ per block hour)

Utilization (Block Hours / Year)	100	300
Average Stage Length (nm)		
Flying Operations	\$180	\$180
Flight Crew, Salaries / Expenses	\$173	\$162
Fuel, Oil, Taxes	\$3	\$3
Other		
Aircraft Costs		
Insurance	\$3	\$3
Maintenance	\$476	\$476
Depreciation	\$62	\$62
Rentals	\$318	\$318
Total Direct Operating Costs	\$905	\$933
Cost per Available Seat Mile - \$	12.33	9.85
Cost per Airplane Mile	\$5.67	\$4.44
Cost per Seat Block Hour	\$19.67	\$19.11

Note: Data from DOT 419419-1999.

ATR 42

THE AVIONS DE TRANSPORT REGIONAL (ATR) first flew in August 1984, and entered service in December 1985 with the French regional airline Air France. The aircraft is a joint venture between Aerospatiale of France and Aeritalia of Italy. The ATR 42's name originally designated it as a 42 passenger aircraft, but subsequent reduction of the forward baggage compartment now allows for a seating configuration of up to 50 passengers.

The baseline aircraft is the ATR 42-300/320 powered respectively by PW120/121 engines. The latest version is the ATR 42-500 powered by PW127x engines and Hamilton six bladed propellers. Thus increasing the payload to 12,015 lb and the cruise speed to 300 kts.

The standard front cargo door allows the aircraft to be quickly converted from a passenger layout to freighter. Unique among turboprops, is the integration of a Propeller Brake on the right engine, which allows running of the engine in "Idle" mode to provide aircraft electrical power and air conditioning without the inconvenience and safety hazards of a rotating propeller.

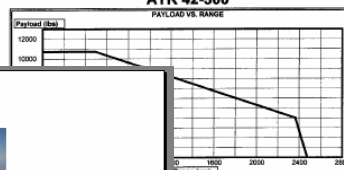
The ATR 42 and ATR 72 have a very high degree of commonality, allowing for cross-crew qualification, and a common spare parts holding.

TYPICAL CABIN CONFIGURATION

48 seats in a four abreast layout with a center aisle. Access to the cabin is by an air stair at the rear passenger door, and a modular galley in the rear of the aircraft is serviced through the same door. A standard toilet is located in the rear of the aircraft behind the passenger door. Baggage is accommodated in overhead bins on both sides of the cabin, under seat storage, in an extremely accessible forward and aft baggage compartment, and in a closet.



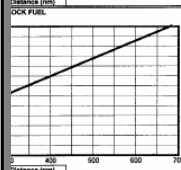
ATR 42



ATR 42-300
PAYLOAD VS. RANGE



ATR 42-300
CRUISE TIME



ATR 42-300
FUEL CONSUMPTION

US \$ 350.00

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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

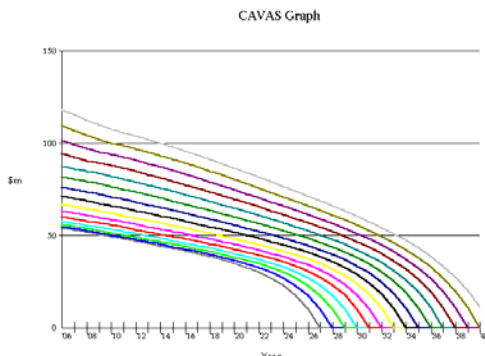
35 years

File No.

013

Search Term

Add Modify Delete OK



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	63.34	66.80	71.07	72.94	81.43	87.52	94.23	101.54	109.47	118.00
2007	52.85	53.49	54.73	56.34	58.98	62.01	65.42	69.85	74.86	80.07	85.92	92.18	99.12	106.73	115.25
2008	51.69	52.36	53.61	55.23	57.85	60.84	64.23	68.69	73.65	78.87	84.80	91.04	97.97	105.20	113.29

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	8,858,261	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
AIRCRAFT LIFE ADJ. CASH FLOW	25,841,782	25,329,851	24,506,290	23,686,100	22,869,282

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