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USA

EXECUTIVE OFFICE
PO Box 189
Vienna, VA 22183 – USA
Tel: +1-240-582-0119
Fax : +1-226-444-9723
enquiries@avmarkinc.com

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

EUROPE

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

LATIN AMERICA

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

ASIA & ASIA-PACIFIC

AVMARK ASIA-AMS
50 Raffles Place
34-02A Singapore Land Tower
Singapore 048623
Tel: +65-65-38-38-35
Fax: +65-65-38-38-10
enquiries@avmarkinc.com

Market Comment

Time to Pay Debts: International Air Transport Association (IATA). The airline industry collectively owes approximately $211 billion. The debt has not fallen below $150 billion in this century and that burden limits how airlines can do business. **IATA** Chief Economist **Brian Pearce** stated what every credit card debtor knows and every national government should know. “Airlines finance their balance sheets with debt. This puts huge pressure on earnings because you have to keep money coming in to finance debt. When you are in debt,” he said, “you risk losing flexibility. Interest eats up cash reserves and without liquidity your options become limited.” The U.S. budget deficit and the Euro-zone financial crisis are illustrations of the debt problem writ large. Airlines raised $44 billion in cash in 2009, through the sale of assets worth $13 billion and by adding $31 billion to their debt. U.S. airlines are repeating their practice of borrowing, which led to several Chapter 11 bankruptcies after 2001. This time, they have a enough cash to tide them over for a while. The major U.S. carriers restrained their capacity, but the low-cost competition is still adding new jets. The improving economy and good cash flows are giving U.S. airlines a temporary reprieve. But they will be vulnerable when the next cyclical downturn comes. If the economy dips again for any number of reasons — such as high unemployment, rapidly rising fuel prices, another war, another bubble collapse or some unexpected event — then the highly leveraged airlines will have no tricks in their bag, except to cut costs.

Geoff van Klaveren, an analyst for **Deutsche Bank** said, “Airlines are being more rational with their capital expenditure and have shown encouraging capacity restraint, although there are signs that this discipline could deteriorate in 2011.” The world’s airlines added nearly 1,000 big jets in 2010 and ordered another 1,200. This year, **Delta** is planning to buy 200 airplanes and **IndiGo** is buying 180. This shows that restraint is going out the window. The recession “forced airlines to cut costs like never before and to consider mergers that would have been unthinkable a few years ago,” he said. **IATA** reported that demand rose 11 percent in 2010, while capacity increased by only 7 percent. **IATA** CEO **Giovanni Bisignani** said, “As a result, yields have risen 7-8 percent this year. That is driving improved profitability.” But he warned that 2010 was as good as it gets. “Next year, global capacity will grow 6 percent ahead of a 5 percent demand improvement.” This means that “yields will stop growing and industry profitability will fall back to $5.3

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billion." A $5 billion profit is not terrible, but it trends in the wrong direction. Another factor that adds to the airlines' debt burden is the need to replace older airliners for environmental, economic, and commercial reasons. **IATA** reports that airlines will spend $1.3 trillion to buy new aircraft by 2020. Fortunately, cash flush Chinese banks are willing to finance aircraft purchases because they have large surpluses and aircraft are valuable, mobile assets that can easily be repossessed and placed with new operators.

Now is the time to pay off the corporate credit card before buying lots of shiny new jets. Fiscal responsibility is boring (just ask the American consumer). None the less, it would be better to build a solid financial foundation rather than to bet the company on predictions of fair winds and sunny skies – i.e. on thin air — as they have done in the past. By lowering debt, the airlines will be able to finance new planes at a better interest rate, because they will have a better credit rating. By lowering debt, the airlines can bank money to prepare for the next down cycle, which come every five to seven years. In the last decade, several U.S. majors filed bankruptcy and then found another bunch of investors to bail them out. The big five airlines combined to become the "Big Three," imitating the banks' survival plan of becoming "too big to fail." The major European airlines have mostly forgone bankruptcy, but are merging at a quick pace. Mr. **van Klaveren** sees this as a solution. "The only sustainable solution for the airline industry is to remove the archaic ownership restrictions that prevent worldwide consolidation, which is badly needed in such a capital-intensive industry," he said. "We believe governments don't need to hold strategic airline stakes: the market will provide." Mr. **Pearce** agrees, saying cross-border mergers are "the only long-term solution for the industry. Without this fundamental change, other efforts to realign the business model along sustainable lines will ultimately fall short." The airlines raised $13 billion in new equity last year but need to raise more to reduce their debt. It is hard to find investors because the industry has such low return on investment. The profit margin in 2010 is estimated to be only 1.6 percent. In comparison, some aircraft lessors are earning 10 percent from their investments. Home mortgages in the U.S. are running at 4 to 6 percent and five-year certificates of deposit interest rates range between 2 and 2.6 percent. Even though investors can find more profitable uses for their money, there are still a few which find the lure of aviation too strong to resist. They are few and far between especially if they cannot invest in another country's airline. Mr. **Pearce** points out that an airline's goal should be to make money and not to fly the most passengers at the cheapest prices. In the past, the airlines have forgotten that point. Their present business plan is to raise as much cash as possible to service their near-term debt. If debt were lower, the airlines would not

have to work so hard to earn a profit. They might also be able to pay their employees better. Or even treat their passengers better. What a concept.

Airbus Orders

Virgin America Launches the A320neo Program. Virgin America placed a firm order for 30 A320 and 30 A320neo aircraft on December 29, but **Airbus** waited to announce it until January 17. The sale is worth $5.1 billion at list price. The A320s will be delivered from 2013 to 2016, and the A320neo will be ready for service in 2016. **Virgin America's** fleet will more than triple in size through leases and deliveries — from 10 A319s and 24 A320s today to a total of 111 A320 Family aircraft in 2019. The airline will take delivery of four A320s this year and will lease eight more. The airline contracted to lease five planes in 2012 and is negotiating for more. The firm order formalized and expanded (by 20 units) a commitment made at **Farnborough International Airshow** in July 2010. **Virgin America** will announce its engine choice by mid-year. Its current fleet is powered by CFM56 engines. Airlines can choose between **CFM International's** LEAP-X engine and **Pratt & Whitney's** PurePower PW1100G engine for the A320neo. The airline is a scant three years old and placed a significant launch order for a new aircraft type. The A320neos will seat 146 to 149 passengers in three cabins: First Class, **Virgin America's** unique Main Cabin and Main Cabin Select, in common with the A320s. The A320neo features new more-efficient engines and large Sharklet wing-tip devices. The combination is expected to deliver up to 15 percent fuel savings as well lower CO2 and Nitrogen Oxide–NOx emissions and reduce engine noise. The A320neo will have over 95 percent airframe commonality with the A320 Family whilst offering up to 500nm (950 km) more range or two tons more payload. **Airbus** estimates that the A320neo's fuel efficiency will yield an average annual savings of $1.1 million per aircraft. The A320neo will emit 3,600 fewer tons of CO2 per aircraft on an annual basis. **Virgin Group** Founder **Sir Richard Branson** said, "We're committed to investing in the next generation solutions that will make air travel more sustainable. The A320neo will help us get there, by lowering costs and reducing our impact on the environment. **Virgin America's** existing A320s are now up to 25 percent more fuel and carbon efficient than the average U.S. fleet, and the A320neo promises to improve on those numbers even more."

At the Airbus Annual Press Conference, company President and CEO **Tom Enders** announced that **Virgin America's** order raised **Airbus'** firm sales above 10,000. "We hit our 5,000th order in August of 2004," he said, "after more than 30 years. To achieve the 10,000th order just over six years later is a ringing endorsement of our product line. And to do so with **Virgin America**, one of our newest and trendiest customers, is very fitting. The fact that this milestone also embraces the first firm order for our new, eco-efficient A320neo is also very inspiring." **Airbus** said it delivered its first airplane, an A300 to **Air France**, in 1974. **Airbus** sold 1,000 aircraft by 1989. Just seven years later, sales had doubled to 2,000 planes. Sales of **Airbus** aircraft reached 3,000 in 1998, and 4,000 aircraft in 2,000. **Airbus** touted its investments in the U.S. economy. The company said in a press release, "**Airbus** spends some 40 percent of its procurement budget with hundreds of suppliers in more than 40 states. In 2009 alone, **Airbus** spent more than $10 billion in the U.S. – more than it spent in procurement in any other country. Using U.S. **Department of Commerce figures**, that dollar amount translates into **Airbus** support of 180,000 American jobs."

IndiGo Gives the A320neo a Big Boost. IndiGo, India's largest low-cost carrier signed a Memorandum of Understanding (MOU) for 150 **Airbus** A320neos and 30 standard A320s. **Airbus** claims this is the

largest order for 100+ seat commercial jets in history, in terms of numbers, and it is one of the largest in monetary terms, too. The order is worth approximately $15.6 billion at list price. The standard A320 is priced at $81.4 million while the A320neo lists for $87.8 million. **IndiGo** is expected to win a 40 percent discount for the order. **Airbus** believes the contract will be signed in several months. The engine selection will be announced by the airline at a later date. All but two of **IndiGo's** 34 A320s are powered by **IAE** V.2500 engines. The airline has another 63 A320s in backlog from the 100-plane order it placed in June 2005. The airline received an average of eight A320s per year since July 2006, so it will take approximately 30 years to fill the 243 outstanding orders, unless **IndiGo** ups its acquisition rate. The airline said it expects to double its fleet to 75 aircraft by 2016. Since it will use new airplanes to replace its oldest ones, **IndiGo** anticipates a fleet of 135 Airbuses by 2022. The first of the 30 A320s will be delivered in 2015, and the first A320neos will arrive in 2016. **Airbus** said **IndiGo** is expected to finance its new airplanes through a combination of loans and leases. The airline currently sells its new jets and leases them back. It is also considering an Initial Public Offering (IPO) to finance the purchases. **IndiGo** is India's third-largest domestic carrier by market share and has been flying for less than five years. **InterGlobe Enterprises** and former **US Airways** CEO **Rakesh Gangwal** own the company, so an IPO would open the airline to outside stockholders. The A320 Family has outsold the 737NG in India by a factor of five. With this order, Indian airlines have ordered 449 A320 Family aircraft and 88 737NGs. India's air transport business is expanding quickly as the economy booms. The country has a dozen domestic airlines that are competing for limited airport and airway space. The domestic carriers had to limit their growth in the past three years due to bottle necks from antiquated infrastructure and the world economic recession. Indian airlines carried an estimated 51 million passengers in 2010. Its neighbor, China, carried an estimated 261 million passengers last year.

Asiana Airlines, South Korea, became the first new customer for the A380-800s since 2009. The airline ordered six aircraft in January and they will be delivered between April 2014 and December 2017. **Asiana** will operate the A380s on routes to Europe and the U.S. Their contract is valued at approximately $1.8 billion; the carrier will announce its engine selection shortly. **John Leahy, Airbus'** Chief Operating Officer-Customers, said the A380 is "the most efficient tool to meet demand on the world's most heavily-traveled routes, especially out of the fast-growing Asia-Pacific region." Most of the airlines that bought the A380 are based in Asia and the Pacific region. **Airbus** received a Memorandum of Understanding (MOU) from Japan's **Skymark Airlines** for four A380s in November. Airlines typically seat 525 passengers in a three-class layout in their A380s. The plane can fly 8,300 nautical miles (15,300 kilometers), enabling **Asiana** to offer direct service from Seoul to Europe and the U.S. **Asiana's** rival, **Korean Air,** ordered five A380-800s in 2003. It expanded its commitments by three planes in February 2008 and by two more A380s in February 2009. **Korean's** first batch of five A380s will arrive between May and December; the rest will be delivered between 2012 and 2014. The Korean flag carrier ordered **Engine Alliance** GP7200 engines for its A380s. **Boeing** is also suffering a drought of orders for its 787-8I jumbo passenger jets. Since the launch of the type in 2005, **Boeing** has landed only 33 firm sales—20 from **Lufthansa,** five from **Korean Air** and eight from **Boeing Business Jets.** With **Asiana's** announcement, **Airbus** has firm orders for 240 A380s from 18 customers. **Asiana** has 35 Airbuses in its fleet and in 2008, it ordered 30 A350s, worth $7.2 billion and optioned 10 more. Deliveries will start in 2016.

December Orders. Airbus sold 188 new narrowbody and 16 widebody jetliners in December. The sale of these 204 jetliners brought **Airbus'** gross orders to 644 and its bookings across the 10,000 milestone. In December, three customers bought 160 A320 Family aircraft. **Virgin America** contracted for 60 A320s, **China Aviation Supplies Holding Company** ordered 50 A320s for **China Eastern Airlines,** and **LAN Airlines** boosted its inventory with six A319s, 34 A320s and 10 A321s. **EasyJet** purchased 15 A320s and switched 20 A319 orders to the A320 model — for a total of 70 A320 orders. Three leasing companies bought 11 A320s. A new customer, **Avolon,** ordered eight A320s, increasing its fleet to more than 60 aircraft. The lessor was founded in May 2010 by some former **RBS Leasing** executives, with initial capital of $1.4 billion. The A320s are valued at more than $600 million at list prices. The lessor will choose the engine type later. **AerCap** bought two more A320s, for a total of 20. **Aircraft Purchase Fleet** added one A320 for a total of 50. Early in the month, one private customer purchased an A320 Prestige and on December 20, another corporate customer bought an A319CJ. Chinese customers added 16 **Airbus** widebodies. **China Aviation Supplies Holding Company** contracted for six A330-300s and **Air China** committed for 10 A350-900 XWBs. The month's sales brought **Airbus'** net orders to 574 in 2010 and total bookings to 10,060 as of December 31.

Airbus December 2010 Orders, Deliveries and Backlog

DEC ORD	DEC DEL	DEC CANX	TOTAL ORD	TOTAL DEL	BACK LOG
			A318		
-0-	-0-	-0-	83	74	9
			A319		
7	2	-0-	1,502	1,272	230
			A320		
171	34	-0-	4,502	2,554	1,948
			A321		
10	5	-0-	857	626	231
			A330		
6	6	-18	1,104	750	354
			A340		
-0-	1	-0-	379	375	4
			A350		
10	-0-	-0-	583	-0-	583
			A380		
-0-	1	-0-	234	41	193
This Month			**This Year**		**BL**
19	49	**-70**	**574**	**510**	3,552

Airbus sold 10,060 aircraft and delivered 6,508 as of December 31, 2010
Total orders, deliveries and backlog include cancellations and order changes.

Airbus Delivered 49 Jetliners in December, consisting of two A319s, 34 A320s, five A321s, three A330-200s, three A330-300s, one A340-500 and an A380. **Airbus** delivered 510 jetliners in 2010, bringing the company's overall deliveries to 6,508.

LAN Airlines, Chile, confirmed its order for 50 A320 Family aircraft. The sale was announced as a Memorandum of Understanding (MOU) at the **Farnborough International Airshow** in July and it is the largest **Airbus** order placed by a Latin American airline. The first of the new batch of six A319s, 34

A320s and 10 A321s will be delivered in 2013. **LAN** chose to have **Airbus'** Sharklet wing-tip devices installed on its new planes to enhance their efficiency and payload-range performance. **LAN** has operated an all-**Airbus** short haul fleet since 2008. With the December order, **LAN** has purchased at total of 15 A318s, 38 A319s, 85 A320s, 10 A321s and four A340-300s. By year's end, **LAN** took delivery of the A318s, 20 A319s, 24 A320s and the A340s. The airline operates subsidiaries in Argentina, Peru and Ecuador and will merge with **TAM,** Brazil by mid-year. **Airbus** sold more than 550 aircraft to 22 Latin American customers. More than 300 Airbuses are flying in the region and another 250 planes are on backlog.

China Eastern Airlines agreed to buy 50 more A320s, through **China Aviation Supplies Holding Company,** for delivery from 2012 to 2015. The airplanes are valued at $3.2 billion ($64 million each) at list price, but the airline said it negotiated a significantly lower price for the planes. **Airbus** recently announced orders for 102 planes from Chinese airlines, including the 50 **China Eastern** A320s. Half the A320s will be built at **Airbus' Final Assembly Line-China (FALC)** in Tianjin, China. **China Eastern's** fleet will expand by about 11 percent when the A320s enter service. They will allow the airline to introduce new domestic and regional routes from its hub in Shanghai—the country's financial capital. **China Eastern** saw its passenger numbers rise nearly 50 percent this year, due to the end in the global recession and due to buying **Shanghai Airlines**.

EasyJet contracted to buy 15 A320s in December, and switched a current order for 20 A319s to the larger A320 model. The list price for the 15 A320s is $1.1 billion ($73.3 million each). The low-cost carrier also optioned 33 A320s, raising its total options to 42 A320 Family aircraft. The new A320s will be delivered between 2012 and 2014 and will either be purchased directly or leased. The airline now has 172 A319s and 70 A320s on order, making it one of the world's largest customers for the single-aisle Airbus. **EasyJet** operates 159 A319s and 23 A320s, as of December 31. The airline accepted its first A319 in September 2003 and received its 100th Airbus in April 2007. **Easyjet's** CEO, **Carolyn McCall,** said the airline can grow its capacity through a flexible combination of adding new aircraft, deferring deliveries and extending leases in order to match economic conditions and market opportunities.

Airbus Netted 574 Commercial Aircraft orders in 2010. It sold 644 aircraft, but lost 70 existing sales. The new orders are valued at more than $84 billion at list prices; the net orders are worth $74 billion. **Airbus** said it captured 51 percent of the gross worldwide market, in terms of units sold, and won 52 percent of the net new orders in the larger-than-100-seat market. The manufacturer sold 452 A320 Family aircraft, 160 A330/A340/A350 XWB Family aircraft, and 32 A380s in 2010. By year's end, the commercial backlog was 3,552 aircraft – six years of production at current delivery rates. The backlog is valued at over $480 billion, at list prices. The military backlog stood at 247 aircraft, including the A330MRTT, the A400M, the CN235 and C295. **Airbus** also sold 21 new military twin-turboprop aircraft. **Airbus** has increased its production for nine years in a row and surpassed its 2009 record of 498 deliveries with its production of 510 commercial aircraft in 2010. It delivered 401 A320 Family aircraft, 91 A330/A340s, and 18 A380s to 94 customers, including 19 new ones. **Airbus Military** delivered 20 CN235 and C295 military transport aircraft, exceeding the 2009 figure by four airplanes. **Airbus** added 78 A350 XWB orders this year, boosting its total to 583. There are four development A400Ms flying, with a fifth coming on line this year. They have flown more than 1,000 hours in over 300 test flights. Series production of the A400M will start soon and civil certification is planned by the end of the year. The A330 Multi-Role Tanker Transport—MRTT was certified in 2010, and five are currently flying.

Four A330 MRTTs are undergoing conversion. The first two MRTTs will be delivered to the **Royal Australian Air Force—RAAF** shortly. The A380 program has finally stabilized, even with the disruptions caused by last November's Trent explosion, and the temporary upset to the production line that it caused. **Airbus** turned many temporary engineering jobs into full-time positions and assigned employees to work on the A320neo and A350. **Airbus** hired 2,200 new employees last year and plans to add 3,000 more in 2011, which will bring the active workforce up to 55,500 by year end. The new employees will help ramp-up the single-aisle and widebody programs, as well as develop and industrialize the A400M, A350 XWB and the A320neo, **Airbus** said.

Delta Air Lines plans to replace its old narrow-bodies. President **Ed Bastian** told an investor meeting that "we clearly need to get the DC-9s retired." The airline also wants to retire its older MD-88s, older **Airbus** narrowbodies and the 757s. **Delta** inherited 40 DC-9s and 126 A320 family aircraft from **Northwest** and operates 117 MD-88s and 179 757s. Mr. **Bastian** admitted that the airline was out of the new plane market for the last two years due to the complexities of merging with **Northwest** in 2008. They had plenty of capacity (more than 700 aircraft) and needed time to properly allocate them on its route system. The airline is open to acquiring new aircraft through direct ownership and long-term leases. **Delta** is looking at a firm order for 100 to 200 small, medium and large single-aisle planes for its domestic routes. They intend to option another 200 aircraft, and deliveries could start in 2013. **Delta** has requested proposals from **Airbus, Boeing** and **Bombardier.** The airline has only 18 airplanes on order, all are 787s, due at the end of the decade.

State-Guaranteed Airliner Export Financing will become more expensive under a tentative agreement by Brazil, Canada, France, Germany, Japan, Spain, the U.K. and the U.S. The banks will charge more for export guarantees premiums in order to reduce the distortion to competition between airlines. **Steven Tvardek**, with the French **Organization for Economic Cooperation and Development**, said the agreement "will mean that government-backed financing can complement the market, without crowding the market out." Under the new plan, export-guarantee premiums will be raised on February 1, and will be set annually with reference to market conditions, Mr. **Tvardek** said. The cost of the premium for an aircraft financing guarantee would double to 8 percent and aircraft buyers will pay a market surcharge which will be modified each quarter. The new agreement will exempt the current order backlogs, therefore, **Airbus** and **Boeing** can use the current state-backed financial terms for deliveries through 2012; **Bombardier's** and **Embraer's** extensions run through 2013. Financing for those manufacturers' airplanes will fall into line with guarantees available to **Airbus** and **Boeing.** Up to now, the regional jets were considered to be in a different category. The **Mitsubishi** MRJ is subject to the new rules, because Japan is an **OECD** signatory, while the Russian **Sukhoi** Superjet 100 and the Chinese **Comac** ARJ21 are not. The airlines that were excluded from receiving guarantees complained that the cheaper government financing favored well-funded rivals. Some airlines are still not happy, because the inequality between government and commercial financing still remains. Commercial airplane loans are about 1.5 percentage points higher than government-backed financing, also the three-year transition time favors the government loans. Approximately 20 percent of the **Airbus** and **Boeing** deliveries will have government guarantees. During the recession, even more airplanes were financed with government help. Airlines based in the "home countries" of **Airbus** and **Boeing** still do not qualify for budget government financing. The **Obama** administration approved the new agreement. An official said, "No agreement is going to be perfect or avoid all risks in the future. This does push things closer to a market-based system, and we will have to see where this plays out."

Boeing Orders

Boeing Sold 55 737s and One 787 in December. **C.I.T. Leasing Corporation** ordered 23 737-800s and 15 737-900ERs at the end of the month. Another lessor, **AerCap** purchased 10 737-800s, list priced at $80 million each, and took purchase rights for an additional five. Its CEO **Klaus Heinemann** said the 737-800s will be delivered with performance upgrades and the new Sky Interior. **Boeing Business Jet** ordered one 737-800BBJ, one **Unidentified Customer** committed for one 737-800 on December 2, and a week later another **Unidentified Customer** purchased four 737-900ERs. Further, an **Unidentified Customer** ordered one 787-8 in the middle of the month; no other information was released by **Boeing.** The manufacturer lost orders for eight 737s, two 747s, three 777s and one 787. **Boeing** delivered 33 737s, one 767 and eight 777s in December.

Boeing delivered 462 commercial airplanes in 2010, two more than the target of 460 deliveries that the company set. **Boeing** netted 530 commercial jet orders during the year, reflecting the economic recovery. The company sold a very respectable 625 new aircraft, including 508 737s, one 747, three 767s, 76 777s and 37 787s. It lost 95 existing orders in 2010, including 22 737s, two 747s, 30 777s and 41 787s. At year-end **Boeing** had 3,443 unfilled orders, representing a seven and one half year backlog at the current production rate. **Boeing** said the 376 737NG deliveries set a company delivery record for the second consecutive year. The 737 won 486 net orders while the rival **Airbus** sold 416 A320 Family aircraft. **Boeing** delivered 74 777s and netted 46 orders in 2010. The manufacturer delivered a dozen 767s during the year and sold three. The 787 program suffered a net loss of four orders, when airlines ordered 37 new 787s and cancelled 41 existing commitments. The 747-8 backlog also shrank by one unit. **Airbus** twin-aisle planes outsold **Boeing** widebodies, when it netted 124 A330s, A340s and A350s orders and 32 A380s.

Boeing announced several production rate increases during the year. It will raise the 737NG production rate to 35 per month in

Boeing December 2010 Orders, Deliveries

DEC ORD	DEC DEL	DEC CANX	TOTAL ORD	TOTAL DEL	BACK LOG
			737		
54	33	-0-	8,824	6,638	2,186
			747		
-0-	-0-	-2	1,525	1,418	107
			767		
-0-	1	-0-	1,044	994	50
			777		
-0-	8	-3	1,163	910	253
			787		
1	-0-	-0-	847	-0-	847
This Month			**This Year**		**BL**
55	42	-5	**530**	**462**	3,443

Boeing sold 20,933 aircraft and delivered 17,490 as of December 31, 2010
The Current Program includes sales and deliveries of 737s, 747s, 767s, 777s and 787s.
Sales totals are net, minus cancellations.

early 2012, and to 38 per month by July 2013. The manufacturer currently builds five 777s per month and will increase the rate to seven per month in mid-2011. **Jim Albaugh**, **Boeing Commercial Airplanes** CEO said, "In response to strong customer demand globally, we are increasing our yearly production to 100 777s" (8.3 per month) in the first quarter of 2013. The company currently has 250 777s in backlog. One 767 is completed each month now, and the rate will increase to two per month. This will let **Boeing** build through its 50-unit backlog by early 2014. **Boeing** decided to raise widebody production rates after **Airbus** announced that it would build nine A330 per month beginning in January 2012.

Boeing Started Final Assembly on the 1,000th Boeing 767 at its Everett, Washington, factory. The 1,000th airplane is a 767-300ER for **ANA—All Nippon Airways** and is the last 767 to be completed in that building. The next 767, line number 1001 (also a 767-300ER for **ANA**) and all future 767s, will be assembled in a new smaller bay, at a production rate of two per month. The current 767 assembly bay will be converted to accommodate a new 787 assembly line. This will be a temporary "surge" line that will augment the first 787 production line. A permanent second 787 production facility is being constructed in Charleston, South Carolina. **Boeing** workers are worried that the **U.S. Air Force** will choose the **Airbus** A330 tanker, which will spell the end of 767 production at about 1,044 units. They hope the 787 "surge" line will be a permanent third production line to speed delivery of the much delayed Dreamliner. It is still too soon to write off the 767, which has been built at Everett since 1980. If it is finally supplanted by the 787 and the **Air Force** does not buy **Boeing's** KC-767, the last 767 will roll out in about 2.5 years. The 1,000th 767 will be delivered to **ANA** in February, and another six will follow by 2014. The airline placed its first order in 1979, and has received 89 767s to date. The other 767s will be delivered to **Azerbiajan Airlines (4), DHL Airlines (3), Japan Airlines (6), LAN Airlines (4), UPS (20), Uzbekistan Airlines (4)** and two will go to unidentified customers. **Boeing** will offer its final price for the 767 tanker contract to the **Air Force** in the next month.

CIT Aerospace placed an order for 38 Next-Generation 737 airplanes and took purchase rights for another seven 737s. The lessor purchased 15 737-900ERs and 23 737-800s and will receive them from 2014 through 2017. **CIT** said it won a discount from the $3.15 billion list price (an average of $82.9 million each). It is **CIT's** largest order of **Boeing** airplanes and the largest order for the 737-900ER placed by a leasing company. The lessors' 737s will be fitted with "the innovative Boeing Sky Interior and other performance improvements that will keep its airplanes at the leading edge of passenger comfort, efficient operations and reduced fuel consumption," said **Boeing's** Vice President of Sales **Marlin Dailey.** The lessor has 140 **Boeing** airplanes in its portfolio and has 58 on backlog. **CIT** owns or finances another 160 commercial aircraft, including 131 Airbuses. It has 55 Airbuses on order. **Jeffrey Knittel**, president of **CIT's** transportation finance unit said the order "reflects our efforts to maintain one of the youngest and most techno-logically advanced fleets in the industry." It also represents **CIT's** re-entry into the first tier of aircraft lessors after its emergence from bankruptcy in December 2009.

Boeing Delays 787 Deliveries by Six Months. On January 18, the manufacturer announced that it will deliver the first Dreamliner to **All Nippon** in the third quarter of 2011. This is a six-month delay from the last announced delivery date of February. **Boeing** had to revise its delivery schedule for the seventh time to fix the electrical hardware and software after an electrical fire on board a test aircraft on November 9; the test fleet was grounded until December 23. The program also suffers from other

manufacturing problems that will be addressed, such as the Trent 1000 engines, excessive condensation problems, parts shortages, shipping delays, and widespread quality control issues. On top of those problems, it is rumored that the **Federal Aviation Administration—FAA** may not certify the 787 for long-distance overseas flights. The **FAA's** aviation safety deputy administrator and **Boeing** executives met to discuss the 787's engine and electrical-system reliability issues. Both were called into question by recent failures. The **Boeing** spokesperson **Yvonne Leach** said, "We are confident we will work through any issues or concerns that the **FAA** has in a cooperative and constructive manner." Further, she said, "We're working a revised program schedule that will accommodate the known issues and discoveries – including the work backlog that exists in the factory – as well as the remainder of flight test and certification." She seemed to excuse the delays by saying, "We have always acknowledged that new airplane programs are difficult and that bringing innovation to the market takes hard work." **Boeing** and **Hamilton Sundstrand** engineers redesigned some of the 787's electrical system software to improve power distribution. They also redesigned the electrical panels where the fire started. It has been determined that the fire was caused by a foreign object that short-circuited the panel. **Boeing** said it would test the Ram Air Turbine, a wind-driven turbine that generates backup power in the event of emergencies; the turbine pops out of the aircraft's belly automatically when normal power is lost. **Boeing** re-started the 787 certification program in mid-January and it said it was "gradually returning individual airplanes to the flight test program." **Scott Fancher,** head of the 787 program said, "The revised timeline for first delivery accommodates the work we believe remains to be done to complete testing and certification of the 787. We've also restored some margin in the schedule to allow for any additional time that may be needed to complete certification activities." An **All Nippon** spokeswoman did not have much to say about the new schedule except, "The aircraft is now three years late and has been delayed seven times, so we will be looking to **Boeing** for assurance that it can meet this latest delivery date." **ANA** looks forward to a full delivery schedule so it can plan its "future route network and fleet expansion strategy." The airline may receive only one of its 55 787s this year. Other early deliveries will go to **Air India, Continental Airlines, Japan Airlines International, LAN Airlines** and **Royal Air Maroc**. **Boeing** paid more than $5 billion in penalties and delay concessions to airlines so far. Some 30 aircraft are partially completed and waiting for engines and extensive rework to the interiors and flight systems to make them airworthy.

Shandong Airlines, China said it will buy 15 Boeing 737-800 aircraft worth up to $1.2 billion ($80 million each) at list price. The new 737s will be delivered between 2014 and 2015. **Shandong Airlines** told the Shenzhen stock exchange that it will fund the airplanes with revenue and bank loans; the airline said it was negotiating discounts from the list price.

Xiamen Airlines' General Manager **Che Shanglun** said the airline intends to order six 787s for planned international routes. The airline operates 46 737NGs and eight 757s on 15 domestic and inter-national routes. **Xiamen** has 36 737NGs on order and plans to expand its fleet to more than 130 airplanes by 2015. The airline is on solid financial footing and earned a net income of 1.8 billion yuan ($272.6 million) in 2010. **Xiamen** also received 810 million yuan for fleet expansion from its majority share owner **China Southern Airlines.**

Boeing Forecasts a Need for 1,150 Commercial Jets in India over the next 20 years. The planes will be worth up to $130 billion; India will account for more than 4 percent of the worldwide market. **Airbus** forecasts a demand for 1,032 commercial aircraft in India in the same period. **Boeing India** President **Dinesh Keskar** said, "We see air traffic in India growing 15 percent per year over the next five years

and about 8.5 percent on average over the next 20 years." Domestic air travel rose 19 percent in 2010, while traffic rose 8 percent in 2009. Traffic actually declined by more than 10 percent in 2008, due to the global economic downturn, which was exacerbated by higher fuel prices. Mr. **Keskar** expects Indian airlines will add about 40 aircraft each year over the next two decades to meet the growing demand. Presumably the other 300 new airplanes will be for replacement of old aircraft. Mr. **Keskar** explained growth could be restrained by higher fuel prices or a shortage of pilots. **Air India's** chief operating officer **Gustav Baldauf** said, "Based on the studies our consultants have done, the Indian aviation market will grow to 150 million passengers by 2015, and [the] company has to expand in a growing market." **Air India** plans to double its fleet to 272 planes over five years. The airline operates 135 jets now and intends to lease 107 planes by the end of 2015. Leases are seen "as a more cost-effective and flexible management solution," he said. Currently, **Air India** leases 27 aircraft – 15 percent of its fleet. By 2015, leases will account for 40 percent. ***The Economic Times*** of India reports that **Air India** asked **Bombardier** to tender a proposal for leasing from 16 to 20 CRJ700s for five year terms, with a two-year renewal option. The airline also invited lease quotes for 10 A320s and 10 A330s from **Airbus. Air India** has already scheduled delivery of 27 787 Dreamliners and three 777s in the next few years. Rival **Jet Airways** also announced plans to lease 10 **Airbus** A330s.

Tupolev Tu-204SM First Flight. The updated twin-jet flew from the **Aviastar** factory airport in Ulyanovsk, Russia, on December 29. The Tu-204SM variant of the basic Tu-204 is 70 percent new and is powered by **Aviadvigatel** PS-90A2 turbofans. The Tu-204SM features an enhanced auxiliary power unit, a new avionics suite, new air-conditioning and cabin pressure control systems and a new two-man flightdeck. **Tupolev** increased the plane's payload from 21 to 23 tons, and it can now fly up to 4,600 kilometers. Launch customer **Moscow Airlines** ordered 15, with deliveries starting in late 2011. Deputy chief designer **Mikhail Khalenkov** said the plane completed several successive circuits at three different altitudes. The flight data was downloaded after landing so that the technical crew could evaluate it and plan the next tests.

Regional Report

SkyWest Airlines ordered four more **Bombardier** CRJ700 NextGen airliners and the planes will be operated for **Delta Connection.** The CRJ700s will be fitted with 65 seats in a dual-class configuration; the contract is valued at approximately $148 million ($37 million each) at list price. **SkyWest Airlines** and its sister airline, **Atlantic Southeast Airlines**, currently operate the world's largest fleet of CRJ aircraft — 406 CRJ200, CRJ700 and CRJ900 regional jets. **Bombardier** has taken firm orders for 1,713 CRJ Series aircraft and approximately 1,610 have been delivered.

Embraer sold 10 EMBRAER 190s to **CDB Leasing,** the leasing subsidiary of **China Development Bank**. The deal is worth about $400 million ($40 million each) at list prices. The Brazilian company said deliveries will begin in the second half of this year; the E-190 can seat up to 114 passengers. **CDB Leasing** will lease the E-190 jets to **China Southern Airlines**, which is China's biggest airline. **China Southern** has operated six ERJ-145s since 2004, and it will base the new E-190s in Xinjiang. The sale is a bit of a coup for **Embraer** because it beat out its domestic competitor, the **Comac** ARJ21. **Embraer** and **CDC Leasing** signed a Memorandum of Understanding (MOU) in December 2009, for the 10 E-190s. This is **Embraer's** first sale to China since the recession. Last year, **Hainan Airlines** cancelled a large portion of its ERJ-145 orders. Many analysts thought the cancelation was due to Chinese

government pressure to support **Comac** and its oft-delayed ARJ21 regional jet. It is quite possible that the 50-seat ERJ-145 was too small for the market. Sales of the type dried up in the West several years ago because the type was no longer profitable to fly at the current fares. **Embraer** said that 80 ERJ-145s, larger E-Jets and Legacy 600 bizjets are in service in China. Twenty-nine EMBRAER 190s will be delivered to China in the coming years. **CDB Leasing Co.** has registered capital of 8 billion yuan, and has approximately 60 billion yuan in total assets, including 73 aircraft that have been delivered to airlines.

Alitalia decided to lease 20 new EMBRAER 170s or EMBRAER 190s rather than wait for the **Sukhoi** Superjet to be certified. **Alitalia,** the Italian carrier, intended to support the Superjet program in which Italy's **Alenia Aeronautica** is a partner. The airline even modified its re-equipment plans to accommodate the Superjet's delays, but now the airline is tired of waiting. **Alitalia Express** operates four 2004-model EMBRAER 170s.

Embraer delivered 92 jets in the fourth quarter, including 30 commercial jets, 61 executive aircraft and one military airplane. The company completed 246 jets in 2010 and has a firm order backlog of 250 commercial jets. **Embraer** said its complete backlog is worth $15.6 billion. The company said the "commercial aviation market showed concrete signs of recovery and [has] gradually regained its business activity." **Embraer** sold 97 new airplanes; the number includes 16 firm E-190 orders and 44 options from **Air Lease Corp.** and **Republic**. **LAM,** Mozambique, ordered one E-190, **Lufthansa** bought eight more E-195s, and **CDB Leasing** ordered ten E-190s. One E-190 was sold to an undisclosed customer, **BA CityFlyer** picked up two E-190s, and **Fuji Dream Airlines** purchased one E-175; **US Airways** cancelled five firm E-190 orders. **Embraer** established six industrial partnerships for the KC-390 program, with the governments of Argentina, Brazil, Chile, Colombia, the Czech Republic and Portugal. These partnerships could result in the sales of 60 military transport planes.

Embraer December 30, 2010 Orders & Deliveries

Type	Total Orders	Total Options	Total Deliveries	Current Backlog
ERJ135	108	-0-	108	-0-
ERJ140	74	-0-	74	-0-
ERJ145	708	-0-	706	2
E170	191	40	181	10
E175	173	276	133	40
E190	478	353	321	157
E195	105	51	64	41
Total	**1,837**	**720**	**1,587**	**250**

Type	4th Quarter Deliveries	2010 Deliveries
Legacy	9	12
Lineage	5	8
ERJ 145	2	6
Embraer 170	1	9
Embraer 175	3	8
Embraer 190	20	58
Embraer 195	4	17
Total	**44**	**118**

Embraer announced that its production rates will remain stable through 2012.

SuperJet International—SJI, the **Sukhoi-Alenia Aeronautica** joint venture sold 15 long range Sukhoi Superjet 100s to **Interjet,** Mexico and the airline optioned five more. The SSJ100s will be delivered in an all-tourist 98-seat configuration and the 20 planes are worth $650 million ($32.5 million each) at list price. The first Superjets will be delivered in the second half of 2012. **SuperJet International** announced it is offering its new "SuperCare" after-sales support program to **Interjet.** The contract will

run for 10 years and is a comprehensive "per-flight-hour" program that was developed by **SJI** specifically for SSJ100 aircraft operators. "This innovative lifecycle solution has been designed to maximize aircraft availability to operators and minimize their maintenance and administrative associated costs," **SJI** said. The program has 170 firm SSJ sales. **Interjet** currently operates 22 A320s and has 12 more on order.

National Aerospace Laboratories (NAL) and **Hindustan Aeronautics Ltd. (HAL)** are developing India's first domestically designed regional aircraft, the RTA-70; they expect to launch the plane by the end of the year. Originally, the RTA-70 was to be a high-wing twin turboprop, designed to carry between 70 and 90 passengers, but now the **Indian Government** wants **NAL** to investigate the use of turbofans, with the intention of offering a stretched 80-100 seat version. **NAL** is looking at both engine options and is expected to make its recommendations in April, and is currently talking with the major jet-engine manufacturers, including **General Electric, Pratt & Whitney, Rolls-Royce** and **Snecma**. The RTA is seen as a stepping stone to larger aircraft; **Comac** took this route in China, using the ARJ21 regional jet as the progenitor of the C919 mainline jet. **NAL** forecasts a need for 250 regional aircraft in the next 15 years and it sees demand for 150 military transports to replace the 104 **Antonov** An-32s in the **Indian Air Force's** fleet. That market may be filled by the joint Indian-Russian **Multi-role Transport Aircraft—MTA.** It will be capable of carrying 15-20 tons, while the An-32 is rated at 7.5 tons capacity. **NAL** originally focused on the turboprop option, because it is more fuel efficient, it seems the government is more concerned with gaining the prestige of building jet airliners. The RTA could enter service by 2017, and **NAL** is open to partnering with international aerospace companies. The plane will feature locally manufactured avionics and "fly by wire" controls. It will have to compete in a very crowded 50-100 seat market, including the **Antonov** An-148, **Bombardier** Regional Jet, **Comac** ARJ21 **Embraer** E-Jet, **Mitsubishi** MRJ, **Sukhoi** Superjet and the **Tupolev** Tu-334. If the RTA-70 is built as a turboprop, it would compete against the mature **ATR** ATR-72 and **Bombardier** Dash 8 programs and the **Xi'an** MA60.

Aeroflot, the Russian flag carrier ordered 10 more Superjet 100 medium-haul airliners, **Sukhoi's** General Director **Vitaly Savelyev** said. "We expect to get the planes next year. We have even increased our order and are now eager to buy about 40 airliners instead of 30."

Sukhoi said it won 170 firm orders for the Superjet 100. Last year, the company finished the first three airline-standard Superjets at its plant in Komsomolsk-on-Amur in the Russian Far East. The factory will build 14 aircraft in 2011. The first plane completed 30 flights and the other two planes are nearly ready, a company spokesman said. The first three aircraft will be delivered to **Armavia,** Armenia and **Aeroflot** by March.

Sukhoi plans to receive a **European Aviation Safety Agency—EASA** certificate for the Superjet 100 medium-haul airliner in mid-2011. It is capable of carrying 75-95 passengers a distance of up to 4,500 kilometers. The Superjet was developed by the **Sukhoi Design Bureau** in cooperation with major American and European aviation corporations, inclu-ding **Boeing, Snecma, Thales, Messier Dowty, Liebherr Aerospace,** and **Honeywell.**

ATR sold 80 new aircraft in 2010, 33 were optioned and it delivered 51 new ATRs. At year's end, **ATR** sold 1,051 airplanes and delivered 412 ATR 42s and 503 ATR 72s. The company intends to increase production to nearly 70 aircraft per year by 2012.

Engine News

Rolls-Royce and **British Airways** completed contracts for the purchase of Trent 900 and Trent 1000 engines for a dozen **Airbus** A380s and 24 **Boeing** 787 Dreamliners. The airline ordered the widebodies in September 2007, and optioned another seven A380s and 18 787s. The contract is valued at more than $5 billion at list prices, if all options are exercised; the deal includes TotalCare long-term support agreements. There was no explanation why it took **BA** and **Rolls** three years and three months to come to agreement, especially since most of **BA's** airplanes are equipped with **Rolls-Royce** engines. **Rolls-Royce's** CEO **Sir John Rose** said, "We are pleased that **British Airways** continues to put its trust in our world class Trent engine technology and service provision." **BA** is the ninth customer to select the Trent 900 for the A380. The Trent 1000 was chosen to power 215 of the 847 787s on order, while 24 airlines and lessors chose the **GE** GENX for 343 787s. The first 787-8s and 787-9s to be delivered will be equipped with Trent 1000s; Trent-powered 787s have operated more than 2,000 hours of test flights and the first 787s will enter service with **ANA** in the third quarter. **BA's** first A380 is due for delivery in 2012 and **British** is buying eight 787-8s and 16 787-9s for delivery between 2012 and 2016. **Rolls-Royce** won more than $4.2 billion in engine orders and TotalCare maintenance contracts in the last few weeks.

Mesa Cancelled its order for 10 70-seat Bombardier CRJ700 jets. When **Mesa** filed for Chapter 11 bankruptcy in January 2010, **Bombardier** said **Mesa's** order for 10 aircraft remained on backlog, and that they would be delivered in 2013. The bankruptcy court allowed the airline to abrogate its purchase agreement. **Bombardier** filed a $310 million claim against **Mesa** – the total amount owed for the CRJs. Now **Mesa** is obligated to pay $75 million, or $7.45 million per plane, and forfeiture of the $500,000 deposit. In 2001, **Mesa** ordered 38 CRJ900s and 30 CRJ700s. All but the last 10 CRJ700s have been delivered. The airline filed for bankruptcy because it had too many airplanes. It now operates 71 CRJs and 13 Dash 8s under codeshare agreements with **United** and **US Airways**. **Mesa** plans to emerge from bankruptcy early this year.

Order Changes and Cancellations

Airbus Order Changes. Aircraft Purchase Fleet added one A320 in December but then switched five of its A320 orders to the A319 model. It now has 50 A320s and five A319s on order. Fourteen of the A320s are in service with **Alitalia**. **EasyJet** switched 20 A319 orders to the A320 model when it ordered 15 new A320s. The airline now has a total of 70 A320s and 172 A319s on order with 159 A319s and 23 A320s in service.

Airbus Reported 18 A330-200 Cancellations. The **Aircraft Purchase Fleet** dropped two of its 10 A330-200 orders. **Grupo Marsans** dropped its last six A330-200s in backlog; the tour operator took delivery of four A330s to date. Its subsidiary, **Air Comet** ceased operations in December 2009. **US Airways** cancelled 10 of the 25 A330-200s that it ordered. The airline now has seven in service and eight on backlog.

Boeing Changes. Boeing lost 95 orders in 2010, including 22 737s, two 747s, 30 777s and 41 787s. In December, **Boeing** lost orders for eight 737s, two 747s, three 777s and one 787. The customers were not identified.

Guggenheim Aviation Partners canceled its last two orders for 747-8F Freighters, faulting the 18-month delay in the program. In 2006, **Guggenheim** ordered four 747-8Fs and optioned two more, worth $1.92 billion at list price. It cancelled two orders in December 2009. **Steve Rimmer,** the lessor's CEO, said, "It's very disappointing for us, as we wanted to stay with the program. The cancellation was a direct result of the delays and the commercial consequences of those delays." **Boeing** retains 33 orders for passenger 747s and 74 cargo 747s; a program total of 107. **Dubai Aerospace Enterprise (DAE)** is the sole lessor still holding 747 orders, with 15 747-8Fs to be delivered. Some of the planes are destined for service with **Emirates SkyCargo**. The fate of the rest is up in the air, since **DAE** was forced to cancel a significant portion of its **Airbus** and **Boeing** orders due to financial difficulties caused by the Dubai Emirate's near default. The first 747-8F delivery is now scheduled for the middle of 2011. **Boeing** is adding a fifth 747 to its test fleet to speed up the fixes of glitches found in the new design. It will speed up production of the 747-8 in 2012 to meet expected demand for the plane. The manufacturer is talking with three Asian airlines about new orders for passenger 747s and freighters. **Randy Tinseth** said, "We're in talks with a handful of customers. Most of them are in the Asia Pacific region, because that's where most of the demand for this aircraft is going to be because of the route structure of the airlines."

Airbus and Boeing saw orders from leasing companies rise sharply. Lessors' share of **Airbus** orders rose to 35 percent of the total, up from 5 percent last year. **Boeing's** orders from lessors nearly doubled from 12 percent to 21 percent. The leasing companies stopped buying during the recession and were content to take delivery of their existing backlog. Three big lessors, **CIT Leasing, Royal Bank of Scotland Group (RBS)** and **ILFC,** were financially humbled. The first filed for bankruptcy in December 2009, but bounced back and placed a 38 plane order in December. **RBS** was taken over by the **British Government** and cancelled many orders. **ILFC** retrenched and sold off some inventory. It also lost its top management to **Air Lease Corp.,** which set up shop this year. **DAE Capital** also slashed its expectations by canceling orders for new aircraft last year. Now, all the trends are upward. Lessors accounted for 27 percent of sales by the two manufacturers, which is the highest portion since 2000. Big lessor orders are both good and bad for the manufacturers. The good is that lessors' purchases smooth out the cyclic dips and peaks in new orders. The lessors are more reliable customers than airlines and are better credit risks. The bad for the manufacturers is that lessors win deep discounts on large airplane orders. As more lessors enter the market, the possibility of placing speculative orders increases. Then the manufactures could build too many planes, which could reduce aircraft values and lease rates. Lessors currently own 33 percent of all commercial jets. **Boeing** said that number will rise to 50 percent in 10 years.

Leasing Companies

AerCap signed 13 new lease agreements for aircraft in the fourth quarter 2010, including three A319s for **Frontier Airlines;** two A320s for **Brussels Airlines;** one A320 for **Donbassaero;** Ukraine, one A319 and one A320 for **LAN Airlines;** one A320 for **P.T. Metro Batavia,** Indonesia; one 737-800 for **Orenair,** Russia; one 757-200 for **Delta Air Lines;** one 737-400 for **Vision Airlines,** U.S.; and one 737-400 for **Nok Air,** Thailand. The new aircraft will be leased for an average of 138 months, while the used aircraft will be leased for an average term of 62 months. During the period, the lessor took delivery of two new A320s and one new A330, and purchased one used 757. **AerCap** leased eight aircraft in the fourth quarter, including the **Frontier** A319s, the **Delta** 757, the 737-400 to **Vision** and the A320 to **LAN. AerCap** leased one new A330 to **Hainan Airlines** and one A320 to **Hello Airlines,** Switzerland. The lessor sold two new A320s and one used A320 from its owned portfolio. It disposed of one 737-300 and one 737-500 from its managed portfolio. **AerCap's** subsidiary **AeroTurbine** disassembled three aircraft and

three engines from its own inventory, and one aircraft and one engine for third parties. **AerCap** contracted to lease 13 CFM-56 engines, two PW4000s, two V2500-A2s and one CF6 engine; all 18 were delivered to the lessees during the fourth quarter. **AerCap** expanded its engine pool with the acquisition of nine CFM-56 engines and signed a letter of intent to buy one more. It sold three owned CFM-56 engines. At the end of the year, **AerCap** had 350 aircraft and 96 engines – owned, managed, on order, under contract or letter of intent – in its portfolio. The company signed a new $791 million debt facility in the fourth quarter. It arranged $1.6 billion in financing in 2010, and a total of $6.6 billion in the last three years.

Avolon is buying five new A320 and six 737-800s from four airlines. The planes will be leased back to the former owners. Two of the aircraft were delivered in 2010, and the rest are due this year. **Avolon** is buying two A320s from **Philippine Airlines** and three A320s from **IndiGo.** The lessor will buy and lease-back three 737-800s with **Air Berlin** and three 737-800s with **Virgin Blue.**

AVIATION BUSINESS
Airline News

UTair Is Buying 51 Percent of Moscow Airlines from the Moscow government, said Russian Transport Minister **Igor Levitin. UTair** is currently Russia's fourth largest air carrier. **Moscow** has a significant debt, Mr. **Levitin** said, so it is possible that **UTair** will keep **Moscow's** route system and will let the airline go bankrupt. Both airlines have mixed fleet of obsolete Russian types and not-so-old western aircraft. **UTair** operates 20 Tu-154s and 28 Tu-134s which need replacement in the near term, as well as 19 737-400s and -500s, two 757-200s, eight CRJ100/200s and 15 ATR turboprops. **Moscow Airlines** flies three 737-300s, six 737-800s, two Tu-154s, five Il-86s and two EMB-120 turboprops. It has 30 **Antonov** An-148s on order and **UTair** will take delivery of the first of 24 **Sukhoi** Superjets in 2013. The Superjets will replace **UTair's** Tu-134s.

Alliances

The New Zealand Government approved a trans-Tasman-Sea alliance between **Air New Zealand** and **Virgin Blue**. The two airlines agreed on a minimum number of seats to be operated between New Zealand and Australia. They will cooperate on scheduling, and support services on the routes. The **Australian Competition and Consumer Commission (ACCC)** granted conditional authorization for the alliance for the next three years. New Zealand Transport Minister **Steven Joyce** lauded the tie up and said the major benefits of the alliance will be "more sustainable competition [and] cost savings. Travelers will benefit from a wider range of travel options and improved range of departure times, and the continuation of competitive fares." The **ACCC**

THY—Turkish Airlines will buy the rest of Bosnia's flag carrier **BH Airlines** this year. **THY** spent €5 million ($6.6 million) to buy 49 percent of **BH Airlines** in 2008. The deal covered the costs of leasing two ATR 72-200s. **THY** will invest an additional €5 million. It leased one A319 to **BH Airlines** in August, which replaced a 737-400 that **BH** returned to **THY.** The sale will close after the new Muslim-Croat federation government takes office this year. The process of forming a government is slow and the old government may step in to save the transaction. It is feared that **BH** will shut down before it can be rescued.

originally opposed the deal, saying the alliance was not "more competitive." The commission received additional information from the applicants and interested parties about the public benefits, so it changed its mind. The **ACCC** will restrict the alliance's ability to limit capacity and raise fares. **ANZ** and **Virgin Blue** will control 56 percent of the trans-Tasman market share while **Qantas Airways** and its subsidiary **Jetstar Airways** have 32 percent. Another seven airlines fly between the two countries.

American Airlines and Japan Airlines released details about their alliance. They plan to jointly operate 10 trans-Pacific routes and will work together on connecting flights from the cities being served. Both airlines are members of the **oneworld** alliance and are taking advantage of the new "open skies" treaty, signed by the U.S. and Japan in 2009, to liberalize flight services between the two countries. The partners will share revenue generated through the joint business and the alliance will have antitrust immunity from regulators. The alliance could generate an annual operating profit of $156 million. Japan wants to make its Tokyo airports into regional hubs for services to Asia in order to compete with Singapore, South Korea and China.

Bankruptcy of the Month

Indonesia's PT Mandala Airlines suspended its operations on January 12. The budget carrier served 13 domestic destinations as well as Hong Kong, Macau and Singapore. The airline had three A320s and two A319s in its fleet and another 25 A320s on firm order. They were scheduled for delivery in the second half of this year. **Mandala** President Director **Diono Nurjadin** told a news conference, "We think this is the best step to guard the future prospects of **Mandala**. Starting tomorrow, we will stop operations temporarily to be able to focus on restructuring the company." Mr. **Nurjadin** did not say how far in debt the airline was, but did confirm that he asked the commercial court to delay recovery action for 45 days. **Mandala** cited the high cost of leasing aircraft for its financial woes. It returned four A320s to lessors this year and will return the rest of the Airbuses immediately. Mr. **Nurjadin** said the airline had received expressions of interest from potential buyers.

Saudi Arabian Airlines, the state-owned flag carrier, agreed to join the **SkyTeam** airline alliance in 2012. The airline will be **SkyTeam's** first member from the Middle East. **Saudi Arabian** will add 35 new cities across the Arabian Peninsula and Gulf region to the alliance network, given it has major domestic hubs at Riyadh, Jeddah and Dammam. Travelers can connect to new destinations, such as Alexandria, Aden, Colombo and Islamabad, on the Arabian Peninsula, the Indian subcontinent and Northern Africa. The flag carrier offers direct flights to Europe, Asia, Africa and the United States from its hubs. The airline is modernizing its infrastructure and modernizing its fleet by buying 88 new planes, including 35 A320s, 15 A321s, eight A330s, 12 Boeing 777s and eight Boeing Dreamliners. It is also restructuring its domestic and international network. **Saudi Arabian** transports 19 million passengers between 26 domestic and 55 international destinations annually. So far, the major Middle Eastern airlines have spurned the opportunity to join alliances, saying that they did not want to lower their level of service to that of the western legacy carriers. **Emirates** has been quite adamant about staying elusive and exclusive.

Norwegian Air Shuttle ASA expects to feed traffic to **Finnair Oy's** long-haul flights to Asia. The planned alliance will start this quarter. Negotiations started in June but were stalled by the incompatibility of the airlines' information-technology systems. **Norwegian** is Europe's fourth largest

low-cost carrier, but it is limited to serving European destinations by its 737 fleet. The airline will lease two 787 Dreamliners from **International Lease Finance Corp**. in the fall of 2012, for 12 year terms. **Norwegian** intends to order at least four more 787s this year, adding to the 54 short-haul 737NGs on order.

Cargo Pallet

North American Airlines Contracted ST Aerospace to convert a **Boeing** 757-200 passenger plane to Combi configuration. The Combi will accommodate up to 10 cargo pallets and have seating for 45 passengers. Spokesman **Brian Bauer** said, "The Boeing 757 Combi will be utilized on routes where our customers require the shipment of heavy supplies as well as personnel. **North American** will be able to offer customers a seamless upgrade using this modern and fuel-efficient platform." The conversion will be performed by **ST Aerospace's** subsidiary **VT Systems** at its maintenance, repair and overhaul (MRO) facility in Mobile, Alabama. The Mobile facility designed and converted two 757-200 passenger jets into multi-role Combis for the **Royal New Zealand Air Force.** It also converted 17 757s into freighters for **DHL Airways**. It is currently performing 87 757 passenger-to-freighter (PTF) conversions for **Federal Express – North American Airlines** was founded in 1989, and operates 757-200s and 767-300ERs on contracted air transportation services for the U.S. military.

Guggenheim Aviation Partners (GAP) Chose ST Aerospace to perform a passenger-to-combi (PTC) conversion on a 757-200 for **TNT Airways S.A**. The modification will be done at **ST Aerospace's** Singapore facility. The aircraft will enter conversion in February, and be finished by the end of 2011. **ST Aerospace** will design and engineer the 757's conversion into a combi aircraft and will apply for **Federal Aviation Administration (FAA)** and **European Aviation Safety Agency (EASA)** Supplemental Type Certificates (STCs) for the PTC conversion. The company will also perform maintenance checks while the 757 is in the hanger. The conversion involves the removal of the passenger interior, installation of a side cargo door and a new cargo handling system as well as a Class C cargo barrier. The PTC STC will be based on **ST Aerospace's** existing STC for the 757-200 passenger-to-freighter (PTF) conversion. When finished, the combi will be able to carry eight pallets on the main deck and will have an 81-seat passenger

The U.S. Federal Aviation Administration restored the top aviation safety rating to Mexican airlines. This allows them to expand services to the U.S. The **FAA** said Mexico's civil aviation system meets minimum international safety standards and qualifies for the Category One rating. Mexico was downgraded to Category Two in July 2010, which stifled Mexican airlines' ability to change their route systems. There was no problem with flight safety, and the downgrade was due to a shortage of flight inspectors, the Mexicans said. The U.S. competitors were able to expand their services in reaction to **Mexicana's** bankruptcy in August. Now the Mexican carriers can compete more freely with the northern giants.

VivaAerobus, Mexico plans to lease 10 more 148-seat 737-300s in 2011. Four 737s will be acquired in the first quarter and the other six will arrive in the second half. The new 737s will be based in Mexico City and will be put on **VivaAerobus'** two routes to the U.S. The airline is adding several new U.S. gateways this year.

Aeromexico added frequencies on several U.S. routes, including to Los Angeles, New York JFK, Miami, Chicago, Las Vegas and San Antonio. The Mexican flag carrier is taking advantage of the country's return to a **FAA** Category One safety rating. The **SkyTeam** partner will start new services to Caracas, Guatemala City, San Salvador, Panama City and Vancouver this year.

compartment. **ST Aerospace** has completed 50 757 PTF conversions to date, and has a backlog of 56 aircraft.

China Eastern Airlines is selling a third of its stake in **China Cargo Airlines**. Its share in the cargo airline will shrink from 70 percent to 51 percent. **COSCO Group** also reduced its share in **China Cargo Airlines** from 30 percent to 17 percent. **Concord Pacific** and **Singapore Airlines** will each own 16 percent. The share shuffling came through a 1.55 billion yuan ($232.9 million) capital increase. **China Cargo** had assets of 4.6 billion yuan and net liabilities of 344.6 million yuan. The airline is using its new capital to buy the air cargo businesses of **Great Wall Airlines** and **Shanghai Cargo Airlines.**

Maximus Air Cargo is buying three Airbus A300-600s from **Japan International Airlines.** The Abu Dhabi, UAE-based cargo airline will spend $95 million to buy the jets and convert them into freighters. The freighters will be placed in service in the second half of the year. The airline currently charters six airplanes and operates two A300B4-600RFs from **Air Atlanta Icelandic** through ACMI (aircraft, crew, maintenance and insurance) leases. **Maximus** was founded in 2005, and it flies to cities in the Middle East, Far East, Europe and Africa. It is a subsidiary of **Abu Dhabi Aviation,** which is 30 percent owned by the emirate's government.

AIRCRAFT DELIVERIES & SALES

Jet Aircraft

A318 & A319. In December, **Hainan Airlines** leased two -133s (SN 4410 & 4529) to **Capital Airlines**, China. **AWAS** leased two 2008-vintage -111s (SN 3364 & 3403) to **airblue,** Pakistan. The A319s will operate on the airline's domestic and international routes and are part of the airline's re-

Aeronautical Engineers. Inc. (AEI) will convert six 737-400s for two un-named Russian customers this year. The Commonwealth of Independent States' **Interstate Aviation Committee** recently approved **AEI**'s Supplemental Type Certificates (STC) for the 737-300SF (Special Freighter) and 737-400SF conversions. **AEI** has a contract with an undisclosed Russian operator to convert six 737-400s. The company is negotiating with another Russian carrier for the conversion of five 737-400s; all 11 737 conversions will be finished this year. The first batch of 737s will come from leasing companies and will be converted before being exported to Russia. The airline will replace its **Antonov** An-12 freighters with the 737-400SFs. The second airline already operates 737-400 passenger aircraft and will have **AEI** convert five of them into freighters for a planned all-cargo operation. The first two conversions for the Russian customer will be done by **Commercial Jet** in Miami**.** The remaining four 737-400s will be modified this summer, and the work may be done by **Boeing Shanghai Aviation Services, AEI's** new Chinese conversion center, but the decision is not final. **AEI** plans for **Boeing Shanghai** to be the primary conversion center for the Russian market because Shanghai already offers maintenance, repairs and overhauls (MRO) to several Russian carriers. Its MRO shop is certified by Russian authorities and the facility is closer to Russia than Florida is. **AEI** said CIS airlines have more than 100 An-12 freighters in service. The An-12s are prime candidates for replacement with the 737SF, which offers similar capacity and 30-year newer technology. **Aeronautical Engineers** was selected by an undisclosed customer to convert one 737-300 into a 9-pallet Special Freighter. The aircraft was built in 1990 and is currently being modified into a freighter and undergoing heavy maintenance at **Commercial Jet** in Miami, Florida.

fleeting strategy. **AWAS** owns a portfolio of more than 200 modern aircraft on lease to over 90 airline customers and has another 117 aircraft on order from **Airbus** and **Boeing**.

A320. **Airbus** delivered 34 A320s in December, including four -214s (SN 4417, 4485, 4492 & 4528) to **Uzbekistan Airways** and two -232s (SN 4535 & 4552) to **IndiGo. Airblue** took delivery of -214 (SN 3974); the airplane was stored since its first flight in July 2009. In Europe, **Air Purchase Fleet** leased three -216s (SN 4520, 4523 & 4536) to **Alitalia. Air Berlin** accepted -214 (SN 4510). In the Middle East, **Saudi Arabian Airlines** leased -214 (SN 4519) from **Alafco** and two -214s (SN 4501 & 4517) from **GECAS. Saudi Arabian** has leased 13 A320s from **GECAS** since mid-2009. **Air Arabia** received -214 (SN 4524) and **Gulf Air** accepted two -214s (SN 4502 & 4541). **Libyan Airlines** accepted the fourth of seven -214s (SN 4526) and **Afriqiyah Airways** received its seventh -214 (SN 4521). The airline has four more on order. In Latin America, **LAN Airlines** took delivery of two -233s (SN 4546 & 4549) and **TAM** acquired -214 SN 4544. **Avianca** leased -214 (SN 4547) to **Aerogal**, Ecuador. This is the airline's third new A320. In Southeast Asia, **Zest Air,** Philippines leased -232 (SN 4533) from **Asiawide; Cebu Pacific** received two -214s (SN 4508 & 4537); **Qantas** leased -232s (SN 4527) to **Jetstar. BOC Aviation** leased -232 (SN 4515) to **Jetstar Asia; Tiger Airways** received -232 (SN 4532). Chinese airlines added five new A320s; **Hainan Airlines** leased -232 (SN 4513) to **Capital Airlines**. **Airbus** delivered two -232s (SN 4514 & 4531) to **Shenzhen Airlines; FALC**-built -214 (SN 4396) to **China Southern** and -232 (SN 4423) to **China Eastern.**

A380. **Airbus Delivered 18 A380s** in 2011, two short of the target of 20. It had to let the delivery of a 19th A380 slip into 2011. **Airbus** intends to deliver two A380s per month in 2011.

Airbus delivered the seventh -842 (SN 047) to **Qantas Airways** in December. In January, the airline accepted its eighth A380 (SN 055). It has 12 more on order. The planes are list priced at $346.2 million and were ordered in 2001. **Qantas** returned five A380s to service by the Christmas holidays. The airline grounded its fleet for inspection in November, after an engine exploded on one A380. That airplane is still being repaired. **Qantas** restarted non-stop trans-pacific A380 services to Los Angeles on January 16.

Korean Air will fit its A380s with only 407 seats, the lowest-density layout in the industry. The plane will feature an all-business upper deck with 94 lie-flat sleeper seats with 74- inch seat pitch; the 12-seat first class section will be in the forward portion of the lower deck and the economy class will seat 301 passengers in the mid-section and the tail. **Korean Air** said the business passengers will have a sense of exclusivity. It will take delivery of five A380s in 2011, and will put its first A380 in service on Asian routes in May. The airline will launch A380 services to the United States and Europe in August. **Air France** currently flies the highest-density A380s with 538 seats. **Air Austral** will squeeze 840 passengers into is two A380s when they are delivered in 2014.

AWAS leased a new A320-214 (SN 4562) to **Frontier Airlines** in January. The second and third A320s will be delivered in March and June, respectively; the A320s are powered by **CFM International** CFM-56 engines. **Frontier** is an operating unit of **Republic Airways Holdings, Inc**.

A321. Five A321s were delivered in December, including -213 (SN 4538) to **Air China** and -211 (SN 4500) to **Aeroflot. Qatar Airways** accepted -231 (SN 4530), **Swiss International Air Lines** acquired -231 (SN 4534), and -231 (SN 4545) was handed over to **Lufthansa**. **AWAS** leased A321-211 (SN

1970) to **Asiana Airlines**. The aircraft will be subleased and operated by **Air Busan**, a regional airline subsidiary of **Asiana.** The A321 will be operated on international routes from the Busan base to Taipei, Hong Kong, Osaka and Cebu.

A330 & A340. **Airbus** delivered six A330s in December, including two -200s to **CIT Leasing**. **Qantas** leased the first **CIT** -202 (SN 1174) and **Garuda Indonesia** leased the second -243 (SN 1184)**. Airbus Military,** Spain took delivery of -203 (SN 1183). It will be converted into a MRTT tanker for the **Royal Australian Air Force. Hong Kong International Aviation Leasing** leased two -343Es (SN 1168 & 1178) to **Hainan Airlines. Swiss International Air Lines** acquired -343E (SN 1181). The **Government of Kuwait** took delivery of VIP A340-541 (SN 1102).

WestJet is leasing a **Boeing** 757-200 for its non-stop services between two cities in Alberta, Canada and two Hawaiian islands. The new routes are subject to Canadian government approval. **WestJet** will lease the 757-200 from **North American Airlines** and operate the service from February 12, 2011, to April 30, 2011. Charter carrier **North American Airlines** will provide the pilots and flight attendants as well as aircraft maintenance during the term of the lease. A **WestJet** service ambassador will be on board each 757-200 flight to ensure that the **WestJet** guest experience is consistently delivered the airline said. The short duration of the lease suggests that Hawaii services are an experiment. If it proves profitable, **WestJet** is in position to switch some of its 44 737NGs on order to the 737-900ER type. It will then be able to fly its own airplanes on the routes.

Boeing 737NG. **Boeing** delivered 33 737s in December. **American Airlines** took four -823/Ws (SN 29554, 30903, 31111 & 40584), for a fleet total of 153 -800s. **Continental Airlines** received the first -824/W (SN 31652) fitted with the new Boeing Sky Interior. The plane was painted in the new **United Airlines** color scheme. **Continental** accepted two -924ERs (SN 31643 & 31655). **Continental** operates 36 -700s, 127 -800s and 44 -900s and has 46 more -700s, three -800s and one -900ER on order. **Delta Air Lines** received its 132nd and last -800, an -8FZ/W (SN 31793). It was sold it to **Babcock & Brown** for lease to **Malaysian Airline System**. **Southwest Airlines** took delivery of its 344th -7H4/W (SN 36668), and now operates 354 -700s and has another 105 on order. **Boeing Business Jet** accepted its sixth -900BBJ and -8JM/W (SN 37663) for its client **ACM Air Charter.** This was **BBJ's** 16th -800/W-BBJ**;** it has four -800BBJs and one more -900BBJ on order. In Latin America, **COPA Airlines** accepted -8V3/W (SN 40361) and has 42 in backlog. **GOL Airlines** received its 56th -8EH/W (SN 35838); it has 98 more on order. **Boeing** delivered seven 737-800/Ws to lessors. Two -8HO/Ws (SN 37932 & 37934) went to **Alafco** for lease to **Okay Airways**. **GECAS** leased -86N/W (SN 36808) to **Garuda Airlines** and leased (SN 39393) to **China Eastern. KLM** leased -8K2/W (SN 37820) from **C.I.T. Leasing Corporation. Dubai Aerospace Enterprise (DAE)** leased -8KG/W (SN 39450) to **Virgin Blue**. **MC Aviation Partners** leased -8FZ/W (SN 40713) to **Skymark Airlines.** In the Middle East, **flyDubai** took delivery of -8KN/W (SN 40240); **Egyptair** accepted its 16th -866/W (SN 40760), and it has four more on order. **Boeing** delivered three 737s to East Asian airlines, including -846/W (SN 40349) to **JAL Express**, -881/W (SN 33903) to **All Nippon/Air Nippon ANK,** and -8H6/W (SN 40130) to **Malaysia Airlines.** In Europe, **Air Berlin** accepted -76J/W (SN 36873), **TUI Travel** received two -8K5/Ws (SN 37245 & 37247), and **Norwegian Air Shuttle** bought two -8JP/Ws (SN 39004 & 39165); it has 54 more on order. In India, **SpiceJet** accepted its 20th -8GJ/W (SN 37361). Another 33 are on order.

Boeing delivered two 737-89M/Ws (SN 40910 & 40911) to **Air Austral**. The airplanes will replace -33A (SN 27452) and -53A (SN 24877) in its short-haul fleet. The airline is headquartered in St. Denis, Reunion, a French Department island in the Indian Ocean.

Boeing 747. **Aircastle** delivered ex-**Japan Airlines** -446F (SN 33748) on long-term lease to **Asiana Airlines,** South Korea and -446F (SN 33749) to **AirBridge Cargo Airlines,** Russia. **Aircastle** acquired the aircraft in November 2010.

McDonnell Douglas. **Transmile Air Services**, Malaysia is selling four early 1990-era MD-11 freighter aircraft (SN 48444, 48446, 48485 & 48486) to **FedEx**. The planes were stored in April 2008. The $68 million sale price will be used to pay down **Transmile's** debt when the deal closes in the second quarter of 2011. The airline owes approximatly $172 million. **Transmile** will continue to operate its two 737-200F freighters.

Boeing 767. **JAL International** took delivery of -346ER (SN 40365) in December. The airline has six more on order.

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Boeing 777. **Boeing** delivered eight 777s in December, including two -3F2ERs (SN 40709 & 40792) to **THY-Turkish Airlines.** The airline received five -300ERs in 2010. **Ethiopian Airlines** received its first -260LR (SN 40770). It has four more on order. **EVA Air** accepted its 15th and final -35EER (SN 33757). **GECAS** took delivery of its 27th -36NER (SN 38289) and leased it to **Egyptair**. The Egyptian flag carrier leased four -36NERs from **GECAS** last year. The lessor has four more on order. **Qatar Airways** received its 13th -3DZER (SN 38247). It has three more on order, as well as two -200ERs and one 777F. **Air France** took delivery of its 200th **Boeing** aircraft on December 9. The 777-328ER (SN 35544) is the 58th 777 in the **Air France** fleet, which consists of 25 777-200s, 31-300s and two 777Fs. The airline has one 777F due in 2011, and has 11 777-300ERs on order for delivery by the end of 2015. **Air New Zealand** welcomed the delivery of its first -319ER (SN 38405). It ordered five -300ERs to complement the eight -200ERs in its long-haul fleet. The airline will use the first three -300ERs on direct flights from Auckland to Los Angeles or London, beginning April 2011. **ANZ** also operates 15 737-300s, six 747-400s, five 767-300ERs and a dozen A320s. It has eight 787-9 Dreamliners on order and is scheduled to take delivery of the first of that type in late 2013.

Bombardier delivered the first CRJ1000 NextGen regional jets to launch customers, **Air Nostrum** and **Brit Air,** on December 14. **Air Nostrum** accepted SN 19002 and **Brit Air** bought SN 19004. **Brit** received SN 19006 in January and SN 19003 was delivered to **Air Nostrum**. **Bombardier** chose not to deliver the first two CRJ1000s that it built. The prototype SN 19991 is not fit for commercial use, because it was modified from the CRJ700 and CRJ900 prototype. The first production model, SN 19001 will eventually have a passenger interior installed and will be sold to an airline.

Bombardier delivered two CRJ900LRs (SN 15257 & 15258) to **Libyan Airlines** in December. The airline has one more on backlog. **Lufthansa** leased SN 15259 to **Eurowings. American Eagle** took delivery of two CRJ702s (SN 10316 & 10317) last month and received SN 10318 in January.

Turboprops

ATR delivered ATR 42-500 (SN 831) to **Inter Regional Express** for lease to **Air Antilles Express** in December. **Air Mauritius** accepted ATR 72-500 (SN 921) and **Firefly** took delivery of two ATR 72-500s (SN 934 & 935). **Lao Airlines** received SN 938. In January, **Vietnam** purchased SN 939. **ATR** delivered 51 new ATRs in 2010 and delivered a total of 412 ATR 42s and 503 ATR 72s.

Bombardier delivered five Dash 8Q-400NGs (SN 4302, 4309, 4313, 4324 & 4331) to **Air Baltic** in December. The planes were sold to **Nordic Aviation Capital A/S (NAC)** and were leased-back. **Heli Malongo**, Angola, accepted two Q400NGs (SN 4322 & 4325). **Olympic Air** acquired SN 4327. **Pinnacle Airlines** received three Q400NGs (SN 4336, 4339 & 4340), and sold them to **Colgan Air. Ethiopian Airlines** bought SN 4334. **Airstream International** arranged the sale of three **Air Southwest** DHC-8 300s to lessor **Aircraft Solutions**. The Dash 8s were leased back to the airline and are operating routes within the UK and to Ireland and the Channel Islands.

Viking Air delivered new Twin Otter (SN 846) to **Air Seychelles** in December.

Embraer delivered the first of two EMBRAER 190-100IGWs (SN 19000398) to **Jetscape,** which leased it to **Kenya Airways**. The second E-190 will be delivered to **Kenya Airways** in May 2011. Both E-Jets will be leased for eight-year terms. **Kenya Airways** operates five E-170s, including two ex-**Finnair** E-170s that **Jetscape** provided on four-year leases. **Saudi Aramco** took delivery of two more E-170-100LRs (SN 17000319 & 17000320) in December. **Embraer** delivered the first of two ultra-large Lineage 1000 executive jets (SN 19000296) to Abu Dhabi-based VIP charter company, **Falcon Aviation Services. Al Jabar Aviation** accepted EMBRAER 190-100BJ Lineage 1000 (SN 19000261). **Tianjin Airlines** accepted two E-190-100LRs (SN 19000385 & 19000394), and **Austral Lineas Aereas** received two E-190-100IGWs (SN 19000395 & 19000397). **TACA** leased SN 19000399 from **Wells Fargo Bank,** trustee. **Globalia** leased E-190-100 (SN 19000401) to **Air Europa**. **Airstream** handed over a second ERJ-145 (SN 145167) to **Semey Avia** in Kazakhstan. The aircraft was previously operated by **FlyBe** and **British Airways**. It will fly routes within Kazakhstan and to neighboring countries.

Xi'an Aircraft delivered three MA60s (SN 0505, 0506 & 0603) to **Merpati**, Indonesia, in December. The airline will take six more by March.

Antiques and Other Junque

GA Telesis will disassemble ex-**United Airlines** 737-322 (SN 24639), ex-**US Airways** 737-3G7 (SN 23780) and three ex-**Comair** CRJ-100s (SN 7026, 7031 & 7035). The 737s' CFM56-3 engines and CRJs' CF34-3A1 engines will be added to **Turbine Engine Group (TEG's)** inventory. The aircraft will enter the disassembly line in the USA and parts will be remarketed **GA Telesis Aircraft Systems Group (ASG)**.

GA Telesis UK bought ex-**Air India** 747-437 (SN 27078) and will have **Air India** disassemble the aircraft in India. The 747 was powered by PW4056 engines. The company purchased ex-**Air France Boeing** 747-428 (SN 25344) and it will be torn down by **Air Salvage** at Kemble, U.K. The 747 was equipped with CF6-80C2B1F engines. **GA Telesis UK** also bought ex-**Gulf Air** A340-300 (SN 103). The A340 was equipped with CFM56-5C3/F engines. It was recently retired and flown to France, where

it will be dismantled by **TARMAC**, a division of **EADS**. The aircraft parts will be remarketed **GA Telesis, UK** in cooperation with the **GA Telesis Aircraft Systems Group** and **Turbine Engine Group,** respectively.

Recent Retirements. Japan Airlines International retired its fleet of seven A300B4-622Rs (SN 621, 637, 641, 711, 740, 753 & 837) in November. All seven are listed for sale by **GA Telesis. Atlas Air** permanently retired two 747-2D3B(F)s (SN 21251 & 21252) at Roswell. **Orient Thai Airlines**' 747-246B (SN 22479) was retired and is now on display at **Don Muang Airport**, Bangkok.

The "Miracle on the Hudson" A320 was acquired by the **Carolinas Aviation Museum** in Charlotte, North Carolina. The **US Airways** A320 made an emergency landing in the Hudson River on January 15, 2009, shortly after take off from **LaGuardia Air-port**. All 155 passen-gers and crew survived the first successful ditching of a jet in several decades. Much of the credit for their survival goes to Captain **Chesley "Sully" Sullenberger** who seemed to have done everything right during the emergency. The A320 was fished out of the river and barged to New Jersey where the **NTSB** inspected it as part of its accident investigation. The A320 was headed for Charlotte when it went down. It will arrive at its final destination in May, only 28 months late. The airplane will be reassembled and put on display, along with Capt. **Sullen-berger's** uniform and other memorabilia.

Accidents and Safety

*From **Aviation Safety Foundation***

2010 Was Slightly Worse than Average in Terms of Safety. The number of fatalities rose by 13 percent—828 people were killed last year. The number of fatal accidents rose from 23 in 2009 to 28 in 2010. The decade averaged 794 fatalities. The world's airline industry averaged 27 fatal accidents per year during the 2001-2010 decade, which is considerably lower than the average of 38 accidents per year in the 1990s. Just a few accidents can skew the numbers. Three high-profile accidents caused nearly half of the year's carnage. An **Air India Express** 737-800 crash killed 158 people on board, while an **airblue** A321 killed 152 in Pakistan and an **Afriqiyah Airways** A330 wreck killed 103 passengers and crew. The fatal accident rate was one accident per 1.3 million flights in 2010, or stated another way, one fatality per 3.8 million passengers. In 2009, the rate was one crash per 1.5 million flights and one death per 4.5 million passengers carried. Statistically, 2009 was the safest year on record, with 731 deaths from 23 accidents.

The Russian Air Force lost Antonov An-22A (RA-09343, SN 043482272) near Krasny Oktyabr, Tula Region, Russia, on December 28; all 12 crew members were killed. The An-22 was built in 1974. The Russian defense ministry set up a commission of inquiry to determine the reason for the crash. The Ministry took the precaution of grounding the **Air Force's** fleet of **Antonov** An-22 transports and **Tupolev** Tu-95 bombers. Both types are powered by four **Kuznetsov** NK-12MA turboprop engines and contra-rotating propellers. Russia lifted the Tu-95 ban on January 13.

Kogalymavia Tupolev Tu-154B-2 (RA-85588, SN 83A588) was damaged beyond repair on January 1, when an engine caught fire before take-off from **Surgut Airport**, Russia. There were 116 passengers and eight crew members on board. Of that number, three people died and 43 were injured; the airplane was destroyed by the fire. The 1983-model Tu-154 was powered by three **Kuznetsov** NK-8-2U jet engines. The Russian **Federal Transport Oversight Agency, Rostransnadzor** suspended all Tu-154B flights in Russia until the causes of the accident are determined. Six airlines in Russia operate 14 of the early model Tu-154Bs so the grounding will not cause much disruption to service.

Iran Air lost 36-year old Boeing 727-286 (EP-IRP, SN 20945) on January 9 when the airplane landed five miles short of **Urmia (Orumiyeh) Airport**, Iran. The twelve crew and 60 of the 93 passengers were killed. Severe weather at Urmia is suspected as a cause for the accident. The ***Fars News Agency*** quoted the Deputy Minister of Roads and Transportation as saying "the accident occurred during a forced landing outside the airport."

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PO Box 189, Vienna, VA 22183 – USA
Tel: +1-240-582-0119 Fax : +1--226-444-9723
enquiries@avmarkinc.com

TAAG Angola, the country's flag carrier, grounded its fleet of three **Boeing** 777-200ERs after two of the planes suffered engine failures. One 777 had to turn back to Luanda after take-off because of engine trouble. Another 777 aborted its take-off at Lisbon. **TAAG** spokesman **Rui Carreira** said, "In the face of two similar incidents in the space of 17 days, **TAAG** has decided to suspend all flights for its Boeing 777-200ER fleet for the sake of caution and international security. We will demand a report from the manufacturers of the motor and the plane — **General Electric** and **Boeing** — respectively, who will carry out an investigation to determine the causes."

Late Breaking News

American Airlines announced that it exercised options for two extended range 777-300ERs on January 19. **Boeing Commercial Airplanes** CEO **Jim Albaugh** said, "**American** is the first carrier in the United States to order the 777-300ER. These new airplanes will complement their large fleet of 777-200ERs offering additional flexibility in serving the nonstop routes." The 777-300ERs are powered by **GE** GE-90 engines. The 777 can seat up to 365 passengers in a three-class configuration and can fly up to 7,930 nautical miles. **American** will use the 777-300ERs for expansion and not replacement of older equipment.

The Chinese Government approved the purchase of 200 **Boeing** aircraft worth $19 billion. The 200 orders confirm commitments made earlier. They will be filled over a three-year period, from 2011 through 2013. **Chinese** airlines are buying 737s and 777s. The firm order coincides with Chinese President **Hu Jintao's** visit to Washington DC. **President Barack Obama** said the economic talks with Mr. **Hu** were about "buying stuff," and the Chinese waited until the meeting to make the big announcement. **Boeing** said "the agreement positively impacts more than 100,000 jobs including those at **Boeing** and with its thousands of suppliers throughout the U.S." **Boeing** jets currently account for more than 50 percent of all commercial jetliners operating in China, the manufacturer said. **Boeing** forecast that China will need 4,330 new airplanes, worth more than $480 billion in the next 20 years.

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We publish the ***AVMARK Newsletter*** monthly; containing market information, various analyses and commentary; also reports all orders, purchase sales and leases of new and used transport aircraft. We also publish several other statistical compilations from our extensive database on aircraft, carriers, traffic, costs and operations.

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.

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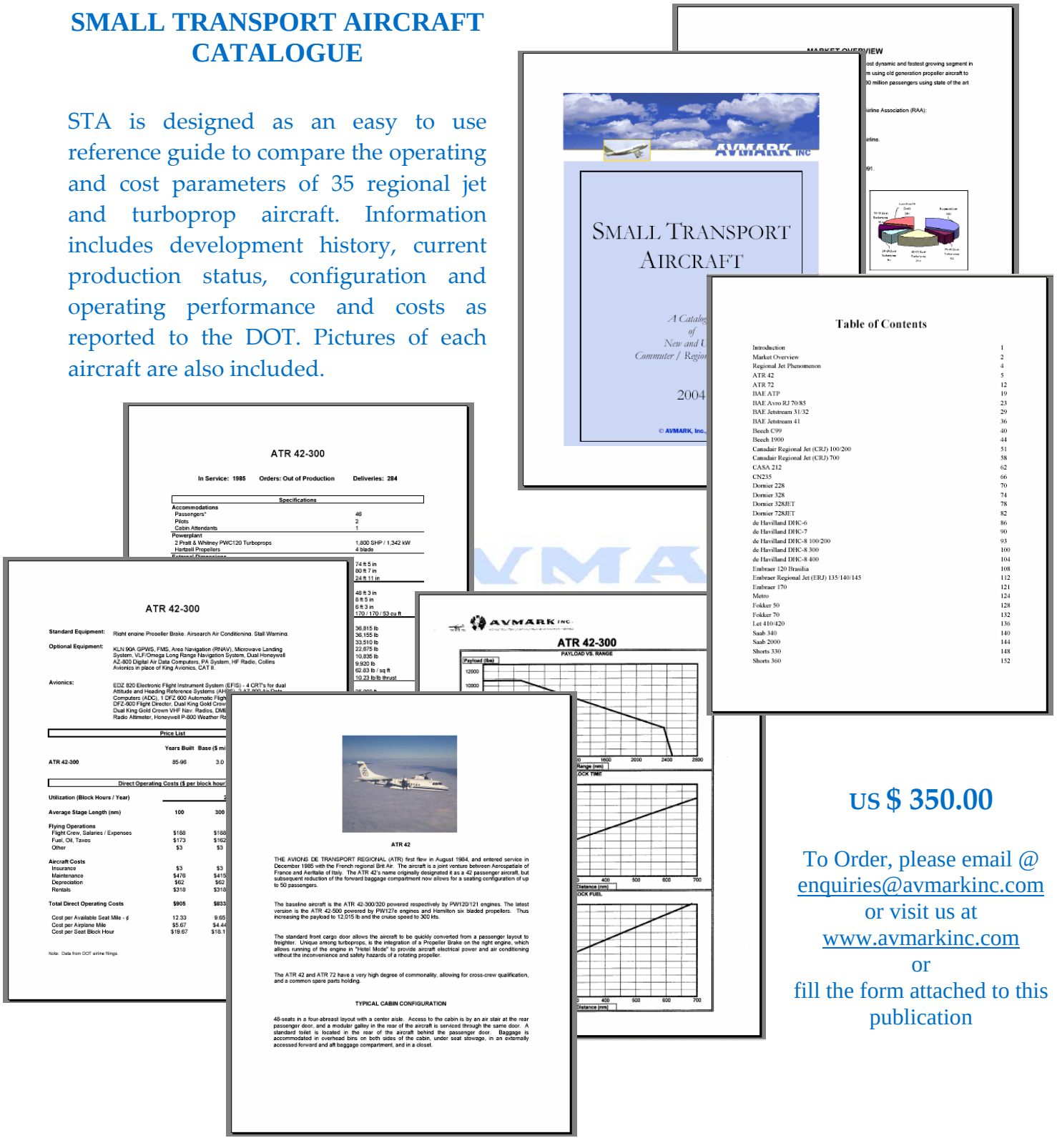

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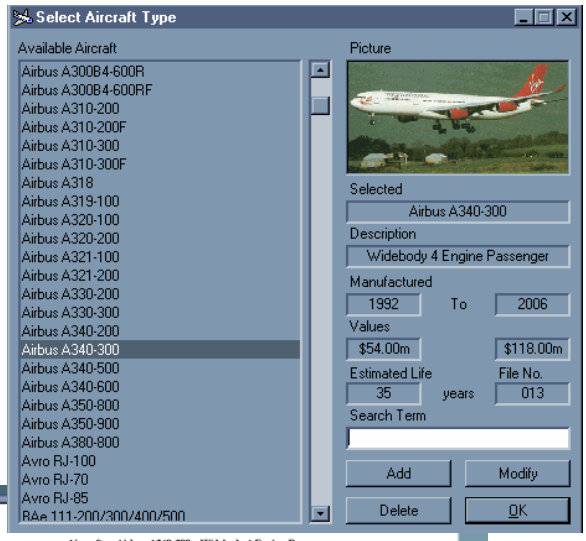

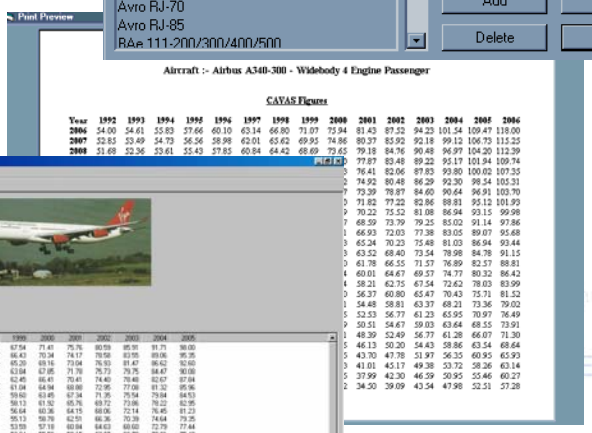

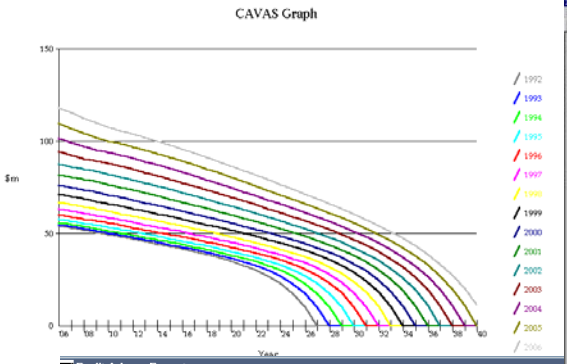

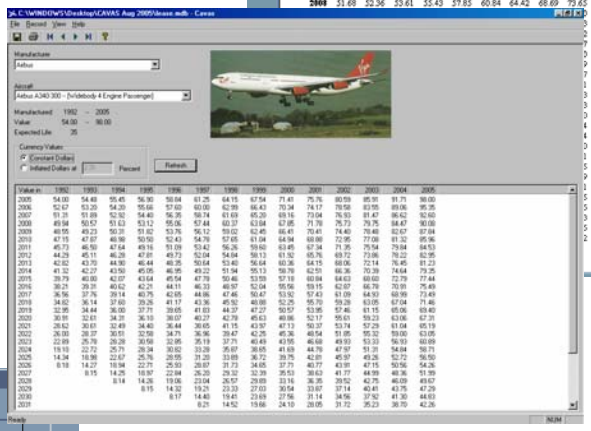

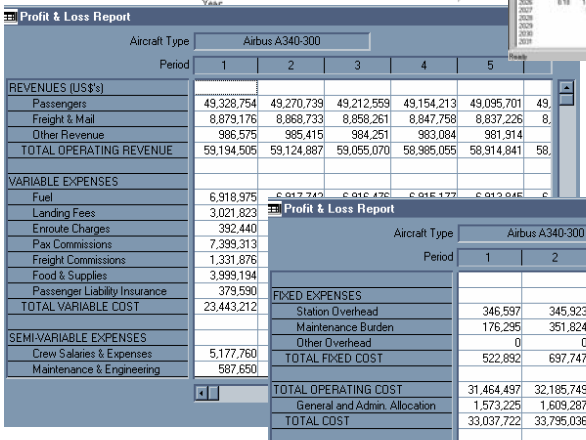

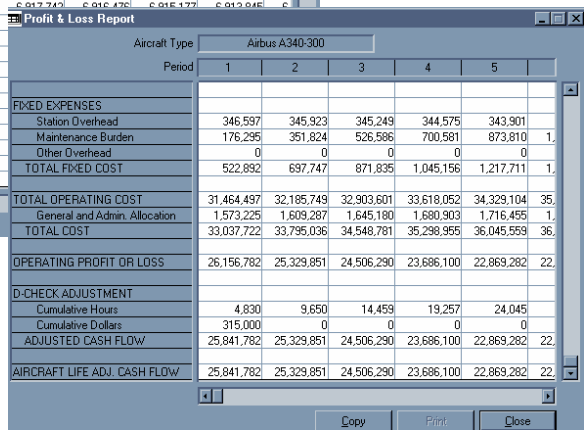

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