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Newsletter

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Market Comment

American Airlines and US Airways Group settled litigation with the **Department of Justice (DOJ),** six states (Arizona, Florida, Michigan, Pennsylvania, Tennessee, and Virginia) and the District of Columbia, which challenged the airlinesô merger. The companies also announced an agreement with the **Department of Transportation (DOT)** that related to small community service from **National Airport**. Under the terms of the settlement, the airlines will divest 52 slot pairs, gates and related facilities at Washingtonôs **National Airport,** and 17 slot pairs at New Yorkôs **LaGuardia Airport**. The airlines also will give up two gates and related facilities at Bostonôs **Logan International Airport,** Chicagoôs **O'Hare International Airport,** Dallasô **Love Field**, **Los Angeles International Airport**, and **Miami International Airport**. The **DOJ** will manage the divestiture process after the completion of the merger. It originally filed the lawsuit to block the merger because the **DOJ** claimed the new airline would reduce competition and raise airfares for passengers. This would be due to its dominance at **National** and **LaGuardia**, as well as concerns about a large number of other city pairings. Texas withdrew its suit after **American** reassured the state that it would not move its corporate headquarters and jobs to another locale. Similarly, Florida was worried that **American** would cut its services at Miami. The airline currently operates around 70 percent of the flights at **Miami Airport**, a hub for flights to and from Latin America. Before the settlement, the Attorney General of Florida said, ñWe are hopeful that we will reach a timely resolution to benefit the residents of Miami and all Floridians and travelers to Florida.ò After the divestitures, the new **American** should still generate more than $1 billion in annual net savings beginning in 2015. The combined company expects to offer 44 fewer daily departures at **National** and 12 fewer daily departures at **LaGuardia. American** and **US Airways** currently fly 290 and 175 departures at the respective airports. The slot divestitures are not expected to lower employment at the new airline. The merger is valued at $11 billion and will create the worldôs biggest airline. **Tom Horton,** Chairman and CEO of **AMR Corp**., the parent of **American Airlines** said, ñThis is an important day for our customers, our people and our financial stakeholders. This agreement allows us to take the final steps in creating the new **American Airlines."** The settlement was approved by the **Federal District Court** and the bankruptcy judge overseeing **American's** Chapter 11 proceedings. **American** will merger with **US Airways** by December 9.

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It is AVMARK's Opinion that this should be the last big merger in the United States. Three mega carriers that fly domestic and international services are enough. The big three, **'New' American, Delta** and **United/Continental** should not be allowed to acquire smaller carriers or each other. With their market clout and 1,000-airplane fleets, the top three should be solvent and successful. If they fail, it will be due to their own incompetence. The several mid-level airlines, **Southwest, JetBlue** and **Alaska** are apparently doing well in their markets and should not need to merge, although they should be able to bulk up by buying complementary airlines, but not competing airlines. The mid-three effectively keep the larger airlines in line in terms of fares, because the cheapest fares fill the most airplanes. Access to slots and gates at major airports are the largest impediment to real competition. The low-cost carriers manage to avoid some slot constrained airports by offering bargain flights from ancillary airports far from the city center. This helps keep some fares low, but does not really solve the problem of market dominance by the top three airlines. Perhaps the airports should shake up the allocation of slots and gates occasionally, or some other method of curbing monopolistic tendencies could be invented.

Airbus Orders

Airbus Sold 153 New Aircraft and Delivered 59 in October, bringing its backlog to a new industry record of nearly 5,400 aircraft. This equals eight years of production at current rates. Rival **Boeing's** backlog was 4,800 as of October 31. **Airbus** broke **Boeing's** grip on the Japanese market with its sale of 18 A350-900 and 13 A350-1000 jetliners to **Japan Airlines**. **SASð Scandinavian Airlines** joined the A350 XWB customer list when it firmed up its previously-announced Memorandum of Understanding for eight A350-900s. The orders brought the A350 XWB sales total to more than 750, one year before the first delivery of **Airbus'** extra widebody aircraft, and seven years since the project was launched in July 2006. **Boeing** has sold nearly 1,000 of the similarly sized 787 since **All Nippon Airways—ANA** ordered 50 in April 2004, and has delivered 98 of them since handing over the first one to **ANA** in September 2011.

Airbus sold 16 more A330s to Chinese airlines, proving that the twin-aisle, twin jet is still very popular. **China Eastern** ordered six A330-200s and one -300, **Air China** bought six A330-300s, **Hainan Airlines** purchased one A330-200, and one -300, while

China Southern placed an order for one A330-300. **SAS** confirmed its provisional order for four more A330-300s.

VivaAerobus Group booked 40 A320neo (new engine option) and 12 A320ceo (current engine option) aircraft. This was Latin Americaôs biggest A320 aircraft order, and allows the Mexican low-cost carrier to become an all-**Airbus** airline by 2016. **JetBlue Airways'** shifted its A320 Family order book and ordered 15 A321ceo and 20 A321neo aircraft. The contract raised total bookings past the 10,000 order mark, to 10,025 as of October 31. Now more than 40 percent of A320 Family aircraft sales are for the A321 model, illustrating the global trend for higher-capacity airliners, **Airbus** said. At the end of the month, **easyJet** added another six A320ceo jetliners to its backlog. **OHA Centre Street Aircraft Holdco** bought its second A319ceo for lease to **American Airlines**.

Airbus Orders, Deliveries and Backlog October 2013

OCT ORD	OCT DEL	OCT CANX	TOTAL ORD	TOTAL DEL	BACK LOG
			A318		
-0-	-0-	-0-	79	79	-0-
			A319		
1	4	-0-	1,522	1,389	133
			A320		
58	32	-0-	6,505	3,478	3,027
			A321		
35	11	-0-	1,919	856	1,063
			A330		
20	8	-0-	1,286	1,024	262
			A350		
39	-0-	-0-	764	-0-	764
			A380		
-0-	4	-0-	259	115	144
This Month			**This Year**		**BL**
153	59	-0-	**1,215**	**504**	5,393

Airbus sold 13,527 aircraft and delivered 8,134 as of October 31, 2013. Fifty orders have been cancelled. Total orders, deliveries and backlog include cancellations and order changes. Airbus expects to deliver 620 aircraft in 2013.

By the End of October, Airbus had sold 1,265 new aircraft, and lost 50 firm aircraft orders, for a net total of 1,215 aircraft. The manufacturer delivered 47 A320 Family aircraft, eight A330s and four A380s (a new record for super jumbojet deliveries), to **British Airways, Emirates, Korean Air** and **Thai Airways**. **Airbus** increased its production rate by nine percent since 2012, and delivered 504 airplanes in the first 10 months of this year. It should easily meet its goal of 620 deliveries in 2013. **Airbus** valued its commercial backlog of 5,393 jets at ú583 billion.

Airbus Announced its First Sale to Japan Airlines (JAL) in October. The flag carrier is buying 18 A350-900s and 13 A350-1000s, and it took options for a further 25 aircraft. The A350s will be handed over from 2019 through 2025. The deal was worth $9.5 billion at list prices. The A350s will replace 777s on long-haul routes. This is **JAL's** first order for **Airbus** aircraft, although its merger partner **Japan Air Service** bought A300s in the 1980s. The A350-900s comfortably seat more than 300 passengers in a three-class layout, and can serve routes as long as 8,100 nautical miles (nm). The A350-1000s will seat 350 passengers and can fly up to 8,400 nm. The A350 XWB models are equipped with

Rolls-Royce Trent XWB engines. The first A350-900 will fly commercially in the second half of 2014. **Airbus** has sold 764 A350 XWBs to 39 customers worldwide.

SASð Scandinavian Airlines confirmed a Memorandum of Understanding (MoU) it signed at the **Paris Air Show** for four A330-300 Enhanced and eight A350-900s. The airline also optioned six more A350-900s. The final contract for the long-haul aircraft specifies that the A330s will be delivered in 2015 and 2016. The first A350s will be delivered in 2018. The new twin jets will replace seven A340-313Xs that were delivered in 2001 and 2002, and four A330-343Xs that were delivered from 2002 to 2004. The aircraft will be financed by export credit financing, and sale and leaseback transactions.

Airbus Started Assembly of the First A320neo. It completed the first NEO engine pylons at its dedicated pylon facility in St. Eloi in Toulouse. Other major NEO components and subassemblies are taking shape in factories across various countries. **Spirit AeroSystems** delivered the leading and trailing edge wing structures from its factory in Prestwick, Scotland. The center and rear fuselage, which are made in Hamburg, will be joined with the forward fuselage when it is shipped from St. Nazaire, France. After January 2014, the major components will be brought together at the single-aisle facility in Hamburg. The manufacturer said the first A320neo is well on track for final assembly in spring 2014, and the aircraft will take flight in the autumn.

VivaAeroBus will replace its fleet of 19 737-300s with 40 A320neos and 12 standard A320s by 2016. The deal is worth $5 billion ($96.15 million each) at list price. The airline will announce the engine selection at a later date. **VivaAeroBus** is Mexicoôs fourth-biggest carrier and is 49 percent owned by **Irelandia Aviation,** (owned by **Tony Ryan,** the founder of **Ryanair**) and 51 percent owned by Mexicoôs largest bus company, **IAMSA**. The countryôs largest airline, **Aeromexico,** ordered **Boeing** 737-MAX aircraft, while the second and third biggest airlines, **Interjet** and **Volaris,** picked A320neos from **Airbus**. The manufacturer has more than 500 of its aircraft in operation throughout Latin America and the Caribbean. The manufacturer sold more than 800 aircraft in the region and currently has a backlog of nearly 400. In the last 10 years, **Airbus** tripled the regionôs in-service fleet, and delivered more than 60 percent of all aircraft operating in Latin America.

JetBlue Airways placed the 10,000th order for an **Airbus** A320 Family aircraft in late October. The airline purchased 15 A321ceo (current engine option) and 20 A321neo (new engine option) aircraft. The A321ceos will enter service by 2017, and the first of 20 new A321neos will arrive in 2018. The 35 A321s are valued at $4 billion at list price. The airline opted to convert eight of its 11 A320ceo and 10 of 40 A320neo orders to eight and 10 orders for the larger A321ceo and A321neo, respectively. The airline retains three A320ceo and 30 A320neo orders. The first A320neos will be delivered to **JetBlue** in 2016, and will be built in **Airbus'** new Mobile, Alabama-production line. **Airbus** forecasted the facility will produce between 40 and 50 aircraft per year by 2018. Nearly 2,400 neo aircraft have been sold since the programôs launch two years ago.

Aerolineas Argentinas signed a Memorandum of Understanding to buy four A330-200s. The first two will be delivered in the first and second quarters of 2015, and deliveries will be completed in 2016. The A330s will carry 24 passengers in business-class and 248 in economy-class. **Aerolineas** agreed to lease four A330-200s from **ILFC** at the **Paris Air Show** and received the first one in September. The eight A330s will replace four A340-200s and seven A340-300s in its long-haul fleet.

At the Dubai Airshow 2013. The Dubai flag carrier, **Emirates,** added 50 more A380-800s to the 90 A380s it has already ordered. The deal was worth $20 billion ($400 million each) at list price. Their current A380s are powered by **Engine Alliance** GP7200s, but the airline did not specify an engine type for the newest batch. **Emirates** took delivery of its first A380 in July 2008, and has now received 39 A380s. The most recent super-jumbojet was on static display at the **Airshow**. **Airbus** said the re-order confirmed the continued strong demand for very large aircraft in the Middle East, and they are needed to meet the regionôs higher than average traffic growth. Chairman and Chief Executive of **Emirates, Sheikh Ahmed bin Saeed Al-Maktoum,** said, ñThe A380 continues to be the flagship of our fleet and after five years in operation, it remains highly popular with our passengers. It is still one of the most efficient aircraft to operate today in terms of fuel burn and emissions per passenger, and it gives us the flexibility in some cases to meet passenger demand in slot-constrained markets. This latest order will help us meet both fleet expansion and fleet replacement needs.ò Since first entering service in 2007, 115 A380s have joined 10 world-class airlineôs fleets. The total A380 fleet has accumulated over one million flight hours in almost 140,000 commercial flights. **Emirates** now accounts for 45 percent of the 309 A380s that have been ordered since the programôs launch in December 2000. The delivery dates were not announced, and it is very apparent that **Emirates** will pay much less than the list price for bailing out the A380 program.

Airbus Started Final Assembly of the Last A350 Test Airframe (SN 005) after receiving the three fuselage sections in Toulouse in November. The A350-900 will be the second test aircraft (after SN 002) to be fitted with a passenger cabin. It will fly long distances to simulate in-service operations, and later it will be used for route-proving flights. **Airbus** said SN 005 was scheduled to fly the first time in the spring of 2014, and it will be used to perform cabin related flight tests. It will also participate in the Early Long Flight tests where the passengers are **Airbus** employees. This allows the cabin and related systems to be tested under realistic conditions in order to ensure a mature cabin at entry into service. The companyôs first two flight-test aircraft, SN 001 and SN 003, have performed more than 100 test flights and logged over 500 hours. The A350 XWB has already won more than 760 firm orders from 39 customers worldwide. The first will be delivered to the launch customer **Qatar Airways** in the second half of 2014. The airline has purchased 80 A350s (43 -900s and 37 -1000s). **Qatar** joined the **oneworld** alliance and will start cooperation with **British Airways, American** and the other carriers the same time it puts the first A350-900s into service.

Airbus will freeze the design of the 350-seat A350-1000 by the end of the year. It is scheduled to enter service in mid-2017 with **Etihad Airways** ï three years ahead of the competing 350 to 400-seat **Boeing** 777X. With **Etihad's** order at **Dubai Airshow,** A350-1000 sales rose to 186.

Qatar Airways announced its intention to buy five A330-200F freighters. The airline will option eight more, for a total commitment worth $2.8 billion ($215.4 million each). The first two A330Fs will be delivered in 2014. **Qatar** has not selected an engine yet, but its three A330Fs are fitted with **Rolls-Royce** Trent 772B-60 engines. The Doha-based airline also operates 16 A330-200s and 13 -300s, which are powered by **GE** CF6-80E engines. **Qatar Airways** received its first **Airbus** aircraft in 1997 and now has ordered more than 200 **Airbus** aircraft from the current product families, including the single-aisle A320, the twin-aisle A330/A340 and the flagship A380. The A330-200F can carry 70 tons of payload up to 4,000nm. To date, **Airbus** has sold 49 A330Fs, and delivered 24 of them.

Etihad Airways, the national airline of **Abu Dhabi,** ordered 40 A350-900s and 10 -1000s, one A330-200F, 26 A321neos and 10 A320neos, in a deal worth $26.9 billion. The airline said it is taking 24 regional versions of the A350-900. All the A350s will be powered by **Rolls-Royce** Trent XWB engines. **Etihad** said the single-aisle A321neos will be fitted with **CFM International** LEAP-1A powerplants, even though its A321ceos are powered by **IAE** V2533-A5 engines. The first of the aircraft will start arriving in 2018. The deal also includes options on another 30 unspecified aircraft, taking the potential order to 117 jets. The carrier can move aircraft between its several equity alliance partners. **Etihad** was launched only 10 years ago and flew its first service in November 2003 with an A330. The airline now has 86 aircraft in its fleet, including 23 A320 Family aircraft, 25 A330s and 11 A340s.

Libyan Wings, a startup based in Tripoli, signed a Memorandum of Understanding to buy three A350-900s and four A320neos, at the **Dubai Airshow.** The seven airplanes will be delivered after 2020 and are worth $1.2 billion at list prices. The A320neo engines have not been selected yet. The airline will start operations from Tripoli to Benghazi, Miserata and Tubruk in early 2014 with two leased A320 aircraft. It intends to grow its fleet to 10 aircraft within five years. As planes are added, **Libyan Wings** will start serving neighboring nations of Tunisia and Egypt and Casablanca, Morocco, as well as Istanbul, Turkey.

Air Algérie signed a Memorandum of Understanding for three A330-200s at **Dubai Airshow 2013.** The new aircraft will be deployed on medium and long haul routes from the airlineôs hub in Algeria. **Air Algérie** has already purchased five A330s and has taken delivery of all of them. The A330 Family, which seats from 250 to 300 passengers, has won more than 1,200 orders, and more than 1,000 of them are flying for more than 100 operators worldwide.

Airbus A380 Improvements. The manufacturer is looking at winglets to improve the A380ôs fuel efficiency, and it wants to put more seats into the super-jumbo to boost the airplaneôs profitability. **John Leahy**, the head of sales, said **Airbus** could fit 50 more tourist seats in an A380 without sacrificing passenger comfort, by maximizing the tourist cabin configuration. The average A380 can carry 525 passengers in three class configuration. The airlines can add another 30 passengers by changing from 10-abreast seating to a higher-density 3-5-3 seat row. These small upgrades to the A380 will improve the economics of the super-jumbo without requiring a costly update, he said. ñWe are not about to spend $1 billion to take 2 tons out of the plane. The airplane works very well,ò even if some customers got ñcarried awayò with luxurious amenities to fill the space provided by the two-deck cabin. **Airbus** wants to change the A380ôs image from a luxury liner to a more plebian people mover. Only one airline has chosen the all-tourist, 850-passenger cabin while the rest emphasize lay-flat beds and showers in First Class. **Doric Leasing** wants **Airbus** to develop a less-opulent, more universal cabin so that it can lease A380s to a variety of airlines without having to make expensive interior changes between customers. Several European legacy carriers are easing away from their A380 commitments. **Lufthansa** cancelled three A380 orders, **Virgin Atlantic** deferred delivery of its six until the end of the decade, and **Air France/KLM** hinted that it would drop two commitments.

Spring Airlines, Chinaôs biggest low-cost carrier, ordered 30 more A320ceos, subject to government approval. The first ones will be delivered in 2015, and the planes are list priced at about $2.75 billion.

EADS Reported Higher Revenues and Profits which were driven by **Airbus'** commercial aircraft sales activities. New orders more than doubled to ú138.2 billion, and the backlog value reached ú642.5 billion by the end of September, 2013. **EADS** held ú5.2 billion in cash, and revenues from the first nine months of 2013, increased 7 percent ú40.0 billion (up from ú37.3 billion in the first nine months of last year). The increase was due to a 9 percent increase in commercial aircraft deliveries and the first deliveries of the **Airbus Military** A400M. Revenues were broadly stable at **Eurocopter, Astrium** and **Cassidian**. One-off charges were limited to the impact of the A380 wing rib issue and the pre-delivery payment (PDP) dollar mismatch and balance sheet revaluation at **Airbus**. The charges equaled -ú445 million, up from the -ú337 million incurred in 2012. Net income rose to ú1,195 million, from ú880 million in 2012. In October, **EADS** feared it would have to cut production of its double-decker A380 unless it found buyers for some unsold production slots in 2015. It also worried that the target date for reaching break-even on the A380 program might also slip. The **Emirates** order for 50 A380s should have put those troubles to rest. The delivery dates and value of the orders were not announced. It is possible that the planes will be built late in the decade and were sold at bargain prices. Neither of those scenarios will help fill the slots, or hasten the programôs break even, which was estimated at the 300th delivery. **EADS** Finance Director **Harald Wilhelm** said the break-even date of the A380 project would be reached in 2015, based on 30 deliveries that year (up from 25 deliveries this year). He said that falling short of those goals ñwould not be a financial disasterò. Until the massive **Emirates** order, the A380 program actually shrank due to three cancellations. It is still possible that **Doric Lease** will finalize its tentative order for 20 A380s by the end of the year. It is still a priority to sell open slots in

Airbus' Latest Global Market Forecast (GMF) for Latin America stated that airlines in the region would require 2,307 new aircraft between 2013 and 2032. The numbers included 1,794 single-aisle, 475 twin-aisle and 38 very large aircraft (VLA) worth an estimated $292 billion at list prices. This was less than 8 percent of the approximately 29,230 new passenger and freighter aircraft valued at nearly $4.4 trillion that will be required to satisfy future robust market demand by 2032. The regionôs gross domestic product (GDP) is currently growing at 3.6 percent per year, above the world average of 2.6 percent. **Airbus** said socio-economic indicators forecast that Latin Americaôs middle class will grow to represent more than half of the population by 2032, and the economy was expected to outperform the world average. This was largely due to Mexicoôs and Brazilôs consumer spending. Traffic growth in Latin America is expected to grow at 5.2 percent, outperforming the world average of 4.7 percent. The growing middle class and increased consumer spending made air transport more accessible in the past 10 years. There is plenty of room for increasing numbers of city-pairs served and the total number frequencies. Only 40 percent of Latin Americaôs top 20 cities are connected by direct flights. **Airbus** forecasts that two-thirds of the population in emerging markets will take a flight per year by 2032, making the region the second highest in terms of traffic growth rates worldwide, after the Middle East. Low cost carriers (LCC) now account for nearly 40 percent of the market share, up from just 12 percent in 2003. The highly competitive LCC market led airlines to seek the most efficient aircraft available, forcing the regionôs average fleet age down 42 percent to 9.5 years since 2000, compared to the world average age of 10.7 years. Latin American is no longer the dumping ground for antiquated aircraft. **Airbus** sold more than 800 aircraft and holds a backlog of almost 400. Over 500 **Airbus** aircraft are in operation throughout Latin America and the Caribbean. In the last 10 years, **Airbus** has tripled its in-service fleet, while delivering more than 60 percent of all aircraft operating in the region.

2015 and beyond, Mr. **Wilhelm** said, because long-lead time parts have to be ordered two years in advance. The company expects to see a negative free cash flow of ú1.5 billion in 2013, due to the expense of flight testing the A350 and preparing for its serial production. Earlier this year, they planned to break even on cash flow. ñThis reflects the companyôs investment into production ramp-up and development programs as well as recent government customer budgetary constraints,ò **EADS** said in a statement. Mr. **Wilhelm** commented that one third of the shortfall in cash flow compared with the previous target was due to budget constraints among unidentified government customers, which buy defense and space equipment. **EADS** Chief Executive Officer **Tom Enders** will brief unions and investors on the details early next month.

Boeing Orders

Boeing Sold 79 New Aircraft in October, including 65 737s, five 747-8s, six 777s, and three 787s**.** One **Business Jet / VIP Customer** contracted for one 737-800BBJ. One **Unidentified Customer** purchased two 787-8s on Halloween. Another **Unidentified Customer** bought 42 737-MAX aircraft. **Aerolineas Argentinas**, signed a contract for 20 737-800s, worth $1.8 billion ($90 million each) at list prices. **El Al Israel Airlines** purchased two more 737-900ERs, for a total of eight. **Korean Air** committed to buy five 747-8 Intercontinentals and six 777-300ERs at the **Paris Air Show** in June. The Korean flag carrier signed a firm contract in October and ordered one more 787-9 Dreamliner as well ï all 12 airplanes were valued at $3.9 billion at current list prices. **Boeing** lost a dozen 737 orders in late October, for a total of 131 737 cancellations, but it sold 907 new 737s. The manufacturer sold a total of 1,102 new aircraft this year and lost 145 existing orders, for a net total of 955 orders as of October 31. Its backlog stood at 4,800, at the end of the month.

Boeing Delivered 54 Aircraft in October, including nine 787s. It also handed over 34 737NGs, one 747, two 767Fs, and eight 777s.

Korean Air purchased five more 747-8 Intercontinentals for a fleet total of 10. The first of its passenger 747-8s will enter service in 2015. The 747-8s will replace

Boeing October 2013 Orders, Deliveries

OCT ORD	OCT DEL	OCT CANX	TOTAL ORD	TOTAL DEL	BACK LOG
			737		
65	34	-12	11,275	7,789	3,486
			747		
5	1	-0-	1,530	1,475	55
			767		
-0-	2	-0-	1,108	1,059	49
			777		
6	8	-0-	1,473	1,147	326
			787		
3	9	-0-	982	98	884
This Month			**This Year**		**BL**
79	54	-12	**959**	**530**	4,800

Boeing sold 23,898 aircraft and delivered 19,098 as of October 31, 2013.
The Current Program includes sales and deliveries of 737s, 747s, 767s, 777s and 787s.
Sales totals are net – minus 133 cancellations. Boeing expects to deliver from 635 to 645 aircraft in 2013,

Korean's 15 747-400s by 2017. The airline ordered six additional 777-300ERs for a total of 21 from **Boeing**. It will long-term lease two new 777-300ERs from **ALC**, one in November 2014, and the second in May 2015. The flag carrier also ordered its 11th 787-9 Dreamliner. Its first 787-9 is due in 2016, five years later than originally scheduled. The combined order was valued at $3.9 billion at current list prices, and the delivery dates for the new aircraft were not announced.

Aerolineas Argentinas, the Argentine flag carrier, signed a contract for 20 737-800s, worth $1.8 billion ($90 million each) at list prices. They will be delivered between 2016 and 2018 and will be used to modernize its current fleet of 22 737-700s and four 737-800, which are leased.

El Al Israel Airlines purchased its seventh and eighth 737-900ER (Extended Range) airplanes two weeks after it took delivery of its first 737-900ER. The -900ERs feature the **Boeing Sky Interior,** with 16 first class and 156 tourist seats. The first six -900ERs have replaced **El Al's** six 767-200ERs that entered service in 1984, and were recently parked. The flag carrier operates an all-**Boeing** fleet of nearly 40 airplanes including 737NGs, 747-400s, 767-300ERs and 777-200ERs, and it serves more than 40 destinations worldwide from its base in Tel Aviv.

Unidentified Customer(s) bought 42 737-MAX aircraft in late October, and another **Unidentified Customer** purchased 26 737s in early November. By November 21, another **Unidentified Customer** ordered seven 737s. The three orders raised the total number of 737s sold to unnamed clients in 2013, to 257, in 2013. **Boeing** lost a matching 26 existing 737 orders in the first week of November, and four more were cancelled in mid-November. One can assume that the customer exchanged Next Generation orders for the new MAX

Boeing Formally Launched its New 777X Family at the **Dubai Airshow 2013,** with orders and commitments for 259 aircraft from four airlines. Chairman and CEO **Jim McNerney** said it was the largest launch in commercial jetliner history, by dollar value. The list price value of the agreements was more than $95 billion. **Emirates** committed to buy 35 777-8X and 115 777-9X aircraft and reserved purchase rights for 50 more. The provisional sale was valued at $55.6 billion ($370 million each) at list prices. **Etihad Airways** signed an order for 25 777X aircraft, including the first order for the 777-8X, and **Qatar Airways** signed a letter of intent for 50 777-9X aircraft, worth $18.9 billion ($378 million each). The first customer for the 777X, **Lufthansa,** signed a commitment for 34 airplanes in September. The 777X family will be powered by **GE** GE9X turbofan engines. It features **Boeing's** largest-ever wing that will have 10 foot-long folding wing tips to conserve airport space. It will be built of composite materials like the 787 wing. The manufacturer will stretch the decades-old 777ôs aluminum fuselage and will update the current 777ôs pneumatic control systems instead of copying the 787ôs composite fuselage and all-electric architecture. Updating the 777ôs proven technology will lower the risk of the certification and production delays that plagued the all-new Dreamliner, which entered service 42 months late in 2011. **Boeing** is offering the long-range 777-8X ï capable of flying 350 passengers for 9,300 nautical miles, and the 400-seat 777-9X ï with a range of 8,200nm. The manufacturer said, ñThe 777X builds on the passenger-preferred and market-leading 777, which today commands 55 percent of market share in its category in terms of backlog, and 71 percent of the in-service fleet worldwide. The 777-8X competes directly with the A350-1000, while the 777-9X is in a class by itself. Design of the 777X is underway and suppliers will be named in the coming months. Production is set to begin in 2017, with first delivery targeted for 2020. The airplane should be 12 percent more fuel efficient than any competing airplane.

model. Another **Business Jet / VIP Customer** purchased a 737-BBJ, it was the third BBJ sale in 2013. The manufacturer sold 941 new 737s, and booked a total of 161 737 cancellations. In the third week of November, **Etihad Airways** ordered 25 777Xs, one 777F and 30 787-10s, and **Lufthansa German Airlines** firmly ordered 20 777Xs out of its September commitment to buy 34 of the type. **TUI Travel PLC** revealed its order for two 787s which were previously listed as 'unidentified.ô

Southwest Airlines announced its order for 20 737s that was previously listed as ánidentified.' **Boeing** booked the order on June 19, and the customer was revealed in mid-November. It is not yet clear if **Southwest** ordered 20 737-800s or 20 737-MAX aircraft. In May, **Boeing** reported that **Southwest** had firm orders for 326 MAX aircraft, to be delivered from the third quarter of 2017 through 2027.

Etihad Airways signed a firm order for 17 777-9Xs and eight 777-8Xs, 30 787-10s and one 777F freighter on the first day of the **Dubai Airshow.** The airline will be the launch customer for the 777-8X, and took options and purchase rights on 12 more of the type. **Boeing** expects to deliver the first 777Xs around the end of the decade. **Etihad** signed a firm order for 30 787-10s and placed options and purchase rights for 12 787-10s. The airline had already ordered 41 787-9s. They will be delivered from 2014 through 2019. The carrier ordered its fourth 777F freighter and took two options. The airline operates 17 777-300ERs, three 777Fs and one leased 747-8F freighter. It has one more 777-300ER on order. The total commitment for 82 widebodies was valued at $25.2 billion at list prices. The 50 777X aircraft were list priced at $19 billion ($380 million each).

Boeing Will Increase 737 Production to 47 Per Month by 2017. The jump in production rate was a response to the strong demand for the 737 Family, which has won more than 11,200 orders from 266 customers worldwide. These numbers include more than 6,500 orders for the Next-Generation 737. **Boeing** is looking at a current backlog of 3,400 unfilled orders, of which 1,600 orders are for the 737-MAX. The backlog will be partially alleviated by ramping up production from 38 to 42 per month in the first half of 2014. Production will be increased incrementally from 2014 to the third quarter of 2017, in time for the first 737-MAX delivery. Once implemented, the 737 program will build more than 560 airplanes per year, and will have increased its output by nearly 50 percent since 2010. **Beverly Wyse**, VP and general manager of the 737 program, said, ñWe're taking this step to make sure our airplanes get into the hands of our customers when they need them. Our employees and our suppliers have successfully increased the production rate to unmatched levels over the last three years. This increase will lay a solid foundation as we bridge into production on the 737-MAX.ò The company also intends to increase the 787 family production rate from 10 to 12 per month by 2016.

The Etihad Airways Order for 30 787-10 Dreamliners, valued at $8.7 billion at list prices, pushed Dreamliner sales over 1,000. **Boeing** said the Dreamliner family reached the sales milestone faster than any other widebody airplane in aviation history. The 787 was launched in April 2004, and received its 1,012th order in 115 months, about eight years faster than the **Boeing** 777. The 1,000th A330 was ordered by **Cathay Pacific** in July 2008, 21 years after the first order by **Air Inter** in March 1987. The rival A350 has topped 810 after eight years. **Boeing** said it has accumulated 1,012 Dreamliner orders from 60 customers worldwide. **Etihad** now has 71 787 Dreamliners on order and is the worldôs largest airline customer for the airplane. Its first 787-9 will be delivered in mid-2014, and the first 787-10 is due in 2018, one year after the first flight. To date, 102 787 Dreamliners have been delivered to 16 customers around the world.

TUI Travel ordered two additional **Boeing** 787-8s, raising its commitment to 15 **GE**-powered 787s. The new 787s will be delivered in 2016. The purchase was originally attributed to an unidentified customer on **Boeing's *Orders & Deliveries*** website. **TUI Travel** operates six airlines, and four of them, **Arkefly, Jetairfly, Thomson Airways,** and **TUI Fly Nordic,** will operate 787s. The first 787s for **Arkefly** and **Jetairfly** will join their fleets in the next few months. **Thomson** received four 787-8s from May through October. The airline group placed its first 787 order in February 2005. **TUI** said it will pay considerably less than the list price of $424 million ($212 million each) as a result of various concessions, allowances and support from **Boeing**.

Flydubai ordered 100 737-MAX-8 twinjets at the **Dubai Airshow** as well as 11 more 737-800NGs. The airline currently operates 31 -800s and has 19 on order from its original contract signed at **Farnborough Air Show** in 2008. The commitment, including orders and purchase rights, was valued at $8.8 billion at list prices and was the largest ever **Boeing** single-aisle airplane purchase in the Middle East. The investment continues **flydubai's** desire to have an all-**Boeing** 737 fleet. The 737-MAX aircraft will be powered by the **CFM International** LEAP-1B engines and are designed to be 8 percent per-seat more fuel efficient than the A320neo. The configuration of the 737-MAX was finalized in July 2013. The first flight is scheduled for 2016 and the first deliveries start in 2017. The new aircraft has won more than 1,600 orders to date, and the Next Generation 737 backlog is nearly 2,000.

Boeing's Current Market Outlook (CMO), forecast that Middle Eastern airlines will require 2,610 new airplanes over the next 20 years. They will be worth an estimated $550 billion at list prices. Some 900 airplanes, equaling one-third of that demand, will replace todayôs fleets, the other 66 percent of the airplanes are expected to fill the demand caused by the rapid expansion of traffic in the region. According to the **CMO,** long-range, twin-aisle airplanes, such as the 777 and 787, as well as the A330 and A350, will continue to dominate the regionôs order books. Vice President of Marketing, **Boeing Commercial Airplanes, Randy Tinseth,** said, ñInternational traffic growth in the Middle East continues to outpace the rest of the world. The Gulf region benefits from a unique geographic position that enables one-stop connectivity between Europe, Africa, Asia and Australasia. Additionally, over the last decade, we've seen a rise in low-cost carriers that have benefitted from a large youthful population, large migrant workforce and trends toward market liberalization.ò The **Boeing** forecast reports that twin-aisle aircraft will account for more than 50 percent of the regionôs new airplane deliveries through 2032. That segment accounts for 24 percent of the global market. Single-aisle airplanes, the 737 and A320 Family, will make up 47 percent of regional deliveries through to 2032, while large airplanes, the 747 and A380, will account for 10 percent of demand. Regional jets account for only 1 percent of the future market. **Boeing** forecast a long-term global demand for 35,280 new airplanes, valued at $4.8 trillion. These new airplanes will replace older, less efficient airplanes, and meet the growing demand for new airplanes.

777X Program Development Schedule. **Boeing** intends to deliver the first 777X aircraft in 2020. The design of the 777 derivative will be finalized by the end of 2014. The aircraftôs configuration will be firmed up in 2015 and the detailed design work will be finished in 2016. **Boeing** will start manufacturing parts in 2017 and the first flight is scheduled to take place in 2019. **Scott Fancher**, VP and General Manager for Airplane Development, said the schedule was designed to ñcatch the front end of the replacement wave for the 777-300ER and 747-400.ò **General Electric** outlined the schedule for the GE9X engine, which will power the 777-8X

and -9X. **GE** started GE9X design in 2010, and will finalize the work in 2015. Ground testing is scheduled to begin in 2016, and the first test engines will fly in 2017. The engine will be certified in 2018. **GE** expects that the GE9Xôs fuel burn will be 10 percent lower than on the GE90-115B installed on the 777-300ER, while maintenance costs will be ñcomparableò to the GE90. The manufacturer said the GE9X should be 5 percent more efficient than the **Rolls-Royce** Trent XWB engine on the **Airbus** A350, which is flying now.

Bombardier's CS100 Program moved into the product certification phase and the CS300 program is transitioning to the product definition phase. The manufacturerôs third quarter report said four CS100 test aircraft are being built and will join the first flight test vehicle (FTV-1) in the coming months. The first CS100 flew 10 hours during four test flights since September 16, and performed another two flights in the first week of November. The company needs to complete 2,400 flight hours before certification and delivery to **Malmo Aviation** in September, 2014. The firm order backlog remains at 177 aircraft, but the test program will provide critical data about the aircraftôs performance. **Bombardier** will forward fight test data to airlines, after the second aircraft begins flying in November or December.

Regional Report

Bombardier Aerospace reported that its revenues dropped to $2.0 billion, for the period ending on September 30, 2013, from $2.3 billion for the same period in 2012. Earnings before taxes totaled $86 million or 4.3 percent of revenues for the third quarter, down from $118 million, or 5.2 percent, last year. **Bombardier Aerospace** delivered 45 aircraft during the third quarter, compared to 57 for the same period last year, and sold a net of 26 new orders, down from 83 for the same quarter last year. The **Commercial Aircraft** unit signed a Memorandum of Understanding with the Russian state corporation, **Rosteckhnologii (Rostec)** to explore the possibility of setting up a Q400 NextGen final assembly line in Russia. **Rostec** signed a letter of intent (LoI) to buy up to 50 Q400 NextGen turboprop aircraft. **Ilyushin Finance** also signed a LoI for another 50 Q400 NextGens. Based on list price, the 100 Q400s are valued at $3.4 billion ($34 million each). **Flexjet** placed conditional orders from **Executive** unit for 85 Learjet family and 30 Challenger family aircraft, with options for another 150 business aircraft. The value of the ñfirmò conditional orders (excluding options) is $2.4 billion at list prices. **Bombardier Aerospace** announced that **CDB Leasing Co.**, China, was the previously undisclosed customer for five CS100 and 10 CS300 aircraft. **CDB** also optioned an additional five CS100 and 10 CS300 aircraft. Based on list prices, the conditional order was valued at approximately $1 billion and could increase to $2.1 billion if the 15 options are exercised. The deal brings the CSeriesô orders and commitments to 403 aircraft from 15 customers as of September 30, 2013. **Bombardier Aerospace** has a backlog worth $32.9 billion.

The Iraqi Government will exchange its four outstanding orders for CRJ900s for five **Bombardier** CSeries jets. The Iraqi transport ministry signed a Letter of Intent for five CS300s and optioned another 11 of the type at the **Dubai Airshow.** The government ordered 10 CRJ900s in 2008, but the aircraft were tied up in a dispute over war reparations with Kuwait. Six of the CRJ900s were delivered to **Iraqi Airways** between 2008 and 2011. The other four were built, but the airline deferred delivery because the CRJ900s were too small for the routes they were initially intended. According to the government, the new contract puts the cost of the CS300s at $40 million each, while **Bombardier** valued the order at $387 million ($77.4 million each) at list price. If the options are taken up, the deal would be worth $1.26 billion ($78.75 million each at list price). Firm orders for the CSeries are stuck at 177, and **Bombardier** reports 242 commitments (options and letters of intent) for the type from 16 customers. Potential buyers wait for flight test results to validate the company's claims about the new jet's fuel efficiency and cost

savings potential. **Qatar Airways'** CEO **Akbar Al Baker** said the airline was still interested in the CSeries, but he said, ñItôs already two years late from original launch date, itôs just started to fly and it hasnôt accumulated enough hours, with only one aircraft flying at the moment. Once they have substantial orders, **Qatar Airways** would be interested in it and any future generation of technologically advanced airplanes.ò The airline ordered 30 A320neos in 2012. Some analysts believe that **Airbus** and **Boeing** have been heavily discounting their competing jets to crush the CSeries.

Air Cote d'Ivoire conditionally ordered two **Bombardier** Dash 8-Q400s and took two options at the **Dubai Airshow**. When the order is firmed, it will be worth approximately $69 million ($34.5 million each). The options are worth another $72 million ($36 million each). The airline expects to secure financing for the Q400s shortly. The two dual-class configured Q400s will be delivered in August and September 2014. The carrier intends to restart domestic flights with the Q400s and will replace its **Embraer** E170 on regional services. The airline also operates two A319s from its base in Abidjan to nine African cities.

Palma Holding signed a Letter of Intent for four firm Q400 orders and four options. The deal is worth $282 million ($35.25 million each) at list prices. **Palma** is the first Middle Eastern lessor to buy **Bombardier's** Q400 NextGen aircraft. The planes will be delivered in the dual-class, 67-seat configuration to **Ethiopian Airlines.**. The optioned Q400s have not been placed yet, but the lessor said it is working to conclude leases with interested airlines including existing Q400 aircraft operators. **Ethiopian** currently operates a fleet of 13 Q400 NextGen airliners. **Bombardier** has placed more than 200 Dash 8/Q-Series turboprops, CRJ regional jets and single-aisle CSeries aircraft in service, or on firm order in the Middle East and Africa.

Bombardier Launched a High-Density Dash 8-Q400 Turboprop With a Sale to Nok Air. The Thai low cost airline placed a firm order for two Q400 NextGen turboprop airliners, took options on two more Q400s, and reserved purchase rights on four others. **Bombardier** confirmed that **Nok Air** will be the launch customer for a new extra-capacity seating option, which will allow the Q400 NextGen to accommodate up to 86 passengers. The firm order is valued at approximately $63 million ($31.5 million each) at list price. The value could grow to $258 million ($32.25 million each) if **Nok Air** exercises its options and purchase rights. The new variant will have two or three additional seat rows than the current Q400ôs 80 seats. It was not clear if **Bombardier** will use slimmer seats or modify the cabin to carry up to 86 passengers.

Bombardier has sold nearly 500 Q400s since 2000. The type can carry from 67 to 80 passengers, but the majority of the fleet is configured with around 74 seats. **Ethiopian Airlines** chose the dual-class 67-seat version in 2011, featuring seven business-class and 60 economy seats, fore and aft lavatories as well as a galley outfitted to provide cold and hot meals. The manufacturer has been studying the stretch of the Q400 to 90 seats since 2007, to attract airlines away from the less fuel-efficient regional jets. The 90-seater, dubbed the Q400X would also be able to operate from airports that restrict jets. **Bombardier** forecast demand for 2,700 turboprops in the 60- to 99- seat market by 2031, while rival **ATR** sees a need for 1,340 90- plus seat turboprops, as well as 1,640 in the 70- seat sector.

Abu Dhabi Aviation, signed a Letter of Intent (LOI) for two Q400 NextGen aircraft. The Abu Dhabi-based airline is a longtime Bombardier Q-Series customer. The Q400s are valued at $35 million each at list price. **Abu Dhabi Aviation** is the largest commercial helicopter operator in the Middle East, and

also flies a fleet of one Q400, one Dash 8/Q300 and two Dash 8/Q200 turboprops. It has operated **Bombardier** commercial aircraft for over 20 years. The carrier supports offshore oil, engineering and construction companies.

Embraer S.A. delivered 19 passenger jets and 25 executive jets during the third quarter of 2013, for a total of 44 aircraft. The companyôs firm order backlog grew to $17.8 billion, the highest level since the third quarter of 2009. The launch of the E-Jet-E2 model at the **Paris Air Show** drove the increase in commercial sales. Aircraft deliveries and revenues from the companyôs growing **Defense & Security** unit, raised revenues to $1.288 billion. Third quarter net income attributable to shareholders and Earnings per ADS basic totaled $52.9 million and $290,500, respectively.

Embraer Executive Jets sold one ultra-large Lineage 1000 to **Arab Wings** at the **Dubai Airshow.** It will be delivered in the first quarter of 2014, and will be managed on behalf of an undisclosed customer. It will be available for third-party charters. **Arab Wings** already operates a super midsize Legacy 600 and a large Legacy 650 out of its base at Amman, Jordan. The Lineage 1000 is based on the EMBRAER 190 regional jet.

JetBlue Airways is expected to convert its 24 deferred EMBRAER 190 orders to a commitment for the re-engined E-Jet E2 model. Last month, the airline announced that it would take delivery of its 60th E190 in the fourth quarter, and that it would maintain its E-190 fleet at that level for seven years. The deferred E190s were to be delivered from 2014 to 2018 and are now scheduled for the 2020-2022 period, several years after the E190 E2 enters service. **JetBlue** ordered 100 E190s in 2006, and optioned another 100. Presumably the other 12 firm orders and options have been cancelled. Chief Executive **Dave Barger** said, ñThe deferral is not linked [to the E2] but coincidentally the timing is very good for the geared turbofan version of the E2. **Embraer** would love to have **JetBlue** as an E2 customer. We have to be looking further out.ò He said rightsizing at 60 aircraft is perfect, and it allowed the airline to build its Boston and San Juan services with shorter range mission flights. The 24 deferred E190s were valued at $1.11 billion ($46.25 million each) at catalog prices, while the E190 E2 is list priced at approximately $57 million each.

Embraer Has Slots Available. Now that **JetBlue** deferred 24 E190s from 2014-2018, until after 2020, the manufacturer has some holes to fill in its production line. They hoped to maintain the eight-aircraft per month production rate of the current generation E-Jets until 2018. Then **Embraer** will switch over to building the re-engined E-Jet E2. **Embraer's** commercial aviation division president and CEO **Paulo Cesar Silva**, said he was worried that **Embraer** would have to slow production between 2016 and 2018, but demand from North American operators for the E175 should minimize the chance of a slowdown. ñGiven the need in the U.S. market to replace 50-seaters and the need to modernize the U.S. fleet, I think [there will be] big demand for the E175. It will help fill the gap.ò At the end of September, **Embraer** had 246 E-Jets on back order. Those orders account for less than three yearôs production at the current 90-95 planes per year.

Alpha Star Aviation Services, a Saudi Arabian private aviation operator, placed an order for one ATR 72-600 and optioned a second. The firmly ordered aircraft will be the first ATR 72-600 to operate in the Middle East region when it is delivered in September 2014. It will join a smaller ATR 42-600 that is already in the companyôs fleet. **Alpha Star** has four **Airbus** ACJ family corporate jets, two **Hawker Beechcraft** 900XPs and one **Gulfstream** G-V in its fleet.

GE Capital Aviation Services (GECAS) ordered five ATR 72-600s and reserved options for five more turboprops during the **Dubai Airshow.** The first ATR 72s will be delivered in 2015. **ATR** reported the deal was worth $241 million ($24.1 million each). **GECAS** CEO **Norman Liu** said, ñWe have seen significant market interest in the ATRs and that is why we have added more of them to our portfolio. These aircraft will support the strong growth in regional air transport we anticipate over the coming years.ò

Air Seychelles purchased three **Viking Air** DHC-6 Twin Otter Series 400 aircraft. The new Twin Otters will replace older aircraft in the airlineôs domestic fleet. The new aircraft will be used for services between Mahé and Praslin, as well as other islands in the archipelago, including Bird, Denis and Frégate. All three aircraft will be delivered by mid-2015. The airline has the option to accelerate delivery if aircraft slots become available. The airline already operates one **Viking** DHC-6-400 and three **de Havilland Canada** Series 300 aircraft**.**

Engine News

Pegasus Airlines finalized its order for **CFM International's** LEAP-1A engines to power 100 **Airbus** A320neo and A321neo aircraft in November. The contract was valued at approximately $4.3 billion at list prices. The deal included a 20-year **Rate per Flight Hour (RPFH)** maintenance agreement that will guarantee maintenance costs on a dollar per engine flight hour basis. **Pegasus'** first new aircraft will arrive in 2016 and the last is due in 2022. The Istanbul-based low-cost carrier has been a **CFM** customer since it was founded in 1990. The airline currently operates 40 **CFM**-powered **Boeing** 737-800s on scheduled services to 76 domestic and international cities throughout Europe, Russia, Central Asia, Caucasus, the Middle East, and Africa. The airline ordered 58 A320neo and 17 A321neo aircraft in December 2012, and took 25 A320neo Family options. The airlineôs General Manager **Sertac Haybat** said, ñWith this order, we have now increased our total **Airbus** fleet investment to $16.3 billion U.S. ð $12 billion for 100 new aircraft and $4.3 billion for the engines and the long-term service agreement. Based on the delivery schedule for the fleet, our partnership with **CFM** will continue at least until the year 2042. Together, we are witnessing the signing ceremony for a collaboration that is set to last for another 30 years.ò

Etihad Airways, the flag airline of the United Arab Emirates, announced it selected the **CFM International** LEAP-1A engine to power the 26 **Airbus** A321neos that it ordered at the **2013 Dubai Airshow.** Deliveries will begin in 2018. The order was valued at $2.8 billion at list price, and includes a long-term services agreement. **Etihad** signed a 15-year **Rate per Flight Hour (RPFH)** agreement, under the terms of which **CFM** will guarantee maintenance costs on a dollar per engine flight hour basis. **Etihad** is a new **CFM** customer, having operated **IAE** V2500-powered A320ceo aircraft in

Engine Alliance, the partnership of **General Electric** and **Pratt & Whitney,** is exploring major upgrades to the A380ôs GP7200 engine, to improve fuel efficiency. They will finish the engineering work this year and present the upgrade options to customers in 2014. More customers have chosen the rival **Rolls-Royce** Trent 900 engine, but **Engine Alliance** has sold the largest number of engines. **Emirates** ordered the GP7200 for its first 90 super-jumbos, but the airline has not chosen an engine for the 50 A380s that it ordered at **Dubai Airshow.** The airline said it wanted improvements in the A380 engine in the future, so the **Engine Alliance** is trying to address **Emirates'** requirements. It will introduce several upgrades to existing and new engines by the middle of next year to improve reliability and long-term performance.

the past. The press release talked about the A321neo, but did not mention which engines will be fitted on **Etihad's** 10 new A320neos.

Flydubai signed an agreement to purchase up to 200 LEAP-1B engines to be installed on 100 **Boeing** 737-MAX aircraft. It also ordered 22 CFM56-7Bs for the 11 **Boeing** 737-800 aircraft that it ordered at the **Dubai Airshow.** The deal includes a 10-year **Rate per Flight Hour (RPFH)** agreement for the LEAP engines.

Deutsche Lufthansa chose **CFM International** CFM56-5B engines to power the 30 firm Airbus A320ceo (current engine option) aircraft that it ordered in June. The sale was valued at more than $610 million at list prices. **Lufthansa** currently operates a fleet 350 CFM56 engines installed on **Airbus** A319/A320s, and four-engined A340-300s, and **Boeing** 737 Classic aircraft. Other members of the **Lufthansa Aviation Group, Germanwings, Austrian,** and **Swiss**, operate more than 560 CFM56 engines.

The First LEAP-1A Engine was test started on September 4, 2013, ahead of the schedule set in early 2010. **CFM** said the engine performed flawlessly and logged more than 300 hours and 400 cycles over five weeks. **CFM** will start the icing tests in 2014, more than one year ahead of the engine certification, to ensure that any potential issues are identified well in advance. The manufacturer said the LEAP engine is rooted in **CFM's** advanced aerodynamics, environmental, and materials technology development programs. The LEAP will offer 15 percent better fuel consumption and an equivalent reduction in CO2 emissions when compared to todayôs best **CFM** engine. It will also offer a 50 percent reduction in nitrogen oxide emissions, and up to a 15 decibel reduction in noise. The new technology brings with it **CFM's** reliability and low maintenance costs.

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CFM International (CFM) is having a banner sales year in 2013, selling more than 1,255 LEAP engines, as well as 1,172 CFM56 engines through October. The 2,427 engines have a combined value of $25.7 billion at list price. The engines will be fitted on commercial and military aircraft, and include spare engines. Last year, **CFM** booked a total of 1,998 CFM56 and LEAP engines valued at $23 billion at list price. So far **CFM** won total orders for 5,607 LEAP engines, and more than 30,360 CFM56 engines.

CFM International marked three major CFM56 production milestones in 2013. It delivered its 25,000th CFM56 engine in May, and its 10,000th CFM56-7B engine for the **Boeing** Next-Generation 737 in October. It will complete its 8,500th CFM56-5 engine for the **Airbus** A320ceo Family program in December. **Jean-Paul Ebanga,** President and CEO of **CFM International**, said, ñIn nearly 32 years of service ï more than 25,000 CFM56 engines ï we have never once delayed an aircraft delivery. It is an incredible record and we are very proud of what we have accomplished.ò **CFM** maintains the highest production rate in the industry, and it is on track to deliver approximately 1,500 CFM56 engines per year in 2013 and 2014. It will continue to ramp up CFM56 production while transitioning to build the new LEAP engine family. **CFM** has a current backlog of more than 10,000 CFM56 and LEAP engines. By 2019, **CFM** expects to build 1,700 engines per year, including installed and spare CFM56-5B and CFM56-7B engines, while it moves to full LEAP production. **CFM** expects to manufacture spare CFM56 parts for the 18,000 engines in service, at least until the year 2040, the manufacturer said.

Rolls-Royce won a $5 billion order from **Etihad Airways** for 100 installed Trent XWB engines for the 50 **Airbus** A350 XWB aircraft the airline ordered at **Dubai Airshow 2013**. The order included a long-

term **TotalCare** support program. **Etihad** ordered 24 A350-900 Regional, 16 long-range A350-900 and 10 A350-1000 aircraft, and now has 62 A350s on backlog. **Tony Wood,** President, Aerospace at **Rolls-Royce**, said: ñThe Trent XWB is the largest-selling Trent engine, with more than 1,600 on order prior to entry into service next year (because it is the only engine offered on the A350 XWB).ò The airline operates 28 A330s powered by Trent 700 engines, and has 11 Trent 500-powered A340s in service. **Etihad** also ordered Trent 700 engines with **TotalCare** support, to power the one A330-200F freighter aircraft it bought.

GE Aviation sold $26 billion worth of big-fan jet engines and services for **Boeing** widebody aircraft at the **Dubai Airshow.** Collectively, **Emirates, Etihad Airways** and **Qatar Airways** ordered 450 new GE9X engines for the new **Boeing** 777X. GE also received orders for GEnx engines for the **Boeing** 787 and GE90 engines for the **Boeing** 777.

Order Changes and Cancellations

Airbus Fudges 'No Order Conversion' Pledge. Two customers for the standard A320 Family appear to have converted their orders to the A320neo (new engine option), in spite of **Airbus'** statement that it would not allow such swaps. **IndiGo** exchanged 30 A320ceos for the A320neo model. The airline ordered the 30 A320s when it bought 150 A320neo aircraft in 2011. **Spirit Airlines** switched five A321s to A321neos. The airline ordered 20 A321s in June 2013. At the end of October, **Airbus** recorded 2,487 orders for the A320neo Family, up 95 from its September total of 2,392 orders. Sixty of the new A320neo orders came from **VivaAeroBus** and **JetBlue Airways** in October. When it launched the A320neo on December 1, 2010, **Airbus** firmly stated that it would not allow customers to convert from the current-engined aircraft to the new-engine version. It recently said the 35 model conversions were part of new contracts with the customers.

JetBlue Airways cancelled eight A320ceo orders and ordered eight more A321ceos. It exchanged 10 A320neos for 10 larger A321neos, to be delivered in 2018 and 2019. **Aeroflot** switched 10 A350-800 orders to the A350-900 type. It now has eight -800s and 14 -900s on order. They will be delivered between 2018 and 2013.

Air Serbia will acquire 10 **Airbus** A320neos from **Etihad Airways,** which purchased 49 percent of the Serbian flag carrier in August. **Etihad** ordered the 10 A320neos at the **Dubai Airshow**, but did not select the engines yet. The A320neos will be delivered from 2018 through 2020 and will replace eight leased A319s and two leased A320s that are entering **Air Serbia's** fleet. The leased

Airbus is **Overbooking Sales of the A320ceo Family** in order to maintain its 42-per-month production rate while it transitions to the A320neo. **EADS** Chief Financial Officer **Harald Wilhelm** said the overbooking of the current A320 ñallowed us to close the transition between the A320 and the A320neo.ò The tentative production transition schedule suggests that **Airbus** will quit building the A320ceo in early 2018, when the production line will be dedicated to the A320neo. The A320ceo backlog exceeds the number of available slots, but **Airbus** expects that routine cancellations will give it flexibility. The airframer admitted that some A320ceo orders were converted to A320neos, which eases pressure on the shrinking A320ceo backlog. **Airbus** does not want to exceed 42 per month during the transition to the NEO, but it can ramp up production after 2018. **Airbus** officially listed 1,771 current A320ceos and 2,452 A320neo Family aircraft in the backlog, as of October 31. At the current production rate, **Airbus** has 2,100 A320 slots available until December 2017.

A319/A320s are replacing 10 aged 737-300s. The **Serbian Government** said that the airline would buy and own the A320neos. **Etihad** has a five-year management contract with **Air Serbia,** which was formerly known as **JAT Airways.**

Boeing's Order Cancellations and Changes. Air Berlin did not cancel eight 737-800s that were ordered in December 2007. **Boeing** revealed that the airline was the customer for eight 727-800s that were previously unidentified. The airline still has 28 -800s yet to be delivered.

Embraer. GECAS cancelled two of its EMBRAER 190 orders and now has only one on order. The lessor ordered a total of nine E170s, five E175s, 27 E190s and 12 E195s, and has taken delivery of all but the one E190. **ETA Star Group,** India, dropped one of its five orders for the EMBRAER 170 in September.

ATR. Nordic Aviation Capital ordered 50 -600s at **Paris Air Show**. It is now known that the lessor chose to buy six ATR 42-600s and 44 ATR 72-600s. Two of the ATR 42-600s that are being readied for delivery are SN 1004 & 1009.

Southwest Airlines converted orders for 20 Next Generation **Boeing** 737s to the 737-MAX-8 model in November. Ten each will be delivered in 2023 and 2024. Three of the 20 737NGs were 737-800s, and the remaining 17 were 737-700s. The -800s were to be delivered in 2014, while the -700s were to be handed over in 2015. The airline switched another 19 737-700NGs to the larger 737-800NGs. After the order change, **Southwest** now plans to take delivery of 24 737-MAX-8s in 2023, and another 24 in 2024. Next year, **Southwest** will take delivery of 33 737-800s, down from 36 previously scheduled. In 2015, it will accept only 19 737-800s, instead of the 36 737-700s that were initially planned. It has options for seven -700 deliveries in 2014 and five in 2015. The airline will receive 31 -700s in 2016, 15 -700s in 2017 and its final 10 -700s in 2018. **Southwest** has a dozen 737NG delivery slots reserved for each of those years. Those -700 orders and options can be converted into -800 orders before delivery. The first 14 MAX-8s are due in 2017, and the next 13 MAX-8s will arrive in 2018. **Southwest** will accept 15 MAX-7s and 10 -8s in 2019, 14 -7s and 22 -8s in 2020. In 2021, the airline will receive its last MAX-7 and 33 MAX-8s, and it has another 78 MAX-8s on order for delivery from 2022 through 2024. It has 191 737-MAXs on option from 2021 through 2027. Under the new plan, **Southwest** has effectively delayed 20 deliveries by nine years, without changing the number in backlog.

Leasing Companies

The Fitch Ratings Agency Said Lessors Were Writing Down the Value of A340s and 747s. International Lease Finance Corp. (ILFC) and **Aircastle** recently wrote down the value of older, uncompetitive four-engined widebodies in response to shifting global supply-and-demand fundamentals according to **Fitch Ratings. ILFC** took a $1.2 billion noncash impairment charge in the third quarter after determining that future cash flows for 30 **Airbus** A340s did not support their previous net book values on the balance sheet, **Fitch** said in a press release. ñThis decision reflected the lessor's view that the holding periods for A340s and certain 747-400s would be shorter than 25 years, which is the industry standard.ò The charge represents approximately 3.5 percent of **ILFC's** net book value and came after the lessor took even larger write-offs in 2010 and 2011. **ILFC** currently owns 17 A340-300s and 13 -600s. ñThe A340 has a very limited global operator base, which contributed to **ILFC's** decision to reduce useful lives and residual values,ò **Fitch** said. Over 375 A340s were built between 1993 and 2011, but it was discontinued due to its relative fuel inefficiency when compared to long-range twin-jet widebodies. **ILFC** is the only **Fitch-**

rated lessor to own A340 family aircraft. **Airbus** provided residual risk guarantees to the airline owners of the type. **Aircastle** reported a $98 million impairment charge (approximately 2 percent of its fleetôs net book value). This too was driven by a reduction in the useful lives and residual values of its six 747-400BCF converted freighters. ñDemand in the freighter market has remained stagnant and capacity has been added, resulting in an imbalance,ò **Fitch** said. **Aircastle** is the only large lessor to own the type. The rating agency said, ñThe supply/demand outlook for select widebody aircraft, including the A340 and 747-400 fleets, has shifted in recent years as airline demand for these less fuel-efficient four-engine aircraft has slipped. Lessees now have greater opportunities to lower unit costs by adding more competitive twin-engine aircraft, such as the **Boeing** 787 and **Airbus** A350, to their fleets.ò Lessors find it more profitable to scrap the aircraft for parts (particularly engines) than to pay the significant maintenance costs needed to refurbish the assets and lease them at lower rates. **Fitch** forecasts more changes in useful life and residual value assumptions for older and less fuel-efficient aircraft, unless traffic improves dramatically in the next few years. It said the potential for technological obsolescence and short production runs will impair expected cash flows and residual values for older types. Exposure to older, uncompetitive aircraft is a long-term risk facing the aircraft leasing industry, **Fitch** said.

Stratos, a financial advisory boutique firm, was launched by **Gary Fitzgerald. Stratos** will specialize in aircraft leasing and financing and will provide aircraft sourcing and lease-related services to airlines and investors. Mr. **Fitzgerald** said, ñ**Stratos** has been created to address a gap in the market where many airlines and investors need cheaper and easier access to aircraft operating lease platforms. They also need advanced technology to decipher aircraft economics and the ability to tap into a network of industry financing experts.ò The **Stratos** team comprises experienced industry executives located across three continents.

Air Lease Corporation (ALC) will long-term lease one new **Boeing** 737-800 to **Okay Airways**, which is based in Beijing, China. The aircraft will be delivered to **Okay** in June, 2015.

Aeroflot Russian Airlines wants to add eight new **Boeing** 737-800s to its fleet from four operating leasing companies. It is talking to **BBAM Aircraft Management** about leasing two of their 737-800s, and about leasing another two -800s from **Avolon Aerospace**. The airline wants another -800 from **AWAS,** and three 737-800s from **SMBC Aviation Capital.** The carrier is also looking to extend the lease agreement on four **Airbus** A320s with **GECAS.**

GE Capital Aviation Services (GECAS) leased four **Boeing** 737-800 aircraft to **Hainan Airlines** to expand the carrierôs fleet. **Hainan Airlines** operates a fleet of more than 120 aircraft to some 90 destinations around the world. **GECAS** said the 737s were handed over, but did not say when.

CIT Aerospace signed 54 lease agreements and delivered 14 new and used aircraft in the third quarter of 2013. The deliveries included the extensions of some current lease contracts. The lease agreements included current and future leases of commercial aircraft. The company added eight new customers to its client base, bringing 2013 totals to 113 signed lease agreements and 42 aircraft delivered. **CIT Aerospace** owns and finances a fleet of approximately 330 commercial aircraft which are leased to, or financed for approximately 100 customers in 50 countries.

Airline News

Is Alitalia Finished? The **Italian Government** is trying to line up a ówhite knightô to invest in the nearly bankrupt flag carrier. **Alitalia** was privatized in 2008 and has not been profitable for a decade. Several Italian investors and two large domestic banks have already pledged ú240 million ($300 million) to keep **Alitalia** flying for a few months, but it is not enough to rejuvenate the fleet or launch more lucrative intercontinental routes. The airline was declared a national strategic asset by the government, which is concerned about possible job losses, so it is supporting the carrierôs search for an international carrier interested in a strong partnership. So far, **Aeroflot, Etihad Airways** and **Lufthansa** have politely said óno thanksô Sovereign wealth funds from the United Arab Emirates have listened to **Alitalia's** sales pitch but were non-committal as of November 21. **Air France/KLM** decided to walk away from a ú300 million ($403 million) capital increase and allowed its 25 percent stake to be diluted to just 7 percent. The airline group also wrote off its entire ú119 million ($149 million) investment in **Alitalia** to zero. It chose not to invest more because it thought the plan to cut up to 2,600 jobs and restructure the company was not aggressive enough. The group said **Alitalia** could not be saved unless the creditors write off some of its ú813 million ($1.016 billion) debt. The board of **Alitalia** approved a revamped business plan that will target cost savings of between ú200-ú400 million ($270-$541 million), and a spokeswoman said ñthe revised industrial plan only mentioned cost cuts and did not specifically refer to any redundancies at this stage.ò **Alitalia** is looking at laying off 220 pilots, 400 cabin staff and 600-700 ground staff, as well as 1,300 ñfixed-term contractsò to keep its planes in the air. The unions pledged to battle the job cuts, which further discourages outside investment. After **Alitalia** was privatized five years ago, the company fired a third of its staff. To add to **Alitalia's** misery, it is a partner in the **SkyTeam** alliance, and if it found a non-alliance partner, it would have to pay around ú200 million ($250 million) in penalties to exit **SkyTeam**. A high-level Italian political source said, ñAll **SkyTeam** members are blocked by the French from seeking a deal with **Alitalia**, while all outside carriers would need to cover the penalty for breaking up the alliance, which makes it neither desirable nor feasible.ò The restructuring plan calls for cuts in the number of its medium-range aircraft and routes, and increasing international and intercontinental flights to boost revenues, making it a more attractive business proposition for a new investor. This is not a quick fix, and it requires the acquisition of expensive, modern, long-haul aircraft and the development of routes during a time when world air traffic is growing slowly.

The Aeroflot Group combined its **Vladivostok Avia** and **SAT Airlines** subsidiaries in the Russian Far East into **Aurora Airlines JSC.** Both airlines joined the **Aeroflot** group in 2011. The newly created airline was intended to contribute to Russiaôs Far East social and economic development by creating a system that was more efficient and more accessible to passengers. The old airlines served 42 and 15 destinations respectively, and operated a combined fleet of 24 fixed-wing aircraft and 11 helicopters. **Aurora** plans to increase its number of flights from 172 to 534, the number of destinations from 30 to 128, and its annual traffic should reach 2.4 million passengers by 2018. **Aurora** will add modern aircraft, including medium-haul **Boeing** 737s, and three **Airbus** A319s by the end of 2013, and it will take four more A319s by the end of 2014. Its regional fleet will include 50 to 78-seat turboprops, and the local air transportation fleet will operate aircraft with up to 20 seats. **Aurora** should operate up to 40 aircraft by 2018. **Aeroflot** will hold 51 percent of the stock, while the remaining 49 percent is owned by the Sakhalin regional administration. **Konstantin Sukhorebrik** was appointed general director of **Aurora.**

Aeroflot Fleet Plans. The Russian flag-carrier will place 10 **Sukhoi** Superjet 100s with subsidiary carriers, and delay its **Airbus** A350 deliveries. The 22 A350s will now be handed over from 2018 to 2023, a four year delay. The airline has eight A350-800s and 14 A350-900s on order. **Aeroflot** will take delivery of 16 **Boeing** 777s, two **Boeing** 787s and 20 Superjets from 2013 to 2016 and will retire 34 over the same interval. Eight Superjets will be delivered in 2014 and the other 12 will follow in 2015. **Aeroflot's** fleet plan shows that 10 of the jets will be transferred to subsidiaries in 2015. It was not stated which of its subsidiaries, including **Donavia, Orenair, Rossiya,** and **Aurora,** would operate the Superjets. **Aeroflot** will retire its six **Ilyushin** Il-96-300s by the end of 2014, and the airline group will phase out some **Boeing** 767s as the 787-8s arrive. It is trying to amend the lease agreements concerning its six **Antonov** An-148s.

IATA Posts October Jet Fuel Prices. The association updates the worldôs average jet fuel price each week. On November 1, the average price of fuel was $2.903 per gallon. The fuel price was $2.987 per gallon on October 11. The November price was 0.4 percent lower than in October, and was 3.81 percent less than in November 2012. The price of fuel is affected by location. It was only $2.903 in the Middle East region and was as high as $2.967 per gallon in Europe & CIS region. **IATA** forecast that the global airline industryôs fuel bill will total $124.5 billion in 2013. This was a decrease of $3 billion over 2012.

Oasis Management, a Hong Kong-based investment fund, bought 5 percent of **Hawaiian Holdings,** parent of **Hawaiian Airlines**. The investment reflected the fundôs view that **Hawaiian** was undervalued because ñthe market seems to be fundamentally overlooking the potential for **Hawaiian** as it opens direct routes to mainland China,ò said **Alex Shoghi**, at **Oasis. Hawaiian** will launch three weekly flights to **Beijing**, in 2014.

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Icelandic Carrier WOW air may acquire **Airbus** A321s or **Boeing** 757s to fly low-cost services from Reykjavik to the U.S. East Coast. The countryôs only discount carrier was launched in May 2012 and now operates three wet-leased A320-200s on flights to Europe. **WOW** will start flying to **Boston** in 2014 and the airline wants to expand to other cities in eastern North America. Founder and Chief Executive Officer **Skuli Mogensen** said that U.S. services would boost **WOW's** share of the growing Icelandic tourism market. The islandôs economy was devastated by bank failures and the recession in 2008. Tourism grew 20 percent last year and is expected to expand further. **WOW** wants to compete more effectively with **Icelandair** which flies one-stop trans-Atlantic services with 18 **Boeing** 757-200ERs and one 757-300. A321s fitted with extra fuel tanks will match the range of the 757s, but have 15 fewer seats. Used 757s are ñperfectly suitedò for U.S. operations but are ñgetting outdated,ò Mr. **Mogensen** said. The last one was delivered in 2004. **Icelandair** will replace their long-range 757s with 16 **Boeing** 737-MAX-8s and ï MAX-9s toward the end of the decade. **WOW air** won its own operating certificate in

Air New Zealand (ANZ) received approval from the **Australian Government** to increase its share of **Virgin Australia** to 25.9 percent. **ANZ** Chief Executive Officer **Christopher Luxon** said, ñThe opportunity to take our shareholding in **Virgin** to 25.9 percent and the recently extended **Tasman Alliance** with **Virgin** means we can confidently work with **Virgin** to provide a strongly competitive, Australasian and international airline network.ò **Virgin Australia's** other major shareholders are **Virgin Group, Etihad Airways** and **Singapore Airlines**. The **New Zealand Government** currently owns 74 percent of **Air New Zealand**, but it intends to sell a minority stake in the company in the coming years.

October and will purchase or lease new jets to replace the A320s it is ACMI-leasing from **Air Via.** It flew to 14 European cities this summer; it will expand to five A320s, and add services to Stockholm and Boston in the spring of 2014. Mr. **Mogensen** said the airline was not interested in transfer traffic through Iceland, while **Icelandair** ñis now selecting new destinations that really have nothing to do with Iceland,ò he said. It serves 12 North American and 24 European cities. ñThe main driver for us is the growth of tourism to Iceland, though I do think North America will also strengthen our European destinations using Iceland as a via-hub.ò **Icelandair** in turn offers services to Europe through **Keflavik Airport** from smaller North American cities such as Edmonton and Halifax that do not have direct European flights and from where the shortest path passes near Iceland. The North American traffic lessens **WOW's** reliance on the crowded market from Europe to Iceland, where 17 airlines compete during the summer and five or six continue operating through the winter. Only **Icelandair** and **Delta Air Lines** fly to Iceland from the U.S. in the summer and the former is the sole carrier in the winter.

Bankruptcy of the Month

Global Aviation Holdings, and its subsidiaries, **World Airways** and **North American Airlines** filed voluntary petitions for Chapter 11 Bankruptcy in November. **Global Aviation** is the largest commercial provider of charter air services to the U.S. military and a major provider of worldwide commercial global passenger and cargo air transportation services, the company said. It filed for bankruptcy to strengthen its balance sheet and gain financial flexibility while it continues to realign its operations. The airlines will continue to operate during the reorganization process. As part of the reorganization, it is taking steps to align its cost structure with the realities of market demand. **Global** will reduce its workforce by approximately 16 percent by the end of the year.

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Technical

JetBlue Airways ordered 110 Sharklets shipsets for its 130 A320s. The seven newest planes were already fitted with wingtip devices. Twelve of its oldest jets are leased from **GECAS** and **ILFC**, and the airline said it was not financially viable to retrofit the oldest aircraft. Most of the leased fleet was delivered from 1999 through 2004 and their leases may expire soon. **JetBlue** provisionally ordered the Sharklets in February 2013, and its management was happy that **Airbus** green-lighted the retrofit program. **JetBlue's** retrofit program will start in 2015, and should be completed in early 2017. The Sharklet retrofit requires reinforcing the A320ôs wings before the wingtips can be attached. **JetBlue** did not put a price on the program but said the capital costs will be paid back in about three years or less.

Tigerair, Singapore, completed the first A320 Sharklet retrofit in Asia. The modification was performed by **Sepang Aircraft Engineering** in Kuala Lumpur, Malaysia. The Sharklets are 2.4 meters tall and made of light-weight composites, and the kits can easily be installed on 4,000 later-model A320s. **Tigerair** operates five A320s with Sharklet-ready wings, and it will take delivery of production-fitted Sharklet aircraft later this year. **Airbus** has secured commitments for around 200 shipsets from several airlines. **Airbus** will initially deliver kits for A319 and A320 models and will evaluate a retrofit for the A321 at a later stage.

Cargo Pallet

Hong Kong Aircraft Engineering Company's joint venture company, **Taikoo (Shandong) Aircraft Engineering Company,** completed a **Boeing** 737-400 converted freighter (SN 25226) for **SF Airlines**. This was the 100th freighter conversion performed by the **HAECO Group**. The aircraft was also the 40th 737 conversion completed with its Supplemental Type Certificate (STC) partner **PEMCO World Air Services**.

Taikoo (Xiamen) Aircraft Engineering Company (TAECO) completed its first Boeing 757-200 converted freighter (SN 29793) for **Air China Cargo**. This was the seventh 757 freighter conversion completed by **TAECO** with its Supplemental Type Certificate (STC) partner **Precision Conversions**. The work took 105 days, and included a heavy maintenance check, and a new paint job. **Air China Cargo** also operates three 747-400F freighters and four 747-400BCF converted freighters. **TAECO** completed its first 757-200PCF passenger to freighter conversion in 2010.

Aeronautical Engineers (AEI) redelivered the fifth **Boeing** 737-400SF 11 Pallet freighter (SN 25184) to the **ASL Aviation Group**. The conversion was performed at **Commercial Jet Services** in Dothan Alabama. The 21-year-old aircraft will be ferried to Paris, France, where it will enter service with **Europe Airpost** in support of the **French Post Office**. This is AEIôs 16th of 23 freighter redeliveries scheduled for 2013.

Military Market

Boeing Delivered the Second and Third P-8I to India in late September and late November, respectively. Indiaôs first long-range maritime reconnaissance and anti-submarine warfare aircraft was handed over in May. It ordered eight P-8I aircraft in January 2009, and should receive the last one by late 2014. The P-8I is the **Indian Navy** variant of the P-8A Poseidon that **Boeing** developed for the **U.S. Navy**. The P-8Is operate out of **Naval Station Rajali** and are used to test their weapons capabilities, including firing a **Boeing Harpoon** missile at a target and dropping a torpedo.

Boeing Delivered the 12th Production P-8A Poseidon to the U.S. Navy, on October 25. The plane joined the other P-8As at **Naval Air Station Jacksonville** in Florida, where it is being used to train Navy crews. It is the sixth aircraft from the **Navy's** second low-rate initial production (LRIP) contract awarded in November 2011, and another two P-8As are due in 2013. **Boeing** received four

France's Armée de l'Air accepted its second A400M Atlas tactical transport from **Airbus Military** on November 6. The aircraft (SN 008) joined the first Atlas (SN 007) at the **1/61 "Touraine"** squadron at the French BA 123 air base in Saint-Jean-de-la-Ruelle, near Orléans, France. The French ordered 50 A400Ms for delivery from 2014 through 2019. **Airbus Military** is also poised to deliver the first of 10 A400Ms to the **Turkish Air Force**, which will become the second customer nation to receive the type. The manufacturer has export delivery slots available during 2016 so **Airbus Military** flew one of its A400M development aircraft to the **Dubai Airshow** to drum up some orders from Middle Eastern nations. The **Europrop International** TP400-D6-powered airlifter has a maximum payload capacity of 37 tons and can fly more than 3,300 kilometers (2,050 miles) without refueling. **Airbus Military's** five development A400Ms have completed the typeôs 2,000th flight in October. The first test aircraft flew on December 11, 2009. The development fleet has clocked up 5,665 flight hours.

LRIP contracts for 37 P-8As, awarded in 2011, 2012 and 2013. The **Navy** plans to purchase 117 P-8As, and is preparing to deploy the first P-8As in December 2013. They will replace the **Navy's Lockheed** P-3 fleet.

Embraer Chief Executive **Frederico Curado** said the company will be satisfied capturing only 20-30 percent of the potential market of 700 military transports. The twin-jet KC-390 tanker-transport is sized between a **Lockheed Martin** C-130J and the **Airbus Military** A400M, and **Embraer** foresees a production run of between 140 and 210 units. **Embraer** has secured commitments from six countries to buy 60 KC-390s, including 28 from the **Brazilian Air Force**. The KC-390 will be powered by two **International Aero Engines** V2500s. It is scheduled to fly by the end of 2014, and should enter service in 2016. The transport is designed to perform cargo, aerial refueling and medical evacuation missions. **Embraer's** major competitor is the C-130J, which is backed by U.S. diplomacy and the **Pentagon's Foreign Military Sales (FMS)** system. **Lockheed** has sold C-130s to export customers since the late 1950s and has produced more than 2,300 aircraft since its first flight in 1954. Mr. **Curado** concedes that with ñthe whole U.S. influence in defense equipment, there are some markets that we are very, very unlikely able to participate.ò The manufacturer signed a contract to have **Boeing** sell and maintain the KC-390, and train personnel in the U.S., U.K. and Middle Eastern markets, which ñmay increase the opportunities for us,ò Mr. **Curado** said. The deal may open markets that would normally be closed to a Brazilian aircraft manufacturer.

Peru to Buy Two Alenia Aermacchi C-27Js. The government will finalized a ú100 million ($135 million) order for two tactical airlifters for its air force, shortly. The deal will be signed ñas soon as the administrative procedures are completedò and will cover in-service support activities, the Italian manufacturer said. The air force decided the C-27J was ñthe only aircraft in its class interoperable with heavier airlifters already in service in Peruò, and it had ñthe capability to operate on a large number of airfields where its competitor is unable to landò. The **Peruvian Air Force** currently operates three **Antonov** An-32s, one An-72 and two **Lockheed** L-100s.

The U.S. Department of Defense plans to transfer seven C-27Js from the **U.S. Air Force** to the **Special Operations Command**. Three of the aircraft have already been handed over, with the remainder to follow by April 2014, **Alenia Aermacchi** reported. The Spartans will support **U.S. Army Special Forces** personnel, and the aircraftôs final configuration has yet to be determined.

Alenia Aermacchi has completed the first C-27J battlefield airlifter for the **Royal Australian Air Force (RAAF)** at the companyôs Turin plant. The aircraft is currently undergoing equipment installation and functional tests in preparation for its first test flight in November. In early 2014, the C-27J will be delivered to the prime contractor **L-3 Communications**, in support of the **U.S. Air Force Foreign Military Sale** to Australia. **Alenia Aermacchi** is currently under contract to deliver 10 C-27Js to the prime contractor **L-3** by 2015.

Kazakhstan exercised an option to buy its third and fourth **Airbus Military** C295 medium transports. The air force took delivery of its first two C295s earlier this year, and will receive the other two in 2014 and 2015. The **Ministry of Defense** signed a Memorandum of Understanding in 2012 for the eight C295s, and the provision of in-service support. The two parties will negotiate the delivery schedule of the other four aircraft over the next few years. The **Kazakhstan Air Force** operates seven **Antonov** An-12s, An-24/26s and An-72 transports.

Airbus Military is testing a firefighting capability for its C295 medium transport. A C295 fitted with a tank installed in its fuselage took part in water bombing trial near Cordoba, Spain. The C295 development aircraft released water from the internal tank to test the effect on the planeôs aerodynamic performance and center of gravity. **Airbus Military** said, ñThe flights went well, and further tests are planned in the near future to make a more detailed analysis of the C295 as a firefighter aircraft.ò The twin-turboprop C295 carries a maximum payload of around 9 tons, and has already been adapted for use as a maritime patrol and anti-surface/anti-submarine warfare aircraft. **Airbus Military** also flight tested an aircraft fitted with an airborne early warning system radome, and is looking to adapt the type for use as a dedicated gunship.

Saudi Arabia awarded a $180 million contract to buy two **Lockheed Martin** KC-130J tankers and the associated non-recurring engineering support. Last year, the **Saudi Government** contacted the U.S. **Defense Security Cooperation Agency** about the purchase of five KC-130J tankers and 20 C-130J-30 tactical transports, valued at approximately $6.7 billion ($268 million each). The **Royal Saudi Air Force** KC-130Js will be built at **Lockheed's** final assembly site in Marietta, Georgia, and will be delivered by April 2016. The five KC-130Js will replace **Saudi Arabia's** seven KC-130H tankers. The **RSAF** also operates 30 C-130E and C-130H transports, and six civil L-100 Hercules.

AIRCRAFT DELIVERIES & SALES

Airbus

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Airbus A319. **Airbus** delivered four A319s in October. South Koreaôs **SK Telecom** received ACJ319-115X/W (SN 5768). **American Airlines** leased one -112/W (SN 5810) from **Oha Centre Street Aircraft Holdco,** and -112/W (SN 5798) from **CIT Aerospace. China Eastern Airlines** accepted -133 (SN 5700).

Airbus A320. **Airbus** delivered 32 A320s in October. **Qantas Airways** took delivery of six -232/Ws and leased two -232/Ws (SN 5725 & 5738) to **Jetstar Hong Kong.** The airline received one -232/W (SN 5532) and sold it to **BOC Aviation;** it was leased to **Jetstar Airways. Qantas** leased one of the -232/Ws (SN 5814) to **Jetstar,** one (SN 5813) to **Jetstar Asia,** and one (SN 5796) to **Jetstar Japan. LATAM Airlines Group** took delivery of one -214/W (SN 5818) for **LAN** and one -214/W (SN 5801) for **TAM. GoAir**, India, received one -214/W (SN 5811) and leased another one (SN 5809) from **Aviation Capital Group. IndiGo** accepted two -232/Ws (SN 5807 & 5829). **AWAS** leased two of nine -232/Ws (SN 5806 & 5828) to **Thai Airways'** regional subsidiary, **Thai Smile.** The airline will serve new domestic and China, India, and Southeast Asian nations. **AWAS** also leased the second of three -214/Ws (SN 5822) to **VietJetAir.** It is the ninth A320 to join its fleet. **Etihad Airways** received two -232/Ws (SN 5791 & 5821),

Hong Kong Aviation Capital announced **DVB Bank** closed refinancing on two 2006-vintage A320-200s in October 2013. The aircraft are on operating lease with **Asiana Airlines**. **HKAC** is a leading aircraft lessor based in Hong Kong. It currently has a portfolio of over 70 aircraft on lease to over 20 airlines globally. **HKAC** also signed a MOU with **Airbus** for the purchase of 60 A320/A321neo aircraft at the **Paris Air Show.**

and sold the latter one to **Avolon** for lease back. The A320 was financed by **Abu Dhabi National Leasing**. **Etihad** will sell a second A320 to **Avolon** in December. **AirAsia** accepted two -216/Ws (SN 5812 & 5824). It leased the first to **Thai AirAsia** and kept the second for its own operation. **Air Lease Corp.** leased -232/W (SN 5823) to **China Eastern Airlines,** and -232 (SN 5832) to **China Southern Airlines. Tianjin FAL** delivered one -214 (SN 5690) to **Air China** and -214 (SN 5679) to **Hainan Airlines**, which leased it to **China West Air. Hong Kong Airlines** leased new -214 (SN 5799) to **Tianjin Airlines. Silkair** received -233 (SN 5794), and **Tigerair** accepted -232 (SN 5805). **Spirit Airlines** acquired -232/W (SN 5804), and **BOC Aviation** leased -233/W (SN 5793) to **Volaris**. **Aerventure** leased -214/W (SN 5802) to **Air France,** and **Iberia** leased -216 (SN 5815) to **Iberia Express. Al Sahaab Aircraft Leasing** leased -214 (SN 5833) to **Jazeera Airways.**

Vanilla Air, Japanôs newest low-cost carrier, leased its first A320-216/W (SN 5844) from **AWAS.** The airline will start commercial services on December 20, from **Narita International Airport** to Okinawa and Taipei. It will gradually expand services to Sapporo and Seoul (Incheon) and international holiday resort destinations. **Vanilla Air's** A320 was configured with 180 seats, equipped with Sharklet wingtip devices and powered by CFM56 engines. The low-cost carrier was formerly known as **Air Asia Japan**, and is now wholly owned by **ANA Holdings Inc**. **Vanilla Air** is returning its other A320s to their lessor **AirAsia.**

GE Capital Aviation Services leased a new A320-214/W (SN 5862) to Japanese low-cost carrier **Star Flyer** in November. The aircraft came from the lessorôs order book with **Airbus,** and it will be used to expand the airlineôs fleet.

Airbus A321. **Airbus** delivered 11A321s in October, including two -231s (SN 5820 & 5825) to **Philippine Airlines,** and two -231s (SN 5795 & 5800) to **US Airways** for a total of 90. **JetBlue** received its first of 30 ï 231/Ws (SN 5783), and **China Eastern Airlines** accepted -231/W (SN 5770). **EVA Air,** Taiwan, leased its first Sharklet equipped -211/W (SN 5808) from **GE Capital Aviation Services (GECAS),** and **BOC Aviation** leased -231 (SN 5774) to **Asiana Airlines. UTair** took delivery of its third new -211 (SN 5779), and **Aeroflot** acquired its 24th of 26 -211s (SN 5790). **Finnair** took delivery of its second of five -231/Ws (SN 5803). The aircraft was sold to, and leased back from the Japanese aircraft leasing company, **Nomura Babcock & Brown (NBB).** The transaction was arranged by US-based lessor **BBAM.** It financed its first -231/W (SN 5758) with NBB through a similar sale and leaseback transaction in September. Both planes are leased for 12 years. **Finnair** will receive its third A321 in December, and the final two in the first quarter of 2014.

Germania took delivery of its first of two A321-211/Ws (SN 5843) in November. Both aircraft are equipped with Sharklet wing tips and CFM56 engines. The new A321s will be operated exclusively for the **Alltours** travel agency in a 208-seat single class cabin layout. **Germania** operated eight A319s since 2011.

American Airlines took delivery of its first **Airbus** A321-231/W Transcontinental (SN 5834) in November, as part of its fleet renewal program. The A321T is equipped with a three-class cabin, **Gogo's** WiFi service, and will be operated between New Yorkôs **JFK International Airport** and **Los Angeles International Airport** starting in January 2014. The airline will also add more **Boeing** 777-300ERs, 787s and **Airbus** A321Ts.

Airbus A330. **Airbus** delivered three -200s, one -200F and four -300s in October. **Wilmington Trust**, trustee acquired the -243F (SN 1448) and leased it to **Avianca/Tampa Colombia**. **Air China** received its 29th -243E (SN 1459), and **China Eastern Airways** accepted -243 (SN 1461). **US Airways** took delivery of its 11th -243 (SN 1455) and it has four more on order. **Airbus** delivered two -343Es (SN 1456 & 1460) to **Philippine Airlines,** for a fleet total of 11. **Dragonair** received -343E (SN 1457), and **Saudi Arabian Airlines** accepted its ninth -343E (SN 1454).

Iberia leased its fifth A330-302 (SN 1437) from **BOC Aviation**. It was the first to carry **Iberia's** new livery and was named after Spanish **King Juan Carlos I**. The flag carrier has leased four new A320-200s and five A330-300s from **BOC Aviation**, and has three more new A330-300s contracted for lease by April 2014.

Skymark Airlines is the only Japanese carrier to order the A380 to date. It is looking at several financing options because the budget airline lacks the cash to buy the superjumbos outright. **Skymark** must decide between sale-and-lease back financing and funds from the **European Credit Agency** by early next year. It will take delivery of its first A380 in August or September. The carrier will launch long-haul services to New York in December 2014. It is possible that **Skymark** will lease the airplanes from **Doric Lease,** which is targeting Asian carriers for the double-decker plane. The airline is investing most of its current profits in pre-payments to **Airbus** for the six A380s. It spent ¥12 billion ($120 million) for its first two A380s, and it needs another ¥40 billion ($407 million) for the A380s in the next fiscal year. The budget carrier raised ¥18.2 billion ($182 million) in May 2011, by selling shares to pay for new aircraft and fund an overseas expansion.

Airbus A380. **Airbus** is on track to deliver 25 A380s this year, given that it has handed over 18 of them as of the end of October. The manufacturer delivered a record four A380s in the month, including the third of 12 -841s (SN 124) to **British Airways**. **Korean Air** received its eighth of 10 -861s (SN 128) and **Thai Airways** accepted its fifth of six -841s (SN 125). **Emirates** received its 38th -861 (SN 136) in October and its 39th -861 (SN 134) in November. The latter one was sold to **Doric Nimrod Air Three Limited** for lease back. It was the 116th A380 to be delivered so far, and the 38th aircraft in **Doric's** asset management portfolio.

Boeing

Boeing 737 NG. **Boeing** delivered 34 737s in October, including three -932ERs (SN 31917, 31918 & 31919) to **Delta Air Lines.** They were part of **Delta's** 100-airplane order placed in 2011. **GECAS** received three -86N/Ws, and leased one of them (SN 28621) to **Transaero**, Russia, one (SN 38018) to **Travel Service**, and the last one (SN 41262) to **Okay Airlines. Alaska Airlines** received two -990ER/Ws (SN 41704 & 43255), and **United Airlines** accepted two -924ER/Ws (SN 42742 & 42818). **Air Lease Corporation** leased one -89P/W (SN 41308) to **China Eastern Airlines,** and one -89L/W (SN 41309) to **Air China. China Southern Airlines** accepted two more -81B/Ws (SN 38955 & 38956), for a total of 73. **Lion Air** received two -9GPER/Ws (SN 38738 & 38739) and has 92 more on order. The two -900ERs were leased to its new Thai subsidiary, **Thai Lion Air**. **Boeing** delivered only one -700 in October, a -79L/W (SN 41093) to **Air China**. It also delivered four -800s to Chinese airlines ï **Hainan Airlines** accepted its 66th -84P/W (SN 39204), **Shandong Airlines** received one -85N/W (SN 39114), **Shanghai Airlines** accepted one -86D/W (SN 38060), and **Shenzhen Airlines** took delivery of one -87L/W (SN 39137). **SMBC Aviation Capital** leased -85C/W (SN 39931) to **Xiamen Airlines,** and

BOC Aviation leased -8AL/W (SN 39062) to **Jet Airways.** Elsewhere in Asia, **Malaysia Airlines** leased -8H6/W (SN 39334) from **Babcock & Brown Asset Management (BBAM),** and received -8H6/W (SN 40151) from its own backlog. **All Nippon Airways** received -881/W (SN 33905), and **SpiceJet** acquired -8GJ/W (SN 37364). **Aviation Capital Services (ACS),** a subsidiary of the Russian state corporation, **Rosteckhnologii (Rostec),** leased its second -8LJ/W (SN 41196) to **Aeroflot. UTair,** Russia, received its first directly purchased -8LP/W (SN 41707). The airline currently has another 39 737NGs on order. **Air Europa** celebrated the Spanish carrier's 25th -85P/W (SN 36594). The Spanish carrier is set to take delivery of another nine -800 from **Boeing**. **EL AL Israel Airlines** took delivery of its first of eight -958ER/Ws (SN 41552) and **flydubai** accepted its 31st of 50 -8KN/Ws (SN 40260). **COPA Airlines** received -8V3/W (SN 40790), and it has 26 more on order. **Qantas** acquired its 67th -838/W (SN 39364).

Indonesia's Largest Airline Group, Lion Air, took delivery of its 100th Next-Generation 737 in November. The airlineôs President Director **Rusdi Kirana** said the airline had grown from one airplane [a leased 737-200, in June 2000] and ñtoday we're taking our 100th Next-Generation 737ò, an extended range 737-900ER (SN 38741). The airline group has taken delivery of 20 737-800s and 80 737-900ERs. **Lion Air** was the launch customer for the 737-900ER, and it currently operates 67 737-900ERs and 19 737-800s. The groupôs 13 other -900ERs and one -800 are leased to **Batik Air,** Indonesia, **Malindo Air,** Malaysia, and **Thai Lion Air**, a new carrier based in Bangkok.

Xiamen Airlines received its 100th **Boeing** airplane in November. The airline started services in 1985 with two 737-200s, and was Chinaôs first joint venture between **Civil Aviation Administration of China (CAAC)** and a municipal government. The carrier is now the countryôs sixth largest airline and it serves 218 domestic routes and 26 international and regional routes. It accepted its 77th 737-85C (SN 41792), joining 17 737-700s, and six 757-200s. The airlinesô five-year plan ending 2015, calls for **Xiamen** to grow to 136 airplanes, including six 787s.

Flydubai secured a $228 million loan from five regional and international banks to finance the purchase of six new 737-800s. The banks included **NordLB,** Germany, **Crédit Agricole,** France, and **Gulf International Bank**. The loans are structured as 12-year finance leases. The loans normally cover up to 85 percent of an aircraftôs value, so each of the six -800s could be worth $44.7 million each, considerably less than the $90 million list price. Two of the 737-8 KN/Ws (SN 40260 & 40261) were delivered by November, and one more is scheduled for delivery in December. The other three are due in the second half of 2014. The **Dubai Government**-owned airline operates 32 737-800s, and it has another 18 on order, due by 2015.

Boeing 747. **Boeing** delivered one 747 in October. **Nippon Cargo Airlines** received its third -8KZF (SN 36136). The airline has 11 more on order. **Cargolux Airlines International** leased -4HQERF (SN 37303) from **Amentum Aircraft Leasing** in October. The airplane was ñdeliveredò in April 2009 and flown to storage in Marana that May. The airplane was one of two -400Fs ordered by **LoadAir Cargo**, Kuwait, but the airline never started operations. **Kalitta Air** acquired the other ï 4HQERF (SN 37304) from **Boeing** in November 2011, after 28 months of storage in Marana.

AWAS leased one 747-4R7F freighter (SN 25868) to its long-time customer **Centurion Air Cargo**, Miami, Florida. The aircraft was acquired from **Cargolux** in July and re-delivered to **Centurion** in September. The airline will operate the -400F to and from South America and Europe. **Centurion**

became an **AWAS** customer more than four years ago and it currently leases three MD-11Fs from **AWAS.** The lessor reported the advantages of the 747Fôs nose-loading capability will allow **Centurion** to carry outsized items such as vehicles, as well as oil and gas exploration equipment. The cargo airline was founded in 1985 as **Challenge Air Cargo,** and changed its name to **Centurion Air Cargo** in July 2001. It has a 550,000 square foot cargo center at **Miami International Airport,** which is the largest privately-owned all-cargo airline facility in North America.

Boeing 767. **Boeing** delivered two 767s in October, including the second of three -3KYERs (SN 42221) to **Air Astana**. The airline has one more on order ð the last passenger -300ER to be built. **FedEx Express** received its second of 46 767-3S2F freighters (SN 42707). The 767s will be used to modernize **FedEx's** fleet with more efficient freighters. **Jet Asia Airways** acquired its fifth 767-200ER (24325) after the aircraft was given a C- Check at **Boeing Shanghai's** maintenance facility. The 767 was configured with 235 economy class seats and will be used to expand **Jet Asia's** frequencies to China, South Korea and Japan. The airline will obtain its first **Boeing** 767-300ER in early October 2013. **United Airlines** sold 2000-vintage -224ER (SN 30432) to **Wells Fargo,** trustee. **Utair,** Russia, will operate the aircraft.

GE Capital Aviation Services (GECAS) leased 777-3N6ER (SN 42101) to **Ethiopian Airlines** in November. **Ethiopian's** first -300ER will seat nearly 400 passengers in a two-class configuration, and it will be deployed on long-haul, non-stop routes to the U.S. and China. The airline operates six 777-200LR (Longer Range) airplanes and two leased 777F freighters. In the near future, another three -300ERs with join **Ethiopian's** expanding fleet. It currently serves 76 destinations across five continents.

Lufthansa Cargo accepted its first 777F freighter in November. The 777-FBT (SN 41674) was delivered a week late because the slats on the left wing needed to be fixed. **Lufthansa Cargo** had intended to unveil the plane at a ceremony on November 1. It entered commercial service to **JFK Airport** on November 19. **Lufthansa Cargo** has another four 777Fs on order, valued at around $300 million each at list prices.

Boeing 777. **Boeing** delivered one 777F and seven 777-300ERs in October, including two -3U3ERs (SN 29146 & 29147) to **Garuda Indonesia. Cathay Pacific Airways** accepted -367ER (SN 41760)**,** for a fleet total of 32 -300ERs. **British Airways** received -336ER (SN 38431), and **Saudi Arabian Airlines** took delivery of -368ER (SN 41056). **BOC Aviation** leased its eighth and final -3ALER (SN 41527) to **Thai Airways**. **GE Capital Aviation Services** leased one -36NER (SN 41818) to **Kenya Airways,** which will lease a second in 2014. **Kenya** also has one -300ER on order. Starting in March, it will receive its first of four **Boeing** 787 Dreamliners. The airline now operates an all-**Boeing** long-haul fleet of four 777-200ERs, two -300ER and six 767-300ERs. **Emirates** leased its 10th -F1H (SN 42231) from **Dubai Aerospace Enterprise**. The lessor has three more on order.

Boeing 787. **Boeing** delivered nine 787-8s in October, including two -8s (SN 34785 & 34786) to **Royal Brunei Airlines.** These were the first Dreamliners for a Southeast Asian airline. They entered service in mid-October, and will be joined by three more 787-8s on order. **China Southern Airlines** acquired its fourth and fifth of 10 -8s (SN 34925 & 34929). **Air India** received its ninth of 27 -8s (SN 36286), and **LAN Airlines** accepted its sixth -8 (SN 38473). It was leased from **Babcock & Brown Asset Management (BBAM). Qatar Airways** acquired its ninth -8 (SN 38324). **ILFC** leased two -8s (SN 35307 & 35308) to **Aeromexico.**

The Second Boeing 787-9 Dreamliner (SN 41989) flew a 4-hour, 18-minute test flight on November 7, and the third 787-9 (SN 41990) flew on November 19. The latter was the first to be powered by **General Electric** GEnx engines, and the third of three 787-9s to be dedicated to the test program. It took off from **Paine Field** in Everett, Washington, only two months after the first 787-9ôs inaugural flight, and landed at Seattleôs **Boeing Field** nearly three hours later. The second -9 (SN 41989) was the only -9 test airplane to be fitted with a passenger interior, and it will test systems such as the environmental control system in addition to avionics and other aspects of airplane performance. The third will be used ñto test engine performance as well as airplane handling characteristics such as low-speed performance and braking. The fleet flies regularly, with the second airplane now in Florida for climatic testing, and has accumulated more than 180 flight hours and more than 60 flights,ò **Boeing** said. The manufacturer will also conduct some testing on the first two production airplanes, which are in final assembly in Everett. It will deliver the first 787-9 (SN 34334) to **Air New Zealand** in mid-2014. The development of the newly launched 787-10 also is progressing as planned.

Regional Jet

BAe-AVRO. **Starbow Airlines,** Ghana, appointed **Cockley Brake** to sell its fleet of three BAe146-300s (SN E3123, E3169 & E3183). **Starbow** operates domestic and regional services in West Africa from its base in Accra, and is evaluating replacement regional jet types. **Cockley Brake** was formed last year by **Steve Doughty** after a lifetime career marketing regional aircraft for **BAE Systems**.

Bombardier delivered two CRJ900LR NextGens (SN 15272 & 15294) to **Delta Air Lines** in October, and they were leased to **Endeavoir Air.**

Embraer. **Republic Airlines** took delivery of two EMBRAER 170-200 LRs (E175) (SN 17000373 & 17000374) in October. The airplanes will be operated for **American Eagle. Azerbaijan Airlines (AZAL),** Azerbaijan, received its fourth and final EMBRAER 190-100 IGW (E190) (SN 19000636). **Denim Air,** Netherlands, received E190 (SN 19000616) in October, and put it into storage. **Austral**, Argentina, accepted its 21st of 22 ordered E190s (SN 19000640). **Conviasa** acquired its fifth and sixth E190s (SN 19000634 & 19000635). It has seven more on order.

Sukhoi delivered the third **Sukhoi** Superjet 100-RRJ-95B (SN 95028) to **Interjet,** Mexico, in November. It has two SSJ100s already in service with the airline. The aircraft was rolled out from **SuperJet International's** hangar in Venice, Italy upon completion of customization and technical acceptance procedures on November 5, 2013.

Flying Colours Corp., the Canadian headquartered MRO, completion and refurbishment specialist, delivered its first special mission **CRJ ExecLiner** conversion to Sharjah, UAE-based operator **Eagle Aviation FZC.** The aircraft was delivered ahead of the **Dubai Airshow**, following a four-month refurbishment process which incorporated a complete **Flying Colours Supplemental Type Certification**. The design team worked in close collaboration with the operator to convert the former airliner into an innovative special mission airplane, the company said. The **ExecLiner** can offer regular VIP charter, Medevac options, or a combination of charter/medevac operations.

Turboprop Aircraft

ATR. **Nordic Aviation Capital (NAC)** took delivery of ATR 72-600s (SN 1100) in October, and leased it to **Azul Linhas Aereas.** The airline will lease another four -600s from **NAC,** and it also took delivery of -600 (SN 1115) from its own backlog. **NAC** leased -600 (1110) to **SAS/JetTime.** It was the first of four -600s that **JetTime** will lease from **NAC. Villa Air**, Seychelles, received one -600 (SN 1109). **Air Lease Corp.** leased one -600 (SN 1108) to **LIAT**. **Uni Airways** accepted one -600 (SN 1111), and **Avianca** received -600 (SN 1114). The **Japanese Civil Aviation Bureau (JCAB)** certified the ATR 72-600 in October, paving the way for **Nordic Aviation Capital** to lease two -600s to **Air Link**, a start-up regional. **Nordic Aviation Capital** leased one ATR 42-500, (SN 603) to **SATENA,** Colombia, and **NAC** sold ATR 42-500 (SN 602) to **MWG Limited**.

Viking Air delivered one DHC-6-400 floatplane (SN 874) to **Regent Airways,** Bangladesh, in September. Two DHC-6s (SN 878 & 882) were flown from the factory in Victoria, BC, to the U.S. for installation of mission equipment and re-delivery to the **United Arab Emirates Air Force.** The **UAE AF** will receive its first modified -400 (SN 876) shortly. **Malaysian Airlines'** subsidiary, **MAS Wings**, accepted its first passenger -400 (SN 880) in September and its second (SN 883) in October. **Viking Air** is completing two -400s (SN 884 & 885) for the **Vietnamese Navy.**

Bombardier. **EuroLOT** took delivery of two 8Q-402 NextGens (SN 4442 & 4443) on the last day of October. Several days later, **Bombardier** delivered 8Q-402 NextGen (SN 4451) to **EuroLOT.** All three were leased from **Nordic Aviation Capital. WestJet Encore** accepted 8Q-402 NextGen (SN 4453) in October, and **Horizon Air** received one -402 NextGen (SN 4452).

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Bombardier Delivered the 50th Iconic Bombardier 415 Superscooper that was assembled at its North Bay, Ontario facility. The aircraft was purchased by a partnership led by **Tenax Aerospace** of Ridgeland, Mississippi, and it will be used under contract to the **United States Forest Service** starting next month. The **Bombardier** contract was valued at approximately $34.5 million at list price. This was the first Bombardier 415 to be purchased by an U.S. operator, but five of its predecessor CL-215s operate in the U.S. It is the only aircraft specifically built as an aerial firefighting airplane. It is able to land on unpaved runways, lakes, rivers and seas, enabling both rapid initial attacks to extinguish fires and sustained attacks to contain fires.

The Czech Republic accepted four **Airbus Military** C295 transport aircraft at a ceremony at the C295 final assembly line (FAL) in Seville, Spain.

German-Based 328 Support Services GmbH completed work on Dornier 328JET (SN 3171) for **SpringChild Investments**, British Virgin Islands. It will be leased to its new Nigerian airline, **Air Peace**. The privately-owned airline operates from **Murtala Mohammed Airport,** Lagos, Nigeria. The new airline offers charter, cargo and scheduled flights with three Dornier 328 jets specifically configured for different purposes, and with four **Boeing** 737-500s.

Antiques and Other Junque

Scandinavian Airlines (SAS) retired its last three **McDonnell Douglas** MD-80s on October 26, ending 28 years of service with the carrier. The airline performed a two-hour tour with MD-82 (LN-RMM) around Denmark, flying past **Aalborg** and **Billund Airports**. Finally, the MD-80 made a low pass over **Copenhagen Airport,** before landing for the last time as a **SAS** aircraft. At one point, **SAS** operated 66 MD-80s, but it replaced them with **Airbus** A320s. The airline will start taking deliveries of 30 A320neos in 2016.

Reliance Aircraft International (RAI), Texas, acquired ex-**Jetairfly** 767-300ER (SN 24844) and ex-**US Airways** 737-400 (24548) for disassembly. President **Terry Hix** said that **RAI** will focus on diversifying its inventory to support its global customers. **RAI** was founded in 2011, and has purchased or taken on consignment 13 aircraft so far. It recently purchased ex-**Gulf Air** 767-300ER (SN 24485) and is also selling parts from one ex-**KLM** 737-300 and one -400, one ex-**Malaysian** 737-400, and one ex-**Southwest** 737-300. **RAI** also broke down one ex-**American** A300-600R and MD-82, and one ex-**Delta** 757-200. It intends to double its warehouse space by end of this year.

Accidents and Safety

From Aviation Safety Foundation

Tatarstan Airlines' Boeing 737-53A (VQ-BBN, SN 24785) was destroyed in a landing accident at **Kazan Airport**, Russia. All 44 passengers and six crew members were killed. The airplane was on a scheduled service from Moscowôs **Domodedovo Airport** to Kazan. The crew executed a missed approach procedure while approaching the runway. The initial flight-data recorder analysis indicated that the pilots accidently pushed the aircraft into a steep dive after the jet pitched up during a go-around. They apparently feared it would stall so they dove to increase airspeed. The 23-year old 737 had many operators over the years and had served in **Tatarstan's** fleet since December 2008. The airline grounded its **Boeing** 737-400 as a precaution in the wake of the accident, but it still operates four **Airbus** A319s, and two **Tupolev** Tu-154Ms.

Bearskin Airlines' Swearingen SA227-AC Metro III (C-FFZN, SN AC-785B) crashed while on approach to **Red Lake Airport,** Ontario, Canada. Both pilots and three of the five passengers were killed in the accident and the resulting fire. The airplane struck a power line and crashed in a wooded area south of the runway.

Aerocon's Swearingen SA227-AC Metro III (CP-2754, SN AC-721B) caught fire upon landing at the **Riberalta Airport**, Riberalta, Beni, Bolivia. It was operating a domestic flight from the **Teniente Jorge Henrich Arauz Airport,** Trinidad, in the same province. The aircraft landed in bad weather, and it came to rest on its back and burned out. Eight of the eighteen occupants onboard the aircraft were killed and the other 10 were seriously injured.

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

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Aircraft appraisal, inspection and technical monitoring; analysis of market conditions and forecast of values; assistance with aircraft acquisitions and placement; valuation of facilities, equipment and other assets.

AIRLINE IMPROVEMENT PROGRAMS

Our staff undertakes corporate reviews of entire airlines or specific aspects of airline operations, advising airline executive management, government and international organizations (i.e. World Bank), on various aspects of airline restructuring and/or privatization. Specific issues addressed include airline valuation, strategic planning, scheduling and fleet planning, market development, revenue management, operations and maintenance efficiency. We also provide a full range of services for start-up carriers.

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We prepare traffic/operation forecasts and financial analysis for airport and other facilities planning; competitive evaluation of performance/design characteristics and market potential for new aircraft; critical assessment of capability, marketing strategy and opportunities for suppliers of products and services; and air service needs related to tourism development.

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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.

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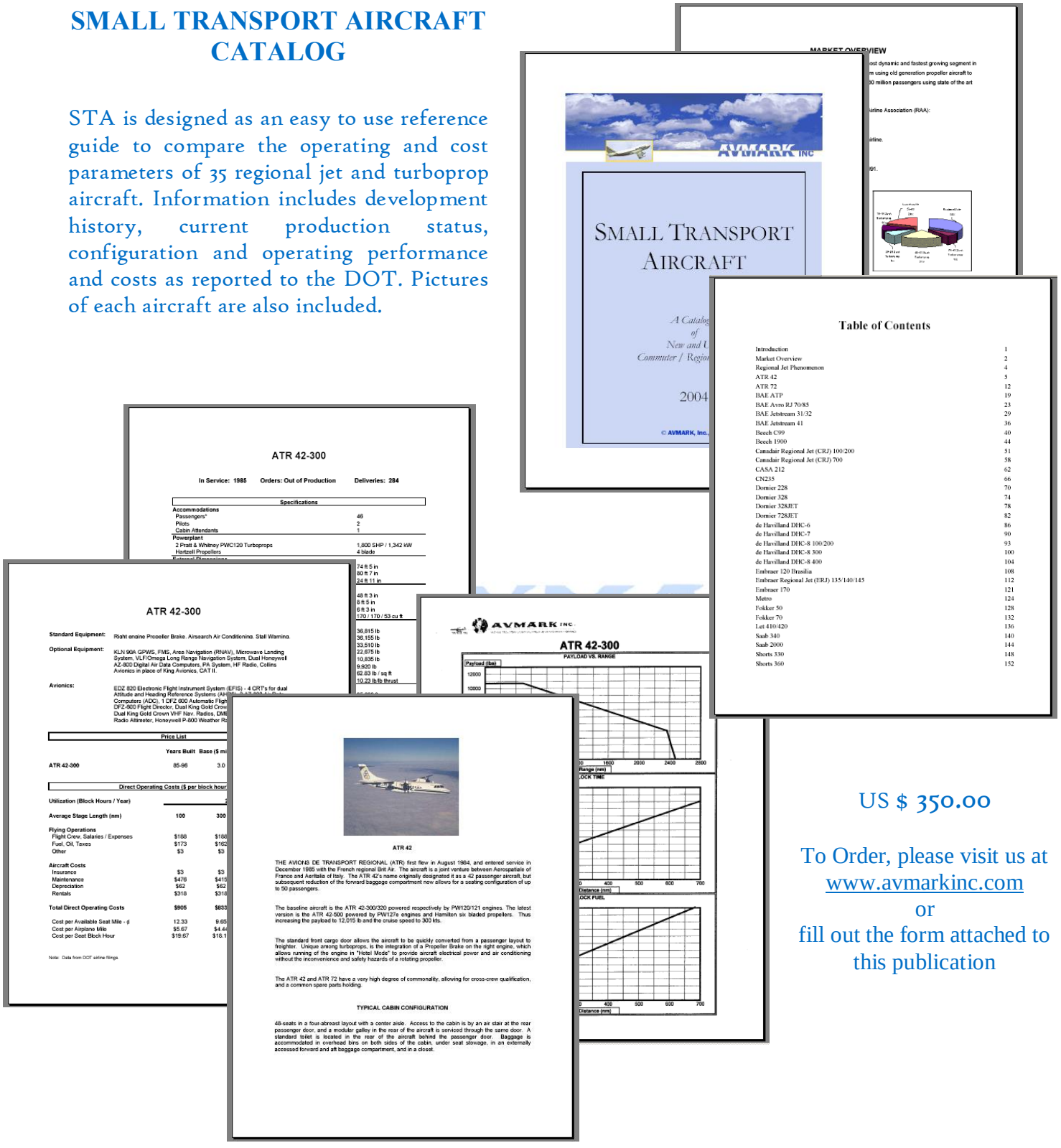
STA is designed as an easy to use reference guide to compare the operating and cost parameters of 35 regional jet and turboprop aircraft. Information includes development history, current production status, configuration and operating performance and costs as reported to the DOT. Pictures of each aircraft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



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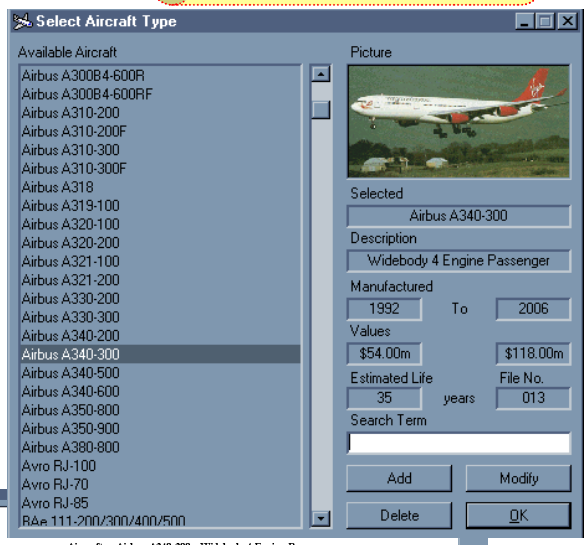

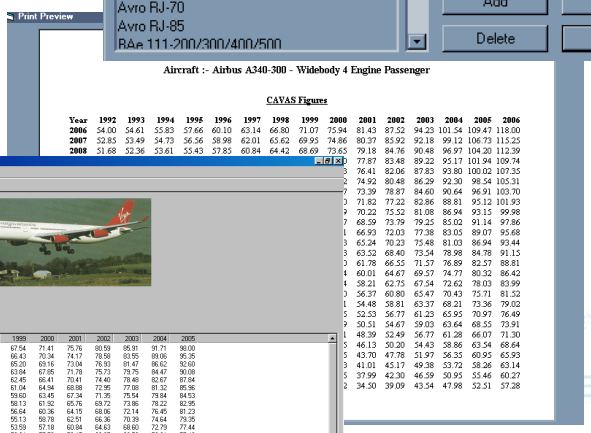

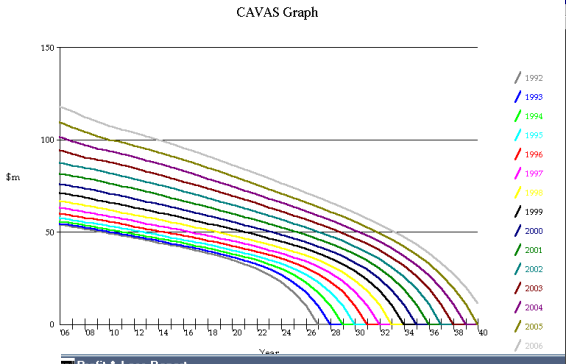

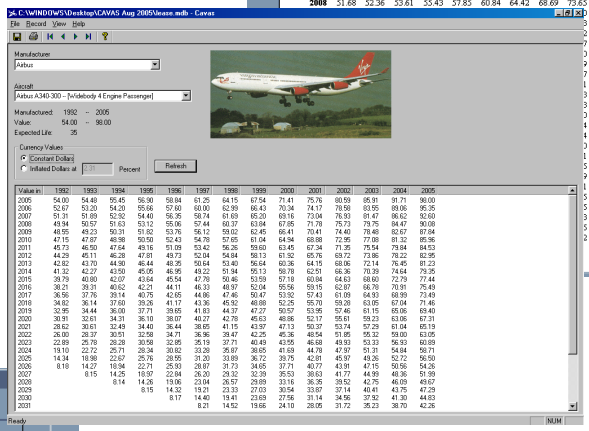

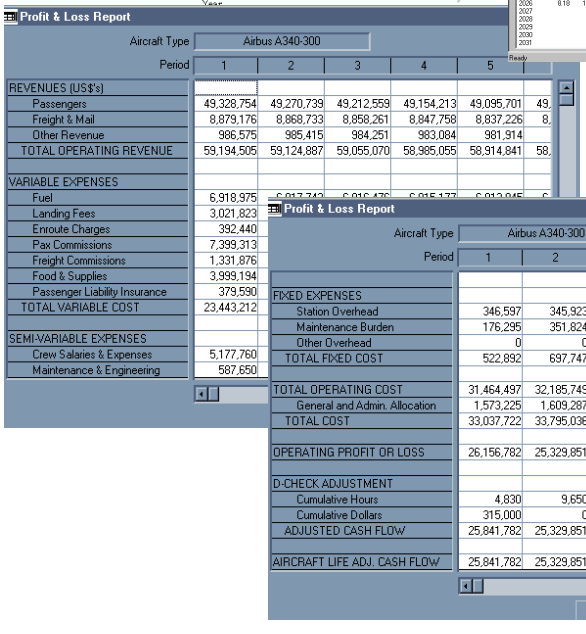

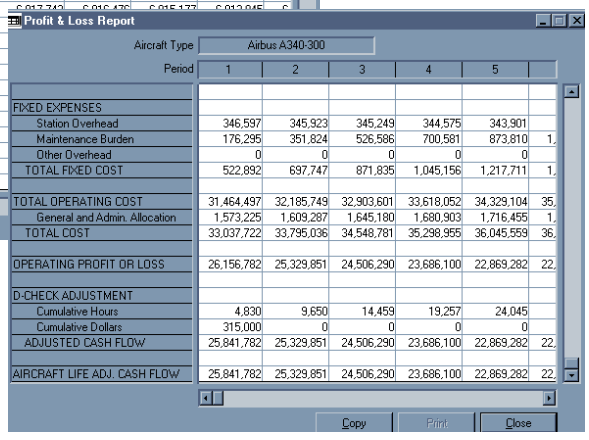

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