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Newsletter

Market Comment

USA

EXECUTIVE OFFICE

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

PUBLISHING OFFICE

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

EUROPE

AVMARK ESPAÑA

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

LATIN AMERICA

AVMARK-SLEM S.A.

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

ASIA & ASIA-PACIFIC

AVMARK ASIA-AMS

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

Chinese Leasing Companies Will Soon Rival the Western Ones. International Air Transport Association-IATA forecast that passenger traffic in Asia will grow at an average of 4.9 percent annually over the next 20 years. China's traffic will rise at 5.6 percent per year, IATA reported. **Boeing** said the region was set to overtake the U.S. as the world's largest plane market because economic growth in China, India and Southeast Asia encourages more air travel. Commercial airplane sales in the region will rise to \$5.2 trillion over the next 20 years. **Airbus** put the value of new aircraft in the region at \$4.4 trillion in the next two decades. **CIT Aerospace** said airlines in the East Asia/India region may not have placed enough orders yet to cope with future demand. **CIT** predicted that Asian markets will need about 13,000 new aircraft over the next 20 years, approximately 650 per year, which is half of **Airbus'** and **Boeing's** current production. **CIT** admitted that softening yields and declining load factors have fueled concerns about a long-term surplus. To bolster its argument, **CIT** said low-cost carriers (LCC) control 30 percent of Europe's market, but they account for about 20 percent in the Asian market in terms of available seat miles. This gives them plenty of room for expansion.

The Chinese Government allowed the state-owned **Bank of China** to buy the well-established **Singapore Aircraft Leasing Enterprise** in December 2006 for \$965 million. Its name was changed to **BOC Aviation** in 2007. **BOC** continued to be engaged in the world market, but other banks originally focused on the domestic market. Now China encourages all of its leasing companies to look for opportunities outside the country.

China Aircraft Leasing (CALC) is talking to **Boeing** about a potential order, but the numbers or models of aircraft to be ordered, or delivery dates were not mentioned. The Hong Kong-based Chinese lessor recently signed a Memorandum of Understanding (MoU) for 100 A320 Family aircraft from **Airbus**, valued at \$10.2 billion. The lessor is gearing up to serve domestic and foreign airlines which are replacing older jets and adding more for new routes. **Jens Dunker**, CALC's head of aircraft trading, said, "There is huge potential demand globally. Some 80 percent of current-generation planes need to be replaced by new aircraft in the coming years." He said his leasing company would not venture beyond single-aisle aircraft for at least another year or two. **CALC** currently has 38 aircraft, including five 737-800s, one **Airbus**

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A319, eight A320s and four widebodies. The company has another 26 A320ceos and five A321ceos on order. Its provisional order for 16 A320ceos, 10 A321ceos and 74 A320neo aircraft should be finalized by the end of the year, with the purchase price to be settled by cash from internal sources and bank borrowings, the lessor said. **CALC** signed a framework agreement with the **Export-Import Bank of China** for as much as 10 billion yuan (\$1.6 billion) of financing. Mr. **Dunker** expects to place at least 50 percent of aircraft in the Greater China region, which means he is shopping the rest of the planes to customers all around the world. In July, **CALC** became the first aircraft leasing company in the region to sell shares to the public. It signed its first contract with a non-Chinese airline in August, when it agreed to lease five A320s to India's state-owned flag carrier **Air India**. The planes will be delivered in 2015. Another two Airbuses will be leased to a domestic airline.

In Response to the Burgeoning Need for More Airplanes, several more investors are leaping into the leasing market. **Cheung Kong (Holdings) Ltd.**, owned by the Hong Kong multi-billionaire **Li Ka-shing**, will jump start its entry into aircraft leasing by purchasing 45 planes, worth \$1.89 billion, from other leasing companies. In a filing to the **Hong Kong Stock Exchange** **HKEx**, the company said, "The aircraft leasing business will generate long-term steady income for the group. [The purchases] will constitute a meaningful platform to further develop the aircraft ownership and leasing business for the group." **Cheung Kong** will buy 11 **Airbus** A320-200s, five **Boeing** 737-800s and two 737-900ERs from **GE Capital Aviation Services** for \$714.8 million through **Accipiter Holdings**, Ireland. **Accipiter** will also buy three 737-800s from **GECAS** affiliates for \$101.2 million. The **GECAS** planes have an average age of 3.1 years. The new lessor also agreed to buy 10 airplanes from **BOC Aviation** for \$492 million, and will purchase 14 aircraft from **Jackson Square Aviation** for \$584.2 million. The airplanes are currently leased to airlines for an average six to nine years. **Cheung Kong** will also form a 60-40 venture with **MC Aviation Partners**—**MCAP**, Japan. That partnership will buy 15 **MCAP** airplanes for \$733.5 million, according to **Cheung Kong's** filing, and it will be based in Hong Kong, with the airplanes managed by an Irish company. Earlier this year, **Cheung Kong** announced it would buy an unspecified number of aircraft from **AWAS**, which is owned by **Terra Firma Capital Partners** in the U.K. **AWAS** said it intended to sell up to 100 newer aircraft for as much as \$5 billion, and will keep 180 airplanes. **Cheung Kong** made its money as a real

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estate investor and developer, but it has worldwide investments in energy, ports, telecommunications and retailing.

China's Spring Airlines will start a leasing business and may receive government approval by the end of this year. It is registered in Shanghai's free-trade zone to take advantage of lower tax rates. The leasing company will manage **Spring's** fleet, and will also lease aircraft to other carriers. The airline was founded by Chairman **Wang Zhenghua** in 2005, and it plans to spend as much as 2.5 billion yuan (\$409 million) to expand its fleet and network, the Shanghai-based carrier said. The **China Securities Regulatory Commission** approved **Spring's** initial public offering, and the airline hopes to sell shares this year. Funds from the share sale will be used to buy up to nine A320s and three simulators. **Spring** will also expand its international network. It has 47 A320s and two simulators already, and has 96 A320 Family aircraft on order.

Spring joins **AirAsia Bhd.**, Malaysia, and **Lion Air**, Indonesia, by entering the leasing market with aircraft they may not need. So far, the latter two companies have transferred new aircraft to their associated companies. Some of **AirAsia's** A320s have left the immediate Southeast Asia region and are being leased to **AirAsia India**. The two airlines have a combined backlog of more than 700 A320s and 737s.

So far, dropping fuel prices and responsible fares, combined with ever growing numbers of passengers, have kept the low-cost carrier model working. Economic growth in China is

CIT Aerospace said that airlines in China and East Asia have ordered too few passenger jets. A purchasing boom by low-cost carriers in Southeast Asia caused concern about an aviation capacity glut in the region, but **CIT** and others in the industry said China has not purchased enough of the latest generation of aircraft. **Steve Mason**, VP of **CIT Aerospace**, a subsidiary of **CIT Group**, said, "China and that region of Asia have not got enough orders. They have missed opportunities to get new technology aircraft at close dates from the manufacturers directly." That directly benefits leasing companies such as **CIT** which placed speculative orders for the A320neo Family and 737 MAX. Mr. **Mason** dismissed fears of an aircraft order bubble, but did forecast consolidation in the Asian airline market due to completion for the rapidly increasing traffic. In the next two decades, half of the world's air traffic is expected to contact Asian airspace in some way. **CIT** dismissed concerns that lower oil prices and rising interest rates may cool the market for more fuel efficient aircraft. Airlines may hold onto older aircraft longer than originally planned. **Tony Diaz**, President of **CIT Commercial Air** commented that "there is a difference between the interest rate and the availability of capital. There is a lot of capital out there. If rates went up 300 or 400 or 500 basis points and there was still availability then fine, you pay a little more, but in the big picture it is not going to make a huge difference. If the capital starts to become scarce, that is different." Oil prices have fallen 25 percent in 2014, down to the \$80 range. The price drop is expected to be a temporary windfall, and the airlines have been putting the fuel cost savings in their pocket. **CIT** sees **China Aircraft Leasing's** \$10.2 billion order for 100 Airbus A320 Family jets as vindication of their opinion. China is expected to announce even more orders during the Asia-Pacific Economic Co-Operation gathering on November 10-11, or during a bilateral summit between Chinese and U.S. leaders. Many of **Boeing's** 981 unidentified orders (including 878 737s, 22 777s and 29 787s) are believed to be destined to China. **Airbus** has 378 undisclosed orders, including 368 A320 Family aircraft. China may be the recipient for the majority of those aircraft too. The waiting list for the newest **Airbus** and **Boeing** jets stretches into the next decade, well beyond China's five-year planning cycle. This obstructs their airlines' ability to buy enough aircraft to grow their fleets with traffic demand.

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expected to slow and their country may dip into recession. Indonesia is suffering from overcrowded airports and there are other perils lurking in the region. Time will tell whether the optimists or pessimists were closer to the mark. Chances are that over 20 years, there will be good years and bad, and both will look back and point to when they were right. At this time, China is putting its money to work and will be a huge player in the world's leasing market, which is a huge part of the world's new aircraft market. **AerCap** and **GECAS** will have to be smart and agile to remain dominant and will have to look at their residual values calculations, because there will be a lot of good quality used aircraft overhanging the market if Asia stops growing at the predicted rates.

Airbus Orders

Airbus sold three A320 Family aircraft in October, raising **Airbus'** gross sales to 1,080 for the year and net sales to 794 after 286 cancellations. **BOC Aviation** acquired two A320ceo (current engine option) airliners, which now positions it as **Airbus'** 10th largest customer with a total of 257 orders (251 A320 Family aircraft and six A330s). **Airbus** sold one ACJ319 to an unnamed private customer. The ACJ319 is one of the most popular members of ACJ family, which combines the widest and tallest cabins of any business jets with intercontinental range in this size category, **Airbus** said. The manufacturer delivered 50 aircraft, including 42 A320 Family aircraft. One of the seven A330s delivered in the month was the first of six A330-300s ordered by **SriLankan Airlines**. Completing the October deliveries, **Airbus** handed over another A380 flagship jetliner to **British Airways**. **Airbus'** backlog stood at 5,860 aircraft as of October 31.

Delta Air Lines' Airbus A330Neo Launch Order. The U.S. carrier ordered 25 A330-900neo and 25 A350-900 widebody jets in Novem-

Airbus Orders, Deliveries and Backlog October 2014

OCT ORD	OCT DEL	OCT CANX	TOTAL ORD	TOTAL DEL	BACK LOG
A318					
-0-	-0-	-0-	79	79	-0-
A319					
1	2	-0-	1,466	1,422	44
A319neo					
-0-	-0-	-0-	49	-0-	49
A320					
2	25	-0-	4,641	3,788	853
A320neo					
-0-	-0-	-0-	2,514	-0-	2,514
A321					
-0-	15	-0-	1,536	996	540
A321neo					
-0-	-0-	-0-	709	-0-	709
A330					
-0-	7	-0-	1,354	1,127	227
A350					
-0-	-0-	-0-	750	-0-	750
A380					
-0-	1	-0-	318	144	174
This Month			This Year		BL
3	50	-0-	794	493	5,860

Airbus sold 14,609 aircraft and delivered 8,749 as of October 31, 2014. Two hundred eighty six orders were cancelled. Total orders, deliveries and backlog include cancellations and order changes.

ber. They are worth about \$13 billion at list prices. The A330neo will be powered by **Rolls-Royce** Trent 7000 engines and is priced at \$275 million, while the A350-900 is fitted with Trent XWB engines and is catalog priced at \$295 million before typical industry discounts. **Rolls-Royce** said the order for engines was worth \$5 billion and it included the **TotalCare** long-term, post-delivery services as part of a support package. **Delta** currently flies 57 A319ceo and 69 A320ceo aircraft, plus 11 A330-200s and 21 A330-300s. It ordered 10 A330-300s and 45 A321ceo aircraft last year. **Boeing** did not have enough 787 positions available in the timeframe that met **Delta's** requirement, the company said. **Airbus** had more delivery slots available following the cancellation of **Emirates Airline's** order for 70 A350-900s. The A330neo production line also has slots available, while the Dreamliner is nearly sold out. **Delta's** first A350-900neo will arrive in 2017 and the first A330neos will be delivered in 2019. The airline intends to retire its last 16 747-400s by 2017, and will replace some of its long-haul 767-300ERs.

The First Airplane to be Built in Airbus's New Plant in Mobile, Alabama, will be an A321ceo (current engine option). The company originally planned to start production with the A320. The change reflected rising demand for the bigger jet in the U.S. American carriers currently have 41 A320ceos and 162 A320neos on backlog, and have outstanding orders for 195 A321ceos and 156 A321neos, a ratio of two to three. The first **Airbus** A321ceo will come off the production line in April 2016. So far this year, **Airbus** booked 135 gross orders for the A321ceo and 176 for the A321neo. Airlines are up-sizing to larger jets to improve their efficiency by carrying more people per flight, which lowers the per-seat cost.

Frontier Airlines placed a firm order for nine **Airbus** A321ceo (current engine option) aircraft, worth \$990 million at list prices. This is the airline's first purchase of **Airbus'** largest single-aisle airplane. It operates 35 A319s, and 20 A320s which are powered by CFM56 engines. **Frontier** has 80 A320neo (new engine option) Family aircraft on order. The airline has not announced its engine selection or the seating configuration for its A321s.

China Aircraft Leasing Company (CALC), China's leading independent aircraft operating lessor, signed a Memorandum of Understanding (MoU) with **Airbus** for 100 A320 Family aircraft. The commitment covers 74 A320neo, 16 A320ceo and 10 A321ceo aircraft worth approximately \$10.2 billion at list prices. **CALC** placed a firm order for 40 A320 Family aircraft at the 2012 **Farnborough Airshow**. Dr. **Mike Poon**, CEO and Executive Director of **CALC** said, "The A320 Family [is] a perfect fit in **CALC's** strategy to offer the most innovative and dynamic leasing solutions to aviation customers in China and around the globe." **China Aircraft Leasing** wants to build up a fleet of at least 100 aircraft by 2015. The lessor has a 3 percent share in the world's fastest-growing aviation market. China's 800-plane leasing market is currently dominated by **AerCap** and **GECAS**.

Atlasjet, Turkey, made a preliminary deal to buy up to 30 A321ceo aircraft worth \$3 billion at list prices. The airline intends to expand in Eastern Europe and Central Asia. The tentative agreement did not specify the number of aircraft because details need to be worked out. CEO **Orhan Coskun** said the airline was in the final stages of talks to buy up to 50 planes, but **Airbus** would not comment on discussions with potential customers. Industry insiders said the number of planes could be lower. **Atlasjet** already operates 19 A320 Family airplanes and flies to 20 cities in Turkey, Europe and the Middle East. It is controlled by Turkish tour operator **ETS**. The airline is still talking to **Boeing** about

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buying 737NGs, and it has signed a letter of intent with **Bombardier** to buy the CSeries jet, which can hold 160 people in high-density seating. So the **Airbus** order is not a done deal.

Azul Linhas Aéreas Brasileiras (Azul Brazilian Airlines) will acquire 63 **Airbus** A320neo aircraft from 2016 and through 2023. The Brazilian low-cost airline will order 35 aircraft from the manufacturer and lease 20 from **AerCap** and another eight from **GECAS**. The A320neos will be fitted with 174 economy seats, and will complement **Azul's** fleet of ATR 72-600s, EMBRAER 190s and E195s. The A320neos will be powered by **CFM International** LEAP-1A engines. The Airbuses will be used on **Azul's** longer haul flights.

Indonesia's Lion Group CEO Rusdi Kirana said the airline plans to order **Airbus** A330s, which will replace smaller aircraft at slot constrained domestic airports. The latest order for current-generation A330s will be placed soon and **Lion Air** will buy from seven to 10 jets worth up to \$2.5 billion at list prices. The low-cost carrier will not defer any A320s or 737s from of its large order book. He said the airline was no longer looking at the **Bombardier** CSeries.

The Federal Aviation Administration (FAA) certificated the first variant of the **Airbus** A350-900 XWB on November 12. The agency's approval followed the type certification awarded by the **European Aviation Safety Agency (EASA)** on September 30. EASA followed its initial approval by issuing a certification for **Extended-range Twin Engine Aircraft Operations (ETOPS)** in October, making the A350 the first aircraft to achieve such approval ahead of its entry into service.

757 Replacements. **American Airlines'** VP of Fleet Planning, **Peter Warlick**, said the airline was evaluating the economics and the range and performance capabilities of the long-range version of the A321neo. The airplane will be fitted with extra fuel tanks to extend its range to 4,000 nautical miles (approximately 7,500 kilometers). This would be 100 nm farther than the current **Boeing** 757-200 can fly, and the A321neo would burn about 25 percent less fuel than the 757. **Airbus** is actively discussing an A321neo long-range development with our customers, the company said. It will build the A321 at its new assembly plant, in Mobile, Alabama. **American** has already ordered 71 A321ceos and 100 A321neos, and it operates 28 A321ceos and 105 757-200s. **Delta** operates 129 757-200s and 15 757-300s, and has outstanding orders for 45 A321ceos, while **United** operates 93 757-200s and 21 757-300s. **Boeing** is considering developing a replacement for the narrowbody 757 twin jet with a new jetliner that could fly 4,000-nautical mile missions, said its CEO **Jim McNerney**. They delivered 1,050 757s from 1980 to 2004. The new jet would fill the gap between its best-selling narrowbody 737, and the larger, widebody 787, while borrowing from each of the aircraft families. The high-density version of the 737 MAX 200 will seat 200 people, while the 787-8 seats 242 in two classes. It seems that **Boeing** cannot stretch the 737 MAX past 200 seats, and the 787-8 is too large. **Boeing** spokesman **Doug Alder** said, "We have in-depth knowledge of the mid-market segment due to the significant installed 757 base. We continue to study this niche segment to identify product alternatives that are right for our customers and right for **Boeing**. There is no timeline. **Boeing** may have missed the boat when it comes to orders from U.S. airlines, but it cannot afford to cede the entire market to **Airbus**. Analysts see a need for up to 1,000 jets in the 200-250 seat market, which can fly trans-continental or trans-Atlantic routes. **Airbus** has sold 724 A321neos, while **Boeing's** largest narrowbody, the 737 MAX 9 has attained 286 orders. **Delta** will replace its oldest 757s and domestic 767-300s with 100 737-900ERs and 45 A321ceos. The newer 757s would fly for several more years. **United** is getting rid of its oldest 757s and has outstanding orders for 37 737-900ERs and 100 737 MAX 9s.

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The A350 flight test campaign featured five aircraft which accumulated more than 2,600 flight test hours. The A350 XWB backlog stands at 750 orders from 39 different customers worldwide. The A350-900 is powered by **Rolls-Royce** Trent XWB engines and seats 315 passengers, while the slightly larger A350-1000 variant will be fitted with 369 seats. Thirty-two 276-seat A350-800s are still on order but **Airbus** is trying to steer those customers to the smaller 252-seat A330-800neo. **Airbus** said the A350 XWB sets new standards in terms of passenger experience, operational efficiency and cost-effectiveness.

Boeing Orders

Airlines and Lessors Bought 43 737s, One 747 and Two 777s in October, for a total of 46 new sales. **AirBridgeCargo Airlines** (Russia) ordered its first 747-8F, and received it in the same month. The plane was built for **Cathay Pacific Airlines**. **AirBridgeCargo** operates five 747-8Fs that were ordered by its sister company **Volga-Dnepr Airlines**. One **Business Jet/VIP Customer** ordered two 777-300ER BBJs. The 777-300ER BBJ offers 3,641 square feet (338 square meters) of cabin space and a range capability of 9,220 nautical miles (17,075 kilometers). To date, **Boeing** has sold two 777-200LR BBJs and four -300ER BBJs and has delivered one of each. **Monarch Airlines** finalized its order for 30 737 MAX 8s. **Alaska Airlines** purchased another 10 737-900ERs for a fleet total of 59 (23 delivered). The 10 new planes were list priced at \$990 million (\$99 million each). The airline also has outstanding orders for 20 737 MAX 8s and 17 737 MAX 9s. The new -900ERs will be used for network growth, and to replace **Alaska's** 27 elderly 737-400s. One **Unidentified Customer** ordered one 737 MAX, and another customer purchased two 737-800s. No orders were cancelled in October. The company booked 1,152 new orders in the first 10 months, including 835 737s, two 747-8Fs, four 767Fs, 263 777s and 48 787s. Cancellations of 106 aircraft lowered the net order total to 1,046. **Boeing** delivered 62 new airplanes in October, including 39 737s, two 747Fs, one 767F, nine 777s and 11 787s, for a total of 590 so far this year.

Air Canada unveiled its order for two additional 777-300ER (Extended Range) airplanes in October. The order was placed in August and was listed as unidentified on **Boeing's Orders & Deliveries** website at that time. The two 777s were valued at \$660 million at list prices. **Air Canada** currently operates 17 777-300ERs and six 777-200LRs (Long Range) and now has two -300ERs in backlog. **Boeing** said the 777 is the world's most successful twin-engine, long-haul airplane, and it has sold more than 750 777-300ERs to more than 40 customers. The 777-300ER is equipped with the GE90-115BL engine, and offers a maximum range of 7,825 nautical miles (14,490 kilometers).

Garuda Indonesia announced its order for 50 737 MAX 8s, valued at \$4.9 billion at current list prices in October. The flag carrier of Indonesia will purchase 46 737 MAX 8s and will convert existing orders for four Next-Generation 737-800s to 737 MAX 8s. The order was reported on Boeing's **Orders and Deliveries** website in September as placed by an unidentified customer. **Garuda Indonesia** currently operates 77 737s and the 737 MAX 8s from the new order will replace current 737s. The **Garuda** order raised **Boeing's** total 737 MAX orders to 2,295 airplanes from 47 customers worldwide.

Monarch Airlines finalized its order for 30 737 MAX 8s worth more than \$3.2 billion (\$106.7 million each) at list prices. The order was originally announced at the **Farnborough International Airshow** in July. **Monarch** optioned 15 additional 737 MAX 8s. It plans to transition to an all-**Boeing** single-aisle fleet that will operate a distinctive European scheduled leisure carrier, said **Monarch's** CEO **Andrew Swaffield**. The 737 MAX has accumulated 2,325 orders from 48 customers and is the fastest selling

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airplane in **Boeing** history, the manufacturer said. Further, "The 737 MAX will be 14 percent more fuel-efficient than today's most efficient Next-Generation 737s" and 20 percent better than the original Next-Generation 737s when they first entered service. The 737 MAX 8 will have an 8 percent per seat operating cost advantage over the A320neo," Mr. **Swaffield** said. **Monarch** was founded in 1968 and serves holiday destinations around the Mediterranean and the Canary Islands as well as European ski resorts. Ninety percent of the airline was purchased by the **Greybull Capital** group which secured £125 million of permanent capital and liquidity facilities.

SMBC Aviation Capital ordered 80 737 MAX 8s in November. They were valued at more than \$8.5 billion at list prices. This is the largest single order for the 737 MAX from a leasing company. It will help **SMBC** grow its portfolio of high-demand, fuel-efficient airplanes. The lessor placed its first order with **Boeing** a decade ago. The contract was signed in Tokyo on November 10. **SMBC** was the 50th 737 MAX customer and its order pushed the program's backlog above the 2,400 mark. **Boeing's Current Market Outlook**

forecast that airlines will need more than 25,600 single-aisle airplanes over the next 20 years. The manufacturer has done business in Japan for more than 60 years, and built close partnerships with Japanese airlines and its aviation industry. Japanese customers have purchased over 1,000 **Boeing** airplanes and aerospace companies make a significant contribution to all of its commercial airplane programs. **SMBC Aviation Capital** has 180 **Boeing** airplanes in its portfolio and has 95 airline customers in more than 40 countries.

One Unidentified Customer ordered 10 737s in November, and another customer bought 30 737s. One **Business Jet/ VIP Customer** purchased two 737s in mid-month and another **VIP Customer** ordered a 737BBJ.

Virgin Atlantic exercised one its four **Boeing** 787-9 options in November. It will be delivered by the end of 2018. The airline may pick up the other three in short order. CEO **Craig Kreeger** said "We have not exercised those options, but we are communicating very clearly that we plan to." Mr. **Kreeger** also suggested that the airline would buy the 787-10 variant to replace seven Gatwick-based 747-400s that

Boeing October 2014 Orders, Deliveries					
OCT ORD	OCT DEL	OCT CANX	TOTAL ORD	TOTAL DEL	BACK LOG
737					
43	39	-0-	12,300	8,263	4,037
747					
1	2	-0-	1,537	1,496	41
767					
-0-	1	-0-	1,114	1,065	49
777					
2	9	-0-	1,807	1,248	559
787					
-0-	11	-0-	1,054	204	850
This Month			This Year		BL
46	62	-0-	1,046	590	5,536
Boeing sold 25,342 aircraft and delivered 19,806 as of October 31, 2014.					
The Current Program includes sales and deliveries of 737s, 747s, 767s, 777s and 787s.					
Sales totals include 106 cancellations.					

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will be retired after the leases expire in 2019. The 323-seat 787-10 is smaller than the A350 and 777, which are also under consideration, but it offers fleet commonality and the attendant efficiency in pilot training among other areas, he said. **Virgin** put its first 787-9 into revenue service, becoming the first airline in Europe to operate the variant. It will be joined by the second of the 17 firmly ordered 787s by year-end. The 787-9s are replacing A340s and London Heathrow-based 747s. The first few 787-9s will fly to Boston, Newark, New York and Washington D.C. Eventually it will serve **Virgin's** longest range routes to places like Hong Kong and Johannesburg. Today, the airline has 10 A330s, 15 A340s, 12 747s and one 787 in its long-haul fleet. By the end of 2018, the 787s will comprise almost 60 percent of its fleet.

Kuwait Airways announced its intent to purchase 10 777-300ERs, in late November. They are list priced at \$3.3 billion and will upgrade the airline's fleet. The 777 deliveries will start in November 2016 and the planes will be used to launch new routes. One unidentified customer placed a firm order for 10 777-300ERs in August, and it was reported in the press that **Kuwait** was the buyer. **Boeing** said it will add the sale to its *Orders & Deliveries* website when it is confirmed.

Boeing plans to develop a new aircraft to replace the 737 MAX by 2030. CEO **Jim McNerney** said, "It will be slightly bigger, there will be new engines. The current look of the planes (shape) won't change dramatically. There's a good chance it will be a composite airplane." He said the push for the new aircraft was being driven by competition from China and elsewhere. **COMAC** is developing the C919 to compete with the A320neo and 737 MAX. Russia is building the MS-21 and **Bombardier** is offering the slightly smaller 160-seat CSeries CS300. Mr. **McNerney** said a 737 MAX replacement was needed "because the new entrants would do something like MAX." After nearly 100 years of aircraft experience "we cannot give up that advantage because competing on costs alone would be difficult. Innovation is the only answer, there's no easy way around." **Boeing** considered designing a "clean-sheet" to succeed the 737 in 2010, but chose to rework the 737 and launch the MAX after **Airbus** sold hundreds A320neo Family aircraft. Since both manufacturers are vested in their re-engined narrow-bodies, neither intends to come up with a new design before 2030. **Boeing's** strategy is to avoid projects that take decades to come to market (like the 787), and they want to innovate frequently, using their latest technology in derivative aircraft (like the 777X).

COMAC, the Chinese state-owned aircraft maker, signed an initial agreement to sell 30 C919s to **China Merchants Bank's** leasing unit, **CMB Financial Leasing**. **CMB** has a fleet of 20 aircraft including A320s and 737NGs. The company started operations in 2008. The financial terms of the order weren't disclosed. The order was signed at **Airshow China 2014** in Zhuhai, and raised **COMAC's** firm order book to 430. Most of the orders are from domestic companies. The 168-seat C919 will be the first Chinese-built jet in the narrowbody market. It is intended to compete with the **Airbus** A320 and **Boeing** 737. The C919's first test flight was recently pushed back to 2015 from 2014, and the first airplane will be delivered in 2018, a delay which gives **Boeing** and **Airbus** more time to deliver their upgraded 737 MAX and A320neo aircraft first. The C919 will be powered by the **CFM LEAP** engines, the same type that will be installed in the A320neo and 737 MAX.

Regional Report

Bombardier Aerospace reported that its third quarter earnings of \$74 million, before interest and taxes, were down from the \$86 million in 2013. Its aerospace division's revenue was \$2.6 billion and the other units sold \$2.3 billion. **Bombardier** split its aerospace division into three units: business jets,

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commercial aircraft and aerostructures (which make plane components). The reorganization is in place, Chief Executive Officer **Pierre Beaudoin** told analysts, "Our new lighter structure will result in a more nimble organization, which brings reduced costs and contributes to increased profitability." The company will eliminate about 200 more aerospace jobs, bringing the total to 3,700 this year. This was in addition to the 900 positions cut at the railroad unit. The company booked restructuring charges of \$63 million in aerospace, and \$57 million in the rail unit, both due to job cuts. The workforce reductions will save a combined \$268 million per year. Its sales and administrative costs fell 7.4 percent during the latest period. The company delivered 71 aircraft in the quarter, including 45 business jets and 26 commercial aircraft, up from the 36 bizjets and

nine airliners delivered a year earlier. The aerospace division's sales nearly tripled to 76 orders during the quarter, while it sold 26 jets and turboprops in the same quarter of 2013. Sales were boosted by **Macquarie AirFinance's** firm order for 40 CSeries jets raising the firm total to 243. **Bombardier** resumed CSeries test flights in September, four months after flights were halted due to engine failure during ground testing. The test jets have completed about 18 percent of the 2,400 flight-hour program. The first CSeries CS100 is still scheduled to enter service in the second half of 2015, to an undesignated airline. **SWISS** declined to be the launch customer, so the manufacturer is talking to another airline to undertake the honor of being the first CSeries operator. **SWISS** ordered 30 CSeries in 2009 and still plans to receive its first plane in late 2015. The first of the larger CS300s will be delivered by mid-2016.

Bombardier has been demonstrating its new CSeries jet to the U.S. major airlines, including **United Airlines**. Spokeswoman **Marianella Delabarrera** declined to say who has seen it so far. "We're trying to capture as much of the interest as possible" she said about the ongoing demo tour. "We really don't want to disrupt the flight testing if we can prevent that, but there are times when it's convenient." **Bombardier** is flight testing the CSeries at Mirabel, Quebec, and Wichita, Kansas. One of the CSeries test planes flew to their regional sales office in Dallas in October. Some customers went to Dallas to see the plane, and others have visited Mirabel. The CSeries also visited existing customer **Republic Airways**, in Indianapolis.

China Express Airlines confirmed its order for 16 **Bombardier** CRJ900 NextGen regional jets. It also took options for another eight CRJ900s. The agreement was signed in Beijing on the sidelines of a meeting of Asia-Pacific political leaders and business CEOs, and was initially announced on June 30, 2014. Based on the list prices, the firm order was valued at approximately \$727 million (\$45.4 million each). The value could increase to \$1.12 billion if **China Express** exercises its options. The airline was launched eight years ago and now **China Express** operates four CRJ200s and 11 CRJ900 NextGen aircraft on regional passenger services to nearly 50 cities throughout China. There are currently about 35 CRJ and CRJ NextGen regional jets in service in the Greater China area.

Falcon Aviation Services, Abu Dhabi, ordered three additional Q400 NextGen airliners. The airline converted three of its five Q400NG options into firm orders. The planes were optioned as part of its Letter of Intent (LOI) that was announced at **Farnborough Airshow** in July. **Falcon's** firm order was valued at approximately \$90.3 million (\$30.1 million each) at list price, and the airline has now booked six firm orders. It wet leased the first of them to **Senegal Airlines** and intends to lease the rest to African airlines. Also during the **Airshow**, **Bombardier** said **Falcon** announced "a Memorandum of Understanding (MOU) concerning their collaboration in addressing Africa's need for high-quality aircraft which meet international standards." The carrier is based at **Al Bateen Executive Airport**, and operates a fleet of corporate jets for VIP charter flights, as well as a fleet of helicopters which serve the

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offshore oil and gas industry. The company also conducts search and rescue, aircraft management, maintenance, repair and overhaul, and aviation consulting.

Bombardier delayed plans to build its Dash 8 Q400NG turboprops in Russia until the political tensions in the region improve. Chief Executive Officer **Pierre Beaudoin** said, "For now we are not proceeding because conditions are not favorable for creating a joint-venture in Russia. Given the political situation now, the situation of the Russian economy, we are putting the project aside for now and we'll see how things evolve over the next few months." The company intended to open a Q400 production line in Russia to feed that country's demand for high-capacity turboprops. A preliminary deal with state-owned **Rostekhnologii (Rostec)** was signed in August 2013, and they intended to finalize the partnership this year. In a related agreement, **Rostekhnologii** was to buy up to 100 Q400s valued at about \$3.4 billion, based on list prices. The provisional order has not been cancelled. Canada joined other nations in placing economic sanctions on Russia after that country annexed Crimea earlier this year.

United Airlines is talking with **Bombardier** and **Embraer** about buying new narrowbodies to replace unprofitable 50-seat regional jets. The airline is looking at **Embraer's** largest E-Jet E2 family and **Bombardier's** smallest CSeries CS100. The talks are preliminary and an order is not imminent, sources at **United** said. The jets would fill a gap between **United's** narrowbodies which seat more than 150 people, and its regional jets which seat a maximum of 76 passengers. The new jets would be operated by **United** pilots. Their contract lets the airline take more commuter aircraft in 2016, as long as larger CS100s or E-Jet E2s are added to the mainline fleet. That agreement lets **United** buy four 76-seaters for every five mainline planes it acquires, up to a total of 223 regional aircraft. The **United Express** units will still fly the 76-seat regional jets. The mid-sized regional jets will replace the inefficient 50-seaters at **United Express**. **United** generates more than \$1 million of annual profitability every time it replaces a 50-seat jet with an E175, the airline said. **Embraer's** largest E195 E2 can seat up to 132 passengers, while **Bombardier's** CS100 will carry up to 125 people in single class configuration. Analysts noted that a deal with **United** would boost the manufacturers' chances to weaken **Airbus'** and **Boeing's** hold on narrowbody sales to major U.S. airlines. At this time, **United** is buying used aircraft to replace the 50-seaters that it is grounding. It purchased two used 737-700s in the last quarter.

Bombardier September 30, 2014 Orders & Deliveries

CRJ	Total Orders	Total Deliveries	Current Backlog
Challenger	33	33	-0-
CRJ1/2/440	1,021	1,021	-0-
CRJ700	350	339	11
CRJ900	359	314	45
CRJ1000	70	39	31
Total	1,833	1,746	87
CSeries	Total Orders	Total Deliveries	Current Backlog
CS100	63	-0-	63
CS300	180	-0-	180
Total	243	-0-	243
Dash 8	Total Orders	Total Deliveries	Current Backlog
Q1/2/300	671	671	-0-
Q400	514	471	43
Total	1,185	1,142	43

Bombardier delivered 19 CRJs and seven Dash 8-400s this quarter.

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Embraer Reported its Third Quarter Revenues were \$1,239.7 million, a 3.8 percent decline from the same quarter in 2013. The company delivered 19 commercial and 15 light executive jets, and its firm order backlog was \$22.1 billion, an all-time company record, as of September 30. The lower total aircraft deliveries were partially offset by higher revenues from **Embraer's Defense & Security** unit. Year-to-date revenues for 2014 were \$4,243.3 million, which was 7.9 percent higher than the previous year.

SkyWest Airlines placed a firm order for seven **Embraer** E175s in November. The planes are worth about \$301 million (\$43 million each) at list prices, and will be operated for **Alaska Airlines**. Deliveries are scheduled to begin in the second quarter of 2015. The aircraft are part of **SkyWest's** previous order for 100 (40 firm and 60 reconfirmable) E175s, with an additional 100 options, that was placed in May 2013. Now **SkyWest's** firm orders stand at 47. The E175s for **Alaska Airlines** will be configured with 76 seats including 12 First Class seats. **SkyWest** is the launch customer of the E175-E2, having ordering 100 aircraft and taking 100 options in June 2013. E174-E2 deliveries begin in 2020.

COMAC and Comsys (Tianjin) Aviation Leasing Company signed a letter of intent for 20 ARJ21-700 regional jets at the **Airshow China** on November 11. At the **Airshow**, the **Republic of Congo's Transport Ministry** confirmed its order for three ARJ21s. Two will be delivered in passenger configuration and the third will have a business jet interior. Congo had signed a Memorandum of Understanding at the **Farnborough Airshow** in July. **COMAC** has commitments for 278 ARJ21s. The manufacturer expects that the **Civil Aviation Administration of China** will certify its regional jet by the end of the year, after several years of delay due to the airframer's inexperience in both development and certification.

VLM Airlines, a Belgian regional carrier, may become the first **European Union** operator of the

Embraer forecast that 1,020 new 70- to 130-seat jets will be needed for the Chinese regional aviation market by 2033. This will represent 16 percent of that segment's global deliveries. **Embraer** released its **China Regional Aviation Market Outlook** at the **10th China International Aviation & Aerospace Exhibition**, in Zhuhai, Guangdong Province, in early November. Air travel in China will increase 6.8 percent annually in the next two decades, due to the country's sustained economic growth, which will see an expected 5.5 percent annual GDP growth rate. Fast urbanization and a growing middle class will also contribute to building China into one of the world's fastest growing markets, **Embraer** said. Civil aviation policies support regional aviation's rapid development. China launched an "Essential Air Service" program, improved its incentive policies, and built more regional airports in central and western China, which will spur the regional aviation sector to even more growth. The **Outlook** found a mismatch between market demand and aircraft type, which resulted in poor connectivity and lower frequencies – basically too many large airliners chasing too few passengers. The airlines need right-sized aircraft to unlock the huge potential in the country's secondary and tertiary markets, and to avoid irrational and unhealthy competition both on trunk lines and in regional aviation, the **Outlook** report said. The new generation of 70- to 130-seat regional jets, with lower operating cost, can be used in different business models. **Embraer** sees a need for 300 70- to 90-seat jets and 720 jets in the 90- to 130-seat category. Eighty-seven percent of new deliveries will be used to support market growth, and the other 13 percent will replace older aircraft in the current fleet, including 50-seat airplanes. **Embraer** has logged 181 firm commercial jet orders, and delivered more than 100 of them. The company currently has 80 percent of China's regional aviation market.

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Sukhoi Superjet 100LR. It will lease two of the long-range regional jets from **Ilyushin Finance**. **VLM** has the option to lease another two and took purchase rights on 10 more. The parties signed a letter of intent to lease the first two jets for 12 years. The airline will use the Russian-built twin-jets to return to scheduled services from its Antwerp base in 2015. **VLM** operated charter and wet-lease services for several European airlines, including **CityJet** with its fleet of 12 **Fokker F.50s**, since 2009. Its management recently completed a buy-out from **Intro Aviation**, and wants to try flying several scheduled services with four Superjets and two F.50s. **VLM** applied for traffic rights, and hopes to announce its new destinations in the coming weeks. **Sukhoi** has sold 166 Superjets and delivered 50 of them. Up to now, **Interjet**, Mexico, is the only Western customer, having ordered 20 and taken delivery of 11 aircraft.

Lion Group, Indonesia, ordered an additional 40 ATR 72-600s, worth \$1 billion (\$25 million each), at list prices. **Lion Air** is the country's biggest airline and is now the largest customer for the European turboprop. It has firm orders for 100 ATR 72s and has taken delivery of more than 40. The newest batch of planes will be delivered from 2017 through 2019. **Lion's** strategy is to fly to remote locations in Indonesia and Malaysia, to tap Indonesia's rapidly growing consumer class, as well as to compete with Malaysia's **AirAsia**. Chairman **Rusdi Kirana** said, "The additional ATR 72-600s will be used to meet the growing demand forecast over the next five years both within the Group's existing operators' networks and to develop other opportunities." **Lion Group** has three subsidiary airlines which operate ATRs: **Wings Air** flies 32 ATRs in Indonesia, **Malindo Air** uses 10 ATRs in Malaysia, and **Thai Lion Air** recently acquired one ATR for operation in Thailand. The Asia Pacific region accounts for nearly 40 percent of ATR -600 series aircraft sales. Today, more than 300 ATR aircraft are operated by Asia-Pacific carriers, while there are another 100 on order.

Joy Air and **Okay Airways** are the launch customers for **AVIC's Xi'an Aircraft MA700** turboprop program. Chief Engineer **Dong Jian Hong** said the Chinese carriers will be involved in the development of the 70-seat turboprop, and will ensure that the aircraft meets market demands. The airframer did not disclose the number of MA700s the airlines will order. Mr. **Dong** said the MA700 is scheduled to make its first flight in 2017, and will be certificated by the **Civil Aviation Administration of China** in 2019. It will also be certified by the U.S. **Federal Aviation Administration**. **Joy Air** and **Okay Airways** already operate the older MA60 turboprop, and **AVIC** said their input will push the MA700 program forward, considering their experience with turboprops. The MA700 will compete with the ATR 72-600 and Dash 8-Q400 NextGen in the large turboprop market. **AVIC** said the MA700, **COMAC ARJ21** regional jet and C919 narrowbody, will offer customers a full-range of Chinese-made aircraft.

Thailand's Agriculture Ministry signed a Letter of Intent for 10 **Xi'an Aircraft MA60** turboprops at **Airshow China** in Zhuhai. The turboprops will be used for cloud seeding missions. The delivery dates and aircraft pricing will be announced once a sale contract is finalised, **AVIC** said. **AVIC** has built 90 MA60s and enhanced MA600s and another 82 aircraft are on order from domestic carriers and from governments and airlines in developing countries.

Viking Air, Victoria, BC, Canada, sold two Twin Otter Series 400 aircraft to **Highlands and Islands Airports Limited (HIAL)**, Inverness, Scotland. **HIAL** will be the first Twin Otter Series 400 operator in Scotland. The two aircraft will be delivered in mid- 2015, and will be configured as standard 19-passenger commercial landplanes. They will be based in Glasgow and provide Public Service Operation

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services to several islands off the west coast of Scotland. Provisions for operator flight and maintenance training were also included in the contract, and will be provided through **Flightsafety International** in Toronto, Ontario, and **Pacific Sky Aviation**, in Victoria, BC, **Viking** said.

Order Changes and Cancellations

Airbus Reported Several Order Changes and Cancellations in October. **CALC—China Aircraft Leasing Co.** switched one A320 order to the A321 type. **CALC** now has 34 A320s and five A321s on order. **Aviation Capital Group** transferred two A320ceo orders to **Synergy Aerospace**, which immediately leased them to **Avianca Brasil**. **IndiGo** cancelled 20 A321neo orders and picked them up as A320neos. **TAM** transferred orders for 16 A320neos, 29 A321ceos and six A321neos to **LATAM Airlines Group**. **Intrepid Aviation** cancelled its last A330-200 order and picked up its 16th A330-300. **Srilankan Airlines** transferred one of its A330-300 orders to **Air Lease Corp.**, and then leased the plane from them upon delivery.

Skymark Airlines, Japan's third-largest carrier, said it was at risk of going out of business should it have to pay **Airbus** the full cancellation cost that the manufacturer is demanding. **Skymark** paid ¥26.5 billion (\$244 million) to **Airbus** for the six A380s and this was more than the airline's market value. It apparently owes **Airbus** another ¥43.5 billion. The airline expects to lose ¥13.7 billion yen (\$126 million) for the fiscal year ending in March, and lost ¥5.7 billion yen in the first half of the fiscal year, due to the costs of introducing new A330 and the weaker yen, have pushed up fuel costs. Its spokeswoman **Yuka Izumaru** said, "Negotiations with **Airbus** are likely to continue into next month. The weaker yen and intensifying competition with low-cost carriers is impacting [our] earnings." **Skymark** will drop unprofitable flights from Narita airport and will return two leased 737-800s in November. The airline will also sell and lease back some engines, a flight simulator and other assets to increase cash. **Skymark's** first A380 performed its maiden flight and flew to Hamburg for cabin installation and final painting.

Boeing Did Not Report any Cancellations in October. **Boeing** announced the various customers for 737s when they were delivered during October, including one -800 for **Hainan Airlines**, one -700 for **China Eastern Airlines**, one -800 for **Xiamen Airlines**, and one -800 for **Shandong Airlines**. An undisclosed customer ordered seven 777-300ERs in August 2013. **Qatar Airways'** purchase of one of the 777s was announced when it was delivered in October. It is assumed that the flag carrier is the customer for the other six. **Lion Air** exchanged six 737-900ER orders for six -800 orders. **CIT Aerospace** switched one 737-900ER order for one 737-800. **Garuda Indonesia** changed four of its 737NG orders to the 737 MAX 8 variant.

Embraer announced that previously undisclosed customers, **Fuji Dream Airlines** and **AZAL-Azerbaijan Airlines** purchased three EMBRAER 175s and two EMBRAER 190s respectively.

Leasing & Finance

SMBC Aviation Capital agreed to lease six **Airbus** A320-200s and one A321-200 to **Volaris**, Mexico. The company also purchased and leased back one new **Boeing** 737-800 with **Batik Air**, Indonesia. This is the first of a four aircraft covered by the sale and leaseback contract. As of October, 2014, **SMBC** owned and managed 376 aircraft, valued at over \$10 billion, which were on lease to airline customers in

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more than 40 countries around the world. It is committed to purchase a further 142 aircraft worth over \$13.5 billion from **Airbus** and **Boeing** in the coming years.

AerCap's CEO Aengus Kelly, commented, "The third quarter of 2014 was the first fully consolidated quarter and I am pleased to report that we have achieved record earnings of over \$315 million and ended the quarter with total assets of \$44 billion." **AerCap's** adjusted net income was \$315.8 million, an increase of 253 percent over the same period in 2013, mostly due to the integration of **ILFC**. **AerCap's** fleet utilization rate was 99.3 percent, the average age of the owned fleet was 7.6 years and the average remaining contracted lease term was 5.5 years. The lessor completed 134 aircraft transactions, and it is committed to purchase 391 aircraft with scheduled delivery dates up to 2022. More than 90 percent of **AerCap's** ordered aircraft which will be delivered by December 2016, and nearly 60 percent of the airplanes due through 2019, have been placed with an operator, either under lease contract or letter of intent. Nearly all of the **ILFC** aircraft and "substantial business operations" were transferred to Ireland. The lessor ended the third quarter with \$6.6 billion of available liquidity, and, \$8.9 billion of funding had been raised. **AerCap** bought nine aircraft worth a total of \$700 million and exercised an option to purchase 50 A320neo Family aircraft from **Airbus**. It agreed to purchase seven **Boeing** 787s from **Virgin Atlantic Airways** and will then lease them back. The first will be delivered in October and the lease terms are twelve years. **AerCap's** lease rents rose to \$1,172.3 million, compared with \$234.3 million in the same period in 2013. Its average lease assets were \$35.9 billion, compared with \$8.0 billion for the same period in 2013, again due to the integration of **ILFC**. Lease revenue rose to \$1,222.1 million, compared with \$258 million in 2013. Its net gain from sale of assets for the third quarter of 2014 was \$2.8 million, compared with \$10.7 million last year.

FLY Leasing Limited announced that it will purchase and lease-back three new **Boeing** 737-800 aircraft with a leading Asian airline. **FLY** bought the first aircraft by November, and the two remaining airplanes will be delivered by December 31. CEO **Colm Barrington** said the three new 737-800s increased its total acquisitions this year to 19 aircraft valued at over \$800 million. The lessor agreed to sell eight of its 11 **Boeing** 757 aircraft, and the deal is expected to close by the end of 2015. Mr. **Barrington** commented, "The sale of these eight older 757 aircraft, averaging 15.7 years of age, will lower the average age of our fleet and substantially reduce our exposure to out-of-production aircraft. The total proceeds from this transaction will exceed the net book values of the aircraft, which continues our record of moving on older aircraft at premiums to net book value. **FLY's** strategy is to actively manage its fleet, continually selling older aircraft (to lower the age of our fleet) and reinvesting in younger models. Our recent issue of \$400 million of unsecured notes, combined with more than \$300 million of capacity in our acquisition facility, provides **FLY** with the financial resources to maintain our growth trajectory. **FLY** is on track to grow its fleet by more than 15 percent in 2014, and expects similar growth in 2015."

Avation PLC announced that it will lease two new **Airbus** A321ceo aircraft to **Thomas Cook Airlines**, a member of the **Thomas Cook Group**. The two aircraft will be sold to **Avation** when they are delivered by **Airbus** in February and March 2016, and they are part of **Thomas Cook's** previously announced order of four A321s. The leases will run for 12 years with further 6-year renewal options, exercisable by **Thomas Cook**. The lease rate is typical for commercial leases. **Avation** Executive Chairman **Jeff Chatfield** said, this was the company's first purchase of new jet aircraft. "Avation seeks 12-year leases due to the predictability of the revenue stream over a meaningful time scale. This

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transaction represents an approximately \$100 million investment. **Avation** has committed to the sale and leaseback transaction along with an aircraft pre-delivery finance program until delivery in 2016. **Avation** is willing to consider sale and leasebacks from major commercial airlines and also to provide commercial airlines with pre-delivery finance.

Aircastle's Third Quarter Lease Rental and Finance Revenues were \$180.3 million, up \$15.1 million, or nine percent year over year. They reported a \$43.3 million impact from aircraft acquisitions, which were offset by \$21.1 million from lower revenues due to aircraft dispositions. Total revenues for the third quarter were \$177.6 million, an increase of \$7.5 million, or four percent above the previous year. They reported \$15.1 million in higher lease rentals and \$8.7 million in lower amortization of net lease discounts and incentives, but this was offset by lower maintenance revenue of \$17.1 million. **Aircastle** shortened the expected lives and reduced the residual values of two MD-11 freighters and wrote down \$20.4 million. Net income was \$19.2 million.

AWAS will purchase three new 737-800s from **Ethiopian Airlines** and lease them back. All three aircraft will be delivered in 2015 and come from the airline's orders with the manufacturer. As part of the deal, **AWAS** will assist **Ethiopian** with the disposal of two 767-300ER widebodies that are no longer needed.

Engines

Zhejiang Loong Airlines, China, will purchase LEAP-1A engines from **CFM International** for its nine **Airbus** A320neo aircraft. **CFM** valued the engine order at \$260 million at list price, which includes spare engines. **Zhejiang Loong Airlines** is based in Hangzhou in Eastern China, and began commercial operations in December 2013 with two CFM56-5B-powered A320s acquired from **Beijing Capital Airlines**. It has since added four new A320s and three ex-Air China 737-300SF freighters to its fleet.

Emirates will soon decide on which engine to install on its latest batch of 50 A380s, President **Tim Clark** said. The airline's first 90 A380s are, or will be, fitted with **Engine Alliance** GP7200 engines. **Rolls-Royce** is bidding to knock **General Electric/Pratt & Whitney** off the wings of **Emirates'** latest super jumbos. Mr. **Clark** said, "We're close in making a decision. By the end of this month we will

Long-Haul, Gulf Hub, Operating Model Will be Successful for Years. **Boeing** Chief Executive Officer **Jim McNerney** said, "Given the technology I see available, which is the size and range of airplanes, I think that this business model is sustainable for many, many decades. The Europeans are going to fight back, the Indians are going to try to compete and the Asians are going to try to figure out a way to fly over you." The three dominant Gulf carriers **Emirates**, **Etihad Airways** and **Qatar Airways** have acquired large widebody fleets of **Airbus** A380s and **Boeing** 777-300ERs to exploit the region's position as geographical cross-roads and built their home bases into hubs for intercontinental travel. The American and European legacy carriers have been supplanted as the world's commercial center has shifted south and eastward. Mr. **McNerney** predicted that **Lufthansa Group** and **Air France-KLM Group** will face increasing challenges in coming years as Gulf fleets swell even larger. They are already finding it tougher to compete in east-west markets, and he said, "There's more market share that is available in Europe and America." Gulf carriers have already ordered 342 widebodies from **Boeing** this year, including deals for 225 of the new 777X. The A380 backlog in the region stands at 106, while the European legacy carriers have six A380s on order. The Europeans will be buried by capacity and will have to find a way to adapt. The American international carriers may be next.

let the contract. The **Rolls-Royce** Trent 900 has more A380 customers, but there are more orders for the GP7200 since it was chosen by the A380's largest customer, **Emirates**. **Tony Wood**, President of Aerospace at **Rolls Royce**, said the company had a good shot at winning the competition. **Rolls** is the exclusive engine provider for the A350 widebody. This year **Emirates** canceled its order for 70 A350s but Mr. **Clark** said he would look at a possible order after the airplane proves its efficiency in service. "We will look at the A350 again, and then we'll compare it to the 787-10, which didn't exist when we bought the A350," he said. So far **Emirates** has chosen to operate the much larger A380 and 777 and it is looking at a 300 seat jet for shorter-haul routes. There are "holes appearing in our fleet planning" after 2018, Mr. **Clark** said, but **Airbus** said the A350 was sold out through the end of the decade.

Airline News

Emirates Net Income in the First Half totaled \$12 billion, up 11 percent from a year ago, while its net profit in the first half of 2014 amounted to \$514 million, an 8 percent improvement over the same period in 2013. The profit at the ground-handling unit fell due to repairs to the **Dubai International Airport** runway impeded traffic at the carrier's main hub. The 80-day runway repair work forced the airline to cut flights to 41 cities and lowered its revenue by \$270 million. Fuel accounted for 38 percent of the airline's operating costs, while regional conflicts, the Ebola epidemic and currency fluctuations are forcing the airline's expansion plan to be agile after its profit growth fell off. It was one of the first carriers to suspend flights over areas of armed conflict, including Ukraine and Iraq, and the route deviations increased fuel burn. **Emirates** carried 23.3 million passengers between April 1 and September 30, 8.4 percent more than in 2013. Even as it added aircraft, the load factor rose to 81.5 percent from 79.2 percent a year earlier. The airline is pressing forward with the expansion of its global route network and launched services to four new cities, including Abuja (Nigeria), Boston, Brussels, Chicago and Oslo. It now flies to 146 destinations in 83 countries, up from 137 cities in 77 countries from the same time last year. **Emirates** is the largest operator of both the A380 and 777, and it took delivery of six A380s and seven 777s in their first half. It has 11 more new widebodies scheduled for delivery by the end of the financial year on March 31, 2015. The airline is the world's largest airline in terms of international traffic.

Monarch Airlines Sold. The **Greybull Capital LLP** investment firm purchased 90 percent of **Monarch** from the **Mantegazza** family and this recapitalized the charter carrier to the tune of £125 million (\$200 million). The other 10 percent of the stock will be contributed to the **Pension Protection Fund**. Under the leadership of new Chief Executive Officer **Andrew Swaffield**, **Monarch** will be transformed into a low-cost carrier. The airline transported 6.8 million passengers last year and owns the **Cosmos Holiday** travel brand. It will shift to scheduled operations by next summer, and end its charter and long-haul flights in April 2015. The airline will retire eight of its 42 aircraft. The U.K. **Civil Aviation Authority** has renewed **Monarch's ATOL—Air Travelers Operator's License**. The company announced a \$3.1 billion order for 30 **Boeing 737 MAX 8** jets at the **Farnborough Air Show**, and the planes will arrive from 2018 to late 2020. The **British Airline Pilots' Association** and the **Unite** union, which represents cabin crew and engineers, agreed to up 30 percent pay cuts to protect 3,200 jobs. The airline had recently undertaken a comprehensive strategic review of all areas of the business, from operations to ownership and financing in order to realize an opportunity to build on **Monarch's** brand and to enter the European scheduled leisure carrier market. **Monarch Airlines** launched operations in April 1968 with two **Bristol Britannia** 200 long-haul turboprops.

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Fuzhou Airlines launched operations with its first 737-800 flight from the capital of Fujian province to Beijing on October 30. The carrier will operate domestic services to Chongqing, Haikou, Hefei, Kunming, Pudong, Shanghai, Tianjin, Taiyun and Xian, and will expand its operations to 11 more cities. The carrier is 60 percent owned by **Hainan Airlines**, which manages the new airline, and is 20 percent owned by **Fuzhou State Asset Investment Holding Co.** The airline currently operates two 737-84P/Ws (SN 34032 & 36782) that were transferred from **Hainan Airlines**, and it will acquire three more.

Ryanair Signed CEO Maichale O'Leary to a Five-Year Contract. Previously Mr. O'Leary had been on a renewable annual contract. A **Ryanair** spokesman said, "Mr. O'Leary has been granted options over 5 million ordinary shares, payable at current market prices. However, these options will only vest if the airline delivers exceptional performance targets over the next five years, which have been set by the remuneration committee." The contract was a reaction to the retirement of two important executives and it insures management stability. Mr. O'Leary was responsible for seeing the airline grow from 3 million passengers per annum to its current 80 million. He wants to oversee the forecasted 50 percent traffic increase in passengers by 2019. Capacity growth will be fuelled by the airline's order for 100 of the newly-launched 737 MAX 200 aircraft which were valued at \$10.4 billion (£6.4 billion). He also wants to complete the purchase of **Aer Lingus**, and settle issues at Stansted and Dublin airports. He said, "I think the whole digital transformation and new growth at primary airports makes it a very interesting place to work for the next number of years."

IATA Posts November Jet Fuel Prices. The association updates the world's average jet fuel prices each week. On November 14, the average price of fuel was \$2.315 per gallon, 3.5 percent lower than the October price of \$2.441. It was also 20.2 percent less than in November 2013. The price of fuel is affected by location. It was only \$2.200 in the Middle East region and was as high as \$2.410 per gallon in Latin America. Fuel is now cheaper in Europe at \$2.307 per gallon, than it is in North America, at \$2.372. Since last year fuel costs there dropped by 21.7 and 17.4 percent respectively. **IATA** forecast that the global airline industry's fuel bill will total \$122.9 billion in 2014. This was a decrease of \$7 billion over 2013.

Flybe Launched London City Airport Operations with six **Bombardier** Q400 aircraft. The airline will significantly boost its services from the heart of London to Belfast, Dublin, Edinburgh, Exeter and Inverness. "Our new **London City** routes provide direct links for customers in the regions to the heart of London's financial district," said **Flybe's** CEO **Saad Hammad**. He said the airline is talking with major European airlines about taking over their currently unprofitable short-haul routes. It is exploring "white label" deals where **Flybe** performs regional services on behalf of bigger carriers, which will allow them to focus on more lucrative routes requiring larger planes. (White label is a product manufactured by one company that is packaged and sold by other companies under varying brand names.) "Some [of the talks] will take longer than others before they cross the Rubicon because they're still owned by governments," he said. Mr. **Hammad** joined **Flybe** in 2013, after a stint at **easyJet**. He overturned the previous CEO's plan to buy large regional jets and compete head to head with the big airlines in the European regional market. He intends to operate fuel efficient turboprops in search of more modest growth while exploring options for third-party flights. Mr. **Hammad** canceled orders for 20 new **Embraer** E175 jets and subleased 24 Dash 8 Q400NGs from **Republic Airways** instead. The newer Q400NGs will replace 21 older Q400s. The airline retained four E175 orders which will be filled in 2018. **Flybe** currently has a "white-label" deal with **Finnair**, and has joint-ventures with **Brussels Airlines**, Belgium, and **Helvetic Airlines**, Switzerland.

The European Commission Approved Etihad's Purchase of 49 Percent of Alitalia. The two airlines agreed to give up airport slots on the Rome-Belgrade route since **Alitalia** and **Air Serbia** are the only carriers offering direct flights, and **Etihad** is part owner of both airlines. The **Commission** said it had concerns that the monopoly created by the transaction on the Rome-Belgrade route could lead to higher prices and a loss of service quality for passengers. This was the **EC's** only condition. The Gulf carrier also has minority stakes in **Aer Lingus**, **Air Berlin**, **Virgin Australia** and Swiss-based regional carrier **Darwin Airline**, which operates as **Etihad Regional**. **Alitalia** will benefit from a \$1.76 billion (\$2.2 billion) rescue plan that will provide funds to invest in more profitable long-haul routes and reduce its dependence on domestic and regional services where it faces fierce competition from low-cost airlines and high-speed trains. The **Alitalia** deal will strengthen the airline's presence in Europe's fourth-largest travel market of 25 million passengers per annum.

Flybe and Finnair are to Restructure Jointly Owned Flybe Nordic. The Exeter-based regional airline agreed to sell its shares in **Flybe Nordic** to either its partner, **Finnair**, or a new majority shareholder for the price of one euro. The share sale is conditional on the approval of European competition authorities. **Flybe Nordic** fully owns the Finnish subsidiary **Flybe Finland**, which operates **Finnair's** regional airline services. **Flybe** currently owns 60 percent of **Flybe Nordic** and **Finnair** holds 40 percent. The joint effort has not been profitable since its founding in 2011 and the partners were unable to resolve their differences as to how to fix the problem. **Flybe** is open to selling its share to a new majority shareholder by the end of the year. **Flybe Nordic** was based on a prior carrier, **Finncomm Airlines**, and operates two ATR 42-500s, 10 ATR 72-500s and two **Finnair** E170s.

Saudi Arabia's Budget Airline, flynas, suspended its unprofitable long-haul flights. CEO **Raja Azmi** said, "We have taken a stand that we are suspending - not stopping - those routes for the moment and will re-look at the whole situation again." The airline dropped all flights to **London Gatwick**, and cancelled its plans to expand to new destinations including Manchester, Kuala Lumpur and Jakarta, from its hub in Jeddah. The airline returned two 767-300ERs (SN 25411 & 26208) to **EuroAtlantic Airways** in November. It still retains one 747-428 (SN 25628) that it leased from **Eaglexpress Air**, and two A330s (SN 096 & 1008) that it leased from **Hi Fly**. **Flynas** apparently wet-leased its long-haul equipment. The airline is 37 percent owned by Saudi investment firm **Kingdom Holding** and is 63 percent held by **National Airline Services Holding**. Mr. **Azmi** said the carrier would focus on expanding its short-haul services. It might look at a different model for long-haul flights at a later date. It operates 23 leased A320-200s and three E190s on 950 weekly flights to 25 domestic and regional destinations. It carried 3.3 million passengers in 2013 and it expects to break even next year, after seven years of losses.

Lion Group, Indonesia, started A320 operations with its first three aircraft in November. It leased two A320-214/Ws (SN 6164 & 6280) from **Avolon**, and the third (SN & 6309) from **Transportation Partners**. In March 2013, the airline ordered 234 A320 Family aircraft, which comprised of 60 A320ceo, 109 A320neo, and 65 A321neo aircraft. The initial batch of A320s will be operated by the **Group's** full-service subsidiary **Batik Air**, and will fly domestic and regional services. The **Batik** aircraft are powered by CFM56 engines and feature a premium two class layout seating a total of 156 passengers. Jakarta-based **Lion Group** was launched in 2000, and has become one of Asia's fastest-growing airlines. The **Group's** three airlines, low-cost **Lion Air**, full-service **Batik Air** and domestic

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regional unit **Wings Abadi Airlines**, fly to more than 70 cities in South East Asia. The Group also owns 49 per cent of Malaysia-based **Malindo Air**.

Cargo Pallet

Airbus To Launch the A330 Beluga. The new Beluga will be based on the A330-200 and will use much of the existing components and equipment. The design will include the Beluga's distinctive lowered cockpit, the cargo bay structure and the rear fuselage and tail, all which need to be developed. The extra-large transport's cargo bay will be 1 meter (3 feet) larger in diameter and 6 meters (18 feet) longer. It will carry 53 tons of payload, an increase of 6 tons. The manufacturer needs to build five A330 Belugas to accommodate the ramp-up of the A350 XWB and other aircraft production rate increases. The first of the five new Belugas will enter in service in mid-2019. The existing five-strong A300-600ST (Super Transporter) Beluga fleet will be retired by 2025. **Airbus** uses the A330 Beluga to transport large aircraft components, such as wings, tails and fuselage parts between company production sites in Europe. The plane also can fly oversize cargo such as complete helicopters for customers. The first A300-600ST entered service in 1995 and the last was delivered in 1999. They currently fly 5,000 hours per year and **Airbus** launched the Fly 10,000 program to double each **Beluga's** flight hours by 2017. Even this will not be enough to address the forecast need for oversize capacity, so the new A330 Beluga fleet will close the capacity gap. Oversize air transport is a cornerstone of the company's industrial operations due to its flexibility and short transport lead-times, **Airbus** said.

Atlas Air Worldwide Holdings, a provider of outsourced aircraft and aviation operating services, placed a third **Boeing** 747-400F freighter into service for **Etihad Airways**, the national carrier of the United Arab Emirates. **Atlas Air** will operate the freighter on behalf of **Etihad Cargo**, through an ACMI (aircraft, crew, maintenance and insurance) agreement, starting in November.

Military Market

Airbus Defence and Space said it recently missed a significant milestone to introduce military capabilities to the A400M Atlas aircraft, triggering a contract cancellation clause. **Airbus Group** CFO **Harald Wilhelm** said, "We did not achieve all the [operational] capabilities in time. It missed the standard operating capability 1.0, which was due to be attained by November 1, and **Airbus'** failure to do so has triggered a contract clause enabling European customers to cancel their orders. Mr. **Wilhelm** said all the nations comprising the **OCCAR** procurement body – Belgium, France, Germany, Luxembourg, Spain, Turkey and the U.K. – would have to agree unanimously to terminate their combined 170 orders, which "we see as unlikely." He said the company should deliver 10 Atlas aircraft this year, but the "profile of deliveries is obviously not smooth." The shortfalls are expected to be addressed by mid-

Airbus Flew the Royal Air Force's first A400M Atlas tactical transport to **RAF Brize Norton** air base on November 17. The A400M, registered as ZM400 (SN015), was delivered from the company's **Defence & Space** in Seville, Spain. The formal delivery event was held at the air base near Oxfordshire ten days later. The **RAF's** second Atlas (SN 016) flew last month, and **Airbus** expects to hand it over in November, with the third aircraft (SN 020) arriving in December. With its useful maximum payload capacity of 32 tons, the Atlas will replace the **RAF's** now-retired **Lockheed C-130K Hercules** fleet. The last of the **RAF's** 22 A400Ms will be delivered in 2018.

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2015. Mr. **Wilhelm** said this is not the most cost efficient way to do this, due to the need for retrofit programs for aircraft that have already been handed over. **Airbus** is introducing further enhancements to the A400M, with aerial delivery, in-flight refuelling and self-protection, the key capabilities to be installed during the next year, he said. **Airbus** will continue with deliveries and industrial ramp-up. It has handed over three Atlases to France and one to Turkey. France will receive another two A400Ms and the German **Luftwaffe** will receive its first Atlas (SN 018) before the end of 2014.

The French Air Force ordered 12 A330 MRTTs (Multi Roll Tanker Transport), worth €3 billion (\$3.8 billion). The first will be delivered in 2018, followed by the second in 2019, and then they will arrive at a rate of one or two per year. They will be delivered in a specific French configuration, and the contract includes training, spares, ground support equipment, and five years of in-service support. The air force is replacing 11 50-year-old **Boeing** KC-135FR and three KC-135RG aircraft. France is the sixth nation to order the A330 MRTT, which have ordered a total of 34 aircraft. India and Qatar have selected the MRTT and are negotiating for six and two aircraft respectively.

Airbus Defence and Space and **Tata Advanced Systems** submitted a joint bid to replace the **Indian Air Force's** ancient fleet of **Hindustan Aeronautics Ltd.** HAL 748 turboprop transports with the **Airbus** C295 twin-turboprop medium airlifter. **Alenia Aeromacchi** is offering its C-27J Spartan to the **IAF** as well. The HAL 748s, Indian-built versions of the **Hawker Siddley** HS 748, were delivered from the 1960s to 1984 and 56 are still in service. If **Tata Advanced Systems** and **Airbus** win the contract, the first 16 will be built in Spain and the other 40 will be manufactured and assembled by **Tata Advanced** in India. **Airbus** said, "This will include undertaking structural assembly, final aircraft assembly, systems integration and testing, and management of the indigenous supply chain." No details are known about the **Alenia** C-27J offer.

The Mexican Navy ordered two more **Airbus Military** C295s in October. They will join its four-strong fleet of C295 medium transports, as well as six CN235s and two C212s. The **Mexican Air Force** operates six C295s, and has four more on order. Two CN235s are operated by the **Federal Police**, making Mexico the largest **Airbus Defence and Space** customer in Latin America. **Airbus** said the new **Navy** aircraft will be operated on a diverse range of transport missions for military, civil and humanitarian missions. The **Mexican Government** evaluated the **Airbus** A400M Atlas after watching the tactical transport carry out a series of demonstrations in Mexico City in May.

Alenia Aermacchi and the **Slovak Defense Ministry** signed a contract in October for the supply of two C-27J Spartan aircraft. The deal includes early logistic support and the training of pilots and maintenance personnel. The acquisition of the C-27J is part of the **Slovak Armed Forces'** modernization program. The **Defense Ministry** started the bid process in 2008 and **Alenia** won in December 2008, but it took six years for the details to be worked out. The two twin-turboprop tactical transports will be delivered in 2016 and 2017. The new aircraft will replace the **Slovak Air Force's** pair of Soviet-built **Antonov** An-26 transports. **Alenia Aermacchi** said "The Slovak armed forces intend to increase their contribution within **NATO**, and the C-27J Spartan is the fundamental means to assure full interoperability with other bigger-size heavy airlifters used in international coalitions." The Italian airframer has sold 78 Spartans to 12 nations, and 48 of the type are currently operational with the armed forces of Bulgaria, Chad, Greece, Italy, Lithuania, Mexico, Morocco, Romania and the U.S. It has outstanding orders from Australia, Peru and Slovakia.

Lockheed reported it delivered five C-130J aircraft in the third quarter of 2014, and eight C-130Js in the same period of 2013. The company said it earned approximately \$225 million less during the recent quarter, due to three fewer deliveries. This means the C-130J (exclusive of spares, training and other costs) is valued at approximately \$75 million each.

AIRCRAFT DELIVERIES & SALES

Airbus

Airbus A319. Two A319s were delivered in October, including one **Airbus Tianjin Final Assembly Line (FAL)**-built -115W (SN 6191) to **China Eastern Airlines**. **Z/C Aviation Partners** took delivery of its sixth of nine -115/Ws (SN 6310) and leased it to **American Airlines**.

Airbus A320. **Airbus** delivered 25 A320s during September, including two -232/Ws (SN 6300 & 6304) to **Spirit Airlines**. **Synergy Aerospace** took delivery of two new -214/Ws (SN 6139 & 6173) and leased them to **Avianca Brasil**. The airplanes had been allocated to **Aviation Capital Group**, flew in May and June 2014, and were stored at Toulouse until delivery. Two **Lion Air**-ordered -214/Ws (SN 6164 & 6280) were sold to **Avolon** and leased to **Batik Air**. The first of the A320s was stored in **Lemwerder Airport**, Germany, since June. **AWAS** lease a second and third new -233/Ws (SN 6288 & 6321) to **Volaris**, Mexico. The aircraft came from **AWAS'** direct order from the manufacturer. **Volaris** has been an **AWAS** customer since 2013. **Iberia** accepted two -214/Ws (SN 6290 & 6328) and transferred the first one to **British Airways**. Four Chinese airlines acquired one A320 each in October. **Shenzhen Airlines** received **Tianjin FAL**-built -232 (SN 6197), and **Hong Kong Airlines** acquired -214 (SN 6206) from **Tianjin FAL** and leased it to **Beijing Capital Airlines**. **Chengdu Airlines** leased -216/W (SN 6281) from **China Aircraft Leasing Co. (CALC)**, and **BOC Aviation** leased ex-**Qantas/Jetstar** -232/W (SN 6302) to **Hong Kong Express**. It was the second A320 that **BOC** leased to **HK Express**. **Thai Smile** leased the first of five new -232/Ws (SN 6297) from **Thai Airways International**. **SMBC Aviation Capital** leased a second -214/W (SN 6282) to **Vanilla Air**, Japan, and **Jetstar Japan** acquired -232/W (SN 6296) from **Qantas Airways**. **Tigerair Australia** sold -232/W (SN 6136) to **AWAS**, which long-term leased it to **Jetstar Pacific**, Vietnam, after a five-month

In November, AWAS delivered one new A320-214/W (SN 6320) from its order pipeline to **ANA Holdings** which will use the aircraft to support the expansion of its low cost regional subsidiary, **Vanilla Air**. It is based in Narita and flies to Naha (Okinawa), Sapporo, Seoul and Taipei. **Vanilla Air** was launched on December 20, 2013, and **AWAS** supplied a total of four A320s to the airline.

AWAS leased one A320-200 to **Lion Air's** Indonesian full service subsidiary **Batik Air**. It is part of a four aircraft transaction with **Lion Air** that included three 737-800s. The new aircraft were purchased by the airline from their respective manufacturers and then sold to **AWAS** for lease back.

Jetstar Hong Kong sold six of the nine new A320s that it had on order because it could not start operations. The **Hong Kong Government** has still not approved the start of services, 18 months after the application was submitted.

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storage period. **AirAsia** received -216/W (SN 6262), **IndiGo** accepted its 99th of 100 ordered -232/Ws (SN 6287), and **Cebu Air** acquired its 21st -214/W (SN 6317). **Airbus** delivered the 73rd -214/W (SN 6301) to **Lufthansa**, and the 29th -214/W (SN 6293) to **Air Arabia**. **South African Airways** accepted one -232 (SN 6306) and **AZAL Azerbaijan Airlines** received one VIP A320-214CJ Prestige (SN 6285). It was flown to Basel, Switzerland, to have the interior installed.

Airbus A321. **Airbus** delivered 15 A321s in October, including two -231/Ws (SN 6279 & 6326) to **JetBlue**. **American** leased one -231/W (SN 6313) from **Aviation Capital Group**. **GECAS** leased an eighth -211/W (SN 6312) to **EVA Air**, and one -211/W (SN 6314) to **Thomas Cook Scandinavia**. **Air China** leased -211/W (SN 6319) from **GECAS** and -232/W (SN 6308) from **Air Lease Corp. (ALC)**. **ALC** leased -231/W (SN 6324) to **Air Macau**. **Sichuan Airlines** leased one -231/W (SN 6316) from **ALC** and took delivery of -231/W (SN 6303) from its own backlog. **Avolon Capital Partners** purchased two new -321/Ws (SN 6291 & 6295) from **Philippine Airlines** and leased them back. These were the fifth and sixth A321s to be acquired by **Avolon**. **ICBC** leased the fourth new -231 (SN 6299) to **Asiana Airlines**. **China Eastern Airlines** received -231/W (SN 6305).

VietJetAir, Vietnam, received its first A320 (-214/W, SN 6341) ordered directly from **Airbus** in November. The delivery marks the start of a major expansion at the airline. It has another 13 A320ceo, seven A321ceo and 42 A320neo aircraft on firm order and purchase rights for another 30 aircraft. It currently leases 16 A320s and will lease seven more from third party lessors. Vietnam's first private domestic/international airline started flying in 2011.

Amentum, a Dublin-based commercial aircraft leasing company, renewed the lease of A320-233 (SN 3624) with **Volaris (Concesionaria Vuela Compania de Aviacion)** for another six years. The aircraft is owned by **Global Aircraft Fund I** and was financed with commercial debt from **NordLB**. **Amentum** manages a total of three A320-200s on lease to **Volaris** for two different investor customers.

CIT Aerospace leased used -231 (SN 3669) to **Dragonair**. The aircraft is powered by **IAE V2533-A5** engines and is the second of two aircraft **CIT** leased to the airline in 2014. **Dragonair** previously leased two A320-232s (SN 4023 & 4247) from **CIT Aerospace**.

Airbus A330. **Airbus** delivered three -200s and four -300s in October, including the 15th of 18 -243s (SN 1565) to **Hawaiian Airlines**. **Synergy Aerospace** leased the 10th and last -243 (SN 1492) to **Avianca**. The airline now operates a dozen of the type. **China Eastern Airlines** received its 27th -243 (SN 1569). **Philippines Airlines** acquired its 21st of 23 -343Es (SN 1559) and **Cathay Pacific** received its 46th of 49 -343Es (SN 1567). **Air China** accepted its 15th of 20 -343Es (SN 1570). **SriLankan Airlines**, the national carrier of Sri Lanka, leased its first -343 (SN 1564) from **Air Lease Corp.**, and became a new operator for the type. The -300 joined the airline's existing fleet of seven A320s, two A321s, seven A330-200s and six A340-300s. **SriLankan** will take delivery of a further five A330-300s and four A350-900s.

Scandinavian Flag Carrier SAS completed the sale of A330-343 aircraft (SN 497) to Florida-based **Aviator Capital**, and leased it back. This is the first transaction between the two parties and was arranged by **SkyWorks Leasing**.

Airbus A350. The delivery of the first A350-941 (A7-ALA, SN 006) to **Qatar Airways** has been delayed by a week. It will arrive in Doha between December 12 and December 15. **Airbus** is currently building two aircraft a month and plans to increase the build-rate to three A350s per month by December 31. They intend to produce five planes per month by December 2015, and up to 10 a month by mid-2018.

Airbus A380. Only one A380 was delivered in October, the eighth of 12 -841s (SN 163) for **British Airways**. **Airbus** put **Skymark Airline's** first A380-841 (SN 162) into storage at Toulouse.

Boeing

Boeing 737 NG. **Boeing** delivered 39 737s in October. **Lion Air** received one -9GPER/W (SN 38299) and three -8GPER/Ws (SN 39825, 39826 & 40061). **Lion Air** is operating the -9GPER. The first and third -8GPERs were leased to **Batik Air**, Indonesia, and **Malindo Air**, Malaysia, leased -8GPER (SN 39826). **American Airlines** acquired two more -823/Ws (SN 31203 & 33329) for a fleet of 242, and **United Airlines** took delivery of two -924ER/Ws (SN 60087 & 60088). **Ryanair** accepted two -8MD/Ws (SN 44688 & 44689) for a fleet total of 352. They were sold to **Aviation Finance & Leasing** and leased back. **WestJet** purchased two -8CT/Ws (SN 60125 & 60126) for a fleet total of 19, and it has six more on order. **China Eastern Airlines** bought one -79P/W (SN 39739) and one -86D/W (SN 41493). The latter plane was sold to **Shanghai Airlines** upon delivery. **Air China** took delivery of -89L/W (SN 41098) and leased -89L/W (SN 41324) from **Air Lease Corp.** **GECAS** received three -86N/Ws (SN 41254, 41270 & 43421), and leased the first to **Hainan Airlines**, the second to **Garuda Indonesia Airways**, and the third to **Nok Air**, Thailand. **Southwest Airlines** received its 73rd -8H4/W (SN 36920) and **Delta Air Lines** accepted its 28th -932ER/W (SN 31939). **Alaska Airlines** acquired its 23rd -990ER/W (SN 41703), and the airline has 36 more on order. **Boeing** delivered one BBJ2 (SN 60686) to a **Business Jet/VIP Customer**, and one -8JP/W (SN 43878) to **Norwegian Air Shuttle**. **COPA Airlines** bought its

Amedeo bought a second A380 (SN 164) from **Emirates** after it was delivered to the airline in November. The plane was leased back for 12 years. The lessor acquired its first A380 (SN 157) from **Emirates** in September. The financing for both planes was the same. A bank syndicate, including **Commercial Bank International**, **China Construction Bank, Dubai Branch (CCB)**, **Qatar National Bank (QNB)**, **Sumitomo Mitsui Trust Bank** and **Westpac Banking Corporation (Westpac)** provided the senior and junior loans. Approximately 20 percent of the undisclosed purchase price was paid in the form of equity capital from **Amedeo** and New York-based **Pine Brook Partners**. In the past the equity portion was purchased by shareholders in funds listed by **Amedeo** (né **Doric**) on the **London Stock Exchange**. The banks provided 80 percent of the capital. The banks will be paid quarterly and after the 12-year lease, **Amedeo** and **Pine Brook** will own the airplane. They can then re-lease it to **Emirates** or another airline, or sell it on the open market. The jet will have a residual value of 50 percent at the end of the lease term. So far, no used A380s have been sold and the first will not come off lease until 2017. **Amedeo** will start taking delivery of 20 A380s in 2016, but it has not placed any with an operator. Chief Executive Officer **Mark Lapidus** believes the 550 plus-seat plane will be needed at slot-constrained airports where extra frequencies do not offer more connectivity and where there are peak time departures. Further, he said, these trends will only manifest themselves more clearly and definitively in the future. Mr. **Lapidus** said, We have four delivery slots for 2016 and we will make sure those are taken care of. His leasing plan is focused on airlines that were not wanting to buy the high-priced planes.

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37th -8V3/W (SN 40784), then sold it to **SMBC Capital** and leased it back. **SilkAir** acquired its seventh of 23 -8SA/Ws (SN 44223), and **Jet Airways** received its 28th of 30 -85R/Ws (SN 39069). **Flydubai** took delivery of -8KN/W (SN 40267), and **Qantas** took delivery of its 73rd of 74 -838/Ws (SN 44576). **Boeing** delivered -800s to three other Chinese airlines, including one-84P/W (SN 39216) to **Hainan Airlines**, one -85N/W (SN 41619) to **Shandong Airlines**, and one -85C/W (39906) to **Xiamen Airlines**. Six leasing companies received one -800 each. **Avolon** leased the first of two -8MA/Ws (SN 43662) to **Aeroflot** in October. **AerCap** leased -8U3/W (SN 41800) to **Garuda Indonesia Airways**, and **Aviation Capital Group** leased -8HX/W (SN 40549) to **Kenya Airways**. **AWAS** leased a second new -860/W (SN 39442) to **Ethiopian Airlines**. It came from **AWAS'** direct order. **Siberian Airlines** leased -8GJ/W (SN 41400) from **BOC Aviation**, and **SMBC Aviation Capital** took delivery of -8LJ/W (SN 39950). It has not been leased to a client yet.

Military 737 Delivered. **Boeing** delivered the 31st P-8A Poseidon (SN 42259) to the **U.S. Navy** in October, ahead of schedule the company said. The latest P-8A and six others are currently having their electronic suites installed before being placed in active service. There is an approximate 6-7 month lag between delivery and entry into service.

The India Navy's sixth P-8I maritime patrol aircraft was delivered on schedule on November 24, to the **Naval Air Station Rajali**. The P-8I is part of a contract of eight awarded in 2009. The final two will be delivered in 2015. **Boeing** said the **Indian Navy** is currently conducting missions with the first five aircraft, and the newest P-8I will begin flight trials in the coming months.

Avolon purchased one 737-800 from **flydubai** in November and leased it back. The airline now leases five -8KN/W (SN 40234, 40246, 40247, 40248 & 40249) from **Avolon**.

Qantas' 74th and last **Boeing** 737-838/W (VH-XZP, SN 44577) arrived in Sydney on November 17. It was painted in a unique retro livery that harkens back to the airline's red and orange color scheme from the 1970s. The fuselage has a white top with a golden-orange stripe and the vertical stabilizer is all red with the winged kangaroo logo painted in white. **Qantas** CEO **Alan Joyce** said, "For 70 years this familiar kangaroo on the tail has represented not just our airline, but also the best of Australia and a sense of home for those who have seen it at airports around the world." The airplane is named "James Strong", who was the airline's CEO from 1993 to 2001, and who died last year.

Ruili Airlines took delivery of its first 737-7ME/W (SN 60460) from **Boeing**. **Ruili** is a new private airline based at **Changshui International Airport** in Kunming, Yunnan province. The airline has another seven 737-700s and six 737 MAXs on order. The carrier acquired two 737-700s and one 737-800 from **Air Berlin** in December 2013, and operates them on seven domestic routes in China. **Ruili** plans to fly 120 daily flights on 60 to 70 routes, with 30 **Boeing** airplanes by 2020.

Boeing 747. **AirBridgeCargo Airlines** ordered its first 747-867F (SN 60687) and took immediate delivery. The plane was built for **Cathay Pacific Airlines**. **AirBridge** operates five 747-8Fs that were ordered by **Volga-Dnepr Airlines**, also in Russia. **Nippon Cargo Airlines** received its sixth -8KZF (SN 36141). The airline has eight more on order. To date, **Boeing** has delivered 52 747-8 Freighters and 24 passenger 747-8Is.

November 2014

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Boeing 767. **Federal Express** took delivery of its seventh -3S2F (SN 44378). The cargo airline has 41 more on order.

Boeing 777. **Boeing** delivered nine 777s in October, including the 12th 777-F1H freighter (SN 42233) for **Dubai Aerospace Enterprise**. It was leased to **Emirates**. **Ethiopian Airlines** accepted the first of four -350 freighters (SN 42031). **Boeing** has delivered 98 777Fs to date and has 36 more on backlog. **Cathay Pacific Airways** received two -367ERs (SN 41759 & 42144), and now has 41 in its fleet and eight on backorder. **China Eastern Airlines** received its second of 20 -39PERs (SN 43288), and **American Airlines** accepted its 15th -323ER (SN 33523). **Emirates** purchased its 69th of 120 -31HERs (SN 41368). This was the airline's 100th 777-300ER and marked another milestone in a partnership with **Boeing** that began when the Dubai-based airline ordered its first 777 in June 1992. With this delivery, **Emirates** has 142 777s in operation and is the only airline in the world to operate all the 777 variants. The 777 comprises the largest part of its 213-strong fleet, and **Emirates** has another 51 777-300ERs and 150 777Xs on order. **China Airlines** leased the airline's second -36NER (SN 41822) from **GECAS** in late October. The airline leased its third -36NER (SN 41845) in November, and the fourth aircraft is scheduled for delivery in January 2015. **Qatar Airways** accepted its 28th and final -3DZER (SN 60330) last month. It has one 777F and 50 777Xs on order.

Qatar Airways took delivery of three **Boeing** widebodies on October 27, which is an unprecedented event. **Qatar's** CEO **Akbar Al Baker** said, "We took delivery two 787s and a 777. Each of them was on their way to Doha at 15 minute intervals. Never in the history of an airline have so many aircraft been taken in just one day." There have been occasions when an airline accepted two narrowbodies at one time, but as far as **AVMARK** knows, no airline has taken the delivery of three twin-aisle jets in one day, especially ones that cost \$218 million and \$330 million at list prices. **Qatar** has outstanding orders for 51 777s and 13 787s. In mid-December, the **oneworld** alliance carrier and launch customer will receive the first **Airbus A350** to be delivered.

Boeing 787. **Boeing** delivered 11 787-8s in October, including two 787-8s (SN 38334 & 38335) to **Qatar Airways** on October 27. **AerCap/ILFC** leased the second of five -8s (SN 36110) to **Thai Airways International**. **Air Canada** received its fifth -8 (SN 35261), and **Xiamen Airlines** accepted its second of six -8s (SN 41539). **CIT Leasing** leased -8 (SN 37164) to **Royal Jordanian**, its third Dreamliner. The Jordanian flag carrier will lease -8 (SN 36112) from **AerCap** and -8 (SN 37166) from **CIT** shortly. **Kenya Airways** took delivery its sixth of nine -8s (SN 36043), and the 10th and final -8 (SN 34752) was delivered to **Ethiopian Airlines**. A **Business Jet/VIP Customer** accepted -8 (SN unknown) on October 8. The first North American carrier to operate the stretched -9 Dreamliner, **United Airlines**, received its second -9 (SN 36402). It has 24 more on order. **Virgin Atlantic Airways** leased its first 787-9 Dreamliner (SN 40956) from **AerCap/ILFC** on October 9. The airline is the first European airline to operate the 787-9, and the airplane was the first of 16 787-9s that **Virgin Atlantic** had ordered from **Boeing**.

American's first 787-8 (N800AN, SN 40618) was rolled out of the paint shop at **Boeing's** Everett, Washington, facility. It is scheduled for delivery to **American** in November and it is expected to enter service on domestic routes in the first quarter of 2015. A second Dreamliner (SN 40619) will be delivered this year and another 11 aircraft are due in 2015. The airline has firm orders for 15 more 787-8s and 26 787-9s. **American** will use 787s on its international routes after enough of them have been delivered. CEO **Doug Parker** said, "You need more than one airplane. You need to have a critical mass where you can actually do an international route."

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Avianca expects to take delivery of its first **Boeing** 787-8 (SN 37502) in the first week of December, and hopes to put it in commercial service by year-end. After certification and training in Colombia, the aircraft will fly to London, Madrid and Barcelona and will replace the A330s that currently serve those routes.

Regional Jet

Bombardier delivered the sixth CRJ702ER (SN 10340) to **Ibex Air**, an **ANA Connection** regional, in October. **Delta Air Lines** accepted three more CRJ900LR NextGens (SN 15335, 15336 & 15337), for a fleet total of 73. They were leased to **Endeavor Air** for operation on behalf of **Delta Connection**. **American Airlines Group's** ninth of 30 enhanced CRJ900 NextGen aircraft (SN 15338 & 15339) were delivered, and the aircraft will be operated by the group's wholly-owned subsidiary **PSA Airlines** under the **American Eagle** brand.

Embraer. **Republic Airways** accepted two more EMBRAER 170-200 LR (E175s) (SN 17000366 & 17000428) in October, for operation on behalf of **American Eagle**. The first E175 (SN 17000366) was an **Embraer** test aircraft that first flew in November 2013. **United Airlines** leased four new E175s (SN 17000426, 17000427, 17000429 & 17000430) to **Mesa Airlines**. **Azul Linhas Aereas** received one EMBRAER 190-200 SR (E195) (SN 19000678).

United Airlines will transfer 36 **Embraer** ERJ-145s to **Trans States Airlines**, which will operate them under the **United Express** brand. The first ERJs will be handed over this year and will enter service in February 2015. The last one will arrive in the first quarter of 2016. **Trans States** has operated regional service under the **United Express** name since 2003. With the addition of the 36 50-seat aircraft, **Trans States's** fleet will more than double to 65 aircraft.

Sukhoi Civil Aircraft Company delivered two SSJ-95Bs (SN 95046 & 95048) to **Interjet**, Mexico in October.

Turboprop Aircraft

ATR. In October, **Aviation PLC** took delivery of new ATR 72-600 (SN 1183) and leased it to **UNI Airways**, the largest regional domestic airline in Taiwan. This is the second -600 that **Aviation** leased to **UNI**. **Wings Abadi Airlines** received one -600 (SN 1186) and leased it to **Malindo Airlines**. **Azul Linhas Aereas** took delivery its 37th -600 (SN 1180), and **Mount Cook Airlines/Air New Zealand Link** accepted its fifth -600 (SN 1182). **Garuda Indonesia** leased its seventh -600 (SN 1181) from **Nordic Aviation Capital (NAC)**. **JetTime** leased one -600 (SN 1171) from **NAC**.

Airstream International Group arranged the dry lease of a second ATR 72-500, (SN 585) to **Kalstar Aviation**, Indonesia. The ATR was previously owned and operated by **Air Dolomiti** before it and sister ship (SN 638) were purchased by **Aircraft Solutions Lux**. The aircraft will enter service on internal routes based on the island of Kalimantan (Borneo). **Airstream** arranged the sale of ex-**Kingfisher Airways** ATR 72-500 (SN 720) to **Air Vanuatu** on behalf of **Plateau Aviation**. The airline will use the aircraft on domestic and international flights. The ATR underwent extensive refurbishment at **Sepang Aircraft Engineering** in Malaysia prior to delivery. **Airstream** helped place ATR 42-320 (SN 093) with **RJM Aviation** on behalf of **Regourd Aviation**, France. The airplane will undertake oil and gas industry operations in Chad. This was the eighth ATR that **Airstream** has sold or leased in 2014.

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and one -600 (SN 1177) from **Air Lease Corp.** Both are operated for **SAS-Scandinavian Airline System** which now has eight -600s in its fleet.

Bombardier. In October, **Falcon Aviation Services**, Abu Dhabi, wet-leased new 8Q-402NG (SN 4454) to **Senegal Airlines** for one year. A second Q400NG will be leased later. **Falcon** and **Bombardier** signed a Memorandum of Understanding (MOU) in July 2014, saying they will jointly address the need for several modern, high-quality aircraft in Africa which meet international standards. The **Senegal** airplane is the first example of the collaboration. **Nok Air**, Thailand, received its third and fourth high-density, 86-seat Q400NGs (SN 4479 & 4480) in November.

Bombardier delivered the first two Q400 NextGen turboprops (SN 4478) to **Air Côte d'Ivoire** in November. The airline purchased two Q400NGs and took two options in a deal announced on December 18, 2013. The airline opted to enroll its Q400 NextGen fleet in **Bombardier's 'Smart Parts'** program, which offers competitive and predictable component exchange and repair costs, as well as superior quality and availability of key components. The five-year **Smart Parts** agreement is customized to meet the airline's specific operational and performance needs, the manufacturer said.

Antiques and Other Junque

Last Passenger MD-11 Leaves Service. Dutch carrier **KLM Royal Dutch Airlines** was the world's last airline to fly the three-engine tri-jet widebody for regular revenue service. It retired the **McDonnell Douglas MD-11** (PH-KCE, SN 48559) on October 26 after it flew from Montreal to Amsterdam, where it was met with a water-cannon salute. The plane had a special logo "95 Years" painted on it to commemorate **KLM's** founding in 1919. **KLM** has operated **Douglas Commercial** (DC) aircraft since its first DC-2 was delivered in 1934. It was the only airline in the world to operate all the DC models, from the DC-2 through the DC-10. This included the very rare DC-5, which it flew in Indonesia. **KLM's** first DC-2 PH-AJU named **Uiver** (Stork) was entered in the October 1934 **MacRoberson Air Race** between London and Melbourne to demonstrate the safety and reliability of the DC-2. **Uiver** came in second behind a purpose-built **de Havilland DH-88** racer. **KLM** took delivery of its first MD-11 (SN 48555) in December 1993 and its 10th in April 1997. The airline operated the type for nearly 21 years. In a statement, the carrier said the flight "not only

Boeing Donated the Third 787-8 Produced (ZA003, SN 40692) to the Museum of Flight in Seattle. CEO Ray Conner said, "Boeing is committed to supporting and giving back to the communities where our employees work and live. By placing this airplane in the Puget Sound area, members of the **Boeing** team and their families will see it displayed locally, and it will hopefully inspire a new generation of aviation enthusiasts here in Washington state." The airplane had a unique past, first as part of the 787 flight test and certification program and later circumnavigating the globe several times in 2011 and 2012 during the Dream Tour, which introduced the 787 to more than 68,000 visitors in 23 countries, **Boeing** said. **Museum of Flight** CEO **Doug King** commented, "This revolutionary airplane caps the museum's collection of historic commercial airplanes, beginning with our 1932 **Boeing** 247, which was the first all-metal, modern airliner. It was followed by our 1969 prototype 747, the first jumbo jet, and now with the first composite airliner, the 787. It's an incredible addition to our comprehensive display." The first and second 787 prototypes (SN 40690 & 40691) will be shared with "museums around the world, the aviation community and future generations of employees and airplane enthusiasts," the manufacturer said.

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marks the end of **KLM's** MD-11 operations worldwide, but also the end of a remarkable era in civil aviation. The plane was retired because the aircraft had become expensive to maintain and [had] relatively high fuel consumption. Spare parts [were] hard to come by and it [was] no longer feasible to maintain stocks," **KLM** said.

For the Record, The Last Passenger DC-10 was retired on February 20. **Biman Bangladesh Airlines** operated the world's last scheduled passenger flight, when the three-engined widebody (SN 48317) flew from **Biman's** base in Dhaka, Bangladesh, to Birmingham, England, with a refueling stop in Kuwait City. It was a relatively young 26.2 years old. **Biman's** DC-10-30s were replaced by new **Boeing** 777-300ERs.

GA Telesis (UK) purchased six **Airbus** A321s (CFM56-5B) last operated by **Alitalia**. It received the first -211 (SN 434) in November, and the rest will arrive by December 31, 2014. They will be disassembled and remarketed by the **GA Telesis Asset Transaction Group (ATG)**. The engines will be overhauled by **GA Telesis Engine Services Ltd (GATES)** in Helsinki, Finland. **GA Telesis Component Repair Group Southeast**, and **GA Telesis Composite Repair Group** will repair other parts they are sold.

British Airways (BA) will speed up its retirement of older long-haul **Boeing** 767-336ERs and has accelerated the delivery schedule of its **Airbus** A380s and 787 Dreamliners. By the end of next year, **BA** will operate only four 767s, and the last of them will be retired in 2016. The prior plan was to have seven 767s in service in January 2016. They will be replaced by 787-9s. The airline has 22 on order and will have 13 in service by the end of next year. The first ones will be introduced in 2015, and **British** will receive its first **Airbus** A350s in 2018 and the first of 12 787-10s in 2019. The 10th A380 will enter service in the fourth quarter of 2015, at least three months ahead of the original schedule. **BA** will take delivery of its last two A380s by the end of 2016. The airline will retire the 767-336ERs it has flying short-haul routes by 2018, and replace them with **Airbus** A320-family jets. The carrier will also remove its 10 737-436s by 2015. The airline is increasing the seating in its A320 Family by 6 percent. **BA** finished renovating its 51 A320s with a higher-density cabin configuration. It will start adding seats to its 11 A321s in November and will be finished in December. **BA** will reconfigure its 44 A319s by next summer.

Accidents and Safety

From Aviation Safety Foundation

SkyWay Enterprises Shorts 360-200 (N380MQ, SN SH.3702) crashed into the water off **Sint Maarten-Juliana Airport**, Netherlands Antilles, during takeoff on October 29, 2014. The airplane had climbed for 30 seconds, then the controller warned of traffic in the area, and advised a sharp turn. Shortly after that, the airplane hit the water and both pilots were killed.

Beiga Airways Let L-410UVP turboprop (9Q-COT, SN 831023) was damaged beyond repair in an accident near **Shabunda Airport**, D.R. Congo, on October 25, 2014. Both pilots were seriously injured. The airplane was operating a domestic cargo flight to Shabunda, and hit the ground about 2 kilometers short of the airport.

Air Canada Express Bombardier DHC-8-Q402 (C-GGBF, SN 4433) apparently blew a tire during takeoff from Calgary, and performed an emergency landing at **Edmonton International Airport**,

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Alberta, Canada, on November 6, 2014. The right hand main gear collapsed during the landing and one of the propeller blades pierced the fuselage and grazed a passenger. The year-old airplane was substantially damaged, but the occupants escaped without serious injury.

A SpiceJet Boeing 737NG airliner hit a stray buffalo during take-off from Surat, India, on November 9. No passengers nor crew were hurt, but the 737 was substantially damaged. The buffalo was killed. The airline reported the animal was "essentially invisible" against a dark background, and it was able to penetrate the poorly maintained fencing at the airport. "Stray animals are a growing menace in some airports," **SpiceJet** said in a statement.

Ariana Afghan Airlines Boeing 737-4Y0 (YA-PIE, SN 26086) landed at **Kabul Airport**, Afghanistan, and suffered a right hand main landing gear failure on November 7, 2014. The airplane came to rest on its nose and left gear and the Number 2 engine. Everyone safely evacuated the aircraft. The 21-year old airplane may be written off.

Global Airlift British Aerospace BAe-748 freighter (5Y-BVQ, SN 1778) crashed just short of the airstrip at Panyagor, Jonglei State, South Sudan, and killed the two crew members, on November 14, 2014. The aircraft was operating a charter flight for **Lutheran World Federation**.

AVMARK CAPABILITIES

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

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PUBLICATIONS

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

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

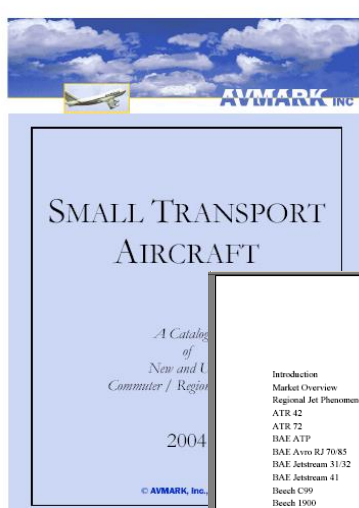
AVMARK's Historic Jet and Turboprop Values; summary of the then current fair market values as published in the AVMARK Newsletter for all jets and turboprops in service.

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

Sample of Avmark Publications

SMALL TRANSPORT AIRCRAFT CATALOG

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



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

Most dynamic and fastest growing segment in the world using old generation propeller aircraft to 90 million passengers using state of the art

Airline Association (RAA):

1990-1999

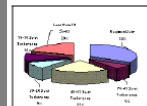


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Embraer 170	121
Fokker 50	124
Fokker 70	128
Let 410/420	132
Saab 340	136
Saab 2000	140
Shorts 330	144
Shorts 360	148
Shorts 380	152

ATR 42-300

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

Specifications	
Accommodations	
Passengers*	46
Pilot	2
Cabin Attendants	1
Powerplant	
2 Pratt & Whitney PWC120 Turboprops	1,800 SHP / 1,342 kW
Hamilton Propellers	4 blades
External Dimensions	
Length	74 ft 8 in
Wingspan	60 ft 7 in
Height	24 ft 11 in
Weight	
Empty	48,815 lb
Max Ramp	56,155 lb
Max Takeoff	53,510 lb
Max Landing	22,875 lb
Max Ramp	10,325 lb
Max Takeoff	9,920 lb
Max Landing	40.53 lb / sq ft
Max Ramp	10.23 lb / cu ft

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

Optional Equipment: KLN 900 GPS/W, FMS, Area Navigation (RNAV), Microwave Landing System, VLF Omegat Long Range Navigation System, Dual Honeywell AZ-800 Digital Air Data Computers, PA System, HF Radio, Collins Avionics in place of King Avionics, CAT II.

Avionics: EDZ 820 Electronic Flight Instrument System (EFIS) - 4 CRT's for dual Attitude and Heading Reference Systems (AHRS), Dual Autopilots, Dual GPS, Dual King Gold Crown VHF Nav, Radios, DME, Radio Altimeter, Honeywell P-800 Weather Radar.

Price List

Years Built	Base (\$ mil)
85-99	2.0

ATR 42-300 85-99 2.0

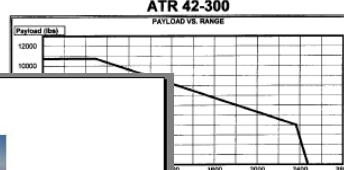
Direct Operating Costs (\$ per block hour)

Utilization (Block Hours / Year)	
Average Stage Length (nm)	100 300
Flying Operations	
Flight Crew, Salaries / Expenses	\$198 \$188
Fuel, Oil, Taxes	\$173 \$162
Other	\$3 \$3
Aircraft Costs	
Insurance	\$3 \$3
Maintenance	\$478 \$415
Depreciation	\$62 \$62
Rentals	\$318 \$318
Total Direct Operating Costs	\$806 \$683
Cost per Available Seat Mile - \$	12.33 8.65
Cost per Airplane Mile	\$5.67 \$4.44
Cost per Seat Block Hour	\$16.67 \$15.1

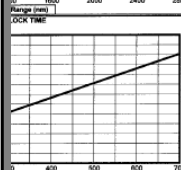
Note: Data from DOT Airline Reports.

ATR 42-300

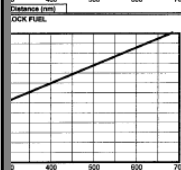
PAYLOAD VS. RANGE



Range (nm)



Distance (nm)



ATR 42

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

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

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

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

TYPICAL CABIN CONFIGURATION

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

US \$ 350.00

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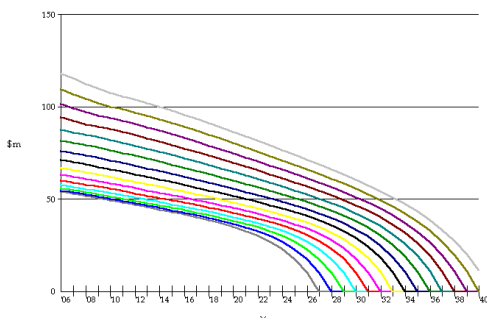
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TAV reports current fair-market values by year of build and projects the future value of 116 transport category aircraft. The future values are based on an economic model that projects the values based on the earning stream of approximately 130 different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

CAVAS Graph



Profit & Loss Report

Aircraft Type	Period	1	2	3	4	5	6
REVENUES (US\$)							
Passengers	49,328,754	49,270,739	49,212,559	49,154,213	49,095,701	49,037,189	48,978,677
Freight & Mail	8,879,176	8,868,733	8,858,261	8,847,758	8,837,226	8,826,673	8,816,110
Other Revenue	986,575	985,415	984,251	983,084	981,914	980,744	979,574
TOTAL OPERATING REVENUE	59,194,505	59,124,887	59,055,070	58,985,055	58,914,841	58,844,626	58,774,411
VARIABLE EXPENSES							
Fuel	6,918,975	6,917,340	6,915,705	6,914,070	6,912,435	6,910,800	6,909,165
Landing Fees	3,021,823	3,021,823	3,021,823	3,021,823	3,021,823	3,021,823	3,021,823
Enroute Charges	392,440	392,440	392,440	392,440	392,440	392,440	392,440
Pax Commissions	7,399,313	7,399,313	7,399,313	7,399,313	7,399,313	7,399,313	7,399,313
Freight Commissions	1,331,876	1,331,876	1,331,876	1,331,876	1,331,876	1,331,876	1,331,876
Food & Supplies	3,993,194	3,993,194	3,993,194	3,993,194	3,993,194	3,993,194	3,993,194
Passenger Liability Insurance	379,590	379,590	379,590	379,590	379,590	379,590	379,590
TOTAL VARIABLE COST	23,443,212	23,443,212	23,443,212	23,443,212	23,443,212	23,443,212	23,443,212
SEMI-VARIABLE EXPENSES							
Crew Salaries & Expenses	5,177,760	5,177,760	5,177,760	5,177,760	5,177,760	5,177,760	5,177,760
Maintenance & Engineering	587,650	587,650	587,650	587,650	587,650	587,650	587,650
TOTAL SEMI-VARIABLE COST	5,765,410	5,765,410	5,765,410	5,765,410	5,765,410	5,765,410	5,765,410
TOTAL OPERATING COST	29,208,622	29,208,622	29,208,622	29,208,622	29,208,622	29,208,622	29,208,622
OPERATING PROFIT OR LOSS	29,985,883	29,916,265	29,846,647	29,777,029	29,707,411	29,637,793	29,568,175
D-CHECK ADJUSTMENT							
Cumulative Hours	4,830	9,650	14,459	19,257	24,045	28,833	33,621
Cumulative Dollars	315,000	0	0	0	0	0	0
ADJUSTED CASH FLOW	25,841,782	25,329,851	24,506,290	23,686,100	22,869,282	22,052,464	21,235,646
AIRCRAFT LIFE ADJ. CASH FLOW	25,841,782	25,329,851	24,506,290	23,686,100	22,869,282	22,052,464	21,235,646

Profit & Loss Report

Aircraft Type	Period	1	2	3	4	5	6
FIXED EXPENSES							
Station Overhead	346,597	345,923	345,249	344,575	343,901	343,227	342,553
Maintenance Burden	176,295	351,824	526,586	700,581	873,810	1,047,039	1,220,268
Other Overhead	0	0	0	0	0	0	0
TOTAL FIXED COST	522,892	697,747	871,835	1,045,156	1,217,711	1,390,266	1,562,821
TOTAL OPERATING COST	31,464,497	32,185,749	32,903,601	33,618,052	34,329,104	35,039,156	35,749,208
General & Admin. Allocation	1,573,225	1,609,287	1,645,180	1,680,303	1,716,455	1,752,607	1,788,759
TOTAL COST	33,037,722	33,795,036	34,548,781	35,298,355	36,045,559	36,791,763	37,537,967
OPERATING PROFIT OR LOSS	26,156,782	25,329,851	24,506,290	23,686,100	22,869,282	22,052,464	21,235,646
D-CHECK ADJUSTMENT							
Cumulative Hours	4,830	9,650	14,459	19,257	24,045	28,833	33,621
Cumulative Dollars	315,000	0	0	0	0	0	0
ADJUSTED CASH FLOW	25,841,782	25,329,851	24,506,290	23,686,100	22,869,282	22,052,464	21,235,646
AIRCRAFT LIFE ADJ. CASH FLOW	25,841,782	25,329,851	24,506,290	23,686,100	22,869,282	22,052,464	21,235,646

Select Aircraft Type

Available Aircraft

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

Picture

Selected

Airbus A340-300

Description

Widebody 4 Engine Passenger

Manufactured

1992 To 2006

Values

\$54.00m \$118.00m

Estimated Life

35 years File No.

013

Search Term

Add Modify Delete OK

Aircraft : Airbus A340-300 - Widebody 4 Engine Passenger

CAVAS Figures

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
2006	54.00	54.61	55.83	57.66	60.10	63.14	66.80	71.07	75.94	81.43	87.52	94.23	101.54	109.47	118.00
2007	52.85	53.49	54.70	56.56	58.99	62.01	65.62	69.95	74.86	80.37	85.52	92.18	99.12	106.73	115.25
2008	51.68	52.36	53.61	55.43	57.85	60.84	64.42	68.69	73.65	79.18	84.76	90.48	96.97	104.20	112.39
2009	50.49	51.19	52.46	54.29	56.70	59.67	63.24	67.50	72.44	77.95	83.52	89.34	95.81	103.44	111.63
2010	49.28	49.99	51.27	53.10	55.50	58.46	62.01	66.25	71.17	76.66	82.32	88.23	94.87	102.80	111.00
2011	48.05	48.77	50.05	51.88	54.28	57.23	60.77	64.99	69.89	75.37	81.02	86.92	93.85	102.00	110.20
2012	46.80	47.52	48.80	50.63	53.03	55.98	59.51	63.71	68.60	74.07	79.72	85.62	92.75	101.00	109.20
2013	45.53	46.25	47.53	49.36	51.76	54.71	58.23	62.42	67.30	72.76	78.40	84.30	91.43	99.80	108.00
2014	44.24	44.96	46.24	48.07	50.47	53.42	56.93	61.11	65.98	71.43	77.06	82.86	89.99	98.50	106.70
2015	42.93	43.65	44.93	46.74	49.14	52.09	55.60	59.77	64.63	70.07	75.70	81.50	88.73	97.40	105.60
2016	41.60	42.32	43.60	45.41	47.81	50.76	54.27	58.43	63.28	68.71	74.34	80.14	87.47	96.20	104.40
2017	40.25	40.97	42.25	44.06	46.46	49.41	52.92	57.07	61.92	67.35	72.98	78.78	86.21	95.00	103.20
2018	38.88	39.60	40.88	42.69	45.09	48.04	51.55	55.70	60.54	65.97	71.60	77.40	84.83	93.60	101.80
2019	37.49	38.21	39.49	41.30	43.70	46.65	50.16	54.31	59.14	64.57	70.20	76.00	83.43	92.20	100.40
2020	36.08	36.80	38.08	39.89	42.29	45.24	48.75	52.89	57.72	63.15	68.78	74.58	82.01	90.80	99.00
2021	34.65	35.37	36.65	38.46	40.86	43.81	47.32	51.46	56.29	61.71	67.34	73.14	80.57	89.30	97.50
2022	33.20	33.92	35.20	37.01	39.41	42.36	45.87	49.99	54.82	60.24	65.87	71.67	79.10	87.90	96.10
2023	31.73	32.45	33.73	35.54	37.94	40.89	44.40	48.52	53.35	58.77	64.39	70.19	77.62	86.40	94.60
2024	30.24	30.96	32.24	34.05	36.45	39.40	42.91	47.02	51.85	57.27	62.89	68.69	76.12	84.90	93.10
2025	28.73	29.45	30.73	32.54	34.94	37.89	41.40	45.51	50.34	55.76	61.38	67.18	74.61	83.40	91.60
2026	27.20	27.92	29.20	31.01	33.41	36.36	39.87	43.98	48.80	54.21	59.83	65.63	73.06	81.80	90.00
2027	25.65	26.37	27.65	29.46	31.86	34.81	38.32	42.43	47.24	52.65	58.27	64.07	71.50	80.30	88.50
2028	24.08	24.80	26.08	27.89	30.29	33.24	36.75	40.85	45.66	51.07	56.69	62.49	70.02	78.80	87.00
2029	22.49	23.21	24.49	26.30	28.70	31.65	35.16	39.26	44.07	49.48	55.09	60.89	68.42	77.20	85.40
2030	20.88	21.60	22.88	24.69	27.09	30.04	33.55	37.65	42.46	47.87	53.48	59.28	66.81	75.60	83.80
2031	19.25	19.97	21.25	23.06	25.46	28.41	31.92	36.02	40.82	46.23	51.84	57.64	65.17	73.90	82.10

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