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Market Comment

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After 10 Years, the Pentagon Finally Buys a Tanker. Boeing won the third and final competition to provide new aerial refueling tankers to the **U.S. Air Force**. The process to order 179 tankers started shortly after September 11, 2001, when the U.S. suddenly found itself at war. The **Air Force** had wanted to replace its approximately 440 early-1960's-era KC-135 tankers for years, but could not do so during the post-Cold-War era defense budget cuts. After 9/11, the **Congress** opened its checkbook and Senator **Ted Stevens** of Alaska proposed that the **Air Force** lease 100 tankers based on the then 20-year-old 767-200 design. The lease was priced at \$23.5 billion, a whopping \$235 million per plane, at a time when **Continental** bought 10 767-200ER passenger planes for a reported \$50 million each. Tight-fisted Senator **John McCain** quashed the lease. One **Pentagon** and one **Boeing** official went to jail and the whole deal was cancelled by **Defense Department** Secretary **Don Rumsfeld** in 2006.

The **Pentagon** opened the tanker contract for competitive bids in January 2007, and chose the **EADS/Northrop Grumman** product in February 2008. Starting in 2004, **EADS** spent many months and many hundreds of millions of dollars designing and building the A330 MRTT-Multi-Roll Tanker Transport. **Boeing** was also busy. It sold eight KC-767 tankers, based on the 767-200ER, to the air forces of Italy and Japan. The **Pentagon** chose the larger and newer A330 MRTT because it beat **Boeing's** KC-767 offering in many fields, including performance and price. **Boeing** challenged the outcome of the contest to the **Government Accounting Office** and the contract with **EADS/Northrop Grumman** was overturned. This happened during the recession and a hotly contested presidential election. The **Bush Administration** chose to let the new administration deal with the problem.

The **Pentagon** re-opened the bidding for the tanker contract in September 2009, and it immediately became a political football in Congress. **Boeing** was backed by a largely **Democratic** legislative group from Washington State and Kansas; the company spent \$17.8 million for advertising and lobbying in 2010. **EADS**, which had been abandoned by **Northrop Grumman**, again submitted its A330 MRTT and was backed by a largely **Republican** delegation from Alabama, Louisiana, and Mississippi, where it intended to assemble its tankers. **EADS** spent only

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\$3.2 million for lobbyist. Both manufacturers contributed to political campaigns, but **Boeing** outspent **EADS** in that arena. After reviewing the bids, the **Pentagon** asked the manufacturers for their best prices. The process was deemed to be open and transparent, but it was temporarily blemished when an official sent proprietary information about each company's bid to the other company. That official was fired and each manufacturer submitted their "final best offer."

Much to everyone's surprise, **Boeing** won. The Washington delegaton was ecstatic and had to change its press release title from "Decision Will Not Stand" to "Best Choice Made for Next Gen Tanker." The southern delegates complained that the hurricane- and oil-ravaged Gulf Coast needed the approximately 50,000 jobs that **EADS** would bring into the area had it won the competition. Even more surprising was **EADS North America** Chairman **Ralph D. Crosby's** announcement that "It's time to put the interest of the warfighter first and we're stepping aside. We will not take any action that could further delay the already overdue replacement of the **Air Force's** aging tanker fleet. The bid that we submitted was substantially lower than was submitted in the last competition. Our bid reflected a sound business case and offered a reasonable return to our shareholders." Apparently if **EADS** would not protest, the **EADS**-supporters in **Congress** could not. Therefore the contest was over unless, as Mr. **Crosby** said, "should [**Boeing**] fail to deliver, we stand ready to step in with a proven and operating tanker."

Boeing won the contract on price. The Deputy Secretary of Defense **William Lynn** said both manufacturers satisfied all 372 mandatory performance requirements in their offers, but "**Boeing** was the clear winner." Representative **Norm Dicks**, a senior **Democratic** member of the **Defense Appropriations Committee**, pushed to change how the **Air Force** assessed the airplanes' total fuel-burn costs from a 25-year period to 40 years. Along with construction costs, this added \$1 billion to the A330's price. **Boeing** cut its production costs by moving its 767 production line at the Everett plant and making it much more

efficient by building both civil and military 767s on the same line. This helped to trim the 767's per-unit price.

The press reported that the contract for 179 newly-named KC-46A tankers was worth \$30 billion (an average of \$168 million each). The **Air Force** however, signed its first order for 18 KC-46As, valued at \$3.5 billion. The new \$194.5 million per-unit price would now include the costs to develop and build the four pre-production aircraft. Flight testing and production would both start in 2015, and the first 14

production-standard planes would be ready for service in 2017. In 2008, **Boeing** priced its smaller KC-767 at \$168 million each and the **EADS A330 MRTT** was bid at \$160 million each. This lead critics to charge that **Boeing** was seeking too much profit. It was assumed that **EADS** would underbid **Boeing** again, but **Dennis Muilenburg**, president of **Boeing Defense Space and Security**, said, "We submitted an aggressive, but responsible bid." This time the **Boeing** bid was 1 percent (approximately \$330 million) less than **EADS'** price. The development contract was a fixed-price and production and flight-testing would run concurrently. If **Boeing** ran into technical or flight-test problems with the tanker, it would have to retrofit the fixes onto the early production aircraft and absorb the costs. **Boeing** had to fix the **Italian KC-767** tankers and this delayed their delivery for several years.

It will take **Boeing** four years to design, build and fly the pre-production KC-46A. **EADS** has flown five A330 MRTTs already and will deliver the first two in the next few months. The loss of the **USAF** tanker contract gives **EADS** the freedom to sell the A330 MRTT to the rest of the world. The company has already sold 28 A330 MRTTs to U.S. allies – Australia, Saudi Arabia, the UAE, and the U.K. It is possible that other countries will buy the KC-46A to achieve commonality with the U.S. fleet. Perhaps Israel will do so, but it is believed most countries will opt for the A330 MRTT which carries more fuel, cargo and passengers and is ready for short-term delivery. Brazil and India recently requested proposals for the A330 MRTT. The first KC-46A will not be operational until 2017, according to the current schedule.

The **Air Force** issued a Request for Proposals for the KC-X tanker in 2002, and it will have taken 15 years to put it into service by 2017. An aerial tanker is not much more complicated than putting some extra fuel tanks into a commercial airplane. **Boeing** delivered its first purpose-built aerial tanker, the KC-97, in 1950. It delivered the first jet-powered air tanker, the KC-135, in 1957. Both of these planes took about three years to develop. It took **McDonnell Douglas** five years to develop, build and deliver the KC-10, which was based on the DC-10-30. **Boeing** launched the KC-767 program in 2002, and sold eight to Italy and Japan for \$145 million each. The planes were scheduled for delivery in 2005, but launch customer Italy finally received its first plane in late 2010. Japan ordered a simpler model of the KC-767, so it was able to put its planes in service between 2008 and 2010. The KC-135 was designed in the mid-1950s, and the last was delivered in January 1965. The **Air Force** expects to operate the type until 2040, when the newest one will be 75 years old. This also means that if the newest KC-46A is delivered in 2040, it will be based on a 60-year-old design. The KC-46A is forecast to have a 40-year service life, so when the last KC-46 is retired in 2080, the Boeing 767 will have been in constant use for 100 years. Amazing.

Airbus Orders

Airbus Sold Four A380s, Three A330s and One A319 ACJ in January. The company booked four A380 orders from its first Japanese customer, **Skymark Airlines**. Japan's third largest airline firmed up its Memorandum of Understanding dating from November 2010. **AirAsia X** contracted for three A330-200s, and one unnamed private customer ordered one A319 Airbus Corporate Jetliner. **Airbus** delivered three A319s, 22 A320s, five A321s, four A330-200s and six A330-300s in February.

Skymark Airlines signed its contract to buy four A380s, becoming the first airline in Japan to order the A380; it optioned two more. The four planes are list-priced at \$375 million each and will fly on

Skymark's new routes to Frankfurt, London and Paris in 2014. Firm orders for the A380 stand at 244 from 19 customers worldwide. Five customers have taken delivery of 43 aircraft.

AirAsia's Long-Haul Subsidiary

AirAsia X placed a firm order for three A330-200s with delivery starting in 2014. The low-cost carrier will operate the aircraft on routes from Malaysia to Asia, Europe and the Pacific. **AirAsia X** previously ordered 25 A330-300s and 10 A350-900s; it operates nine A330-300s and two leased A340-300s. **AirAsia X's** A330-200s are the 238-ton increased take-off weight model and will be able to fly non-stop from Kuala Lumpur to Europe. All of the airline's A330s are powered by **Rolls-Royce** Trent engines and the -200s will be fitted with a two-class 288-seat layout. **AirAsia X's** parent **AirAsia Group** operates an all-**Airbus** fleet and has ordered 175 A320s for its short-haul subsidiaries in Indonesia, Malaysia, and Thailand. As of March 1, **Airbus** has sold 1,108 A330s and has delivered 755 of them to 90 operators worldwide.

Airbus February 2011 Orders, Deliveries and Backlog

FEB ORD	FEB DEL	FEB CANX	TOTAL ORD	TOTAL DEL	BACK LOG
			A318		
-0-	-0-	-0-	83	74	9
			A319		
1	3	-0-	1,489	1,276	213
			A320		
-0-	22	-0-	4,484	2,598	1,886
			A321		
-0-	5	-18	883	634	249
			A330		
3	10	-1	1,108	765	343
			A340		
-0-	-0-	-0-	379	375	4
			A350		
-0-	-0-	-12	571	-0-	571
			A380		
4	-0-	-0-	244	43	201
This Month			This Year		BL
8	40	-43	-3	73	3,476

Airbus sold 10,057 aircraft and delivered 6,581 as of February 28, 2011
Total orders, deliveries and backlog include cancellations and order changes.

Afriqiyah Airways, Libya, ordered three A321s by converting three previously placed A320 orders. **Airbus** reported in February that the airline now has orders for eight A320s, three A321s and three A319s. **Afriqiyah** ordered the A319s and six A320s in 2006, and added five more A320 orders in 2007. The airline has taken delivery of the three A319s and six of the A320s. All of **Afriqiyah's** A320 Family aircraft are equipped with **CFM International** CFM56 engines.

One Unnamed Private Customer ordered one A319 Airbus Corporate Jetliner. **Airbus** has sold 78 ACJs and delivered 63 of them to date.

Turkish Airlines-THY signed a firm order for 10 A321s and three A330-200F freighters in March. The 10 A321s are priced at \$1 billion (\$100 million each) and three A330-200Fs are valued at \$600 million (\$200 million each) at list prices. Deliveries of the new batch of A321s begin in 2013. The airline

ordered 27 Airbus aircraft in 2009 and 2010. It already operates four A310F freighters, 50 A320 Family aircraft, 11 A330s, one A330-200F and nine A340s. The new Airbuses will be used to meet **THY's** passenger and cargo growth plans.

Cathay Pacific Airways ordered 15 more A330-300s for delivery starting in 2013. The new A330s will be powered by **Rolls-Royce** Trent 700 engines and will join the airline's fleet of 31 A330s that are operated on services across the Asia-Pacific region. The Hong Kong-based airline also announced plans to lease two A350-900s, adding to the 30 that it ordered in September 2010. The carrier said it had no plans to order A380s, but it may buy 14 more twin-engined twin-aisle aircraft. It has a backlog of 91 widebodies, including 21 A330-300s, 32 A350-900s, 10 747-8Fs and 28 777-300ERs.

TAM Airlines, Brazil, signed a Memorandum of Understanding for 22 A320neos and 10 A320 Family aircraft, worth approximately \$2.6 billion at list price. **TAM** is Latin America's launch customer for the A320neo; it did not announce its engine choice. The first A320neo will be available in 2016, and will feature new more-efficient engines and Sharklet wing-tip devices. The A320neo will be up to 15 percent more fuel efficient than the standard A320 and will produce less CO₂ and NO_x emissions and engine noise. The A320neo has more than 95 percent airframe commonality with the A320 Family and offers up to 500nm (950 km) more range, or two tons more payload. **TAM** previously placed firm orders for 35 A319s, 82 A320s, 17 A321s, 15 A330-200s and 27 A350-900s. It has taken delivery of 79 A320 Family aircraft and 13 A330s, so far.

Emirates May Swap its 50 Airbus A350-900 orders to the A350-1000 type. The airline ordered 50 A350-900s and 20 -1000s in November 2007, but now **Emirates** President **Tim Clark** said that the airline's route system has matured and it requires airplanes that carry more than 300 passengers. The -900 carries 290 passengers and is now considered too small. **Emirates** is scheduled to take delivery of the first -900 in April 2015, about the same time the -1000 will be ready. Mr. **Clark** is waiting for **Airbus** to freeze the -1000 design so that the airline can make a decision. He said, "We may slip the order to the -1000. We haven't decided quite yet which one we'll take. We're actually playing around with how this order fits." Another problem is that the current -1000 will not have a range or payload comparable to the Boeing 777-300ER. Mr. **Clark** thinks the **Rolls-Royce** Trent XWB engines are not up to the job of flying the heavy -1000 on the long-haul routes that he has in mind for the A350.

Iberia, part of **International Airlines Group (IAG)**, signed a Memorandum of Understanding to buy eight A330-300s and option eight more. The airline will choose the engine type later. These planes will be the only twin-engined, widebody aircraft in **Iberia's** fleet when they are delivered between 2012 and 2014. They will replace eight of **Iberia's** fleet of 19 four-engined A340-300s which are between nine and 19 years old. The A330s have a range of up to 5,600 nm (10,400 km) with a typical 300 passenger load. In January, **Iberia** and **British Airways** merged and formed **International Airlines Group**, an Anglo-Spanish airline holding company that allows each airline to operate semi-independently. The combined airline is now the second largest in Europe and one of the largest in the world by revenue. Their Airbus A330 order was worth \$1.8 billion at list price and was **IAG's** first airplane order.

International Lease Finance Corporation (ILFC) signed a Memorandum of Understanding to purchase 75 A320neo and 25 A321neo aircraft. Sixty of the airplanes will be powered by the **Pratt & Whitney** PurePower PW1100G engines and deliveries will begin in 2016. The lessor is still negotiating with **CFM International** about the selection of the CFM56 Leap-X engine for the rest of the planes.

ILFC is the first customer for the A321neo. The 100 planes are valued at \$9.2 billion (\$92 million each) at list price. The A320neo order replaces a long standing order for 10 A380s, worth \$375 million each at list price. **ILFC** CEO **Henri Courpron** explained, "With 104 widebodies on order and fewer than a dozen single-aisles, it makes perfect sense to re-balance our order book and position **ILFC** strategically on the fuel-efficient neo." He previously described narrow-bodied jets as the workhorses of the global airline fleet. The lessor also ordered 33 737-800s for delivery from 2012 to 2016. These are the first orders placed by **ILFC** since 2008, and are made possible by \$14 billion in new financings and aircraft sales as well as a \$2 billion revolving unsecured line of credit from eleven banks. **ILFC** has recovered from the recession and the resignation of its management. It was almost broken up and sold off piecemeal by its parent company, **AIG**, when the liquidity crunch threatened the insurance giant. **ILFC** was stabilized and has repaid the U.S. government loans. The company is the world's second largest aircraft lessor (by fleet value) after **GECAS**. As of December 2010, **ILFC** had 950 aircraft in its fleet and nearly 100 widebody planes on order through 2019, including 74 of the long-delayed Boeing 787s.

Deutsche Lufthansa's Supervisory Board approved the order of 25 A320neos and five A321neos in mid-March. The deal was valued at \$2.8 billion (\$93.33 million each) at list prices and the first planes will be delivered in 2016; they will be operated on European routes. The firm contract could be signed in April. In September 2010, **Lufthansa Group** ordered 40 A320 Family aircraft worth \$4.3 billion. The airline also has outstanding orders for 30 **Bombardier** CSeries. **Lufthansa** said it will decide whether to buy the 787 Dreamliner or the A350 XWB this year.

Airbus Chief Operating Officer, Customers, **John Leahy** welcomed **ILFC** as the first lessor to order the A320neo Family. He said that A320neo orders and commitments had passed 300 since the launch late last year and could surpass 500 sales by the **Paris Air Show** in June. **Airbus** forecast the sale of 4,000 neos in the next 15 years. Mr. **Leahy** dismissed the loss of the A380 program's only order by a lessor by saying, "the A380 is a long term program. Over the next twenty years we see a market of over 1,300 passenger aircraft in the very large aircraft segment. The A380 continues to win new customers and many are coming back with repeat orders." **ILFC** ordered five A380s and five A380Fs and optioned four more in July 2000. The commitment for A380Fs was switched to the passenger model in December 2006, after **FedEx** and **UPS** dropped their orders for the freighter. The first delivery of **ILFC** A380s was delayed until 2013, and then to 2014. It seems obvious that **ILFC** could not find customers for the super-jumbo jets, even after ten years of trying. It is a rather specialized airplane that has a small market. The 180-seat A320 is much easier to place than the 880-seat A380. **ILFC** CEO **Henri Courpron** said, "The neos are going to be spoken for very quickly."

Airbus forecasts that Asia-Pacific Airlines Will Take Delivery of 8,560 New Aircraft in the next two decades. The airplanes represent 33 percent of new aircraft deliveries worldwide and are valued at \$1.2 trillion. Carriers in the region are expected to replace 78 percent of the 3,680 aircraft they currently operate. The region will overtake North America and Europe as the world's largest air transport market. **Airbus** expects the number of passengers carried by Asia-Pacific airlines to rise by 5.8 percent per year while freight traffic will increase by 7 percent annually. It predicts that the region's fast-growing mega-cities will need a preponderance of large aircraft to carry passengers between them. So carriers will acquire around 3,360 new widebodies, representing 40 percent of all widebody deliveries. **Airbus** sees a market for 780 very-large-aircraft and around 2,580 twin-aisle widebodies. The market will require

5,200 new airliners in the 100- to 210-seat category. The narrowbodies will be delivered to low-cost carriers and to national carriers that serve secondary, short-haul routes. The dedicated freighter fleet operated by Asia-Pacific airlines will quadruple in size to 1,056 aircraft. The majority of them will be converted from passenger models, but approximately 270 new-production freighters will be needed, representing more than 30 percent of expected global demand. The manufacturer foresees total demand for 25,850 new passenger and freighter aircraft valued at \$3.2 trillion over the next 20 years, including 1,740 very-large-aircraft, 6,240 twin-aisle widebodies and 17,870 single-aisle aircraft.

The Market Will Decide when **Airbus** will phase out the legacy A320. A spokesman said if there is a demand for the A320, the company will continue to build it. Recently, **IndiGo**, **TAM** and **Virgin America** committed for both A320 and A320neo, which suggested there is a need for both models. He also said it is **Airbus'** policy that customers cannot switch existing orders for A320s for A320neo orders at a later date. "There is no possibility of conversion," he said. As of March 1, there were 2,357 A320 family aircraft on backlog. This represents five and a half years production at current rates of approximately 400 per year, which brings us to the beginning of 2016, when the A320neo should be ready for service.

Boeing Orders

In February, **Boeing** sold one 737NG to an unidentified customer. **LAN Airlines** ordered three 767s and **TAM** ordered two 777-300ERs. An unidentified customer (**FedEx**) committed to buy four 777Fs while **Aeroflot** ordered two 777-200ERs and six 777-300ERs at the end of the month. **Etihad** cancelled four of the 35 787-9s it bought in March 2008. The airline replaced the lost 787s with three 777-300ERs, which will be delivered in 2013. The 787 program now stands at 843. **Air Berlin** cancelled two 737NG orders late in the month. **Boeing** delivered 27 737NGs, two 767-300ERs and six 777s during the month.

LAN Airlines ordered three passenger 767-300ERs to replace the three 767-300F orders it cancelled in November. It now has seven 767-300ERs on order for delivery by mid-2013. The airline has taken delivery of eight 767-300Fs and 18 767-300ERs.

Brazilian Airline TAM Linhas Aereas ordered two additional extended range 777-300ERs and took purchase rights for two more. The order was valued at approximately \$568 million at current list prices and brings **TAM's** 777-300ER commitments to 12. The airline has four in service and eight on backlog. The new 777s will allow **TAM** to expand its long-haul services to new markets and add capability on existing routes. The airline's CEO **Libano Barroso** said, "The Brazilian aviation market continues to grow at a rapid pace. We need to develop our network competitively and capitalize on robust international traffic growth." The 777-300ERs are somewhat compatible to the two 777Fs that **TAM's** merger partner **LAN Airlines** has ordered. More than 60 customers had bought nearly 1,200 777s by mid-March.

Aeroflot Russian Airlines announced an order for six extended range 777-300ERs and two 777-200ERs in February. The order was valued at \$2 billion (\$250 million each) at list price. The first four -300ERs will be delivered in 2013, in time for the 2014 **Olympic Games** in Sochi, Russia. **Aeroflot** is a member of the **SkyTeam** global airline alliance and seven out of 12 **SkyTeam** members have ordered a total of 141 777s. The Russian flag airline carried 11.3 million passengers last year to 97 destinations in 47 countries.

Boeing Sold 64 New Airplanes in March. Three weeks into the month, **Boeing** reported that the **U.S. Air Force** ordered four pre-production KC-46A air tankers, which are based on the 767 aircraft. **Cathay Pacific Airways** bought 10 more 777-300ERs; **ILFC** purchased 33 737-800; **Korean Air** added two 747-8Fs to its backlog and **Unidentified Customer(s)** ordered 11 737NGs and four 777s. The manufacturer lost eight 787 orders, but it did not say which customer dropped the planes. One **Unidentified Customer** cancelled one 737NG order.

EL AL Israeli Airlines signed its contract to buy four extended range 737-900ERs and placed options for future aircraft. The firm order was valued at \$343.2 million at current list prices. The 737-900ER can seat up to 215 passengers in a single-class configuration and will be delivered with the new Boeing Sky Interior.

FedEx ordered four more 777F freighters in February as an “**Unidentified Customer,**” but revealed its purchase in March. The airline has ordered 27 777Fs and taken delivery of 13.

Cathay Pacific Airways ordered 10 Boeing 777-300ER airplanes valued at \$2.8 billion at list price in March. The order will increase **Cathay’s** planned fleet of 777-300ERs from 36 to 46. The airline currently has taken delivery of 14 -300ERs and leases another four. **Cathay** ordered its first 777-200 in May 1992, and its first -300ER in December 2005; this is the airline’s fifth re-order for the long-range jetliner. The 777-300ER is the backbone of **Cathay’s** ultra-long-haul fleet and serves destinations in North America and Europe. The carrier also operates five 777-200s, 12 777-300s, 45 747-400s (in both passenger and cargo versions) and it has 10 747-8 Freighters on order. **Cathay** currently has 91 widebodies on order or contracted for lease. They will be delivered by 2019. The carrier said it will retire its 21 747-400s and 11 A340-300s and may return some leased A330s by the end of the decade.

Korean Air confirmed its two optioned 747-8F freighters, worth \$639 million at list prices. The airline was the first to order both the passenger and freighter versions of the 747-8 when it bought five passenger 747-8Is and five 747-8Fs and optioned two 747-8Fs in December 2009. **Korean Air** currently

Boeing February 2011 Orders, Deliveries

FEB ORD	FEB DEL	FEB CANX	TOTAL ORD	TOTAL DEL	BACK LOG
			737		
1	27	-2	8,823	6,687	2,136
			747		
-0-	-0-	-0-	1,525	1,418	107
			767		
3	2	-0-	1,047	997	50
			777		
17	6	-0-	1,182	919	263
			787		
-0-	-0-	-4	843	-0-	843
This Month			This Year		BL
21	35	-6	17	26	3,399

**Boeing sold 20,950 aircraft and delivered 17,551
as of February 28, 2011.**

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

Sales totals are net, minus cancellations.

operates 22 747-400 airplanes and five 777Fs. The first of its seven new 747-8Fs will be delivered late this year.

Air China ordered five 747-8I passenger jetliners at the **Asian Aerospace** air show in Hong Kong. The purchase was subject to Chinese government approval. **Air China** was the first Chinese carrier to buy the passenger version of the new 747-8 and it will use the airplanes on its international routes. **Air China** Vice President **He Li** commented that his airline has operated the 747 since the 1980s, and "The new, high-capacity 747-8 Intercontinental will deliver exceptional economics and a great flying experience to our customers." The 747-8I can carry 467 passengers in a three-class configuration. The airplane features a new wing design, an upgraded flight deck and a new interior based on the 787. The 747-8I is powered by GENx-2B engines, which are more fuel efficient and produce lower emissions than "any competing jetliner," **Boeing** said. The 747-8I also carries 26 percent more cargo by volume than the preceding 747-400. The only other Chinese airline to buy jumbo jets is **China Southern Airlines**. It ordered five A380s several years ago and will take delivery of the first one this spring. The five **Air China** 747-8Is are valued at approximately \$1.54 billion at list price (\$308 million each), but the airline said it won significant discounts. The consulting firm **Avitas** put the real sale price at about \$830 million (\$166 million each). The airline said its 747-8Is will be delivered in 2014 and 2015. **Boeing** has sold 76 747-8F freighters and will deliver the first one to **Cargolux** in midyear. Three airline customers have ordered 30 passenger planes and private operators ordered eight VIP models. The first 747-8I was rolled out on February 13 and flew on March 20. The plane will be delivered to the **Government of Kuwait** in the fourth quarter. Two 747-8Is were purchased by Kuwait for conversion into VIP transports. The first commercial passenger 747-8I will be delivered to **Lufthansa** in early 2012.

Hong Kong Airlines signed a Memorandum of Understanding (MoU) to buy 38 Boeing widebodies, including six 777F freighters, 30 787-9s and two 787-8 VIP airplanes. The MoU was announced at the **Asian Aerospace** show in Hong Kong on March 7. This will be the largest Dreamliner sale in three years, when they are signed. The 787 sales tally will stand at 875. The 38 widebody airplanes are valued at more than \$8.5 billion at list prices, but are worth just over \$5 billion after **Boeing** grants its typical discounts of 40 percent. The larger 250- to 290-seat 787-9 is becoming more popular and currently accounts for 30 percent of total Dreamliner sales. **Hong Kong Airlines** is 46 percent owned by **HNA Group**, which also owns another 787 customer, **Hainan Airlines**. **Hong Kong Airlines** also has 15 A350-900s on order and operates seven A330s. It has 30 A320s and 12 A330s on order and will receive six A330s this year.

At the Asian Aerospace 2011 Air Show, **Randy Tinseth**, **Boeing's** vice president of Marketing said, "Asia Pacific will account for one-third (10,320) of new airplane deliveries worldwide over the [20-year] period. This demand is driven by the fact that Asia Pacific will account for 44 percent of travel in 20 years' time, up from around 34 percent today." The region's air traffic is expected to grow over the next 20 years at an average annual rate of 6.8 percent, compared to the world average of 5.3 percent. Traffic growth is driven by China's dramatic expansion and air travel will increase by 8.6 percent per year over the next two decades. World air cargo traffic will triple over the next 20 years as well. **Jim Edgar**, regional director of Cargo Marketing for **Boeing**, said, "From now through 2029, we expect world air cargo traffic to grow at an annual rate of 5.9 percent. Routes associated with Asia will continue to experience the world's highest growth rates over the next 20 years, at 6.8 percent. China represents 40 percent of the trans-Pacific cargo market." Mr. **Tinseth** said that the world's airlines will need 30,900

new passenger and freighter airplanes through 2030, which will cost approximately \$3.6 trillion. Forty-four percent of these aircraft will replace older, less-efficient airplanes, while 56 percent will be new aircraft needed to meet air traffic growth. The world fleet is projected to double from 18,890 to 36,300 airplanes during this span. Single-aisle airplanes will account for the majority of the new planes to be built. Mr. **Tinseth** said **Boeing** was looking 50 years into the future – “We’re spending a lot of time with our customers to understand their needs and preferences for an airplane that will serve the single-aisle market.” He said customers want to know what can be done with a new airplane in terms of size, fuel efficiency and reduced carbon footprint and maintenance costs – “We are taking our time making this decision [when to build a new airplane] analyzing all the technological data as well as what customers want.” Mr. **Tinseth** continued by saying, “We could make an announcement as early [as] this summer.”

Lufthansa Group’s Supervisory Board approved the purchase of five Boeing 777F freighters in mid-March. The group has not said whether the planes will be operated by **AeroLogic**, a **Lufthansa/DHL Aviation** joint venture, or by **Lufthansa Cargo**. The first ones will be delivered in 2013. The order was priced at \$1 billion (\$200 million each) at list price. **AeroLogic** started operations in June 2009, and currently has eight 777Fs in its fleet. **Lufthansa Cargo** operates 18 MD-11s.

Boeing Announces 787-8 Dreamliner Delivery Schedules. The company intends to deliver the first 787-8 to **All Nippon Airways** in late July. Another 19 787-8s will be handed over to **Air India**, **ANA**, **China Southern Airways** and **Japan Airlines** this year. **LOT-Polish Airlines** expects to receive its first 787-8 Dreamliner in April 2012. Another four will be delivered by December. The delivery schedule for the last three was not announced. **LOT** ordered the eight 787s between September 2005 and 2007. The Trent 1000-powered Dreamliners will replace its five 767-300ERs on long-haul routes to North America and East Asia. **Boeing** told **Air Canada** that its first five 787s will be delivered from the fourth quarter of 2013 through mid-2014. This is a seven month delay from the last schedule; the airline has 37 Dreamliners on order. **Korean Air** switched its 10 787-8 orders to the larger 787-9 model. This delayed delivery of the 787s by five years and the first will now be handed over in 2016. Under the previous schedule **Korean** was to receive its first 787-8 this year. The airline said it will use A330s and 777s as interim capacity until the 787-9s are delivered.

International Lease Finance Corporation (ILFC) ordered 33 Next-Generation 737-800s in March. They will be delivered between 2012 and 2016. The order was valued at more than \$2.6 billion at list price. This was **ILFC’s** first order for **Boeing** aircraft since June 2007, and it brings its 737NG order total to 280. The company has taken delivery of all but 38 of them. The 737-800 order helps balance the company’s order book, which includes 74 787 Dreamliners. **ILFC’s** new 737-800s will be fitted with the all-new 737 Boeing Sky Interior. They will also be 2 percent more fuel efficient than the current 737-800 due to aerodynamic and engine upgrades. The first 737s with the performance improvement package will enter service by early 2012.

Boeing Executives Strongly Hinted that the company will build a new narrowbody that will carry up to 210 passengers. The plane will have new, more-efficient engines and will be ready for service in 2019 or 2020. **Boeing** said it was waiting for engines that were superior to the **CFM Leap-X** and **P&W PW1100G** before bringing the plane to market. It was also leery of developing two airplanes—the re-winged 777 and the new narrowbody—at the same time. Now **Boeing** plans to develop the narrowbody first because its potential market is much larger. The company told the press that they worried that the

residual value of its customers' existing planes would drop precipitously if the replacement were brought to market too soon. **ILFC's** Chief Executive Officer **Henri Courpron** thought it was arrogant to tell **Boeing** what to do about its new plane. His predecessor, **Steven Udvar-Hazy**, was not so reticent, because he told the manufacturers exactly what he wanted as a customer. Of course, Mr. **Courpron** subtly told **Boeing** what he thought of the standard 737NG. **ILFC** ordered 100 A320neo Family aircraft for delivery **after** 2016; the lessor bought only 33 737NGs, which will be delivered **by** 2016. Do not expect **ILFC** to buy many 737NGs after the A320neo enters service. Last year, leasing companies ordered more than one-third of the planes **Airbus** sold and accounted for one-fifth of the **Boeing** orders.

Regional Report

Wings Air, Indonesia, and its parent company **Lion Air** signed an order for 15 additional ATR 72-500s. The airline signed a Memorandum of Understanding for the 72-seat aircraft in 2010, and the firm order will bring **Wings Air's** fleet to 30 ATR 72s. The planes will be delivered in 2012 and 2013, and are worth \$325 million (\$21.7 million each). In 2009, the airline ordered 15 ATR 72-500s and optioned 15 more. Those options were confirmed by the recent order. **Wings Air's** first ATR 72-500 was delivered in January 2010, and another nine arrived in the following year. When all 30 are delivered, **Wings Air** will be the largest ATR operator in South-East Asia. The airline's ATRs are financed by France's export credit agency **COFACE** and Italy's **SACE**.

Commercial Aircraft Corp. of China (COMAC) expects to sell 50 to 100 more C919 airplanes this year. China's first 150-seat passenger jet will soon challenge the Boeing 737NG and Airbus A320 in the world's fastest-growing air-travel market. **COMAC** said its C919 will be 15 percent more fuel-efficient than the current **Airbus** and **Boeing** planes. It is scheduled to fly in 2014 and should enter commercial services in 2016. The Chinese state-controlled **COMAC** sold 100 C919s last year and it intends to sell 3,000 aircraft worldwide over the next two decades. This is approximately 10 percent of the forecasted global demand. The nation's big three carriers, **Air China Ltd**, **China Eastern Airlines** and **China Southern Airlines**, split commitments while **GECAS** signed a letter of intent for five C919s with options for five more. **CFM International's** CFM56 Leap-X engines will power the C919 while western companies will supply the flight controls, landing gear, nacelles and the rest of the components that will make the plane saleable outside of China.

Virgin Blue Group will wet-lease up to 18 ATR 72 turboprops from **Skywest**, Australia. The deal is part of a strategic alliance between the airlines. **Virgin Blue's** first four ATR 72s will be delivered in mid 2011. Another four will be acquired in 2012. **Skywest** will provide the technical and cabin crew and will take care of the planes' maintenance, under the wet-lease agreement.

Trip Linhas Aereas, Brazil, ordered four EMBRAER 190 jets worth \$172 million (\$43 million each). With this order, **Trip** has ordered 11 and leased 13 E-Jets. The airline will receive nine 110-seat E-190 aircraft this year which will double its E-Jet fleet. **Trip** is now the largest regional airline in South America. It was founded in 1999, and now serves 82 cities with a fleet of 42 jet and turboprop aircraft. **SkyWest**, U.S., owns a 20 percent share of **Trip's** capital. **Embraer** booked one of **Trip's** orders in the fourth quarter of 2010, and will book the other three this quarter. **Embraer** forecasts that the Brazilian aviation market will double over the next five years because more than 40 million Brazilians will join the nation's middle class by the end of 2014.

Alitalia finalized its acquisition of 15 EMBRAER 175s and five EMBRAER 190 jets through a lease from third parties. The new E-Jets will be delivered starting in this third quarter. The E-175s and E-190s will be fitted with in single-class cabins of 88 and 100 seats, respectively. The E-Jets will be used on **Alitalia's** domestic and European network, and replace and enhance its existing fleet of 16 regional jets.

The Bombardier CSeries CS100 First Flight may be delayed by three months, a supplier said. The plane was supposed to fly in June 2012, but now the flight was expected in September or October of next year. **Bombardier** did not confirm the CS100's first flight delay, but said the development program was flexible and that its final certification and delivery was on schedule for 2013. The company signed a Memorandum of Understanding with **ICBC Financial Leasing Co.**, to provide \$8 billion in financing for **Bombardier's** CSeries, Dash 8-Q400, and CRJ sales in China.

Bombardier Sells Eight Turboprops. The **Israel Government** ordered six CL-415 amphibian turboprops for delivery by the end of 2012. The planes can be used for search and rescue or as a firefighting water bomber. **Air Niugini** ordered one Dash 8Q-400NG in January. **Pinnacle Airlines** exercised an option for one Dash 8Q-400NG in December. The plane will be delivered in the third quarter of 2011.

The Russian Interstate Aviation Committee issued the type certificate for the **Antonov** An-158 in February. "The presentation of the type certificate of An-158 opens the way to development and manufacture of this aircraft for a long time. Ukraine is one of the countries having its own aircraft industry once again," Ukrainian Prime Minister **Nikolay Azarov** told **RIA Novosti**. **Ilyushin Finance & Co. (IFC)**, a Russian leasing company, ordered 10 An-158s and will take delivery of the first five aircraft by the end of 2011. **Antonov** plans to build eight jets this year; they are priced at \$27-30 million each. Production is split between two factories — two An-158s will be built by **AVIANT** in Kiev and three jets will exit the **Voronezh Aircraft Production Association** facility in Russia this year. **IFC** is the major customer for the slightly smaller An-148 and it will place five Russian-made An-148-100s with its airline customers this year. It ordered 80 An-148s for delivery in the next six years. The lessor predicts 350-400 sales for the 75-seat An-148 and 200-250 orders for the 99-seat An-158.

Order Changes and Cancellations

Dubai Aerospace Enterprise (DAE), the Middle East's largest lessor is becoming smaller. It cancelled another 12 A350s and 18 more A320s; last year **DAE** cut seven A350 and 18 A320 orders. The lessor ordered 70 A320s and 30 A350s at the **Dubai Airshow** in November 2007. It now has 11 A350s and 34 A320s on backlog. **DAE** also cancelled 47 of the 100 **Boeing** aircraft that it ordered at the air show. The **Dubai Government**, which owns the leasing company, was slammed when its real estate bubble burst in the 2009 recession.

Airbus Order Shuffle. **China Aviation Supplies Holding Co.**, switched one of its 57 A320 orders to the A319 model. **Volaris**, Mexico, swapped 14 A319s for the larger A320. The airline has taken delivery of the 11 A319s on order as well as one of 19 A320s. **Afriqiyah Airways**, Libya, cancelled three A320 orders and ordered three A321s. The airline now has three A319s and six A320s in its fleet and outstanding orders for two A320s and three A321s.

Aercap cancelled one of its 15 A330-200 orders. It has leased 10 and has four in backlog.

Etihad Airways, Abu Dhabi, United Arab Emirates, cancelled an order for four of its 35 787-9 Dreamliners and replaced the lost capacity with an order for three 777-300ERs. The airline has already ordered 15 777-300ERs and one 777F, and had 14 777s on option. **Etihad** explained that it wanted to continue to expand its services on schedule and would not wait for the oft-delayed 787s to be delivered. The 777s will be handed over in 2013, and the carrier's first 787s should arrive in late 2014. The airline ordered 35 787-9s in March 2008 and optioned another 35. The cancellation leaves the airline with a backlog of 31 787-9s.

Air Berlin, Germany, cancelled two 737NG orders in February. It now has ordered 15 737-700s and 94 737-800s, and has taken delivery of six -700s and 42 -800s. The airline ordered 85 737NGs in 2006, and another 15 in 2007 – all for delivery from 2007 through 2014. **Air Berlin** cancelled three 737NG orders in November 2009.

Aer Lingus, the Irish flag-carrier, said it cancelled its last three A330 orders and ordered three more A350-900s. The A330-300s were to be delivered in 2013 and 2014, and the three A350s would arrive after January 2018. The airline now has nine A350s on order. The first four will be delivered in 2015, another two in 2016. **Aer Lingus** said it is offering to sell one of its eight A330s because it needs to trim its long-haul fleet. In August 2009, the airline deferred deliveries of its A330 and A350 backlog.

Kingfisher Airlines may cancel its orders for A380s and A350s or swap these planes for smaller aircraft like A320s and A330s, the **Business Standard**, India reported. The five A350s are due for delivery in 2014, and the five A350-800s are scheduled to enter service in 2015. **Kingfisher** Chief Executive Officer **Sanjay Aggarwal** said, "We are reviewing our purchase plan of A380s and A350s. With our airline joining the **oneworld** alliance [in late 2011] we do not need these ultra long-haul aircraft any more. However, we have not started any negotiations with **Airbus** now." **Kingfisher** ordered the A350s and A380s in 2005. The super jumbo jets were originally scheduled for delivery in 2011, but they were deferred until 2014, and then until 2015. The airline intends to double its fleet from 66 to 137 aircraft by 2016. It currently operates three A319s, 23 A320s, six A321s and five A330s. It has 79 A320s, 15 A330s, two A340s, five A350s and five A380s on order. **Kingfisher** plans to add six A320s, two A330s and one ATR 72 this fiscal year and will take delivery of 14 more airplanes in 2012-13; 20 in 2013-14; 16 in 2014-15, and 13 in 2015-16.

EgyptAir wants to defer some of its four impending A330-300 deliveries in order to reduce its capacity in the face of the country's political instability; the flag-carrier wants a delay of three or four months. It received the first A330-300s in August 2010, and is suffering from a severe slump in traffic and revenues since the government was overthrown in February. **EgyptAir** took delivery of one new 777-300ER in February and another is due shortly. The airline wants to short-term lease some of their six 777s until air traffic returns to normal, which is expected before the winter schedule is inaugurated. The carrier intends to take delivery of four 737-800s by the end of 2012.

Engine News

Pratt & Whitney PurePower PW1100G Geared Turbo Fan Engines will propel 60 of **International Lease Finance Corporation's (ILFC)** 100 **Airbus A320neo** Family aircraft. **ILFC** contracted to buy 75 A320neos and 25 A321neos. The lessor is placing a firm order for 120 PW1100G engines for 60 aircraft and has optioned 80 engines for the other 40 neo aircraft. The first A320neo will be delivered in 2016. **Pratt & Whitney** said the A320neo is the first **Airbus** plane to be equipped with the new, high-

efficiency GTF engines. **ILFC** is negotiating with **CFM International**, the **GE/Snecma** joint-venture, about its buying the CFM56 Leap-X engine for 40 aircraft. If the lessor cannot make a deal with **CFM**, it will take up the PW1100G options.

Turkish Airlines (THY) ordered 10 **International Aero Engines** V2500 SelectOne engines for the five A321s it ordered in March. The airplanes and engines will be delivered in 2013. This is the fourth time **THY** has selected V2500 engines and this order was valued at up to \$200 million. **THY** operates five A319s, 25 A320s and 21 A321s, and has another six A319s and 24 A321s on order.

Asiana Airlines, South Korea, chose **Rolls-Royce** Trent 900 engines for its six Airbus A380s. The airplanes will be delivered between 2014 and 2017, and the contract includes a TotalCare long-term maintenance program. The airline will also operate 30 Trent XWB-powered Airbus A350 XWBs.

Leasing Companies

Garuda Indonesia said it will lease six Boeing 737-800s from **GE Capital Aviation Services (GECAS)**. The first three 737s will be delivered in June, September and October 2013, and the final three will arrive in June, September and October 2014. The airline will lease three spare CFM56-7B engines as well. **Garuda** also agreed to lease four 737-800s from **RBS Aviation Capital**. Those 737NGs will be delivered in 2013 and 2014. The Indonesian flag carrier plans to operate 153 airplanes, including A330s, 737-800s and 777-300ERs by 2015. It currently has 13 A330s in service and six more on order. It operates 15 737-800s and has 10 737-800s and 10 777-300ERs on order.

Air Berlin will sell five A320s, three A321s and four 737-800s to **GE Capital Aviation Services** and lease them back. The planes will be delivered in the first three quarters of 2012. The sales/lease-backs of the dozen airplanes are valued at approximately \$1 billion or \$100 million each at list prices.

The Jetstar Group will lease 10 more A320 aircraft and will extend the leases on 11 A320s. **Qantas'** low-cost subsidiaries – **Jetstar Airways**, Australia, **Jetstar Asia**, Singapore and **Jetstar Pacific**, Vietnam – lease a total of 58 A320s. **Qantas** did not say how the new airplanes would be divided up.

IndiGo, India, will finance 180 A320 Family aircraft through sale and lease-back contracts. The low-cost carrier chose to finance 100 A320s that it ordered in 2005 through sales and lease-backs instead of using conventional bank loans. This scheme allows **IndiGo** to return the leased planes to financiers after only six years. This insures the airline operates a young fleet and that its new planes offer the lowest operating costs possible, the airlines Chief Financial Officer **Riyaz Peer Mohamed** said. "Doing sale leasebacks is more expensive than loan financing," he continued to say. The deals lessen the burden on their balance sheets, eliminates the need for commercial bank finance and shields them from falling used-airplane values. **IndiGo** currently operates 36 A320s and will take delivery of 12 more A320s this year and 10 planes in 2012. The 2011 and 2012 deliveries have been financed, or the contracts are in place for sale and lease-backs. **IndiGo** intends to have 72 A320s in service by 2014, having started to return its oldest planes to lessors this year. The airline will firm up its order for 30 A320s and 150 A320neos soon. That batch of planes will be delivered from 2016 to 2025. The huge order is justified because passenger traffic is growing by 10 percent to 12 percent annually in India.

Jetstar Airways operates eight A330-200s and will lease a ninth one from **Qantas** soon. **Qantas** has 44 A320s on order and will take delivery of 15 between July 2011 and June 2012.

New Leasing Company. Aviator Capital was launched recently and it acquired up to \$225 million from an institutional investor. The lessor will buy used commercial passenger aircraft and lease them to top tier airlines. The new company offers full-service commercial aircraft leasing and management from its headquarters in Miami, Florida. **Aviator's** management team has over 100 years of combined experience in the commercial aircraft leasing business.

Airline News

EgyptAir is offering to lease 25 of its 70 aircraft due to the political unrest in Egypt. The airline faces severe losses in traffic and revenues until tourists return to the Nile. The carrier intends to lease the flight crews along with the planes. The flag carrier especially wants to lease its four Boeing 777-300ERs. It has two more due for delivery this year. **EgyptAir** also operates A330s, 777-200ERs and a mix of A320s, 737-800s and Embraer regional jets. The airline expects traffic to pick up by winter.

Olympic Air will cease services from Athens to Vienna, Brussels, London and Paris. It will retire some of its five A319s and nine A320s to match the shrinking route network. The airline will continue to fly to Amsterdam, Belgrade, Bucharest, Cairo, Istanbul, Larnaca, Sofia and Tirana.

The Ukrainian Government's state property fund sold its 61.6 percent share in **Ukraine International Airlines** to **UIA Beteiligungs-gesellschaft mbH**, **UIA Holding GmbH** and **OOO Capital Investment Project**. The three companies were already minority shareholders in the airline. **UIA Beteiligungs-gesellschaft** now

IATA (International Air Transport Association) Reports Strong January Traffic Growth.

Jan 2011 vs. Jan 2010	RPK Growth	ASK Growth	PLF	FTK Growth	AFTK Growth
Africa	14.3%	13.6%	68.7	7.9%	13.4%
Asia/Pacific	5.8%	7.0%	77.7	6.4%	8.9%
Europe	7.9%	8.8%	73.9	8.6%	9.7%
Latin America	11.0%	12.4%	79.7	12.7%	4.0%
Middle East	11.7%	11.2%	75.8	13.8%	14.2%
North America	8.7%	10.0%	77.2	14.1%	15.3%
Industry	8.2%	9.1%	75.7	9.1%	10.9%

2010 vs. 2009	RPK Growth	ASK Growth	Load Factor	FTK Growth	AFTK Growth
Africa	12.9%	9.7%	69.1	23.5%	12.1%
Asia/Pacific	9.0%	3.6%	77.6	24.0%	14.3%
Europe	5.0%	2.5%	79.4	10.8%	0.6%
Latin America	13.2%	7.9%	76.5	29.6%	20.2%
Middle East	17.8%	13.2%	76.0	27.6%	15.7%
North America	7.4%	3.9%	82.2	22.9%	6.9%
Industry	8.3%	4.6%	78.4	20.8%	9.3%

RPK: Revenue Passenger Kilometers measures actual passenger traffic

ASK: Available Seat Kilometers measures available passenger capacity

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

FTK: Freight Tonne Kilometers measures actual freight traffic

AFTK: Available Freight Tonne Kilometers measures available total freight capacity

FLF: Freight Load Factor is percent of AFTKs used

owns 59 percent of the country's largest airline. **UIA Holding** owns 26 percent and **OOO Capital Investment Project** holds 15 percent. The government garnered \$36 million for its flag carrier. It is raising money by selling assets to pay down its budget deficit. The airline said it expects the private owners to invest in its fleet and network development; the airline operates 14 classic 737s and four 737-800s.

United Continental Holdings (UAL) plans to ground its fleet of 34 737-500s and 10 767-200ERs. All the planes came from **Continental's** fleet. The 737s were delivered from 1994 through 1998, and the 767s are 10 years old. The world's largest airline is retiring its least efficient planes to cut fuel use amid rising prices. The fleet cuts will trim planned capacity growth to zero this year from a planned increase of 1 to 2 percent. Domestic capacity will shrink by up to 2.5 percent, but the carrier will boost international capacity by much as 3.5 percent. The airline has seen its fuel costs rise by 27 percent in the last 12 months.

Thai Airways International and **Tiger Airways Holdings** will form a joint effort to establish a low-cost carrier called **Thai Tiger Airways**. **Thai** will own 49.9 percent of the airline, while **Tiger Airways**, Singapore, will hold 39 percent and **RyanThai** will have 10 percent. The new company is associated with **Ryanair Holdings**, the owner of **Ryanair**, Ireland. The last 1.1 percent will be sold to Thai investors. The Thai LLC is waiting for approval from the Thai **Ministry of Transport** and the **National Economic and Social Development Board**. The new LLC plans to lease five A320-200s from **Tiger Airways** and start operations in July. **Thai Tiger** hopes to acquire another five A320s from **Tiger** and intends to fly 20 airplanes by 2015. The airline will serve three domestic and six regional routes in the first year of operations.

IATA (International Air Transport Association) Posts Jet Fuel Prices. The organization updates its global average jet fuel price each week. On March 11, the average price of fuel was \$3.20 per gallon, up a whopping 40 cents from mid-February's \$2.80 per gallon. **IATA** said fuel prices rose 5.1 percent from the previous week, 13.7 percent from the previous month and were up by 51 percent from March 2010. The organization now estimates that the price increases will add \$45 billion to the global airline industry's total fuel costs and will cost the industry \$118.1 billion in 2011. This is up \$9 billion from the January 21 estimate. The message is that airlines can say goodbye to their profits unless they can squeeze more money out of their passengers. In March, **IATA** said, "Global airline net profits will halve this year as rising costs, especially oil prices, offset increasing demand." Director-General **Giovanni Bisignani** labeled this year's forecast net profit margin of 1.4 percent "as more worthy of a charity than an industry." The industry earned 2.9 percent profit in 2010. "We are constantly walking on a tightrope with very thin margins, and there is no buffer," he said. "This industry is very, very fragile." The industry had revenues of \$552 billion and net profits of approximately \$16 billion in 2010. This year, the revenue forecast was \$594 billion and the profits are expected to drop to \$8.6 billion. The industry owes debts of some \$210 billion. Mr. **Bisignani** warned that every \$1 increase in the price of a barrel of oil adds \$1.6 billion in costs to airlines.

Bankruptcy of the Month

PC Capital SAPI's Plan to Resurrect Mexicana Failed when the tiny boutique investment firm was not able to raise the \$200 million needed to restart operations. The company said it had lined up one foreign and three domestic investors. This convinced the bankruptcy court that **PC Capital** was the best

option for saving the airline. The investment firm was going to fire all of **Mexicana's** workers and intended to re-hire 4,000 of them to operate a shrunken fleet and route system. The airline filed for bankruptcy in Mexico in August and shut down. This brought down **Mexicana's** affiliated carriers, **MexicanaLink** and **MexicanaClick**. The parent airline also filed for Chapter 15 bankruptcy protection in the U.S. and listed \$500 million in assets and \$1 billion in debt. The company did so to protect its fleet and route system, which were its best assets. By March, most, if not all, of its leased aircraft had been recovered by lessors and rival Mexican airlines had picked up **Mexicana's** traffic.

Gomelavia, Belarus, ceased operations on February 22. The state-owned company flew three Antonov An-24 turboprops to Minsk, Kaliningrad and Moscow from its base in Gomel.

Wataniya Airways, Kuwait, ceased operations on March 16 after a run of financial trouble. The airline was founded two years ago and leased seven A320s from **AerVenture** and **ALAFCO**. Late last year, **Wataniya** returned three A320s to its lessors and cut its route system. The airline said, "Given the current financial situation of the company and the lack of fair trade requirements in the local market, as well as the difficult political and security situation in the region, the board has decided to cease all **Wataniya Airways** operations." The airline continued to say that both it and its shareholders would "enter a process to determine the future of the company," so there is some chance that the cessation will be temporary.

Nomads Travel Club ceased operations in March, after flying since 1964. The travel club was a way for air carriers to fly charters around the world without having to be real airlines. The club offered inclusive package tours to holiday destinations and the club members did not have to do anything but buy a ticket and show up for the flight. The club took care of the hotels, meals and itinerary. Several travel clubs, such as **American Trans Air**, evolved into "real" airlines, only to fail anyway. Travel clubs operated second-hand airplanes that the major airlines had retired due to obsolescence. **Nomads** bought a DC-7 from **Eastern Air Lines** in 1964. It upgraded to an Electra in 1971, to a 727-100 in 1981, and a 727-200 Adv in 1993. Ironically, the non-profit travel club lasted longer than the airlines it bought planes from. **Nomads** filed for Chapter 7 bankruptcy and listed assets of 3.9 million, including the 727-221RE Super 27 valued at \$2.5 million, and debts of \$3.917 million. The club owns a hanger and terminal in Detroit. It was killed off by the aging demographic of its membership and by the recession, which is extremely severe in Michigan. The club lost \$1.9 million in 2009, and \$1.3 million in 2010.

Cargo Pallet

FedEx Express is interested in **Boeing's** proposed 767-400ER freighter. The freight company wants to replace the 58 MD-10-10Fs and 16 MD-10-30Fs that it currently operates. **Boeing** would like the 767-400ERF to be a production bridge between the last of the 24 767-300ER and 25 -300F orders and the first of the KC-46A re-fueling tankers. The first KC-46A is scheduled to fly in 2015, and 18 of them should be operational by 2017. This leaves a four-year gap between the last commercial delivery and the first military one. Some of the KC-46A technology could be incorporated into the 767-400ERF, or perhaps vice versa. The KC-46A was proposed as a -200ER freighter fuselage fitted with -300ER wings and the instrumentation from the 787. The 767-400ER is 21.1 feet (6.43 meters) longer than -300 and its wings were redesigned and lengthened by 14.3 feet (4.36 meters). If **FedEx** buys the -400ERF, the planes will be built on the company's new 767 final-assembly line at Everett, Washington. The launch of the 767-400ERF may slow development of the 777-200 and -200ER freighter conversion program

that was expected to be launched by mid-year. In the past, **FedEx** had ordered freighter versions of passenger planes as their production was coming to an end. **Boeing** sold the last 15 727-200 Advs to **FedEx** as -200Fs, and **FedEx** bought 11 new DC-10-30Fs and 22 new MD-11Fs from **McDonnell Douglas**. **UPS** also bought eight 747-400Fs and 40 757-200PFs, when passenger plane sales tapered off. Both freight companies received bargain prices for their fleets.

Military Market

Airbus Military successfully completed 1,665 simulated flight-cycles on its A400M test airframe (SN 5001) to earn civil type certification from the **European Aviation Safety Agency (EASA)**. The test program had to simulate one year of flights before the airplane could enter service. The test airframe at Dresden, Germany, has now performed enough cycles to equal five years worth of flying at an average of 333 flights per year. By mid-2012, the A400M will have performed 25,000 simulated flights. This is 2.5 times the airplane's 30-year, design life of 10,000 cycles (333 flight-cycles per year). The A400M needs **EASA** civil certification because it is the common standard for the seven countries which are the launch customers. **Airbus Military** anticipates earning its civil certificate by the end of the year. The manufacturer has four pre-production aircraft in its flight-test program and is on target and moving ahead as planned. The first production A400M will be delivered to the **French Air Force** in 2013. **Airbus** told the press in February that it expects to sell approximately 400 A400M transports over the next 20-30 years, which is half the forecast market for military transports of that size. Many of the world's air forces need to replace their **Lockheed Martin** C-130 Hercules aircraft and the **Boeing** C-17 may be too large and expensive to be an effective C-130 supplement. **Airbus** said the A400M can carry twice the payload of the Hercules and the A400M's turboprop engines are more fuel efficient than the jets on the C-17. The wing-mounted turboprops will also be less prone to ingesting runway debris from unprepared airstrips. Several European nations, including Belgium, France, Germany and the Netherlands, launched the **European Air Transport Command**. They will pool and operate their A400M fleets during a crisis. This will help those countries to cut defense spending without cutting capacity.

U.S. Air Force plans to re-engine its fleet of 17 E-8C Joint Surveillance Target Radar System (Joint STARS) aircraft with **Pratt & Whitney** JT8D-219 engines. The first four engines were removed from **Seven Q Seven's** 707-330C test-bed. **Seven Q Seven** is **Pratt & Whitney's** joint venture partner in the re-engining program and earned the original airframe-engine Supplemental Type Certificate. **Northrop Grumman** will remove the E-8C's four **PW** TF33 (JT3D-3B) engines and install the JT8D-219s, which are being modified by **P&W** at its manufacturing plant in Middletown, Connecticut. It is assumed that the engines are being sourced from MD-88s that have been retired from airline service. The JT8D-219-engined E-8C will be more fuel efficient and will have more thrust than the original model. **Pratt & Whitney** said, "This gives the Joint STARS aircraft higher operational altitude and longer mission duration while significantly reducing the maintenance burden of the older engines. It's a win-win proposition for our **U.S. Air Force** customer." The **Air Force** will need more than 80 engines if it retrofits its entire Joint STARS fleet.

The First South Korean 737 Airborne Early Warning and Control (AEW&C) Aircraft will be delivered in July. It is currently undergoing type test and evaluation this month and it will be demonstrated to the **South Korean Air Force** shortly. The airplane was built by **Boeing**, and the electronics were installed by **Korean Aerospace Industries**.

The First Royal Saudi Air Force (RSAF) A330 Multi Role Tanker Transport (MRTT) flew on March 15. **Airbus** delivered a civil A330-200 to **Iberia** 16 months ago and the airline's maintenance facility converted it into a MRTT. It took **Iberia's** employees 140,000 man-hours to modify the aircraft and install 5,500 system components. After the flight, **Iberia** delivered the completed MRTT to **Airbus Military** for the "final certification and qualification phase for this version of the A330 MRTT leading to contractual delivery later this year," **Airbus** said. The second **RSAF A330** is undergoing conversion and the modification of the third will begin in mid-year. As of March, three **Royal Australian Air Force (RAAF)** and two **Royal Air Force A330 MRTTs** have flown and the two **RAAF** aircraft are ready for delivery.

The Royal Australian Air Force may buy a fifth **Boeing C-17** transport, but it will have to sacrifice the purchase of two **Lockheed Martin C-130Js**. Australia's Minister of Defense **Stephen Smith** said the nation cannot afford both new acquisitions. It will make a decision whether to buy the C-130Js or C-17 in two years. The government explained that one C-17 can carry "up to four C-130 loads in a single lift and cover twice the distance in three-quarters of the time." Australia's four C-17s were delivered between 2006 and 2008.

AIRCRAFT DELIVERIES & SALES

Jet Aircraft

A318 & A319. One A319-133X ACJ (SN 4583) was delivered to **CIT Leasing** in February and **LAN Airlines** accepted two -132s (SN 4598 & 4605). **Brussels Airlines** leased two ex-**Mexicana** A319s (-111 SN 3790 & -112 SN 4275) from **US Leasing** and **ILFC**, respectively. **Brussels** will retire five Avro RJ85s and replace them with four A319s and two A320s. The six Airbuses will be delivered by the end of the summer.

A320. **Airbus** delivered two -233s (SN 4576 & 4597) to **LAN Airlines**, two -232s (SN 4603 & 4609) to **Indigo**, two -216s (SN 4571 & 4582) to **Indonesia AirAsia**, and two -214s (SN 4588 & 4591) to **easyJet**, in February. **Spirit Airlines** leased one -232 (SN 4592 & 4595) from **CIT Leasing** and **BOC Aviation**, respectively. **Air Berlin** bought -214 (SN 4606) for itself and -214 (SN 4594) for **Niki Luftfahrt GmbH**. **GECAS** purchased and leased-back one -214 with **Air Berlin**, and two new -214s with **Niki Luftfahrt (flyNiki)** in February. **Avianca** took delivery of -214 (SN 4567) and **Jetblue Airways** accepted -232 (SN 4578). **GECAS** leased -214 (SN 4586) to **Spring Airlines** and -214 (SN 4589) to **Aigle Azur**. **Airbus** delivered four A320s to Chinese airlines which included -214 (SN 4573) to **Juneyao Airlines**, -214 (SN 4507) to **China Southern Airlines**, -232 (SN 4473) to **Air China**, and **Hainan Airlines** leased new -232 (SN 4580) to **Capital Airlines Beijing**. **Airbus** delivered the second of 51 A320-232s (SN 4584) to **Aircraft Lease Corp. (ALC)**, which then leased it to **Air New Zealand**. Lastly, **Tiger Airways** received -232 (SN 4561). **AWAS** purchased two 2009-model -214s (SN 3486 & 3906) from Dublin-based aircraft lessor **Aircraft Purchase Fleet**. **Alitalia** continues to lease the airplanes.

Cabot Aviation arranged the sale of one **Cyprus Airways** -232 (SN 295) to **Myanmar Airways International**. The A320 was purchased new by **Cyprus Airways** in 1992 and is equipped with **IAE V2500-A1** engines.

ILFC said it wrote down the value of its current fleet of A320 Family aircraft by \$602 million, due to the launch of the new A320neo narrow-body program.

Aer Lingus leased one new A320-214 (SN 4572) in January and will lease three more in the first half of this year. It will return its three 1999-model A321-211s to their lessors and said it will sell several short-haul A320s as well. Its oldest A320s were delivered in 2000 and 2001.

A321. Saudi Arabian Airlines took delivery of its fourth -211 (SN 4590) in February, and **Lufthansa** received two -231s (SN 4585 & 4607). **TAM Linhas Aereas** accepted -231 (SN 4570) and **Niki** bought -211 (SN 4611).

A330 & A340. Airbus delivered four A330-200s in February. This included -223 (SN 1202) to **China Southern Airlines** and -223 (SN 1200) to **Korean Air. Airastle Advisor Ltd.** leased -243 (SN 1191) to **South African Airways** and **CIT Leasing** leased -202 (SN 1198) to **Qantas Airways**. That A330 is operated by **Qantas** subsidiary, **Jetstar**. Six A330-300s were delivered in February. **Saudi Arabian Airlines** took delivery of its eighth -343 (SN 1192); **Air China** accepted its fifth -343 (SN 1199) and **Cathay Pacific Airways** received -342E (SN 1196). **Swiss International Air Lines** leased newly delivered -343E (SN 1193) to **Edelweiss Air**. **Virgin Atlantic Airways** took delivery of -343X (SN 1195) and leased -343X (SN 1201) from **Aercap**.

BAe-British Aerospace. BAE Systems said it would quit converting BAe 146 regional jets into freighters after building two planes. The company re-launched the BAe 146QT conversion program in 2007, but found scant interest in the airplanes probably due to the recession. **BAE** sent two BAe 146s to the **Aerostar** plant in Romania, which finished the first converted 146-200QT freighter in June 2008, but the plane has not found a customer. **BAE** placed its 146-300QT converted freighter on lease with **Cobham Aviation Services**, Australia. **BAE** has 27 idle aircraft in its fleet, but it expects to place a significant number of them this year. **BAE Systems Regional Aircraft** leased six Avro RJ100s (SN E3377, E3379, E3380, E3381, E3382 & E3384) to **Swiss Air Lines International** in late 2010. The six RJ100s were previously leased to **BA CityFlyer** and were subleased to **Swiss**. When **BA CityFlyer** ended its RJ operations, **BAE Systems** bought the aircraft from the banks and bondholders and then leased them directly to **Swiss**. The airline will replace its RJ100s with **Bombardier CS100s** in 2014. **Korongo Airlines** will operate BAe 146-200 (SN E2192) on services within the Democratic Republic of Congo in March. The airline was established by **Brussels Airlines, Georges Forrest International (GFI)** and Congolese investors. The airplane currently operates for **Brussels** on its European routes.

A380. Lufthansa should receive its fifth A380-841 in March; it will have eight A380s in service by mid-summer. **Lufthansa** put one A380 on the Frankfurt to JFK route on February 28. The airline will replace its 747-400 with an A380 on the daily Frankfurt-San Francisco route in May. **Lufthansa** may launch new A380 services to Chicago, Miami and Washington Dulles in the U.S. as it adds A380s to its fleet. **Qantas** said that five of the six grounded A380s had returned to service in February. SN 014 is still at Singapore and will be repaired and returned to service by September. The airline will take delivery of four A380s by June 30.

Boeing 737NG. Boeing delivered 27 737s in February, including eight -8AS/Ws (SN 35039, 35040, 35041, 35042, 40305, 40306, 40307 & 40308) to **Ryanair**. The airline ordered 338 737-800s between March 1998 and January 2009. It has received 300 of them since taking the first one in March 1999. **Ryanair** will take delivery of 37 -800s this year and is the world's largest operator of the 737-800. **Qantas** accepted three -838/Ws (SN 34185, 34203 & 34204) and they are leased to **JetConnect/Qantas NZ**. **GECAS** leased -86N/W (SN 38012 & 38015) to **Xiamen Airlines** and -86N/W (SN 38013) to **Shandong Airlines**. **RBS Aviation Capital** leased -8FE/W (SN 39921) to **Virgin Blue Airlines** and **Aviation Capital Group** leased -8K5/W (SN 38097) to **TUIfly Nordic**. **Norwegian Air Shuttle ASA** leased -81D/W (SN 39412) from **AWAS** and took delivery of -8JP/W (SN 39046). Boeing delivered -846/Ws (SN 40351) to **Japan Airlines/JAL Express**, -8GJ/W (SN 37365) to **SpiceJet** and the 12th -8KN/W (SN 40242) to **flydubai**. **Alaska Airlines** received -890/W (SN 35200) and it has 58 -800s in service and 12 more -800s on order. In Europe, **TUI Travel plc** leased new -8K5/W (SN 37252) to **TUIfly** and **Air Berlin** accepted -86J/W (SN 37760). **Lion Air** took delivery of two more -9GPER/Ws (SN 37277 & 37278) and **Southwest Airlines** accepted the only -700 delivered in February, -7H4/W (SN 36669).

Boeing 737 Classic. **AWAS** leased -33A (SN 25032) to low-cost carrier **VivaAerobus**, Mexico. The Monterrey-based airline operates 14 737-300s on intra-Mexican and international flights. **Boliviana de Aviación (BoA)**, Bolivia's state-owned airline, leased its fifth 737-300 from **ILFC** and will lease a sixth -300 shortly. The airline will replace its -300s with a new aircraft type later this year. The airline launched operations in early 2009, with two 737-300s leased from **AWAS** and **ILFC**. **Air Austral**, Reunion, sold its 737-33A (SN 27452) and 737-53A (SN 24877), a spare CFM56-3C1 engine, spare parts and tooling, to **Aircraft & Engine Support LLC**. The sale was arranged by **Avinco**. **Air Austral** took delivery of two new 737-89M/Ws (SN 40910 & 40911), which replaced the classic 737s. **The Indonesian Air Force** bought two 1993-model -400s from the country's flag carrier **Garuda**. The **Air Force** will use the 737s as troop and VIP transports and will not significantly modify the planes' interior.

Boeing Sky Interior. **Copa Airlines** is the first Latin American carrier to take delivery of a 737-800 fitted with the new Boeing Sky Interior. **Copa** received -8V3/W (SN 40666) in March and brings the airline's -800 fleet to 18. **Air Berlin**, the Berlin-based low-cost carrier, accepted its first -76J/W fitted with the new Boeing Sky Interior. In February, **Air Berlin** received its first -86J/W with the new interior and it is now the first airline to operate both aircraft types with the new cabin design.

Boeing 747. **General Electric Aviation** bought 17-year-old ex-**Japan Airlines** 747-446 (N356AS) and will refurbish it at a cost of \$60 million. The plane will be used as the flying test bed for the CFM56 Leap-X engine. It will undergo an extensive structural modification to the wing and renovation of the interior before it enters service in 2013. The 747 is powered by CF6-80C2 engines and it will be based at **GE's** Victorville, California facility. The plane replaces the 747-121 flying test-bed (SN 19651), which was the fifth oldest 747 in the world and the oldest one still flying in the U.S. **GE** bought the current 747 in 1992.

Japan Airlines International retired its last two 747-446s on March 1. The airline operated a total of 112 747s. The airline flew every model of 747 that **Boeing** built, except the SP. The first **JAL** 747-146 was delivered in March 1970. The Japanese flag carrier was one of the world's leading operators of the jumbo jet, but so far it has not ordered the 747-8 passenger or freighter. Instead **JAL** replaced the 568-

seat domestic 747-400Ds with 472-seat domestic 777-346s. The long-range 747-446s carried 393 passengers in three classes while the 777-346ERs are fitted with 246 seats. **Boeing** is trying hard to get **JAL** to buy the 470-seat 747-8I, but the airline is bankrupt and it already has 35 787-8s on order with first deliveries starting this summer.

Boeing 757. **FedEx Corporation** will add 18 more 757s by May 2012, bringing its 757 freighter fleet to 60. The new 757s will replace many of the 77 obsolete 727-200Fs on **FedEx**' short-haul American routes. The package carrier said it will retire nine 727s in 2011, 25 in 2012, 10 in 2013, 16 in 2014, 11 in 2015, and six in 2016. **FedEx** bought its first 757 in 2007. It intends to acquire a total of 90 757Fs so it needs to find another 30. The company is willing to buy 757s fitted with either **Rolls-Royce** or **Pratt & Whitney** engines. **FedEx** will pay **Singapore Technologies Aerospace** between \$4.8 million and \$5.5 million each to convert up to 87 757s into freighters by 2015. Each freighter conversion includes heavy maintenance and engine overhauls and takes about 100 days. So far **Singapore Technologies** has completed 32 757F conversions for **FedEx** and has eight airplanes at its facility right now. By buying 757s in bulk, **FedEx** is propping up their value. A **Piper Jaffray** analyst said **FedEx** probably pays about \$10 million for each plane, which is several million dollars more than another airline might pay for one or two passenger 757s.

McDonnell Douglas. **Delta Air Lines** is buying nine of **Japan Airlines**' 16 MD-90s to replace some of the 40 old DC-9s that it inherited from **Northwest Airlines**. The first planes were flown to Miami for refurbishing before entering **Delta** service in January 2012. The airline "continue[s] to look for opportunities to acquire used MD-90s," said **Nat Pieper**, the vice president of fleet strategy. The airline plans to add up to 50 MD-90s jets to its fleet of 31 by the end of 2013. **Delta** also bought four of **China Southern Airlines**' 13 MD-90s (SN 53523, 53524, 53526 & 60002) in November. They are being reconfigured to **Delta's** specifications before entering service this spring. The airline has contracted to lease eight MD-90s from **SAS**. **Saudi Arabian Airlines** is replacing its 29 MD-90s with A320s, but there is no word if they are selling them to **Delta**. MD-90s seat 160-172 passengers and are worth between \$5 million to \$9 million, according to **Douglas Runte**, managing director at **Piper Jaffray & Co.** **Douglas** built 116 MD-90s and sold the planes for between \$42 million and \$49 million each when new. The capital-efficient MD-90s were delivered between 1995 and 2000, and they are replacing DC-9s in **Delta's** fleet that average 34 years of age.

Icelandair bought -23NER (SN 30735) from **Flycorp Ltd.**, in February, in a deal arranged by **Cabot Aviation**. The RB211-535E4-B engined plane was delivered new to **American Trans Air** in 2000, and was subsequently operated by **VIM-Avia**, Russia and **Aurela**, Lithuania.

Boeing 767. **Boeing** delivered -381ER (SN 40567) to **All Nippon Airways** and -346ER (SN 40366) to **JAL International** in February. Each airline has five more 767-300ERs on order.

Boeing 777. **Boeing** delivered six 777s in February, which included two -3F2ERs (SN 40711 & 40793) to **Turkish Airlines-THY** and -306ER (SN 39972) to **Air France** for lease to **KLM**. **Air New Zealand** received -319ER (SN 38406) and **GECAS** leased -36NER (SN 38290) to **Egyptair**. **FedEx Express** took delivery of its 12th 777-FS2 Freighter (SN 37137) in late February. The plane was originally ordered by **Guggenheim Partners** and was reallocated to **FedEx**. The airline has another 17 777Fs on order from **Boeing** and will lease 10 more. It also holds 15 options, bringing its potential 777F

fleet to 55 airplanes. The new aircraft allow **FedEx** to boost capacity on key routes, to launch new routes and to put its fleet of MD-11 freighters on secondary routes. The 777s will be operated on “longer, higher demand routes,” **FedEx** said. The company has committed \$1.4 billion to acquire aircraft.

Bombardier delivered CRJ900LR NextGen (SN 15263) to **Lufthansa**, which leased it to **Eurowings**. **Brit Air** received CRJ1000EL NG (SN 19010) in February.

Embraer delivered EMBRAER 170-100 STD (SN 17000322) to **J-Air** and EMBRAER 190-100 IGW (SN 19000409) to **Austral Líneas Aereas** in February. **Lufthansa** leased E-195 (SN 19000411) to **Lufthansa CityLine**. In March, **Aerolittoral** accepted E-190 (SN 19000408) and **Virgin Blue** received E-190 (SN 19000412) and **Azul Linhas Aéreas Brasileiras** took delivery of its 19th E-195. **LOT-Polish Airlines** expects to take delivery of its first of four new E-195s in March or April. The E-195s will replace its 737-500s on the European routes. **LOT** operates three Embraer ERJ-145s, 10 E-170s and 12 E-175s, as well as two 737-400s and four 737-500s. **Airstream International** placed ex-Flybe ERJ-145 (SN 145300) with **bmi Regional**. This is the fifth aircraft that **Airstream** has placed with **bmi**. Previous placements include the sale of an ERJ-135 and ERJ-145, the lease of an ERJ-145 and the ACMI lease of a 767-300ER.

Saab. Saab Aircraft Leasing (SAL) sold 10 Saab 340 aircraft, leased 11 Saab 340s and orchestrated two third-party Saab 340 placements in 2010. The company arranged one new Saab 2000 lease and extended the leases of six airplanes. The 30 transactions nearly double the number of deals reported in 2009. The company manages 110 Saab 340s and Saab 2000s in its portfolio. **SAL** sold Saab 340s to **Eznis Airways**, Mongolia, **PenAir**, U.S., **Regional Express**, Australia, **SkyBahamas**, and to one investor. **Saab Aircraft Leasing** CEO **Michael Magnusson**, commented that 2010 showed resurgence in the turboprop market. **Saab** said it plans to quit the leasing market by 2015.

Turboprops

ATR. Taimyr Airlines (NordStar Airlines) took delivery of its first ATR 42-500 (SN 823) in March. The Russian regional airline ordered four aircraft and optioned three in 2010; the sale was listed as “undisclosed” at the time. The ATR 42-500s will fly within the Krasnoyarsk Region and to destinations such as Novosibirsk, Irkutsk and Yekaterinburg. **Taimyr Airlines** is owned by the Russian metal company **Norilsk Nickel** and it operates five 737-800NGs from Krasnoyarsk and Norilsk in Siberia to the biggest cities of Russia. **Norilsk Nickel** is negotiating to buy **Nordavia** from its parent **Aeroflot** to transport workers to remote production sites. **Nordavia** operates 15 737-500s and four Antonov An-24s and carried 1.4 million passengers last year between Moscow, Archangelsk, and Murmansk in the far northwest of Russia.

ATR delivered ATR 72-500 (SN 943) to **Wings Abadi Airlines** and SN 944 to **Cebu Pacific Air** in February. **Nordic Aviation Capital (NAC)** purchased new ATR 72-500 (SN 921) from **ATR** and leased it to **Air Mauritius**. The airplane was delivered in December 2010. This was the second time **NAC** bought a new **ATR** aircraft and leased it to an airline operator.

Bombardier delivered Dash 8Q-402NG (SN 4349) to **Luxair** in February. **The Royal Moroccan Air Force** took delivery of CL-415 (SN 2079) in February.

Aircraft Industries-Let delivered Let 410 UVP-E20 (SN 2734) to regional air carrier **Air Guyane Express**, French Guyana, in February. The new aircraft seats 19 passengers and is equipped with digital avionics and quick-change foldable seats. The airplane can easily be switched between carrying passengers or cargo. The airline operates another two Let 410s.

Antiques and Other Junque

Iran Bans Tupolev Tu-154s. Iran's **Civil Aviation Organization** forced four Iranian airlines to retire the 17 Tu-154s that they were leasing. The ban was due to several crashes of Tu-154s that were flown by pilots from former Soviet countries. **Reza Nakhjavani**, the country's head of civil aviation said, that the Iranian airlines had replaced the Tu-154s with 35 western aircraft that were acquired on the international second-hand market, but he did not go into details. The U.S. placed an embargo on Iran 30 years ago, which kept the country from buying new **Boeing** or **Airbus** planes. The state-run **Iran Air** also had to replace its ancient Boeing 737s and Boeing 747s because the planes were banned from flying to European Union countries for unstated "security reasons." Airlines in the country operate approximately 140 jet and turboprop aircraft. **Airbus** A300/A310s and **Fokker** F.100s and F.50s are the mainstay of their fleets.

TES Aviation Group acquired the sixth ex-**Japan Airlines** 747-446D from **DVB Bank, Deucalion Aviation Funds** and **Sojitz Corporation** this month. The 747 and its CF6-80C2B1F engines were flown to Arkansas where **Universal Asset Management (UAM)** handled the disassembly and sales of all airframe material. **TES** has been given the responsibility for leasing or parting out the engines.

American Airlines is donating one of its 25-year-old MD-80s to **Tulsa Tech** in Tulsa, Oklahoma. The airplane will be a maintenance trainer for students in the **Aviation Maintenance Technology (AMT)** program at **Tulsa Tech**. It will give them an opportunity to gain practical experience by working on a commercial aircraft. The **FAA**-approved program trains certified technicians who will repair, maintain and inspect commercial aircraft. **American's Tulsa Maintenance & Engineering (M&E) Base** employs more than 6,500 people and is the world's largest private maintenance facility. They provide heavy maintenance work for **American's** Boeing 737, Boeing 757, Boeing 777 and MD-80 fleets, the company said. Previously **American** donated three MD-80s, one to the **Museo del Nino (Children's Museum)**, the second to the **Miguel Such Vocational School** in San Juan, Puerto Rico, and the third to **G.T. Baker Aviation School** in Miami.

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International Airlines Group (IAG) is scrapping two **British Airways** 747-436s (SN 23909 & 23910). IAG is writing off €19 million (\$26 million) relating to the two aircraft.

Accidents and Safety

From Aviation Safety Foundation

Trip Linhas Aéreas ATR-72-212 (PR-TTI, SN 454) exited the runway after landing at **Altamira Airport**, PA, Brazil on February 21. The four crew and 47 passengers escaped serious injury, but the 16-year-old plane was substantially damaged and may be written off. The ATR's left wing scraped the ground.

Fairchild F-27 For Sale

1959-era F-27A cargo turboprop, serial number 11. Not flyable at this time, run out engines, has log books. Airplane is good for parts, museum display or coffee shop. Once operated by Horizon Air, currently owned by the Museum of Mountain Flying, Missoula, MT.

Contact: **Jim Beyer** at (406) 274-3521 or e-mail: mrmtomontana@msn.com

Voronezh Aircraft Production Association (VASO) Antonov 148-100 (RA-61708, SN 41-03) crashed during a test flight for its customer, the **Myanmar Air Force**, on March 5. Two **Myanmar Air Force** members, and four Russian crew were on board. All were killed when the airplane broke up in mid-air near Garbuzovo, Belgorod Region, Russia. Russian investigators recovered the airplane's flight recorder. It shows the An-148 was pushed beyond maximum aerodynamic limits. An aircraft equipment malfunction misled the pilots into thinking they were flying too slowly. The inter-regional transport committee said — "To achieve the desired speed the pilots [increased loads on the aircraft] that exceeded the maximum permissible. Destruction of the aircraft in the air resulted." The committee is looking into the nature of the technical problem, possibly pilot error, or even the quality of the jet's fuel.

Desert Sand Aircraft Leasing's de Havilland Canada DHC-6 Twin Otter 100 (N157KM, SN 57) crashed after takeoff from **Clayton County Airport-Tara Field** in Georgia, on March 8. The airplane was on a test flight after maintenance. It hit trees off the runway and the two pilots were killed. The Twin Otter was delivered in 1967 and was most recently being used to carry skydivers.

Flugfélag Íslands - Air Iceland's de Havilland Canada DHC-8-106 (TF-JMB, SN 337) landed in high winds at **Godthåb/Nuuk Airport**, Greenland, on March 4. The airplane's right hand main gear collapsed, the plane ran off the runway, the nose gear failed, then the right wing scraped the ground. All 31 passengers and three crew members escaped serious injury. The 18-year-old plane was substantially damaged and will probably be written off.

Trans Air Congo Antonov 12BP (TN-AGK, SN 402006) crashed short of the runway at Pointe-Noire, Congo, on March 21. The plane came down in a residential area, struck several houses and burst into flames. All four crew, five passengers and 14 people on the ground were killed. Three of the crew were from Russian and the fourth was a citizen of Kazakhstan.

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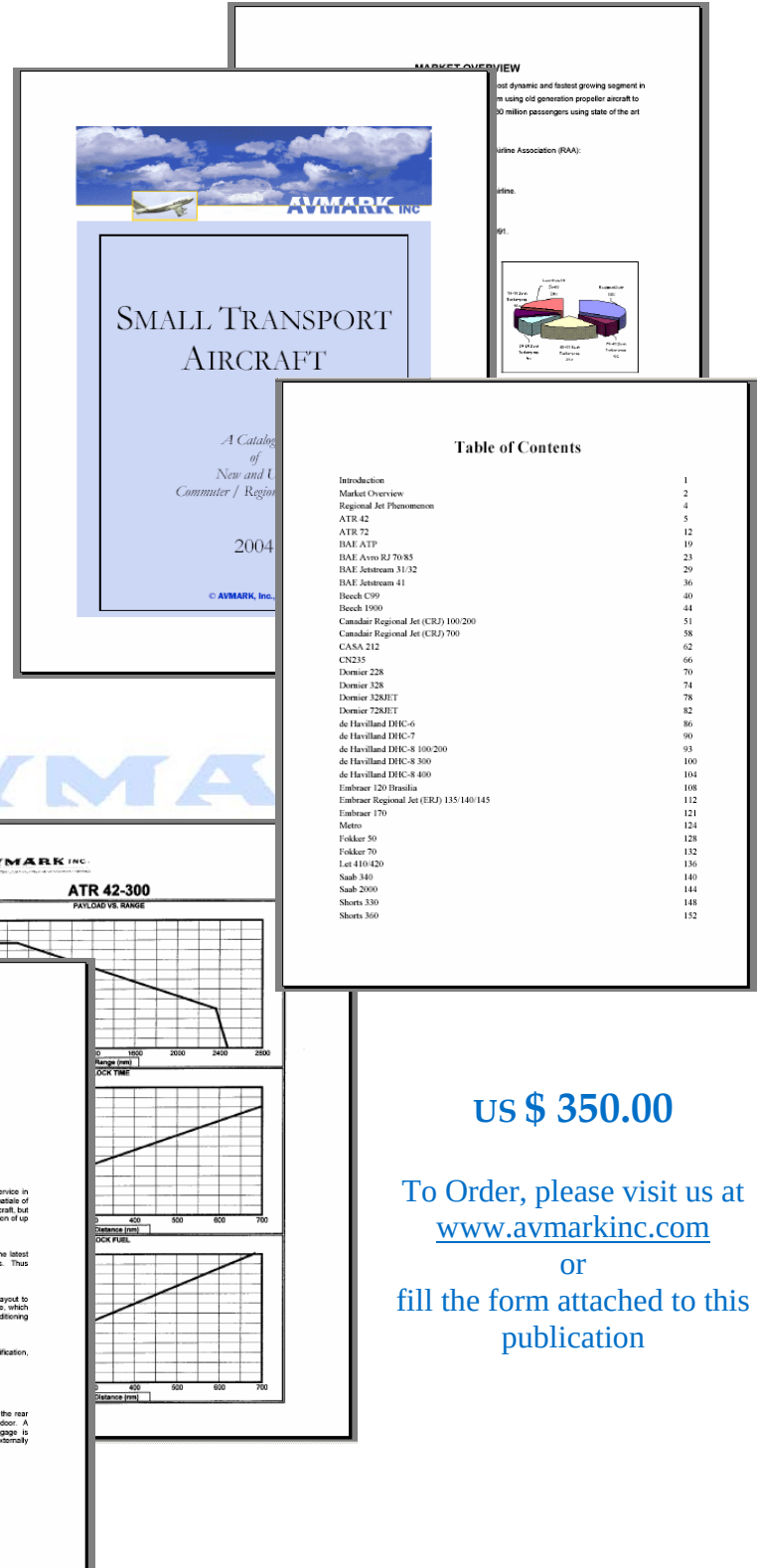
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Select Aircraft Type

Available Aircraft

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

Picture

Selected

Airbus A340-300

Description

Widebody 4 Engine Passenger

Manufactured

1992 To 2006

Values

\$54.00m \$118.00m

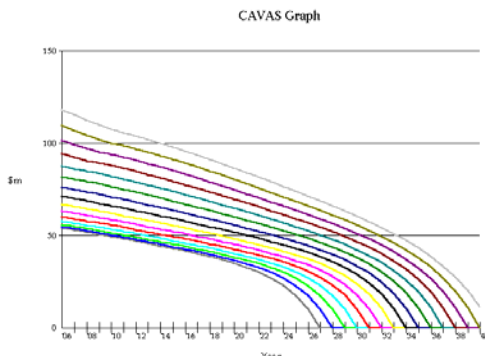
Estimated Life

35 years File No.

013

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CAVAS Figures

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
2006	54.00	54.41	55.83	57.66	60.10	63.54	66.80	71.07	72.94	81.43	87.52	94.23	101.54	109.47	118.00
2007	52.83	53.49	54.73	56.34	58.98	62.01	65.42	69.85	74.86	80.07	85.92	92.18	99.12	106.73	115.25
2008	51.69	52.56	53.61	55.43	57.85	60.94	64.43	68.69	73.45	78.39	84.16	90.49	97.97	105.20	113.39

Profit & Loss Report

Aircraft Type: Airbus A340-300

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

Profit & Loss Report

Aircraft Type: Airbus A340-300

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

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