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With the delivery of its seventh 747-8F, Korean Air is just one new freighter away from completing its fleet modernization program. See p. 6 for more.
Lowest Cost Conversions

B737-800SF
B737-400SF
B737-300SF
CRJ200 SF
MD-80SF

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ATSG ACQUIRES PEMCO

Air Transport Services Group (ATSG) significantly expanded its MRO footprint (and added a new conversion business) with the acquisition, announced on 2 January, of US-based MRO and conversion company PEMCO World Air Services. The acquisition was made through ATSG’s MRO subsidiary Airborne Maintenance and Engineering (AMES).

PEMCO, which was owned by private equity firm Sun Capital Partners, has its own MRO facility at Tampa International Airport (TPA), where it performs heavy maintenance, overhaul and repair work for a variety of airlines, as well as some 737-300 and -400 passenger-to-freighter conversions. It has also done some conversions at the COOPESA facility in San José, Costa Rica (SJO), but most of its conversions are done at the STAECO facility in Jinan, China. No surprise there, as most of PEMCO’s conversions are done for Chinese carriers – in fact, PEMCO says that it has converted more than 70% of the 737-300Fs and -400Fs currently operating in China.

ATSG said that, following the acquisition, it would offer heavy maintenance and modifications at the AMES facility in Wilmington and the PEMCO facility in Tampa, and passenger-to-freighter conversions in “Tampa, Central America, and Asia.”

PEMCO is the leading supplier of 737 Classic conversions to the Chinese market (most recently redelivering the above 737-300F to Longhao Airlines). This will fit well with ATSG’s joint-venture, all-cargo airline that is expected to begin operation in China this year.

Regarding future conversions, ATSG said it would consider developing new programs for 737NG and/or A321 aircraft, but had not yet made any decision.

Beyond saying that ATSG did not assume any PEMCO debt in connection with the acquisition, the companies released no financial details of the transaction. ATSG President and CEO Joe Hete did say, however, that the acquisition was “consistent with our goal to diversify ATSG’s revenue and earnings, for an investment in the same price range as our planned and completed stakes in cargo airlines in China and Europe.” He also added, “based on ATSG’s current estimates and outlook, the PEMCO acquisition is expected to be accretive to ATSG’s earnings starting in 2017.”

Alibaba goes to sea. Chinese e-commerce giant Alibaba entered a partnership with Maersk, the world’s largest ocean container shipping line, allowing shippers to use Alibaba’s OneTouch website to book space on Maersk vessels.

OneTouch, which Alibaba acquired in 2010, targets small- and medium-sized Chinese exporters and allows them to book shipments with air freight and parcel delivery services. And now, with Maersk, as well. The service launched in late December, offering advance booking of space with Maersk on selected routes from eight Chinese ports, with a pre-paid deposit to lock in rates.

Last year, Amazon also entered the ocean freight business when it gained certification in China as a non-vessel operating common carrier (NV OCC). With Alibaba now allowing shippers to book directly, and Amazon now a forwarder in its own right, it is no longer reasonable to dismiss out of hand the thought that traditional forwarders face an existential threat.

That is not to say that Expeditors and Schenker and K+N and the other giants of the industry are in any trouble.

At least not today. The forwarders that should be worried today are the hundreds of small outfits that serve the thousands of small- and medium-sized shippers in China that want to move their products to North America and Europe. But to say something like “Well, sure, those little guys are going to suffer, but we’ll be okay” is to make a serious mistake.

Listen to Maersk CEO Soren Skou, recently quoted in The Loadstar on the way the business will change as Maersk pursues its goal of increased digitization: “The customer experience is likely to change: it’s going to be online; it’s going to be self-service; it’s going to be a lot less person-to-person; a lot fewer emails; and a lot fewer phone calls.”

And, regarding forwarding, he added: “It’s going be more cost-effective for us because the customer will be doing a lot of the work for themselves, and it’s going to affect the demarcation lines between what has traditionally been a freight forwarder and what has traditionally been a carrier.”

Online ad-hoc freight platforms continue to boost offerings. On 30 November, Singapore-based
RUMORS, SPECULATION & COMMENTARY (cont. from p. 3)

Cargobase announced it was adding additional modes of transportation to its platform of on-demand spot market rates. Previously, Cargobase offered rates for Aircraft Charters, On-Board-Couriers, Next-Flight-Out, Regular Air Freight, and Road Freight. With the recent addition of Ocean Freight, the company now has a comprehensive portfolio and is able to provide customers with visibility of their shipments. Cargobase claims that although it’s platform does not remove freight forwards from the equation, it does enable customers to bypass much of the subcontracting common in ad-hoc freight quotations by connecting them to the most relevant forwarder.

Will stricter enforcement of noise regulations hit cargo operations in Brussels? Reports in the Belgian media indicate that a storm is brewing around Brussels National Airport (BRU). Not a thunderstorm, but rather a regulatory storm, as the government moves to more-stringently enforce existing noise and night-flight rules that will particularly impact 747 freighter aircraft operating at BRU. Belgian business daily L’Echo quotes the Airport’s CEO Arnaud Feist as saying: “We have actually received feedback from several customers indicating their decisions to leave for Schiphol as of March 2 if nothing changes before March 1. We have already lost some customers and routes in the recent past, and the Chinese cargo carrier Yangtze River Express is leaving for Amsterdam as of January 1. Two or three other airlines are in the same state of mind.” The airport is currently working with various levels of government to find a solution. This problem is not unique to Brussels. Airports that were built far from the cities they serve have seen the cities expand, and as suburbs replace farmland, residents begin complaining about noisy aircraft – never mind that building or buying their house close to an airport was their own choice. Further complicating matters is that various levels of government are involved, and laws and regulations are often put in place without enough thought about the long-term consequences. Air freight is an important contributor to the economy of the Brussels region – as it is in Frankfurt and London, where similar regulatory battles have been underway for years – but it is easy for politicians to forget this when voters are clamoring for noise restrictions right now. We hope that BRU’s management will be able to convince regional and national legislators to think the entire issue through carefully before making decisions that may ultimately do more harm than good.

New boss at AF-KLM Cargo. Long-time KLM and Martinair cargo veteran Marcel de Nooijer will take over as Executive Vice President of Air France-KLM Cargo, replacing Bram Graber, who left the position in June of this year. Mr. de Nooijer will have his work cut out for him, as Air France-KLM’s cargo business has been in a downward spiral for several years. For the first eleven months of 2016, total Group cargo traffic was down 6.7% to 7.70 billion RTKs – and this follows full-year declines of 8.5% in 2015, 2.4% in 2014, 4.6% in 2013, and 6.3% in 2012. Likewise, despite the adoption of various strategies (sometimes conflicting with previous or subsequent strategies), the carrier’s cargo division has, year after year, reported huge financial losses. For the four years from 2012 through 2015, the cargo division reported annual operating losses averaging €299 million, and looks to be doing no better in 2016.

SHORT SEGMENTS

CONVERSION, MRO & MANUFACTURER NEWS

EGAT is Boeing’s new 767 conversion center. In mid-December, Boeing announced it had selected Evergreen Aviation Technologies Corp (EGAT) to perform passenger-to-freighter conversions for the manufacturer’s 767-300BCF program.

Taiwan-based EGAT and Boeing have considerable shared history. In addition to its work as a heavy maintenance center for Boeing aircraft, EGAT also performed the conversion of four 747-400 passenger aircraft to large cargo freighter (LCF) configuration, or, as the four freighters are more popularly known, Dreamlifters.

While there is no question that EGAT is fully qualified for the job of performing 767 BCF conversions, it is interesting that Boeing should require another conversion house for its 767-P-to-F program at this time. When it launched the program in 2005, Boeing selected ST Aerospace as its conversion partner, and the first aircraft (for All Nippon Airways) was soon induced. Not long after that, in anticipation of soaring demand for freighter-converted 767-300s, Boeing announced that it would also use its Boeing Shanghai MRO joint venture as a conversion center.

But the expected demand did not materialize. Or, perhaps more accurately, delays in the 787 program forced carriers to keep their 767s in passenger service. The resulting feedstock shortage, combined with strong competition from Bedek Aviation Group’s 767-300BDSF program, kept demand low, and Boeing’s seventeen conversions to date have all been done at ST Aero’s Paya Lebar facility in Singapore.

Demand picked up this year with a nine-unit conversion order from Atlas Air Worldwide Holdings. But with only one other 767 conversion order in Boeing’s backlog, why the need for a third conversion center?

Part of the answer lies in the recently-launched 737-800BCF program. Boeing already has thirty-six firm orders and twenty-four options for 737 conversions – more than enough to completely occupy the lines available at the Boeing Shanghai facility. (In fact, Boeing has already said it will also have 737-800BCF conversions performed at the STAECO facility in Jinan.)

Another factor is that Atlas is in something of a hurry to get its nine 767-300BCFs in the air, as it has promised Amazon that it will have them all operating by the end of 2018. Still, that is two full years to convert just nine aircraft – not too much of a stretch for ST Aero.

<table>
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<tr>
<th>Boeing Freighter Conversion Backlog</th>
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<tbody>
<tr>
<td>Customer</td>
</tr>
<tr>
<td>767-300BCF</td>
</tr>
<tr>
<td>All Nippon Airways</td>
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<tr>
<td>Atlas Air Worldwide Holdings</td>
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<tr>
<td>Guggenheim Aviation Partners</td>
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<tr>
<td>SF Airlines</td>
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<tr>
<td>Uzbekistan Airways</td>
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<tr>
<td>767-300BCF Subtotal</td>
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<tr>
<td>737-800BCF</td>
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<td>Air Algérie</td>
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<td>Cargo Air</td>
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<td>China Postal Airlines</td>
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<td>LAS Cargo</td>
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<tr>
<td>YTO Express Airlines</td>
</tr>
<tr>
<td>Unidentified Customer</td>
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<tr>
<td>737-800BCF Subtotal</td>
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<tr>
<td>Boeing Total (all types)</td>
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Source: Boeing, Cargo Facts database  CARGO FACTS -- January 2017

(continued on page 6)
The Global Leader in 767-300 Freighter Leasing and Operating Solutions

Let’s face it; one size doesn’t fit all. Your operation is unique. Shouldn’t your freighter leases be tailored to fit your needs?

Cargo Aircraft Management offers tailored dry leases on the most efficient medium range converted freighter on the market today: the best-in-class Boeing 767-300BDSF, which boasts lower operating costs than comparative aircraft, along with a wide variety of cargo configurations, engine powers, and avionics packages.

As an affiliate of Airborne Global Solutions, we offer customers access to flexible, bundled solutions with partner companies whose services fit together seamlessly.

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Which brings us to ST Aero itself. Eleven years ago, when Boeing launched the 767-300BCF program, ST Aero was a Singapore-based MRO, with a side specialty in Boeing conversions. It was a partner in the manufacturer’s original 757-200 conversion program, and also in the MD-11 P-to-F program. But since signing on as the conversion house for Boeing’s 767-300BCF conversions, ST Aero, through its ownership of EFW, has also become something else: a major competitor to Boeing in the freighter conversion market. However, despite this, Boeing said: “767-300BCF conversions at [ST Aerospace] are currently scheduled to continue through mid-2018. Future conversion capacity will be driven by market demand and may require multiple conversion sites.”

TABY begins Saab conversions. Scotland-based regional carrier Loganair awarded a contract to Sweden-based Täby Air Maintenance (TAM) for the conversion of two Saab 340B passenger aircraft to freighter configuration. Conversion will take place at TAM’s Örebro facility, where the first unit [187, ex-Aerolitoral] has already been inducted, and is expected to be redelivered this month [FAT 003644]. A second 340B freighter (197), will follow, with redelivery expected by the end of the first quarter [FAT 003645].

Last year, TABY and Kansas City-based Jet Midwest partnered to obtain FAA certification and jointly market the conversion program. Earlier this year, TABY’s Saab 340A/340B configuration program became the first to receive both EASA and FAA approval, launching another entrant into the turboprop freighter market. Following conversion, a Saab 340 freighter offers a maximum cargo payload of 3.8 tonnes, more than double the 1.5-tonne capacity of a Cessna Caravan, but less than half the 8.5 tonnes available on an ATR 72.

Korean’s freighter fleet renewal nears completion. Korean Air took delivery of two new freighters in December, one 747-8F and one 777F, while retiring two 747-400ERFs (taken by US-based lessor Altavair). This leaves Korean just one 777F delivery away from completing a freighter fleet renewal program that began in December 2006, when the carrier placed an order with Boeing for five 747-8Fs and five 777Fs. This was followed by orders for two more 747-8Fs (2011) and five more 777Fs (2015) from Boeing, and an agreement reached in 2016 to lease two 777Fs from Altavair.

Prior to taking delivery of these new types, Korean operated a fleet of twenty-four 747-400 freighters, made up of seven -400ERFs, nine -400Fs, and eight -400BCFs. The converted freighters went fairly quickly once the -8Fs and 777Fs began arriving, with the last one gone from the fleet in 2014. However, despite the less-than-optimal cargo environment, Korean kept all of its -400Fs and ERFs until August 2016, when it retired a -400F. This was followed by a second -400F in October, and then the two ERFs that were taken by Altavair late in the year as part of the above-mentioned lease agreement. Under that agreement, Altavair will take two more ERFs in 2017, which, combined with the remaining 777F that will soon be delivered, would leave Korean with thirty freighters. This is almost certainly more than it needs, and we expect most, or all, of the seven remaining -400Fs will soon be retired.
**SHORT SEGMENTS**

**Expanded STC for IPR.** Switzerland-based IPR Conversions received an extension to its EASA-issued ATR conversion STC’s, and can now perform conversions on variants of the ATR42/72-500 series. The newly-expanded STC covers both its large cargo door and structural tube conversions. Until now, all of IPR’s conversion have been completed in Toulouse. A steady flow of conversion orders however, has prompted IPR to launch a second conversion center. Next month, an ATR 72-500 (467) will be inducted for LCD and structural tube conversion at the newly approved center, Contact Air Technik GmbH in Saarbrücken, Germany.

**GATCO 737-400 Main Deck Cargo Loading Systems receives FAA STC.** US-based Global Aerospace Technology Corporation (GATCO)’s new STC encompasses four different main-deck cargo loading system configurations, which are optimized for installation into PEMCO 737-400 P-to-F conversions.

**CARRIER, LESSOR, & HANDLER NEWS**

**Kalitta pilots ratify new contract.** Pilots at US-based ACMI and charter operator Kalitta Air voted overwhelmingly to ratify a new contract. The International Brotherhood of Teamsters, which represents the Kalitta pilots, said a twenty-one-day voting period ended on 20 December, with 234 pilots voting in support of the new deal, and just 17 voting against.

According to the union, the four-year agreement provides “industry-leading scope and job security protections, reduced duty period limits and enhanced rest provisions. It also contains improvements in benefits, protections for pilots who fly cargo into war zones or geographic areas experiencing acts of terrorism, and a 55 percent increase to hourly pay rates, as well as incremental raises through 2020.” Kalitta Air currently operates eighteen freighters, including thirteen 747-400Fs/ERFs/BCFs, three 747-200Fs, and two 767-300BDSFs.

**LHC becomes doubly cool.** Lufthansa Cargo’s Frankfurt Cool Center will nearly double in size, from the current 4,500 square meters, to 8,000 square meters. This is yet another indication of the international pharma market’s growing demand for air freight. At a time when the air freight industry as a whole was chastised for its inability to safely transport temperature-sensitive goods, the Frankfurt-based carrier was among the first to offer an unbroken cold chain, helped in part by its cool center, which opened in 2011. In its current state, the facility boasts four cold-storage rooms that are kept at varying temperatures (-12 to -20 °C, 2 to 8 °C, 5 to 15 °C, and 15 to 25 °C). Additionally, the facility is equipped with a deep-freeze room that has direct access to the apron. The expansion project is set to begin in February, with completion expected by late summer. Last year, Lufthansa added IATA’s CEIV certification to its existing GDP certification to stay at the forefront of pharma handling.

Qatar targets Americas for expansion. Qatar Airways Cargo will begin serving four new destinations with its 777Fs, beginning in February 2017. New destinations in South America include Buenos Aires, São Paulo and Quito. The twice-weekly flights from the carrier’s Doha hub reach the South American cities via Luxembourg. On the return leg, the freighters will stop in another new destination, Miami, before their onward flight to Doha via Luxembourg.

Ulrich Ogiermann, Qatar Airways’ chief officer cargo, said the new routes will target pharma and perishables exports out of South America – commodities that are in great demand in Europe and Asia. Qatar Cargo’s freighter fleet currently sits at 21 units after the recent addition of its eleventh 777F. It also has eight A330-200Fs and two 747-400Fs.

As other large Gulf-region carriers such as Dubai-based Emirates, and Abu Dhabi-based Etihad Airway, begin to adjust to slowing growth, Qatar continues to pursue an aggressive expansion strategy. Emirates, which, in previous years, experienced double-digit cargo traffic growth, reported its cargo traffic was flat during the first half of its 2016 fiscal year, compared to the same period in 2015.

**Qatar Airways takes 10% stake in LATAM.** On 28 December, Qatar Airways, through its wholly-owned subsidiary Qatar Airways Investments, completed the acquisition of 10% of Chile-based LATAM Airlines Group, reaching a total of almost 61 million shares at a price of US$10 per share. The two carriers already cooperate as members of the oneworld alliance, and whether the acquisition of the stake will lead to any changes at the operational level remains to be seen.

What is interesting is that Qatar is, in many ways, going in the opposite direction to neighbor and competitor Etihad Airways. Abu Dhabi-based Etihad has been widely reported to have suffered losses of as much as US$2.6 billion as a result of its years-long stake-acquisition binge. Both it and Dubai-based Emirates have announced significant job cuts – in Etihad’s case reportedly to include CEO James Hogan (see below). And, on the cargo side of their operations, both Etihad and Emirates have seen once-phenomenal demand growth slow to almost nothing.

Contrast this with Qatar Airways, where year-over-year cargo volume growth is well into double-digits, and the carrier has just acquired the significant stake in LATAM.

**Etihad Airways is showing some signs of a slowdown in its cargo division.** Despite having recently clocked its busiest month ever this past October, when it carried 53,785 tonnes, year-over-year cargo volume growth has slowed almost to a standstill. Etihad’s passenger business is also showing signs of trouble, and the carrier confirmed that layoffs (reportedly starting at the very top, with CEO James Hogan) would be part of a restructuring plan that will help Etihad adapt to “an increasingly competitive landscape.”

In related news, Etihad Airways and Lufthansa finalized a codeshare agreement, set to begin this month (subject to government approval). The agreement signals a strategic cooperation between two former, and often bitter, rivals. Although initially restricted to the carriers’ passenger operations, the deal may foreshadow future cargo developments. The German carrier will begin putting its LH code on Etihad Airways’ twice-daily flights between Abu Dhabi and Frankfurt and its twice-daily services between Abu Dhabi and Munich. Etihad will, in turn, put its EY code on Lufthansa’s services between Frankfurt and Rio de Janeiro, Brazil as well as Bogotá, Colombia. Lufthansa also agreed to lease 38 aircraft from Air Berlin, in which Etihad holds a 29% stake. The aircraft will fly for Lufthansa’s Eurowings Group and its network carrier Austrian Airlines.

While the two deals are unrelated, they were both announced on the same day and could be indicative of tightening relations between the two carriers. Struggling to grow its cargo business, Lufthansa Cargo has already finalized, or is in the process of forming, new cargo joint ventures with Japan-based ANA, US-based United and Hong Kong-based Cathay Pacific. Given that Qatar Airways has already chosen IAG as its European partner, a cargo alliance between Lufthansa and Etihad seems even more likely.

**Airwork update.** China-based RIFA confirmed its intention to acquire New Zealand-based Airwork Holdings in a letter to shareholders submit-[continued on page 8]
On 7 December, UPS (above) wasn’t the only big express company to buy itself a Christmas present. Germany-based Deutsche Post-DHL completed its acquisition of UK-based parcel, mail, and logistics services provider UK Mail, which will now become a part of DP-DHL’s European parcel network.

SF goes Ukrainian. China-based SF Express and Ukraine-based postal and express company Nova Poshta signed a partnership agreement under which the two will cooperate to provide fast delivery of packages from China to online shoppers in Ukraine. The service, which has been tested over the past few months, will offer full track and trace (through Nova Poshta) on orders made with most of the big Chinese e-commerce companies. SF will fly the packages from China to Kiev’s Boryspil Airport (KBP), with Nova Poshta taking over from that point to the customer’s door.

SF Airlines joins IATA. The International Air Transport Association (IATA) formally granted membership to SF Airlines, the air arm of China-based SF Express, at a ceremony in Shenzhen on 20 December. Among other things, this will mean that SF’s cargo data will be added to IATA’s monthly and yearly summaries of worldwide traffic. Given SF’s rapid growth, this is a significant addition. The carrier, which recently took redelivery of the fourth of five freighter-converted 767-300BCFs it ordered from Boeing, currently operates a thirty-six-unit freighter fleet, including four 767-300BCFs, sixteen 757-200PCFs, three 737-400Fs, and thirteen 737-300Fs.

Is that an online purchase? Just throw it on the baggage conveyor! Netherlands-based Parcel International launched a new pan-European same-day delivery service in cooperation with KLM and Amsterdam Schiphol Airport (AMS). The service, under the name 12Send, offers first-mile pickup (from online sellers in the Schiphol catchment area) and drop the packages into Schiphol’s baggage system. The baggage system routes the packages to the appropriate KLM aircraft flying to cities in KLM’s European network. At the destination airport, 12Send takes over again, providing last-mile delivery to the consumer, using electric vans or e-bikes.

Avolon to acquire CIT Aerospace, following recent board approval from its parent, China-based Bohai Capital. When the US$10 billion deal closes, Avolon will add an 330 aircraft to its current portfolio, further consolidating the number of large aircraft lessors in the market. Just last year, Ireland-based Avolon Leasing was acquired by Bohai Capital, the aircraft leasing affiliate of China’s HNA Group.

EXPRESS & POSTAL NEWS

UPS acquires Marken. UPS bought itself a Christmas present in the form of Marken, a privately-owned, US-based company that specializes in providing clinical trial logistics solutions to the life-sciences industry. The acquisition will provide a significant boost to UPS’ presence in the healthcare field, as Marken manages about 50,000 temperature-controlled drug and biological shipments every month in more than 150 countries, with a focus on direct-to-patient services and biological sample shipments. Terms of the acquisition were not disclosed.

Longhao takes its first freighter. China-based startup Longhao Airlines took redelivery of its first aircraft, a 737-300F (29069, ex-China Eastern), following conversion to freighter configuration by PEMCO World Air Services at the STAECO facility in Jinan [FAT 003643]. The carrier, a subsidiary of Guangzhou-based Longhao Aviation Group, said it received its Air Operator’s Certificate on 7 December, and intends to begin commercial service following redelivery of two more PEMCO-converted 737-300Fs in early 2017.

When its commercial service starts, Longhao Airlines should have no trouble filling its freighters, as it recently signed an agreement with Shenzhen-based SF Express, under which SF will take most of Longhao’s capacity.

Will Phnom Penh Air Cargo finally fly? Two years ago, Cambodia’s Council of Ministers granted preliminary approval for an Air Operator’s Certificate to a Phnom Penh-based, but Chinese-backed, all-cargo airline. For reasons unknown, the carrier didn’t follow through and submit its formal AOC application… until now. The Phnom Penh Post reports that Phnom Penh Air Cargo is about to submit its application, and hopes to launch service between the Cambodian capital and Nanning in southern China using “one or two Boeing 737 freight aircraft.”

New freighter service to provide food-security lifeline to Galapagos residents. On 19 December, Ecuador-based Islandcharters began chartering a 737-400F from Colombia-based AerCaribe to shuttle freight from the mainland to the Galapagos Islands. Initially, the freighter will operate flights between Ecuador’s largest cities, Guayaquil and Quito, and Seymour on the island of Baltra. According to ch-aviation, Islandcharters was to run four flights in December before regularizing a scheduled timetable. In recent years, the thirty-or-so thousand inhabitants scattered across the chain of Ecuadoran islands in the South Pacific have run into food shortages when ships carrying food and supplies have run aground, thus significantly delaying delivery.

Will the New Zealand Stock Exchange on 8 December. While little has changed regarding Hangzhou-based RIFA’s future plans for Airwork since a takeover notice was first issued in October, shareholders were given a 4 January 2017 deadline to accept or reject the offer.

RIFA maintains a low profile, both in China and abroad, where the holding company has a history of successful overseas acquisitions, particularly in Oceania. RIFA’s core business has traditionally related to the production of high-end textile machinery and precision electronic machinery. More recently, the conglomerate has taken an interest in sectors such as livestock and aviation. In 2014, RIFA launched Air Xiya, which it refers to as a “general aviation business.” As partial owner of Airwork, RIFA expects new opportunities to arise from:

- “Growing Airwork’s helicopter leasing presence in China through a potential dispatch of existing Airwork helicopters and acquisition of new helicopters.”
- “Developing Airwork’s leading aviation maintenance, repair and overhaul (MRO) capability and reputation to expand its certification in emerging markets, including Asia and Latin America.”

RIFA’s original takeover notice, issued to the New Zealand Stock Exchange, stipulated requirements to acquire a stake of at least 50.01%, and up to 75%, in Airwork Holdings. With an offer price of $5.40 per share, the deal would be valued at approximately US $146 million.

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Amazon makes its first commercial drone delivery. On 7 December, Amazon’s Prime Air made its first commercial delivery with an unmanned drone. The delivery took place in Cambridgeshire, near Amazon’s UK drone-testing plant, where the company has been working with the government to test longer-distance deliveries. Jeff Bezos, Amazon’s CEO,
CEO, broke the news on Twitter, announcing that his company delivered a parcel containing electronics and popcorn to a customer’s home, from a nearby Amazon fulfillment center. Unlike normal fulfillment centers, the Cambridgeshire facility boasts an adjacent semi-automated drone loading and launching platform. The delivery itself lasted 13 minutes, during which the drone traveled about two miles. After this first delivery, Amazon said it planned to expand the Cambridgeshire drone test operations.

Regulatory hang-ups in the US forced Amazon to move much of its commercial testing operations to the UK, where regulators have been more forward-looking than their US counterparts. “The UK is a leader in enabling drone innovation,” said Paul Misener, Amazon’s vice president of global innovation policy and communications. “This announcement strengthens our partnership with the UK and brings Amazon closer to our goal of using drones to safely deliver parcels in 30 minutes to customers in the UK and elsewhere around the world.”

FORWARDING & LOGISTICS NEWS

Hong Kong’s U-Freight: Industry only ‘scratched surface’ of e-commerce. After attending the recent Amazon Global Selling Expo in Hangzhou, China, Hong Kong-based logistics firm U-Freight Group said that the growth potential for global e-commerce is “far from exhausted,” even in well-established regions, such as the United States, Europe and Japan. U-Freight CEO Simon Wong added, however, that the air cargo industry will need “new approaches” to ensure the international supply chain will remain intact.

“We came away convinced that there is much, much more to come from the global e-commerce market and we are, in fact, only just scratching the surface,” Wong said, regarding the Amazon Expo, which was attended by selected shippers with revenues in excess of US$10 million per year that had been invited to share their needs regarding e-commerce logistics.

Wong added that U-Freight is currently interested in working with the Fulfillment by Amazon (FBA) program to move freight from origin to delivery, including customs clearance, via Amazon Fulfillment Centers.

“Online retailers need to find new models and innovative platforms to deal with the logistics challenges they face,” Wong said. “That includes ensuring that they engage with their freight forwarder at an early stage of the process to ensure that they truly understand the complex logistical demands of e-commerce.”

U-Freight offers both standard and express customs clearance at origin in China and at destination in the US and Europe. It also operates its own e-commerce fulfillment center in Shanghai.

Yusen Logistics expands to Switzerland. The Japan-based freight forwarder opened a branch office near Zurich Airport on 1 January, 2017. Home to two of the world’s largest airfreight forwarders, Panalpina and Kuehne + Nagel, Yusen called the Swiss office a “strategic step” for the company. The new outpost will offer air and ocean freight services, land transportation and customs clearance. Yusen currently has 77 offices scattered across Europe, but Zurich will be the first in Switzerland. Last November Yusen added IATA’s CEIV-Pharma certification at its Amsterdam Schiphol Airport location in a bid to capture high-value pharma shipments moving between the EU, the US and Asian markets.
Korean Air took delivery of a 747-8F (37653) from Boeing [FAT 003655]. This is the seventh of seven 747-8Fs Korean ordered from the manufacturer.

Air Georgia acquired a 747-200F (24399, most recently operated by Trans Avia Export) [FAT 003654]. Prior to this acquisition, Air Georgia offered passenger charter flights with Cessna Citations from its base in Tbilisi.

Moldova-based startup Fly Pro acquired a 747-200F (24576, most recently operated by South Air) [FAT 003657].

Korean Air took delivery of a 777F (62696) from Boeing. [FATs 003645-3647]. Korean now has seven 777Fs with one more on order.

FedEx retired an MD-10F (46708) [FAT 003651].

FedEx took delivery of a 767-300F (43549) from Boeing. [FAT 003650].

SF Airlines took redelivery of a 767-300BCF (28154, ex-Qantas) following conversion to BCF freighter configuration by Boeing at the ST Aerospace facility in Paya Lebar [FAT 003636].

Two more 767-300 freighters are coming for ATSG.

• Cargo Aircraft Management (CAM, the leasing arm of US-based Air Transport Services Group) ferried a 767-300 (27060, ex-American Airlines) to Bedek Aviation Group’s Tel Aviv facility for conversion to BDSF freighter configuration [FAT 003639]. Following conversion, CAM will lease the freighter to Amazon, which will hand it back to one of ATSG’s subsidiary carriers for operation in the Prime Air network on a CMI basis.

• CAM also acquired another 767-300 (25197, ex-American), and will have it converted to BDSF freighter configuration by Bedek [FAT 003657 – 3658].

China Postal Airlines took redelivery of a 757-200PCF (25889, ex-China Southern Airlines) following conversion to PCF freighter configuration by Precision Aircraft Solutions at the TAECO facility in Xian [FAT 003652].

Another 757-200PCF for Cargojet? A 757-200PCF (24605, ex-American Airlines) is currently in conversion by Precision Aircraft Solutions at the Flightstar facility in Jacksonville. CargoFacts believes the end user will be Canada-based Cargojet [FAT 003659].

Aviastar to operate Russian Post’s two Tu-204s. According to a report in ch-aviation, Russian Post will switch the CMI operation of its two Tu-204 freighters (64051 and 64052) from Direct-Avia (a startup which has failed to start up) to Aviastar [FATs 003660 – 3663].

US-based Everts Air Cargo will convert a third MD-80 to freighter configuration. Aeronautical Engineers, Inc inducted an MD-83 (53079, ex-US Dept. of Justice) for conversion to freighter configuration at the Commercial Jet facility in Dothan (DHN) [FAT 003633].

DHL Express ACMI-leased a 737-400F (26071) from Spain-based Swiftair [FAT 003653]. The freighter will reportedly be based in Accra, Ghana.

US-based lessor Vx Capital Partners took redelivery of a 737-400F (28701, ex-Thai Airways) following conversion to freighter configuration by Aeronautical Engineers Inc at the Commercial Jet facility in Miami [FAT 003664]. No end user has been announced.

Kalitta Charters II put its second 737-400F into revenue service. The US-based charter operator recently took redelivery of the unit (24271) following conversion to freighter configuration by Aeronautical Engineers, Inc [FAT 003649].

ASL Aviation Group took redelivery of a 737-400F (24917, from the ASL fleet) following conversion to freighter configuration by Aeronautical Engineers, Inc [FAT 003640]. The freighter will be operated by subsidiary carrier ASL Airlines Hungary.

Luxembourg-based lessor Vallair took redelivery of a 737-400F (27213, ex-Air Bucharest) following conversion to freighter configuration by Aeronautical Engineers, Inc at the Commercial Jet facility in Dothan [FAT 003642].

Another 737-400F for Cargo Air. Bulgaria-based Cargo Air acquired a 737-400 (28038, ex-Enter Air) [FAT 003641]. Cargo Facts expects the carrier will have it converted to freighter configuration by Aeronautical Engineers, Inc.

ASL to convert another 737-400. Ireland-based ASL Aviation Group ferried a 737-400 (28885, ex-Alaska Airlines) to the Commercial Jet facility in Dothan (DHN), for conversion to freighter configuration by Aeronautical Engineers, Inc.

China-based startup Longhao Airlines took redelivery of its first aircraft, a 737-300F (29069, ex-China Eastern) following conversion to freighter configuration by PEMCO World Air Services at the STAECO facility in Jinan [FAT 003643].

YTO Express Airlines acquired a 737-300 (23739, ex-US Airways) and is having it converted to freighter configuration by PEMCO World Air Services at the STAECO facility in Jinan [FATs 003665 – 3666].

Greece-based Mediterranean Air Freight ACMI-leased an ATR72-200F (150) from Spain-based Swiftair [FAT 003667]. This is Mediterranean Air Freight’s only aircraft.

Sweden-based Amapola Flyg ACMI-leased an ATR72-200F (449) from Swiss lessor Zimex Aviation [FAT 003668].

Loganair to add two more Saab 340Fs. UK-based regional carrier Loganair ferried a Saab 340B (187, ex-Aerolitoral) to Örebro (ORB) for conversion to freighter configuration by Täby Air Maintenance (TAM) [FAT 003644]. A second Saab 340B (197, from Loganair’s fleet) will enter conversion soon [FAT 003645].

South Africa-based Solenta Aviation acquired an ATR72-200F (108) on lease from ASL Airlines Ireland, and will operate the freighter on an ACMI basis for DHL Express [FATs 003669 – 3670].

Japan-based Ryukyu Air Commuter took delivery of the third of five DHC-8 Q400 Combis (4545) from Bombardier [FAT 003671]. Ryukyu was the launch customer for the combi variant of the Dash 8 Q400.
With e-commerce becoming an ever more important driver of air freight demand, it seems appropriate to start 2017 with a look at the Christmas season through the eyes of the world’s biggest e-tailers, Amazon and Alibaba.

According to Amazon, the 2016 holiday season was its best-ever. Topping the list of best-sellers were the company’s own electronic must-haves, including Echo Dot, Fire TV Stick, Fire tablet, and Amazon Echo. Of course, millions – many, many, many millions – of orders for other items were placed and delivered. Here are a few fun facts about those orders:

- More than 1 billion items shipped worldwide with Amazon Prime and Fulfillment by Amazon this holiday season.
- Amazon.com customers purchased enough 4K TVs to reach the peak of Mount Everest more than nine times.
- 23 December 2016 was the biggest day ever for Prime Now deliveries worldwide, and members ordered three times more items compared to last year, with one- and two-hour delivery worldwide. Echo Dot, Amazon Echo, Fire TV Stick and Oreos Cookies were some of the most popular items ordered that day in the US.
- 19 December was the peak worldwide shipping day this holiday season.
- Amazon fulfillment centers in San Marcos, Texas and Kent, Washington, as well as two Polish fulfillment centers, in Poznan and Wroclaw, shipped more than 1 million items in a single day.
- The fastest Prime Now delivery on Christmas Eve took 13 minutes and was delivered at 9:05 p.m. to a Prime member in Redondo Beach, California.
- More than 72% of Amazon customers worldwide shopped using a mobile device this holiday.
- Shopping on the free Amazon mobile app grew by 56% this holiday, worldwide.
- On Cyber Monday, Amazon customers worldwide purchased about 36 toys per second on a mobile device.

And, of course, billions of online purchases meant millions of returns, so air and road freight providers received a sort of post-Christmas bonus. UPS, for example, said that this year’s record e-commerce sales drove another record that will help jump-start the New Year. National Returns Day, (5 January) is when UPS shipped the most returned packages back to retailers. The company said it expected to return 1.3 million packages on that day alone.

For its part, China’s e-commerce giant Alibaba said its annual peak occurs during the 11.11 Global Shopping Festival (formerly known as Singles Day) that takes place in mid-November and is often compared to the Black Friday/Cyber Monday period in the US. According to data published by Adobe, the combined value of online sales on Black Friday and Cyber Monday in 2016 was US$6.73 billion, up 15.6% over 2015. But Chinese consumers have taken to online shopping at a rate far outpacing their counterparts in North America and Europe, and Alibaba said the value of online sales during its 11.11 event in 2016 was up 32% from 2015 to US$17.8 billion – that’s double the growth rate and 2.6 times the sales revenue of Black Friday/Cyber Monday.
PEAK SEASON BOOSTS VOLUMES AND COSTS FOR FEDEX

FedEx reported operating income up 2.6% y-o-y in the second quarter of its 2017 fiscal year, driven primarily by the inclusion of TNT Express, which added revenues of $1.9 billion during the quarter.

The charts at right and below show FedEx’s second-quarter results as reported, with net income up 1.3% to $700 million, as overall revenue swelled by 20.0%, to $14.9 billion. Despite higher revenues, costs associated with IT and infrastructure investments, and integration costs from the acquisition of TNT Express held profits down. Adjusting for the impact of the TNT acquisition (in both years) and legal matters in FY16, net income was up 3.8% and operating income was up 2.5%.

Turning to the FedEx Express segment, operating income as reported was up 2.3% to $636 million. Adjusting for the above-mentioned factors, Express operating income rose 5.1% to $654 million.

Total US domestic package volume fell slightly (down 0.6%), but this was offset by stronger international demand, and overall package volume was up 0.5%. FedEx’s high-yield US Overnight Envelope product continued to post significant average daily volume increases into this quarter, and was up 4.9%. Composite US Package yields were up 2.7%, and International Export Package yields were up 0.7%.

Turning from the numbers to some larger issues, during a conference call following publication of the quarterly results, FedEx Chairman and CEO Fred Smith told investors the company was in the midst of a record peak season, driven primarily by e-commerce demand. Average daily volumes can be nearly double that of a normal business day during peak season.
which requires FedEx to plan carefully and add sortation and lift capacity. Smith said the company was better-equipped to handle this year’s peak because of various infrastructure investments, including “the recent opening of four major hubs and nineteen automated stations year-over-year.” FedEx also secured external lift for the peak season. In August 2016, FedEx signed a five-year contract with Atlas Air Worldwide Holdings, under which Atlas agreed to operate five 747-400Fs for FedEx for a flexible period beginning in late November/early December each year.

Mike Glenn, president and CEO FedEx Services, added, “This surge in demand is driven primarily by a relatively small number of customers. Less than 50 large retail and e-tail customers are responsible for the majority of peak demand.”

As interest in e-commerce giant Amazon’s own-controlled logistics network grows, Smith took the call as an opportunity to reiterate that, although FedEx is “committed to being a leader in the e-commerce market, it’s important to recognize that non-e-commerce deliveries to residences and business-to-business traffic represents the vast majority of FedEx Corporation’s estimated $60 billion in FY17 revenues.”

Discussing the results in the FedEx Freight segment, Alan Graf, EVP and CEO, attributed the unit’s higher average daily LTL volumes, and increased revenue to “Freight’s competitive advantage of having the fastest published transit times in the LTL industry,” which, Graf added, “is driving higher growth in its priority service.”

Although FedEx Ground package volumes grew slightly, Ground operating income was down, “due to increased rent, depreciation and staffing related to network expansion as well as higher purchased transportation rates” according to Graf.

Regarding the TNT integration, at the end of the first fiscal quarter FedEx said it expected the TNT acquisition to be accretive by FY18, although, in the second-quarter call, Graf said integration and restructuring will continue over the next four years.

The company said it plans a more comprehensive update in March, but, in the meantime, offered a few financial and operational highlights:

- Of the total $14.93 billion total revenue, $1.90 billion (12.7%) came from TNT. Absent this amount, total revenue would have been $13.03 billion, up 4.6% over the $12.45 billion in 2QFY16.
- FedEx Express package volume was up 0.5%. TNT Express package volume was up 7.9%. TNT’s average daily volume was 1.07 million, or 25.0% of FedEx’s 4.29 million.
- FedEx Express per-package revenue was up 1.4%, TNT per-package revenue was down 2.0%.

A more accurate measure than either chargeable weight or FTKs may be a new metric developed by WorldACD. Acknowledging that neither tonnes carried nor freight-tonne-kilometers flown (FTKs, the measure used by IATA) was a perfect measure of demand growth, the company introduced a new measure – direct tonne kilometers, or DTKs – that it felt did a better job.

DTKs are calculated by multiplying the weight carried by the direct-flight distance between origin and destination. WorldACD says this is a more accurate reflection of demand because it eliminates the inflationary effect on FTKs of routes with intermediate stops. That is, demand for iPhones in Europe is the same whether those phones fly from China to Europe directly, or with a stop in Dubai, but the route via Dubai is over 3,000 kilometers longer, and using DTKs instead of FTKs more accurately reflects this.

Using this new measure, WorldACD found that demand was up 7.1% y-o-y in October – much closer to the gain in chargeable weight than it has been since the company introduced the new measure. This indicates a smaller shift towards long-haul traffic than in previous months, which WorldACD attributes to a boom in the relatively short-haul intra-Asia traffic in November (up 15% y-o-y).

Perhaps more important than the increase in traffic was a considerable strengthening of the yield environment. While yields were down, “due to increased rent, depreciation and staffing related to network expansion as well as higher purchased transportation rates” according to Graf.

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### FREIGHTER FLEET ANALYSIS

#### PRODUCTION FREIGHTER ORDERS & DELIVERIES DECLINE IN 2016

#### Boeing Production Freighter Backlog

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<th>Deliveries</th>
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#### 777F

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#### 767-300F

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<th>Customer</th>
<th>Orders</th>
<th>Deliveries</th>
<th>Backlog</th>
</tr>
</thead>
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<td>Asiana Airlines</td>
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<td>0</td>
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<tr>
<td>Azerbaijan Airways</td>
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<tr>
<td>DHL</td>
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<td>FedEx</td>
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<td>GECAS</td>
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<td>Japan Airlines</td>
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<td>LAN Airlines</td>
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<td>UPS</td>
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<td><strong>122</strong></td>
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<tr>
<td><strong>Boeing Total (all types)</strong></td>
<td><strong>462</strong></td>
<td><strong>320</strong></td>
<td><strong>142</strong></td>
</tr>
</tbody>
</table>

Source: Boeing, Cargo Facts database

#### Airbus Production Freighter Backlog

<table>
<thead>
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<td>MNG Airlines</td>
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<td>5</td>
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<tr>
<td>Synergy Aerospace</td>
<td>2</td>
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</tr>
<tr>
<td>Turkish Airlines</td>
<td>9</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td><strong>Airbus Total (A330-200F)</strong></td>
<td><strong>42</strong></td>
<td><strong>36</strong></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>

Source: Airbus, Cargo Facts database

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Surprise! The most popular production freighter in 2016 was Boeing’s largest offering, the 747-8F. In an otherwise very quiet year for freighter purchases, UPS placed an order for fourteen units.

All things considered, 2016 was a good year for the air freight industry. Full-year data is not yet available, but we expect that when the final numbers are tallied, we will see an increase in worldwide air cargo traffic of about 4% over 2015 – not spectacular compared to what once would have been considered a “good” year, but a welcome result when viewed in the light of the last ten years.

However, despite the growth in 2016 and optimism about demand in 2017, carriers worldwide ordered fewer production freighters than their average over the last five years. As shown in the chart on the facing page, there was a net total of sixteen orders for the production freighters offered by Boeing and Airbus, compared to a five-year average of twenty-nine. Likewise, the total of thirty-three deliveries was a drop from the average of forty-four.

Airbus and Boeing currently offer a total of four production jet freighters:

#### A330-200F

Airbus booked no orders in 2016 for its only production freighter. During the year, the manufacturer delivered three units – two to Turkish Airlines, and one to Qatar Airways. To date, Airbus has booked a total of forty-two orders for the A330-200F, and delivered thirty-six, leaving it with a backlog of just six units.

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**PRODUCTION FREIGHTER ORDERS & DELIVERIES DECLINE IN 2016**

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**Source:** Boeing, Cargo Facts database

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**FREIGHTER FLEET ANALYSIS**

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**Boeing Production Freighter Backlog**

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**Airbus Production Freighter Backlog**

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**Source:** Airbus, Cargo Facts database

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**FREIGHTER FLEET ANALYSIS**

---

**Source:** Boeing, Cargo Facts database

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**FREIGHTER FLEET ANALYSIS**

---

**Source:** Airbus, Cargo Facts database

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**FREIGHTER FLEET ANALYSIS**

---

**Source:** Boeing, Cargo Facts database

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**FREIGHTER FLEET ANALYSIS**

---

**Source:** Airbus, Cargo Facts database

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FREIGHTER FLEET ANALYSIS

747-8F: After several years of drought, rain began falling for Boeing’s largest freighter in 2015, with orders from AirBridgeCargo Airlines (twenty, through parent Volga-Dnepr Group), Silk Way West Airlines (three), and Atlas Air Worldwide Holdings (one). Japan-based Nippon Cargo Airlines cancelled four orders, but this still left Boeing a net of twenty orders for a freighter program some observers believed to be effectively dead. 2016 brought more good news, with a fourteen-unit order from UPS, bringing Boeing’s order total for the 747-8F to 101.

On the delivery side of the equation, Boeing handed over six 747-8Fs to five customers in 2016, with AirBridgeCargo taking two (one of which went to UK-based sister carrier CargoLogicAir), while Cargolux, Cathay Pacific, Korean Air, and Silk Way each took one. This leaves Boeing with thirty-two orders in its backlog.

777F: The resurgence in 777F orders that began in 2014 and continued in 2015 came to a screeching halt in 2016, during which Boeing not only booked no new 777F orders, but, in fact, suffered a cancellation of four orders by Guggenheim Aviation Partners (now renamed Altavair). Given that Boeing has booked a net total of 165 orders for the freighter variant of its 777F, one bad year may not be cause for alarm, but it is hardly a cause for celebration, either.

During the year, Boeing delivered eleven 777Fs to four customers: Korean Air and Qatar Airways took four and three, respectively, while Etihad Airways and lessor Altavair each took two (with the Altavair freighters going to Korean on long-term lease). Boeing’s 777F backlog now stands at thirty-six.

767-300F: FedEx was the only customer for Boeing’s 767-300F in 2016, with an order for six more units, bringing its total 767-300F orders to 112. The Memphis-based integrator was also Boeing’s only 767-300F delivery customer in the year, taking a total of thirteen units. Boeing has now taken orders for a total of 196 767-300Fs and delivered 122, leaving it with seventy-five units in its backlog (all for FedEx).

THE 500TH 787

Christmas came a bit early for Colombia-based Avianca, when Boeing delivered a 787-8 aircraft (37511) on 21 December, 2016. And not just any 787, but the 500th of the type to enter service since the first unit was delivered to All Nippon Airways in 2011.

While it will be many years before a 787 freighter becomes available, the popularity of the type in passenger configuration (it reached 500 deliveries faster than any other widebody) has had a significant impact on the air freight industry in two respects. First, the 787 is a better belly cargo machine than the aircraft it replaced (Boeing’s 767). The 787 offers up to seven pallet positions (depending on model) compared to the four available in a 767-300, and also has significantly longer range.

Second, and perhaps more important, once a steady stream of 787s began entering service, the 767-300ERs they replaced became available for conversion to freighter configuration.

Production Jet Freighter Net Orders: 2012 through 2016

<table>
<thead>
<tr>
<th>Year</th>
<th>A330-200F</th>
<th>747-8F</th>
<th>777F</th>
<th>767-300F</th>
<th>Total</th>
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<tbody>
<tr>
<td>2012</td>
<td>5</td>
<td>7</td>
<td>2</td>
<td>19</td>
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<td>2014</td>
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<td>9</td>
<td>9</td>
</tr>
<tr>
<td>2015</td>
<td>4</td>
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<td>7</td>
<td>30</td>
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<td>2016</td>
<td>0</td>
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<td>14</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>Total</td>
<td>-4</td>
<td>26</td>
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<td>Average</td>
<td>-0.8</td>
<td>5.2</td>
<td>7.4</td>
<td>12.0</td>
<td>29.0</td>
</tr>
</tbody>
</table>

Source: Carriers, lessors, manufacturers

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A New Approach to Air Cargo

With explosive growth in China’s e-commerce market and the resulting air express boom, Cargo Facts Asia is the forum to discuss how the industry can take advantage of this growth. The 2017 conference has an expanded agenda, featuring new sessions on Cargo IT and Innovation, as well as sessions covering the future of conversions and the annual Cargo Facts Freighter Forecast. The event will bring the focus of the global cargo community to Shanghai and China for essential industry discussions. Don’t miss the opportunity to join us. Register today at www.CargoFactsAsia.com.