

May 2013 - www.avitrader.com

A close-up photograph of a male technician in a light blue short-sleeved uniform shirt and safety glasses. He is wearing a name tag that reads "A.N.T. Todd". He is focused on a large, reddish-brown woven composite material, possibly a repair patch, which he is holding and inspecting. The background shows a workshop or factory setting with various tools and equipment.

TESTING TIMES FOR COMPOSITE REPAIR

Profiles of TAP and TP Aerospace

THE CHALLENGE OF THE NEW

Welcome to the May 2013 edition of MRO!

As a young boy, I hated nylon. Having to wear nylon shirts, nylon trousers, nylon socks, even nylon pyjamas and sleep in nylon sheets was horrible. I decided that, whenever possible, I would wear clothes made from natural fibres, sleep on cotton sheets and avoid man-made materials.

Then, about 20 years later, something remarkable began to happen. Man-made materials started to do extraordinary things. Carbon fibre bicycles were as light as a handbag and went like lightning.

Lycra clothes were suddenly comfortable and an excellent fit (as long as you kept your weight down). And in industrial design, composite materials could achieve results that went wildly beyond what had been possible in the past.

In the aviation field, as Keith Mwanalushi reports in his excellent cover story this month, composite materials have been with us for some decades – since I was in nylon pyjamas in fact – but the scale of their use has expanded dramatically in recent years, with the arrival of the A380 and the 787, where much larger elements of the aircraft are constructed of carbon fibre. This places whole new pressures on MRO providers, as they grapple with the challenges of repairing extra sized components in situ, for example.

New procedures and even new kinds of machinery may be needed to address these challenges, something that the industry needs to prepare for and invest in.

As we discover in our IBA article this month, many large airlines (and some not so large) are certainly prepared to invest in the industry at the moment, with more than 1,000 new orders for

aircraft placed this year so far. This is a notable turnaround and signals that the sector is in excellent health, with the promise of plenty of work for many companies associated with it.

We wish you all a very prosperous summer 2013 (or winter if you're reading this in the Southern hemisphere) and that you enjoy reading this month's edition, with its usual crop of news, features and profiles.

David Nicholson
Editor
MRO



There are calls for a uniform approach to training.

Photo - TIMCO

AviTrader MRO

Published monthly by

AviTrader Publications Corp.
9500 Aquila Road
Richmond, BC
Canada V7A 3P9

Email: peter.jorssen@avitrader.com
Tel: +1 (604) 448 0970
www.avitrader.com

Editorial

David Nicholson, Editor
Email: editor@avitrader.com
Tel: +44 (0) 20 7359 1200
Mobile: +44 (0) 7802 834477

Alex Ward, Deputy Editor
Email: alex.ward2106@gmail.com

James Thurman, Designer
Email: james.thurman@hotmail.co.uk
Mobile: +44 (0) 7944 486447
Web: snaresandsymbols.daportfolio.com

Advertising inquiries

Jenny Falk
Head of Sales & Marketing
Email: jenny.falk@avitrader.com
Tel: +49 (0) 8761 346007

Registration

AviTrader MRO is a subscription-free monthly publication. To receive a copy in your inbox every month, please send an email with the subject "subscribe" to oem-mro@avitrader.com

Contents

MRO and Production News	4-11
Cover Story: Testing times for composite repair	12-15
IBA Analysis	16
Finance News	18-19
Company Profile: TAP Maintenance and Engineering.	20
Other News	22
Company Profile: TP Aerospace	23
Information Technology News	24
People On The Move.....	24



**Leasing an aircraft
doesn't make it fly.
We do.**

Lufthansa Technik's Aircraft Leasing and Trading Support (ALTS) is the fast, professional service that takes over when a leased aircraft changes operators. We handle the full spectrum of checks and modification work, including design, cabin furnishings and repainting—all the way up to the necessary inspections and approvals. In short, we take care of all the technical and administrative tasks of aircraft leasing for you, whether you're the lessor or the lessee. Let's talk about it!

Lufthansa Technik AG, Marketing & Sales
E-mail: marketing.sales@lht.dlh.de
www.lufthansa-technik.com/leasing
Call us: +49-40-5070-5553



More mobility for the world

Lufthansa Technik

Small Planet Airlines chooses A320 cycle flat rate (CFR) program

TP Aerospace Leasing has been awarded a contract to provide its full service and all inclusive Wheels & Brakes Cycle Flat Rate (CFR) Program to the Polish division of Small Planet Airlines. TP Aerospace Leasing will provide a highly flexible, cost effective and tailor-made component maintenance, pool access, onsite lease inventory and logistics program in support of Small Planet Airlines' current and planned fleet of A320 aircraft operating on the Polish charter market. Small Planet Airlines, under recently new ownership, is in the midst of restructuring and renewing its entire fleet.

Bombardier expands maintenance capacity for commercial aircraft in Tucson, Arizona

Bombardier has opened three new lines of maintenance at its Tucson, Arizona aircraft service centre to boost heavy maintenance capacity for Q400 and Q400 NextGen turboprops. The new lines are housed in an existing hangar space on Tucson's 1,146,901 ft² service centre, complementing existing maintenance capabilities for Q-Series aircraft at Bombardier's facilities in Bridgeport, West Virginia and Macon, Georgia. Within the past year, Bombardier has secured several long-term heavy maintenance contracts with North American carriers seeking to maximize their operational efficiency. Bombardier's line and heavy maintenance offering for commercial aircraft is designed to maximize quality and return-to-service speed within a competitive, predictable cost structure. The facilities are backed by Bombardier's 24/7 technical help desks, in-service engineering teams and support staff deployed around the world.

FL Technics and Airline Component Services will establish Boeing 737 NG components stock at London Heathrow

FL Technics, a global provider of integrated aircraft maintenance, repair and overhaul services, and Airline Component Services, an international company specializing in supply and supply management of aircraft structural components, announced the signing of a three-year consignment agreement. According to the agreement, the parties will establish a new Boeing 737 NG components stock worth \$4 million at Heathrow Airport, London. Under the newly established partnership, FL Technics will supply Airline Component Services with Boeing 737 600/700/800/900 flying controls, flaps, ailerons, doors, as well as other airframe structural components. In order to ensure prompt availability and effective logistics, the provided parts will be stored at Airline Component Services facilities near Heathrow



Dornier 328 jet conversion for SkyBird Air

Photo: 328 Support Service

Airport. The components will be available for exchange, loan and outright sale. Further to the agreement, FL Technics will promote and market Airline Component Services' stock of flying control parts for Airbus A320 and Boeing 737 CL for airlines, MROs and other clients in Eastern Europe.

FL Technics also signed a consignment agreement with Florida-based FAA/EASA certified repair company XTRA Aerospace. According to the agreement, the companies will establish a Boeing 737 NG and CL component stock in Vilnius, Lithuania. Based on the newly signed contract, FL Technics will supplement its spare parts stock in Vilnius with a wide range of XTRA Aerospace-supplied Boeing 737 CL/NG parts, including hydraulic pumps, panels, sensors and indicators. The aircraft inventory will be available for both exchange and outright sale. The XTRA Aerospace-provided parts will also supplement comprehensive FL Technics PBH Programs, further extending the range of spare parts support services for the company's clients. XTRA Aerospace and FL Technics are also planning to expand their cooperation in the future by covering Airbus A320 parts.

SkyBird Air receives final 328 VIP aircraft

German-based completions and refurbishment company 328 Support Services GmbH, delivered the final aircraft in a series of three Dornier 328 jet conversions to Nigerian charter company SkyBird Air in early April. The Lagos-based company, which was a new African customer for 328, accepted the refurbished 32-seat Dornier jet aircraft at 328's facilities in Oberpfaffenhofen, Germany. The latest delivery completes a contract worth over €14 million in total, which saw recently rebranded 328 refurbish three Dornier 328 jets into two 32-seat passenger airliner conversions and a VIP

configured 328DBJ TM last year. The SkyBird Air fleet now consists of Dornier Jets with serial numbers 3120, 3141 and 3151.

In April, 328 was also contracted to deliver a Dornier conversion to SpringChild Investments, a Lagos-based privately-owned business. In a first for Dornier 328 conversions, the configuration of MSN 3200 will boast four forward facing business class seats at the front of the aircraft, complemented by a further 23 seats in an economy format in the aft cabin. The four business class seats have been engineered to slide away from each other after take-off, improving passenger comfort once the aircraft is in flight.

The interior conversion and modifications of MSN 3200 will be completed by 328 at its Oberpfaffenhofen headquarters. SpringChild Investments will have the external paint work on another Dornier 328 (MSN 3221) completed at sister company JETS Bournemouth in the UK, demonstrating the integrated offering the restructured 328 Group companies can offer. This aircraft is due to be commenced in late May for delivery in early June 2013.

GA Telesis Engine Services acquires part of Finnair's Engine Services

GA Telesis and Finnair have signed an agreement whereby GA Telesis will acquire a part of Finnair Engine Services, employing 80 of Finnair's engine service professionals. The deal comprises of the sale of tools and the transfer of the personnel to GA Telesis Engine Services Oy (GATES). They will rent their facilities from Finnair Facilities Management. GATES will begin operations at Helsinki Airport, offering repair and overhaul of General Electric CF6-80C2, CFM International CFM56-5B and -5C, and Pratt & Whitney PW2000 jet engines. GATES is the only

operation of its kind with direct trucking routes to the Russian and Eastern European markets.

AFI KLM E&M to maintain Afriqiyah Airways CF6-80E1 engines

AFI KLM E&M and Afriqiyah Airways have signed an agreement covering support for the CF6-80E1 engines, equipping the Libyan flag carrier's two A330-200s. This exclusive long term contract is for 'Time & Materials' engine repairs. Afriqiyah Airways will shortly be taking delivery of three new A330-200s, the first by the end of this year and the other two in 2014, and these will be automatically included in the scope of the contract.

FAA approves Sikorsky Aircraft's new platform approach system for S-92 Helicopters

Sikorsky Aircraft reported that the Federal Aviation Administration (FAA) has approved a new functionality on the S-92 helicopter to provide offshore oil operators with an automated approach that reduces cockpit workload by 60 per cent and allows safer operations under challenging weather and operating conditions. Sikorsky developed the

new safety feature in close collaboration with PHI, an important Sikorsky customer that is operating S-92 and S-76 helicopters in the Gulf of Mexico, providing transportation to offshore oil workers to the platforms there.

Saywell International and BAE Systems Regional Aircraft extend agreement for Jetstream 31/32 spares support

BAE Systems Regional Aircraft has extended the agreement for Saywell International to be the sole distributor of spares for the Jetstream 31/32 regional turboprop aircraft for a further five years. Originally signed in February 2008, the new agreement means that Saywell will be responsible for Jetstream 31/32 spares delivery until at least 2018.

BAE Systems itself will continue to provide full technical and continued airworthiness support and delivery of technical publications to the Jetstream 31/32 fleet. A multi-million pound stock inventory of spares is available at the Saywell International facility at Worthing in south-east England. Saywell also has a spares distribution centre in Hollywood, America, as well as offices in Vancouver and Singapore.

EASA extends BAE Systems Regional Aircraft's Part 21 approval

BAE Systems Regional Aircraft has received European Aviation Safety Authority (EASA) approval to extend its Part 21 G and J approvals, allowing the company to work on any aircraft type for both design and manufacturing work. For several years BAE has had Design Organisation Approval (DOA) allowing it to carry out design work for different aircraft types. The latest development is that the business has now received Production Organisation Approval (POA) from EASA which allows it to manufacture/produce a range of non-OEM aircraft parts, as well as manufacture specified appliances for third-party companies under the European Technical Standards Order (ETSO). Under these extended POA approvals, BAE can manufacture non-OEM aircraft parts, components and assemblies in both metallic and composite materials including electrical loom assemblies. It also covers aircraft equipment and systems, including mechanical, hydraulic, pneumatic, electrical, fuel, and power plant, plus furnishings and safety equipment. BAE is now also approved to manufacture/produce galley equipment, cargo pallets and



ESP[®] ESPECIALLY
KNOWLEDGEABLE

Eagle Service™ Plan (ESP® Program) is more than predictable maintenance costs. It's the peace of mind that comes with knowing your engines are in the hands of the people who know them best. VISIT WWW.PWC.CA/ESP TODAY!

**DEPENDABLE
SUPPORT**



Pratt & Whitney Canada
A United Technologies Company

containers, passenger and crew seats associated with an ETSO.

[Air Mauritius selects Direct Maintenance to commence line maintenance](#)

Direct Maintenance and Air Mauritius, the national carrier of Mauritius, have commenced a line maintenance partnership. Direct Maintenance engineers in Nairobi, Kenya, will be attending the Air Mauritius A319 aircraft landing into Jomo Kenyatta International Airport on frequent basis, making sure the flights are operated in a safe and timely manner.

[Etihad Airways opens line maintenance base at Singapore's Changi International Airport](#)

Etihad Airways, the national airline of the United Arab Emirates (UAE), has opened a line maintenance base at Singapore's Changi International Airport, the carrier's eighth outside of Abu Dhabi. Equipped with the latest technology, the new facility will perform all scheduled and non-scheduled line maintenance for Etihad's daily flights operating to Singapore, from both Abu Dhabi and Brisbane. This includes transit, daily and weekly checks, scheduled engineering services, fault repairs for aircraft systems and cabin issues. From its UAE hub, Etihad operates daily return flights to Singapore and onwards to Brisbane, the state capital of Queensland, Australia. Etihad is deploying a team of line maintenance aircraft engineers, trained in Abu Dhabi, to be based at the new Singapore facility. The airline's existing line maintenance facilities are in Dublin, Chicago, Lahore, London-Heathrow, Manchester, Melbourne and Sydney.

[GE Aviation opens new jet engine factory in Auburn, Alabama](#)

On April 29, GE Aviation celebrated the grand opening of its new jet engine components factory in Auburn which will create hundreds of jobs. The 300,000 ft² advanced manufacturing plant will produce precision, super-alloy machined parts for GE jet engines that will power future commercial and military aircraft, and also support the vast fleet of GE jet engines already in service. Upon completion, the facility will represent a GE investment of \$75 million in the state of Alabama. By the end of 2013, GE expects to hire 50 employees. Based on current demand for its jet engines, GE expects to hire a further 300 to 400 people when the plant is at full capacity later this decade. The Auburn facility will manufacture high-pressure turbine (HPT) airfoils. The plant will deliver its first parts later this year. As the facility continues to ramp up production, it is expected that the facility will contribute to every commercial jet engine family produced by GE Aviation.



An Etihad Boeing 777-300ER taking off in Abu Dhabi

Photo: AirTeamImages

[Messier-Bugatti-Dowty inaugurates new production unit in Mirabel, Canada](#)

Messier-Bugatti-Dowty (part of the Safran Group), inaugurated the company's new landing gear production facility at its plant in Mirabel, Canada. The inauguration represents the culmination of more than a year of construction and total investments of C\$58 million. The company has received significant support from the Quebec government for its expansion and modernization program through the Quebec Ministry of Finance and the Economy and from Investissement Québec, which allocated a non-refundable grant of C\$7.4 million.

The Canadian government, via Canada Economic Development, granted an interest-free C\$3 million loan. The progressive increase in production rates has stimulated significant investments within the plant. Two new machining lines are now being installed, along with major industrial machinery and equipment, including numerical control (NC) machine tools and systems for special processes. According to Stéphane Salvignol, General Manager of the Mirabel plant, "We supply structural landing gear parts for the Boeing 787 and Airbus A350, as well as for the Airbus A320, A330 and A380. This expansion has become necessary to meet the growing needs of our customers."

[Ameco Beijing provides landing gear overhaul for T'way Air](#)

On April 9, Ameco Beijing completed Boeing 737-800 landing gear exchange and overhaul for South Korean-based T'way Air. It is planned that Ameco will perform another Boeing 737-800 landing gear overhaul for the airline in

November, 2014. T'way operates five Boeing 737-800 aircraft with regular and charter routes in Japan, Thailand and Taiwan, apart from South Korean mainland.

[Boeing Winnipeg announces site expansion and 737 MAX work](#)

Boeing Winnipeg in Canada announced plans to increase its Murray Park Road manufacturing site by more than 22 per cent, primarily to house new composites work for Boeing's 737 MAX airplane. The building will be expanded by 14,000 m² to a total of 62,000 m² of manufacturing space. It will be used mainly to construct the one-piece composite acoustic inner barrel on the newly designed engine nacelle inlet for the 737 MAX.

The inner barrel is one of the latest quiet engine technologies that will be used on the 737 MAX to help reduce operational noise of the airplane by up to 40 per cent. The expanded building, which includes two bays about the size of 12 Olympic-sized swimming pools, will house the 737 MAX and some 787 Dreamliner production. Construction will begin immediately on the west side of the existing Murray Park facility, with an estimated completion by the fourth quarter of 2014.

[Kahala Aviation orders four AEI B737-400SF 11 pallet conversions](#)

Aeronautical Engineers (AEI) has been selected by Kahala Aviation of Ireland to provide two firm 737-400SF 11 pallet configuration conversions, with options for two additional conversions to be started in May this year. The first aircraft, a B737-400, MSN 25052 was built in 1991 and will be converted at one of AEI's North

KEEP YOUR FLEET UP IN THE AIR. NOT YOUR SCHEDULE.



We're proud to be one of the world's largest airline MROs. And when you combine our size with our experience managing the world's largest airline fleet, you'll see we've developed the expertise to provide top-notch, on-schedule service to more than 150 aviation and airline customers around the globe. It means we can deliver uncompromising attention to detail on everything from airframe, component and engine jobs, to line maintenance and everything in between. Plus, we're committed to superior service ... from your expert in the hangar, to your dedicated account manager in the office. That means unparalleled quality. Competitive costs. Quick turnarounds. All the tools to keep your aircraft — and your schedule — moving like they should.



Visit [DeltaMRO.com](https://www.deltamro.com), call +1-404-773-5192 or just snap the code with your mobile device to contact us.

 **DELTA**
TechOps
WHAT IT TAKES TO FLY.

American conversion facilities. Both 737-400SF conversions are being converted on spec and are currently available for lease.

Boeing adjusts 747-8 production rate

Boeing will adjust the production rate for the 747-8 program from two airplanes to 1.75 airplanes per month because of lower market demand for large passenger and freighter airplanes. Boeing will continue to monitor market conditions and their effect on production rates moving forward. The company expects long-term average growth in the air cargo market to resume in 2014 and forecasts a demand for 790 large airplanes (such as the 747-8 Intercontinental) to be delivered worldwide over the next 20 years.

REVIMA delivers first 747-400ER/F shipset

REVIMA delivered the first B747-400ER/F overhauled landing gear shipset to a North American customer. This model is the latest addition to REVIMA's extensive repair capability for Boeing aircraft. REVIMA has experience servicing a global customer base of 747 Classic, 747-400/400F, 757-200, 777-200/300, MD11 aircraft. This first overhaul was performed in less than eight weeks and significantly benefitted from REVIMA's comprehensive industrial capability and continuous improvement (LEAN) manufacturing transformation.

In addition to the overhaul of this new model, REVIMA performed the complete maintenance on the LRUs (steering metering valve, nose landing gear actuators, body steering actuators) which are installed on this landing gear shipset. Boeing and REVIMA recently completed negotiations to extend contract agreements

covering the overhaul and repair of landing gear systems for MD-11 and Boeing 777-200ER Aircraft through 2017.

Star Air signs long term exclusive flight hour agreement with GA Telesis

GA Telesis has signed a total fleet support program agreement with Danish company Star Air A/S. The flight hour-based support agreement will cover inventory support, component maintenance and full supply chain logistic and warehousing solutions.

GA's Composite Repair Group (GAT CRG) also signed an exclusive CF6-80A Thrust Reverser Support Agreement with Star Air. GAT CRG, through its Strategic Nacelle Access Pool Program (SNAP) will be responsible to provide Star with an advanced rotatable pool to support 28 thrust reverser overhauls for its CF6-80A powered B767s over the next 24 months. Star Air is part of the A.P.Moller-Maersk Group and operates as a Danish cargo airline. It was founded in 1987 and started operations with two Fokker F27. Their current fleet is comprised of 11 Boeing 767-200 BDSFs.

Apple Aviation expands operations to Aerohub, Newquay Cornwall Airport

Apple Aviation (AA), a successful UK-based aircraft maintenance, repair and overhaul (MRO) company, has been approved by the UK Civil Aviation Authority (CAA) for EASA Part 145 Base/line maintenance and EASA Part M

Continued Airworthiness Management. AA has selected Aerohub, Newquay Cornwall Airport as the location for its aerospace maintenance facility headquarters. AA currently operates at Manchester (main base), East Midlands, London Heathrow, Paris and Brussels as well as airports in the Middle East and Asia.

The new facility, within the airport's Enterprise Zone, will consist of a new 35,000 ft² hangar capable of accommodating two narrow body or one wide body aircraft and offering a large, bespoke parking space for AA's increased operations.

The creation of a MRO facility at Aerohub will allow AA to offer complete maintenance and support packages to all existing clients and attract new clients with tailored support packages and competitive rates coupled with a first class facility which is currently under construction and will be ready for operation in September 2013.

Copa Airlines and Lufthansa Technik sign extended component services contract

Copa Airlines and Lufthansa Technik AG have signed a five-year total component maintenance (TCM) contract for the airline's entire Boeing 737NG fleet, currently consisting of more than 60 Boeing 737-700 and -800 aircraft. Respective services will also be provided to aircraft due to be delivered to Copa in the next few years. Lufthansa will support Copa at its main base of operations, the hub of the Americas at Tocumen International Airport in Panama City, Panama.

A 24/7 'aircraft-on-ground' support guarantees a permanent global component support for the airline also in unscheduled situations. The Lufthansa office in Fort Lauderdale, Florida will coordinate the customer support. Maintenance, repair and overhaul services will be carried out at Lufthansa's component centers in Tulsa, Oklahoma, and Hamburg, Germany.



A 747-8 Intercontinental in production in Seattle

Photo: Boeing



Star Air AS has signed a flight hour agreement with GA Telesis

Photo GA Telesis

Lufthansa Technik Shenzhen expands service offer for China and Asia

Lufthansa Technik Shenzhen (LTS) is expanding its maintenance, repair and overhaul (MRO) offer in the Asia-Pacific region even further. The cornerstone was laid on April 18 for two new LTS buildings at Bao'an International Airport in Shenzhen, southern China, where the company is headquartered. When they are complete, LTS will have doubled its workshop and warehouse capacity from 7,000 to nearly 15,000 m².

The new buildings are scheduled to be finished by the beginning of 2014. As a composite materials specialist, LTS will respond to the increasing demand for technical services for composite materials by installing and commissioning a second large autoclave. Special new test benches already enable the company to work on larger and latest generation hydraulic and pneumatic components such as those for Airbus A380 or Boeing 787 aircraft.

Lufthansa Technik to provide total technical support for two Airbus Corporate Jets A319

Lufthansa Technik, a leading provider of technical services for commercial, VIP and executive jets, has recently signed a two-year contract with an undisclosed Asian VIP customer

to provide all round technical support for two ACJ319 aircraft. The Total Technical Support TTS contract extends from line maintenance to full provisioning with components and materials, including logistics plus Maintenance Management and CAMO Services. Lufthansa Technik will provide maintenance support out of its worldwide network.

Services for components, wheels, brakes and other materials will be established and handled via the Lufthansa facilities in Hamburg and Frankfurt. Additionally, Lufthansa Technik will provide technical support on board aircraft by accompanying maintenance staff.

Spirit Airlines signs extended contract for thrust reverser overhaul

Spirit Airlines and Lufthansa Technik AG have signed an exclusive four-year airframe related components (ARC) contract for 28 A320 family aircraft (A319, A320 and A321) and options for additional aircraft. The Spirit fleet currently consists of 49 aircraft.

Lufthansa will support Spirit at its main base of operations, Fort Lauderdale International Airport, in addition to its thrust reverser facilities in Sun Valley in California, Hamburg in Germany, and Shenzhen in China.

Aruba Airlines selects Barfield for full component support of its Airbus A320 fleet

Barfield, a Sabena technics company, announced the signing of a four-year contract with Aruba Airlines, the Dutch Antilles' operator, for the full support of its fleet of two Airbus A320. Barfield's airline programs division, in charge of managing power-by-the-hour contracts, will provide nose-to-tail component support and repair, with some components being repaired in Barfield's new fast shop in Bogota, Colombia, as well as pool access and main base inventory, located in Oranjestad, Aruba.

AeroTurbine and Honeywell sign material supply agreement

AeroTurbine has expanded its Supply Chain Solutions business with a recently signed material supply agreement with Honeywell International. The agreement provides aftermarket support and on-the-shelf availability for select Honeywell material in the mechanical line of products. The products will complement AeroTurbine's global inventory support programs that are currently active in Dubai, Singapore, London, Los Angeles and Miami by supplying genuine original equipment manufacturer (OEM) traceable inventory. AeroTurbine will also provide Honeywell with

Centre of repair excellence, with unique access to spares inventories

TCCA Accredited - Approved Maintenance Organisation 33-12
EASA Part-145 Approved Maintenance Organisation

AJW Technique delivers an uncompromising focus on quality, supported by significant core Airbus and Boeing inventories valued at almost \$500 million.

The fully equipped independent facility in Montréal, has over 80% of component and power plant ATA chapter capability:

**Avionics • Pneumatics • Fuel
Instruments • Hydraulics**

AJW technique

Component Repair and Overhaul

www.ajw-aviation.com
sales@ajw-technique.com
Call: +1 514 339 5100

An AJW Group Company



Contact us for our full capability list

access to used material from its pool of certified inventory.

UTC Aerospace Systems to provide nacelle maintenance for Avianca Brasil A320 fleet

UTC Aerospace Systems' aerostructures business has been selected by Avianca Brasil's OceanAir Linhas Aereas to provide complete nacelle maintenance for the airline's fleet of 12 A320 family aircraft powered by CFM56-5B engines. The flight hour agreement specifies that aerostructures will provide initial provisioning of spare parts, dedicated nacelle components to enhance Avianca's operational reliability, as well as providing scheduled and unscheduled maintenance repair and overhaul (MRO) coverage, including parts and labor. The MRO work will be performed at UTC's MRO facility located in Atibaia, Brazil (Goodrich do Brasil).

Nextant Aerospace appoints Jet Aviation Singapore as new authorized service center for Nextant 400XT

Nextant Aerospace, maker of the Nextant 400XT, the only remanufactured business jet, has announced Jet Aviation Singapore as its new authorized service center in Asia. The contract, which was signed at the Asian Business Aviation Conference and Exhibition (ABACE), will see Jet provide maintenance services for Nextant's growing fleet of 400XTs in the region. As the company's exclusive authorized service center in Singapore for Southeast Asia, Jet will become a core element of Nextant's global network of owned and authorized service centers.

MTU Aero Engines inaugurates center of excellence for high-tech blisk production

After 20 months of construction and installation activities, MTU Aero Engines inaugurated its new center of excellence for blisks at its premises in Munich, Germany. With a total work space of 10,000 m², the leading-edge blisk manufacturing system, combined with one of the world's most advanced machine pools, is



MTU's new center of excellence for blisks

Photo: MTU Aero Engines



Nextant Aerospace selects Jet Aviation Singapore as its new authorized service center

Photo: Jet Aviation

accommodated in a high-technology, energy-efficient building. Once it is up and running, the hall will have 20 milling machines, seven combined turning and milling machines and eight coordinate measuring machines. They will allow MTU to expand its production capacities from currently 600 to as many as 3,500 blisks a year by 2016. Some 200 employees will be working in Hall 077 at state-of-the-art workplaces. The investment into the innovative shop building, including its machinery, is worth around €65 million. In the new manufacturing hall, one of the world's largest flexible systems for the production of high pressure and intermediate pressure compressor blisks has been set up. Blisks – blade integrated disks – are high-tech components where the disk and the blades form one single part. They are used increasingly in modern engine compressors. MTU is among the world's leading blisk manufacturers. Once the production ramp-up is complete, numerous compressor stages for commercial and military engines – notably the fuel-thrifty, quieter PW1000G family of engines incorporating geared-turbofan technology, the PW800, and the TP400-D6 – will be produced in the new building.

Commercial Jet's Alabama facility selected as AEI's fourth authorized conversion center

Aeronautical Engineers (AEI) has selected Commercial Jet's (CJ) new 400,000 ft² facility at the Dothan Regional Airport in Dale County, Alabama as its fourth AEI authorized conversion center

(AACC). CJ's Alabama facility will provide 737-300SF, 737-400SF and MD80SF passenger-to-freighter conversions and maintenance for AEI customers. The facility joins a growing number of AACC which include CJ's facility in Miami Florida, Flightstar Aircraft Services, Inc. based in Jacksonville, Florida and Boeing Shanghai Aviation Services, in Shanghai China.

Nexcelle begins nacelle hardware manufacturing

Nexcelle's role in the creation of next-generation integrated propulsion systems (IPS) has marked important milestones as hardware manufacturing is now underway for the innovative O-Duct on the CFM International LEAP-1C power plant, and an inlet section for the GE Passport engine. These milestones underscore ongoing progress at Nexcelle's two parent companies – Aircelle (Safran) and GE Aviation's Middle River Aircraft Systems – for both of Nexcelle's programs: the LEAP-1C, which is to equip COMAC's C919 twin-jet airliner; and the Passport, to power Bombardier Global 7000 and Global 8000 twin-engine business aircraft. Nexcelle's first-manufactured element for the passport power plant is a single-piece component that fits inside the air inlet, directing airflow into the engine. This 360-degree composite-bonded component is built by Middle River Aircraft Systems at its production site near Baltimore, Maryland.

Komy receives order for overhead compartment mirrors from Lufthansa

Komy has received an order for the Komy Mirror series of mirrors for cabin overhead

compartments from Lufthansa for use on new Boeing 747-8 Intercontinental passenger aircraft. Lufthansa, which has seven aircraft of the 747-8 model on order, already has five of them in operation. Lufthansa decided to install the Komy Mirror for the upper deck of the aircraft. It is installed because smaller persons may not be able to see behind the 'threshold' of overhead compartments. Lufthansa has installed the Komy Mirror for other aircraft such as 757, 737, A319, A320, A321, A330 and A380 since 2011.

Cessna Citation Latitude production on track

The Cessna Aircraft Company reported that the production for the Citation Latitude aircraft, first announced in October 2011, is on schedule and making progress toward completion of full airframes this year. "We've started building engineering test articles. The first prototype is expected to fly in Q1 2014," said Terry Shriner, business leader for the Citation Latitude. "We've moved from engineering, analysis and modeling to cutting metal and driving rivets. The team is always energized when we see an airplane begin to take shape for the first time."

To build experimental units for testing, Cessna is using production tooling. During this phase, improvements will be identified and

incorporated into the tooling and assembly methods before line production begins in 2014 to continue to ensure on-schedule deliveries and support the expectation of high quality finished aircraft. The first airframe is planned for testing cyclic fatigue, the second for static testing.

Southern Air selects A J Walter Aviation to provide PBH support

Southern Air, based in Kentucky, America has selected A J Walter Aviation (AJW) to provide power-by-the-hour support to its current fleet of four B747 and four B777 aircraft. This twelve-year agreement for eight aircraft is AJW's first contract with Southern Air and will provide the operator with global support across its numerous locations worldwide.

Air Incheon chooses A J Walter Aviation to provide PBH support

A J Walter Aviation (AJW) is to provide full ATA Chapter power-by-the-hour support for low cost cargo operator Air Incheon's growing fleet of Boeing aircraft. The contract will commence with Air Incheon's in-service B737-400F and expand to include a second aircraft this summer. AJW is also locating a main base kit consignment at Incheon International Airport in

Seoul, South Korea. Air Incheon operates routes throughout China, Japan, Russia, Mongolia and South Korea and aims to expand its fleet to four aircraft by mid 2015. This power-by-the-hour contract will be fully supported by AJW's Singapore hub which holds significant Boeing inventory for AJW customers in the region.

A J Walter Aviation signs 5 year contract with Somon Air

A J Walter Aviation (AJW) has signed a 5-year contract with Tajikistan-based airline Somon Air, to provide power-by-the-hour support for its current fleet of two B737 Classics. This is AJW's second PBH contract with Somon Air. In January 2012, the airline chose AJW for a 5-year contract to provide support to its fleet of four B737NG aircraft. Somon is the first private airline in Tajikistan with headquarters located in Dushanbe and main operations based at Dushanbe International Airport. Since its formation in 2008, the airline has mainly aimed its passenger service at Eastern Europe and the Middle East with a route to Dubai.

It is committed to expanding its flight network globally and maximising the productivity and efficiency of its operational capability. Somon also serves as the official carrier of the President of Republic of Tajikistan.



whether it's composite repair or comprehensive aircraft care ... we've got you covered

airframe base maintenance

composite repair

24/7 TIMCO LineCare™

modifications & installation services

engineering & interior design

interior refurbishment

seats, galleys & lavs

engine care

TIMCO

www.timco.aero

Testing times for composite repair

By Keith Mwanalushi

One of the major challenges of composite materials is the ability to detect and inspect damage, and with more composite intensive aircraft coming into service, airlines and maintenance providers need to look closely at how to improve process control when repairing advanced materials.

With the introduction of new generation aircraft such as the 787, the A380 and the A350, which are now closer to production readiness, the debate over what is needed to repair these aircraft is at a crucial stage. Airlines and MROs are facing a new maintenance reality that will involve higher levels of composite and advanced material repair.

Firstly it is important to note that composite materials have already been around for some time. "We have experience of composites since the 80s," declares James Kornberg, Aerostructures Product General Manager at AFI KLM E&M. "Composites are not new.

The A310 and Concorde, for example, already had composite elements so we started to do repairs on composites more than 20 years ago and based on this experience we now have even more capability on composites."

Modern applications of composite structures are not as big a change as some would imagine observes Glyn Richards, Senior Technical Engineer at British Airways Engineering. "Composites have existed on aircraft for many years. Let's not forget that

the 777 has a complete carbon fibre tail, so to us composite structures are not new. What is new is the scale. There is no denying that composites have come of age in the 787 and A380 where they are now being applied to the structural fuselage."

Being prepared for repairs

Lightweight composites will soon rival metals as the primary material used in airframes, so how prepared are the key MRO providers? "We have been planning for the introduction of the 787 and A380 into the British Airways fleet for many years now," says Richards. "Planning for the maintenance and repair of these aircraft has been a major priority throughout, so we feel well-prepared for the new approaches introduced by the use of composites."

In terms of composite material repair, BA Engineering initially sent its engineers for additional training. In the case of the 787, of which BA has 42 on order through IAG, this has involved sending staff to Boeing's facilities in Miami to receive instruction on the latest techniques for managing composite repairs. According to Richards, this includes training

on new tools and new ways of working to a level where engineers feel as confident working on the 787 as with any other aircraft.

"Of course the skills for a repair are only one part of the equation. You also need the right materials," Richards says. "We have been working to ensure that we have a well stocked inventory to make repairs on composite materials as required. For the 787, we have partnered with AJ Walter to install a comprehensive inventory and component pooling services that will prove crucial to guaranteeing turn times both for BA and for our commercial customers."

TIMCO Aviation Services' maintenance shop is equipped with hot bonders for on-wing repairs as well as two autoclaves and curing ovens for large repairs and complete rebuilds of components. To further prepare for the increase in use of composites, TIMCO are also working with a company that is building first article tooling for a major original equipment manufacturer (OEM) for design and development of composite bond tools.

Russell Bonnell, President for MRO business units at GA Telesis, LLC explains that traditional repair procedures for composite airframe articles have been accomplished using ovens or autoclaves for the curing process on components removed from the aircraft. "The advent of more lightweight composite aircraft airframes will drive the need for more on-wing repairs," he says. "GA Telesis is preparing for this by staying current with new OEM and industry repair technology and methods, as well as FAA guidance such as AC 43-214 (Repairs and Alterations to Composite and Bonded Aircraft Structure). We are also looking at the development of tooling for future composite repair requirements."

With new methods come new challenges

Although composite materials offer advantages in terms of weight and cost, they are not a miracle solution and do have their own specific challenges. Kornberg agrees with Bonnell, saying the environment is changing and repairs are increasingly on-wing compared to the traditional shop visit. Bonnell adds that a particular challenge with repairing composites is identifying hidden damage and moisture ingress, so there is more than a requirement for the use of non-destructive inspection (NDI) techniques, such as thermography inspection, that have been introduced to locate these types of damage to avoid the potential of further damage.

Richards also highlights the issue of on-



After years of planning BA is prepared for any composite repairs on its soon to be delivered A380s.

Photo - British Airways

Take control of your business with **ALSO ON THE CLOUD**
Quantum Control

SCALABLE MRO APPLICATION INFRASTRUCTURE READY TO GO



**QUANTUM AVIATION MRO & LOGISTICS SOFTWARE
AFFORDABLE AND SIZED FOR YOUR BUSINESS**



Have complete peace of mind with Quantum MRO & Logistics Software - the industry's preferred solution.



component control

MRO & Logistics Software Solutions

componentcontrol.com

Please visit us at **EBACE 2013**

May 21-23 · Geneva Palexpo, Geneva, Switzerland · Booth #2044



wing repair capability. The major challenge specific to the 787 and A380 will lie in the development and expansion of in situ aircraft composite repairs, "but with BA Engineering's extensive experience in the field of on-wing repairs, we are confident we will achieve this. In fact, we have established a dedicated team to focus on these in situ composite repairs," he explains.

"This approach is highly beneficial to the customer as on-wing repair teams enable greater aircraft utilization as the components stay on the aircraft during the repair. The evolution within the repair team model meanwhile, means that engineers can be trained for specific fuselage composite repairs allowing them to become specialized."

Another challenge comes from the sheer size of these new aircraft assemblies, which could require specialist machinery simply to lift them. "There could well be a growth in specialist composite repair technicians who can perform repairs tasks in situ, without having to move the aircraft," Richards adds. "This approach would bring about significant savings to operators."

STS Engineering Solutions say undetected/controlled manufacturing processes can result in components not meeting ultimate strength and durability requirements prompting premature repairs and/or replacement. In situations where excessive disbonding may have occurred, engineers review the discrepancy as a potential fabrication error and repair accordingly.

Jim Dinwiddie, Supervisor for Composites and Paints at TIMCO tells AviTrader MRO that one of the biggest challenges at the moment is the timely supply of materials. "There are several small quantity suppliers that can fill our own pre-impregnated and adhesive needs within 48 hours but their inventory levels, while good by industry standards, do not always meet our needs," he says.

For materials the suppliers do not stock, TIMCO are forced to stock onsite at an additional cost and for materials these providers stock, their minimum purchase volumes sometimes exceed immediate requirements. "Unless we have similar projects that follow up with a need for the same materials, shelf life can expire, requiring unplanned scrap and waste," Dinwiddie says.

He also brings to light another challenging area – changing the industry mindset about the length of time required to accomplish repairs. "OEM engineering is increasingly changing the way repairs are accomplished.



BA Engineering is working in partnership with various repair MRO stations and 787 operators for sharing of material holdings.

Photo - BA Engineering

The time required to complete metal bond repairs, for example, has in some cases more than doubled because of an inability to co-cure repairs and an increased call out for 'verify film'. We are continuing to educate customers and our own team members on the increased requirements and lead times necessary to successfully accomplish these repairs."

Bolted versus bonded repairs

The pros and cons of bolted and bonded repairs is an ongoing debate in the MRO community. The ideal repair method would match the original properties of the material but typically there are tradeoffs. Dinwiddie sees many factors that play into which repair method is best and there are a number of considerations that should be taken.

He explains: "An elevated temperature repair, for example, is not always practical on-wing in the middle of winter in a cold climate or during a rain storm in any location. Conversely, bolted repairs have their place but they often deviate from the original design of the structure and should be removed when a bonded repair can be accomplished in a controlled environment."

Chris Jessup, Senior Vice President of Sales and Marketing for AAR's MRO division, says he follows the customers' lead on this issue as they define the processes and methods that should be used. "That said, our experience with composites repairs and composite fabrication are an asset and we work closely with customers and OEMs if we have

recommendations or ideas for a more efficient process," he says.

Randy Steenholdt, Vice President of Engineering at STS Engineering adds that while composite components can be fabricated in pristine composite (autoclave) facilities, the complexity of accomplishing repairs on the aircraft continues to be the limiting factor.

Ultimately, Richards believes the operator or MRO will not have that many choices with regards to the type of repair they carry out, as the certification of a repair design depends on testing analysis which the manufacturer has to do when developing a new aircraft. That said, he emphasises that while most parts of the repair manuals are fairly prescriptive when it comes to approaching repair, there can be a choice when it comes to some parts of the 787 fuselage. "This choice however, is largely made for the operator by whatever option is available on the day, particularly if the aircraft is away from base," Richards says.

"There is a commonly held belief that the bolted repair may be faster to perform, but this has yet to be categorically proven. Whatever the truth on this matter, one thing is clear – bonded repairs are process sensitive. So as soon as any damage occurs to a 787, there needs to be a full review of both repair options available."

Improving process control

With more composite intensive aircraft



If adopted, a skill-development paradigm for technicians could be beneficial.

Photo - TIMCO

for existing aircraft welders," he says. "In preparation for this, operators and MROs need to ensure that they have sufficiently trained technicians who are capable and approved."

The traditional certification of a composite repair was either in a workshop MRO repair/overhaul environment or as part of an airframe licence activity but, due to the complexities of a modern hot-bonded carbon fibre pressure hull repair, approval for such repairs is anticipated to only get harder to achieve.

Richards concludes that MROs and training organisations need to fully understand the types and levels of repair activity required and adopt a staged approach, "not only on hand skills but also in repair documentation and material usage. Certainly within British Airways Engineering, a valuable composite technician has evolved over many years of experience and training and as such is not easily replaced."

coming into service, airlines and maintenance providers are looking for new technologies that can improve process control when repairing advanced materials. So the focus now is on new technologies that are in development or emerging in the market place to improve composite repair capabilities.

"One new repair approach is the use of multi-angle scarfing, which reduces the amount of good structure removed in preparation for the repair of thick monolithic structures," Bonnell explains. "Also, we are in permanent contact with manufacturers of hot bond consoles and heat blankets, who are continuously introducing new products that are adapting to new materials and technologies. To underline once more the importance of NDI, we are preparing ourselves to offer our customers new NDI procedures, like the vacuum loss inspection and the elasticity laminate checker inspection."

The search for standardisation

Another issue facing the industry is that presently there is no formal certification for composite repair technicians. It would seem sensible for the Federal Aviation Administration (FAA) and other similar authorities, along with OEMs and large MRO providers to work together to develop a qualification ladder that will take a person

from apprentice to highly skilled with one or two levels in between.

Dinwiddie agrees: "This would lead to a uniform approach to training and would provide the basis for the guidance MRO providers need to train technicians to become proficient at accomplishing not only advance composite repairs but also metal bond. Once the required standard training would be established, the FAA could then develop a certificate to show proficiency at each level."

Similarly, Richards notes that due to recent and forthcoming rulings by regulatory bodies, composite repair activities are coming under ever closer scrutiny. "It is possible that regulations will eventually stipulate an individual licence, similar to those issued



Training academies need to keep abreast with new materials and technologies says Chris Jessup - AAR

CFM56™ x 24/7
 Round the clock access to our engines.
 The CFM engine you need, when you need it.

SES
 POWER TO FLY NOW

IBA Analysis - Thoughts for 2013 - on the back of the January, February and March conferences - By Ben Jacques

Toward the end of this year, I suspect that many of the '2013 in review' articles will devote swathes of text discussing the 787's battery problems. I am going to move past the 787 quite quickly, because although in terms of column inches it has dominated the first quarter of this year, it is far from being the most interesting or the most relevant when discussing the rest of the industry right now.

January was reasonably peaceful until the 7th when pictures of firefighters in Boston climbing into a JAL-operated Boeing 787 appeared. We had almost a week of peace, then pictures of an ANA 787 requiring a full emergency evacuation after it returned to land only moments after takeoff. Cue the usual hand wringing and industry chatter, however this time the mainstream media got interested and were excited when Japanese authorities grounded all 787s on the Japanese register, followed shortly by the FAA grounding everything else. Boeing have recently returned the Ethiopian 787s to service and it looks as though the remaining 787s will be returning shortly, and deliveries of new aircraft will recommence in due course.

Airbus do not seem to have stolen too much of a march in terms of orders placed since the 787 was grounded, which supports the opinion that the industry as a whole has good faith in Boeing and their ability to work with new technology and return the 787s to service in the near future. In terms of kicking Boeing while they are down, there was an A350 milestone in early February, as Rolls-Royce gained EASA certification for their Trent XWB. The A350 program continues to



Ben Jacques Commercial Manager IBA 2

look reasonably strong with a good order backlog – hopefully Rolls-Royce and Airbus will avoid the problems which now plague some of the A340 variants in terms of a lack of future secondary market.

Perhaps the biggest story of the first quarter of 2013 should be the volume of orders placed – if those which have been reported, but are yet to appear on manufacturers' websites become realised – then we have seen orders for over 1,000 aircraft since the New Year.

Of some of the larger and more notable orders placed, Lion Air opted for more than 200 Airbus A320 Family aircraft, including both the current option and the new engine option (NEO). Not to be outdone, American Airlines ordered well over 100 A320 Family, over 100 737MAX variant and more than 40 787s. Michael O'Leary's Ryanair reportedly agreed to take 175 737 aircraft, whilst Turkish Airlines ordered over 150 aircraft, a mixture of Boeing and Airbus, both current and next generation narrow bodies. I've ignored the orders from Air China, Hawaiian, Malaysian, Icelandair, Air Lease Corporation, Sberbank and others who would normally receive more interest, but in the face of many large orders, they do not tend to get as much press coverage.

These large orders indicate significant discounts offered for buying in volume, which is neither a great surprise nor a bad idea considering many of these orders are for the last-off-the-line of current 737 and A320 variants before the MAX and NEOs arrive respectively later this decade. It is often a shrewd sign to see airlines taking these discounted aircraft, shoring up the final delivery positions for the original equipment manufacturers (OEMs), whilst providing good opportunities for efficient airlines. The capital cost of these aircraft should not outweigh the fuel saving offerings of the more modern variants way into the future or unless fuel seriously spikes, which is unlikely and could potentially be combatted with robust hedging strategies. As the saying goes, imitation is the most sincere form of flattery and these last-off-the-line orders imitate the actions of Southwest Airlines, which successfully negotiated and efficiently operated many last-off-the-line Boeing 737s in the late 1990s.

At several conferences during the first quarter of the year, much of the discussion

centred round the topic of useful economic life of commercial aircraft and different OEMs, lessors, airlines and appraisers' view of this issue.

You can probably imagine what the views of the various interested parties are, but essentially everyone wants aircraft to last well into their twenties if not thirties and it is not a question of whether they are built to last, it is a question of whether they are economically viable for their owners and operators during the latter period of their lives. Some companies have nailed their colours to the mast, which is their prerogative and their right, however many disagree that there has to be a final position or line drawn in the sand and that there is far more to this than age as a mere number. IBA will cover this in due course, so please rest assured that we are not ignoring the topic, but you are very welcome to contact us and discuss it further.

Other topics discussed at the year's early conferences include India and their airlines, some of which seem to be fighting fit and others who seem to be fighting to take a breath at all. India and the various scenarios being played out within its borders have not been a good advertisement for the Cape Town Convention on International Interests in Mobile Equipment, as India is a signatory but doesn't seem to have actively supported the rights provided under Cape Town for owners and lessors.

In terms of other market developments during the recently closed first quarter, we are still seeing huge merger and acquisition activity, which is encouraging alongside several serious cash resources trying to gain an understanding of, and access to, the industry, which again is great news. However, this cash needs to find its way to the right places otherwise it won't be the tonic which many areas of the industry could still benefit from.



**The International
Bureau of Aviation
is an independent
aviation consulting
firm based in Leatherhead, UK,
with representation worldwide**

*Would you like to know more about
IBA publications? Do you require
independent research and consultancy
services to give your company an
edge?*

Contact Owen Geach, IBA commercial
director, for more information:
E: owen.geach@ibagroup.com
T: +44 (0) 1372 224 488
M: +44 (0) 7917 648 712



Making Informed Decisions

IBA services regarding data provision

As the aviation cycle continues its unpredictable path, risks and opportunities are forever rising and receding. The combined experience of IBA's personnel along with the amounts of data acquired and analysed over the past 24 years, forms an exceptionally strong and unique base for IBA's data provision services.

Data provision services currently offered

- Aircraft Values Book
- Engine Values Book
- Lease Rate Digest
- Jet Values 2
- Maintenance Cost Journal

Now available, JetData, IBA's new commercial aircraft database.

Through our online portal, JetData provides 24/7 global access to accurate information on all modern jet and turboprop aircraft with a capacity greater than 20 seats. Users can obtain detailed information providing insight into and analysis of the aviation industry.

For more information or a quotation on any of the data provision services offered by IBA contact Ben Jacques on +44 (0) 1293 224488 or ben.jacques@ibagroup.com



International Bureau of Aviation

Minimising Risk - Maximising Opportunity

Call: +44 (0) 1372 224488

sales@ibagroup.com

www.ibagroup.com

www.jetvalues2.com

IBA Group Ltd IBA House 7 The Crescent
Leatherhead Surrey KT22 8DY United Kingdom

Air Transport Services Group's first-quarter net income up 28%

Air Transport Services Group, a leading provider of aircraft leasing and air cargo transportation and related services, reported consolidated financial results for the quarter ended March 31, 2013. Revenues were \$143.3 million, a decrease of 1.5 per cent. Total operating expenses were \$126.9 million, down 3.7 per cent, including a \$3.8m reduction in salaries, wages and benefits expense due in large part to reductions in airline related costs prior to the merger of Air Transport International and Capital Cargo International Airlines in March 2013. Pre-tax income was \$13.6 million, an increase of 26.5 per cent. Net earnings from continuing operations increased 27.6 per cent to \$8.5 million. Net earnings include a non-cash federal income tax provision. First-quarter adjusted EBITDA was \$37.3 million, a 9.5 per cent increase from \$34.1 million in the same period of the prior year. Capital expenditures totalled \$59.4 million for the quarter, including the purchase of two 757-200 Combi aircraft.

Air Lease Corporation announces first quarter 2013 results

Air Lease Corporation reported another consecutive quarter of fleet, revenue, profitability and financing growth. Diluted EPS increased by 46 per cent to \$0.38 per share for the three months ending March 31, 2013 from \$0.26 per share for the three months in 2012. Revenues increased 45 per cent to \$192 million compared to \$133 million in 2012. Income before taxes increased 48 per cent to \$62 million with a pre-tax margin of 32 per cent, compared to income before taxes of \$42 million with a pre-tax margin of 31 per cent in 2012. Air Lease Corporation acquired seven aircraft (including five aircraft from its order book and two incremental aircraft), growing its fleet to 162 aircraft spread across a diverse and balanced customer base of 71 airlines in 41 countries.

HEICO signs agreement to acquire Reinhold Industries

HEICO Corporation has entered into a definitive agreement to acquire Reinhold Industries from certain affiliates of The Jordan Company, L.P., a New York-based investment firm, and Reinhold management. Reinhold will be part of HEICO's Flight Support Group. Financial details were not disclosed but HEICO stated that it expects the acquisition to be accretive to its earnings per share within the first twelve months following closing. The acquisition is subject to customary closing conditions, including clearance under the Hart-Scott-Rodino Antitrust Improvements Act. The company stated that it expects the acquisition to close within the next 45 days. Based in Santa Fe Springs, California, Reinhold is a leading manufacturer of advanced niche components and complex composite assemblies for commercial aviation, defense and space applications. A majority of Reinhold's revenue is derived from the design, manufacture and sale of commercial aircraft components, such as its unique composite seatbacks and related components used in a large number of airliner seats. Reinhold also generates a substantial portion of its sales from defense activities, principally those related to currently fielded missile defense systems such as the Patriot-2, Standard Missile and GMD programs.

Willis Lease Finance earns \$1.6m in first quarter of 2013

Willis Lease Finance Corporation (WLFC), reported earnings of \$1.6 million in the first quarter ended March 31, 2013, compared to \$2.5 million in the same quarter a year ago, with the drop in earnings primarily due to reduced gains on the sale of leased equipment. In the fourth quarter of 2012, Willis Lease recorded a loss of \$0.8 million after absorbing a \$2.8 million charge relating to preferred share issuance costs incurred in a prior period resulting from the redemption of its Series A-preferred shares. The lease

portfolio increased 4.6 per cent to \$1.02 billion, largely due to the purchase leaseback transaction with Scandinavian Airlines that was completed late in the quarter. Average utilization for the first quarter was 84 per cent, consistent with the first quarter a year ago and down slightly from 85 per cent in the fourth quarter of 2012. Quarter-end utilization was 82 per cent compared to 85 per cent a year ago and 86 per cent at December 31, 2012. Total revenues fell slightly to \$35.3 million from \$35.7 million a year ago, with all revenue line items increasing in the period except for gains from sale of equipment which decreased \$1.9 million. Lease rent revenues increased 1.7 per cent to \$24.5 million compared to \$24.1 million a year ago. Maintenance reserve revenues increased 7.6 per cent to \$9.2 million, compared to \$8.6 million a year ago. Total net finance costs increased 17 per cent to \$9.2 million, compared to \$7.9 million in the same quarter a year ago, reflecting higher debt levels and higher average financing costs.

Spirit AeroSystems Holdings first quarter revenues up 14%

Spirit AeroSystems Holdings reported first quarter 2013 financial results reflecting continued strong demand for large commercial aircraft and strong core program operating performance. Spirit's first quarter 2013 revenues were \$1.442 billion, up 14 per cent from \$1.266 billion for the same period of 2012, driven by higher production volumes and model mix. Operating income was \$145 million, up from \$122 million for the same period in 2012, driven by increased volume and productivity and efficiency on core programs, partially offset by a net pre-tax \$15 million additional forward-loss on the 787 program related to the wing. Net income for the quarter was \$81 million, compared to net income of \$74 million in the same period of 2012.

The increase in current quarter income was partially offset by the negative impact of

Worldwide leader in Commercial Aviation Services

Asset Management
Initial Provisioning
Repair Management

Aircraft Inspection
Exchange / Loan Programs
Inventory Management



foreign currency exchange rates.

[Aircastle announces first quarter 2013 results](#)

Aircastle reported first quarter 2013 total revenues of \$176.2 million, an increase of \$11.3 million, or 7 per cent versus the previous year. The increase reflects \$8.2 million of higher lease rental and finance lease revenues, \$4.2 million of higher maintenance revenues associated with unscheduled lease terminations, and \$4.3 million of higher other revenues from interest on debt investments and additional revenue in connection with early lease terminations. These increases were partially offset by higher amortization of net lease premiums and incentives in the first quarter of 2013 of \$5.5 million, primarily due to two unscheduled lease transitions in the first quarter of the prior year which led to comparatively lower amortization of lease incentives.

Adjusted EBITDA for the first quarter was \$168.6 million, up \$16.7 million or 11 per cent from the first quarter of 2012, driven primarily by higher lease rentals, maintenance and other revenues of \$16.8 million. Net income for the first quarter was \$23.1 million, down \$9.5 million, or 29 per cent. Higher total revenues of \$11.3 million and \$1.0 million of higher gains from the sale of aircraft were offset by higher interest, net of \$10.2 million, higher depreciation of \$5.4 million and non-cash aircraft impairment charges of \$6.2 million. Adjusted net income for the quarter was \$27.4 million, down \$5.0 million year over year, and reflects higher total revenues of \$11.3 million and \$1.0 million of higher gains from the sale of aircraft. These increases were offset by non-cash impairment charges of \$6.2 million, higher depreciation of \$5.4 million and higher adjusted interest expense, maintenance and other costs of \$5.6 million.

[Safran reports 9.5% revenue growth in first-quarter 2013](#)

Safran reported that its first quarter 2013 adjusted revenue was €3,404 million, up 9.5 per cent year-on-year, or up 9.6 per cent on an organic basis. Solid revenue growth contributed from Aerospace activities, both in OE deliveries and aftermarket. Sales in defense were resilient and there was positive dynamics in security. Civil aftermarket was up 10 per cent in USD terms, driven by first overhaul of recent CFM56 and resumption of growth in widebody engines. Full-year 2013 revenue outlook has been upgraded further to first quarter revenue dynamics and the integration of Goodrich Electrical Power Systems (GEPS) from April 1, 2013. Safran expects adjusted revenue to increase by a percentage in the mid-to-high single

digits (previously 5 per cent). Adjusted recurring operating income should grow by a percentage in the mid-teens. Free cash flow is expected to represent about 40 per cent of adjusted recurring operating income.

[Boeing Commercial Airplanes reports decreased first-quarter 2013 revenue](#)

Boeing Commercial Airplanes first quarter revenue decreased to \$10.7 billion on delivery mix and lower services revenue. First-quarter operating margin improved to 11.4 per cent, reflecting the delivery mix and lower R&D, partially offset by higher period costs. During the quarter, Commercial Airplanes delivered the first 777 aircraft produced at a record production rate of 8.3 per month and reached a four-year contract extension with the Society of Professional Engineering Employees in Aerospace (SPEEA). In April, Commercial Airplanes delivered the first 737 produced at a record production rate of 38 per month. In April, approval was given by the Federal Aviation Administration (FAA) for airlines to begin the process of returning the 787 to service with an enhanced battery system. The company is committed to the safety of all their airplanes and has worked diligently alongside authorities to further enhance the safety of the 787. Commercial Airplanes booked 209 net orders during the quarter. Backlog remains strong with more than 4,400 airplanes valued at a record \$324 billion.

[Safran to acquire Rolls-Royce's 50% share in joint RTM322 helicopter engine programme](#)

Safran has reached an agreement with Rolls-Royce to acquire Rolls-Royce's 50 per cent share in their joint RTM322 helicopter engine programme. Upon closing, Turbomeca (Safran's helicopter engine business) will assume global responsibility for the design, production, product support and services for the RTM322 engine, a 2,100-2,600 shp engine family equipping the Apache, EH101 and NH90 helicopters. Rolls-Royce will provide full support during the transition phase, enabling progressive transfer of all their activities to Turbomeca under this programme.

[TransDigm Group and Aerosonic Corporation announce acquisition agreement](#)

TransDigm Group and Aerosonic announced a definitive merger agreement, providing for Aerosonic to become an indirect wholly-owned subsidiary of TransDigm. TransDigm and Aerosonic both design, manufacture and supply highly engineered aircraft components. Under the terms of the agreement, TransDigm will offer to acquire all of the outstanding shares of Aerosonic

for \$7.75 per share in cash in a transaction valued at approximately \$39 million on a fully-diluted basis. The cash consideration represents a premium of approximately 59.8 per cent to Aerosonic's closing share price on April 19, 2013, and a 77.8 per cent premium to its average trading price over the trailing 60 days. The transaction will be funded with TransDigm's cash on hand and is not subject to any financing condition.

[B/E Aerospace posts first quarter 2013 results](#)

B/E Aerospace announced its first quarter 2013 financial results. First quarter 2013 revenues of \$842.2 million increased \$94.9 million, or 12.7 per cent, as compared with the prior year period. First quarter 2013 operating earnings were \$153.6 million, an increase of 18.3 per cent, and operating margin of 18.2 per cent increased 80 basis points as compared to the prior year period. The growth in operating earnings and the improvement in operating margin occurred primarily as a result of operating leverage at the higher revenue level and ongoing operational efficiency initiatives. Operating earnings and operating margin, both adjusted to exclude acquisition, integration and transition (AIT) costs, were \$157.7 million and 18.7 per cent. First quarter 2013 net earnings were \$89.9 million, an increase of 30.7 per cent as compared with the prior year period.

[Exchange Income Corporation completes acquisition of Regional One](#)

Exchange Income Corporation completed its acquisition of Regional One, a privately-owned US company that is a leading provider of aircraft and engine aftermarket parts to regional airline operators around the world. The acquisition was first announced on February 28, 2013. The corporation paid a total purchase price of \$74.2 million, of which \$13.5 million was paid through the issuance of 494,656 common shares and the balance, \$60.7 million, was financed through the corporation's senior credit facility.

A portion of the cash and share payments at close were put in escrow and will be held until certain conditions are met. The purchase price is subject to an earn-out that could result in additional payments of up to \$9.3 million, through a combination of cash and shares if Regional One achieves certain EBITDA targets, which would result in a maximum potential purchase price, subject to other adjustments, of \$83.5 million. Other potential adjustments to the purchase price will be made pending the finalization of the Regional One's working capital and an adjustment for taxes.

Fast Turnaround on TAP

At TAP Maintenance and Engineering (TAP M&E), Executive Vice President Jorge Sobral takes pride in the company's fast turnaround times, which help its clients achieve their goals. "We have all the materials in place and can locate them immediately, using RFID (radio-frequency identification) tags. We



TAP M&E Executive Vice President - Jorge Sobral

have very high mobility," he says.

TAP as an airline can boast 67 years of continuous operation, while the Maintenance and Engineering unit has many years experience working across the TAP fleet, with facilities in Brazil and Portugal. Sobral argues that TAP M&E, which offers services to third party airlines as well as its core TAP work, can provide an excellent range of facilities and expertise across different aircraft types. Around 50 per cent of TAP M&E's work is for third party airlines.

"If you look at our Brazilian operations, we cover Embraer, Boeing and Airbus. We can offer different solutions for different fleets," says Sobral. "Our competitors may offer to work on two out of three manufacturers, but it's not common to work on all three."

Sobral stresses the breadth of TAP ME&'s operations covering not only airframe work but engineering, planning, logistic services and so on. "It is better to have the full coverage by investing in the future," he argues.

Company information

TAP M&E is the MRO organization of TAP Portugal, the Lisbon-based operator, with around 4,000 trained and qualified employees providing maintenance and

engineering services in aircraft, engines and components. In an internationally recognized, very demanding market where safety is the prime value, TAP M&E is certified by several aviation authorities including the Federal Aviation Administration (FAA) and the European Aviation Safety Agency (EASA).

Since the foundation of TAP in 1945, TAP M&E has been responsible for the maintenance of its entire fleet, presently with more than 50 Airbus aircraft. In the 1970s the company started providing services to third party customers, a segment that quickly won a significant share in its activity that now accounts for more than half the total revenue of the business unit.

The long term involvement with a commercial operator has made TAP M&E aware of the importance of on time delivery of products (aircraft, engines and components) and services for an efficient operation.

That is why TAP M&E is committed to offering its customers cost efficient maintenance with short turnaround times and high quality and reliability standards. The company places heavy emphasis on high standards of safety,

safety of persons and property.

The quality of services of TAP M&E has been internationally recognized by customers and manufacturers throughout the years.



M&E Aircraft Maintenance main hangar



M&E Aircraft Maintenance main hangar

The Power Lies Under the Surface



Financial Solutions
Component Solutions
Supply-Chain Solutions
Maintenance Solutions

What you see on the surface is just the tip of the iceberg. What lies beneath is a powerful organization committed to providing solutions to the aerospace industry that impact the bottom line.

www.gatelesis.com



EMRISE CORPORATION, a multi-national manufacturer of defense and aerospace electronic devices and communications equipment, has received a \$1.5 million order for electronic devices and subsystems to be used in in-flight entertainment and connectivity (IFE&C) systems to be installed in commercial aircraft. The order, which was received from a longstanding customer by the company's Pascall Electronics Ltd. subsidiary in England, is expected to begin shipping in the fourth quarter of this year with shipments expected to be completed by the end of 2014.

Dell OEM Solutions has partnered with Airbus to support A320 Family airliner operators worldwide by providing an end-to-end electronic flight bag (EFB) solution supported by Dell Latitude solutions. Dell laptops, which adhere to strict regulatory standards, will be pre-loaded with FlySmart and Airbus software, and installed as Class-2 EFB equipment. This EFB approach eliminates the need to carry paper-based flight documentation while digitizing information in a way that supports local specifications. This initial announcement will cover EFB Class-2 solutions for Airbus' single-aisle aircraft, though the agreement includes

scope to extend application to other aircraft types.

Within the framework of the Joint Technology Initiative 'Clean Sky', **Liebherr-Aerospace Toulouse SAS** and **Sonaca**, based in Gosselies, Belgium, have recently achieved a major milestone in the development of a wing ice protection system that uses electric instead of pneumatic energy. The companies had the thermal performances of the electric ice protection system validated in both an anti-icing and a de-icing mode under defined icing conditions. The tests were carried out at the NASA Icing Research Tunnel (IRT), in Cleveland, America. The functionality of the control principle of the system was also tested and validated. The next validation step will be a flight test with an electrical wing ice protection system demonstrator on an Airbus A320 test platform in 2015. This test is meant to evaluate the robustness of both the control and the power consumption of the system in the different flight phases.

EirTrade Aviation Ireland has completed the teardown of an A320-212 aircraft in their hangar at Ireland West Airport, in Charlestown, Ireland. This is the first aircraft of its type to be dismantled by EirTrade.

The company was founded by a team of aviation professionals in 2010 and has its headquarters in Dublin, Ireland. EirTrade provides aircraft and engine teardown management, sales and consignment of aircraft and engine components, as well as back to birth traceability on aircraft engine records to maximize their value. EirTrade also offers storage facilities for airlines and lessors at their IAA-Approved Dublin facility.

Crane Aerospace & Electronics, a segment of Crane Co., announced the approval of its SmartStem Wireless Tire Pressure system for use on Boeing 747-400 aircraft. This approval represents the first certification for retrofitting SmartStem on large commercial aircraft. SmartStem technology is standard on Boeing 777 and 787 production aircraft. The 747-400 SmartStem system provides a significantly improved alternative to manual aircraft tire pressure measurement. SmartStem provides a means to check tire pressure quickly, accurately and without gas loss, for improved safety. Each system consists of high-accuracy SmartStem sensors, which replace the existing standard wheel fill stems, and a handheld reader, which electronically reads and stores tire pressure and temperature.

TRADEWINDS
ENGINE SERVICES
est 1996

Your Worldwide Jet Engine Parts Supplier

USA: 954-421-2510
sales@tesllc.aero | www.tesllc.aero
4700 Lyons Technology Parkway | Coconut Creek, FL 33073

Intertek
ASA-100 ACCREDITED
ASA
AVIATION SUPPLIERS ASSOCIATION

TP heads East

Denmark-based wheels and brakes MRO specialist TP Aerospace is rapidly expanding its Asian operations. The company has announced that its new facility in Singapore will launch in late 2013, providing a full range

in the States in addition to the Far East operations. "We are looking to expand further into areas including the Middle East and South America," adds Ibsøe. "It would make sense to copy our facilities into at least two more regions."



TP Aerospace warehouse



Co-Founder and Director of Sales and Acquisitions Thomas Ibsøe

of services to East Asian customers on an outright, exchange and loan basis.

"We have our own assets and inventory so the turnaround time for clients is zero," says company Co-Founder and Director of Sales and Acquisitions Thomas Ibsøe. "This is the number one reason that clients find us a more attractive option. We keep our inventory at the shops."

In recent years, TP Aerospace has doubled its revenue annually, expanding beyond its European origins to open bases in Las Vegas

TP Aerospace operates its wheel, brake and tyre facilities in a similar way to specialist MRO engine shops, offering a 'standalone' lease to airlines for peak season use. "This has been well received, especially by our larger clients such as Lufthansa and Air Canada," says Ibsøe.

"The trend is for nose-to-tail setups but when you have the option to use expertise for certain areas, we will stay as an alternative to OEMs."

The company offers a 24-hour worldwide customer service, including both short and long term programmes. Its European workshop in Hamburg, Germany, also offers Leading Edge Boot replacements and non-destructive testing (NDT) inspections.

"Our contract division offers 'plug-n-play' wheels and brakes solutions through our all inclusive and tailor made Cost-Per-Landing programme, alongside standalone lease packages

worldwide," says Ibsøe. "Our programmes are transparent, straight forward and flexible, to meet operators' individual requirements, both operationally and financially. Customers enjoy an unbeatable service level guarantee with any of our short or long term programmes."

Company information

TP Aerospace's European trading division is located in Copenhagen, Denmark, where it offers access to its market-leading ready-to-go wheels, brakes and tyre inventory, applicable to all commercial aircraft platforms on outright, exchange and loan basis. A 24-hour worldwide customer service is offered.

The company has worked with a large range of airlines throughout the world, including LOT Polish Airlines, Aer Lingus, Icelandair, Monarch Airlines and others.

"Our goal is to make sure that our customers will profit from having chosen TP Aerospace Leasing as their partner in more ways than one," states the company.

"A thorough knowledge of our customers and their business is an essential part of our company philosophy, as only then are we able to deliver the flexibility and individual service, which is our standard."



TP Aerospace Brake

Astronics Advanced Electronic Systems, a wholly-owned Astronics Corporation subsidiary, signed a multi-year agreement with Panasonic Avionics to provide Astronics' EMPOWER In-Seat Power Systems for installation with Panasonic's In-Flight Entertainment and Connectivity (IFEC) Systems on Airbus A350s.

Pentagon 2000 Software, a leader in fully-integrated aerospace and defense MRO software systems, reported that Fokker Services B.V., has implemented the Pentagon 2000SQL Heavy Maintenance MRO system at its new state-of-the-art Singapore facility. Arend Teters, Fokker's ICT manager, said: "We are continuing with our strategy of worldwide implementation of the Pentagon 2000 MRO software in all of our facilities. The system's advanced functionality provides us with tremendous capabilities in our day-to-day operations. We are able to gain complete visibility and control over our internal operations as well as our external supply chain.

The multi-company setup allows rapid deployment to new facilities with seamless operations across all of our international business units. The internal advantages that we achieve from use of the system allow us to provide more efficient and effective solutions for our customers."

Global enterprise applications company **IFS** reported that Emirates has selected IFS Applications 8 to manage its new engine overhaul facility in Dubai, UAE. The solution will support all business processes including MRO and corporate performance management (CPM). It includes licenses and services worth over \$6 million. In 2011, Emirates announced the construction of Asia's most technically sophisticated engine overhaul facility in Dubai.

The 90,000 m² facility will be Emirates' in-house engine overhaul facility. IFS will support all operations at the facility, which, when fully operational, will service up to 300 engines a year. The solution includes IFS's Complex Assembly MRO feature, which has been used by Finnair and Alitalia Maintenance Systems. The solution also offers advanced CPM capabilities and integrated support for finance and HR.

CTS Engines selected Quantum Control software to manage its full range of engine MRO service operations. CTS Engines performs the vast majority of engine repairs at its 60,000 ft² state-of-the-art engine service center in Fort Lauderdale, Florida. The Quantum Control software will support the company's ten, full-service bays and integrate all data relevant to MRO including labour, materials, tracking, regulatory, contract and

accounting, into a single database shared across business departments.

Component Control announced that AJW Technique and Kelly Aviation have both selected Quantum Control to manage their MRO integrated logistics processes at new facilities in Montreal, Quebec. AJW already utilizes the robust and aviation-specific system across its complete aircraft spares support flagship, AJW Aviation, and said the decision to expand their new facilities was a natural step. The Kelly Aviation Center will use Quantum Control as its new enterprise solution to manage commercial services, including complete engine teardown and reassembly management end-to-end, and financials.

Component Control released that Jet Engine Solutions, a provider of tailored and turn-key solutions for the engine leasing and trading industry, has selected Quantum Control software to manage its accounting and shop control operations, and to automate inventory sales through www.StockMarket.aero integration. Quantum Control's Shop Control Module manages the complete component and assembly repair and overhaul process. It is fully integrated with quoting, receiving, invoicing and shipping modules and includes real-time cost and schedule management functions.

People On The Move

Rockwell Collins announced that Chairman and CEO **Clay Jones**, will retire as CEO on July 31 after almost 34 years of service. Rockwell Collins President Robert (Kelly) Ortberg is expected to succeed Jones as CEO at that time. Jones will remain on the company's board of directors as non-executive chairman.

Kaman Corporation announced that **Robert Starr**, has been appointed to the position of Senior Vice President and CFO effective as of July 1, upon the retirement of William Denninger, the Executive Vice President and CFO. Starr, who joined the Company in 2009, currently serves as Vice President and Treasurer.

Denis Sauvage has been appointed as Vice President/General Manager of Aero Technologies, the largest company in the Miami-based Aero Maintenance Group, specializing in component maintenance and support for the commercial aircraft of North and Latin American airlines. He will also head up the MRO department of Air-Pro, which specializes in seat and safety equipment maintenance.

Aircastle Advisor, an affiliate of Aircastle,

appointed **Michael Kriedberg** as Chief Commercial Officer (CCO). Kriedberg, who joined Aircastle in late April 2013, will be responsible for directing the company's investment, lease placement and asset sales activities, and will serve as an integral member of the leadership team. He will be based at the company's headquarters in Stamford, Connecticut and report directly to CEO, Ron Wainshal.

Avioserv San Diego, a leading aerospace entity focused on the sales, trading, consignment and leasing of commercial jet engines, and aircraft and engine parts, announced the promotion of **Timothy Veit** to Chief Operating Officer. Veit brings more than a decade of industry experience in the areas of operations and sourcing, and he will be working closely with CEO David Leblanc and EVP of Corporate Development, Cameron Burr, in growing Avioserv and executing on its strategic plan.

The Board of Directors of GATES has appointed **Basil Papayoti** as its President. Papayoti is an industry veteran with 25 years of direct commercial airline maintenance experience. Starting his career as an

engine scientist at McDonnell Douglas, he soon moved to Aviall Engine Services where he held many operational program management positions. He later joined Allied Signal where he managed the ALF and CFE product lines. After he left the OEM ranks, he joined Delta TechOps as the General Manager of the engine shop operation which produces 700 engines annually. He later assumed the position of Director TechOps Sales and, subsequently, Vice President and Chief Commercial Officer at Air Canada Technical Services. In 2007, Papayoti founded SkyView Consulting Partners which provides advisory services for MROs, OEMs, airlines, airline associations and financial institutions.



Clay Jones, Chairman & CEO of Rockwell Collins will retire on July 31st

Photo Rockwell Collins