Police Aviation Research Number 244 August 2016 PAR

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LAW ENFORCEMENT

BORDER GUARD: Wescam has received an order from the Finnish Border Guard to provide MX[™]-15 electro-optical and infrared (EO/IR) imaging systems for installation on a number of Airbus H215 twin-engine helicopters. The newly equipped H215s will support a variety of missions across Finland, including maritime border patrol and search and rescue ^{(SAR).}

HUNGARY

RENDORSEG: It is said that Hungarian Police air support have bought a batch of five MD902 Explorer's from a German police force. The five have been acquired from the Baden-Wurttemberg Police, who are taking delivery of six H145 helicopters from Airbus, and are the first law enforcement operator of the type.

The five Explorers – the first of which was delivered last month, were originally purchased from 2003 – four new aircraft and one pre-owned from a German operator. It is this latter one – serial 900-0052 – which has been delivered so far and will carry the Hungarian Police registration of R-900. It is likely that the other four will be R-901 to R-904. IJP Helihubl



Ed: The H145s will be replacing these MDs and the EC155 fleet. In Hungary it is assumed that the Explorer fleet will supplement or supplant an existing fleet of a similar number of MD500E that have been in service in Hungary since 1990. Meanwhile the Explorer fleet being disposed of by NPAS through an agent [Multiflight in Leeds] is, despite initial negative assumptions, slowly selling.

INDONESIA

NATIONAL POLICE: AEM of British Columbia, Canada has been selected to provide its new generation loudspeaker systems to Bell Helicopter Textron Canada Ltd for two B429 helicopters purchased by the Indonesian National Police. The aircraft were signed for at the 2016 Singapore Airshow during a formal ceremony. As the official police force for Indonesia, the aircraft will support law enforcement activities and will contribute to the safety, accessibility, sustainability and security of the region. [AEM]

FRONT COVER: The US Coast Guard brought its newest fleet member to the Farnborough Air Show last month.

Now known as the Leonardo HC-27J Spartan it has of course grown out of the original Fiat G222 into a very capable aircraft and useful for a variety of USCG roles including SAR.

Aircraft 2714 was one of a number of USAF aircraft put in long term storage after the cancellation of the 2012 JCA programme and was one of 14 pulled out of the desert to be refurbished. At the same time the USCG gave up 14 old C-130s to the US Forestry Service for fire fighting.

Sacramento will operate six of the Spartan's and Clearwater in Florida another six. The other two will be training aircraft.

UNITED KINGDOM

This is the first issue in memory when PAN was faced with no news stories on the UK Nation al Police Air Service so I was somewhat thankful when this image from David Thompson popped into the inbox late last week.

As he said, 'Not much but it might be of interest.'

MD902 Explorer G-YPOL, the highest hour example of the type and potentially the best of the bunch despite its extensive use was on duty many miles from its usual haunt over Wakefield, West Yorkshire—over Portsmouth during the recent **Louis Vuitton America's Cup World Series Portsmouth** event and took up a watching position alongside the Spinnaker Tower much to the delight of the Japanese tourists on the view deck.



21-24 July: The Louis Vuitton America's Cup World Series Portsmouth event features the best sailors in the world competing on AC45F (45 foot foiling) catamarans and drew large crowds to the south coast port to watch America's Cup teams battle it out on the water while paying host to a multi-faceted aerial show from the aerobatic teams of the Red Arrows and others as well as the more staid hovering of NPAS!



TRINIDAD & TOBAGO

POLICE AIR SUPPORT: Although money remains short and the project is not in the current Strategic Plan the air unit is looking to finance a small fixed wing type for coastal patrol and inter-island transportation to supplement the Sikorsky S-76 helicopter it has access to.

UNITED STATES

NATIONAL: A recent spate of police shooting -executions of multiple officers in the street – has understandably rocked the USA even in the face of regular death and injury shootings among the ranks of officers. The multiple execution style killings taking place in recent weeks were in Dallas, Texas and Baton Rouge, Louisiana.

Across the USA thirty-two officers have been killed by gunfire alone this year. In this country, perhaps more than others, the provision of police air support has been a thing of officer safety more than other roles and many budgets are built around that premise.

It has become clear as a result of these particular incidents that some resources have been neglected and allowed to decay others poorly selected in the first place.

Rumour has it that Dallas, once a three helicopter operation was poorly equipped to effectively support the ground operations to isolate the gunman. As previously reported in PAN the unit lost its most modern aircraft, a role-equipped Bell 407, in a cost cutting exercise and it seems that the two remaining machines could not muster an effective operational EO/IR camera on the night it was really needed and could only rely on the use of the 'Mark 1' eyeball and searchlights to assist the beleaguered officers on the ground.

Similarly, in Baton Rouge there was only limited local air support, a Robinson R44, but fortunately the State Police helicopters are based in the city, although it has been stated that the most modern machines, the Bell 430 were much more suited to transportation than tactical air support. [PAR]





NEW JERSEY: State Police are no longer taking South Jersey's accident and trauma victims to hospitals by helicopter via SouthSTAR air-ambulance service.

Facing competition from private operators, Virtua decided this year to end its longstanding partnership with the State Police.

SouthSTAR and its North Jersey counterpart, NorthSTAR, are subsidized by a \$4 fee tacked onto every car registration in New Jersey and for years, Virtua had a monopoly in South Jersey.

But when the state Department of Health started licensing other air-ambulance services in 2006, Virtua began to see a decline in its monthly flights -- down from 75 that year to just 20 per month in 2015 and that level was not sustainable.

The announcement was not expected by the New Jersey State Police. They provided the helicopters, pilots and mechanics while Virtua provided the flight nurses, doctors, paramedics and medical equipment.

Whether they will now need to retain a people carrier AW139 fleet remains to be seen.



AIR AMBULANCE

DRF: Thirty-one HEMS bases in Germany and Austria are operated by DRF Luftrettung for emergency rescue and the transport of intensive care patients between clinics, at eight HEMS bases 24/7. In addition to that, DRF Luftrettung operates ambulance aircraft with specialized crews for worldwide repatriations.

From January to June 2016 DRF Luftrettung was called 19,248 times to rescue missions. On average the red and white helicopters took off to 100 missions every day. DRF Luftrettung was very frequently alerted after traffic and leisure accidents. Regularly their emergency physicians and paramedics took care of patients with acute coronary syndromes and strokes. The specialisation of hospitals had a noticeable effect, too: every third emergency patient had to be flown to a specialised hospital. At its two HEMS bases in Austria rescue missions in mountainous areas were frequent. The helicopters based in Tyrol and Carinthia are equipped with a cable winch, which is essential for rescue operations in alpine terrain. A specially equipped offshore-helicopter is additionally based at Güttin (isle of Rügen) to provide fast emergency service for offshore-operations in the Baltic Sea.



The Operation-Center of DRF Luftrettung at the airport Karlsruhe/Baden-Baden ensures the airworthiness of their own ambulance aircraft and helicopter fleet around the clock, 365 days a year. More than 80 engineers are on duty for DRF Luftrettung. The department IASS (International Aviation Sales & Service) offers the whole range of services of DRF Luftrettung to private, commercial and official aviation operators. National and international clients benefit not only from the extensive expertise in air rescue and from the performance of the technical Service Center of DRF Luftrettung with their own Design Organization but also from flight operation trainings.

Within Germany DRF Luftrettung is most experienced in 24-hour flight operation and was the launch customer of the new H145 operating 24-hour air rescue missions. Currently DRF Luftrettung operates five H 145, more will be acquired. [DRF]



PANAMA

The Vice President of the Republic of Panama, Isabel de Saint Malo de Alvarado, visited Leonardo-Finmeccanica's factory and final assembly lines in Vergiate (Varese) last month. During the visit an AgustaWestland GrandNew helicopter, which will be used in Panama for emergency medical services, was presented to the Vice President.

Leonardo has several major Government programmes, including contracts for a digital mapping system and AgustaWestland AW139 helicopters used for homeland security duties and utility transport.

Leonardo has a great deal invested in the region including several high value infrastructure programmes relating to newly rebuilt waterways of the Panama Canal, but was beset by corruption allegations that saw a number of important Finmeccanica contracts in the country cancelled.

Ed: The corruption is associated with the same mindset that led to those 12 cancelled AW101 helicopters for India but was financially greater in extent.

The scandal involves a multi-million-dollar contract Panama signed with Finmeccanica in 2010 to supply the helicopters, radars and mapping system. That agreement was championed by then Panamanian president Ricardo Martinelli and the Italian prime minister Silvio Berlusconi until questions started to be asked and people started being arrested.

Last year, five years after it signed on the dotted line, the government of Panama was seeking to cancel the \$200M deal with Finmeccanica. Then the government of the Central American nation applied to its own supreme court to overturn one of three contracts that made up the 2010 deal, covering the sale of Lyra radars for coastal surveillance by Finmeccanica unit Selex.

In the near future, the government will ask the court to rule on cancelling the other two contracts, said the country's ambassador to Italy — one for digital mapping signed with Finmeccanica unit Telespazio, and one for six AW139 helicopters signed with the group's helicopter unit AgustaWestland.

The Panamanian move was based largely on evidence being heard in the trial then underway in Rome of a former Finmeccanica manager and a former consultant, who were accused of offering a 10% kickback on the €180 million deal to Panama's then-president, Riccardo Martinelli.

The free supply of the GrandNew air ambulance is seen by many as a sweetener for the steadily improving situation in recent months.

SOUTH AFRICA

Awesome Aviation, Lanseria has partnered Johannesburg-based aeromedical specialists, Air Evacuation Services, to launch a new medevac service as Awesome Air Evac. Awesome Air Evac will offer a LearJet 35 and a Falcon 10 based fixed-wing air ambulance service covering the whole of Africa and its surrounding islands, as well as Europe and the Middle East.

Air Evacuation Services also has an existing partnership with Medair Charter and uses their medically-equipped LearJet 55. <u>http://www.awesomeairevac.com</u>



UNITED KINGDOM

EAST ANGLIA: Her Majesty the Queen and HRH the Duke of Edinburgh visited the East Anglian Air Ambulance (EAAA). During the visit, Her Majesty opened the Charity's new operating base, the Egerton-Smith Centre, which is sited at Cambridge Airport. The Royal party were met by the Lord Lieutenant Sir Hugh Duberly and welcomed by local dignitaries. The Queen and The Duke were given a tour of the new facility and briefed on the work of EAAA. The Duke of Cambridge was able to show them the H145 aircraft he flies for the Charity. The Queen and The Duke then met some of the Charity's volunteers, patients, crew and support staff. The Queen unveiled a plaque formally opening the new facility and met the founder of the Charity after whom the building is named, Andrew Egerton-Smith.

The Egerton-Smith Centre is constructed from pre-fabricated materials, the purpose-built new base offers improved energy efficiency and insulation, resulting in reduced running costs. Operational since December 2015, the facility provides work and rest space for the Charity's clinicians and pilots, together with support staff and volunteers. The base was built using money raised locally from regional supporters. [Helihub]

EXETER: Capital Air Ambulance, the UK's largest fixed-wing medical evacuation company, is planning to grow its share of the European market by expanding its fleet and operational bases.

Exeter Airport headquartered Capital, which is a subsidiary of UK corporate services provider Rigby Group, took delivery in June of its first business jet a Bombardier LearJet 45 which has opened up the southern European and North African markets to the company for the first time. Hitherto Capital has relied upon five examples of the Beechcraft King Air 200 with the Blackhawk PT6A-42 engine upgrade for European work and five Piper Chieftain piston-twins primarily used to service domestic needs in the Channel Islands and Isle of Man.

Rigby's aviation division includes Capital, British International Helicopters, Exeter, Norwich and Coventry airports.

To accommodate the growing demand, Capital has opened a second base at Coventry airport and says it may eventually establish a facility in mainland Europe. [Flight Global]



LINCS & NOTTS: Lincolnshire and Nottinghamshire Air Ambulance has announced that its new Leonardo AgustaWestland AW 169 was formally accepted by the charity at an official handover in Italy on July 5.

The new AW169 will replace the charity's current MD902 Explorer helicopter after role completion at Staverton. The 902 then goes to Essex & Herts AA.

The new helicopter will be in the same emergency yellow as the current helicopter, which the people of Lincolnshire and Nottinghamshire recognise as their air ambulance.



First stop for the new AW169 [which is marketed within the charity as an 'Ambucopter'] is Staverton for a custom built medical fit to ensure that all of the state-of-the-art medical equipment is laid out properly, before it is finally delivered to mission headquarters at RAF Waddington later this summer. [The Lincolnite/PAR]

August 2016

YORKSHIRE: At a ceremony held at the bi-annual Farnborough Air Show the Yorkshire Air Ambulance took delivery of their second new H145 helicopter. As was the case with the first airframe, delivery to service is some time off as it is being retained by Airbus Helicopters at Oxford for the role completion.

Speaking at a show ceremony, Peter Sunderland, chairman of Yorkshire Air Ambulance, said it had looked at three aircraft types for the update "but it came as no surprise that we chose the H145".



To replace its legacy MD Helicopters MD902s, the initial rotorcraft (G-YOAC) was handed over earlier this year and has recently been fitted with an aero-medical interior at the manufacturer's Oxford, UK site. This has now been completed and will be handed over to the YAA officials at Oxford on August 1 for acceptance.

After training it will enter service in September and will be based in Wakefield, West Yorkshire. Its sister aircraft (G-YOAA) is now at Oxford for its own fit-out following the show, eventually relocating to RAF Topcliffe, near Thirsk in North Yorkshire around year-end. Ed: The other two types the charity considered before deciding on the H145 were the AW169 and the Bell 429.

Some days later the existing HEMS helicopters were called to an air accident at Breighton Aerodrome, near Selby, East Yorkshire. The former military Sud Alouette 2 HA-PPC came down while landing on runway 28 injuring the five male occupants with various head, back, chest and leg injuries. Two were taken by air ambulance to hospital (one to Leeds General Hospital and the other to Hull Royal Infirmary). The other three were being taken to hospital by ambulance. One of the five men injured, the pilot, subsequently died from complications. @YAA



Police Aviation News

WILTSHIRE: Profile is everything for any charity air ambulance and Wiltshire Air Ambulance [WAA] have sought some high visibility sports and entertainment figures to enhance its visibility among the fund givers of the county and beyond.

In the last few weeks' sports stars Shelley Rudman and Lauren Booth and broadcaster Alan Dedicoat have agreed to become Charity Ambassadors for WAA, their air ambulance charitv of choice.

Shelley, Lauren and Alan all have a passion for WAA and are committed to helping to raise awareness and funds to enable the charity to save more lives.

Shelley won the Olympic silver medal and was the World Champion in Skeleton Bobsleigh, Lauren is a Champion Para-cyclist and is a member of the British Cycling Academy and Alan is known for his voice in announcing both the National Lottery draw TV programmes and the UK version of Strictly Come Dancing. Alan is the only non-resident but he travels the area regularly commuting to his home from work in London.

David Philpott, Chief Executive of WAA, said: "We are delighted that Shelley, Lauren and Alan have become Charitv Ambassadors for Wiltshire Air Ambulance. They are well respected and inspirational in their respective fields. Their support of Wiltshire Air Ambulance will help boost our profile and raise the funds we need to operate an essential helicopter emergency medical service in Wiltshire and surrounding counties.

"Shelley, Lauren and Alan all understand the importance of fundraising for charities and we thank them for giving their time to help us with that and using their connections to spread the word about Wiltshire Air Ambulance."



Shelley Rudman (second from left) and Lauren Booth (fifth from left) with (I-r) WAA's Louise Cox (Critical Care Paramedic), Dan Tucker (HEMS Paramedic), Kevin Reed (Head of Operations) and Richard Miller (Critical Care Paramedic) at Wiltshire Air Ambulance's Operations Cen-tra in Dovizos (D) Stochan McCrath at maddaggizetta com tre in Devizes. © Stephen McGrath at maddoggiraffe.com

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UNITED STATES

NATIONAL: Between 1999 and 2008, patient flights increased by 35% to 270,000. The number of air-ambulance helicopters nearly doubled over that time to 677.

Currently the FAA say there are 75 air-ambulance companies operating 1,515 helicopters that make 400,000 patient flights per year.

The average air-ambulance flight costs the patient or insurer between \$12,000 and \$25,000, according to the National Association of Insurance Commissioners.

Nationwide, 90 people died in 92 helicopter EMS crashes between 2006 and 2015. This is an average Between 1999 and 2008, patient flights increased by 35% to 270,000. The number of air-ambulance helicopters nearly doubled over that time to 677.

Currently the FAA say there are 75 air-ambulance companies operating 1,515 helicopters that make 400,000 patient flights per year.

The average air-ambulance flight costs the patient or insurer between \$12,000 and \$25,000, according to the National Association of Insurance Commissioners. Nationwide, 90 people died in 92 helicopter EMS crashes between 2006 and 2015. This is an average of one air-ambulance crash every 40 days.

HAWAII: Hawaii Air Ambulance Inc., predecessor of Hawaii Life Flight, filed for bankruptcy last month following a lengthy battle with a former whistle-blower employee.

The air medical transport company, which flew critically ill and injured patients between the islands until it merged in 2010 with another medevac provider, AirMed Hawaii, listed former employee James P. Stone as one of two creditors.

Stone, a former Hawaii Life Flight pilot, was awarded \$760,680 last year by the Hawaii Labor Relations Board for being wrongfully terminated in 2010 after complaining that his employer did not follow state and federal requirements when refuelling planes, among other safety issues. The decision was affirmed by the First Circuit Court. An appeal by Hawaii Life Flight was dismissed in May by the Intermediate Court of Appeals, and the company has filed a second appeal.

The bankruptcy was filed in the middle of the appeals process, essentially preventing the court from moving ahead with the case.

The company listed assets of up to \$50,000 and liabilities of \$1 - \$10M and estimates there will be no funds available to unsecured creditors after the bankruptcy. [Star Advertiser]



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FIRE CHINA

ZHUHAI: China has completed production of the p0rototype for what is now the world's largest amphibious aircraft. It is designed to be used to fight forest fires and perform marine rescues.

The aircraft, the Aviation Industry Corporation of China [AVIC] AG600, is around the size of a Boeing 737 - far larger than any other plane built to take off and land on water.

It has a maximum flight range of 2,800 miles and can collect 12 tonnes of water in 20 seconds. Its maximum take-off weight is 53.5 tonnes.

southern port city of Zhuhai.

Before the AG600, the largest amphibious cast was the Hughes H-4 Hercules, the Spruce Goose, which was designed in the 1940s as a transport aircraft. It was hitherto regarded as by far the largest seaplane ever built although it only ever made one flight in 1947. Its wingspan is still longer than the AG600's.

The Chinese plane, which is currently targeted at the domestic market, overall large amphibians have not made much of an impression on the market. [Daily Mail]





UNITED STATES

CALIFORNIA: In the wake of a recent wildfire in the Santa Clarita Valley, the county fire chief is to analyse emergency firefighting aircraft and determine how the county can better respond to year-round fire seasons.

The county will look at what it owns, what needs to be replaced and what aircraft should be added.

From the Quebec, Canada, government the county leases Canadair amphibious tankers that can dump 1,600 gallons of water on a fire in just 12 seconds. But those don't arrive until late summer and fires are getting to be a year-round problem. [Valley Signal]

In 2009 San Diego Gas & Electric brought a helicopter to San Diego County which was capable of fighting fires as well as for SDG&E construction use, and SDG&E made the helicopter available to the County of San Diego for regional fire protection purposes. The San Diego County Board of Supervisors approved an agreement with SDG&E in 2009, and in 2010 the agreement was extended through the end of 2015.

SDG&E recently leased a Sikorsky S-64 Helitanker from Erickson, Inc., and on July 19 the Board of Supervisors voted 5-0 to authorise the director of the county's Department of Purchasing and Contracting to enter into negotiations with SDG&E for a new agreement which contingent upon mutually agreeable terms would be for twelve months with five one-year renewal options through 2022.

Under the agreement SDG&E will cover the costs to operate the helicopter during the first two flight hours of any new fire and the county will cover the next two flight hours, although in many cases the state or Federal government may provide reimbursement for the cost of fighting wildfires. The helicopter will be available to all city fire departments and fire protection districts as well as to the San Diego County Regional Fire Authority. [Valley Roadrunner]



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INDUSTRY

The National Transportation Safety Board is devoting two days at its training facility to offer guidance to aviation public affairs professionals on effective management of emergency communication following a major aircraft accident or incident.

The training is scheduled for September 29-30, 2016, at the NTSB Training Center, Ashburn, Virginia, (near Washington, D.C.) and is aimed at communication professionals working with airports, airlines, air charter operators and corporations with aviation departments. NTSB officials will explain how investigation-related information is verified and released to the news media and to family members of those affected by a major accident.

Students will hear from members of the national news media, who will discuss how they cover aviation accidents and how social media has changed how breaking news is disseminated and consumed. Aviation communication professionals will provide case studies highlighting best practices and lessons learned during previous aircraft incidents and accidents. For a complete description of the training, registration information, and cost to attend visit http://go.usa.gov/xcut5

A one-day version of this course is also available outside of Washington for groups of 10 or more. For details, see the course description at http://go.usa.gov/3HqjA



Two people died in the crash of the Bell 525 Relentless prototype in Ellis County, Texas, on July 6. The victims were part of an experimental mission in the twin-engine helicopter, which ended up destroyed from the incident.

The crash occurred about 11:45 a.m. three miles northwest of Italy near Bell Branch, off Farm Road 876 north of Chambers Creek. The 525 Relentless had been in the air for an hour and eight minutes prior to the accident.

In an early report on the 525 crash the National Transportation Safety Board [NTSB] has let it be known that it appears that the main rotor struck the front and back of the helicopter, causing the helicopter to break up in mid-flight.

Spokesman Peter Knudson stated that "The signatures indicate that the main rotor struck both the tail boom and the nose, the probable cause of the inflight break-up is still under investigation."

No cause has been ruled out yet and investigators are still looking at all systems in the helicopter, Knudson said. The preliminary report is usually issued within 30 days of the crash and should be available in early August. [Star Telegram]



August 2016

The FAA is investigating proposals for a significant change in how Inlet Barrier Filters (IBFs) are certified. Most IBFs are produced by independent companies outside airworthiness standards under the STC arrangements – a situation that has been accepted by all for years. The proposed new rules would tend to upset that situation. The IBF industry state there is no need for such a move, and it will hurt their industry.

An estimated 20,000,000 flight hours have been achieved by helicopters fitted with IBFs, without any reported accident or incident directly related to an IBF system, which suggests there is no urgent need to apply certifi-

cation rules to them.

The FAA are planning significant changes which could effectively wipe out the companies making, certifying and supplying IBFs. While the existing STCs will remain valid, the possibility of getting a new STC approved will be near impossible for anyone other than the airframe manufacturers. At present, only Airbus Helicopters makes IBFs, and are thus in the best position to benefit. Over 7,000 IBF systems are currently flying. The other major manufacturers have no apparent inclination to produce them in-house.

An IBF is a piece of equipment that significantly reduces the potential for engine damage. Early systems were developed to protect military turbine engines operating in harsh environments and later adapted to provide the same safety and power margin protection for civil applications.



The potential change in the rules means that IBF manufacturers will be obliged to furnish the certification authority with certain Intellectual Property (IP) from the engine manufacturers, which they are in turn unwilling to supply to a third party. The engine companies necessarily talk to the airframe manufacturers, and the latter thus have access to the IP required. On this basis, if the third party suppliers are eliminated from the market, the airframe manufacturers stand to win.

It is suggested that the FAA is being nudged by EASA to tighten up the rules on this. Given 20 million flight hours free of accident or incident it is all about standardising the rules between EASA and FAA, and the EASA rules are already stricter. For example, Aerometals has been trying to get its IBF certified for the Turbomeca-powered EC135 for over five years and the EASA continues to block this despite the FAA having certified it on a PWC-powered EC135 and there is a growing list of delayed applications in the wings.

There are two principal IBF manufacturers – **Aerometals** and **Donaldson**, Pall Aerospace competes in the same market but has slightly different technology which is closer to a Particle Separator than an IBF.

The wider worry is that if the FAA bow to this initiative for IBFs there might be a danger that in time many other products fitted under STC could be drawn into proper certification rules. [JP HeliHub]

Gama Aviation Plc, has announced the award of an EASA STC for installation of the Garmin G500H EFIS into the Bell 206B helicopter.

The G500H system is certified for Day/Night VFR operations and brings substantial improvements in situational awareness with a large multi-function colour moving map, H.S.I, full-time wind vector and many additional features.

The GPS source required by the G500H is provided by Garmin's GTN750 or 650 touchscreen GPS navigator with integral 8.33 KHz Comm and VOR/ILS receiver. When using the GTN750, optional HTAWS and integrated audio panel and Mode S transponder are also

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available.

The G500H EFIS complements the Cobham HeliSaS 2-axis autopilot which is also EASA certified on the B206B. The HeliSaS features automatic recovery to near-level flight if inadvertently flown to an extreme attitude, plus has Heading, Nav (lateral and vertical), GPS steering and Altitude Hold modes.

Gama Aviation has produced additional EASA minor changes on the B206B for the Garmin GTS800 traffic advisory system and FreeFlight TRA4000 radio altimeter to interface to the

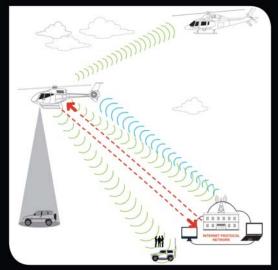


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The FAA has approved Garmin's GTX 335 and 345 Mode S transponders for use in Robinson R22, R44 and R66 helicopters. The newly approved transponders meet impending ADS -B Out regulations without requiring a standalone GPS. Priced at \$3,900, the GTX 335 enables owners and operators to meet impending regulations with minimal expense. At \$6,300, the GTX 345 goes a step further by adding ADS-B In and Bluetooth capability. The Garmin GMA 350H audio panel has also been replaced with the new Garmin GMA 350Hc. The GMA 350Hc offers the same technology as the GMA 350H but includes Bluetooth wireless connectivity for mobile and compatible portable devices, allowing wireless distribution of music or telephone audio through the aircraft's audio panel. The GMA 350Hc is priced at \$2,750.

Soloy Aviation Solutions was one of the sponsors of a July 12 record setting nonstop fuel efficiency flight of 848 nautical miles that lasted over nine hours and burned a mere 56 gallons of fuel. The aircraft used to achieve the flight was a Cessna 182 Skylane that featured an SMA SR305-230 compression ignition (diesel) engine powered by a 50-50 blend of biofuel comprised of Camelina plant seed oil with petroleum Jet-A fuel.

The record setting attempt was sanctioned by the Fédération Aéronautique Internationale (FAI), the organization sanctioning aviation world records.

Two pilots completed the flight; Ross Mc Curdy, a high school teacher in Rhode Island and Thierry Saint Loup, an executive at SMA Engines (Safran Group) in Texas. The pilots took off from the Essex County Airport (KCDW) in New Jersey on July 12th and flew an 848Nm triangular course to Buffalo, New York (KBUF), Portland, Maine (KPWM), and back to Essex County Airport.

As a sponsor of this incredible achievement. Soloy Aviation Solutions was extremely interested in the efficiency performance of the SMA engine in a C182 airframe. Last month Soloy announced a partnership with SMA to bring to market the second generation SR305-230e engine and turnkey STC conversion to Cessna Skylane operators worldwide.





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Under the agreement, Soloy will co-develop an engineering programme with SMA to provide the Cessna 182 a more powerful SMA SR305-230e ci engine as well as improve its installation and aerodynamics package for the airframe. Applicable C182 aircraft models will be finalized as the program gets underway.

Leonardo-Finmeccanica has announced that the AgustaWestland AW139 intermediate twinengine helicopter had shown outstanding hot and high altitude performance and mission capability during recent trials in Pakistan, reached on a ferry flight from Italy. The trials were conducted in the central desert area of Multan, where temperatures touched 49 °C with the helicopter still being able to take-off at its MTOW, and in the northern areas of the Karakoram Range where the helicopter demonstrated its operational capabilities in hot and high environments.



The extensive flights performed in the high temperature desert areas included demonstrations of the AW139s tactical low level flight capabilities and the ability to shut down and restart engines in just one minute. High altitude performance flights included take-offs and landings on unprepared surfaces at 16,300 ft density altitude and flights at 20,000 ft pressure altitude. The most demanding missions in terms of altitude and temperature were all performed with at least eight passengers and two pilots on board, in a fully mission equipped configuration, including a passenger transport layout with up to 12 seats, air conditioning, a comprehensive avionic package encompassing TCAS II (Traffic Collision Avoidance System), HF radio, plus rescue hoist and cargo hook provisions. The most demanding missions performed also included fuel for well in excess of one hour of flight plus required reserves. The aircraft demonstrated significant power index margins in the most demanding conditions, highlighting its unrivalled performance and handling capabilities in an extremely challenging environment. [AW]

The Israeli-based aerostat company, **RT LTA Systems**, announced the establishment of a new subsidiary called "Aero-T". RT, is the designer, developer, and manufacturer of the tactical Aerostat family SkyStar[™], which is used in intelligence, surveillance, communications and homeland security applications.

Aero-T will develop and manufacture a new family of aerostats called SkyGuard. The new aerostats will be in BLIMP shape, and significantly larger than the SkyStar.

Aero-T has completed the development of the first member in the SkyGuard family, the SkyGuard1. The SkyGuard1 has an ability to carry payloads of up to 90kg weight, operation-



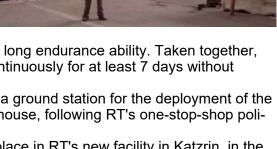
al elevation of up to 3,000 feet (1,000 metres) and long endurance ability. Taken together, these abilities will allow the aerostat to operate continuously for at least 7 days without maintenance.

The development of the SkyGuard1 also included a ground station for the deployment of the aerostat. The ground station is also developed in-house, following RT's one-stop-shop policy.

The manufacturing of the new aerostats will take place in RT's new facility in Katzrin, in the north of Israel.

UBAI International Civil and Military HOW Helicopter Technology 2016 & Operations Exhibition

November 2016, Grand Stand, Meydan Hotel, Dubai, U.A.E



Police Aviation News

August 2016

Brexit, the intended re-emergence of an independent United Kingdom from the European Union is currently the talk of many lands. Many I suspect are bemused by the whole episode—they just do not understand it yet. It seems a strange thing to do and diametrically contrary to all the British Government had previously said. Now is a nearly new set of politicians and potentially a whole new world. Pilots are calling on the Prime Minister and newly appointed Secretary of State for Exiting the European Union to bring certainty to the UK aviation industry following the vote for Brexit.

Airlines have already been hit particularly hard following the vote to leave the EU and pilots are urging the Government to bring aviation to the very top of matters and begin working on how the UK will thrive outside the EU.

There has been a reduction in demand for leisure and business travel, and volatile share prices affecting airlines but the eventual extent of this on aviation regulation remains unknown.

TRAKKA

The **British Airline Pilots Association** [BALPA] is to dedicate one day of its two-day Annual Delegates Conference in November to Brexit, and discussing what the implications are for pilots, the industry and, crucially, for flight safety regulation.

BALPA will continue to work with the UK Government, particularly the Department for Transport, to ensure that pilots' voices are heard in the debate about our future relationship with the EU.

In contrast to that message **BALPA** were in support of the announcement from the government that London City Airport in the Docklands area is to be expanded. This will significantly improve services to and from central London and particularly the Excel Exhibition venue used for events such as DSEi and Helitech during odd years – although the bulk of the improvements are not likely to be very evident in time for the 2017 events.

CRITICAL VISION TECHNOLOGY







Erickson Incorporated and **Helicopter Transport Services** have announced the first flight of its advanced composite main rotor blades for the S-64 Aircrane and CH-54 Skycrane.

Flight testing is expected to continue for several months and certification is expected later this year.

It is expected that the new blades will significantly improve aircraft performance across the four models of helicopter - the CH-54A&B and the S-64E&F.

The new rotor blades are expected to significantly increase aircraft performance at high elevations and temperatures as well as increase fuel efficiency, reduce manufacturing costs and reduce maintenance costs. The rotor blade simply bolts onto the existing rotor heads of the CH54B/S64F and requires a minor main rotor head modification for the CH54A/S64E. The blade program was kicked-off by Erickson and HTS in 2010, with the design being finalized in 2013. Last year, Erickson designed and completed the construction of a 12,000 square foot composite manufacturing facility in Medford, Oregon where the blades are now produced.

Safran Helicopter Engines has signed a seven-year contract with Denmark's Defence Acquisition and Logistics Organization (DALO), to support 14 RTM 322-powered EH101 Merlin operated by the Royal Danish Air Force (RDAF). Over 50 engines will now be covered by Safran's Global Support Package (GSP).



ACCIDENTS & INCIDENTS

4 April 2016 Airbus Helicopters AS365N3 N600LL. Air ambulance of Life Lion Critical Care Transport based at the M. S. Hershey Medical Center, Hershey, PA USA. The aircraft had just undergone maintenance in the vicinity of the tail rotor (Fenestron). As the aircraft was spooling up for flight one of the mechanics involved in the maintenance advised the pilot to shut down due a missing tool. A search turned up a missing box flashlight in an obscured interior ledge.

The company tool control program was followed ensuring all tools were accounted for prior to releasing the aircraft for flight. In addition, the pilot conducted a thorough pre-flight of the aircraft as well noting no discrepancies. Despite implementation and emphasis on tool control which includes shadow tool boxes and other measures this incident still occurred. The light involved was not part of the formal aircraft maintenance toolbox enrolled in Tool Control. The light was used was because it provided a generous amount of light for a sufficient duration without rolling around like the flashlight in the toolbox. In this instance the object did not present a hazard to any flight control or any component critical for flight. The result is that this equipment will now be added to Tool Control but it highlights the dangers of using any uncontrolled equipment on an ad-hoc basis. [Concern]

1 July 2016 Ilyushin 76TD RA-76840. Ministry of Emergency Situations, Russia. The firefighting aircraft was destroyed when it impacted wooded terrain 9 km east-southeast from the settlement of Rybnyi Uyan in the Kachug Region killing all 10 persons aboard. It was equipped with spray tanks to extinguish wildfires. [Safety Net]

6 July 2016 Airbus Helicopters EC145. It was reported that the helicopter had a near miss with a drone on the Gold Coast, Australia. A Westpac Lifesaver Rescue Helicopter was flying over Burleigh Heads in daylight when it was forced to dodge the drone mid-air. The passing distance was judged to be about 50-metres.

11 July 2016 Bell 429 N1SP Delaware State Police Aviation Unit. A volunteer firefighter with the Delaware Air Rescue Team (DART), 46-year-old Tim McClanahan of Lewes, was killed falling from a helicopter in Delaware during a training exercise. He fell onto a grassy area from height as he stepped out onto the helicopter's skid during the exercise at Delaware Coastal Airport in Georgetown.

17 July 2016 Bell UH-1H Huey N71KP. King County Sheriff's Office. The helicopter, the recently rebuilt Guardian 2, was damaged and its occupants injured when it hit a rocky outcrop during a rescue attempt to a hiker on Mount Adams, Yakima County, Washington. The two occupants received minor strains and one of the two skids on the bottom of the helicopter was damaged. The aircraft was able to fly to a nearby airport. Initial reports suggest that the pilot lost full tail rotor authority and the airframe rotated. [Yakima Herald] *Ed: The machine has the BLR cutaway tail modification.*

26 July 2016 AgustaWestland AW119 N596LF. Air ambulance of Life Flight Network, Crashed and damaged during an autorotative landing at Butte, Montana, USA. [ASN]

29 July 2016 Piper PA-31 Cheyenne II N661TC. Air ambulance of Cal-Ore Life Flight [part of REACH Air Medical Services] carrying four people, three crew and a patient, called an emergency while flying across densely forested mountains in Northern California. The Piper PA31 was carrying a pilot, flight nurse, a transport medic and a patient about 360 miles from Crescent City, near the Oregon border, to Oakland when the pilot declared an emergency with a smoke filled cockpit around 1 am. Rescue teams found the crash site on remote land owned by a private timber company in Humboldt County, about 280 miles north of San Francisco. The plane lost contact after stating it was returning to Crescent City but vanished from radar 5 miles north of the Arcata-Eureka Airport on the far northern coast, [Media/REACH]

"It looks like the drone industry has chosen

their go-to event!" -Robert Rodriquez, President of the Society of Aerial Cinematography **InterDrone** The International Drone Conference and Exposition September 7-9, 2016 Paris Hotel, Las Vegas www.InterDrone.com **The Largest Commercial Drone Show in the World! InterDrone is Three Awesome Conferences:** Drone Drone TECHCON ENTERPRISE **CINEMA For Drone Builders** For Flyers, Buyers and For Flyers Engaged in Aerial **Drone Service Businesses Photography and Videography** Content will focus on advanced flying dynamics, chips and Classes focus on enterprise applications Class content includes drone use for boards, airframe considerations, such as precision agriculture, surveying, real estate and resort marketing, action hardware/software integration, mapping, infrastructure inspection, sports and movie filming, newsgathering sensors, power issues, and - any professional activity where the law enforcement, package delivery, software development. and search and rescue. quality of the image is paramount.



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FLIGHT SAFETY

North America's first H145 Level D full motion simulator has arrived at the Helicopter Flight Training Center, a Metro Aviation company. The state-of-the-art simulator is currently being installed at the training center in Shreveport, La.

The simulator's Vital 1100 visual system provides high fidelity, mission specific imagery with vastly improved scene content and exceptional effects. The full motion simulator is equipped with full Instrument Flight Rules (IFR) dual pilot instrumentation, GMX 200 with radar, traffic and terrain and night vision goggle (NVG) capability. The multi-function, touch screen Instructor Operating Station is designed to increase the effectiveness of training by providing instructors with an efficient and productive work space.

The Helicopter Flight Training Center also offers training in an EC135 level D full motion simulator, an AS350 level 7 flight training device and a Bell 407 level 7 flight training device. All simulators are available for dry lease, allowing operators to use their own instructors and training curriculum. Operators without their own instructors can request a referral or take advantage of the "train the trainer" program.

The H145 simulator should be certified for training in Fall 2016. For more information on training opportunities, visit <u>metroaviation.com</u>.



LETTERS

Many thanks for this.

Personally speaking, 2016 was my first year at PAvCon, though I'd heard good things from the other guys here regarding previous events. I must say then that this was an absolutely superb event, extremely well organized, very well attended, excellent presentations, and we will definitely aim to be back again next year.

Please pass on my thanks to your colleagues and we look forward to seeing you again soon.

Best Regards Richard Crabb Solutions Business Development Manager Vislink

I am writing to you in the hope we, as an organisation may be of interest to you as a possible story / article in your magazine.

If I may provide a brief summary of our organisation to set the scene:

Queensland Government Air (QGAir) delivers life-saving, community safety and state support aviation services to the people and government of Queensland, Australia. Our fleet consists of seven fixed wing aircraft and five helicopters with bases located in Brisbane, Townsville, Mt Isa, Cairns and Horn Island.

Of particular interest is our Rotary Wing operation operating the AW139 and the Bell 412EP

in a variety of roles such as Police, EMS, SAR and Swift water rescue. We operate VFR, IFR day, night and on NVG.

QGAir has conducted SAR/EMS/Police operations for over 30 years in Queensland and have some very experienced crews, some of whom have been with us for over 20 years. We operate with a dedicated crew of 5 made of up Pilot, Aircrew [ACO], Rescue Crew/ Rescue Swimmer [RCO], Intensive Care Flight Paramedic, and Emergency Doctor. For Police operations we carry specialist officers as necessitated by the mission.

We encompass a mixture of crew backgrounds many with Military backgrounds (Army, RAAF, RAN, and Royal Navy).

In more recent years QGAir have contributed to disaster relief such as the 2011 Grantham floods and the 2013 Bundaberg floods with bravery medals awarded to crews including a most prestigious award from the Honourable Company of Air Pilots.

Our fixed-wing side also conduct a range of specialised operations including the QLD Premiers flight (Hawker jet and King Air 350), Police surveillance and transport (Citation, Caravan, Islander) and Prisoner transport (Beech 1900). They are also crewed by very experienced pilots with varying backgrounds, including military, airlines and RFDS.

We have undergone a few changes over the years including names; Queensland Rescue, EMQ and now QGAir which has unfortunately led to a loss of continuity with the public and community. We have also grown and taken on new technology such as the AW139 being one of the first operators in Australia to operate this high performance glass cockpit helicopter. But fundamentally we are the same organisation providing a service to the Queensland government and the community.

We would be most interested in working with you to showcase what we do.

Thank you for your time and I look forward to hearing from you in due course. Kind regards,

TROY ALDER

Pilot / Media Officer 'Rescue 510'

Queensland Government Air, Hangar 11-12, Bush Pilots Avenue, Cairns, QLD 4870 Email: troy.alder@psba.gld.gov.au





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EVENT NEWS

Air Charter Expo may seem like a new name on the aviation trade show calendar in 2016, but it already boasts a long and illustrious history.

European Business Air News [EBAN] organised its first specialist show and conference for Business Aviation way back in 1991, as the European Business Air Show at London Stansted Airport, and went on to stage annual events all around Europe.

In 2001 this evolved into **BGAD**, a one-day event focussed on low-costs for exhibitors and an easy atmosphere for networking, hosted by Cambridge Airport. This event grew each year until its most successful edition at London Biggin Hill Airport in September 2015, when the charter industry took centre stage.

Now the show has evolved once more to become the Air Charter Expo, with more exhibitors and aircraft on display than ever before.

EBAN is still very much involved but Adams Aviation Supply Co Ltd is working in concert with them to further expand the event to a broader market by, hopefully, encouraging increased interest from more engineering-types.

1-2 September 2016 Commercial UAV Show, Suntech Centre, Singapore. A conference designed to bring together commercial communities to learn and see how UAV's can help them save money, time and lives. The co-located exhibition will showcase the capabilities and applications of UAV's, from surveillance and monitoring to surveying and delivery and will attract some of the world's leading UAV manufacturers and their suppliers. In 2016 the show will be run alongside two complimentary events: The IoT Show Asia and The Smart Machines Show Asia, together creating the Emerging Technology Show 2016. Event run by Terrapinn. www.terrapinn.com Download the brochure and find out more.

IFSEC SOUTH EAST ASIA 2016

September 7-9 in Kuala Lumpur, Malaysia.

The region's leading security, fire and safety event will take place in early September, at the prestigious Kuala Lumpur Convention Centre, Malaysia. The fourth edition will host various seminars and conferences alongside the exhibition joined by giant international brands.

Being the centre for the region's industry experts to converge, IFSEC Southeast Asia (SEA) is expanding its portfolio with the launch of the Occupational Safety and Health (OSH) section on the show floor. The launch of Occupational Safety & Health (OSH) will be supported by NEBOSH who will have an area on the show

THE COMMERCIAL SHOW ASIA 2016



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floor where visitors can go to learn best practice health and safety. Also launched at IFSEC SEA 2016, will be International Workplace (IW), a seminar program produced by David Sharp, the Founder and Managing Director of International Workplace Ltd.<u>www.ifsecsea.com</u>

19-23 September 2016 6th China International UAS Conference and Exhibition. Beijing, China Aviation Promotion Ltd., Tel: +86 10 87730503 <u>uaschina@126.com</u> <u>www.uaschina.net</u>

21-22 September 2016 The Emergency Services Show 2016 at the NEC, Birmingham. In this year the vent will move to the larger Hall 5 at the NEC, enabling the expanding event to be housed in a single hall. The organisers have confirmed they will continue to offer entry to the exhibition and seminars free of charge as well as provide free parking. More details of the 2016 event will be published on www.emergencyuk.com



Found lurking with no apparent reason at last months Farnborough Air Show was this former UK police EC135T1 G-CHSU [formerly with the Chiltern Police air unit]. Even the knowledge that it was apparently operated by the same people as the Oil Spill Response Boeing 727 in the static park did not really explain its high profile spot on the flight line. More in the upcoming Farnborough and ALEA Shows report.





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