The Helicopter Museum in Weston-super-Mare, Somerset was forced to furlough all its paid staff and close down following the UK government enforced closure of leisure attractions during the COVID-19 virus crisis earlier this year. The Trustees also took steps to minimise all expenditure in an effort to ensure survival over the following months.

Although it was able to partially reopen in July, initially for volunteers only to check the collection of over 100 rotary-wing aircraft by local volunteers, but fully reopening subject to social distancing and limits on visitor numbers by the end of the month. Nevertheless the museum has seen the loss of all its summertime programme of special events, as well as its peak season visitors, amounting to an estimated near £200,000 in lost revenue and delays in completing a planned business extension, which is due to have new learning facilities, conference space and retail and restaurant areas.

As a result the Trustees are seeking donations from individual supporters and the wider helicopter industry to ensure the survival of the unique collection. Such donations, however small, can be made to www.gofundme.com/the-helicopter-museum-an-appeal or by BACS to the Helicopter Museum at the Cooperative Bank (email: helimuseum@btconnect.com for details) or direct by Cheque, addressed to: The Helicopter Museum, Locking Moor Road, Weston-super-Mare, Somerset BS24 8PP. (Dollar, Sterling and Euro cheques are acceptable). Thank you for your support.

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WELL IT continues to be a messy year as we put this edition of HELICOPTER International to bed. Whilst most OEM’s are relying on government business to keep the production lines flowing, the commercial rotary-wing operators are still digesting the results of Chapter 11 and mergers, surplus capacity and the challenges posed by THAT pandemic.

Green shoots are appearing, but very slowly as some people return to work, driving their cars (with fuel prices increasing again) and generally boosting local economies. Whilst some pundits forecast many more employees fortunate enough to still have a job to remain home working, we don’t share that view. Four months of that, with most of our staff furloughed or working remotely has reminded us of the value of companionship - working alone slowly drives you mad!

Fortunately, there are still plenty of news-worthy stories coming to the surface, including quirky ones like the clandestine helicopter factory discovered in Moldova (page 114). It’s difficult to get our heads around this one, but it seems they thought there was a market in the former Soviet Union territories for a helicopter, based on the Kamov Ka-26 and using dynamic components taken from redundant examples lined up in an adjacent field? With no legal documentation or the necessary export/import permits, the perpetrators apparently planned to smuggle the helicopter to their new customers - not necessarily so far fetched in an area of the world where bribes and commissions can be common currency. Furthermore, in the wide open spaces of the former Soviet Union, unregistered and rebuilt helicopters are often flown by private owners-usually found out only when they crash somewhere in the wilderness, often with fatal consequences.

The decision of the French government to invest in its helicopter industry and to accelerate orders and development of Airbus types to reequip its military forces is a bold move, echoed by the United States and in part, by Australia, Germany, Italy and some other countries wanting to maintain their domestic aviation manufacturers and supply chains. But what is happening in the UK? Having previously cut orders for the Leonardo Wildcat for the Army and Royal Navy, the UK arm of the manufacturer now has a fast declining order book for assembled aircraft. True, the Yeovil factory is a centre of excellence for helicopter transmissions for the Leonardo range and is the sole source for AW101 production-but not for the UK government.

At one time production of the AW189 was for the Maritime and Coastguard Agency contract was expected to be a new kick-starter at Yeovil, but that faded into obscurity once the few actually required had been delivered. Now there is a new opportunity with the Royal Air force requiring a replacement for the Airbus (sorry, Aerospatiale) SA330 Puma Mk.2, which is due to be retired in five years time. Having already wasted money delaying the original Puma HC.1 upgrade, the government now has a very adequate replacement ready to go in the shape of the Leonardo AW149 yet risks dilly-dallying again whilst it considers getting into bed with the USA Future Vertical Lift (FVL) programme. In our opinion US-built Chinooks and Apaches, as is currently happening, does little for the UK helicopter industry and growing British expertise, and FVL is far from providing an answer either.

The AW149 is here and now - let’s get on with it!

Elfan ap Rees
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New innovative HX50 helicopter introduced

A start-up company based in Cornwall claims to be developing a new helicopter for private use only. The Hill Helicopters HX50 Revolution is a single-engine five-seat design with a maximum take-off weight of 1,630kg (3,638lb) and is being developed by Dynamicq Engineering in Rugely in Staffordshire, with financial backing from Innovate UK.

The company says the design will deliver a reduced environmental impact, lower noise levels and unprecedented levels of safety, comfort and performance, all at a “game changing” price point. Key innovations include a modern turbine engine designed in house and capable of running on a variety of fuels, with advanced inlet, outlet and engine bay silencers, and an increased power-to-weight ratio compared with current helicopters in the same class.

A newly designed composite airframe, using advanced materials, will provide a lightweight, damage tolerant and impact resistant structure. The HX50 will also benefit from a new approach in rotor and hub design, with a low aerodynamic drag providing superior flight performance and benign handling.

Whilst no date has been published for the first flight of a prototype, Dynamicq Engineering did register the HX50 with the UK Civil Aviation Authority last October as G-DRJH (con. no. PP01), the markings presumably based on the designer, Dr Jason Hill. No doubt more will be revealed at the official launch on 24 August.

Wysong upgrades for HFS

Wysong Enterprises has completed the refurbishment and upgrading of an Airbus H155 helicopter, N155TD (con. no. 6664), for Helicopter Flight Services (HFS), which operates sightseeing and charter flights from Manhattan Heliport, New York and Linden airport, New Jersey. The H155, which can seat up to 12 passengers, is expected to be used in VIP charter flights to the exclusive resort up to 12 passengers, is expected to be used in VIP charter flights to the exclusive resort Manhattan Heliport, New York and Linden airport, New Jersey. The H155, which can seat up to 12 passengers, is expected to be used in VIP charter flights to the exclusive resort.

Finally the aircraft received a full paint service, including a custom paint scheme to match the existing HFS fleet.

5x blade H145 certified

The five-bladed Airbus Helicopters H145 received European Aviation Safety Agency (EASA) certification on 22 June, clearing the way for customer deliveries to begin later this summer. US Federal Aviation Administration certification should follow later this year, whilst certification for the military H145M version will be granted in 2021.

Powered by two Safran Arriel 2E turboshaft engines, the upgrade increases the useful load of the helicopter by 150kg (330lb), whilst the new bearingless main rotor design will ease maintenance operations, while improving ride comfort and reducing external noise levels. Airbus now claims the improved helicopter, with its fenestron tail rotor system and the new five-blade main rotor, is the quietest helicopter in its class.

One of the first to receive the new variant will be Östnes Helicopters, the Airbus distributor for Norway, which already has advance orders for the five-bladed H145 from a local operator.

Moldovan Police close down illegal factory

The Moldovan Police have closed down a clandestine helicopter factory discovered in the central part of the country near Criulenii, that was manufacturing illegal helicopters apparently based on the Kamov Ka-26. The closed down followed several months of investigations and documenting of the activities and culminated in a raid on the premises on 30 June.

The raid discovered over 10 helicopters on a production line at various stages of completion, with paperwork suggesting that the customers were in former Soviet countries, to which the aircraft were to be smuggled without the necessary permits or documents of origin for the parts and equipment used. Also in the building was at least one original Ka-26 in major components, together with several other examples in outside storage.

The majority of the people suspected of being involved in the production and assembly process, including those in charge, are allegedly residents of Moldova’s Transnistrian region, a breakaway state which clings to Soviet Union political traditions and is located on the narrow strip of land between the River Dniester and the Ukrainian border. The River passes close to Criulenii and is known to be a porous crossing point for Transnistria residents. If found guilty, those involved in the illegal factory could face jail sentences of up to ten years under Moldovan law.

ITP Aero contract with CHC

ITP Aero has signed a contract with CHC Helicopter to provide comprehensive support for the GE Aviation CT7-8A and CT7-2E1 engines installed in the operator’s Sikorsky S-92 and Leonardo AW189 helicopters. The contract spans five years and the work will be carried out at ITP Aero facilities in Albacete and Ajalvín in Spain.

The contract includes the use of Engine Health Monitoring (EHM) technology, using data analysis to predict incidents and anticipate the scheduling of maintenance, which will allow ITP Aero to identify the most appropriate moment for necessary minor maintenance. This should avoid issues of a larger scale that would create a higher outlay, thus optimising maintenance costs. In addition to EHM the contract includes engine repair, fleet engineering and mobile repair equipment at CHC’s operating bases around the world, and sets a target turn around time for the repair arrival and return to service of a faulty engine at less than 30 days. This is aimed at maximising fleet availability and reducing the necessary spares pool.

Above: Hill Helicopters has revealed its innovative HX50 design development for the private market.
Kaman launches UAV K-Max kits

Kaman Aerospace is scheduling first deliveries of its unmanned K-Max helicopter kits for 2021, after receiving commitments for the first five from civil operators of the aircraft, including Helicopter Express and Swanson Group Aviation. The new kits follow previous versions, that were trialled in Afghanistan by the US Marine Corps on two unmanned K-Max and deployed between 2011 and 2014 to deliver supplies to forward areas. Since then the company has refined the design and reduced the weight of the system by around 91kg (200lb), with antennas placed below the avionics rack under the engine bay and under the aft tail boom. Individual units making up the unmanned control system include a mission computer, flight control computer plus a duplicate unit, GPS/IMU combination Line of Sight transceiver and Beyond Line of Sight Tx/Rx, and a radar altimeter. The helicopter can also be flown as an optionally piloted vehicle, which Kaman says allows it to be flown piloted to the point of operations, increasing safety, and then being deployed unmanned. The company also argues that, with over 370,000 flight hours since the K-Max first flew in 1991 and a despatch rate of some 98 percent, the aircraft is proven for unmanned operations.

Airbus Helicopters receives government investment boost

Airbus Helicopters is to receive French government financial support, as part of a Euro 15 billion emergency investment into the domestic aerospace industry triggered by the COVID-19 pandemic crisis. Supply companies such as Safran Engines and Thales are also included in the support package, which is contingent on the recipients investing in environmentally focused projects, including more efficient and reduced emission developments.

Based on the wider Plan Aero initiative, Euro 300 million of the funding is being specifically reserved for research and development projects, with Airbus looking to participate with an environmentally friendly replacement for the H125 light helicopter. This project will likely follow the recent development of a hybrid variant of the H130 helicopter, which featured an emergency back-up electric powerplant, developed by Thales in partnership, with Adeno supplying the electric converters. The H130 shares common drive train components with the H125 but the latter project will go further, targeting a 40 percent reduction in fuel consumption and evolution into a hybrid-electric platform, ultimately powered by hydrogen fuel cells. A demonstrator is expected to fly by 2029.

Another Euro 600 million will include the purchase of eight H225M Caracal helicopters to replace ageing French Air Force SA330 Pumas. Euro 200 million will also be spent on acquiring 10 new H160 helicopters for the Gendarmerie, to be utilised for counter-terrorism operations and Euro 32 million will be provided to add two H145s to the Securite Civile helicopter assets. Finally the government plan will accelerate the procurement of the H160 Guepard, with deliveries two years early in 2026, and unmanned air vehicles for the French Navy, including the VSR700 derived from the Guimbal G2 Cabri.

A prototype VSR700 first flew on 8 November last year and the plan will cover the procurement of a second prototype for the development of the technologies and refinement of the specifications to meet the Navy’s operational requirements. The testing will also include ship-based flights from French Navy frigates and accelerate the risk reduction activities.

Eventually the intent is for the VSR700 to be deployed aboard the future French Navy frigate, the FDI, as well as meantime operating from the current FREMM class.

Boston MedFlight’s 80,000 hours

Boston MedFlight in New England recently logged its 80,000th critical care medical transport flight since its founding in 1985. The air medical non-profit company is the region’s primary provider of critical care medical transport by air and ground, caring for more than 4,700 patients annually.

Partnersing with a consortium of medical centres in the Boston–Worcester–Massachusetts area the organisation operates a small fleet of four Airbus H145 helicopters, fully equipped as mobile intensive care units with highly trained critical care crews, and flying almost 2,000 missions per year. The aircraft are based at facilities at Hanscomb Field, Bedford, Plymouth Municipal Airport, Lawrence Municipal Airport and Mansfield Municipal Airport, and operated by Era Helicopters.
Kongsberg acquires Patria Helicopters in Norway

Kongsberg Aviation Maintenance Services has acquired Patria Helicopters in Bardufoss, Norway from Patria Aviation Oy, a subsidiary of the Patria Group. The acquisition is aimed at strengthening Kongsberg support for the NH Industries NH90 helicopters operated by the Norwegian Armed Services.

Previously Kongsberg bought a minority shareholding in the Patria Group in 2016 and more recently entered into strategic cooperation agreements with the Norwegian military, relating to the NH90 and some of the Royal Norwegian Navy’s systems. The company now plans to grow its activities, hiring new personnel and increasing the work force over time to around 50-60 employees. That will involve a greater need for aircraft technicians and this month the first three apprentices will join the work force at Bardufoss from the aircraft mechanics class at Bardufoss High School.

In addition the Kongsberg Technology Training Centre (K-Tech), which is partly owned by the company, will establish operations at Bardufoss this autumn. K-Tech is a centre of education dedicated to technology and industrial subjects and, with its total of 64 apprentices, plays an important role in the efforts to recruit people into the industry.

Coulson/Unical increase Chinook fleet

Coulson Aviation and partner Unical now have 12 ex-US Army Boeing CH-47D Chinook helicopters available for conversion to a unique fire fighting configuration, with a 13,638l (3,000gall) Retardant Aerial Delivery System (RADS) installed below the cabin floor. The system is controlled by the pilots using a touch screen in the cockpit and a belly-mounted camera to monitor the operation, aided also by a crewman in the main cabin to provide all-round surveillance. The aircraft is also configured with night vision system certification as part of its Garmin avionics suite. In addition to the CH-47Ds purchased by Unical, the company also holds a substantial CH-47D spares inventory, acquired from the Canadian Forces and made available to Coulson.

Following the completion of Federal Aviation Administration certification trials, Coulson is deploying two RADS equipped CH-47Ds for the 2020 fire season, with a third tank-equipped aircraft being converted as a back-up and two CH-47Ds with upgraded avionics only for Bambi Bucket fire fighting missions.

2020 ERF cancelled

The 2020 European Rotorcraft Forum, which was planned to be held in Moscow on 8-11 September, has been cancelled due to COVID-19 and restrictions imposed by the Russian government on its own people and foreign travellers from the European Union and other countries. The organising committee says that instead, all the final papers will still be published on line in the electronic magazine (www.delo.ranepa.ru) and it hopes to bring back the Forum to Moscow in 2022.

In the meantime, the 2021 Forum is due to take place in the UK, where the first such event was held in 1975. Since then it has taken place annually across Europe, rotating between the UK, Germany, France, the Netherlands, Poland and Russia, and organised by the various national aeronautical societies. It is now a major event in the rotorcraft community calendar, bringing together manufacturers, research establishments, academia, operators and regulatory agencies, to discuss advances in rotary-wing development, testing and operations.
Babcock sees choppy waters

Babcock chief executive Archie Bethel, speaking on the group’s full year results on 11 June, has reinforced his belief that the oil and gas business is a “major problem area” in its aviation division, with the market dramatically declining in the second half of FY2019-20 and competitors continuing to bid at lower price levels. As a result the company has booked a £502 million write down in its aviation division profit profit of COVID-19, Bethel has concluded that there is unlikely to be any significant growth over the next few years and consequently he does not believe the market is right for a re-designed and price competitive out-place piston-engined helicopter based on the proven S-52 rotor system and transmission. Powered by a new six cylinder 300hp fuel injected Continental IO-540 engine, derated to 245hp, the S-52L features new design tail surfaces, fuel and electrical systems, main and tail rotor blades, flight controls and instrumentation, packaged in a revised fuselage and interior. Safety features include meeting FAR27 requirements for fuel crashworthiness and post-crash fires, seat and surrounding structure protection, an energysorbing four-point wheeled landing gear, and automatic collective pitch reduction in the event of a powerplant or rotor drive failure.

In particular the company says the list never related to the helicopter emergency medical services (HEMS) and this was explicitly stated on the front of the document from 2012, two years prior to the acquisition of BCMS Italia by Babcock in 2014. The ICA had confirmed that whilst it had investigated the possibility of bid rigging arrangements relating to HEMS, no basis was found for such allegations against any of the eight members of the trade association. The ICA has noted the quality and robustness of BCMS Italia’s anti-trust compliance programme however, and reduced the fine to reflect this. Meanwhile the company plans to continue serving its existing contracts in Italy and to compete for future tendering opportunities.

VAT buys S-52 Type Certificate

Vertical Aviation Technologies in Sanford, Florida has purchased the Type Certificate 1H2 for the S-52 helicopter from Sikorsky Aircraft. The certificate is the Federal Aviation Administration design approval for the S-52, originally developed by Sikorsky in the late 1940-early 1950s into the four place S-52-2 93 were built for the US military and the survivors plus a large spares inventory were later purchased by Orlando Helicopters, the predecessor to the current company. The certificate will now be used by Vertical Aviation Technologies to re enter the commercial market with their new S-52L.

The company has been selling rebuilt and kitbuild S-52s for the past 33 years alongside its Whisper Jet S-55 conversions, but now believes the market is right for a re-designed and price competitive out-place piston-engined helicopter based on the proven S-52 rotor system and transmission. Powered by a new six cylinder 300hp fuel injected Continental IO-540 engine, derated to 245hp, the S-52L features new design tail surfaces, fuel and electrical systems, main and tail rotor blades, flight controls and instrumentation, packaged in a revised fuselage and interior. Safety features include meeting FAR27 requirements for fuel crashworthiness and post-crash fires, seat and surrounding structure protection, an energysorbing four-point wheeled landing gear, and automatic collective pitch reduction in the event of a powerplant or rotor drive failure.

The prototype S-52L, registered N52FH (con. number 12) was originally registered in the experimental category on 31 May 2002 as a Vertical Aviation Technologies Hummingbird, powered by a Lycoming VO-435 engine, and has been retained by the company since then as a demonstrator and development aircraft.

With the purchase of the Type Certificate 1H2 the company is now seeking qualified investors to support taking the programme forward.

COVID-19 delays new Scilly Isles service

The Leonardo AW139 helicopter, which is destined for the Penzance Helicopter service to connect to the Scilly Isles, has now been registered with the UK Civil Aviation Authority by LCI Helicopters. Registered as G-PIOS (con. no. 31758) on 17 June, the aircraft has previously been operating in China, registered B-706H with Shanghai King Wing General Aviation. Although that lease expired earlier this year, its return was held up by the COVID-19 crisis.

In the UK the helicopter will be operated by Sloane Helicopters as the AOC holder, reconfigured for the Scilly Isles service and flown in Penzance Helicopter markings and colours, to operate from the new Penzance Heliport on a regular schedule to both St Mary’s airport and Tresco Heliport on the islands.

Leonardo AW189K certified by EASA

The European Aviation Safety Issue (EASA) issued the Type Certificate on 8 June for the Leonardo Helicopters AW189K variant, powered by two Safran Aneto-1K engines. The new powerplant, certificated separately by EASA last December, is rated at 2,500shp and was first unveiled at the Helitech exhibition in 2017.

The AW189K is cleared to operate at a maximum take off weight of 8.6 tonnes and up to an altitude of 4,572m (15,000ft), 1,500m (5,000ft) higher than the base AW189, but is expected to best use this increase in performance for both hot and high flight conditions. The launch customer is Gulf Helicopters in Qatar, which is expected to start operations with the aircraft in the second half of this year. The company already operates five AW189s alongside 20 AW139 helicopters on mainly offshore transport missions. Production of the AW189K began with the engine test aircraft, I-RAIU (con. no. 93001) in 2019.
New H145 deliveries...

Airbus Helicopters handed over a second H145 helicopter, registered D-HDSZ (con. no. 20318), to DRF Luftrettung at the beginning of May, following the delivery of another H145, D-HDRF (con. no. 20319), in early April. Both aircraft will expand the company’s HEMS coverage, which operates from 35 bases in Germany, Austria and Liechtenstein.

More recently the Dutch HEMS operator ANWB took delivery of a new H135, PH-LLN (con. number. 21171) followed by another H135 (con. no. 21151), still carrying its temporary German registration, at the beginning of June. This takes the air medical fleet to nine H135 and H145 helicopters. Also recently delivered were three H145M (BK117D-2M) for the Hungarian Air Force, believed to be con. no. 20284, 20301, 20316 serialised 08, 07 and 10 respectively.

The fourth and final H145M for the Serbian Police Helicopter Wing has also been newly delivered. Registered YU-MUP, it has joined YU-SAR, YU-MED and YU-ICE at their Nikola Tesla base in Belgrade. This latest delivery to Serbia (con. no. 20317) comes some nine months after the first three H145Ms were handed over, primarily because the Serbian government changed its order post contract signature. This added an additional aircraft to the original three on order, but also reduced a parallel order for six H145Ms for the Serbian Air Force from six to five. Unfortunately by this time manufacturing was too advanced for the sixth Air Force aircraft to be reconfigured for the police role, so instead Airbus built a new H145M for the police and completed the surplus Air Force aircraft as a demonstrator.

Finally the first of two H145 helicopters configured in the four-blade format for the Ukraine Police began flight tests at the Donauworth factory on 27 May, carrying the temporary registration D-HMBF, and the Ukraine ident 01. The aircraft will now enter the completions phase before being delivered. Two current H145s are on order, plus eight five-blade variants, identified by their BK117D-3 designation.

...despite COVID 19 restrictions

Airbus Helicopters is continuing the delivery of new helicopters despite the need to comply with COVID-19 health and safety regulations. This has included the use of authorised company staff to carry out flight test and inspection findings in place of customer employees, who normally perform these tasks. Key elements include a video inspection of the helicopter and loose object check, disinfection of all items and the aircraft documentation verification, as well as expanding the flight testing to include the customer acceptance tests.

Helitrans of Trondheim in Norway became the first customer to accept new helicopters under the e-Delivery process, accepting two H125 helicopters into its fleet without the need for physical meetings or travel. The summary information was presented via an online video conference between Airbus, authorised dealer Ostnes and Helitrans to enable the formal transfer of ownership to take place. The two helicopters, registered LN-OFY and LN-OFZ, were then transported by road from Marignane to Trondheim.

PJ Helicopters introduces Bell 429 HEC service

Family-owned PJ Helicopters (PJH) in Red Bluff, California has begun human external cargo (HEC) operations with a Bell 429 helicopter, registered N424PJ (con. no. 57113) and purchased second-hand to offer a light twin-engine Cat. A option to its HEC and external cargo contract offers. The company has retained the original 2012 six seat VIP fit but added a dual cargo hook kit from Bell, providing up to 1043kg (2,300lb) of external lift capability.

PJH already operates various light single helicopters on utility contracts, including the Airbus AS350B, Bell 407 and 206L-3 and the MD Helicopters MD520 and MD530, and initially plans to use the Model 429 for powerline work including construction and maintenance. It is also planning to offer the aircraft for federal fire fighting contracts and, if successful, is looking to eventually add a further three Model 429s to its fleet. These could supplement the existing light helicopter fleet or replace some of the older aircraft as they become more expensive to maintain.

This year sees PJH celebrating its 50th anniversary in the precision lift business, with over 40 helicopters in total in its fleet, ranging from the MD500 to the Bell 214B and Sikorsky UH-60A Black Hawk for heavy-lift work. It began HEC operations in 1986.

MDH to adopt new crash resistant fuel systems for MD500 Series

Liquid Measurement Systems (LMS) of Georgia in Northwest Vermont, which already supports platforms such as the Boeing Apache, Chinook, Bell AH-1 and Sikorsky Black Hawk, have received a contract from MD Helicopters to design and qualify a new crash-resistant gauging system for the MD500 Series helicopters, which includes the MD500E. MD520N and MD530F. Qualification and testing is expected to begin this year for installation in the aircraft at the MD Helicopters facility in Mesa, Arizona.

The crash-resistant fuel systems are designed to prevent the fuel tank from rupturing in the event of an accident and the post-crash fire, that can occur when fuel and fuel vapour escapes, making an otherwise survivable crash fatal. The LMS in-tank fuel probes are also the only ones on the market made from carbon fibre, making then the lightest in the industry and virtually immune to corrosion, cracking, deals and other impacts during field conditions. The probes are also designed to buckle on impact in the event of a crash, which keeps them from puncturing the fuel compartment.

The MD500 Series is especially popular in utility operations, including powerline installation, agricultural spraying, electronic news gathering and also law enforcement work and military special operations, where the egg-shaped cabin design has a long-held survivable reputation. The new LMS gauging system is expected to further enhance the safety elements for pilots and passengers in the helicopters.
First free flight of Airbus VSR700 UAS

Airbus Helicopters has carried out the first autonomous free flight of its VSR700 Unmanned Aerial System (UAS), which is under development for the French Navy. Based on the Guimbal Cabri G2 airframe, the remote piloted helicopter carried out a 10 minute flight at a drone test centre near Aix-en-Provence in the south of France.

The VSR700 carried out its first tethered flight in November 2019 and since then the company has been developing the electronics in the UAS, together with autopilot updates and structural modifications and reinforcements to the airframe. Key to the clearance for free flight trials has been the introduction of geo-fencing, a virtual perimeter to ensure the helicopter remains within a defined boundary, and a flight termination system to allow the mission to be ended if necessary.

Airbus will now open up the flight envelope of the UAS, progressing eventually to sea trials that are expected to take place at the end of 2021. Previously Airbus has carried out manned sea trials with a Cabri G2, fitted with the UAS flight control system, and the programme now includes further trials of the optionally-piloted vehicle and the use of two VSR700 demonstrators. These are modified with a more compatible heavy fuel engine and enlarged fuel tanks, to develop and mature the technical and operational aspects in a naval environment.

Eventually the UAS is expected to be deployed from existing ships, carrying multiple full size naval sensors for extended periods and operating alongside a manned helicopter, with a low logistical footprint.

UK Coastguard flies first UAS missions

The UK Maritime and Coastguard Agency has dipped its toes in the water, operating a Schiebel Camcopter unmanned aerial system (UAS), registered G-UASA, in support of search and rescue missions carried out by Bristow Helicopters, the provider of the Coastguard rescue service. Bristow has been trialling the S-100 since March, operating the UAS from Caernarfon airport, in North Wales, but August saw the UAS providing supporting safety patrols across beaches from Conwy Bay to Llandudno, and across the Snowdonia mountain region. These patrols are expected to continue at weekends throughout the summer holiday period.

MD Helicopters appeals $7.8 million judgement

MD Helicopters (MDH) has appealed to the Arizona Supreme Court to overturn two lower court rulings that would allow the Netherlands government to pursue a 2012 judgement for Euro 5.9 million ($7.58 million) as compensation for an alleged contract breach in the supply of eight MD902 helicopters for the National Police Service.

The contract was originally signed in 2001 but was subject to numerous delays and contract amendments until in 2005 the Netherlands government began taking legal action. This was challenged by MDH but in 2008 the court in the Hague ordered judgement against the company for Euro 1.1 million. A second judgement in 2009 raised the figure still further and following further appeals the Hague set the consolidation judgement at the Euro 5.9 figure.

Since then collection of the judgement has been on hold while the Arizona courts determine if it is enforceable in the state. The Maricopa County Superior Court ruled it met the state laws in 2018 and earlier this year the Arizona Court of Appeals came to the same conclusion. As we closed for press the Supreme Court had not decided whether it would hear the latest appeal.

Bristow has two S-100 systems and will continue its own trials programme during the weekdays, as part of an initiative to explore new ways to carry out search and rescue services in the future.

This includes establishing the regulatory framework under which unmanned aircraft can contribute to the work of the Maritime and Coastguard Agency. Such systems are expected to play a key role when UKSAR2G, the second generation of search and rescue services begins operations in 2024. The technology should allow improvements in operational efficiency and cash savings, with the UAS providing the safety overwatch and monitoring patrols currently carried out by the more expensive manned helicopters, allowing then to remain on standby at their home base for real emergencies.

Milestone Aviation revalued

GE Capital Aviation Services (GECAS), the Irish-American finance and leasing arm of conglomerate General Electric, has written off $729 million in a their revaluation of subsidiary Milestone Aviation, the helicopter leasing company that they acquired in 2015. The write off follows a review of the impact of the offshore helicopter business downturn, due to operator amalgamations, oil and gas company offshore rig retirements and the COVID-19 pandemic, which have all contributed to a decline in the market conditions.

Despite this, Milestone has taken advantage of depressed large helicopter prices to add several Sikorsky S-92s to its already large S-92 fleet, and observers believe new tenders now being circulated by energy companies could soon soak up some of the market’s surplus capacity. Petrobras in Brazil launched four tenders in June to support exploration in the Campus and Santos basins and other tenders have come from Angola, Nigeria, Norway and the UK North Sea. In addition a number of European countries are looking to commercial helicopter operators to provide search and rescue services, with tenders pending in Ireland, the Netherlands and Norway that could begin as early as 2021.

Nevertheless, the specialist helicopter valuation company Helivalues$, based in the United States, says 2020 is proving to be “the worst helicopter market in 40 years”, with second quarter transactions down “drastically” from the first quarter and older intermediate twins like the Bell 412 seeing their values decimated, as the Leonardo AW139 continues to be the aircraft of choice in that sector.
Bell recently delivered a Model 429 helicopter, to be equipped for electronic news gathering (ENG), to the Chinese national television broadcaster China Central Television (CCTV). The aircraft, registered B-7008, will be fitted with its aerial filming systems by Reigwood, a Bell independent representative in China, and will be operated on behalf of CCTV by Reigwood’s subsidiary Reigwood Star.

When it enters service the Bell 429 will be the first dedicated ENG helicopter to operate in China, providing twin-engine safety. It will also be the first ENG configured Bell 429 in North Asia.

Kaikoura Helicopters in South Island, New Zealand has partnered with marine mammal welfare organisation Project Jonah to help protect the country’s marine wildlife, in particular the whales and dolphins that visit the Kaikoura area on the north east coast of South Island. Attracted by upwelling currents bringing an abundance of sea food, some of these mammals end up stranded on the beaches and Project Jonah works with expert teams to help them return to the ocean.

One recent success was refloating a 15m (49ft) sperm whale stranded in Caroline Bay. Sperm whales are the largest predators in the world and Kaikoura Helicopters gives sightseers amazing opportunities to view them as these whales spend several years living just off the Kaikoura coast. The company says that flying out over the mammals gives people a real perspective of their size and demonstrates how hard Project Jonah must work to rescue them. So the company gives customers two options to support the organisation, donating at the Kaikoura Helicopters office in the town or donating when they book a flight online.

Indonesian operator PT. Smart Cakrawala Aviation took delivery of a new H130 helicopter from Airbus Helicopters regional delivery centre in Subang, Malaysia on 9 July, following an e-acceptance process to avoid the need for physical meetings or cross-border travel. Instead, the detailed inspections and flight testing were carried out by authorised Airbus staff.

The H130, registered PK-SNX, is Smart Cakrawala’s first helicopter and will join a fleet of small fixed-wing aircraft for dedicated passenger and cargo transportation, aerial survey work and fire patrols. Transportation to the customer in Jakarta was due to be completed by 24 July.

Bell is purchasing its Chinese independent representative, Zhenjiang Aerochine Aviation, to increase its maintenance, repair and overhaul capability in the country. Already a Bell-authorised maintenance centre and a Civil Aviation Administration of China authorised Pt.145 repair station, the operation is being renamed Zhenjiang Bell Textron Aviation Service.

The acquisition will initially allow Bell to directly provide maintenance and repair services to Bell 206 and 407 operators in China, but with plans to add all current production and legacy models to the coverage, including the Bell 505, 412 and 429. Previously Zhenjiang had independently serviced Bell Helicopters for 10 years as part of the Aerochine Group, which will continue to work alongside Bell to serve its customers.

In addition to Zhenjiang, Bell has a supply centre in Shanghai and a number of other authorised maintenance facilities across China providing maintenance, repair and overhaul services.

A new effort to create a downtown heliport for Sydney in Australia is underway, with a proposal to construct a commercial heliport on the roof of the Sofitel Darling Harbour hotel. Being provided by the hotel owner and investor, Dr Jerry Schwartz, the preliminary design has already been completed and an extensive consultation process with local residents and businesses is now underway, to meet the requirements of an environmental impact statement required by the city council. Also being produced are reports on the aeronautical aspects, covering wind, noise and vibration issues, as well as the preferred flight paths to and from the 20+ storey building.

Sydney lost its only city centre heliport in the 1980s during redevelopment of the area and since then ground level replacement plans have resulted in considerable opposition from local residents. As a result the nearest available public helipad facilities are at Bankstown and Mascot airports in the outer suburbs of the city. If approved, the new heliport would be next door to the city’s International Convention Centre and in the centre of the Darling Harbour business and tourism district.

The approval and planning process is expected to take at least 12 months, followed by construction of the facility if approved in late 2021-early 2022 and operations following later that year.

Singapore-based helicopter charter service Ascent has launched a new service in Thailand, in partnership with local Thai operators SFS Aviation and Advance Aviation. Customers will be able to book flights either on a per-seat or whole aircraft basis using the Ascent app, with trips available within and between cities and regions including Bangkok, Chonburi, Rayong, Hua Hin, and Pattaya. Per-seat prices start at about $260.00.

Advance Aviation operates an all-airbus helicopter fleet, flying from its base at Bangkok Suvarnabhumi airport and offering direct connections to and from its private jet flights at the airport. SFS Aviation, which operates Leonardo AW139 and Sikorsky S-76C+ helicopters, provides flights for the oil and gas industry as well as for emergency medical services. Both operators have committed to following COVID-19 safety protocols to protect passengers and aircrew.

Babcock Australia has teamed with Bell to offer the Model 429 helicopter in a bid to meet the Australian Defence Force’s LAND 2097 Phase 4 project, which calls for a helicopter to meet Special Forces requirements. The aircraft would be customised to meet the specific mission needs.

Bell has previously demonstrated that four Model 429s can be carried inside a Boeing C-17A airlifter with minimal dismantling, as per the LAND 2097 requirements, and says the open architecture system and twin engine redundancy design provides design and safety advantages for the specialist mission. The Defence Force has some previous experience with the Model 429, since the Royal Australian Navy operated three aircraft for crew training between 2012 and 2019, logging more than 10,000 hours and training over 100 aircrew.
Hindustan Aeronautics Ltd has begun manufacturing the first five Light Combat Helicopters in Bangalore, following the completion of trials with four technology demonstrators. A launch contract for 150 aircraft for the Indian Air Force is expected to be signed off later this year.
HAL Indian monopoly challenged

Four Indian companies bidding under the government “Make in India” programme for a share in the proposed manufacture of 111 naval utility helicopters, have called for the state-owned Hindustan Aeronautics (HAL) to be barred from competing. The companies, Bharat Forge, Tata Aerospace and Defence, Mahindra Defence Systems and Adani Defence, claim HAL has an unfair advantage as it has access to government funded infrastructure and the ability to cross-subsidise its bid through other orders on its books.

The companies were responding to a question posed by the Indian defence ministry in May on allowing HAL into the competition, which previously was reserved to the private sector under a strategic partnership model with a foreign technology provider. The four companies argue that the monopoly held by HAL needs to be broken and a level playing field introduced for all bidders, especially as HAL already has a full order book, with other new orders in the offing.

Airbus forms Team Nightjar for Australian bid

Airbus Helicopters has now announced its partnership with over 20 Australian companies to form Team Nightjar, a consortium bidding under the Australian government’s LAND 2097 Phase 4 project to supply a fleet of helicopters for Special Forces operations. Team Nightjar is offering the H145M in competition with the Bell 429 to meet the requirement, which calls for a four tonne class, rapidly deployable multi-role helicopter, capable of operations within a dense urban environment and being air-freighted to trouble spots by the Royal Australian Air Force C-17A Globemaster.

Under the project, the Army is wanting at least 16 helicopters and has further specified that they should be a proven, mature and highly reliable off-the-shelf platform, characteristics that Airbus believes the H145M can easily meet since the H145 family has flown over 5.9 million hours with more than 1,400 aircraft in worldwide service across civil, parapublic and military domains. Up to four H145Ms can be carried in a C-17A in single load, and be capable of being ready to fly within 30 minutes of the aircraft arriving at a deployment location.

The H145M is already supporting special operations roles in Germany, and Airbus also counts Hungary, Luxembourg, Serbia and Thailand among its customers. Airbus says the local consortium will deliver training solutions, provide indigenous participation and enable rapid design and the delivery of enhancements throughout the programme’s life. The proposal will also generate over A$250 million of economic benefits and more than 170 Australian jobs.

On the selection of the name Nightjar for the Australian bid, Airbus notes that it is Australia’s smallest nocturnal bird of prey, with characteristics including agility, stealth through its compact size and with excellent camouflage, silence in flight and non-reflective eyes. The nightjar is also known to hunt in pairs and catch prey on the wing. All these attributes that the company says are reflected in the H145M.

US offers MV-22 to Indonesia

The US Defence Security Cooperation Agency (DSCA) says the State Department has cleared the sale of eight Bell Boeing MV-22 Block C Osprey tiltrotors to Indonesia under a Foreign Military Sales (FMS) offer. The proposal was passed to Congress on 7 July for approval.

The potential deal is valued at $2 billion, including 24 Rolls-Royce AE1107C engines, 20 AN/AQ-27 FLIR radars, 20 AN/AAR-47 missile warning systems, 20 AN-APR-39 radar warning receivers, 20 AN/ALE countermeasures dispenser systems, 20 AN/APX-117 IFF systems, 20 AN/APN-194 radar altimeters, 20 AN/ARN-147 VHF VOR ILS Beacon navigation systems and other avionics, 20 TCASII collision avoidance systems, Joint Mission Planning Systems with unique planning components and 20 M240 and 20 GAU-21 machine guns. The deal would also include comprehensive training, spares and maintenance support.

Indonesia’s armed forces currently operate a range of more conventional rotorcraft, including licence – assembled Bell NB412 and 412EP helicopters, Boeing AH-64E Apaches, Airbus H225M and AS332 variants, Mil Mi-17V-5 and Mi-35, and a mix of smaller types, numbering between 180-190 aircraft in total. The MV-22 would provide the island nation with a more rapid response to humanitarian and disaster relief emergencies, as well as supporting amphibious and anti-terrorist operations. According to the DSCA the sale will promote burden sharing and interoperability with US forces deployed to the region, and also with Japan, which is in the process of taking delivery of its own fleet of 16 MV-22s.

Although some officials in the Indonesian government appear surprised by the FMS offer, the argument to purchase the tiltrotor is based on a perceived Chinese threat to annex the Natunas, the Indonesian archipelago of some 272 small islands in the South China Sea. Lying some 1,175km (730 miles) north of Jakarta the island have a population of less than 100,000 residents, mostly working either for the government or making a living from fishing. The latter has long been a subject of disputes, with Chinese fishing vessels escorted by Chinese coast guard vessels frequently intruding into the Indonesian exclusive economic zone surrounding the Natunas to use large bottom-scraping nets to trawl virtually unchallenged. The zone is also rich in natural gas.

Whilst the Indonesian military does deploy patrol aircraft, fighters and navy vessels into the area, Indonesian bases in the region are few and small, with only one airport at Ranai, the capital of the Natunas, with a 2,560m (8,400ft) runway and a smaller airfield with a 1,189m (3900ft) runway 241km (150 miles) further southwest. There is also a naval base at Tanjung, Pinang, 483km (300 miles) southwest of Ranai that can support vessels up to 30m (100ft) in length. Most of Indonesia’s military bases however are a very long way from the archipelago, meaning that any significant defence force would need to operate independently, probably using amphibious assault ships capable of operating helicopters and supporting the V-22 if that capability is to be purchased.

With no aircraft carriers, the only vessels currently capable of operating the V-22 are two Banjarmasin class ships, which have deck space for up to five helicopters and therefore should be able to accommodate a V-22 strike force.
LMM firing trials from Wildcat HM.2 completed

A joint Royal Navy and industry team has completed airborne firing trials of the Thales Martlet lightweight multi-role missile (LMM) from a Leonardo Wildcat HM.2 helicopter. The firings of the laser-guided missile, carried out over the Aberporth weapons range in Cardigan Bay off the West Wales coast between 27 April and 21 May, are part of the UK Future Anti-Surface Guided Weapon programme, and demonstrated the integration of the Martlet with its associated launcher and airborne laser guided unit into the AW159 Wildcat sensor, displays and avionics systems.

The LMM provides a step-change in capability for the Royal Navy, which in the modern maritime environment faces new threats from smaller, fast moving asymmetric threats that enjoy high mobility and small thermal and radar signatures amidst severe background clutter. LMM can surmount these issues, where traditional electro-optic and radar guidance systems do not provide the certainty of hit required. According to the Royal Navy the Wildcat is capable of carrying up to 20 Martlets, each weighing 13kg (29lb) and taking just 0.3 seconds from launch to reach its top speed of Mach 1.5. In addition to countering fast-moving surface threats, the missile can also be employed against air targets, such as unmanned air vehicles and other maritime helicopters.

The first operational deployment of the Martlet system with the Wildcat will be in 2021 as part of the HMS Queen Elizabeth aircraft carrier defensive cover. The 65,000 tonne vessel will typically operate with its own embarked air wing, accompanied by Type 26 frigates and Type 25 destroyers carrying Wildcats as part of a carrier strike group.

US Army launches drone from UH-60M

The US Army has successfully launched a fixed-wing reconnaissance drone from a Sikorsky UH-60M Black Hawk helicopter in a trial by the Combat Capabilities Development Command (CCDC), carried out at the Yuma Proving Ground in California. The trial saw several ALTIUS (Air Launched, Tube Integrated Unmanned System) 600 drones being fired from a side-mounted tube on the helicopter at a low level altitude of approx 30m (100ft), before deploying folded wings and an aft propeller to fly the surveillance mission. One important aspect from the trials was to confirm that the drone could escape the impulse from the launch and the rotor downwash from the helicopter with no loss of control.

South Korea delays naval helicopter programme

Continuing COVID-19 infection rates in South Korea and elsewhere has forced the government to delay the evaluation of bids from Leonardo and Lockheed Martin for a second phase $800 million naval helicopter programme. Previously an evaluation team had been due to travel to the UK to check out the Wildcat HM.2 helicopter and weapons systems, as well as travelling to the United States to test the Sikorsky MH-60R.

The Republic of Korea Navy already operates the Wildcat, and was planning to order a second batch after no rival bids were received within a set time frame at the end of November 2018, but reconsidered options following a late appeal by the US manufacturer and a proposal for a US government Foreign Military Sale (FMS). The State Department approved the FMS sale last March, which included engines, sonar and targeting systems, communication and other avionics systems, but no weaponry other than eight crew served guns.

The Navy is seeking 12 helicopters under the second round, with the two rival offers markedly differing in their financial packages. Leonardo is proposing a commercial deal, with offset incentives, which are not available under the American FMS offer. However, the latter may also be subsidised heavily by the US government, which is keen to see South Korea well armed against its North Korean neighbour.

Montenegro to operate Bell 505 for training

The Montenegro Air Force is to become the first military operator of the Bell 505 Jet Ranger X helicopter, with an order recently signed for two aircraft to carry out training and liaison missions. The order, valued at around Euro 3.2, million follows an in-country demonstration of the type to the Podgorica headquarters.

The Air Force currently operates three Bell 412EPI helicopters on utility and border patrol missions and a declining number of ageing licence-built Soko Aerospatiale SA341/SA342 Gazelles, which the Bell 505 will gradually replace. Several Mil Mi-8T helicopters have been withdrawn from service since 2012.

The first Model 505 was due to be delivered in July, from the Bell completions facility in Prague, Czech Republic. Meanwhile initial training of three pilots, to be instructors on the new type is being undertaken in France.

SB1 Defiant continues flight trials progress for FVL

The Sikorsky Boeing SB1 Defiant compound helicopter entry for the US Army Future Vertical Lift (FVL) competition is continuing to make progress in flight trials at the Sikorsky West Palm Beach test centre in Florida. On 9 June the aircraft reached 379.66km/h (235.91mph), with chief test pilot Bill Fell reporting that this was achieved whilst using less than 50 percent of the power from the pusher propulsor. The current aim is to achieve 426km/h (265mph) but Fell believes speeds in excess of 463km/h (287mph) or 250 knots are achievable.

The Defiant is competing with the Bell V-280 Valor in the Future Long Range Assault Aircraft (FLRAA) sector of the FVL requirement, aiming to begin replacing the Sikorsky UH-60 Black Hawk in FY2030. The US Army awarded competitive contracts to both companies earlier this year to continue into the Competitive Demonstration and Risk Reduction phase of the programme.

The ALTIUS 600 can be piloted through a hand-held remote control or programmed by a ground station to navigate to certain points before returning to friendly territory to land on any relatively level surface for recovery. During a mission, the onboard sensors feed video and data back to the helicopter, enabling the crew to fix the location of likely targets and take appropriate action from a safe stand-off position. This capability will be especially valuable for the future battlefield helicopters now under development, which will be combat targets for enemy long-range precision munitions.
AW101 deliveries to RNoAF pass half-way point

Leonardo Helicopters has delivered nine of the 16 AW101 Mk.612 helicopters for the Royal Norwegian Air Force (RNoAF), with the eighth arriving on 4 June, via a refuelling stop at Humberstone airport on the UK east coast, and the ninth on 24 June. The contract for the 16 aircraft was signed in December 2013 and included an option for a further six helicopters.

The first aircraft carried out its maiden flight at the Yeovil factory on 5 September 2019 and the nine deliveries to date include serials 0264, 0265, 0268, 0270, 0273, 0275, 0276, 0277, 0278. Of these 0268 was recently redelivered after being returned to Yeovil for repairs, following a roll over mishap whilst taxying at Sola/Stavenger airport in November 2017 and 0265 also flew back to Yeovil in September 2019 for modifications.

All the delivered helicopters are currently with the RNoAF Operational Trials and Evaluation Unit at Sola, but are expected to be transferred to No. 330 Squadron this September, where they will replace the Westland Sea Kng Mk.43 helicopters detached at six search and rescue bases along the Norwegian coast line. The Mk.612 is the most advanced SAR variant produced to date with a full all-weather autopilot capability, and is the basis for a planned upgrade of the Canadian Defence Forces CH-149 Cormorant fleet.

Belgian Air Force to retire NH90TTH early

Industry sources suggest that the Belgian Air Force may retire its four NH90TTH helicopters in 2023 when they reach their 900 hour inspection point. The proposal follows a need to cut defence costs, with the helicopters targeted due to their relatively low use and high operating costs.

Previously military officials have criticised the poor manufacturer support for the small fleet, partially blamed on the multiplicity of NH90 variants adding complexity for the NH90 consortium, and the very long lead times for spares, repairs and engineering advice. As a result operational output has been limited, with low serviceability levels and an availability rate of just 38 percent. Whilst this is similar to other NH90 operators, Belgium has now cut its NH90TTH operations by 40 percent, to reduce costs and extend their life, but is still facing expensive upgrades on the four aircraft to meet operational and legal requirements.

These would take each helicopter out of service for up to 18 months, which is seen as unsustainable.

The last of the four aircraft, serial RN08, was delivered to the Air Force No.1 Wing at Beavchecain air base in November 2014, but officials are now considering a smaller and more flexible replacement option, possibly introducing some commonality with fleets in Belgium and Germany, but this is not confirmed.

If retirement of the NH90TTH is substantiated, this will put pressure on the maintenance and other operating costs of the four NH90NFH based for search and rescue tasks at Koksijde with No. 40 Squadron. This unit is due to relocate to Ostend by 2022 following the completion of infrastructure works, when it will be able to operate with far less personnel as air traffic controllers, fire brigade and some technical services are already there.

Meanwhile a Belgian decision on the future of the NH90TTH will have a knock-on effect for neighbouring Luxembourg, which has been in discussions with NH Industries to purchase two NH90TTH and one NH90NFH to meet its NATO commitments. The aircraft would be based with the Belgian aircraft at Beavchecain and Koksijde respectively, but the Luxembourg government is now understood to be stalling on any contract signature whilst it reviews its options.

RCAF resumes CH-148 operations

The Royal Canadian Air Force resumed operations with the Sikorsky CH-148 Cyclone helicopter in June, after the type was grounded following a fatal crash on 28 April by a Cyclone on final approach to its parent ship in the Ionian Sea. An initial report confirmed that no mechanical failure contributed to the accident. Data recovered from the flight recording system showed that the flight director was set to hold a specific altitude and airspeed, which conflicted with the pilot’s inputs as he was banking to align with and land on the flight deck of the parent vessel, HMS Fredericton.

The helicopter’s low altitude and the software setting meant that the pilot was unable to respond to the situation in time to prevent the impact into the water. Investigators have been able to recreate the crash in a simulator, confirming that the anomaly had occurred under a very specific and narrow set of circumstances, but the rarity of the event meant that the crew would have had no previous exposure or experience on how to handle the situation.

It is understood that this involves throwing a switch that will disable one level of the automation layer, which will allow the pilots to set a recovery path. Cyclone aircrews at both Shearwater and Patricia Bay with the two operational squadrons and the training squadrons are now undergoing revised ground and simulator training. In addition aircraft manuals and documents have been updated, following consultation with Sikorsky, in order to prepare the new training programme.

Meanwhile the Director of Flight Safety for the Department of National Defence says the investigation team will continue their work, to better understand the “why” factor behind the autopilot’s conflicting inputs that led to the crash.
First CMV-22B COD arrives on US West Coast...

The US Navy is continuing to advance its Carrier On Board (COD) replacement programme, with the arrival of a Bell Boeing CMV-22B COD tiltrotor at Naval Air Station, North Island in San Diego, California on 22 June. The aircraft is the third CMV-22B to be delivered to the US Navy, following the hand over of the first and second examples in February and May for developmental trials at NAS Patuxent River, Maryland.

This first fleet delivery initiates the establishment of a West coast CMV-22B unit, to provide the Pacific-based US Navy fleet with COD services. The first deployment is expected to be with the USS Carl Vinson aircraft carrier strike group in 2021. Meanwhile the first three qualified CMV-22B pilots recently completed their training with VMMT DET 24 at MCAS New River in North Carolina and have now been posted to VRM-30, the Fleet Logistics Multi-Mission Squadron at NAS North Island to begin operations.

39 CMV-22Bs are currently on order for the COD service under a $4.2 billion contract, awarded in 2018.

…and USAF receives latest CV-22B

The US Air Force took delivery of its latest Bell Boeing CV-22B tiltrotor, serialled 16-0076, on 2 June from the Osprey assembly centre at Amarillo in Texas. The aircraft, featuring a new very dark grey colour scheme, was flown to Hulbert Field in Florida, where it was handed over to the 801st Special Operations Aircraft Maintenance Squadron.

This unit is tasked with the installation of specific mission equipment and CV-22B maintenance, in support of worldwide special operations performed by the fleet. ‘076 is expected to enter service with the 8th Special Operations Squadron, part of the 1st Special Wing also at Hulbert Field in due course.

In addition to being the last CV-22B for the US Air Force, ordered as an attrition replacement, 16-0076 marked the 400th Osprey delivery by Bell Boeing to the US Department of Defence. Production is currently continuing for the US Navy and Marine Corps.

Nigerian Navy takes new AW139

The Nigerian Navy took delivery of a new Leonardo AW139 helicopter, serial 312 (con. no. 31882) in mid-May, one of four ordered in September 2016 for corporate transport and search and rescue missions, by the Nigerian State House, the River States government and the Navy. The new AW139 was seen undergoing flight trials at the Leonardo Vergiate facility last November and December, when it was carrying the experimental serial CSX81969.

In service it joins a 2007 build AW139 previously transferred to the Navy from the Nigerian Maritime Administration and Safety Agency in 2018, and which in early June was undergoing maintenance. The Navy also operates an Airbus Helicopters AS365N2 Dauphin and a Leonardo AW109E Power on various missions, including security patrols in the Gulf of Guinea, where both oil rigs and commercial shipping are constantly under threat from terrorists and pirate attacks.

Mercenaries abort Libyan helicopter mission

An investigation into a group of mercenaries, allegedly recruited in 2019 to operate three Airbus AS332 Super Puma and three AS341 Gazelle helicopters on behalf of the Haftar rebel forces in Libya, has claimed that the aircraft were transported by road via Botswana with false documentation in June 2019, suggesting they were for a geophysical survey contract in Jordan. False customs declarations and air waybills allowed transit into Libya, where the operation was eventually aborted on 2 July 2019 after Haftar complained about the airworthiness of the helicopters.

The 20 mercenaries, who included four identified pilots, at least one identified helicopter loadmaster and a number of other ex-military personnel, had flown to Benghazi, Libya from Amman in Jordan aboard a commercial cargo aircraft but, following the abortion, had been evacuated to Malta aboard two rigid hull inflatable boats. These had previously been leased from Sovereign Charters, whose owner, James Fenech is now the subject of a criminal case for breaching European Union sanctions on Libya.

Both boats were leased to a company registered in the United Arab Emirates, linked to another UAE firm, Lancaster 6, which was headed up by Christian Durrant. Durrant is a former associate of the US Blackwater private mercenary company founder Erik Prince.

**Analysts explore maritime market**

Analysts exploring the maritime helicopter market estimate that almost 2,200 Western-designed aircraft were on strength for naval and search and rescue missions at the beginning of this year, with compound annual growth rate over the next 10 years to 2029 expected at 1.38 percent. During the same period 355 helicopters will retire but there will be an estimated 677 new aircraft deliveries, dominated by continued production of the Sikorsky S-70 family.

The S-70 and H-60 variants made up 35.6 percent of the market in 2019 and could still hold almost 33 percent in 2029. NH Industries is also expected to continue new deliveries of the NH90NFH maritime helicopter during the period, including more examples for Germany, France and Italy. However the US Coast Guard also features in the analysis, with a major contract for the upgrade of its 98 Airbus MH-66D Dolphin helicopters to the new MH-65E configuration. Future orders include the Indian Navy requirement, for 123 multi-role helicopters, with the Sikorsky MH-60R Seahawk recently selected, and the same customer’s need for 111 utility helicopters, which has yet to be decided.
Testing of the new Sikorsky CH-53K for the US aviation services provider Akima

Safran Helicopter Engines has signed a

The US State Department has approved a

Lockheed Martin has been awarded a $375 million contract

Senior Spanish Navy officials are expressing
difficulty absorbing this addition into the armed forces. The sale will include two GE Aviation T700-GE-701D engines and one Common Missile Warning System, together with other related elements of logistical, engineering and programme support.

GA Telesis of Fort Lauderdale, Florida has set up a new subsidiary, GA Telesis Rotorcraft (GATR) to provide lease and finance solutions in the helicopter sector. The subsidiary has already closed its first transaction, acquiring seven Bell 206L-4 helicopters.

Four of these aircraft are subject to multi-year leases, whilst a fifth is being made available immediately for lease or sale. This will be followed by the sixth aircraft later this year after refurbishment. The final helicopter is being parted out and will be sold as used serviceable material. GATR is seen as a natural expansion of the GA Telesis products and services offered for commercial aircraft and engines, using its comprehensive knowledge of the financing market.

The US State Department has finally approved the sale of six Sikorsky UH-60M helicopters to Lithuania, nine months after the original request was entered. Subject to US Congress approval, the Foreign Military Sale is valued at $380 million, including 14 GE Aviation T700-GE-701D engines, communications and navigation equipment and logistical support.

The helicopters will replace the Lithuanian Air Force fleet of ageing Mi Mi-8s, with deliveries expected to begin in 2024. The aircraft will be used for border security, search and rescue, combat support and troop transport, supplementing the NATO enhanced Forward Presence Battalion Battle Group in Lithuania.

Senior Spanish Navy officials are expressing concerns over the ongoing delay by the government in buying NH90NFH helicopters for the anti-submarine warfare mission, noting that the current fleet of 12 Sikorsky SH-60B Seahawks are 24 years old and at the end of their useful lives. The country’s financial problems over the past ten years has meant that their replacement is now urgent but new NH90s would unlikely be available for the mission before 2023, leaving a 15 year gap in the ASW capability.

As a result, the Navy is looking for an intermediate solution, in the shape of the Sikorsky MH-60R Seahawk. These could be either new-build examples, purchased under a US Foreign Military Sales contract, or second hand aircraft. Spain already operates three ex-US Navy SH-60F helicopters, purchased several years ago to boost the Seahawk fleet. In the meantime the Navy remains committed to taking delivery of seven NH90TTH for the utility role, to replace the obsolete Sikorsky H-3 Sea Kings, with these due to enter service from 2023. Together with the eventual NH90NFH order this would give the Navy an overall fleet of 13 aircraft.

Testing of the new Sikorsky CH-53K for the US Marine Corps took another step forward in June with two weeks of trials aboard the USS Wasp amphibious assault (LHD) carrier in the eastern Atlantic. The exercise marked the first deployment of the heavy lift helicopter at sea. The bulk of the testing was to evaluate launch and recovery, with 364 landings and take offs, by day and night and with night vision goggles from all deck spots, performed in increasing wind speeds and varying wind directions, and complemented by multiple rotor blade spread, fold, engagement and disengagement operations. The test team also monitored ship compatibility, with the aircraft towed around the deck and in the hangar, performing maintenance while aboard, evaluating chain/tie-down procedures and ensuring the CH-53K fits in all the locations it needs to around the ship deck and below in the hangar.

Safran Helicopter Engines has signed a contract with the NATO Helicopter Management Agency (NAHEMA) to support 276 RTM322 turboshort engines, installed in NH90 helicopters operated by the German Army and Navy and the Royal Norwegian Air Force. Signed with the Bundeswehr Service Support office and the Norwegian Defence Material Agency, the agreement will see the engines covered by Safran’s Global Support Package (GSP) under NAHEMA management.

Above: The Italian Army has designated its new Leonardo AW169M basic trainer the UH-169B, having taken official delivery of the first aircraft, serial MM81977 (con. no. 69115), in a ceremony on 13 July at the 2nd Rgt. AVES “Sirio”, based in Lamezia Terme, southern Italy. The second UH-169B is expected to be handed over in the coming months.

The introduction of the new training helicopter will allow the Italian Army to prepare its crews for the future operational transition to the new multi-role Light Utility Helicopter (LUH), which is also based on the AW169 and aimed at progressively replacing ageing models in the Army. These included the A109, AB206, AB205, AB212 and AB412 helicopters, with the replacement offering new generation technology, full interoperability with other NATO assets and a more cost effective and efficient logistical and maintenance approach, based on a “one platform” approach (O. Bernardi).
Boeing has officially confirmed an order from The US Army is aiming to introduce the No. 815 Naval Air Squadron RN flew a Bell has been awarded a $8.4 million order Triumph Systems and Support Fluid Power PZL Swidnik could be in line to secure a The Royal Air Force No.1 Flying Training Benson base in Oxfordshire, following a three

Under a GSP the customer receives a commitment to engine availability, with other benefits including budget stability, a fixed price per engine flying hour, and a technical partnership with the original equipment manufacturer.

In 2017 Safran Helicopter Engines and NAHEMA agreed a similar support programme for RTM322 turboshfts installed in NH90s operated by the French armed forces, the Belgian Army and Navy, and the Netherlands Armed Forces.

Boeing has officially confirmed an order from the Moroccan government for 24 AH-64E Apache attack helicopters, following the signing of a Foreign Military Sales contract with the US government. Morocco thus becomes the 17th country to acquire Apache helicopters, with deliveries scheduled to begin in 2024.

Nearly 2,500 Apache helicopters have been delivered to date and the version for Morocco will feature the latest upgrades with open systems architecture, including new generation avionics, sensors and weapon systems, and an updated Fire Control Radar capable of operating in a marine environment.

The Portuguese Air Force officially phased out of service its last Aerospatiale SE3160 Alouette 3 helicopter on 16 June after taking delivery of 142 examples for home and colonial operations between 1963 and 1974.

Portugal operated both gunship and assault transport variants until it withdrew from its African colonies in 1974. The survivors were then regrouped at home bases and the fleet gradually run down. By 2017 only eight remained in service.

The last operational unit, No. 552 Squadron, has now replaced the type with the Leonardo AW119 Mk II Koalit helicopter.

The Royal Air Force has returned three Aerospatiale Puma HC.2 helicopters from Kinloss Barracks in Scotland back to their RAF Benson base in Oxfordshire, following a three-month deployment to support the Scottish Ambulance Service in their COVID-19 virus activity. The helicopters were called in to provide an interim ability to move infectious patients by air, especially vital to remote highland and island communities whilst the Ambulance Service built its own infectious patient airlift capacity. This has now been achieved, removing the need for the Puma detachment.

While in Scotland the RAF aircrews took advantage of the Scottish mountains and wilderness areas to train for their expected future operational deployment to support UK and allied forces in Afghanistan.

Mercenary forces involved in the re-capture of the Al-Watiya air base in Libya in early May discovered at least 7-8 Mil Mi-24A Hind helicopters stored in hangars, all unserviceable but otherwise mostly intact. The former Libyan dictator Colonel Gaddafi was an early customer for the Hind helicopter in the 1970s and one of only a few export buyers of the A variant, easily identified by the three crew cockpit seating layout under a large glazed canopy.

PZL Swidnik could be in line to secure a major contract for the manufacture of airframes and final assembly of a new multi-mission helicopter for the Polish military, if a submission based on the Leonardo AW139 helicopter finds favour with Poland’s procurement agency. The company has previously put forward an upgraded W-3 platform for the requirement with new digital avionics and main rotor system, but is facing competition from the armed PZL Mielec/Sikorsky S-70i Black Hawk.

The US Army is aiming to introduce the Boeing AH-64E Apache Guardian Version 6 upgrade in regular service at the beginning of 2022, following a period of training with the first unit.

In the meantime 24 similar aircraft have been completed for The Qatar Air Force and are currently being delivered, with the first US Army example due to follow this summer. The Version 6 configuration includes an increased range for the Longbow radar and a new maritime targeting mode.

The Russian military base in Kant, Kyrgyzstan, which is part of the Collective Rapid Reaction force of the Collective Security Treaty Organisation, has taken is taking delivery of two modernised Mil Mi-8MTV5-1 helicopters to replace older Mi-8s at the base. The new aircraft feature night vision goggle compatible cockpit lighting to aid night-time operations at low altitude and off-airfield landings, as well as new generation onboard defence systems.

The pilots for the new helicopters have already undergone theoretical and practical training at the Tver region centre for aviation crew combat training, and will be operational from 1 July.

No. 815 Naval Air Squadron RN flew a Leonardo Wildcat HM.2 (serial ZZ529) to make the first ever helicopter landing aboard the new offshore patrol vessel HMS Tamar, on 28 May. The landing and subsequent take off follows a recent first landing by a Leonardo Merlin helicopter aboard the sister ship HMS Medway on 13 May.

The Royal Air Force No.1 Flying Training School at RAF Shawbury has received the first of four additional Airbus H145 Jupiter helicopters, ordered to boost aircrew training under the UK Military Flying Training System. The system is a partnership with Ascent Flight Training as the service provider.

The new aircraft arrived at Shawbury in temporary civil markings, registered G-CLKO (con. no. 20310) and, following checks, was expected to be transferred to the military register by early June. On 3 June, No.202 Squadron, which is part of No.1 FTS, completed the first overwater winching sortie from a Jupiter (serial ZM500) flying from its base at RAF Valley on Anglesey. The Squadron is responsible for both maritime and mountain training.

Bell has been awarded a $8.4 million order for an AH-1Z attack helicopter flight training device, excluding software integration, to be supplied to the government of Bahrain under a US government foreign military sales contract. The device is due for completion by the end of this year.

Triumph Systems and Support Fluid Power and Actuation Division in Clemmons, North Carolina has been selected to supply the hydraulic pump and assemblies for the Bell 360 Invictus entry in the US Army Future Attack Reconnaissance (FARA) competition. The Triumph system is based on technologies and designs developed for the Bell 525 Relentless.

The company says that by applying previously developed technology, this will minimise technical and schedule risks for the Invictus programme and support Bell’s efforts to meet the mandatory execution and funding profile requirements for the US Army FARA award. Triumph will also benefit from the recent win by Leonardo of the US Navy Advanced Helicopter Training System programme, since the company supplies cockpit and engine controls for the AW119

Above: This ex-Libyan Air Force Mil Mi-35 helicopter was among a number of examples of the Russian gunship discovered hidden at the rebel held At Watiya airbase, when it was captured by Government of National Accord forces in early May.
Bell confirms Invictus team for FARA

Bell has confirmed the team of suppliers supporting its Model 360 Invictus submission for the US Army Future Attack Reconnaissance Aircraft (FARA) programme. Nine companies are included, supplying parts, software and other services to assist the construction of a prototype helicopter.

In alphabetical order the companies are the Astronautics Corporation (Airframe power generation, conversion and distribution framework), Collins Aerospace (Avionics software and hardware integration and mission systems), GE Aviation (T901 engine and integration of Health Awareness System), ITT-Endine (Vibration Eliminator Units), L3 Harris Technologies (Wescam MX-15D multi-sensor and multi-spectral imaging unit), Parker Lord (Rotor dampers, main rotor CF bearing, tail rotor tension torsion strap and active vibration control system), Mecaer Aviation (retractable tail dragger landing gear), Moog (Flight Control computer electronics and actuation, and critical components for the fly-by-wire control system), and Tru Simulation (High Fidelity flight simulator).

The US Army has set a target date of the fourth quarter FY2022 for the first flights of the FARA competitors, with service entry by 2028.
Estonian Air Force to retire R44s
The Estonian Air Force is to retire its four Robinson R44 helicopters over the next four years, with the first already allocated to the Estonian Aviation Museum and being handed over this year. The remaining three aircraft will be taken out of service at a rate of one per year.

The R44s were donated by the United States to the Estonian government in 2002, with two being completed to a law enforcement specification, featuring the FLIR Systems Ultra 8000 thermal imaging camera and tannoy speakers. These two helicopters were upgraded in 2012 for night vision training. The other two aircraft are fitted with the Clipper flotation system and one of these is the helicopter being retired this year.

The retirement of the R44s leaves the Estonian government with three Leonardo AW139 helicopters, which are also fitted out for law enforcement and border controls but are operated directly by the Border Guard. No replacement for the R44 has been announced.

GAO updates on VH-92A Presidential Programme
An April update by the US Government Accountability Office (GAO) on the development of the Sikorsky VH-92A Presidential helicopter has revealed that issues, relating to the auxiliary power unit (APU) exhaust burning the White House lawn, are still likely to persist when the aircraft enters initial operational capability (IOC) with the presidential fleet. This is programmed for January 2021. Sikorsky has already developed a prototype design change to the APU to deflect the exhaust and tested this in March, but it has yet to be proven in service.

Six VH-92As are due to enter the initial operational test and evaluation (IOT & E) phase this summer, including the two engineering development model (EDM) prototypes, which are currently carrying out government tests at NAS Patuxent River in Maryland, and four System Demonstration Test Article (SDTA) aircraft, which are currently being modified to a production representative standard. The EDM prototypes have previously been used to carry out an operational assessment in March 2019, and this and subsequent landing tests at the White House exposed the damage risk to the lawn and nearby trees, not only from the APU but, in addition, from the main engines exhaust deflected in the main rotor downwash.

As a consequence Sikorsky and the Navair programme office are also carrying out tests to see if changes in helicopter and engine operating procedures can nullify the risk of landing zone damage, and hope to have solutions to the issue in place by this coming November. Meanwhile the programme office says there is no need for major reengineering and it has downgraded the risk to allow IOT & E to begin. However during that phase there will also be a need to evaluate some other previously identified technical risks which have undergone modifications. These include helicopter start procedures, electromagnetic environment effects and electromagnetic pulse issues, cyber security, and limitations with the mission communication system. Upgraded software to deal with the latter will be evaluated during the IOT & E though this September.

23 VH-92As are planned to enter service, with the bulk of production in 2022-2023.

RAF Chinooks extend Mali Support
Three Royal Air Force Boeing Chinook helicopters and 100 personnel are to continue supporting the French-led counter-terrorism operation in Mali, following discussions at a remote conference held on 12 June between 15 defence ministers of the Coalition for the Sahel. The conference, led by France, was designed to coordinate international activity in the Sahel and promote long-term stability in the region.

Defeating militant threats, including groups linked to Al Qaeda and Daesh, is a key objective of the coalition and the Chinooks have proved invaluable to move personnel and supplies to the front line of activity, eliminating dangerous road moves and helping to deliver vital support equipment to strategic locations. Personnel from both No.18B Squadron and No.27 Sqdn are currently being modified to a production representative standard. The EDM prototypes have previously been used to carry out an operational assessment in March 2019, and this and subsequent landing tests at the White House exposed the damage risk to the lawn and nearby trees, not only from the APU but, in addition, from the main engines exhaust deflected in the main rotor downwash.

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Defeating militant threats, including groups linked to Al Qaeda and Daesh, is a key objective of the coalition and the Chinooks have proved invaluable to move personnel and supplies to the front line of activity, eliminating dangerous road moves and helping to deliver vital support equipment to strategic locations. Personnel from both No.18B Squadron and No.27 Sqdn have been deploying to Mali on a rota basis, supported by others drawn from across the Royal Air Force and the Army, with the helicopters normally being maintained in the field at Gao, but exchanging for newly overhauled aircraft from the UK at major maintenance intervals.

Sikorsky Aircraft is to offer its multi-role Armed Black Hawk to meet the Philippines requirement for an attack helicopter, in competition with the Bell AH-1Z, Boeing AH-64E and Korean Aerospace armed Surion. A fourth preferred choice, the Turkish Aerospace T129, has had to be ruled out due to a US export block on its LHTEC T800 engines. With Philippines budget availability estimated to be in the region of $250–300 million, and the Air Force wanting at least six aircraft, Sikorsky is offering a direct commercial sale rather than the US government Foreign Military Sales (FMS), route being followed by Bell and Boeing. Both the FMS offers are outside the quoted budget and likely unaffordable. Sikorsky says its offer will be less costly to procure and operate than dedicated attack helicopters, in part because of the Armed Black Hawk’s compatibility with the UH-60 transport variant, which is already on order. Produced outside the quoted budget and likely unaffordable. Sikorsky says its offer will be less costly to procure and operate than dedicated attack helicopters, in part because of the Armed Black Hawk’s compatibility with the UH-60 transport variant, which is already on order. Produced outside the quoted budget and likely unaffordable. Sikorsky says its offer will be less costly to procure and operate than dedicated attack helicopters, in part because of the Armed Black Hawk’s compatibility with the UH-60 transport variant, which is already on order.

For the Armed Black Hawk, which is designed to coordinate international activity in the Sahel and promote long-term stability in the region.
Talon Helicopters in Richmond, British Columbia has become the first Canadian operator to be cleared by Transport Canada for night-vision goggle fire fighting operations, using its approved Airbus AS365N2 Dauphin medium helicopter, C-GTLW.

The aircraft, equipped with a Simplex Fire Attack Model 301 belly tank holding up to 901 (238gall) of water, has a fully configured compatible night vision cockpit and cabin, with several supplementary type certificate upgrades, including the Garmin GTN750 touch screen navigator, helicopter terrain awareness and traffic collision warning systems, and ADS broadcast capability. When not night fire fighting, the Dauphin can be quickly reconfigured for other missions, as the belly tank can be removed within 30 minutes and replaced with a 1,591l (350gall) FAST Bucket for day time fire fighting, or used for passenger transport, medevac, and search and rescue missions. For the latter roles Talon has a fully approved stretcher kit and crew harnesses for evacuation, with a 91m (300ft) hoist cable for day or night use.

Two US Democrat congressmen in Colorado have renewed their call for all helicopter air ambulances in the country to be fitted with crash resistant fuel systems (CRFS) and appealed to their colleagues to pass the Safe Helicopters Now Act, introduced last year with offsetting tax credits for operators who install the systems. CRFS is already mandatory in new production helicopters since 5 April but not retrospectively.

The renewed appeal came on the fifth anniversary of a fatal crash of an Air Methods Airbus AS350B3e helicopter, which caught fire in a post take-off crash in Colorado, resulting in the death of the pilot and severe injuries to the two paramedics on board. A subsequent inquiry found that the lack of a CRFS on the aircraft contributed to the severity of the injuries by allowing spilt fuel to feed the fire. Following the accident, Air Methods and Airbus shared the cost of a $100 million settlement for the victims, and the manufacturer offered a retrofit CRFS for the AS350B3e and H125 from 2016. Air Methods retrofitted its own AS350B/H125 fleet in 2018.

This year Airbus is making the retrofit option available for the AS350B3 and EC130B4 variants and Standard Aero is also offering a CRFS solution for a number of AS350 variants. These include the AS350B1/B2/BA/B3/B3e, AS350C, AS350D/D1, H125 and the EC130B4.

The Devon Air Ambulance now has 150 Community Landing Sites available in its area of operations, allowing the service to reach patients in the more rural communities during the hours of darkness up to 02.00 hours. The sites are equipped with remotely activated flood lighting, controlled by the HEMS dispatcher based at the South Western Air Ambulance Service headquarters, and illuminate the landing area for the medical crews, helping them to move around more easily and to treat and load patients into the aircraft.

Leonardo Helicopters has confirmed the first commercial and air medical order for an IFR-certified AW119Kx single-engined helicopter, from Life Link III, which already operates 10 VFR-equipped AW119Ks from bases in Minnesota and Wisconsin. The order, for one aircraft with an option for a second, is expected to see delivery from the AW119 final assembly line in Philadelphia in the third quarter 2021. The IFR certification includes Genesys Aerosystems glass panel avionics and redundant flight systems typically found in twin-engine aircraft and gained Federal Aviation Administration approval in July 2019. The aircraft is already a platform for the US Navy’s new primary training helicopter, the TH-73A. Leonardo recently received an initial contract for 32 TH-73As but is expected to receive follow-on orders taking the total to 130 aircraft by 2024.

The latest Erickson S-64F Air Crane conversion, destined for delivery to the Italian Forest Service and in full Vigili del Fuoco colours, was undergoing ground and flight tests at the Erickson Medford, Oregon facilities on 16 June, prior to returning to the company’s Willow Springs site in Central Point. The helicopter is temporarily registered N237AC (con. no. 64-905) and was originally certificated in October 2012 by Erickson for heavy lift operations.

Meanwhile two new Leonardo AW139s, serialled VF-142 (con number 31864) and VF-144 (con. number 31888) entered service at the Vigili del Fuoco base at Fontanarossa airport, Catania in Sicily on 25 May.

Above: This Erickson S-64F is the latest delivery to the Italian Forest Service for firefighting and heavy lift operations with the Vigili del Fuoco.

The Srpska Republic, one of the two entities of Bosnia and Herzegovina in the former state of Yugoslavia, has ordered three Kazan Ansat helicopters for its police force, to be based in the major cities of Sarajevo and Banja Luka. The aircraft are due to be delivered by Russian Helicopters from the Kazan plant over an 18 month period, with the first arriving this September, followed by the second delivery in May 2021, and the third in January 2022. The deal follows a visit to Moscow by officials from the Presidency of Bosnia and Herzegovia.

The helicopters are expected to be equipped for law enforcement, rescue, and casualty evacuation work and to be flown by the government Helicopter Service, which currently operates three Aerospatiale SA342 Gazelles, one Bell 206B and a Leonardo AW119 on government missions.

The Omск College of Civil Aviation has recently begun flight training on the Ansat, with four instructors and two aircraft. Ansat registered RA-20001, RA-20010 (in air ambulance markings) and RA-20018 were all present at the facility last month.

Initially a group of eight cadets are undergoing theoretical and ground training, followed by 50 flight hours on the Ansat to qualify them for commercial operations. There is a particular need in Russia for air medical aircrew as part of the large scale development of helicopter emergency medical services, where the Ansat is replacing ageing Mi Mi-2 helicopters dating back to the 1960s.

A judge who presided over the 2015 trial of Steven Metheny, the former vice president of Carson Helicopters, who was convicted of falsifying records that led to the death of seven fire fighters and two pilots, killed in the crash of an overweight Sikorsky S-61N in August 2008 has refused an appeal to reduce his sentence.
Metheny had been sentenced in 2015 to 12 years and 7 months in prison for attempting to defraud the government out of more than $92 million, after the US Forest Service awarded contracts to Carson Helicopters valued at more than $51 million, with $18.8 million already paid before the contracts were cancelled. Metheny had deliberately understated the empty weight of the S-61N and over stated the performance in the bidding documents.

In the recent appeal hearing, the judge dismissed Metheny’s allegations of ineffective counsel by his defence lawyer noting also that it didn’t match the court record, and that therefore the original sentence should stand. That sentence also included an order to repay the money fraudulently gained, following his eventual release from prison.

- Four Coal Seam Gas industry companies in Queensland, Australia have renewed a contract with LifeFlight to continue support for the Surat Gas Aero-Medical Service (SGAS) until at least 2025. Under the agreement LifeFlight bases medically configured Leonardo AW139 helicopters at Roma and Toowoomba to provide an immediate emergency response to the local mining community, and also to the broader south-west Queensland community.

The SGAS members, Santos, Shell, Origin and Arrow Energy, donate 150 hours to the community every year and the helicopters provide 24/7 coverage over some 270,000sq.km (104,248sq.miles) of southern Queensland. This service covers eight council boundaries and a population of nearly 210,000 people, augmenting existing medical services but also providing air medical coverage that in some areas was previously unavailable.

Last year this saw the LifeFlight SGAS come to the aid of 76 people in the region, including patients of Retrieval Services Queensland and company employees.

- Helinet Aviation, which operates from Van Nuys airport in Los Angeles County, California has set up a new Utility Services division following the award of new contracts, including from the US Forest Service. The first aircraft to be acquired for this work is a former US Army Sikorsky UH-60A Black Hawk, registered N70K (con. no. 70-698) and equipped for the fire fighting role.

The arrival of this aircraft augments the company’s existing UH-60 MovieHawk, which has worked for the past four years in the motion picture and television industry, and is the first of several Black Hawks that Helinet plans to operate in the aerial fire fighting market over the next few years. The company has partnered with the aircraft’s two private owners, Brown Helicopters Inc and Anduze Helicopter for support, including a team of pilots, a fuel truck, back-up equipment and maintenance engineers to complete the offer package.

In addition to fire fighting, Helinet’s 14 CFR Pt. 33 and 137 certifications allow the company to provide a wide range of utility services, including aerial seeding, powerline and pipe inspection flights, construction support, aerial mapping, and external load missions. Its fleet includes both single and twin-engined helicopters capable of carrying out these varied services.

- The Washington State Department of Natural Resources has rebuilt an ex-US Army Bell UH-1V helicopter (N342WN) to add to nine similar aircraft used for their initial attack fire fighting programme. The 1970s aircraft, previously serialled 70-16373, was acquired through the Federal Excess Property Programme, with the refurbishment paid for through state funding.

- ITC Aerialseating recently completed a new air ambulance lease deal with a leading air medical operator in the United States, delivering an additional brand new Airbus H130 helicopter.

The transaction followed the delivery of ten air ambulances in March and in early May, bringing the total number of emergency medical service aircraft to almost half of ITC’s fleet, including various light/intermediate single and twin engine helicopters. The company has been serving various air ambulance operators around the world for over 20 years and the new H130 lease brings to five the number of EC/H130 helicopters in the fleet, all used for medical and passenger transportation missions.

- As expected two helicopter companies have entered protests against the US Forest Service (USFS) four year fire fighting contract awards with the US Government Accountability Office (GAO). Billings Flying Service and the Croman Corporation are expected to hear the results of their objections by 8 September.

Ordinarily such protests would prevent any contract award, thus blocking fire fighting operations for the next three months, but the USFS has overcome this risk by awarding guaranteed 90 contracts for 24 Type

- heavy and 12 Type 2 medium helicopters. These contracts could be extended if necessary to ensure there continues to be sufficient national aviation resources available for large wild fire support.

- Coulson Aviation has been awarded a 150 day contract by the Indonesian National Board for Disaster Management (BNPB) for this year’s fire season. The company will relocate one of its Sikorsky S-61 helicopters from its Australian base in Bankstown, New South Wales to support Indonesian fire fighters as needed. It is Coulson Aviation’s first aerial fire fighting contract in the Asia Pacific market, although the company has previously operated large fixed-wing air tankers in Indonesia in 2015, fighting fires in Bornco and Sumatra.

- The Irish Community Rapid Response charity, which has been recently operating a five-day a week air ambulance service in the Republic with a Leonardo AW109E helicopter, due to the need to cut costs after COVID-19 missions put financial pressure on the service, returned to a seven day service from 1 June. Previously, in March the charity had threatened to ground the air ambulance due to a shortage of funding amid the pandemic restrictions. The change now follows an increase in donations, including a Go Fund Me page set up by the family of a patient who received immediate lifesaving care, thanks to the helicopter team, and an innovative fund raising competition between 23 Gaelic Athletic Association clubs in the north Cork area to determine the fittest club.

Together the two initiatives had donated over Euro 45,000 by late May to the ICRR coffers, adding to the many individual donations received by the charity. Annual running costs for the air ambulance service are in the order of Euro 2 million, with each mission costing an average Euro 3,500.

- After more than 30 years of uninterrupted service the state-funded contract between the Scottish Ambulance Service and Bond (now Babcock) Helicopters came to an end on 31 May. Launched in Dundee for a six month trial in 1989, the service rapidly became indispensable and was joined by a second aircraft in 1999 on a full contract.

The new contract is with Gama Aviation, operating two new Airbus H145 helicopters and previously partnered with Babcock to provide fixed-wing backup for the Ambulance Service. Industry sources claim that none of the Babcock pilots have transferred to Gama Aviation, but the company still has air medical business in Scotland, operating two H135s for Scotland’s Charity Air Ambulance from bases at Perth Airport and most recently from Aberdeen.

- Timberline Helicopters has positioned a Sikorsky UH-60A Black Hawk, N563D1, from Bankstown in New South Wales, Australia to Kupang in Timor on contract work. The aircraft arrived in Timor on 2 June after transiting via Wollongong-Mount Isa and Darwin.

- The French government has ordered a new nuclear-powered aircraft carrier to replace the 42,500 tonne FS Charles de Gaulle when she retires in 2040. The new vessel is due to be launched in 2036 and is being developed by Thales Naval France and the Direction des Constructions Navals.

It is expected that the carrier will serve until at least 2080 and be capable of launching the next generation fighters now under development, as well as providing a global reach and a symbol of French pride.
Leonardo promotes AW149 for Royal Air Force

Leonardo Helicopters is continuing to promote the 9 tonne class AW149 helicopter as a post 2024 Aerospatiale Puma Mk.2 replacement, despite the UK Ministry of Defence signing a cooperation agreement on 14 July with the United States Army on the Future Vertical Lift (FVL) Programme. Part of a broader modernisation co-operation agreement, the FVL interest is focused on “closer affiliation in the development of helicopter capability,” which also includes, a greater degree of commonality on the two countries Boeing AH-64E Apache attack helicopter fleets.

FVL is unlikely to enter service with the US Army until early in the next decade, and Leonardo believes the Royal Air Force Puma fleet which, despite upgrading in 2012-2014 features airframes that were originally built in the early 1970s, cannot economically remain in service for another 10-15 years. Currently the Puma Mk.2 is scheduled to retire in 2025 and the UK Ministry of Defence is already looking at replacement options. As the UK’s only helicopter manufacturer and with the AW149 already recognised as a proven and effective multi-mission medium-role helicopter, Leonardo believes its Yeovil plant is well placed to produce both the aircraft and a major contribution to the government’s coronavirus economic recovery plan.

Sales of the AW149 to date include at least 20 to the Egyptian Navy for a maritime assault role and five to the Royal Thai Army, which also operates the well established AW139 variant.

House pushes for production of CH-47F Block II

The US House of Representatives passed its version of the fiscal 2021 defence budget on 31 July, including an amendment calling for the US Army to include $227 million to kick start production of new Boeing CH-47F Block II helicopters. £198 million would be allocated to manufacture the first five aircraft in FY2021, with another $29 million in advanced procurement to enable a second batch of five aircraft to be purchased in FY2022.

The Army has argued that it can meet its heavy-lift helicopter requirements with the current CH-47F fleet until a new replacement becomes available in a 2040 timeframe, but Boeing has been lobbying for the CH-47F Block II upgrade, to avoid the risk of closure of the Chinook production line at its Ridley Park, Philadelphia facility. Thus for only three engineering and manufacturing development Block II aircraft have been built. These are currently under flight test at the company’s Mesa, Arizona plant, but thus far Army officials have fought shy of upgrading all 465 CH-47Fs in its fleet.

It is however funding Block II versions of the NH-47G Special Operations variant of the Chinook, with 24 now on contract with the Army Special Operations Aviation Command, including the latest $265 million order for nine aircraft recently confirmed. The Command plans to remanufacture or produce new a total of 73 MH-47Gs for the special operations role, all with the modifications to strengthen the structure, and drive train, together with new advanced composite rotor blades.

Boeing is also working hard for new overseas orders beyond the current production for Saudi Arabia and Singapore.

US Army continues upgraded and new powerplant tests for CH-47

The US Army Aviation & Military Command Centre (AVMCC) Combat Capabilities Develop-ment Command at Fort Eustis, Virginia is continuing to move forward with the testing of the GE Aviation T408-FE-400 turboshaft engine in the NCH-47D test bed Chinook helicopter, despite the impact of the COVID-19 Coronavirus which has imposed travel restrictions and social distancing measures on some of its industry test partners. The T408 powerplant, already selected for the Sikorsky CH-53K King Stallion, offers 7,500shp compared with only 4,867shp for the Honeywell T55-GA-714A engine installed in the current CH-47F production Chinook.

Ground testing of the T408 in the NCH-47D had progressed to dual-engine flight-idle and opening up the full rotor speed envelope by the end of March, while also verifying engine control fault modes and alternate shut down procedures. This cleared the test bed for final ground running trials, including opening up incrementally the torque envelope prior to entering the flight demonstration stage.

A 25 hour flight test programme at Fort Eustis Felker Army airfield is due to begin this summer to evaluate the feasibility of re-engining the Chinook, including any integration risks and value for money, to determine whether the benefits of installing the new technology engine will be worth the cost. The testing will also include checking the structural response, engine governing, thermal compatibility and the handling qualities - albeit remaining within the existing Chinook operating envelope.

Almost in parallel, the US Army is to test at Fort Eustis the upgraded Honeywell T55-GA-714C in a CH-47F airframe. Offering 6,000 shp, this power plant can replace the existing T55 engine with no need for the major structural or gearbox changes required for the T408 installation, but still offers a 25 percent increase in power and 10 percent less fuel consumption. Honeywell is also suggesting it could save the Army money by offering the new variant as a retrofit option for existing T55 engines as well as providing new build engines.
Honeywell has announced a new independent company, Airbus US Defence & Security, structured to do business with the US government and operating under a Special Security Agreement that will allow it to offer commercial products and services directly to military customers. The new organisation plans to use the successful contract building Uh-72A Lakota helicopters for the US Army as the template for the modulus operandi of the new company, although it will be more focused on satellite design and manufacturing, space exploration and similar related technologies.

In Columbus, Mississippi, Airbus Helicopters assembles Lakota military helicopters and commercial H125s in the same building, right across the aisle from each other, and employees can cross and work on commercial one day and military the next. The company says that really lowers costs and allows price competitive bids for the military, so Airbus want to continue to rely on a commercial industrial base but move military modifications, support and the contracting to Airbus US. This will include seeing the current military helicopter sector business activity, headed up by vice-president of military programmes Scott Tumpack and his team, move under the Airbus US umbrella sometime this summer.

The chief executive officer for the new company is Chris Emerson, formerly president of Airbus Helicopters, who now has an almost entirely new leadership team and board of directors, who are independent of Airbus.

Nationwide anti-police protests in the United States, following the death of a man in Minneapolis during an attempted arrest, and subsequent use of police aviation units to monitor riots and the later funeral procession, resulted in calls to defund or at least reduce budgets for law enforcement helicopter operations.

There are some 350 police aviation units across the United States and, although the defunding calls are currently concentrated on only a few units, including Minnesota State Police, Los Angeles Police and Houston Police departments, other forces are concerned on a possible wider impact as budgets come under review. Supporters are now locally attempting to counter the threat by reminding residents of the humanitarian aspects of police helicopter operations, notably search and rescue and similar missions that complement the law enforcement patrols.

However, the use of National Guard helicopters to help disperse rioting crowds in Washington DC demonstrations still brought the police aviation units under the public gaze, even though that was a military operation, and repairing the damage caused may be a drawn-out public operation.

Above: A detailed patent submission granted to Bell on 21 April reveals potential new design applications to improve performance on future helicopters, by using a “split-tip” or forked-tongue main rotor layout, which the company claims has increased lift by about 13.5 percent in wind tunnel tests, whilst at the same time reducing drag by about 17 percent. The lift/drag ratio is thus increased by almost 37 percent according to Bell, resulting in fuel savings of up to 17 percent. The drawing accompanying the patent design depicts a basic Bell 505 helicopter layout with a two-blade main rotor.

Bell was also granted a patent, on 28 April for a new anti-torque control system, with a cross-flow fan inside the tail boom replacing the exposed tail rotor, fed by an air intake located further forward on the boom. First revealed on the Bell FCX-001 concept mockup, shown at Heli-Expo in Dallas in March 2017, the fan system is described under the patent as a centrifugal blower system, generating thrust by expelling the air through variable aperture ducts, controlled via the pilot’s foot pedals. Adjustable Coanda slots would direct airflow down the side of the tail boom to produce lift and to direct thrust through the appropriate side of the tail boom to provide the anti-torque and directional control.

Bell says the design is more efficient than the more complex and less aerodynamic MD Helicopters NOTAR system or ducted fan designs.
Regional News

- OFFSHORE WORLDWIDE

Northern Helicopter GmbH in Emden, Germany is to take over the offshore rescue service for the 245 wind turbines that form the Veja Mate, Nordergrund, Buteendieck and Bard Offshore wind farms in the German Bight region of Germany’s exclusive economic zone. The new contract package will be effective from 1 August.

Some of the wind farms are located more than 100km (62 miles) from the mainland and the contracts, signed with Veja Mate Offshore Project GmbH, OWP Nordergrund GmbH, OWP Buteendieck GmbH, and Ocean Breeze Energy GmbH cover the next three years, with options for a further two years. The Northern Helicopter rescue helicopters will be on standby 24/7, 365 days a year.

Now part of the DRF Foundation Air Rescue organisation since 2019, the company has specialised in acute and emergency medical care and the transport of injured and sick personnel from wind farms in the North and Baltic Seas for more than 10 years. Together with partners, offers a holistic rescue concept, WINDEACare for offshore air rescue.

CHC Helicopter and offshore wind energy company Ørsted have agreed a contract for aerial transportation during the construction and operations phases of the Hornsea Two offshore wind farm, situated 89km (55 miles) from the Yorkshire coast. Once completed in 2022, Hornsea Two is expected to include 165 Siemens Gamesa wind turbines spread across a 462 sq.km (178 sq mile) area in the North Sea, offering 1.4 GW of clean electricity – enough to power over 1.3 million homes.

A combination of Leonardo AW139 and AW169 helicopters, flying from Humberside heliport in Lincolnshire, will be utilised for crew transfers and cargo flights to both the offshore accommodation jack-up barge and the installation vessels throughout the 18 month construction phase, with a dedicated AW139 providing daily flights for transferring crew expected to come on line in the coming months. CHC and Ørsted will also expand their current contract for transport and technician hoisting at Hornsea One during the site’s operational phase, including the neighbouring Hornsea Two once it is in operation.

CHC already benefits from an established helicopter terminal and personnel handling facility at Humberside airport, adjacent to the Hornsea offshore construction site, and currently works with Unifly to delivery flight operations for Hornsea 1, covering the first five years of operations and maintenance of this wind farm, which is located 120km (74 miles) offshore. Together both wind farms will generate 2.5GW of power.

The 13 Airbus H175 helicopters operated by the NHV Group have now logged more than 40,000 flight hours since the first two entered service in December 2014. The figure represents more than 60 percent of the worldwide H175 flying hours, which currently totals some 66,000 hours.

As the launch customer for the type in the offshore market, NHV works closely with Airbus Helicopters to further improve H175 maturity, with technical enhancements and maintenance improvements designed to reduce operating costs and further increase aircraft availability in a safe and efficient manner. The company says the helicopter is already proving its performance and cost efficiency, with the capability of carrying a full payload to 90 percent of the offshore installations in the North Sea.

Leonardo Helicopters was test flying an new AW139 helicopter (con. number 31902) for Abu Dhabi Aviation in late June at the Vergiate factory. The aircraft was carrying the temporary registration I-RAIS.

Also under test were AW169s I-EASK (con. number 69117) and I-EASI (con. number 69118), both also for Abu Dhabi Aviation and ordered in November last year together with three AW139 helicopters. All these aircraft are expected to be operated on offshore energy contracts. In addition, in the same period two AW169s, con. number 69097 and 69099, were flying at Vergiate in full Qatar Air Force Air Academy colours and temporary Leonardo test registrations.

The NHV Group began a new long term contract on 1 July with Shell UK and the Dutch oil and gas company NAM, providing helicopter services on a daily basis from the NHV, bases in Den Helder and Norwich to the Shell and NAM assets in the Southern North Sea. NHV is providing two Leonardo AW139 helicopters for the three year contract, one at each of the two bases. The company has a long standing relationship with Shell, having previously supported projects in Europe and Africa, where it now has a strong geographic presence.

As of 1 July NHV has a fleet of over 60 helicopters and over 550 employees, with operations in every oil producing country in Europe and through specialist subsidiaries Vertech Offshore and Airlift, who operate in the niche markets of flare tip replacement and power grid construction and maintenance.

The majority shareholder in NHV is Ardian, an investment house with assets of $96 billion managed or advised in Europe, the Americas and Asia.

The new chief executive of the Bristow Group, former head of Era Helicopters Chris Bradshaw, has echoed comments made by Babcock chief executive recently by saying that he believes the oil and gas market is likely to see further consolidation and is no longer big enough to sustain the current number of offshore operators. Bradshaw says that whilst the amalgamation of Bristow and Era will produce savings, the fleet will still face changes over the coming years with the likely retirement of ageing the Bell 212 and 412 models, and older Sikorsky S-76s.

However the company is holding onto orders for new Leonardo AW169 and super medium AW189 helicopters, with deliveries depending on customer demand. Bradshaw sees the AW169 in particular being a strong candidate for future offshore windfarm support contracts, as that market matures in the United States. Bristow is also retaining its position as the launch customer for the Leonardo AW606 tilt rotor, although with more focus on its use in the emergency medical services and corporate transport markets than oil and gas support.

Offshore energy company Equinor has confirmed extensions to its current contracts with CHC Helicopter, for services to the Tampen/Oseberg and Heidrun fields for a further 12 months, commencing this September until August 2021. CHC operates three Sikorsky S-92 search and rescue helicopters and three Airbus AS332L/L1s on the contracts, based at the Johan Sverdrup, Oseberg, Statfjord B and Heidrun rigs, to cover the area of the Northern North Sea into the Norwegian Sea. CHC says the contracts offer the opportunity for further extensions.

Two Airbus EC145 helicopters utilised by Babcock Congo for offshore work have recently been shipped home at the end of a four year contract.

The NHV Group has signed a five year contract extension with Ithaca Energy (UK), to provide aviation services to the company’s FPF-1 floating platform installation, and the Alba, Captain and Erskine fields in the Scottish sector of the North Sea. The extension covers seven days a week coverage and will start in January 2021.

NHV will provide one Airbus H175 helicopter for the primary operation, with a second aircraft providing a back up service. Both helicopters will operate from the NHV facilities at Dyce Airport, Aberdeen to the various platforms, which range in distance from between 145km (90 miles) to 241km (150 miles) offshore.

Bristow Group and Era Group Inc. finally completed their merger and began trading on the New York Stock Exchange on 12 June. This followed Era’s joint annual and special meeting held on 11 June, which approved a reverse stock split and a name change to Bristow Group Ltd. Both shareholders also approved the merger agreement by written consent on the same day.

Legacy Bristow shareholders now own 77 percent of the equity of the new company and legacy Era shareholders own 23 percent, with the combined company now becoming the world’s largest operator of Sikorsky S-92 and Leonardo AW139 and AW189 helicopters in a fleet of over 300 helicopters, 80 percent of which are owned outright. The merger is expected to see annual savings of at least $35 million and maintains a strong balance sheet, supported by a combined cash balance of over $250 million.
The Helicopter Museum at Weston-super-Mare in Somerset reopened to the public on 4 July after completing necessary safety measures to comply with COVID-19 guidance, laid out by the UK government. This includes a one-way system around the exhibits to ensure social distancing and a limit on maximum numbers to avoid over crowding.

Staff and volunteers at the museum had been working to prepare the museum facilities for re-opening, including the relocation of the museum shop and offices into a new extension, and are continuing work on new cafeteria facilities too, in order to try and make up for lost income. The museum is estimated to have lost at least $200,000 in admission and event income over the past three months of enforced closure, with further losses expected due to the downturn in summer visitor numbers during the peak July-August period.

Industry sources report that privately-owned Historic Helicopters, based near Chard in Somerset, is planning to add an all-female flight crew for one of its former Royal Air Force Westland Sea King helicopters when the air show season reopens in 2021, beginning with an ex-22 Squadron female Captain who flew the Sea King previously and joined by the partner of owner Andrew Whitehouse.

Whitehouse partner, Jane Gregory, is already a qualified helicopter pilot herself, flying the Leonardo AW109, and is now undergoing type rating training on the Sea King to become the co-pilot. A female pilot herself, flying the Leonardo AW109, and is now undergoing type rating training on the Sea King to become the co-pilot. A female crewman will complete the team, but Whitehouse reportedly plans to go still further, setting up a scholarship programme to bring further girls through a pilot training programme from PPL to CPL. They too could become type rated on the Sea King in due course.

Currently Historic Helicopters has three Sea Kings, including an ex-Royal Navy Mk.4 Commando variant which is also airworthy. Technically this aircraft, G-CMDO and Mk 3 G-SKNK, are registered to Lift West Helicopters Ltd, a company owned by Whitehouse. He has

Omni Helicopters International (OHI) has appointed Duncan Moore as its new Chief Operating Officer, joining Chief Executive Officer Jeremy Akel and his executive team at the company Moore has nearly 30 years of experience in the aviation industry, much of it in large scale helicopter operations with the Bristow Group, whom he joined in 1996. There he led the company’s first transformation programme and later oversaw the Bristow East Africa, interests as a Director responsible for emergency markets and latterly the Regional Director for Africa.

OHI owns and backs helicopter operators in the offshore sector across Brazil, Mozambique and Nigeria with its main subsidiary being Omni Brazil, the country’s largest offshore helicopter service provider. Other developments are currently targeted across Latin America and Africa. Gretchen Haskins, who has been the Chief Executive Officer of the offshore helicopter safety organisation, Heli Offshore, since it was formed in September 2014 has stepped back from the role, although she will continue to be a board member of the group. Haskins has been succeeded as CEO by Tim Rolfe, a former Bristow Helicopters pilot and latterly director of safety for the Bristow Group European Division, and a core founder member of Heli Offshore.

Ms Haskins was the former group director of the UK Civil Aviation Authority’s Safety Regulation Group and an internationally recognised expert in human factors of safety. She has played a major role in driving Heli Offshore forward as an internationally recognised collaborative group, intent on enhancing offshore helicopter safety.

**Book Corner**

Wrecks & Relics - 27th Edition by Ken Ellis. Published by Crecy Publishing. Price: £18.95 (UK). $29.95 (USA). For anyone interested in or just curious about the United Kingdom’s aviation heritage, this book is the bible, with in-depth coverage of more than 700 locations, where you can find over 5,000 aircraft preserved or slowly fading away. Since the very first edition, assembled by Ken Ellis in the 1960’s, a network of enthusiasts has helped the author to build on and expand the content with detail.

Here you will find not just aircraft in museums but those finding a new life as gate guardians, paint ball targets, instructional training - even “glamping” at various holiday parks. Did you know you can accommodate four people sleeping in a Lynx helicopter? Profusely illustrated with both colour and black/white photographs, this A5 hardback sits comfortably in the glove box of your car, to be pulled out wherever you travel for a local check on nearby airframes.

Books reviewed in HELICOPTER International are available by mail order from The Helicopter Museum. Please fax +44-1934-645230 for cost and postage details or e-mail: helimuseum@btconnect.com
whilst en route from Blythe, California to Mesa, Arizona following loss of tail rotor and rolled onto port side. Main rotor blades separated on impact with hard standing.

4 Robinson R44II B-7651 of Henan Yongxiang Hangkong substantially damaged during take off from uneven slope in field, in Wu-kung, Sikkim due to bad weather conditions, with main rotor blades impacting the ground about 4-5 seconds later. A post impact investigation showed 21 3g’s of fuel remained in the main tank and no obvious sign of a catastrophic failure.

26 Bell UH-1V N3276K of Money Seven Inc. substantially damaged in hard landing while fire fighting at Puerto Nuncio, Nuevo León, Mexico. Helicopter landed in dry riverbed with landing gear collapsed and tail boom.

26 Bell 407-G2 F-GB00 of Giraghi 17 written off at Aigues Mortes, Domaine de Listel, France when it crashed during an agricultural spray sortie and then caught fire.

29 Sikorsky CH-148 148822 of 12 Wing Royal Canadian Air Force written off when it crashed and dived into the Ionian Sea, about 80km (50 miles) from the island of Cephalonia whilst returning to its parent ship, HMCS Fredericton. The helicopter broke up on impact and sank to a depth of some 3,000m (9,842ft). Subsequently the cockpit and flight data recorders were recovered together with some parts of the undersea fuselage. A preliminary investigation concluded that the accident had occurred during a low speed turn to align with and land on the ship's deck. The pilot lost control of the helicopter with the flight director software, which was set to hold a specific altitude and airspeed. The pilot was unable to respond to the situation in time to prevent the crash, in part because crews had no previous experience on how to handle the very narrow and specific set of circumstances. 6 fatal.

29 Airbus EC725R2 of 1-67 Squadron, French Air Force damaged in flight near Douentza, Mali whilst engaged on an early dawn low level patrolling mission, with main rotor blades impacting the ground about 4-5 seconds later. A post impact investigation showed 21 3g’s of fuel remained in the main tank and no obvious sign of a catastrophic failure.

29 Sikorsky S-61N N908CH of Helligroup Fire substantially damaged whilst landing at Camp Dwyer, Helmand Province, Afghanistan when it lost tail rotor authority and rolled onto its side, wreacking main rotor system and damaging tail cone.

20 Bell 206L-3 VH-NBR of GBR Helicopters substantially damaged during forced landing in field in Biedouw-Denvent, Hautes-Pyrenees, France when it rolled over from low hover. 4 fatal.

16 Robinson R22B OE-XPR of P & B Helitrade substantially damaged in autorotation landing in field in Bertoua, Cameroon when it rolled over after low hover. 3 fatal.

15 Airbus AS355FL of 5th Combat Helicopter Regiment ALAT written off in crash during training exercise at Bouhi-Dervant, Hautes-Pyrenees, France when it rolled over from low hover. 2 fatal.

14 Bell OH-58C N183MP of Air One Mobility substantially damaged in precautionary landing in orchard at Livingston, Columbia, New York whilst engaged on an early dawn low level patrolling mission. 3 fatal.

14 Bell OH-58A N153SA of T.Hodges substantially damaged near West Bank, Michigan during precautionary autorotation into a field following in-flight airframe vibration. Pilot made hard landing without autorotation, with low rotor RPM and aircraft skidded about 7m (23ft) before coming to rest. Main rotor impaired tail boom and severed tail rotor drive shaft.

13 Hughes 269C D-HHDG of DHJ helicopter substantially damaged near Welling, Germany when it rolled over during practice autorotation in a field. Main rotor blades were wrecked and tail boom detached during impact, with aircraft coming to rest on port side.

13 Enstrom 280FX T-146W substantially damaged at Ararareyo, Costa Rica in a hard landing following loss of power and tail rotor control as it came to the hover. Skids collapsed on impact with terrain.

13 Robinson R44 D-HALU suffered minor damage after smoke detected in cabin due to burning cable. Aircraft landed near Waltrop, North Rhine-Westphalia with no other damage.

13 Robinson R44II D-HTAB of Heli Transair substantially damaged in forced landing in field at Lampertshutten-Heffenfeld during training flight. Helicopter overturned on starboard side, wreacking main rotor blades and partially tailboom.

13 Bell-Sport CH-7 I-6616 written off when it crashed in a wooded area at Borgiallo, Italy when it rolled over from low hover. 2 fatal.

13 Bell 206L-3 VH-980 of Air Force written off at Anadui airport, , in the extreme north eastern district of Chukotka, Siberia after
it began to spin out of control during take off and crashed, catching fire on impact. 4 fatal.

26 Guimbal G2 HB-ZTT of Helitrans substantially damaged in crash landing on street in Adelboden, Switzerland during local flight from Thon airport.

30 Bell 206L-2 22B 166740 of VMM-163 Sqd, US Marine Corps substantially damaged whilst parked at Brown Feld airport, San Diego when it was struck by taxing DHC-6 Twin Otter, damaging port prop rotor, followed by damage to landing gear and starboard prop rotor blade, as it pushed sideways and scraped against the hard standing.

30 Schweizer 269C N9421P of Eagle Aviation Academy when written off in collision with trees and impact with terrain in Ozark, Alabama. 1 fatal.

3 Bell 206B-3 N401HP of Dakota Territory Tours substantially damaged at Elko, Nevada when it landed hard and rolled onto its port side, wrecking main rotor blades and damaging tail boom and fuselage.

1 Airbus AS350B3 D-HAUO of Helibravo substantially damaged when it crashed in wooded terrain and rolled onto starboard side, during water scooping training flight at Góis, Portugal.

June

1 Robinson R22 206L-1 N5013G of PJ Helicopters substantially damaged in rollover accident whilst landing at Give, Denmark. Main rotor severed tail boom in incident.

1 M 175-7 5A-5141 of Indonesian Army suffered damage in crash under unknown circumstances in Krasnodar region, Russia.

2 Boeing CH-47F D-893 of Royal Netherlands Air Force damaged at Reading airport, Pennsylvania during intermediate stop when storm caused tie down line to snap in high winds, causing damage to forward main rotor blades.

4 Enstrom 480 N130JS of Oho Cattle sustained damage in crash and post impact fire after aircraft came to rest with tail boom detached and main fuselage on fire.

6 Airbus EC145 F-ZBOF of Sécurité Civile suffered damage in blade strike during mountain rescue mission on Col de la Tandilándose, French Pyrenees. Helicopter carried out safe emergency landing nearby.

6 Mil Mi-171-V 5A-SDD of Air and Sea Forces experienced loss of main rotor effectiveness during autorotational landing following a loss of engine power. Main rotor struck tail boom on impact with terrain.

1 Robinson R22B 22B 797SH of Nakashion Air substantially damaged in hard landing on temporary helipad at Fukusaki town, Hyogo prefecture.

July

2 Guimbal G2 SP-NCA of Lotnicza Akademia Wioskowa substantially damaged at Nowe Miasto airport when it landed hard and fractured tail boom and main rotor blades.

2 Robinson R44I1 N7511D of Trans 5 Investments substantially damaged in emergency landing at Welsh, Louisiana following a partial loss of power in flight.

2 Airbus EC155B1 XA-UTT of Transportes Aéros Pegaso damaged on r g Zaap Charly offshore Ciudad del Carmen, Mexico when it was blown onto its port side while parked. Several main rotor blades and port tail stabiliser wrecked against parts of the rig structure.

3 Robinson R44 written off shortly after take off from Campos Gerais, Parana, Brazil when it crashed into grass clearing in wooded land and came to rest on starboard side. Helicopter was on illegal flight, carrying approx 97kg (214lb) of cocaine and was totally destroyed in a fire following the crash.

3 Enstrom 280FX N282SH of Bubs Leasing substantially damaged near Des Moines airport, Iowa when it crashed whilst on short finals onto uneven ground immediately outside the perimeter fence. The aircraft came to rest on starboard side with significant damage to main rotor system and tail section.

4 Robinson R44 VH-NBY of Avanova Ltd written off in crash into street in suburb of Broome, Western Australia after tail rotor gearbox and tail assembly separated in flight soon after take off from Horizontal Falls Safari Adventure at Wunnumurra, on a sightseeing flight with four persons onboard. Helicopter then fell to ground out of control. Previously the pilot and another pilot, who flew the aircraft on 2 July, had reported unusual vibrations through the tail rotor pedals and maintenance personnel had carried out a dynamic tail rotor balance on 3 July 2 fatal.

4 Airbus EC145 N263MH of Metro Health System damaged in Wooster, Ohio when main rotor blade collapsed silt construction fence during take off on ambulance flight.

6 Mil Mi-2 RA-14397 of Don Aero-Service written off during agricultural spray work over rice fields at Kirsalova, Rostov region of Russia when it crashed into water, detaching tail boom and wrecking main rotor system before coming to rest in semi-submerged nose down. 1 fatal.

6 Airbus AS350B2 EC-MVY of Helitrans Pyrnees destroyed in crash during powerline inspection flight at Las Vranas i Fornells, Spain.

6 Robinson R22B PR-OEA of Omni Escola de Aviação Civil written off during training flight when it crashed and sank in Guanabara Bay, Rio de Janeiro, Brazil.

7 Mil Mi-171- V 664 of Peruvian Air Force (PAP) written off when it crashed into a river near Chucuito in the Amazon, Brazil when it crashed into water on illegal flight carrying approx 400 kg (882 lb) of illegal coca paste and a bag containing approx 150kg of marijuana. 2 fatal.
Accident Spot

7 Bell UH-1H N263PB of Airwest Helicopters written off in crash in Tonto National Forest, Arizona while carrying out long line delivery of supplies to fire fighting crews tackling the Polles fire. 2 fatal.
8 Robinson R22 N7186K of PMorris substantially damaged during alligator nesting survey near Venice, Louisiana when engine partially failed at 9m (30ft) altitude. Pilot landed in swampy area with one skid low and main rotor blades impacted terrain.
8 Sikorsky S-70A of Turkish Gendarmerie substantially damaged in crash landing into trees and rocks at Lice Dyarbakir following technical problem. Main rotor blades reduced to stubs only and tail section partially detached but helicopter came to rest still upright.
8 Robinson R44 Clipper OE-XEX of P. Morris 8 Robinson R44II PR-GME substantially damaged in emergency landing in rural area near São João do Cuia, Paraná, Brazil when it rolled onto starboard side. Helicopter was on illegal flight with equivalent of $100,000 inside a suitcase on board.
10 Robinson R44 N878CB of Helicopter Air Alaska involved in accident in Ketchikan, Alaska.
10 Robinson R22 I-9679 written off when it clipped powerlines and fell into the River Tiber in Nazzane, near Rome during a private local flight from a property in Torrita Tiberina. Helicopter sank to depth of 9m (30ft) and later recovered by fire fighters. 2 fatal.
11 Airbus AS355F1 N708AC of IBD Enterprises destroyed in post impact fire after pilot lost control whilst en route from Garfield airport, Rifle, Colorado to carry out low level powerline observation flight. Helicopter entered spin and then descended nose down before impacting terrain approx 2km (1 mile) from airport.
11 Sikorsky CU-60A N60CU of UC Helitanker suffered minor damage during fire fighting sortie on private land near Lomita in Nazzane, near Rome whilst attempting to land in brown-out visibility conditions next to the Unidade Basica de Saúde.
13 McDonnell Douglas 369E 539 of Kenyan Defence Force written off in crash at Kajaki, Helmand province. Helicopter was on an annual maintenance check flight and crashed into terrain approx 18km south of Kajaki.
13 Sikorsky CU-60A N60CU of UC Helitanker suffered minor damage during fire fighting sortie on private land near Lomita in Nazzane, near Rome whilst attempting to land in brown-out visibility conditions next to the Unidade Basica de Saúde.
15 Bell UH-1F VH-412Q of the Royal Australian Air Force written off in crash in brown-out conditions near Coober Pedy, South Australia while attempting to land in street in brown-out visibility conditions near the Unidade Basica de Saúde.
16 Bell OH-58D N4616 of 1601st ADK written off after impact fire during attempt at night take off from a property in Torrita Tiberina.
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The US National Transportation Safety Board (NTSB) is now asking helicopter manufacturers to voluntarily install recording systems with image recording capability in all new turbine engine helicopters as part of crash-resistant measures. The request follows a refusal by the Federal Aviation Administration to mandate these recommendations following a number of NTSB accident investigations, beyond encouraging operators to voluntarily install such equipment.

The NTSB says 86 percent of the 185 turbine helicopter accidents investigated between 2005 and 2017 had no recording equipment installed, not only making the FAA actions ineffective but also sometimes impeding the ability for accident investigators to identify and address potential safety issues. However investigators also reported on five accidents between 2011 and 2017 where onboard recorded data was critical to understanding the circumstance of crashes, one of which led the FAA to issue an emergency airworthiness directive affecting an entire helicopter fleet.

The Garmin GI 275 electronic flight instrument system has completed a series of tests and the company says it is now ready for installation in select Pt. 27 FAA registered helicopters via field approval. The tests included stringent helicopter vibration and temperature checks, to prove the unit can withstand the harsh environments encountered by helicopters.

The GI 275 has previously only been available for fixed-wing aircraft installations but is seen as a scalable cost effective approach to a helicopter upgrade, being intentionally designed to take advantage of the common 8cm (3.25 inch) flight instrument size, reducing installation time and preserving the existing instrument panel. A bright high resolution touch screen display and wide viewing angle also offers good readability in the cockpit. Initial variants approved for installation include the course deviation indicator (CDI), radar altimeter display, and the multi-function display (MFD) versions. Follow-on approval of the GI 275 as a replacement for the attitude indicator and horizontal situation indicator via a supplemental type certificate is expected in the last quarter of this year.

XP Services and Genesys Aerosystems have begun testing the final version of the new avionics suite cockpit architecture for civilised UH-60 and EH-60A Black Hawk helicopters, with a Federal Aviation Administration Supplemental Type Certificate expected this summer. The suite in the Black Hawk comprises of four MIL-STD qualified IDU-680s, dual GPS receivers, dual digital COMM/NAV radios and a 3-axis IFR HelisAS stability augmented system and autopilot. The night vision goggle compatible suite also includes a redundant flight management system, radio/audio management and a Helicopter Terrain Awareness and Warning System within the IDU-680 features. Genesys says the avionics suite will offer a lower cost alternative to the costly and increasingly unsustainable legacy avionics installed in the ex US Army UH-60A helicopters entering the civil market, which will be critical for fleet longevity. In addition, the newer, more rugged avionics will increase safety and mission capabilities, and allow operators to expect higher operational readiness rates.

XP Services, who have provided the trials aircraft, will act as the primary installer of the system in North America, with partnership and licence agreements for installations elsewhere in the world.

The US Federal Aviation Administration has certified a new electronic ignition system (EIS), developed by Lycoming for the engine installation on the Robinson R22 and R44 helicopters. All aircraft purchased after 15 January will include the new EIS.

The installation replaces the left starting magneto, with the remaining right magneto providing redundant ignition and eliminating the need for a back up power supply. The EIS has a very high spark-energy for easy engine starts and has no internal moving parts, offering increased reliability and no previously required 500 hour inspection. In fact it is designed to last the life of the engine, with no scheduled maintenance at all between overhauls.

Japanese-based Toray Industries, which manufactures carbon fibre, is to supply composite materials to the German eVTOL aircraft developer Lilium for its five-seat all-electric Lilium Jet. Toray has extensive experience in developing carbon fibre for aerospace applications, such as the Boeing 787 airliner.

Under the agreement, announced on 14 July, Toray will provide Lilium with materials to build further technology demonstrator versions of the Lilium Jet, as well as to various supply chain members manufacturing parts for prototypes and serial production. Toray is the latest company to partner with Lilium and will also work with the eVTOL engineering team on research and development, focused on other high performance lightweight materials. Lilium expects its eVTOL Lilium Jet to enter service in 2025.

Mecaer Aviation Group (MAG) has received European Aviation Safety Agency (EASA) certification for its Pt.145 rotorcraft repair station operation in Philadelphia. The Italian corporate aircraft maintenance specialist handles many foreign-registered helicopters at the Pennsylvania facility, either being imported into the United States for sale or while being transitioned to a different operating area.

The EASA authorisation will now allow Mecaer to expand its support in a number of areas. These already include maintenance inspections, airworthiness management and pre-and post-purchase checks, refurbishments, avionics and mission systems upgrades, interior completions and repaints, as well as preparation for shipment.
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Russian Helicopters has delivered two more Mil Mi-8MTV from the Kazan factory to Yamal Airlines for passenger and cargo operations in the Yamal-Nenets autonomous district in northern Russia. The aircraft will be based at Salekhard and join two previous Mi-8MTV-1 helicopters handed over at the end of 2019. In 2017-18 the customer purchased five helicopters of the same series, also produced at the Kazan factory.

The Horizon International Flight Academy in the United Arab Emirates had logged more than 1,000 flight hours with its fleet of Bell 505 helicopters by the end of June, in less than six months from the first delivery last January and only 10 weeks since registering its 12th aircraft.

The Horizon fleet is mainly utilised to train military pilots but also takes in students training for a commercial licence (CPL). With a speed of 232km/h (144mph) and a useful load of 680kg (1500lb), the Bell 505 features an integrated glass cockpit and enables student pilots to experience modern controls on a single engine aircraft, reducing training costs whilst also being designed to be safe and easy to fly.

Among the first to pass the CPL course was Sheikh Zayed bin Hamad bin Hamdan bin Mohammed Al Nahyan, a member of the ruling family in Dubai.

Scottish technology investment firm, Baillie Gifford has joined other companies including electrical harnesses etc as a second source supplier.

Following Supplementary Type Certification by the Federal Aviation Administration, Robinson Helicopter is now offering the Shadin Avionics fuel flow meter on new R66 helicopters equipped with Garmin GTN6xx or 750 GPS navigators. The fuel flow meter provides real-time fuel flow data to the GTN, which in turn displays the fuel consumption rate along with fuel range rings on a moving map. Fuel used, fuel remaining, fuel to destination and other real-time information is also available on accessory pages. The Shadin installation adds approx 0.9 kg (2lb) to the aircraft’s empty weight and costs $6,800.

In mid-June Robinson was continuing to make progress on the construction of the 1,000th R66, with the installation of the Rolls-Royce RR300 turboshift engine at its Torrance, California facility.

Elicompany in Carpi, Italy has recently logged its 1,000th flight hour with a Bell 505 JetRanger X helicopter 11-ECIX that entered service just 10 months ago, making the company one of the top ten high-time Model 505 operators in the world. Founded in 1979 and operating mainly in north and central Italy, Elicompany utilises its mostly Bell fleet, which also includes a Model 206, 407GX/QXP and Model 427 for aerial work, scenic flights and passenger transport operations.

Czech aircraft manufacturer Aero Vodochody, which until recently manufactured the complete air frames for the Sikorsky S-76 product line, has been sold by parent company Penta Investments to the Hungarian Arzenal company, owned by businessman, Andrasi Tomborovi (51 percent) and the Czech Republic’s Omnipol (49 percent).

The company has also manufactured the complete cockpit sections for the Black Hawk helicopters since 2011, with an extension agreed in 2017 to continue this contract through to at least 2023. This business includes a complete fitting out of the cockpits, including electrical harnesses etc as a second source supplier.

Total UK has partnered with Newquay airport in Cornwall to supply free jet fuel to the Cornwall Air Ambulance during the current COVID-19 pandemic. The company will initially supply the fuel for one month but this will be renewed and extended if required.

Total already supplies free fuel to the Great North Air Ambulance Service and the Essex & Herts Air Ambulance Trust, but the new arrangement will support the two Cornish air ambulances that cover the county and the Scilly Isles, to provide a critical emergency service run entirely on voluntary donations. The free fuel is expected to fund around 40 missions during June and will be delivered via the Newquay airport fuel farm, which fuels the two helicopters.

The former chief executive officer of Waypoint Leasing and now founder of Intrinsic Aviation, Ed Washecka, has formed a joint venture with Arena Investors to lease, trade and part out mid-to-end-of-life helicopters. Waypoint filed for bankruptcy in 2018 and the assets were later purchased by the Macquarie Group.

Washecka’s new joint venture has begun with the acquisition of three Sikorsky S-76C+ helicopters, two of which will be scrapped for spares whilst the third is to be re-released to an offshore operator. Washecka says parting out redundant helicopters and selling the constituent parts is a better alternative in the current oil and gas market downturn, than parking and sitting on idle assets that continue to depreciate while incurring costs.

After remaining closed for several weeks due to the UK COVID-19 lockdown, the London Battersea Heliport reopened for business on 26 May. A number of safety measures have been implemented to protect passengers and staff, including social distancing and regular sanitising in all areas.

Initially working with shorter opening hours, the first visitor to return to the facility was a Leonardo AW109E of Halo Aviation.
If you are professionally involved in civil or military helicopter operations-/purchasing etc. it’s easy. Just follow the dotted black lines and we’ll do the rest!

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