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In this issue: Helitech 2014 Preview

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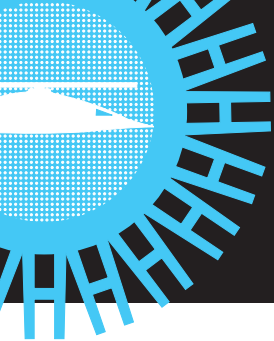
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Development of the Mil Mi-38 transport helicopter is continuing to slip as Russian Helicopters struggles to complete testing with the Klimov TV7-117V engines, which replaced the Pratt & Whitney PW127/5 powerplants used in the original flight trials. Now more than 20 years in development and 10 years since its first flight, certification is not now expected before 2016. Some commercial customers, including UTair are now opting for the new Mil Mi-17/A2 instead.

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LONG STANDING rumours that Prince William, The Duke of Cambridge, is to become an air ambulance pilot were officially confirmed on 7 August with an announcement from Kensington Palace. The Duke, who until recently flew Westland Sea King helicopters in the search and rescue role with the Royal Air Force, will take up his new role next spring.

That the second in line to the throne has chosen such a worthwhile career can only be good news for the helicopter air ambulance services in the UK, that rely so much on charity donations to survive and for the broader helicopter industry in general. After all, if a future King is allowed to fly helicopters, they must be safe mustn't they?

Prince William will work for the East Anglian Air Ambulance (EAAA) based at Cambridge for at least the next two years and will be paid a normal salary, which he will then donate in full to the air ambulance charity. He is expected to fly both day and night shifts, although his rota will take into account any duties he is required to undertake on behalf of Her Majesty The Queen. Cambridge Airport is usefully situated between his new home at Anmer Hall on the Queen's Sandringham estate in Norfolk and his apartment at Kensington Palace.

The Duke currently has some 1300 flying hours in helicopters, but will now need to complete several months of training and written tests to secure the necessary CPL (IR) civil qualifications. He will also convert to the new Airbus Helicopters EC145T2, currently on order and due to enter service with the EAAA in the coming months. Initially he will fly as a co-pilot, but eventually as a helicopter commander.

Of course helicopter flying is something of a tradition in the Royal Family, started by the Duke of Edinburgh in the 1950s and followed on by William's father, Prince Charles and his uncle, Prince Andrew, who both spent time with the Fleet Air Arm. Meanwhile brother Prince Harry flew Apaches with the Army Air Corps in Afghanistan. So good luck to William in his choice – and let's hope there is not a sudden onset of ladies swooning across the East Anglian fens next year!



Meanwhile, what about Harry? Well, we see the argument over tourism and other helicopters over flying the Hudson River waterfront and New Jersey has erupted again, with local senators and politicians calling now for flights to be banned on "safety grounds", claiming the congestion in the sky is a public safety issue for people on the ground below. They have appealed to the New York City Mayor to ban flights from the city-owned heliport and threatened to put forward new legislation to force shutdowns of such flights.

Maybe the UK can help? We know the Americans love the Royal Family so why not send them Prince Harry for a season. We bet they won't complain if he is flying along their beach fronts – they'll all be too busy trying to spot him and tell their friends.

Elfan ap Rees

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FAA to re-examine FAR Pt.27/29

The US Federal Aviation Administration (FAA) is to formally re-examine the certification standards for helicopters under FAR Parts 27 and 29 following industry pressure, in particular from Bell Helicopter. Bell has already succeeded in securing multiple exemptions in other countries, to operate their Model 429 over the FAR Pt. 27 3175kg (7,000lb) weight limit without meeting more stringent Pt.29 standards.

FAR Pt.27 is normally applicable to helicopters with nine seats or less, whilst helicopters that weigh more than 3175kg (7,000lb) and have 10 or more seats must meet the FAR Pt.29 standards. Transport Canada however gave the Model 429 an exemption to 3402kg (7,500lb), after Bell argued that this would allow the aircraft to carry new generation and additional safety-related technology and equipment, without jeopardising needed fuel and payload demands. Since then a growing number of countries have accepted this exemption but not the FAA or the European Aviation Safety Agency.

The FAA sought public comment on a possible change to the rules last February and has received substantial feedback, supporting a revision to restructuring the certification standards under FAR Pt.27 and FAR Pt.29. The Authority has now recognised that the standards may have not kept pace with technology and the capabilities of new generation helicopters, and will now move forward with more formal consultation and discussions with the helicopter industry and other interested parties. The latter are likely to include EASA as well as Transport Canada

AW189 in service

Following the delivery of the first two production AgustaWestland AW189, helicopters to Bristow Helicopters for offshore oil and gas support, the manufacturer also handed over the first AW189 to Weststar Aviation at the recent Farnborough Air Show. This AW189, c/n 49012, is also configured for offshore use and will enter service in Malaysia.

AgustaWestland claims to have orders, framework agreements and options for about 130 AW189s to date, with the 8.3 tonne helicopter available in standard 16 seat, high density 19 seat and long range 12 seat configurations, and with a unique 50 minute run-dry capable main gearbox. Weststar is the launch customer in South East Asia for the new aircraft, which will operate alongside its growing fleet of AW139 helicopters. The company recently passed the 50,000 flight hour milestone with the smaller aircraft, performing offshore transport missions.



Above: The new AgustaWestland AW189 has now begun to enter commercial service with the offshore oil and gas support operators. This aircraft is the first delivery to WestStar in Malaysia.

Meanwhile in the UK, Bristow launched commercial flights with the AW189 from Norwich out to the Cygnus Field 222km (120nm) offshore in the Southern North Sea on 21 July, on contract to GDF Suez. Bristow has a total of five AW189s on order for oil and gas support. In addition the AgustaWestland factory in Yeovil has now received the first AW189 assembly kits for completion in the search and rescue configuration for the Bristow Helicopters SARH contract with the UK Ministry of Defence.

11 aircraft are on order for this contract, all to be assembled and completed in the UK. The first two are due to be delivered this autumn for SAR training to get underway.

Trekkers for Italy

Elitaliana has signed a letter of intent to acquire two AW109 Trekker light twin helicopters for emergency medical service (EMS). The preliminary sales contract marks the first for the new variant in Europe and the first for the aircraft in an EMS configuration.

Unveiled at HeliExpo in California last March with a full scale mockup, with a display also at the recent Farnborough Air Show, the Trekker is a skid-equipped version of the AW109S

GrandNew with internal space for up to six passengers or two stretchers with two medical attendants. AgustaWestland claims the performance, including a cruise speed of 296km/h (160kt) and over 1500kg (3306lb) useful load, outclasses the rival Airbus Helicopters EC135 and offers highly competitive operating costs.

The aircraft is currently intended to feature the Garmin G1000HTM glass cockpit, but this has been criticised by potential operators as offering no IFR capability. This could limit sales in areas such as Canada, where there has otherwise been some interest in the Trekker from utility operators.

Elitaliana is acquiring the aircraft as part of its expansion plans in Italy and abroad. Currently operating two A109E and four A109S GrandNew helicopters in the Lazio and Calabria regions of Italy, the company also signed in 2011 and 2013 letters of intent for a total of six new AW169 4.5 tonne helicopters.

Kaman decision soon on new K-Max production

Kaman Aerospace is expected to make a decision on resuming production of its K-Max single-seat external load carrying helicopter by September, despite a continuing absence of military orders for the unmanned variant following the US withdrawal of forces from Afghanistan.

Previously the company had hoped for further interest from the US Army and US Marine Corps, but the latter has now withdrawn its remaining Unmanned K-Max from the Afghan theatre and made no budget allocation for the repair of its second aircraft, damaged there during operations. The surviving helicopter returned to the USA in early July and will next be used in an autonomous technology trial for the US Army at Fort Benning, Georgia later this month. This demonstration, showing how the Unmanned K-Max can autonomously locate and hook up to a cargo before then delivering it to another location, will be followed in early August by a second trial. This latter demonstration will see the unmanned helicopter deploying an unmanned ground vehicle under a Lockheed Martin squad mission support system (SMSS) project. Two days of practice will take place before an actual demonstration of this capability. Kaman and its partner are also seeking an opportunity to demonstrate the capability of the Unmanned K-Max with the Marine Corps and US Navy for ship board vertical replenishment (VERTREP) operations, especially during landing operations.



Above: Enstrom plans to begin flight trials of the new TH180 two – seat trainer at its Menominee plant in September (Avia Press).

Enstrom back on track

Enstrom Helicopters is getting back on track following some disruption of its production during the recent factory expansion programme at the Menominee facility in Michigan, caused by the need to relocate machinery and jigs etc. The company currently holds an eight-nine month order backlog and planned to deliver 31 aircraft this year, increasing to at least 45 in 2015.

In addition to completing earlier contracts, last March Enstrom announced an order for 16 Model 480B helicopters for the Venezuelan Air Force and Navy, to be used in a training role and delivered over an 18 month period, and most recently has signed

up three new dealers including DSA in the Czech Republic and local companies in North Carolina and Indiana.

DSA is a well established fixed and rotary-wing operator based in Prague, which includes training, sightseeing and taxi flights among its activities, as well as providing maintenance. The company will now represent Enstrom locally but also in Slovakia and Hungary. In North Carolina the new representative is Hi-Tech Helicopters located in Elkin, whilst Indiana Helicopters in Fort Wayne and its partner company Sweet Aviation already uses the Enstrom 28F for flight training and is a launch customer for the new TH180 trainer, shown in mockup form by Enstrom at HeliExpo last February.

Enstrom is also now discussing with its Chinese parent, Chongqing Helicopter Investment Co, the re-assembly of US

manufactured helicopters in China for the local market. This line would utilise Federal Aviation Administration approved parts linked with a Civil Aviation Administration of China production certificate. The company says there are no plans to transfer any actual manufacturing, at least not in the foreseeable future, but sees a big market opening up in the East Asia region.

Meanwhile certification of the Garmin G1000H integrated flight deck for the Model 480B was completed in late July and Enstrom has cut metal on the prototype two-seat TH180 and expects to begin flight testing this September. The company has already begun flight tests of the governor and new drive system in an F28 test bed and certification is anticipated by early 2016.

Helivert in trouble

Russian industry sources at the Farnborough Air Show claimed the joint Russian Helicopters-AgustaWestland joint venture, Helivert is in difficulty, with only three AW139 helicopters assembled at the Tomilino facility and no current plans to build further aircraft. Helivert was established in 2010 and has an initial capacity to assemble up to 20 AW139s per year.

The first locally produced aircraft made its initial flight in December 2012 and was followed by an announcement in May 2013 of an order for five aircraft for AgustaWestland's Russian sales agent, Exclases Russia, also to be assembled at Tomilino. However it is understood that not more than two AW139s have actually flown and instead AgustaWestland is supplying the aircraft direct to Russian customers from its Italian production line. That includes at least seven AW139s delivered for government agency and corporate owners, as well as eight delivered to date for UTAir out of a total order for 10 aircraft, with 10 options.

AgustaWestland has declined to comment on the situation but industry sources say that progress at Helivert has been slower than expected, primarily due to delays in receiving an anticipated large Russian government order. Current Russian relationships with Western governments however suggest this order is unlikely to materialise soon, if at all. Beyond the AW139, the partners did discuss the joint development of a light 2.5 tonne helicopter last year, but recently abandoned this proposal following market research.

Russia is also interested in the larger AW189 helicopter for local production, but discussions on this are seen as premature.

Airbus Helicopters signs multiple Chinese orders

Airbus Helicopters signed orders on 7 July with three Chinese customers for a total of 123 helicopters, to be delivered over the next five years. The signings coincided with an official visit to China of Angela Merkel, the German Chancellor.

The three contracts include one with Guangdong Baiyun General Aviation Company (GAC) for 50 Ecureuil and EC135 helicopters, for expected expansion in its general aviation business. Operating in the heavily populated business zone in Guangdong province on China's south east coast, the company is particularly interested in the relatively new segments of helicopter emergency medical services (HEMS), search and rescue and corporate transportation. An EC130T2 from the Ecureuil family will be delivered this year, followed by the first three EC135T2e arriving by April 2015.

Fujian Xinmei GAC, also based in south east China opposite Taiwan island, has also committed to acquiring a total of 55 single and light twin-engine helicopters over the next six years, beginning with five AS350B3e aircraft already ordered for delivery this year. The company currently operates an AS350B3e, delivered in 2012 for agricultural and utility missions, and with the new orders will become the biggest operator of this type in China.

Finally Yunnan Fengxiang GAC, which is a relatively new business covering a mountainous region in south east China, has ordered 18 AS350B3e to add to their existing two aircraft. The company is focusing on developing utility operations in the region, where there are major mineral reserves and where mountain peaks can top 3,000m (9800ft). The first four of the new order will be delivered later this year, with the remaining 14 due to enter service over the next two years. Fengxiang plans to utilise its fleet in a range of missions, including aerial tours, business aviation and also HEMS.

EC175 completes hot/high trials

Airbus Helicopters has completed a six week set of hot/high trials for the EC175 in the United States, supported by a 15 strong team including pilots, flight engineers, technicians and analysts to study the recorded data.

The aircraft which previously carried out cold weather trials in Canada last January, was shipped out to Nevada by Antonov AN124 on 19 June and initially was engaged in the hot weather portion of the tests, based in Las Vegas. These were aimed at confirming that the EC175 components function properly at 50 degrees C in the most extreme flight situations, including prolonged periods of hovering at maximum take off weight and flying when the onboard equipment has already reached the outside temperature.

The second phase of the trials were carried out at Leadville, Colorado where the airport sits at some 3,000m (9927ft) altitude. This is the highest airport in North America and the third highest in the world. The tests here helped establish the proper helicopter procedures for takeoff and landing under very high and hot conditions, before the EC175 returned to Marignane on 1 August.

KAI to develop new 4.5 tonne helicopter

Korean Aerospace Industries (KAI) has beaten rival Korean Air to become the preferred project leader for a new 4.5 tonne (10,000lb) class Light Civil Helicopter (LCH), for maritime surveillance and transport roles. The aircraft will also provide the basis for a new Light Armed Helicopter (LAH), to eventually replace the South Korean military fleet of ageing Bell AH-1 and McDonnell Douglas MD500D helicopters.

Parallel development of the LCH/LAH is expected to considerably reduce the overall costs of the programme by 340 billion won (\$577 billion), with up to 60 percent commonality of parts and consequent reductions in manufacturing, maintenance and logistics support costs. It is also estimated that the project will contribute up to 50 trillion (\$84 trillion) to the national economy with sales of up to 1000 aircraft, including 600 for export customers. The project launch will be partially supported by the government, which plans to invest more than 1 trillion won (\$974 million), together with contributions from KAI and a yet to be selected foreign partner.

Four Western manufacturers are candidates for the partnership role, including AgustaWestland which is offering a version of the AW169, and Sikorsky which is proposing a design based on the S-76, but with an enlarged cabin. Bell Helicopter is also bidding, with a largely new design. The fourth



Over 200 Jet RangerX signed up

Bell Helicopters now has letters of intent for over 200 Model 505 Jet Ranger X five-seat helicopters including more than 40 signed up in Europe, mostly for non-fleet operators. The company still expects to fly the first aircraft later this year, with certification by mid 2016.

Initial certification will take place in Canada, where the aircraft will initially be built and flown, but with US and European approval following on as soon as possible. Bell is keeping all three major airworthiness authorities in the loop on progress to try and avoid any certification glitches. One issue that will have to be agreed is the use of "grand father rights" for the 206-4 dynamic and transmission system being used in the Model 505. The company is not anticipating any problems with this being accepted, nor with the selected Turbomeca Arrius 2R powerplant which is also already certificated, but has built in some flexibility just in case, in particular with the European Aviation Safety Agency approval programme after watching the recent Robinson R66 certification saga.

Production of the Jet Ranger X will take place at a new plant at Lafayette in Louisiana, under the direction of the current Model 505 programme manager Paul Watts. As general manager of the facility he will be responsible for day-to-day operations and growth plans in Lafayette, with initial concentration on building up a high performance team and the necessary support resources.

Meanwhile the company is praising the expected autorotation performance of the Model 505, noting that it is lighter than the original JetRanger which itself had a good autorotative capability.

contender is Airbus Helicopters, which already partners with KAI in developing and marketing the larger 8.7 tonne (19,180lb) Surion transport helicopter, now in production for the South Korean Army and Police. Their new design is understood to be based on an enhanced version of the AS365N/EC155 Dauphin family.

Subject to a final contract for the LCH/LAH development being approved, expected in November, and a decision on the foreign partners, KAI aims to complete LAH development by 2020, with the LCH following on two years later.

More UK Cabri orders

The Helicentre Aviation Academy in Leicester has confirmed an order for three additional Guimbal Cabri G2 helicopter. The almost Euro 1 million contract was agreed at the recent HeliExpo UK event in June.

The new order will take the Helicentre Cabri fleet up to ten aircraft by early 2016, adding to

five helicopters being leased from the UK distributor, Cotswold Helicopter Centre, and five airframes currently in production at the Guimbal factory in France.

Helicentre is presently consistently logging more than 120 flying hours per month on each of the three Cabris currently in service, predominantly on professional pilot training, and expects to fly over 9,000 hours this year from its base at Leicester Airport. The fourth aircraft for Helicentre is due for delivery in August, followed by the next three in early 2015.

Meanwhile, following certification in China the first of ten aircraft currently on order for local customers and registered B-7793 c/n 1069, is now en route for delivery whilst in the United States, Precision Helicopters is flying the first US registered example, N370PA, on an experimental certificate pending Federal Aviation Administration approval. This is expected some time this year.



Above: Airbus Helicopters has begun deliveries of the EC145T2 with the handover of the first customer aircraft to DRF Luftrettung for air medical missions. The helicopter is seen here with its pre-delivery test registration.

EC145T2 deliveries begin

Airbus Helicopters began deliveries of the EC145T2 upgraded variant on 31 July, with the handover of the first customer aircraft (D-HDSF) to DRF Luftrettung for air medical missions. The helicopter is expected to enter 24/7 day and night service at the operator's Munich base around the end of the year and following the installation and certification of the medical interior at the company's Baden-Baden maintenance facility.

DRF Luftrettung has 20 EC145T2s on order, under an upgrade programme to replace older BK117 and Bell 412 helicopters

at bases across Germany and Austria and sees the new type as ideal for expanding its night time air ambulance capability, with improved performance and flight safety. The aircraft features the Helionix digital avionics suite with a 4-axis autopilot, a fenestron shrouded tail rotor and new 894 shp Turbomeca Arriel 2E engines, with dual channel full authority digital engine control. A new axial compressor and turbine blades coupled with other improvements gives the engine 20 percent more power than the Arriel 1E2 installed in the original EC145 and a 30 minute emergency power rating, providing a superb hover performance, even one-engine-in operative situations.

EC145T2 production is currently centred at the Airbus Helicopters Donauworth factory, where the company is ramping up to meet the expected demand. More than 100

orders have already been placed for the new helicopter, with other customers including the German Armed Forces, which is purchasing 15 for Special Forces operations, a German police air squadron, and other European air medical operators who between them have ordered a total of 85 aircraft. The helicopter will also be used for offshore support to wind farms in the North Sea.

Airbus Helicopters expects to deliver 20 EC145T2s by the year end, increasing to 50 deliveries in 2015. A full flight simulator is also being developed and should be available in 2016.s to the CPI to only allow deployment and activation as one event.

Autopilot kit for Bell 407GX

Bell Helicopter has introduced an in-house developed autopilot kit for the Model 407GX helicopter, designed specifically to integrate with the Garmin G1000H avionics suite and now certificated in the United States and Canada for VFR operations. The company says it has already received orders for the kits from a major Bell 407GX operator wanting to improve flight safety when pilots are faced with inadvertent entry into IFR conditions.

The system has been derived from the Model 429 digital automatic flight control system and features a two-axis functionality with cyclic force trim, and a stability and command augmentation system with heading and altitude preselects available. A "go-around" mode can be activated by a single switch to provide automatic attitude levelling and transition to climb. In addition to integrating with Garmin G1000H navigation modes and display, the system also integrates with audio for alerts and mode annunciations, is compatible with a night vision imaging system and automatically disengages in heavy turbulence or extreme flight attitudes.

Bell is now offering the kit under a supplementary type certificate for both new and retrofit options. The price is quoted at around \$100,000, which the company claims is less expensive than other competitors in this market.

Bell ramps up in Europe

Bell Helicopter is ramping up its sales and support activities in Europe, which the company has recognised as the second largest helicopter market "now and for the next 20 years". Although starting from a low base, the company says it has seen a 37 percent growth in the European commercial helicopter market in recent years, with sales of the Model 429 now topping 40 units and the single-engine Model 407 also doing very well.

As a result Bell is investing more in its Prague facility in the Czech Republic, which will become the completions and customisation centre for Europe, Turkey and Russia as well as the main delivery, training and support hub for regional customers. Initially the facility will concentrate on the Model 407 and Model 429 but will add the new JetRanger X and other Models in due course. To mark the investment, the former Aviation Service Company, which Bell acquired in 2010 has now been legally changed to Bell Helicopter. Last year the facility added Design Organisation Approval to its maintenance certificates and this year is pursuing authorised training certification with the European Aviation Safety Agency.

The company is also increasing its European sales staff as part of a world-wide tripling of the sales force and has recently appointed Air Transport Europe in Slovakia as a Bell facility. Eastern Europe is seen as a particular target to increase commercial sales.

Meanwhile the company appears to be no nearer convincing EASA and the US Federal Aviation Administration to certificate the Model 429 at the increased 3402kg (7500lb) maximum take off weight, despite its acceptance by a growing number of other countries. Limited to 3175kg (7,000lb) under FAR Pt.27 regulations, this has undoubtedly affected air medical and similar sales in Europe, where operators have to consider a trade off in equipment and payload, including fuel, to operate safely.

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UNBEATEN for NEWS



HELITECH this year is once again experimenting with a new venue, this time in Amsterdam at the Amsterdam RAI Congressentrum. Following the criticism of the London venue last year, the spotlight will very much focus on organisers Reed Exhibitions this time to see if they have got it right. At press time, some 180 exhibitors had signed up to take space and Reed have also put together a supplementary programme of meetings.

These begin with a Business and Strategy Conference on 14th, looking at parapublic, UAV and future challenges, and ending with a business leaders forum. There is a charge of Euro 199.00 to attend this event. On 15th there is the free-to-attend EHA Rotorcraft Seminar, which includes an item to consider the effect of EASA Rulemaking activities, and on 16th there will be a free Safety Workshop covering flight training, risk management, technological solutions and safety management systems.

As usual **HELICOPTER International** and our sister-publication **HELIDATA News & Classified** will be present on **Booth C84**, where visitors will be able to pick up copies of our special HELIDATA Show issue.



Above: A helicopter view of the Amsterdam RAI Congressentrum, the venue for Helitech this year.

See page 70
for details of our special
Helidata Show Issues
for
Helitech Amsterdam and
HeliExpo Orlando.

Airbus Helicopters, formerly Eurocopter, (Booth J60) is the world's No. 1 helicopter manufacturer and employs more than 23,000 people worldwide. With 46 percent market share in civil and parapublic sectors, the company's fleet in service includes some 12,000 helicopters operated by more than 3,000 customers in approximately 150 countries.

Finmeccanica – AgustaWestland (Booth E60) is a powerful force in the world helicopter industry, capable of satisfying market demand by offering a wide commercial/military product range encompassing all main weight categories with a full variety of missions.

R&D represents an important commitment to improve existing products as well as to develop innovative solutions. All is combined with an excellent supportability level devoted to total customer satisfaction. Providing unmatched capabilities rather than

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mere platforms is a distinctive Agusta-Westland characteristic. With reference to 2013 data, the headcount at AgustaWestland was 13,225 with major manufacturing facilities located in Italy, UK, Poland through PZL-Swidnik, and USA. Revenues in 2013 stood at 4,076 million. The cumulative order backlog at the end of December 2013 amounted to 11,928 million, with new orders worth 4,384 million.



Hiscox Global Flying protects commercial helicopter pilots against the financial consequences of losing their licence as a result of illness or injury. Their policy is available to individuals, both as a substitute and a top up to an employer policy. Hiscox also offer trainee helicopter pilots protection against the possibility of incurring considerable debt if they are unable to complete training as a result of illness or injury.

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Milestone Aviation Group (Booth L60) is the global leader in helicopter leasing. The company partners with helicopter operators worldwide and supports them through 100 per cent operating lease financing. Milestone provides financing for helicopters, serving a variety of industries, including offshore oil and gas, search and rescue, emergency medical services, police surveillance, mining and other utility missions. Since launching in August 2010, and as of September 30, 2013, Milestone had acquired more than 115 helicopters valued at over US\$ 1.7 billion and closed leases with 25 operators in over 20 countries on six continents. Further information is available at www.milestoneaviation.com.



Russian Helicopters, JSC (Booth J20) is a subsidiary of UIC Oboronprom, which in turn is a part of State Corporation Rostec. It is one of the global leaders in helicopter production and the only helicopter design and production powerhouse in Russia. Russian Helicopters is headquartered in Moscow. The company comprises five helicopter production facilities, two design bureaux, a spare parts production and

repair facility, as well as an aftersale service branch responsible for maintenance and repair in Russia and all over the world. Its helicopters are popular among Russian ministries and state authorities (Ministry of Defence, Ministry of Internal Affairs, Emergency Control Ministry), operators (Gazpromavia, UTair), major Russian corporations. Over 8000 helicopters of Soviet/Russian make are operated in 110 countries worldwide. Traditionally the demand is highest in the Middle East, Africa, Asia-Pacific, Latin America, Russia, and CIS countries. Russian Helicopters was established in 2007.

Ulan-Ude Aviation Plant is a Russian Helicopters production facility. The plant has extensive and advanced manufacturing and technical capabilities

that enable it to quickly launch production of new aircraft types and also to build prototypes and mass-produce helicopters. The plant has built more than 8,000 machines in its 70-year history. Today it specializes in the production of the Mi-171 (Mi-8AMT) and Mi-171Sh helicopters.



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Regional News

- ASIA PACIFIC REPORT

● Russian Helicopters is to deliver a third Mil Mi-26TS to China from the Rostvertol plant in 2015, following a contract signed with Lectern Aviation Supplies and confirmed at the beginning of July. The heavy lift helicopter will be operated in support of forestry management in China's Shandong province.

Commercial operators in China already operate three Mi-26TS on construction, firefighting and disaster relief missions, with two in service with Qingdao Helicopters and the third with Flying Dragon.

● Malaysian operator Aerial Power Lines (APL) has taken delivery of its first two aircraft from Airbus Helicopters, for electrical power line construction and maintenance support. The company is a subsidiary of Sarawak Cable Berhad (SCABLE) and the only company approved by the Malaysian civil aviation department to perform aerial power line operations in the country.

To develop the new service, APL has worked with Airbus Helicopters and the French national electrical grid operator RTE, which has considerable experience of helicopter power line support over a 40 year period. This has enabled APL and SCABLE to assemble a planned business strategy, meeting proven operational and safety standards benchmarked by both European and Malaysian airworthiness authorities.

The first two helicopters were handed over on 27 June at the Subang facilities of the Airbus Helicopters Malaysian subsidiary and comprised single examples of the AS350B3e and an EC135T2e. Both aircraft will remain based at Subang, with the manufacturer providing ongoing training and maintenance support. The AS350B3e, with its proven hot/high performance, will be tasked mainly for power line inspections and surveillance. The EC135T2e will be used to support on-site power line maintenance and construction, with a maximum take off weight of up to 2.95 tonnes (6500lb).

In mid-2015 APL will also take delivery of an EC225 heavy helicopter for power line construction and airlift support at major infrastructure projects.

● Bristow Australia has been working with local CareFlight medical support teams to provide joint training with its helicopter crews assigned to search and rescue aircraft for offshore emergencies. CareFlight will be responsible for providing the medical support in the event of a call out.

Part of the training has focused on the new stretcher system being used, which can be fitted securely into all Bristow helicopter types, as well as in fixed-wing aircraft and ground ambulances. Kept stored on offshore platforms, the new stretchers enable injured workers to be transported from an offshore facility to an onshore hospital with no need for a stretcher transfer at any point en route. This should greatly improve the medevac process.

Meanwhile CHC Helicopter has launched its dedicated search and rescue contract for Shell Australia. The Airbus Helicopters EC225 is based at Broome Airport on 24 hour standby, to respond to emergencies offshore in the region including the Prelude Floating Liquid Natural Gas (FLNG) project.

Prelude is the first deployment of Shell's FLNG technology and is located some 475km (256 nm) north east of Broome. The project is under construction at present, with Shell currently drilling the offshore wells that will feed gas into the storage and transfer facility.

The EC225 has a range of 555km (300nm) from Broome but the service is currently limited to medevac only at night. A new helicopter is due to be introduced next year by CHC with a full 24 hour SAR capability.

● Russian Helicopters have begun deliveries of 20 Kamov Ka-32A1 IBC multirole helicopters to the Sino-Russian Helicopter Technology Company in Qingdao, China. Two aircraft are already in service, with four more due to be handed over by the year end and further deliveries through 2015 and 2016.



Above: The Ulan Ude Aviation Plant has recently carried out flight training courses for the Mongolyn Alt Corporation, which operates two Mil Mi-8/17 helicopters. UAP recently delivered its 850th aircraft in this series.

Built at the Kumertau Aviation Plant, the fleet of Ka-32A1 IBCs is expanding rapidly, according to Russian Helicopters, with the co-axial rotor aircraft being used for construction work, cargo transportation and logging contracts. One aircraft has also been flown in support of China's Antarctic exploration missions with the Chinese State Oceanic Administration.

This was used last January to support the rescue of passengers from the Academician Shokalsky research ship, after it became trapped in the sea ice in Commonwealth Bay, Antarctica.

● The Channel Island of Guernsey, which recently launched its own aircraft certification and registration department under the ICAO designated prefix 2-, has accepted its first helicopter, the corporate Sikorsky S-76A+ based on the neighbouring island of Brecqhou for the owners of the Littlewoods retail chain, Ritz Hotel and Telegraph media titles.

Previously on the UK register as G-BYDF, this particular helicopter is a S-76A+ Mk.II, unusually with a sealed and overpainted starboard side cabin door and with power improvements over the standard aircraft. It was originally built for Honda in Japan in 1990 but flew very little whilst there, spending much of its time hangared before being brought to the UK in 1998.

● Kogoshima Aviation in Japan has ordered a second AgustaWestland AW109S GrandNew helicopter for the nationwide Doctor Heli system air medical programme, which is intended to provide modern emergency medical services (EMS) coverage to all prefectures in Japan.

Kagoshima Aviation already provides a GrandNew for EMS in Kagoshima prefecture, covering the southwestern tip of Kyushu island. The new aircraft has been ordered to cover the northern island of Hokkaido, operating from Hakodate airport on behalf of the Hakodate City Hospital.

The GrandNew will be equipped to accommodate one or two litters with appropriate medical attendance and will also be fitted with a comprehensive selection of EMS equipment and avionics. Hokkaido is the most northerly of Japan's 47 prefectures, with a number of mountains and volcanic plateaux requiring the fitting of skis and an ice detector on the helicopter for cold weather operations.

The new GrandNew is scheduled to enter service in early 2015.

● Northrop Grumman and Yamaha are to collaborate on further developing the successful Yamaha RMax unmanned helicopter, which is widely used in Japan for agricultural spraying missions. Since its introduction in 1997, around 2500 RMax have been built and logged more than 2 million flight hours.

The new partners now plan to take the proven airframe and install the latest autonomous control and sensor technologies, for use in urban environments and for applications such as search and rescue, power line inspections and forest fire observation. Northrop Grumman has coined the name Rotary Bat (R-Bat) for the new variant, which is seen as fitting in with its existing Bat family of unmanned aerial systems.

Military Helicopter News

September - October 2014



Likely marking their swansong at the annual RNAS Yeovilton Air Day commando assault finale, this pair of Westland Sea King HC.MK.4s valiantly played their part, supporting friendly forces repelling a "terrorist" attack, a role they have played for some 30 years (Avia Press).

CRH-60 go-ahead

The US Air Force has confirmed a contract with Sikorsky Aircraft to launch development of the CRH-60 combat search and rescue helicopter. The \$1.28 billion order will only cover an Engineering and Manufacturing Development (EMD) phase, but is expected to eventually lead to production of up to 112 aircraft with a potential order value of around \$7.9 billion.

The joint Sikorsky/Lockheed Martin bid for the contract, to replace the ageing HH-60G Pave Hawk combat rescue fleet, is based on the latest UH-60M Black Hawk variant. Like the UH-60M, the new variant will be powered by General Electric T700-GE-701D engines and will feature composite wide-chord main rotor blades and the fatigue and corrosion-resistant machined aerostructures that are now well established with the US Army Black Hawk fleet.

New will be an increased internal fuel capability, new integrated rescue mission systems and other modifications necessary for the specialised Air Force role. The EMD phase will also cover the delivery of four CRH-60 development aircraft, together with seven aircrew and maintenance training systems. Options include the delivery of five additional CRH-60s by 2020 and the initial training of Air Force crews and maintenance technicians.

Sikorsky and Lockheed Martin entered a highly competitive bid to secure the Air Force order, before the companies became aware that any potential competitors had withdrawn from the tender process. As a consequence the US Congress and the Department of Defence (DoD) were keen to secure the launch funding in the latest defence budget negotiations and shifted priorities to ensure this was possible.

Eventual production quantities however still depend on future funding allocations determined by Congress and DoD acquisition priorities, and are likely to be decided on an annual basis over the life of the programme.

US Army moves on OH-58D disposals

The US Army is already discussing the disposal of its Bell OH-58 Kiowa and TH-57 Creek fleets with the manufacturer, whilst at the same time budgeting to acquire 100 additional Airbus Helicopters UH-72 Lakota helicopters to take over the training role, at an estimated cost of \$804 million.

The principle of retiring the older aircraft has already been accepted by the majority of US Congress members, with the FY2015 budget intended to start the process.



Above: The Italian Air Force is to evaluate the AgustaWestland AW189 for a special forces role following its recent military certification.

Proposed acquisitions include 55 Airbus Helicopters UH-72A, 27 Bell UH-1Y/AH-1Z upgrades, 19 Bell Boeing V-22, 28 Boeing AH-64E, and 124 Sikorsky H-60M Black Hawks—adding eight to the original Pentagon request.

Currently the Army has 335 OH-58D Kiowa Warriors and 182 TH-67s in its inventory, in addition to earlier OH-58 variants, all of which are slated for retirement. Plans to rebuild a number of OH-58Ds and a parallel cockpit and sensor upgrade to an OH-58F configuration have been scrapped. Initially 26 OH-58Ds will be placed in long term storage this year whilst Army officials look for foreign military sales (FMS) or transfers to other US agencies, following the trait previously established with earlier OH-58A and OH-58C disposals. Further OH-58Ds will be retired as the Boeing AH-64E fleet matures to provide the planned replacement option.

Disposal of the TH-67 fleet will follow a similar pattern as additional UH-72s become

available, but these may be offered for sale on the civil market as the aircraft is based on the Model 206 JetRanger. New UH-72s will likely begin to follow on from the end of the current production contract for 340 UH-72A aircraft, which ends next year. Airbus Helicopters recently delivered the 300th Lakota, and has an additional FMS commitment for six aircraft to be delivered to Thailand.

Meanwhile both AgustaWestland and Bell Helicopter are challenging the Army's commitment to the Lakota for training, arguing that a new generation single-engined helicopter would be more cost efficient for the ab-initio training role. Both companies are already planning to bid for a similar training programme to replace 130 Bell TH-57 Sea Rangers used by the US Navy.

Italy evaluates AW149...

The Italian Air Force Special Forces are to evaluate the AgustaWestland AW149 helicopter, following its recent military certification by the Italian Directorate of Air Armaments (ARMAEREO). The Type certificate was signed and handed over at a special ceremony during the Farnborough Air Show, witnessed by a number of official guests including the Italian Defence Minister.

An AW149 aircraft, on static display at the Show in Italian Air Force markings but carrying a test registration, carried out the certification trials at the RSV official test centre at the Pratica di Mare airbase and will now launch the operational evaluation trials. The Italian Air Force is understood to have a requirement for up to four AW149s for special forces use, to supplement the smaller AW139M helicopters it already has in service.

The eight tonne class AW149 is also AgustaWestland's entry in the currently running Polish Air Force multi-role transport helicopter competition. The company is offering local assembly and support at its PZL-Swidnik plant, which already manufactures the airframes for this type and its commercial AW189 equivalent. The AW149 is competing with the locally completed Sikorsky S-70i and Airbus Helicopters EC725 for the business, but AgustaWestland believes it holds a major advantage due to the new technology embedded in the design, including the ability to continue flying at gross weight and 222km/h (120kt) for at least an hour following the loss of main gearbox oil. This would ensure pilots could safely leave a combat zone before needing to make an emergency landing.



Above: The Brazilian Navy is to upgrade its Westland Lynx Mk.21A helicopters after some 17 years of service.

Brazil to upgrade Lynx fleet

AgustaWestland have secured a contract with the Brazilian Navy to carry out a midlife upgrade on eight Lynx Mk.21A helicopters over a two year period, beginning in mid-2015.

The Euro 117 million contract will be carried out at the company's Yeovil plant and includes replacement of the Rolls Royce Gem engines with the LHTEC CTS800-4N powerplant, and new navigation, cockpit displays, mission avionics and an electrically powered rescue hoist.

The new glass cockpit will be fully night vision goggle compatible and complemented by an advanced avionics suite comprising a tactical processor, satnav, traffic collision avoidance system, ILS, and radar warning receiver/electronic surveillance measures integrated with countermeasures dispensers.

The 1361 shp CTS800-4N engines have already been proven in the Lynx Mk.9A upgrade for British Army operations in Afghanistan and also power the Super Lynx300 variant in service with Algeria, Malaysia, Thailand, Oman and South Africa, and the new AW159 Wildcat, currently entering service with the Army Air Corps and Fleet Air Arm in the UK. The installation will provide the Brazilian Lynx with major power improvements in hot/high environments, enabling the aircraft to fly with an increased payload and, due to the engine's better fuel efficiency, over an extended area of operation.

The Brazilian Navy has operated the Lynx helicopter since 1978 with the delivery of nine Mk.21 aircraft for frigate and land-based service. Whilst five of these were refurbished and upgraded with the Gem 42 powerplant and 360 degree Seaspray 3000 radar to a Mk.21A configuration in the mid-1990s. Brazil also ordered nine new aircraft at the same time, deliveries of which took place in early 1997.

...and Polish MRH decision soon?

Industry sources suggest an answer on the Polish Request for Proposals (RfP) for the procurement of new multi-role helicopters for all three military services is now expected by 14 September, with a final decision and contract award likely to follow in short order. The RfP represents one of the biggest helicopter deals available anywhere at the present time, with three teams bidding to supply a total of 70 helicopters in mixed configurations.

Under the RfP, the requirement is for a single helicopter type but with 36 configured for tactical transport duties, 26 configured for combat search and rescue, and eight fitted out for naval anti-submarine-warfare missions. Competing are Airbus Helicopters/WZL 1 offering a locally assembled EC725 Caracal, AgustaWestland subsidiary PZL Swidnik offering the AW149 manufactured in Swidnik, and Sikorsky Aircraft subsidiary PZL Mielec proposing the S-70i Black Hawk. A fourth potential bid from NH Industries with the NH-90 helicopter was not submitted, after the partner companies agreed it would exceed the available Polish budget.

Local manufacturing, maintenance and overhaul support is seen as a key factor in the decision making process and all three short-listed companies have this high on their agenda, together with an eye on possible additional sales in neighbouring Eastern European countries. The US Army deployed a unit of Sikorsky UH-60L Black Hawks to Poland in early June for exercises. Five UH-60Ls from the 12th Combat Aviation Brigade, normally based at Katterbach in Germany, arrived at Miroslawiec on 6 June to support US and NATO forces training in the region.

One of the latter was subsequently written off in a crash at sea in 2003, whilst on approach to the frigate *Conti*, but it is the eight survivors that will be the subject of the new upgrade.

Deliveries of the refurbished Lynx back to Brazil are scheduled to begin in the Autumn of 2017, with all the aircraft back in service by early 2019 to give the Brazilian Navy a significant improvement in its capabilities. A comprehensive support and training package, that includes a Flight Training Device, is also included in the contract.

UK MoD signs FASGW Integration Contract

The UK Ministry of Defence officially signed a £90 million contract with AgustaWestland to integrate the Thales Light and MBDA Heavy Future Anti-Surface Guided Weapons (FASGW) on the AW159 Wildcat helicopters entering service with the Royal Navy. The contract follows much delayed orders placed earlier this year with the two missile manufacturers to develop their FASGW concepts.

FASGW Light being developed by Thales is a 13kg (29lb) missile, with the same laser beam riding guidance system as the company's Starstreak missile and is capable of targeting both surface and airborne threats. The option of an infrared seeker for the missile is also under consideration for the future. The weapon carries a 3kg (7lb) dual-purpose warhead and both a contact and a laser proximity fuse.

MBDA is developing the 100kg (220lb) FASGW (H), which is guided by an infrared seeker and offers a fire-and-forget capability. This missile is armed with a 30kg (66lb) warhead and has an operational range significantly in excess of 15km (9 miles). FASGW (H) will be known as the Sea Venom in Royal Navy service but the missile has also been ordered by the French Navy as the Anti-Navire Léger (ANL) to arm its NH Industries NH90NFH helicopters.

AgustaWestland is expected to begin flight testing the missiles on the Wildcat in a 2018-2019 timeframe using ranges in North Scotland and West Wales, before deployment by 2020, although this will leave a capability gap if the current Sea Skua anti-surface missile is withdrawn from service with the planned Westland Lynx retirement programme over the next three years. 28 Wildcats HMA Mk.2 are in the process of entering service with the Royal Navy as Lynx replacements and the type is due to reach an Initial Operating Capability (IOC) without the missile armament next year.

62 Wildcats are on order for the British military, with just over half delivered by early July. The Army Air Corps AH Mk.1 variant will reach IOC this year.

Defence

- INTERNATIONAL

JMR selections for next phase

Bell Helicopter and a Sikorsky/Boeing team have been selected for the next phase of the US Army Joint Multirole Rotorcraft programme and will each now build demonstrators of their concept aircraft, under a contract which includes three years of flight trials.

AVX Corporation and Karem Aircraft, which both put forward innovative concepts in the first round of the competition, are not be included in the next phase but may receive some separate funding to partially support their research.

Bell Helicopter will now continue development of its V-280 Valor optimum-speed tiltrotor, which builds on the operational experience gained with the current V-22 Osprey but introduces new third generation technology improvements, including two horizontally-fixed General Electric T67 turboshafts. Partners in this programme are Lockheed Martin for the mission system, Spirit Aerosystems which is providing the composite fuselage, GKN building the VeeTail, and Moog developing the fly-by-wire flight control system.

Sikorsky and Boeing will compete with the SB-1 Defiant compound coaxial rotor design, powered by two Honeywell T55 engines as used in the Boeing CH-47F Chinook, and leveraging in results from the experimental Sikorsky X2 high speed helicopter and Boeing composite airframe experience. The partners have already invested \$250 million of their own funds in the SBI and plan to spend considerably more, roughly four times the government investment to develop and build the 13608kg (30,000lb) class full-scale Defiant demonstrator.

Both rotorcraft offer speeds in excess of 426km/h (230kt) and are due to fly in late 2017.

ASAC Sea King life extension

Delays in development of a new helicopter airborne early warning (AEW) system for the Royal Navy are now expected to see at least part of the Westland Sea King ASAC Mk.7 fleet remain in service beyond the previously planned 2016 retirement date. 14 ASAC Mk.7 are currently on strength.

The UK Ministry of Defence plans to replace the Sea Kings with a roll-on/roll-off AEW solution under the Crowsnest programme for the AgustaWestland Merlin HM.Mk.2 helicopter and has been assessing two options. The first, proposed by Lockheed Martin, uses a radar installed in an external pod, but development has been delayed due to a switch in systems from the Northrop Grumman APG 81 radar to what is believed to



be an Israeli Elta system. Flight trials of this are now expected to take place later this summer.

The rival approach is from the current incumbent on the Sea King, Thales, proposing an upgraded version of the Searchwater radar already in use. This could involve completely new units or modifications of the existing radars to reduce costs. Flight tests of this option are planned for later this year.

The delays in procurement of Crowsnest would have left a capability gap of at least two years before the Merlin AEW fit availability, if the Sea King ASAC Mk.7 had been retired earlier. Now the MoD is expected to sign a new interim contract with AgustaWestland to continue support for the aircraft until at least 31 March 2018.

30 AgustaWestland Merlin HM Mk.2s are currently in the process of entering service, with nine aircraft successfully completing a deployment exercise in the Eastern Atlantic

Above: The Sikorsky/Boeing entry for the JMR demonstration will see their SB-1 Defiant competing with the Bell Valor tiltrotor during a three-year trials program.

during June and an interim operating capability being declared at the end of the month. Future deployment of the HM Mk.2 will include 14 aircraft aboard the recently launched new aircraft carrier HMS Queen Elizabeth, providing a mix of anti-submarine and AEW cover for the accompanying task force.

17 Merlin HM.Mk.2s had re-entered service by early July, with four more engaged in ongoing trials with Qinetiq at Boscombe Down. The last of the 30 Merlins is due to be delivered back to the Royal Navy from the conversion line at AgustaWestland next year. However MoD officials are already discussing the possible conversion of up to six additional HM.Mk.1 aircraft, not yet allocated to the upgrade programme.

Chinook APAS trial dates...

BAE Systems expects its Active Parallel Actuation Subsystem (APAS), developed for the Boeing Chinook heavy-lift helicopter to be flight tested by the US Army on a modified MH-47G variant from mid-January 2015. The trial is likely to be completed over a four-month period, after which the company hopes to secure a production order by 2020 for retrofit kits of the system.

APAS is a tactile cueing system that provides synthetic force feedback to pilots and alerts them if they are reaching operating limits, enabling them to concentrate more outside of the cockpit and reducing pilot pressures. BAE Systems says APAS provides the same benefits as fly-by-wire controls but requires far less time to develop and is easily retro fittable to existing helicopters. On the CH-47F or MH-47G Chinook it interfaces with the digital automatic flight control system and replaces the old mechanical pallets with new active pallets, before uploading a new version of the software onto the autopilot. The system can be installed on any aircraft with mechanical connections to the pilot position and displacement-trim flight controls.

Boeing awarded BAE Systems a two year development sub-contract for APAS in December 2012 and, subject to successful acceptance by the US Army, the near term plan is to further develop the kit for production. This will include reducing the weight where possible and certifying the software. The company eventually hopes to make the system into a package that can be easily installed in the field.



Above: This Boeing CH-47D Chinook, now being refurbished for the Moroccan Air Force, was originally built for the US Army almost 50 years ago for service during the Vietnam war!

Boeing looks to future

Boeing delivered 15 Chinook helicopters in April-June this year from its Ridley Park, Philadelphia production facility for the US Army and export customers. The quarter ended on 30 June with the handover of the last of 15 CH-147F variants, ordered by the Royal Canadian Air Force for service with No.450 Tactical Helicopter Squadron, based at CFB Petawawa in Ontario.

Looking ahead to post 2020, when current major production of the CH-47F for the US Army is due to end the company is already planning a CH-47H upgrade, remanufacturing the current variant to lift an additional 1810kg (3990lb) with a strengthened airframe and enhanced dynamic system. This would increase the payload to 24,500kg (54,013lb) and allow the aircraft to remain viable through to its planned retirement date of 2060.

Boeing also produced nine AH-64 Apache helicopters during the same quarter, as the company confirms plans to further develop the attack helicopter beyond the current AH-64E production variant. Company officials believe at least one more major upgrade will be required by the US Army before the proposed Future Vertical Lift (Medium) replacement becomes available. Even then the company believes the AH-64 will remain in service for some years after the new helicopter enters service.

The proposed AH-64F model would include an upgrade to more powerful 3,000shp engines, currently the subject of the US Army Improved Turbine Engine Programme, advanced main rotor technology and possibly a series of high speed improvements to provide an enhanced battlefield capability when supporting drone aircraft. Such modifications might include a retractable main undercarriage, aerofoil stub wings to offload the rotor in fast cruise flight, and a tail rotor that could be hinged through 90 degrees to provide additional forward thrust.

...& CH-47Ds for Moroccan Air Force

Columbia Helicopters is to overhaul three Boeing CH-47D Chinook helicopters for the Moroccan Air Force, under a \$6 million contract issued by the US Department of Defence Foreign Military Sales Office.

The three helicopters are US Army surplus aircraft that require reconditioning and a 400 hour maintenance inspection. The work will include post-desert operations cleaning, and repainting the aircraft into a more appropriate desert camouflage pattern before delivering, re-assembling and flight testing the Chinooks in Morocco. The project is expected to be completed by the end of March next year.

The Moroccan Air Force previously took delivery of six CH-47C Chinooks, assembled by Agusta in Italy in 1979 with three more following in 1982. Seven were later upgraded to a CH-47C+ standard with performance improvements. However the licence agreement with Boeing did not permit Agusta to upgrade Italian-built Chinooks to CH-47D standard, which is one reason why the Moroccan government has chosen the FMS route to acquire this variant.

Interestingly the three CH-47Ds now being purchased are only slightly younger than some of the CH-47Cs, with the first to arrive at the Columbia Helicopters being from a fiscal year 1986 batch and formerly US Army serial 85-24366. This aircraft was originally delivered in late 1986 by Boeing, following its rebuild from an even older CH-47A airframe built in 1966. The two other Chinooks have a similar history. The three aircraft flew into Aurora on 10, 12 and 13 August.

The work now being carried out is similar to a project completed for the Australian government by Columbia Helicopters last year, although in that instance maintenance crews began the process while the Chinooks were still in Afghanistan before completing the task in Australia. This time the company will utilise its newly opened military maintenance facility near Aurora, Oregon. Although Columbia has carried out maintenance on military helicopters and components in the past, this new overhaul centre is expected to generate significant additional military work in the future, as more US Army surplus CH-47D helicopters become available following their replacement by new CH-47F Chinooks.

Surplus UH-60A sales

The US General Services Administration offered 10 early production Sikorsky UH-60A Black Hawk helicopters for sale by auction in June, with a bid deadline of 21 July and a reserve for each aircraft of at least \$1.3 million.

The helicopters, from fiscal year 1979 through 1985, were all mostly complete but lacking some avionics and other minor components. All but one, which had been stripped of its dynamic system, have been stored outdoors, "as is" with no warranty on condition, at Madison County Airport near the US Army Redstone Arsenal in Alabama. Bidders were each required to put down a \$100,000 deposit with their bids.

The US Army has also been part-exchanging early UH-60A helicopters with Sikorsky under a Black Hawk Exchange and Sales Transaction (BEST) programme. This allows the manufacturer to select and buy back the aircraft, with the sale proceeds credited against new UH-60M procurement to offset the cost. The first three UH-60As to be sold back under this programme were handed over at Madison County Airport on 11 June, with further aircraft following.

Sikorsky plans to either break down the newly acquired aircraft for spares recovery or may overhaul them for new customers, including an option to upgrade selected examples to UH-60L standard. Over the next decade it is estimated that between 400 and 800 early Black Hawks will be retired from US Army service, either for direct sale by auction or for transfer back to the manufacturer.

DATELINE: 28th AUGUST 2014

■ Recent new orders placed with AgustaWestland include two AW139 helicopters for the Bangladesh Air Force, to be delivered by the end of 2015. The contract includes a comprehensive support and training package.

Both helicopters will be equipped for a maritime search and rescue (SAR) role with a mission configuration including search/weather radar, FLIR, search light, rescue hoist, emergency hoist, emergency floats and a 4-axis dual digital autopilot with hover and SAR modes. The aircraft will equip a new dedicated SAR unit, able to handle the most demanding weather conditions and with secondary roles including maritime security and disaster relief in the flood-prone country.

■ Airbus Helicopters has completed a retrofit on the first four NH90 TTH helicopters delivered to the Royal New Zealand Air Force, bringing them up to the same final configuration standard as the rest of New Zealand's fleet. The work was carried out by company teams deployed to the RNZAF base at Ohakea.

Similar retrofit programmes are being carried out on interim delivered NH90s for several other customers, at locations in Australia, Finland, France, Germany and Italy. 10 aircraft have already been upgraded and 17 more are currently undergoing the process.

■ Sikorsky Aircraft has been awarded a \$115 million contract by the US Navy for engineering work under a FMS order to supply nine MH-60R Seahawk variants to the Royal Danish Air Force. The contract adds to the original \$135 million order for the green airframes and will cover equipment including the deck lock system, troop seats, wire strike protection, a VOR/ILS navigation system, HF radio antenna and an external lift raft pod.

The total acquisition cost of the Danish agreement is about \$700 million, with first deliveries due by May 2016 and all nine aircraft to be in service by 2018.

■ The US Army is planning new Block 3 upgrades to its Boeing AH-6M and MH-6M Little Bird (MELB) helicopters, to retain the fleet in service with its Special Forces for the foreseeable future.

Modifications will include overhauling and strengthening the ageing airframes, which have seen 10 years or so of intense operations, as well as replacing the main and tail rotor blades with new commercially available composite equivalents, to provide enhanced performance and survivability. In the cockpit, the avionics architecture will be changed to incorporate a fully integrated digital Common Avionics Architecture System (CAAS), to optimise platform interoperability and improve situational awareness. New missile warning systems and infra-red countermeasures are also being sought, compatible with the MELB's weight restrictions.



Funding for the upgrades has already been included in the US Army's FY2015 budget request.

■ The Indonesian defence ministry has selected the Airbus Helicopters AS565M Panther helicopter for its future anti-submarine warfare mission, operating from the Sigma 1054 class guided missile corvettes of the Indonesian Navy.

Subject to final contract the Navy will receive 16 aircraft, fitted with dipping sonar and a range of other specialised equipment, some of which may be installed locally by PT Dirgantara Indonesia. Airbus Helicopters has already signed a memorandum of understanding with the company to maintain and overhaul the new helicopters, work it will do alongside its current assembly of EC725 Cougars and maintenance of the AS350 and AS355 helicopters operated in the country.

■ The semi-autonomous Somali enclave of Puntland has acquired an Aerospatiale SA316B Alouette 3 helicopter to support security operations in the area. The aircraft was reportedly purchased from a South African company, although its use has so far been limited due to a lack of spares support.

The Puntland base at Bosaso is also the occasional home of US Special Forces, operating two Mil Mi-17 helicopters in the region.

■ The Philippines Defence Ministry is expected to make a decision by the end of the year on the acquisition of two anti-submarine warfare helicopters for naval operations. The helicopters are intended to be operated from the two frigates already in service with the Philippine Navy. Likely candidates include the AgustaWestland AW159 Wildcat and the Kaman SH-2G, although other types may also be under consideration.

■ Kazan Helicopters has recently completed its 7,500th Mil Mi-8/17 helicopter, with the aircraft being delivered as part of a current contract with the Russian Air Force. The Kazan factory shares Mi-8/17 production with the Ulan-Ude Aviation Plant, which has delivered more than 4,500 units, taking total production to date to over 12,000 aircraft.

Above: The Maltese Air Force is now operating the first of two AgustaWestland AW139 helicopters in the search and rescue and maritime patrol role.

Kazan produces the helicopter in three main configurations, the Mi-8MTV-1 (export version Mi-171V) which is a multi-role variant, the Mi-8MTV-5. (Mi-17V-5) which is a military transport also capable of being produced in an armed configuration, and the Mi-172 passenger/VIP transport. In conjunction with the Mil Design Bureau, the company is also working on new upgrades of the Mi-17V-5 whilst also developing the new Mi-171A2.

The Kazan plant was selected to manufacture the original production Mi-8 in 1965, replacing the previous piston-engined Mi-4 on the assembly line. The Ulan-Ude plant joined production in 1970 to meet a growing demand for the aircraft.

■ NH Industries is continuing negotiations with the Qatar government to supply 12 NH90TTH and 10 NFH variants to replace its current Westland Commando Sea King fleet from 2017.

The aircraft would be the first of the manufacturer's new baseline configuration, aimed at minimising certification and qualification delays, by allowing customers to instead "plug in" their desired equipment fit.

Meanwhile the 200th aircraft, an NH90TTH for the Belgian Air Force, was officially handed over on 23 June at the German Army Aviation School in Buckeburg during the annual NH90 Product Conference. The aircraft will be operated by No.1 Wing from the Beauvechain air base.

■ The Indonesian Air Force has established a new combat search and rescue squadron at Suryadarma airbase in Subang, West Java to operate Airbus Helicopters EC725s being assembled by PT Dirgantara.

The new unit, No 9 Squadron, is due to receive six EC725s this year from the local production line. A further ten aircraft are also expected to be ordered next year to boost Indonesia's military helicopter transport fleet.



Above: AgustaWestland is reviewing the results of a nine month trial of an optionally piloted version of the PZL Swidnik SW-4 light helicopter. Flight testing began at the Polish subsidiary's facilities in September 2013 and concluded at the parent company's Frosinone plant in May this year.

Christened the SW-4 Solo, the modified helicopter was developed under an Italian defence ministry research contract to evaluate unmanned rotorcraft technology and its potential value to the Italian armed forces. The trials included hands off and remote controlled manoeuvres, hovering, system monitoring and a range of mission profiles but at all times carried a safety pilot on board as a precaution.

AgustaWestland is now discussing a second phase of the trials which could include demonstrations in the UK for the Royal Navy for tactical missions at sea. The company is also progressing plans for fully autonomous flight tests in Poland later this year, with no safety pilot aboard.

■ The handover of a first batch of production Tiger HAD-E attack helicopters to the Spanish Army, by the Airbus Helicopters production facility at Albacete, has reportedly been put back until October 2015. Previously the first two locally assembled aircraft were due to be delivered this summer.

One French-built Tiger HAD-E was previously accepted by the Spanish Army, but is apparently being retained by Airbus Helicopters at Albacete for trials and certification work.

■ Hindustan Aeronautics (HAL) has received an order to manufacture a new batch of 32 Dhruv Mk.III advanced light helicopters, for naval and coast guard search and rescue and armed patrol operations.

Despite early concerns regarding the suitability of the 5500kg (12,125lb) class Dhruv for shipboard and maritime roles, the Indian Navy now operates eight aircraft on armed patrols, whilst the Coast Guard has four carrying out coastal surveillance and rescue roles. Each of the services is now expected to receive 16 Dhruv Mk.IIIs, considerably boosting their fleet size and replacing some older HAL Chetak helicopters in their inventory.

HAL had delivered some 150 Dhruvs from its Bangalore production facility by the beginning of July this year, the majority of which are in service with the Indian Air Force and Indian Army, supporting forces based in the country's Himalayan borders region with Pakistan and China. A small number of aircraft have also been sold or gifted to overseas governments.

■ The Tunisian government has entered a Foreign Military Sales request to the US State Department for the supply of 12 Sikorsky UH-60M helicopters, plus spares, equipment and training. The value of the proposed deal, which has to be approved by the US Congress, is quoted at \$700 million.

The request includes the integration of a precision guided rocket capability to permit the launch of laser-guided rockets and Hellfire missiles. 9,100 2.75 in Hydra rockets, 100 AGM-114R Hellfire missiles and 24 M134 7.62mm machine guns and 24 GAU-19 0.50 cal machine guns are also included in the request, as well as embedded GPS/Inertial Navigation Systems electro-optical infrared laser designators, AN/AVS night vision goggles, missile warning systems, and various communication and tactical systems.

Tunisian Air Force equipment currently includes around 20 ex-US Army Bell UH-1H and 16 ageing Agusta-Bell 205A-1 helicopters to provide an assault transport capability.

■ The Royal Air Force has begun instructor training on the new Boeing HC.Mk.6 Chinook helicopter at RAF Odiham. Initial release to service of the new variant, which is based on the CH-47F with digital flight controls as part of the cockpit upgrade, took place in April.

Four HC.Mk.6 are currently in service and two more are scheduled to follow later in the year. Another nine aircraft will be delivered in 2015, bringing the Mk.6 fleet up to a total of 14 helicopters.

The Ministry of Defence has also announced a new £115m contract with Boeing Defence UK

to maintain the engines of all 60 Chinooks in the fleet from 2016, replacing five individual support contracts and saving £20m.

■ The US Army has qualified the Boeing AH-64E Apache Guardian variant for deck landings, as part of an ongoing trial to evaluate the aircraft for a range of seaborne operations. The qualification followed trials aboard the US Navy amphibious assault ship USS Peleliu by eight AH-64Es off the coast of Hawaii.

With the aircraft cleared to refuel and rearm at sea, additional tests were undertaken further out to sea as part of the US Navy's Rim of the Pacific exercise in the area. This included demonstrations of the helicopter's ability to operate in a maritime environment.

The eight AH-64Es were deployed by the 1st Armed Reconnaissance Battalion, 25th Aviation Regiment normally based at Fort Carson, Colorado and returned home in mid-August.

■ The UK Ministry of Defence has finally signed a contract with Thales UK to develop and integrate the company's new Lightweight Multirole Missile (LMM) for the AgustaWestland Wildcat helicopter. The agreement is valued at £48 million and covers a five-barrel launcher and laser guidance system, as well as deployable test equipment.

Designated the Future Anti-Surface Guided Weapon (FASGW) (Light) by the Royal Navy, which will be the prime customer, the 13kg (28lb) missile is a laser beam-riding precision strike low-cost weapon for attacks on small ships and similar surface targets, and is complemented by the FASGW (Heavy) missile now being developed by MBDA.

Both programmes are well behind schedule and unlikely to enter service before 2020.

■ The Ukraine government recently issued an order to take back 26 Mil Mi-8MTV-1 helicopters, operated by Ukrainian Helicopters for military service to support ongoing anti-terrorist operations in the east of the country. The aircraft have been on lease to the company from the Defence and Interior Ministries since 2003.

The government claimed that a clause in the lease allows for the return of the helicopters in case of a force majeure, fully operational and with military equipment re-installed. Ukrainian Helicopters disputed the order, suggesting that none of the aircraft were airworthy when it took possession and all had to undergo major overhauls and modernisation at the company's expense before they could be put in service. The company also argued that it has current contracts with the United Nations, the cancellation of which would damage the country's international reputation, lose valuable income and incur financial penalties, and ultimately put Ukrainian Helicopters out of business.

CH-148 contract revision details

Canadian sources have confirmed details of the revised contract agreed between the government and Sikorsky Aircraft, to allow deliveries of the much delayed CH-148 Cyclone multi-role naval helicopter to properly get underway. The new \$1.9 billion purchase contract was finally agreed on 18 June.

Under the deal the Royal Canadian Air Force will begin accepting the first eight CH-148s for service next year, but the aircraft will not have a 30 minute run-dry main gearbox and the government has instead reluctantly accepted the current Sikorsky design. Also dropped is an onboard starting system for cold weather operations and automatic deployment of life rafts. Instead the aircraft will have to rely on ground start equipment, whilst the life rafts will need to be deployed manually by crew members in an emergency, from stowage positions in the sponsons. The contract amendments also reduces some of the operational capability of the aircraft, for example the ability to secure the rear ramp in various positions during flight, unobstructed hand and footholds for maintenance use when deployed, and cockpit ergonomic factors and crew comfort systems, especially during extreme temperature operations. In addition, performance of the Cyclone will remain below the original specification as a result of weight and power compromises.

Initial deliveries in 2015 will be to an interim standard, without a fully integrated software package to control the aircraft's mission and warfighting equipment or an automated datalink system. The first helicopters will be used primarily for training and later upgraded to the new agreed configuration post 2018. The agreement has also reviewed the separate in-service support package to be provided by Sikorsky, increasing this from C\$ 3.2 billion to C\$ 5.7 billion and



Above: The Australian Army expects to clear the NH Industries MRH-90 for full combat deployment in September and has already begun to retire its older Sikorsky S-70 Black Hawks from service.

extending it to 2038. This package includes the construction of a new training facility, equipped with simulators.

United Technologies has previously recorded losses on the contract to supply the 28 helicopters, amounting to a total of \$597 million by the end of FY2013. Later figures are not yet available, but the company does expect to claw back some of the losses through the new service support arrangement.

Mexico wants more Black Hawks

The Mexican government has submitted a Foreign Military Sale request to the US State Department to purchase 18 Sikorsky UH-60M helicopters, to provide additional airlift support for its forces engaged in counter-drug operations. The estimated value of the sale, which includes ancillary equipment, parts and training is \$680 million.

Mexico already has US FMS approval to acquire a further five Sikorsky UH-60M for

anti-drug missions as part of its diverse fleet of transport helicopters for internal law enforcement and defence missions. These include three UH-60M purchased in 2011 and several earlier Black Hawks. If approved by the US Congress, the new order will expand and upgrade the existing fleet with new facility construction, an additional aviation ground power unit, five aviation mission planning systems, tool and test equipment, and 18 sets of AN/AVS-9 night vision goggles as part of the deal.

The aircraft will also be delivered with 36 embedded GPS/Inertial Navigation systems plus six spares, 36 M134 7.62mm machine guns and communication security equipment including AN/ARC-210 RT-8100 series

MRH-90 replaces Black Hawks

Following previously publicised delays in the Australian MRH-90 helicopter programme, the Army has now finally begun withdrawing the first Sikorsky S-70A-9 Black Hawks from service, three years behind schedule. 41 MRH-90 are being delivered to the Army by Australian Aerospace in partnership with NH Industries.

The new aircraft received its military type certificate in April 2013, but is currently being flown under a limited operational clearance with no combat capability. This is expected to be lifted fully in September, when the helicopter should be cleared for full Airmobile high-threat combat deployment, 41 months later than originally planned.

A number of design issues have impacted on the operational capability timetable, including the need to modify the self defence gun mount, the cargo hook release mechanism, the cabin seating and the fast rope rappelling device. In addition the relatively low flying rate, caused by reliability and maintenance immaturity during the initial entry into service, have impacted on aircrew training. As a result the Black Hawk fleet will not finally be retired until June 2018, adding some A\$311 million to the service life costs.

Meanwhile the Australian Navy acquisition of six MRH-90 to replace the now retired Westland Sea King helicopters for utility support is also late, with a first operational capability milestone running 45 months behind schedule. As a result the Navy has been forced to use its S-70B-2 anti-submarine helicopters to plug the utility gap.

A recent audit report on the programme criticises both the Australian government and Australian Aerospace for not recognising the complex nature of introducing a new and immature helicopter like the MRH-90 into service, but also recognises the great potential in the aircraft for future multi-role missions over the S-70, in particular during embarked operations.

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Above: The Bahamas Defence Force is evaluating an ex-Royal Air Force Westland Wessex HC.Mk.2 helicopter for search and rescue and security patrols. The aircraft, previously XV729, is one of several previously stored by a private owner in Kent and overhauled at Biggin Hill Airport.

A second Wessex Mk.2 is now being overhauled and the partners claim to have several more airframes and ample spares available as back up (Neil Johson).

radios and IFF identity systems.

Israel tests new gun systems

An Israeli company, Duke Airborne Systems, is planning to carry out flight trials of a retractable remote gun system for medium and heavy utility helicopters, which it claims will allow them to carry out missions without the need for an attack helicopter escort.

The system features a 25mm electric cannon with up to 2000 rounds of ammunition, mounted on a robotic base and with its own multi-spectral sensor system for day/night operations. Normally stored out of sight, in an internal cage unit typically occupying about one-third of the cabin space adjacent to the main cabin door, the weapon deploys automatically on command using a set of robotic arms that extend the cannon and targeting sensor out through the open doorway and position it under the fuselage, locking it in place on cargo hook connections.

This ventral position gives the gun a 360 degree field of fire, but allows the unit to be stowed back in the cabin when not required. The system is almost fully automated including a gunfire location and suppression function, and requires no dedicated operator. Based on proven land-based technology, the robotic system uses a six-axis stabilisation unit which suppresses vibration and translation in three axis of movements and three axis of rotation.

According to Duke, the new weapons system weighs around 500kg (100lb), and can be jettisoned by the pilot in an emergency or easily removed in non combat situations.

Cybaero APID 60 for China

Cybaero, the Swedish manufacturer of the APID 60 unmanned helicopter, has signed a framework agreement with the Chinese AVIC

group, to set up a joint company to produce the 180kg (397lb) gross weight air vehicle over an initial eight year period. The potential order value is up to US \$117,000 depending on the final systems provided.

The APID 60 is a 3.20m (10ft) long vertical take off unmanned air vehicle, with a 3.30m (11ft) rotor diameter and a payload in the order of 50kg (110lb). Power is normally provided by a 55hp two-stroke watercooled engine, giving a cruising speed of 90km/h (56mph) and a flight time of up to six hours. A mobile automatic launch and landing station allows the helicopter to take off and land on moving surfaces, such as the deck of a small ship, and the aircraft is also available in a heavy fuel version for maritime operations, avoiding the need to store volatile fuels on board.

Sensors are provided through partners and tailored for the customer but can include FLIR, laser scanner, magnetometers, ground radar, biochemical sensors etc. Cybaero received a US \$7,000 order earlier this year for the APID 60 from China's Customs Agency, and has previously sold the system to Spain as the Pelicano for naval trials, under a partnership with Indra.

The Chinese agreement sees AVIC committing to purchasing at least 20 helicopter systems during the first three years, and a minimum of a further 50 systems over the following five years. Each system includes helicopters, ground control stations and datalinks. The contract also covers training and support, as well as an option that could eventually see local assembly in China for the Asiatic market.

Through the joint company AVIC will take responsibility for marketing the APID 60 in the East Asia parapublic and commercial aviation sectors, targeting customs and coastguard services, the energy sector, agricultural, mapping and rescue services etc, where the surveillance capabilities of the system can add value.

Diehl offers GILA for Tiger

Guided Weapons manufacturer Diehl Industries is offering a new semi-active laser-equipped rocket for use on the Airbus Helicopters Tiger UHT attack helicopter, in service with the German Army. Dubbed GILA (Guided Intelligent

Light Armament), the 70mm (2.75in) missile is closely derived from the Elbit Systems GATR (Guided Advanced Tactical Rocket), developed since 2008 as a low-cost weapon compatible with standard 70mm launcher hardware, and with a range of up to 8km (5 miles).

Trialed in 2009 in partnership with Alliant Techsystems in the United States, when it was fired from a Bell OH-58D Kiowa Warrior on the range at the Eglin Air Force base in Florida, GATR can be produced by modifying unguided 70mm rockets for use in urban areas against soft or armoured targets, with minimal collateral damage. This makes it a very effective but low cost option. The missile also features a lock-on-before-launch mode, which provides a mission abort capability not available with traditional unguided rockets.

These features make it attractive for the types of United Nations peace keeping and NATO protection missions supported by the German Army and Diehl believes this makes the GILA variant an ideal match for the Tiger UHT for that very reason. Under the terms of the partnership with Elbit, Diehl Defence would receive an extensive workshare if the missile is ordered, including work on the guidance and control unit, manufacture of the actuation system, final assembly of the rocket, simulation software, helicopter integration and logistics.

Diehl suggests that, as the GILA could be integrated with the Tiger's existing 70mm launchers without modification, qualification and integration development

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- Norsk Luftambulans has been awarded an initial three year contract by the Norwegian National Air Ambulance Service to provide air medical cover in the Evenes region. The helicopter will be based at Narvik airport.

The company will order a new Airbus Helicopter EC145T2 for the contract, which is due to commence on 1 May 2015 and is valued at NoK 43 million (Euro 5.1 million). The aircraft will operate with a three-man crew including a doctor/paramedic and will cover the Lofoten Vesterålen, Ofoten and Sør-Troms areas in Norway's central spine.

Norsk Luftambulans already operates eight of the 11 Helicopter Emergency Medical Service bases in Norway, with contracts due for renewal in 2018. The shorter contract period for this latest agreement will allow harmonisation of the tender process at that time.

- ADAC Luftfahrt Technik has signed a Parts-by-the-Hour contract with Airbus Helicopters to maintain the fleet of 14 new EC145 helicopters operated by ADAC. The ten year service agreement is valued at Euro 25 million and, includes technical services adapted to the customers requirements and provided at fixed costs.

In conjunction with the Airbus Helicopters agreement, ADAC Luftfahrt Technik has also signed a similar ten year contract with Turbomeca to cover support of the 28 Arriel 2E engines installed in the EC145T2s.

- Sikorsky Aircraft has shipped the first S-76D helicopters configured for search and rescue operations to Mitsubishi in Japan, for final completion and delivery to the Japan Coast Guard.

To date the Japan Coast Guard has ordered 11 S-76Ds, all configured with the fully coupled four-axis autopilot and Thales Top Deck integrated avionics system, and the more powerful Pratt & Whitney Canada PW210S engines introduced on this latest S-76 variant. The shipment follows the initial delivery of S-76Ds in the offshore support and corporate sectors of the market and should be followed by the first air medical configured aircraft in a couple of months.

Currently the S-76D production line at the Coatesville assembly and completions facility in Pennsylvania is still at a low rate, but building up to produce an expected 25 aircraft this year. Other recent deliveries have included S-76Ds for Bristow Helicopters for Gulf of Mexico operations and an executive aircraft registered to the Prudential Insurance Company of America.

The first operator to put the S-76D into revenue - earning service, National Helicopters in Trinidad, has logged over 500 hours oil and on gas flights since beginning operations last February and is due to receive two more S-76Ds later this year.



Above: Sikorsky Aircraft has shipped the first SAR configured S-76D helicopters to Japan. Seen here is the second example during pre-delivery flight tests.

- The Ministry of Internal Affairs in Uganda has ordered a W-3A Sokol from PZL-Swidnik for delivery in 2015, to carry out law enforcement support for the Ugandan Police. The helicopter will be equipped with a cargo hook, rescue hoist, search light, rappelling system and a loud speaker system, as well as FLIR and provisions for firefighting equipment and emergency flotation.

The contract with PZL-Swidnik also includes the sales of an AW109S Grand New helicopter from parent company AgustaWestland. This aircraft will also be delivered to the Ugandan Police next year, equipped for a law enforcement role.

- AgustaWestland delivered in late June the last of six AW119Kx helicopters for Lifelink III of Minnesota and Wisconsin, to support a consortium of nine hospitals in the region. Ordered from the company's Philadelphia production line last year, deliveries began in early 2014.

Operated on behalf of Lifelink III by Air Methods Inc, the first three helicopters are already in service. When induction is complete, the six aircraft will serve five bases located throughout Minnesota and western Wisconsin, replacing the current Bell 407 fleet and providing a 24 hour seven day week air medical service throughout the year. All the helicopters are fitted with the latest Garmin G1000HTM avionics system, including synthetic vision, moving map, highway in the sky and obstacle/terrain avoidance systems for enhanced situational awareness and safety. Lifelink III also retains options for an additional six aircraft.

Nearly 240 AW119 helicopters have been ordered to date, with sales in more than 30 countries by over 100 customers. The AW119Kx represents the latest variant of this single - engine helicopter, production of which is currently solely at the Philadelphia plant.

- The Wiltshire Air Ambulance is now expected to remain at its current base adjacent to the Wiltshire Police Headquarters in Devizes for up to a further five years, when the current joint arrangement ends in December.

The Wiltshire Police will be vacating the hangar at the year end when their air support unit amalgamates with the National Police Air Service operating from Filton on the outskirts of Bristol. A lease for continued use of the hangar with opt out clauses has been signed, which will allow the Air Ambulance to vacate earlier once it has a permanent site of its own.

The charitable trust is continuing to focus on the Devizes area for its long term base and is currently focusing on four potential sites, all within 16km (10 miles) of the team.

- The Queensland Police have leased an upgraded MBB Bo105 CBS Super Five helicopter from Surf Life Saving Queensland for a two year period to provide aerial support in the Brisbane area. The aircraft is the second of two helicopters funded by the state government, following promises made in the run up to the 2012 Queensland election.

The 20 year old aircraft has been fitted with new avionics, infra red sensor ball and search-light, and will be based at Archerfield Airport.

- The Great North East Air Ambulance Service (GNAAS) has opened a new base at Newcastle Airport in Tyne and Wear, under a partnership with the airport authority which has provided office space, toilet and kitchen facilities for the service, to supplement the main north east England GNAAS base at Tees Valley Airport, near Darlington in Durham.

The air ambulance is a frequent visitor at Newcastle's Royal Victoria Hospital and the new base will allow crews to refuel, restock and re-plan missions locally, rather than flying back to Darlington. The new base will also allow GNAAS to respond more quickly to incidents in the Newcastle region.

GNAAS also has a helicopter based at Langwathby in Cumbria, which remains unaffected by the change.



Above: Airbus Helicopter Vostock has received an order for two more EC145 helicopters for air medical service in the Moscow region. Three aircraft, including RA-01882, are already operational in Moscow.

● The Philadelphia Police Department took delivery of the first of two Airbus Helicopters AS350B2 helicopters in late June, becoming the latest US law enforcement agency to select the type for its aviation needs. More than 220 AS350s are currently in use across the United States in the role.

The Philadelphia Police will use the AS350B2 for general patrol duties, harbour and coastal security, rescue missions including hoist rescues for the first time, and SWAT team insertions. The aircraft were ordered last October using a federal grant and are expected to log around 1,000 flight hours annually in service, replacing the current Bell 206-L4 operated by the aviation unit.

● A Bell 429 helicopter, customised by Heli-Drive in Russia for air medical operations, had completed 52 patient evacuation missions by mid-June after entering service last March in St Petersburg.

Heli-Drive is one of Bell Helicopter's independent representatives in the region and has a state-of-the-art facility in St Petersburg, with more than 8500 sq.m (91,493sq.ft) of space including hangars, service areas and training classrooms. To facilitate helicopter emergency medical services in the region, Heli-Drive has constructed six helipads at regional hospitals in the area, under an agreement with the Russian Ministry of Healthcare and the local healthcare department.

A further ten helipads at other hospitals in the St Petersburg region are planned for construction in the near future.

● Haynes Ambulance in Alabama is introducing an Airbus Helicopter AS350B to its ambulance business, in partnership with Metro Aviation. The new Life Flight service, based at Wetumpka in central Alabama, was launched on 15 June.

The aircraft is the first to enter service with the company, which operates ground ambulances from nine locations throughout Montgomery, Elmore, Pike and neighbouring countries in the State, and has been in business since 1977. The helicopter was completed at Metro's Louisiana facility and will be operated by the company under a contract with Haynes.

● Helinet Technologies in Van Nuys, California is to develop and install a customised mission suite in four Bell 429 helicopters, purchased by the New York Police Department (NYPD) for law enforcement and counter terrorism operations in the city region. The new contract follows recent work by Helinet developing a real-time video and data downlink system for the NYPD current aircraft fleet.

The new mission suite for the Model 429s will be developed in partnership with equipment providers Wescam, Churchill Navigation, Vislink and Trakka Corporation, providing live streaming of high definition video and data from the helicopters to command centres and handheld receivers being used by officers on the ground. Aircrews will also be able to overlay information such as addresses, points of interest and other data onto the video for transmission via the secure downlink. The system will provide complete interoperability with the existing NYPD airborne surveillance structures and the systems of local state and federal partners.

In developing the new system, Helinet is taking advantage of commercial-off-the-shelf equipment where practical, and will also provide ongoing training and 24/7 support following service entry of the system.

● MD Helicopters has officially handed over a second new MD500E helicopter to the Polk County Sheriff's office in Florida, continuing the Sheriff's programme of replacing its old military - surplus Bell OH-58A aircraft.

Polk County covers over 5,180sq.km (2,000 sq.miles) of land and water in the state and the MD500E is fully equipped to support ground

units with surveillance, pursuits and search and rescue missions. The onboard equipment includes a Garmin 500H glass cockpit with night vision goggle compatibility, a moving map system and tactical radio, and a Nightsun searchlight and Meeker mount. The aircraft is also fitted with a 907 kg (2,000lb) cargo hook and an auxiliary fuel tank.

The Polk County aviation unit operates with seven full-time pilots and 10 part-time flight officers.

● Airbus Helicopter Vostock has won an open tender to supply two specially equipped EC145 aircraft for air ambulance service in Moscow. The contract award was announced by the Moscow Health Department in late July, on behalf of the department's Scientific and Practical Centre of Emergency Medicine. Two other manufacturers also entered bids.

Three EC145s already operate on air medical missions with the Moscow Aviation Centre, saving around 600 lives annually. The new aircraft are due to be delivered in 2015. Each will be fully equipped for emergency medical treatment and patient transport, with neonatal facilities including an incubator and lung ventilator for newborn infants.

Airbus Helicopters has over 155 aircraft operating in Russia at the present time, as well as more than 70 flying in neighbouring Commonwealth of Independent States. The company holds over 60 percent of the Russian foreign turbine helicopter market.

● Bell Helicopter has signed a purchase agreement with the Georgia State Patrol in the United States for a Bell 429 helicopter, to be used for a range of law enforcement missions including surveillance, support of ground personnel and search and rescue. The aircraft will join a mixed Bell helicopter fleet, operating from six field locations across the State and including six Model 407s, one Model 206 and five OH-58s.

Elsewhere in the USA, Bell has received an intent to purchase from the San Diego County Sheriff for a Bell 407GX to cover parapublic mission alongside the two Bell 205A1++ and one Model 407 already in use, whilst the Pennsylvania State Police took delivery on 22 July of the first two of six Model 407GX on order.

Pennsylvania currently has six police aviation patrol units, based across the state and still operating six ageing Bell 206 aircraft. The State Police also operated two AgustaWestland AW119 Koala helicopters for ten years but sold both in 2013 and early 2014, along with a Bell 206L-3, as part of a policy to replace its older aircraft. It will however retain a 1999 Bell 407 in service to provide back up for the new fleet.

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Regional News

- NORTH AMERICA

● The Starlite Aviation Group have signed a new leasing and hourly support agreements with Vector Financial Services for an overhauled Airbus Helicopters AS332L Super Puma. The aircraft is one of a number of ex-offshore support Super Pumas traded in to Vector Aerospace.

Vector upgrades the aircraft systems and installs new avionics at its Canadian facilities, before providing the helicopters to customers for further service. Previously overhauled AS332Ls are already in use for offshore operations in South East Asia, flying missions in Afghanistan and supporting peace keeping activities elsewhere. This latest Super Puma is being deployed by Starlite on utility operations.

● Bell Helicopter opened its new 21,368sq.m (230,000sq.ft) headquarters building at its historic Hurst site in Fort Worth Texas at the end of June, with initial occupation by 1100 corporate, commercial sales, military programmes and human resources personnel previously spread across the area.

By vacating offices in some of the old 1950s buildings at Hurst and relocating staff from facilities at Alliance Airport, Bedford and other sites across Fort Worth, the company expects to produce major efficiencies in terms of consolidation and energy saving, amounting to over \$20 million annually. Over the next 12 months Bell also expects to complete a new flight and maintenance training centre at Hurst, which will then see that activity also relocating from Alliance Airport, and bring all the company's Fort Worth activities onto one campus.

The total investment at Hurst is expected to be in the order of \$235 million by the time it is completed, although this bill has been sweetened with tax incentives from the city of Fort Worth. These are worth up to \$13.5 million over ten years, subject to Bell guaranteeing agreed employment numbers over this period.

● Enforcement of a mandatory heli-route along the North Shore of Long Island, New York following local political pressure, has caused more noise complaints than previously, say critics. The route was made mandatory by the Federal Aviation Administration in August 2012, with a review due in August this year.

Previously helicopter operators mostly followed the railroad tracks up the centre of the island, with voluntary guidelines to disperse and minimise any noise. Now helicopter traffic is concentrated on one off-coast route, with a minimum transit height of 762m (2500ft) and increased safety risks. The critics claim that since its inception two years ago, noise complaints from North Shore residents have increased by 360 percent, proving the regulation has not worked. Instead operators are calling for a new and more flexible noise abatement plan, which could be followed voluntarily and minimise noise levels over specific neighbourhoods.

● The US Federal Aviation Administration (FAA) is proposing to adopt a new airworthiness directive for certain Sikorsky S-92A helicopters, requiring the installation of modifications to better alert and prevent main gearbox oil loss, which could lead to gearbox failure.

The upgrade include fitting a sensor and vacuum switch wiring in the gearbox to alert pilots to a failed oil pump, and installing an oil auto bypass system. In addition the directive will require new software for the aircraft management system to show a new visual warning, together with enhanced ground proximity warning system software that provides an aural warning of a complete loss of oil pressure.



Above: Airbus Helicopters carry out 12 year inspections for US and Canadian operators of the EC120 and AS350 family at their Grand Prairie, Texas and Fort Erie, Ontario facilities. This is an EC120 under overhaul for the Albuquerque Police Department.

The proposal has been prompted by evidence that pilots have been unable to manually activate the bypass valve within five seconds of the oil pressure dropping below 35 psi. The auto bypass and software eliminates the need for manual activation, but alerts the pilot so that he can switch the bypass valve out of bypass to cool the oil when necessary. Failing to do this can lead to the hot oil damaging the input module seals, leading to a catastrophic oil leak and failure of the main gearbox.

According to the FAA, up to 44 US registered S-92A helicopters will be affected if the airworthiness directive is confirmed, although all aircraft up to construction number 920179 could be affected if not already retrospectively modified. Later deliveries are not affected.

● The VIH Aviation Group has purchased the former South Korean World Peace Unity Foundation Sikorsky S-92A helicopter, formerly operated in an executive configuration for the cult's leader. Originally built in 2008 the aircraft was offered for sale some 18 months ago, with a total airframe time of just 329 flight hours.

The VIH Group is the parent company of Cougar Helicopters but has recently been selling off its own light helicopter fleet and support bases in Western Canada to focus on heavy lift operations. For this work it primarily uses a fleet of four Kamov Ka-32 helicopters, including one aircraft imported earlier this year from Switzerland. This has replaced a Kamov Ka-32 damaged in a roll-over accident in British Columbia in 2013.

● Heliflite in New York has completed an upgrade on its Sikorsky S-76 executive helicopter fleet, including the introduction of two additional S-76B aircraft purchased in 2012.

Both helicopters are now configured in an eight seat executive passenger layout. A third S-76 in the fleet seats seven passengers and features an on-board refreshment centre. The refurbishment also included both interior and exterior refinishing as well as enhancements to the avionics and satellite tracking systems on board all three aircraft.

Since being established in 1998 at Newark Liberty International Airport, to provide executive helicopter travel in the Northeast Corridor, Heliflite has grown to a fleet of eight helicopters in total, including also a recently leased AgustaWestland AW109 and four Bell 430 helicopters. All the aircraft are Category A certified and equipped with a Traffic Collision Avoidance System to enhance safety in the busy airspace in the region.

The mixed fleet operates within a 402km (250mile) radius of New York City.



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- OFFSHORE WORLDWIDE

- Recent deliveries and production of the Sikorsky S-92A for the offshore support industry include 5N-BPC for Bristow Nigeria, LN-ONE for Bristow Norway, and c/n 920214 for Bristow US operations in the Gulf of Mexico.

B-7305 c/n 920215 has been allocated to CITIC Offshore Helicopters Co in China, whilst C-FBXY, c/n 920216 was delivered in May to CHC Canada as the first of two aircraft allocated for the new contract with Statoil, which will begin later this year, PHI Inc has taken delivery of the next two S-92A, c/n 920217 and '218 as N942PH and N943PH respectively, and Bristow Australia has c/n 920219, '221 with '222 allocated to Bristow US.

Finally Bond Offshore Helicopters received G-VINI c/n 920220 at Aberdeen at the end of March this year, with G-VINK c/n 920223 and G-VINL c/n 920226 following in June.

- Bristow Helicopters Norway has secured a three year contract to provide offshore support services for Lundin Petroleum, and Det Norske, sharing a dedicated Sikorsky S-92 helicopter operating from Stavanger Airport.

The aircraft will service the Edvard Grieg oil project in the North Sea, 180km (112 miles) west of Stavanger, where Lundin has previously identified large deep water oil reserves and is currently preparing for a production start up in the fourth quarter of 2015. The S-92 will also provide a service to the nearby Ivar Aasan oil field, 175km from the Norwegian coast and being jointly developed with Lundin by Det Norske. Initial oil and gas production from this field is expected to begin in 2016.

The contract is scheduled to begin in early 2015 and includes three two year extension options, and additional helicopter support as required by the two companies. Bristow currently has 17 S-92s based in Norway on offshore support operations.

- Gulf Helicopters has begun flying the first two of 15 new AgustaWestland AW189 helicopters the company has on order. Both aircraft were operating from Doha in Qatar in late July. The AW189s will support Gulf offshore oil and gas support operations in the region.

The 8 tonne class helicopter is optimised for long range offshore missions and received European Aviation Safety Agency certification last February, with production now established at the manufacturer's Vergiate plant in Italy. Gulf Helicopters is among the first three operators to put the type in service and has also ordered an AW189 Full Flight Level C simulator to support its pilot training programme. The company already uses an AW139 Full Flight Level B simulator in its training school and in future will offer both simulators to the wider customer market as an AgustaWestland authorised training centre.

More than 130 AW189s have been ordered to date, with the aircraft uniquely offering a certified 50 minute run-dry capable main gearbox to enhance safety and reliability for long range over water operations.

- CAE has confirmed an agreement with Caverton Helicopters in Nigeria to provide training services over a six year period at a new centre, to be located in Lagos. The turnkey operation will include an AgustaWestland AW139 full motion simulator, alongside a similar unit for the Boeing 737NG and two CAE Simfinity Integrated Procedures Trainers.

- Bond Offshore Helicopters has received approval to construct a new hangar and maintenance facility at Aberdeen Dyce Airport, adjacent to the company's existing eastern terminal. The site is currently partly used as a car park.



Above: Lease Corporation International (LCI) has placed an Agusta Westland AW139 helicopter with Indwe Aviation in South Africa, to provide offshore crew change support from George Airport to new oil and gas exploration areas in the Northwest Pletmos region off Western Cape province.

The aircraft is the first AW139 to enter service with an offshore helicopter operator in South Africa and is part of a multi-million dollar order placed by LC1 with AgustaWestland for new helicopters, first announced in 2012. Indwe Aviation is a subsidiary of the Titan Helicopter Group, which provides helicopter services throughout Africa as well as overseas in Peru, India and Antarctica.

The new building will cover a 1955sq.m (21,043 sq.ft) floor area to house up to six helicopters, with stores space and personnel changing facilities. The car parking area will be reconfigured to provide space for 22 vehicles, together with six taxi spaces.

- Statoil has confirmed a five year contract, with an extension option for up to three years, for CHC Helicopter to provide offshore transport services to the Mariner oil field, 250km (155 miles) off the north east Scottish coast. The service is expected to begin in mid-2016.

CHC will provide two Sikorsky S-92 helicopters for the new contract, operating from either Aberdeen or Sumburgh on the Shetland Isles to reach the field, which lies in the North Sea on the East Shetland Platform of the UK Continental Shelf. The project is the first oil field to be developed by Statoil in the UK sector of the North Sea and is the largest field development on the UK Continental Shelf in more than a decade, with an estimated reserve of more than 250 million barrels of oil and an expected 30 year life.

Statoil anticipates the hook-up and commissioning phase of the Mariner field to begin in 2016, with production starting the following year. The contract also includes some additional flexibility, including options to support further exploration activity and possible expansion in the area.

- PHI Inc has signed a joint agreement with Cyprus Airways to establish a new company on the Mediterranean island. PHI Air Europe will serve the Cyprus Exclusive Economic Zone and the Eastern Mediterranean from a joint base at Paphos Airport.

PHI Air Europe hopes to attract business from the oil and natural gas industry operating offshore in the region and sees the partnership as providing a base for shared maintenance and engineering and other services. However the state-controlled Cyprus Airways is in serious financial trouble at present, having posted heavy losses for years and the airline is on the market with bid submissions currently under consideration following the sale already of various assets to stay afloat.

The deal with PHI Inc may therefore throw a lifeline by providing work and income in the near term, but with no long term guarantees.

Clubs and Associations



Westland Sea King by Charles Stafrace. Published by Warpaint Books. Price: £16.00. Coincidentally, this softback book is also partially aimed at the modeller and so also contains three-view plans, coloured side elevations and lots of photographs of its subject, supported again by the development history of the British-built Sea King variants.

The publisher has a long standing reputation for accuracy in its coverage of multiple aircraft subjects and the author of this volume does not disappoint. Each of the Westland variants is covered in turn, with production and service histories varying depending on the operator covered. Naturally this means fuller coverage of the Royal Navy and Royal Air Force Sea Kings than say Pakistan and Qatar. However it is nice to see some previously unpublished pictures of these overseas variants included.

Again detail close ups and a list of models available to make up this coming winter completes this 64 page history, which we heartily recommend to any and all interested in the subject.

Russian Gunship Helicopters by Yefim Gordon & Dmitry Komissarov - Published by Pen & Sword Books. Price: 16.99 (UK). This duo of authors have produced a prolific range of books over the past 20 years, focusing entirely on Russian aviation history and development and with a world-class reputation for detail. This 96 page softback does not disappoint.

Aimed partially at the aircraft modeller, it contains a host of photographs, plans and colour side elevations of the Mil Mi-24, Mi-28 and Kamov Ka-50/Ka-52 along with the development history of each type and details of the various model kits available.

Invariably in a book of this price range, the authors have been unable to go into the full histories of each type - you need to look at other titles they have had published to learn more, but this book does cover all the major developments and some of the original design proposals. For instance, one of the original Mi-24 mockups had a strong resemblance to an armed Bell Huey, whilst the Mi-28 was initially offered as a side-by-side twin rotor compound with a pusher airscrew.

Only the single-seat Kamov ka-50 appears to have remained true to its revolutionary design, a concept that we recall triggered a US panic into developing the ill-fated RAH-66 Comanche, when their intelligence agencies first caught sight of the prototype in 1982. However this book concentrates more on the two-seat Ka-52, so this early history is only thinly covered. Pity-it would have been of interest to some we expect to model the original Ka-50 prototype, as flown with a fake cabin door and windows painted on the fuselage to fool the West!

The World Encyclopedia of Military Helicopters by Francis Crosby. Published by Lorenz Books. Price: £17.99 (UK) \$35.00 (USA). This is a lavishly produced hardback of over 250 pages, which covers not just individual helicopter types used by military forces since the early 1940s but also includes brief chapters on the early pioneering work, key conflicts where helicopters played major roles, technology advances like rotor systems, engines and unmanned systems and even occasional cut-aways of specific designs.

With over 520 photographs in total and featuring more than 80 helicopters in the main directory, this book seems excellent value for money. A pity then that its use as a reference book is spoiled by a multitude of mistakes, far too many to list here and destroying any value as an authoritative source. To pick out just a couple of example at random. The Piasecki H-16 was not the world's first twin-engined helicopter and the Bristol Sycamore captioned as an HC.11 "evaluated by the Royal Air Force search and rescue" has an accompanying photograph of the later HC.Mk.14. In any case the version evaluated by the RAF was the HR.Mk.12 and later Mk.13! A photograph of a Westland Lynx captioned as a Merlin doesn't help authenticity either and neither the Kawasaki OH-1 or the Sikorsky HH-52 receive even a mention.

The conclusion has to be that what could have been an excellent source of reference is not, all for the want of better editing and cross checking. On the other hand, provided the reader accepts the faults and inaccuracies in the text, it is still an interesting collection of photographs and good value for that alone.

Alouette III Sous L'Uniforme by Patrice Gaubert and Bernard Palmieri. Published by Editions LeLa Presse. Price: €50.00 (France). As you may have already guessed this history of the Sud Aviation/Aerospatiale Alouette 3 in military and parapublic service is in the French language but, if you aren't fluent, don't let that put you off. This 332 page A4 size hardback is well worth every cent.

Lavishly illustrated with many previously unseen photographs, accompanied by various detail illustrations and information on every air arm that ever operated the type, this "piece de résistance" (sorry!) is a production list of every aircraft built and the customer. All the variants are covered including the one-off prototypes developed in Romania and South Africa.

As the Alouette 3 moves ever closer to retirement now, it is easy to forget what an important role it has played in many air arms since first being introduced to service in 1961. Over 2,000 were eventually built with widespread military service in more than 60 countries. This book is a fitting tribute.

ROTARY PEOPLE

Airbus Helicopters has appointed **Colin James** as Managing Director of its UK subsidiary, succeeding **Markus Steinke** who is moving to a new position within the Airbus Group at Toulouse. James previously held the position of Vice-President Engineering with Eurocopter since 2009, after carrying out various roles in the company over the previous 17 years. These included managing the development of the Tiger ARH contract and support structure in Australia between 2001 and 2006... Precision Aviation Group has re-appointed **Adrienne Robinson** as Vice President Business Development, following her temporary dual role since 2012 acting as President of Precision Aviation Services (PAS)... **David Ford** has now been appointed as President of PAS, moving from his previous position as General Manager of Chromally Gas Turbines... Columbia Helicopters has named **Mike Brunner** as its new Vice President of supply chain and manufacturing and has recently added newly retired **Major General William Crosby** to its board of directors. Crosby was previously programme executive officer for US Army Aviation and before that was programme manager for the CH-47 Chinook... Three Victoria Air Wing officers in Australia have received Police air Medals for courage after rescuing a Russian sailor last April. **Peter Dillon, Mark Weekley** and **Bradley Pascoe** found the stricken

yacht in 10m (33ft) waves in storm conditions at night, 204km (110nm) offshore in the Bass Strait... Jet Support Services, headquartered in Chicago has appointed **Raymond Weiser Jr** as their first Helicopter Programme specialist to develop the rotary-wing maintenance business. Weiser has more than 12 years civil technical experience, following a career in the US Army... Former Bell Chief Executive Officer **Terry Stinson** has been elected to the Board of CPI Aerostructures for a three year term, following a period as a senior executive with AAR Corporation... The US Navy and Marine Corps have appointed **Colonel Henry Vanderborght** as Programme Manager for Heavy Lift helicopters, succeeding **Col. Robert Pridgen** who is taking programme responsibility for the Presidential Helicopters Programme. Vanderborght previously head up the Bell UH-1Y programme but also has considerable career experience since 1995 of the Sikorsky CH-53E and initial stages of the CH-53K development programme... The Bristow Group has appointed **John Briscoe** as Senior Vice President and Financial Officer following the promotion of his predecessor, **Jonathan Baliff**, to Bristow President and from 31 July as Chief Executive Officer... Dart Aerospace has named **Peter Olep** as Vice President Programmes and Engineering... **Doug Boessen** has joined Garmin as Chief Financial Officer and Treasurer, effective from 31 July... Bell Helicopter has appointed **Frank Carmichael** as Regional Sales Manager in Western Canada... Michael **Choo** has joined Universal Avionics as Regional Sales Manager for Asia.



Marketing Data

- CIVIL SALES

Region	Type	c/n	Owner/Remarks
Australia			
VH-EEB	Robinson R22 Beta II	4638	Heliflite
VH-ESK	Robinson R44 Raven II	13698	Heliflite
VH-FIP	Bell 206B	3135	Commercial Helicopters
VH-IAY	Robinson R22 Beta II	4642	Heliflite
VH-JFN	Airbus Helicopters AS350B2	2637	PFranks
VH-KHO	Bell 212	31181	Cronin Aviation Services
VH-KHY	Bell 212	31185	Cronin Aviation Services
VH-LEE	Bell 206L-3	51230	Southern Cross Executive
VH-MZS	Hughes 300C	100-0056	Helify
VH-NZZ	AgustaWestland AW139	31146	HNZ Australia
VH-ONT	Bell 206B	4004	Aerial Agriculture
VH-OUR	AgustaWestland AW109C	7603	Commercial Helicopters
VH-PCQ	Airbus Helicopters AS355F1	5189	Pacific Crown Helicopters
VH-PNF	Kawasaki BK117B-2	1043	State of NSW Police
VH-SSD	Robinson R22 Beta II	4636	Heliflite
VH-SSM	Airbus Helicopters AS350B2	7857	North Star Pastoral
VH-UAH	Airbus Helicopters AS350B3	7861	Heli Assets
VH-UUA	Robinson R22 Beta II	2946	B.Deleka
VH-WOE	Airbus Helicopters AS350B2	2469	HNZ Australia
VH-WYH	Airbus Helicopters EC130B4	3624	Whitsunday Air Services
Austria			
OE-XAA	Bell 212	31182	Heli Austria
OE-XJI	AgustaBell AB206A	8137	G.Paar
OE-XLS	Airbus Helicopters AS350B3	7378	Heli Austria
OE-XPR	Robinson R22 Beta	4643	P&B Helitrade
OE-XYN	Robinson R44 Raven II	13555	Heli-Line
OE-YAA	Schiebel Camcopter S-100	000232	Schiebel Elektronische Geräte
OE-YAB	Schiebel Camcopter S-100	000250	Schiebel Elektronische Geräte
OE-YAC	Schiebel Camcopter S-100	000303	Schiebel Elektronische Geräte
Canada			
C-FBWX	Bell 206B	4572	National Helicopters
C-FBXJ	Sikorsky S-92A	920216	CHC Helicopters
C-FHUE	Bell UH-1L	6060	Helicopter Transport Services
C-FLFF	Bell 206B	4031	Lally Products
C-FLOX	Airbus Helicopters AS350B2	2786	Lakelse Air
C-FSVH	Hughes 369E	0532E	Vortex Helicorp
C-GHJT	Sikorsky S-76B	760299	Helijet International
C-GRHX	Airbus Helicopters AS350B3	7645	Remote Helicopters
C-GRIJ	Safari Helicopter	0252N	W.Greenslade
C-GVAM	AgustaWestland AW109SP	22298	AIRMEDIC
C-GZGK	Bell 205A-1	30256	Guardian Helicopters
China			
B-7163	Airbus Helicopters EC120B	1113	Guangdong Poly Xiang
B-7296	Schweizer S-269C	S-1955	Shanghai Eastern Gen Avia
B-7305	Sikorsky S-92A	920215	CITIC Offshore Helicopter
B-7447	Airbus Helicopters AS350B3	7725	Hubei Yinyan Gen Avia
B-7536	Robinson R44 Raven II	13678	Hunan Xiang Gen Avia
B-7537	Robinson R44 Raven II	13679	Hunan Xiang Gen Avia
B-7538	Robinson R44 Raven II	13666	Elm General Aviation
B-7541	Robinson R44 Raven II	13562	Sichuan General Aviation
B-7542	Robinson R44 Raven II	13635	Sichuan Xiangyun Gen Avia
B-7543	Robinson R44 Raven II	13652	Sichuan Xiangyun Gen Avia
B-7545	Robinson R44 Raven II	13615	Henan Yongxiang Gen Avia
B-7546	Robinson R44 Raven II	13636	Henan Yongxiang Gen Avia
B-7547	Robinson R44	2303	Sichuan General Aviation
B-7577	Robinson R22 Beta II	4645	Sichuan General Aviation
B-7579	Robinson R22 Beta II	4641	Beijing Tianxin Gen Avia
B-7617	Bell 206L-4	52444	Xinmin General Aviation
B-7620	Bell 206L-4	52443	Jiangxi Intertek Gen Avia
B-7621	Bell 206L-4	52442	Jiangxi Intertek Gen Avia
B-7623	Bell 206B	4556	Shandong Phoenix Gen Avia
B-7785	AgustaWestland AW109SP	22324	Shanghai Jinhui Gen Avia
Czech Republic			
OK-EHM	Robinson R44	1761	Park Lane International School
OK-SGR	Bell 407GX	54426	Blue Sky Service
Finland			
OH-HZW	Hughes 369D	29-0457D	Mustang Helicopters
OH-HZY	Hughes 369D	12-1096D	Mustang Helicopters
France			
F-HCHB	Airbus Helicopters AS350B3	7695	H2i
F-HCLT	Airbus Helicopters AS350B3	7930	Helicorse
F-HLRT	Airbus Helicopters AS350B3	4938	SAF Helicopteres
F-HOGP	AgustaWestland AW139	31565	Heliconia Offshore Helicopters
F-HURX	Airbus Helicopters AS365N3	9001	Heli Union
F-HVAA	Airbus Helicopters EC155B1	6976	Heli Securite
Germany			
D-HSTH	Robinson R22 Beta	1368	Startrade
Great Britain			
G-CIEX	Aerospatiale SA341G	1987	Gazelle Flying Group
G-CIGX	MDH MD900	900-00124	Police Aviation Services
G-CIYI	Robinson R22B	3668	A.G. Littara
Region Type c/n Owner/Remarks			
Great Britain (continued)			
G-ICIO	Robinson R44 Clipper II	12315	Helicom
G-IGIS	Bell 206B-2	1669	C.J.Edwards
G-JNNH	Robinson R66	0016	Hawesbates
G-OAGD	Airbus Helicopters EC225LP	2902	CHC Scotia
G-OHAS	Robinson R66	0349	Heli Air Scotland
G-OENA	AgustaWestland AW139	49007	Bristow Helicopters
G-OTUA	Robinson R22 Beta II	2947	HO Aviation
G-ROAT	Robinson R44 Raven II	13694	R.Jordan
G-SKBL	AgustaWestland AW109S Grand	22011	Sky Border Logistics
G-SNSD	AgustaWestland AW139	31552	CHC Scotia
G-VIND	Sikorsky S-92A	920006	Bond Offshore Helicopters
G-VINL	Sikorsky S-92A	920226	Bond Offshore Helicopters
G- VIPE	AgustaWestland AW109E	11692	Castle Air
G-VMSF	Robinson R22B	3953	Alcam International
G-WDCL	AgustaWestland AW109E	11710	Wickford Development Company
G-XXEC	AgustaWestland AW109S Grand	22104	The Queen's Helicopter Flight
G-YRTE	AgustaWestland AW109S Grand	22133	Galegrove 2
Ireland			
EI-DVZ	Robinson R44 Raven II	11629	M.o'Donovan
Italy			
I-CABO	MBB BK117C-2	9205	INAER
I-IDVE	AgustaWestland AW139	31534	Helisirio
I-LUXT	AgustaWestland AW139	31549	Luxottica
I-PHAX	Airbus Helicopters AS350B3e	7828	Pellissier Helicopter
New Zealand			
ZK-HCG	Airbus Helicopters AS350BA	1628	Liftmac
ZK-IDZ	MDH MD520N	LN406	Heli Imports
ZK-IOJ	Airbus Helicopters AS350B3	7815	Central South Island Helicopters
Norway			
LN-OHS	Airbus Helicopters EC225LP	2691	ERA Leasing
LN-OJN	Airbus Helicopters EC225LP	2911	CHC Helikopter Service
LN-OSY	Airbus Helicopters AS350B3	7593	Pegasus Helicopters
Pakistan			
AP-MRH	AgustaWestland AW109E	11796	Golden Eagle Aviation
Papua New Guinea			
P2-BKD	Kawasaki BK117B-2	1045	Pacific Helicopters
P2-HFR	Bell 212	30507	Heliflex Operations
P2-MHL	Mil Mi-8MTV-1	95721	Hevilift
P2-PAR	Bell 212	30978	Pacific Helicopters
Slovakia			
OM-AVA	Mil Mi-8MTV-1	95901	UTair Europe
South Africa			
ZS-HCK	Robinson R66	0521	A-M Consulting Engineering
ZS-HGN	Bell 206B	2212	Sable Ranch
ZS-HTF	AgustaWestland AW139	41018	Starlite Helicopters
ZS-HVJ	AgustaWestland AW139	31545	Titan Helicopters
ZS-HVS	Robinson R44 Raven II	13415	Bushveld Game Capture
South Korea			
HL-9305	Bell 206L-3	51450	Korean Forest Service
Spain			
EC-MAZ	Bell 412EP	36183	INAER
EC-MBJ	Airbus Helicopters AS350B3	7573	Coyot Air
EC-MBN	Airbus Helicopters AS355N	5598	INAER
EC-MBO	AgustaWestland AW139	41357	INAER
EC-MBP	AgustaWestland AW139	41359	INAER
EC-MBQ	Airbus Helicopters AS350B	4934	INAER
EC-MCC	Airbus Helicopters AS350B3	3493	Coyot Air
EC-MCD	Airbus Helicopters AS350B3	3340	Coyot Air
EC-MCG	Airbus Helicopters AS350B3	3612	Coyot Air
EC-MCJ	Airbus Helicopters AS350B2	2558	Coyot Air
Sweden			
SE-JOT	Airbus Helicopters AS350B3	7838	South Sweden School of Aeronautics
SE-JRL	AgustaWestland AW139	31558	Sjofartsverket
SE-JVO	Airbus Helicopters AS350B3	7859	Daidalos Aero
Switzerland			
HB-ZNR	Airbus Helicopters AS350B3	7905	Europavia Suisse
Thailand			
HS-UOH	AgustaWestland AW139	-	United Offshore Aviation Co
Ukraine			
UR-CIJ	Kamov Ka-32A11BC	9813	Arctic Group
UR-CMI	Mil Mi-8MTV-1	93295	AAL Group
UR-CMJ	Mil Mi-8MTV-1	103M01	AAL Group
UR-CMM	Mil Mi-8MTV-1	94385	AAL Group
UR-CMN	Mil Mi-8MTV-1	95490	AAL Group
UR-CWE	Mil Mi-8T	30521	Crimea Universal Avia
United States (Extracts)			
N27WA	Airbus Helicopters AS350BA	2792	Wings Air Helicopters
N356EV	Airbus Helicopters AS350B3	3649	Can See Aviation
N534LL	AgustaWestland AW119 Mk. II	14822	Critical Care Services
N553RD	AgustaWestland AW139	41369	ERA Helicopters
N500EH	Bell 212	30945	Hilcorp Equipment
N214EB	Bell 214ST	28130	Variant Aircraft Fund
N222UT	Bell 222U	47559	Mark A.Diaz
N407NY	Bell 407	53061	New York Cirt Police
N135KJ	Airbus Helicopters EC135	1123	California Shock Trauma
N494HL	MBB Bo105S	S-813	Maritime Helicopters
N612NW	Sikorsky S-61N	61719	US Leaseco
N683MF	Sikorsky S-76C	760566	ROP Aviation

THINK MEDICAL ASSISTANCE

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Accident Spot

May

- 1 Robinson R44 OK-SPW** substantially damaged near Sulice, Czech Republic when it force landed in field and overturned onto starboard side in long grass, separating tail boom and wrecking main rotor blades.
- 1 Airbus Helicopters AS350B2 TF-HDW** of Nordflug substantially damaged after main rotor blades struck ice on side of Eyjafjallajökull Glacier, Iceland. Helicopter impacted terrain and rolled onto side with broken blades and cabin glazings and fuselage damage.
- 1 Mil Mi-2 SP-SGT** written off in forced landing into farmyard at Czysta, Poland whilst en route to Wilkowo. Aircraft mis-marked as SP-SFC and rolled onto port side after landing, with tail boom and one main rotor blade detached, other blades broken and fuselage damage.
- 1 AgustaWestland AW119 N119HF** of AgustaWestland Corp damaged during training at Lumberton, New Jersey when it slid on landing on runway uneven surface, and main rotor blade cut off tail boom.
- 1 Robinson R22B N802CP** of Advanced Helicopter Concepts substantially damaged during solo hover practice at Frederick airport, Maryland when student drifted helicopter to the right whilst descending and starboard skid contacted grass. Aircraft rolled to right and main rotor blades struck ground before helicopter came to rest on its starboard side, with damage to rotor blades, fuselage and tail boom.
- 1 Airbus Helicopters AS365N F-GVFE** of Helicopteres de France suffered damage to starboard landing gear in night time heavy landing at Maripasoula airport, French Guiana.
- 2 Mil Mi-8MT 61 Yellow** of Ukraine Armed Forces substantially damaged by gunfire from rebel forces in Slavyansk area.
- 2 Mil Mi-24 14 Yellow** of Ukraine Armed Forces shot down by rebel forces in Slavyansk area. 2 fatal.
- 2 Airbus Helicopters EC120B PR-FPL** of Federal Highways Police substantially damaged in emergency landing near Luziania, Brazil whilst en route to local airport when it touched down in long grass and rolled onto port side, detaching tail boom, breaking main rotor blades and causing fuselage damage.
- 2 Mil Mi-24 02 Yellow** of Ukraine Armed Forces shot down by rebel forces in Slavyansk area. 3 fatal
- 3 Bell 206L-3 PT-HTQ** of Nordeste Taxi Aereo written off after impacting sea off Presidio Beach, Aquiraz, Brazil following mechanical problem whilst on local flight from Fortaleza airport.
- 3 Bell 407 N407MH** of San Miguel County Sheriff substantially damaged in emergency hard landing at 3048m (10,000ft) altitude in Lizard Head Pass, Colorado after it lost power during search for missing skier.
- 3 Boeing CH-47F** of 3-82 CAB, US Army substantially damaged in crash during high altitude training in mountains near Orogrande, New Mexico. 1 fatal.
- 3 Bell 47G N7895B of 5847G LLC** substantially damaged in precautionary landing 5km (3 miles) south of El Monte Airport, California after pilot experienced partial loss of power on climb out. During landing with some forward movement, starboard skid caught on ground and aircraft rolled onto its side, structurally damaging rotor blades and fuselage.
- 3 Airbus Helicopters AS350B 5Y-EVU** of North Wood Agencies damaged at Tipilikwani Camp in Maasai Mara, Kenya when passenger smashed windows, doors and fuselage with blade tie down bar during tourism trip.
- 4 Unknown type of ISAF** extensively damaged by gunfire from insurgents in Sangin district of Helmand Province, Afghanistan.
- 4 MD Helicopters MD500 ZS-XXX** of F.Lutzkie written off in crash on land at Doddieburn Ranch, Zimbabwe during alleged inspection of farm fencing. Owner burned the aircraft following the accident, claiming it was in the interests of safety as the wreckage was in a remote area.
- 5 Kawasaki BK117 ZK-HJC** of Westpac Rescue sustained minor damage in a hard landing in field near Springston, New Zealand following in flight emergency whilst on patient transfer flight to Christchurch hospital.
- 5 Mil Mi-24 29 Red** of Ukraine Armed Forces shot down by rebel forces in Slavyansk.
- 8 Airbus Helicopters AS365N2 TU-HAA** of Volta River Aviation destroyed in crash into sea 32km (20 miles) offshore Takoradi, Ghana after suspected flight into poor visibility conditions whilst en route to JackRyan oilrig. 5 fatal.
- 12 Heli-Sport CH-7B VH-SWQ** of M Wills written off in crash 45km (28 miles) north west of Barcaldine, Queensland during mustering operation at Hulton Station. 1 fatal.
- 12 Mil Mi-24** of Kenyan Air Force written off in crash into jungle near residential area in Mandera County, northern Kenya. Forward fuselage partially detached from main fuselage and tail section also badly damaged, together with main and tail rotors. 1 fatal.
- 13 Airbus Helicopters EC120B RA-07232** destroyed when it crashed into forest near Lepšari, Leningrad region whilst en route to Solovoyovo. 2 fatal.
- 13 Robinson R22 VH-HEP** destroyed by ground fire during mustering operation 74km (40nm) north east of Hughenden, Queensland when rotor blade clipped tree and helicopter force landed in long grass, which then caught alight.
- 13 Airbus Helicopters AS350BA C-FHPC** of Heli-Boreal damaged 28km (15nm) north west of Sept-Îles, Quebec when it struck wire in flight, followed by an emergency hard landing.
- 14 Mil Mi-8T RA24421** of Yamal Air Company involved in incident 7.5 km (5miles) from Tarko-Sale, Yamalo-Nenetsky region.
- 17 Bell OH-58A VH-OSQ** substantially damaged in heavy landing at Coffs Harbour after engine lost power at 30m (100ft) during take off. Aircraft impacted terrain, collapsing skids and damaging tail boom.
- 18 Robinson R22B VH-HAY** substantially damaged when it went into a spin and collided with terrain during cattle mustering operations near Fitzroy Crossing, Western Australia.
- 18 Bell 47G N16414** of J. Claridge substantially damaged when a skid caught on the ground handling trailer during take off and aircraft fell off, rolling on its side.
- 18 Airbus Helicopters AS350B3 N840PA** of Papillon Airways substantially damaged after landing at the Ramada site at the bottom of the Grand Canyon near Peach Springs, Arizona when pilot exited the still running aircraft to carry out a fluid level check. Helicopter became airborne and then impacted ground before rolling over, with rotor blades striking pilot before it came to rest. 1 fatal.
- 19 Robinson R22** written off after heavy landing at Tomaszow Boletawiecki, Poland during local flight from Warta Boletawieki airport. Helicopter had no valid airworthiness certificate and was composite of N22431 (main fuselage), G-ORLT (tail boom) and tail rotor blades from R22M Mariner.
- 21 Bell 206A** of Uganda Defence Force substantially damaged in forced landing at Abalo-Kodi after collision with eagle whilst en route to Guly. Pilot lost control and during descent helicopter struck electricity pole before crash landing.
- 21 Bell 206L-4 N55SL** of Helicopters Inc substantially damaged at Beverly municipal airport, Massachusetts when it landed hard during attempted autorotation, following an abrupt loss of power shortly after take off due to engine failure. During flare and touchdown main rotor severed tail boom.
- 22 Airbus Helicopters AS350B3 C-GLHZ** of Lakeshore Helicopters substantially damaged during an external load operation at site north of Lac La Biche, Alberta when pilot lost control during take off and aircraft crashed.
- 23 Robinson R22 VH-WDB** destroyed at Congarra Station, New South Wales when tail boom detached during final approach to land. Aircraft crashed and rolled over.
- 23 Robinson R44 HB-XXX** destroyed in crash near Casares, Spain after pilot flew into power lines in the Sierra Utera ridge during early morning flight. 1 fatal.
- 23 Bell 206B C-GVTM** of Far West Helicopters substantially damaged after skid caught fuel drum during take off at Chamiss Bay, Northern Territories and aircraft rolled onto side.
- 23 Robinson R22B N4081H** of Channel Island Helicopters substantially damaged when it flew into power lines near Santa Paula Airport, California during low level solo flight. Helicopter then impacted terrain. 1 fatal.
- 23 Bell UH-1H N260TA** of Archer Aviation substantially damaged when it crashed near Waitsburg, Washington State immediately after take off due to control failure. Helicopter struck terrain tail first and rolled onto port side, damaging rotor system and tail boom.
- 25 Airbus Helicopters AS365N2 N365WM** of West Michigan Air Care substantially damaged when it landed hard in a parking lot in Constantine, Michigan after pilot was unable to arrest rate of descent during final hover taxi positioning. Aircraft bounced once and then came to rest upright but with damage to starboard fuselage and lower vertical stabiliser.
- 25 Brantly B2B N9023Z** of WR Mott substantially damaged in emergency landing on Hart-Miller Island, Maryland following in-flight mechanical problem. Aircraft landed hard and rolled onto port side, breaking main rotor blades and damaging fuselage.
- 28 Robinson R44II N392GP** of Global Positioning Services destroyed by fire after crashing at Birchwood airport, Chugiak, Alaska whilst carrying out practice external load maneuvering with fluid filled 55 gall barrel on 46m (150ft) long-line. Pilot released load but helicopter pitched up, rolled left and descended before impacting onto gravel road on its port side and catching fire. 1 fatal.
- 28 Texas Helicopter M74A N51853** of G.Oleen destroyed when it crashed into roof of barn during agricultural sortie north of Little Falls, Minnesota. Aircraft penetrated metal roof and remained jammed in structure. 1 fatal.
- 28 Bell UH-1H** of 2/10 Gav, Brazilian Air Force substantially damaged in heavy landing at Campo Grande air base following a mechanical failure at 3m (10ft) during training flight. Skid gear collapsed on impact with ground and aircraft came to rest upright on its belly.
- 28 Boeing CH-47** of US Army substantially damaged when it struck telecommunications mast during take off in Maruf district, Afghanistan and then crashed. 1 fatal.
- 29 Mil Mi-8 16 Yellow** of Ukraine National Guard destroyed when it was shot down by rebels during operation in Slovyansk after lifting troops from checkpoint. 12 fatal
- 30 Bell 407 N1197** of Westwind Helicopters substantially damaged during recovery from an emergency ditching in the Gulf of Mexico close to oil rig Eugene Island 182A. Helicopter had partially lost power on take off from rig and pilot inflated floats and landed on water, but aircraft subsequently inverted before being salvaged.
- 30 Bell OH-58A+ N650MH** of Maine Helicopters substantially damaged when it force landed into trees after running out of fuel whilst on approach to company helipad at Whitefield, Maine. Helicopter came to rest upright with fuselage and tail boom damage and approx 50l (11 gall) of fuel in system.
- 31 Schweizer 269C N920CP** of Kachemak Bay Flying Service substantially damaged at Draughon-Miller airport, Temple, Texas when it experienced ground resonance during a flight demonstration.
- 31 Mil Mi-8AMT RA-22423** of Gazavia written off in night time crash into Munozero Lake, Murmansk region under unknown circumstances. 16 fatal.
- 31 Robinson R44 EC-JTC** substantially damaged in emergency landing at night at Monte Lobeira, Pontevedra, Spain following suspected tail rotor drive failure. Aircraft rolled onto port side after touchdown, with tail boom detached and damaged main rotor blades.
- 31 Robinson R22 N7122E** substantially damaged near San Manuel, Arizona when it flew into power line and crashed.
- 31 Sikorsky CH-53E I63063** of HMH-466, US Marine Corps written off in hard landing on airfield runway in Afghanistan, when tail section separated and main fuselage structure stressed.

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- 3 Robinson R44 II XB-IYO** substantially damaged when it ditched into Lake, Actopan in Mexico during private flight.
- 3 Rotorway 162F N78291** of M. Emery substantially damaged by post crash fire after loss of yaw control and landing hard before rolling on side.

- 3 **Mil Mi-24P 10 Yellow** of Ukraine Army substantially damaged by rebel fire whilst in action at Slavyansk in east Ukraine.
- 3 **Enstrom F280C G-IDUP** of Antique Buildings Ltd substantially damaged at Sywell airfield when main rotor blades struck pump canopy whilst positioning to refuel.
- 4 **Mil Mi-24P 91 Yellow** of No.16 Aviation Brigade Ukraine Army substantially damaged by rebel fire during combat at Slavyansk.
- 4 **Mil Mi-24P 25 Red** of Ukraine Army written off by rebel missile strike and subsequent post crash fire during combat at Slavyansk.
- 4 **Mil Mi-24P 15 Yellow** of Ukraine Army substantially damaged by rebel fire during combat at Slavyansk.
- 5 **Bell TH-57 of TAW-5** US Navy damaged in training accident at Spencer Field, Florida.
- 5 **Mil Mi-8T** of Ukraine Army damaged by rebel fire during combat at Slavyansk and forced to carry out emergency landing.
- 7 **Helibras HB-350B PT-YJJ** of Planalto Industria Mecanica destroyed in crash during take off from camping site on bank of Rio Araguaia, Brazil. Aircraft broke up and main fuselage rolled on side with skids, rotor blades and other parts detached. 5 fatal.
- 8 **Robinson R44 Clipper I-LUSJ** substantially damaged in hard landing in sports field at Prato, Italy when it rolled over.
- 8 **McDonnell Douglas MD369E N504NP** of City of Mesa Police substantially damaged in emergency autorotation landing at night near Mesa, following loss of power in slow cruise at 213m (700ft) altitude. Helicopter landed hard in field in dark and main rotor blades severed tail boom.
- 11 **Bell 206L-4 N207MY** of Westwind Helicopters written off when it began to spin clockwise on approach to South Time Bailier I17 offshore platform in Gulf of Mexico before dropping into water and sinking, with tail boom separating on impact. 2 fatal.
- 11 **Airbus Helicopters AS350B2 N356EV** of Com See Aviation substantially damaged in main rotor overspeed incident, followed by ground resonance and violent shaking during start up sequence at Merrill Field Airport, Alaska.
- 12 **Unknown Type** of Iraqi Air Force reported shot down by rebel forces in Karmah area, Anbar province.
- 12 **Schweizer 269 G-BWAV** of Helihire substantially damaged at Dunfold airfield, Surrey in emergency landing when it rolled onto side following touchdown.
- 13 **Schweizer 269C OO-JCS** of Ramimmo written off in accident during training at Cerfontaine airfield Belgium. 1 fatal.
- 14 **Mil Mi-171** of Iraqi Air Force reported shot down at Tikrit by rebel forces and written off.
- 14 **Bell 206B** of Aeroprak substantially damaged when it ditched into the Ili River in Almaty region, Kazakhstan whilst en route to Araltobe airport.
- 16 **Unknown Type** of Iraqi Army shot down by rebel forces near Falluja, Anbar province. 2 fatal.
- 16 **Mil Mi-171Sh EP-665** of Peruvian Army substantially damaged when it struck trees following take off from barracks in Ayachucho and crashed into grounds of local university.
- 17 **Bell OH-58B 3C-OD** of Austrian Air Force written off in very hard landing at 2000m (6560ft) in the Wattener Lizum area of the Tirol during a training exercise. 1 fatal.
- 17 **Schweizer 269C-1 NI52CC** of Acepilot Training substantially damaged in heavy landing at LeHigh

- Valley airport, Pennsylvania separating tail boom, fracturing main cabin mountings and wrecking main rotor.
- 17 **Airbus Helicopters AS350BA FX1 N6094H** of Sunshine Helicopters substantially damaged in emergency autorotative landing in long grass near Kalului, Hawaii following a loss of main rotor speed during a scenic tour flight.
- 17 **Bell 206B N536T** of Federal Aviation Administration substantially damaged during training flight when it landed hard tail down during an autorotation demonstration at Decatur airport, Texas. Helicopter skidded some 63m (207ft) and came to rest partially off the runway, leaning to the left with the tail boom separated aft of the stabiliser, the tail rotor gearbox separated from the boom and the main transmission tilted aft and free of the drive shaft.
- 18 **Robinson R44 N74713** of Quicksilver-Air substantially damaged in crash at Coldfoot, Alaska following an uncommanded descent whilst pilot was looking for a landing site. Helicopter tipped forward on landing and rolled over.
- 19 **Robinson R22 N784SH** of Helisat substantially damaged at Greenfield airport, Missouri when student lost control during practice autorotation and aircraft dropped rapidly and impacted terrain.
- 20 **Robinson R44 II CC-PXA** of Agricola Garces written off in attempted landing in snow at La Parva ski resort in Andes when it rolled over following touch down.
- 20 **Robinson R22B OK-LPS** damaged in emergency landing into field outside Prague, Czech Republic following mechanical problems en route at 150m (492ft). Engine failed at approx 3m (10ft) on final approach.
- 20 **Bell 206L-3 VH-NKW** of MI Helicopters substantially damaged at Scotia seismic camp near Taroom, Queensland when external load on long line became entangled and line pulled taut whilst pilot was attempting to land. Aircraft crashed from about 3m (10ft).
- 20 **Robinson R22 N681SH** of Star Helicopters substantially damaged when it rolled onto side during landing at Long Beach airport, California.
- 21 **Mil Mi-8T 28 Yellow** of Ukraine Air Force destroyed by fire after crashing in forest near Kharkiv, whilst en route to Chuhuiv air base. 3 fatal.
- 21 **Rotorway I62F N6828D** of T. Payne substantially damaged in emergency landing in field at Hancock near Indianapolis airport, after engine overheated and lost power following take off. Helicopter rolled onto port side after landing in water logged corn stubble.
- 21 **Mil Mi-2 RA3121K** written off during crop spraying mission at Staromavrinskoe, Krasnodar region after power line strike and subsequent post crash fire.
- 23 **Airbus Helicopters AS350B2 N407EM** of EagleMed substantially damaged in emergency autorotative landing near Texarkana, Texas after rotor rpm rapidly increased en route at 305m (1000ft) to hospital on air medical flight. Helicopter landed hard and main rotor blades partially severed tail boom.
- 24 **Unknown Type** of Kenyan Army substantially damaged in forced landing at Komu, Machakos County following mechanical problems during training flight, whilst en route to Garissa.
- 24 **Robinson R44II N544BS** of L. Sikora substantially damaged in emergency autorotational landing on highway near John Tune airport, Tennessee after engine began to run very rough and lose power soon after take off and following refueling. Helicopter landed hard from about 1m (3ft) and main rotor struck tail boom.

- 24 **Mil Mi-8TV 63 Yellow** of Ukraine Army destroyed when it was shot down by rebel fired missile whilst taking off from artillery base on Karachom Mountain near Slavyansk. 9 fatal.
- 24 **Airbus Helicopters AS350B3e LN-OSY** of Pegasus Helicopters substantially damaged in take off crash when it immediately lost height on departure from an Army artillery range near Hjerkin, Norway.
- 25 **Bell AH-1F** of No.33 Sqdn Pakistan Army Aviation Corps written off in night time crash on run way at Multan Army air base whilst attempting to take off. A dust storm may have been a contributory factor. 2 fatal.
- 25 **Robinson R44 C-XXX** substantially damaged when 257km (160 miles) north of Bagotville, Quebec when helicopter entered vortex ring state during descent and began to yaw, before main rotor struck terrain as helicopter rolled over on impact.
- 26 **Mil Mi-35M YI-352** of Iraqi Air Force destroyed by fire after being shot down by rebel forces during commando assault at Tikrit University. 5 fatal.
- 26 **Boeing AH-64D** of US Army damaged in hard landing near Molinelli training range of Fort Rucker, Alabama.
- 26 **Airbus Helicopters AS350B3 N808LF** of PNC Bank damaged in hard landing at Temple, Texas after tail rotor pedal stuck during repositioning maneuver.
- 27 **Mil Mi-8** damaged by rebel gunfire in Somalia whilst en route to Mogadishu and Selbur on UN contract.
- 27 **Airbus Helicopters AS350B N69PJ** of Pay Jay Air substantially damaged when it collided with terrain whilst landing at a private heliport, following a flight from Artesia airport.
- 27 **Robinson R44 N560LH** substantially damaged in accident during crop spraying flight near Quincy, Washington State when it struck pole and crashed.
- 28 **Robinson R66 RA-1588G** of Technodrom destroyed in crash and subsequent fire in Apsheeronsky district, Krasnodar region whilst en route to Sochi. 4 fatal.
- 28 **Mil Mi-25** of Sudanese Air Force reported shot down and substantially damaged in Dilling area South Kordofan by rebel forces.
- 29 **Unknown Type** of Iraqi Air Force reported shot down by rebel forces in Tikrit.
- 29 **Airbus Helicopters AS350B2 N350CR** of Reeder Flying Service substantially damaged in collision with terrain near Dietrich, Idaho during an aerial photography flight when it suddenly reversed direction 180 degrees and descended tail first into the ground.
- 30 **Mil Mi-8 RA-24541** of AeroVir destroyed at Berezovoy Kharbarovsk region when it crash landed onto sandbank during a firefighting surveillance flight and subsequently caught fire. ☠

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● Italian power company Terna SpA has ordered an AW109E Power twin-engined helicopter from AgustaWestland for powerline survey and support missions. The order represent an upgrade for the company, which otherwise has relied on a single-engined helicopter fleet to carry out this work.

● Swiss operator Eagle Helicopter AG, based at Sion and mostly managing third party owned aircraft, has been declared bankrupt by the Swiss authorities who ordered the assets to be liquidated. The company last operated a single Airbus Helicopter AS332 CI Super Puma, and managed three AgustaWestland AW109 helicopters.

Set up in 2002 primarily to support logging activities with a Kaman K-Max and later adding further missions with two Airbus Helicopters AS350B3s, the company subsequently replaced the K-Max with an Airbus Helicopters AS332C1. Like the AS350B3s, this was leased from the French bank BNP Paribas, with Eagle offering the aircraft for construction work, firefighting and other roles both within Switzerland and elsewhere. At its peak Eagle employed some 36 staff, including five pilots, but at the end of June the two AS350B3s, HB-ZGV and HB-ZES were transferred by BNP Paribas to another Swiss company, Swift Copters, which is headquartered at Geneva Airport.

The Super Puma is currently in storage.

● UK charter operator PremiAir is reported to have received a new air operators certificate after the suspension of the previous approval last November, and is anticipating new investment to help the company make a full recovery.

● The Queens Helicopter Flight (THQF) has added an AgustaWestland AW109S Grand to its operations, with the registration G-XXEC allocated on 11 June. The aircraft was previously registered to the manufacturer's US subsidiary in Philadelphia and originally allocated for a sale in Brazil.

THQF operates a Sikorsky S-76C++ as its prime aircraft to support Members of the Royal Family engaged on official duties, but on occasion has chartered other corporate-configured helicopter to meet its needs. Speculation now is that the growing role of the two Royal Princes, William and Harry, has led to the decision to take on a second aircraft. Both are helicopter pilots and engaging much more now on official Royal duties.

● Airbus Helicopters has officially certified the maintenance centre operated by International Aircraft Services (IAS) at Abidjan, Cote d'Ivoire to provide regional customers in West and Central Africa with a complete maintenance solution for their helicopters. The IAS Group is itself a major helicopter operator, with a fleet of over 20 Airbus Helicopters aircraft.



IAS already has a 30 year history of providing helicopter services for its clients in Africa and is the largest civil operator in the West and Central regions, specialising in offshore and onshore contracts across a range of missions, as well as providing helicopter maintenance. Nearly 130 Airbus Helicopters aircraft operate in the two regions and the new agreement will now see IAS equipped to fully service and support the AS350 and AS365 models on behalf of the manufacturer.

The establishment of the new maintenance centre is the latest in Airbus Helicopters plans to broaden its international network of such facilities to improve customer service.

● An Airbus Helicopters AS350 B3e helicopter has set up a new Mexican high altitude landing record by flying to the top of Mexico's highest mountain, Pico de Orizaba. The aircraft landed and took off from the 5610m (18405ft) summit on 2 June, piloted by AH Mexico flight crew José Rodriguez and Erick Valázquez.

Airbus Helicopters has some 500 aircraft operating in the region under the responsibility of its Mexican subsidiary, including the AS350 B3, EC145 and EC225/EC725. Around 500 people are employed at facilities in Mexico City, Veracruz and also Queretaro, where a high technology plant manufacturing aircraft components was opened last year.

● The Administrators for Fast Helicopters at Shoreham in West Sussex, which went into receivership in 2011, have announced the final dissolution of the company, with effect from 17 October. The last report from the joint administrators notes that the final deficit amounted to £204,721 which is irrecoverable.

Efforts to investigate the ownership of four helicopters which were transferred to another company within the parent Longmint Group just before Fast went into receivership, were abandoned due to the likely cost and uncertainties involved.

● The Milestone Aviation Group is to offer \$350 million in Senior Notes due 2017, using the proceeds to pay down a portion of its secured debt.

Above: HeliStar SA in Turkey has secured a contract with the Turkish Electricity Transmission Company (Telas) to carry out aerial monitoring and support of the powerline infrastructure.

HeliStar is a joint venture company based in Ankara and set up in June 2011 by Kaan Air, (which is a distributor for AgustaWestland, Enstrom and Russian Helicopters), in partnership with the US air medical operator Air Methods. HeliStar will operate three AgustaWestland AW119Ke helicopters plus a backup aircraft on the contract, with the aircraft configured with an enhanced FLIR and camera, integrated with a multiple display mission console in the cabin.

As at the end of March this year, the leasing company had a fleet of 135 helicopters, valued at \$2 billion and supporting 25 operators in 23 countries. The company has also placed orders and options for a further 145 aircraft, with an estimated additional value of \$3.4 billion.

● Saxon Air, based in Norwich, has added a rotary-wing air operators certificate (AOC) to its Civil Aviation approvals, allowing the company to expand its current helicopter operations into new markets. Previously it has operated this sector of its business under the AOC of London Helicopter Centres.

Already well established for corporate jet management as part of its fixed-wing AOC, the new approval will allow the company to now also set up a new subsidiary, Saxonair Helicopters, and to add new rotary-wing aircraft to meet an already proven demand. The subsidiary will operate leisure and business charters, tourism flights across East Anglia and the Norfolk Broads, agricultural survey contracts, aerial filming and other missions, including specialist tasks for the energy and renewables industry.

This work will build on the existing helicopter operations that Saxonair has been carrying out for several years, without being restrained by the previous limitations of working under a third party AOC. An Airbus Helicopters EC155 has already been added to the available fleet.

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