

Police Aviation News

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Helicopter Association International Las Vegas 2004



Another year another HAI Heli-Expo and we are older but this time not a great deal wiser. It was a good show – they usually are - but there was nothing to take your breath away in rotary wing airborne emergency services offerings.

Bell's new CEO tried to up the ante with two revised helicopters but both were clearly from yesteryear and few were wholly impressed at the prospect. But at least it was an effort to break the stranglehold that EC are increasingly gaining on the World market. There must be a strong competitor out there somewhere but they were not to be seen in Las Vegas this time around.

The story of the moment remains whether the President will fly the Sikorsky S-92 or the US101 – but that really lies outside the scope of this publication. PHI took delivery of an S-92 at the show which upped the ante a little in the Presidential fleet battle but I suspect that it may not have any real consequence in what is more a military requirement for the US Commander-in-Chief.

The talk of the halls [and there were few] were perhaps RDM MDHI who continue their white knuckle ride to profit – the main difference this year is that no-one pretended that money was not a problem. The last of the fabled 'heavily equipped' Explorer's for the German Police was in the hall supposed on the verge of delivery, but no one breathed a word about the equally 'heavily equipped' Explorer's for the police in the Netherlands. People have stopped asking.

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IN THE HALLS

Bell Helicopter Textron [BHT]

Bell Helicopter Textron aircraft deliveries for 2003 reflected the impact of reorganisation and company process improvements. Additionally, in response to customer concerns and requests, Bell Worldwide Marketing and Sales instituted many new product improvements throughout the year. The combined effect amounted to a 20+% increase in aircraft deliveries in 2003 over 2002 with the delivery of 193 airframes.

The build-up of a backlog in several models ordered paves the way for even better sales in 2004. Orders in December alone reached a ten-year high of 67 just before the end of the sales year. In 2004 more product improvements, the introduction of new models and innovative customer support programs will provide current and new customers the best total value of ownership in the industry.

On its main stand, the static display and those of associated companies Bell Helicopter Textron featured examples of the Bell 206, 407, 412 and 430 at Las Vegas illustration corporate, commercial, law enforcement and EMS completions. In addition there were two mock-up structures illustrating the 427IFR in corporate and EMS configuration. Additionally the prototype Bell Eagle Eye tiltrotor UAV shared the static. [BHT]



Overall though Bell Helicopter pulled some quite tired rabbits out of their hat at HAI this year. Although they are involved in a number of progressive - leading edge even – projects with International partners their core in-house product line continues to disappoint the expectations of both the media and customers.

There are new projects being illustrated – and these suggest that they might seek to develop a new tail rotor system not unlike the fenestron – but there is no timescale being bandied about for what has perhaps unfairly been labelled the ‘Gazelle lookalike.’ These may yet follow the JRX into obscurity.

At a pre-event press briefing on Sunday March 14 Bell’s CEO Mike Redenbaugh tried to be upbeat about the Bell product line. In fairness the recently appointed [May 2003] Redenbaugh, could only work with the tools available – BHT announcing nothing at HAI was not an acceptable option.

By any stretch of the imagination the language used to announce the launch of the uprated more economical Bell 210 barely hid its strong connections to the Vietnam War era Huey.

Bell is developing a fully certified Bell model 210 Medium Utility Helicopter. The new aircraft will provide a significant increase capability over comparative models at greatly reduced DOC’s.

Redenbaugh said, ‘The Bell 210 is the perfect solution for the many agencies that use the UH-1H in utility, Homeland Security law enforcement or firefighting capacities. It combines great performance with an existing logistical base, an unbeatable DOC and a tremendously low initial acquisition cost. Add to that complete FAA certification and the Bell 210 is truly the best total value proposition to be found in the market today.’

Much of the Bell 210 is based on the success of the Huey II programme – 100 conversions currently. Many of the modifications and upgrades that result in the Bell 210 are in the Huey II. The primary differences between the Bell 210 and the Huey II are the inclusion of different actuators, nose assembly and a new electrical system and the receipt of FAA certification. [BHT]



The Bell 210 is a civil certified UH-1H with a refurbished UH-1H fuselage, dynamic components from the Bell 212 (main rotor hub and blades, tail rotor, main and tail rotor support structure, transmission, rotating controls, and tail boom), and an FAA certified Honeywell T5317 engine.

Cost of the Bell 210 will be approximately \$3M. A comparable Huey-sized off the shelf commercial aircraft would cost approximately \$5 million. The Bell 210 will have a useful load that is 640 lbs. higher than the UH-1H, 400 shaft horsepower increased horsepower available, and the DOC will be about \$530 an hour. Plans call for certification to be complete in mid 2005. [BHT]

Ed: There is a market, but time alone will tell whether the ‘300’ units prediction is viable in a market awash with cheap DoD surplus Huey’s. BHT envisages a mix of new build and rebuild but no relative percentages were suggested. The 210 may raise the interest of the fire fighting sector but it is debatable whether they would want to pay out even an attractive \$3M on a ‘new’ machine that might spend half the year stored awaiting the fires. The economics of the broadly similar UH-1H are often just too attractive in such demand led roles. It is reported that

even the 210 is controversial – engine maker PWC were apparently disappointed that the new type was not going to be offering the PT6 as an option.

BHT are to get their 430 certified in Europe – surely a primary market for a twin of this calibre – although they envisage the corporate market rather than going forward with a push to break into the airborne emergency services sector. No timescale has been finalised. [BHT]

It was the announcement that the Model 427 was to be upgraded to SPIFR capability that raised the greatest level of interest among the European sector. The requirement for SPIFR twins in the USA was of little interest at the time the 427 was first launched as a focussing of the Tridair model 206L twin conversion a decade ago. The original international build project included Korean Aerospace but low deliveries, around 50 in a decade, strained that arrangement. Now BHT is talking with ‘undisclosed’ partners.



The passage of so much time since the 427 was launched is clearly some embarrassment. Six years ago BHT were promoting the 427 head to head against the MD900, EC135 and Agusta 109E Power in the SPIFR market for European airborne law enforcement and, to a lesser extent, EMS. One police customer, Western Counties police air support in the UK, was poised to sign up for the 427 as its greatly preferred type when BHT pulled out and declared it could not [or would not] go forward with SPIFR certification. The unit subsequently reconsidered and finally took delivery of an EC135T two years ago. Bell has reportedly taken eleven 427IFR orders from customers around the globe.

Ed: Forward movement on a 427 SPIFR fell into limbo in 1999 and sales naturally reflect this. The reasons why are complex. A number of systems, including a dual hydraulic system, were not fitted to the initial build standard. Whether this was planned or an error in interpreting the exacting requirements of JAR27 may always be open to conjecture. The new project includes a long overdue fuselage/cabin extension of 14 inches [37cm]. Market forces appear to have finally pushed BHT into actually providing adequate room for a stretcher in the main cabin.

It may have been hailed as a ‘clean sheet of paper’ design at the time but the patient access restrictions of the layout shouted out ‘Bell 206L’ from the rooftops.

The main rotor and engine are being upgraded but much of that may well be eroded by the added weight of the additional cabin length. The increase in wetted area has reportedly led to predictions of a higher speed capability.

The ‘new’ 427IFR seeks to address the outstanding IFR issues with a target certification date of 2006. Redenbaugh did not state categorically whether the 2006 date relates to both US FAA and European EASA certification. He suggested that a VFR version would still be required and promoted. It was not clear whether the existing short fuselage option was now ‘dead’ but it was suggested that some features might be available as a retrofit.





There were two mock-ups displayed at the show, one in corporate guise and the other in EMS. Clearly present in these fetching mock-ups was the 'two-cabin' layout with the flight crew divided from the payload by a substantial wall of fuel tanks. One must question whether that can be a truly JAR27 compliant feature. It is noticeable that each of the modern alternative types [EC135/MD900] has shied away from introducing additional fuel into the cabin on safety grounds. Fuel belongs UNDER the cabin not in it Whether these tanks are JAR27 compliant will depend on the results of the drop test requirement [full tank dropped about 30 feet].

THE FIRST 427IFR

In documents produced by Bell in 1998 the original Bell 427 was scheduled to be certified dual pilot IFR in October 1999 and expected to attain single pilot IFR in December 1999. At that time the initial IFR configurations were said to be 'defined.' At that time – and to the great consternation of MD and others that wanted the engine - Bell had managed to corner the market delivery slots for the then new PW207D turboshaft for the first year or so. The pressure was on the competitors and the predicted price [under \$2M] was right. The clearly defined and documented target markets were law enforcement and EMS.

Even in April 1999 the company was predicting IFR certification in late 2000 and that would have placed the type in a very advantageous position. Both MD and EC saw the 427 as their primary competitor. Then it all went very quiet.

At one time there were over 70 orders but production is not believed to have exceeded 50 units. The early type is in service in both the law enforcement and EMS roles in Bahrain and the Czech Republic respectively.

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AgustaWestland are to expand the manufacturing facility of US subsidiary Agusta Aerospace Corporation (AAC) located in Philadelphia, PA. The new facility will open by the end of summer and provide additional space for the manufacturing and final assembly of the Agusta A119 Koala helicopter, presently manufactured in Italy.

Agusta has been operating in Philadelphia for more than 20 years, located in the current facility since 1988. The \$6.8M expansion of the plant will increase the workforce by almost 50 percent. The state-of-the-art, 40,000 square foot workspace will include flight hangars, completion and final assembly areas, manufacturing stations, and avionics assembly. This is the first phase of expansion, with further growth expected in the future.

The A119 Koala is designed for aerial work, law enforcement missions, light utility, medical evacuation and flight training. State police agencies, Emergency Medical Services and offshore companies use the helicopter across the country.

AgustaWestland state that it makes great long-term economic sense to bring the manufacturing and production of the Koala to the Philadelphia plant. [AW]

Lou Bartolotta, Managing Director, Bell/Agusta Aerospace Company, has announced that the AB139 US production and final assembly site will be Bell Helicopter's Amarillo, West Texas. The Bell centre is located on 184 acres along the southeast corner of Amarillo International Airport. Bell/Agusta previously announced it would manufacture its BA609 civil tiltrotor at the facility.



The Amarillo site selection is in addition to the existing AB139 production line in Italy at Agusta's Vergiate facility, and will provide the additional aircraft production required to meet customer delivery demands. Bringing the AB139 to Bell's Amarillo facility will require further expansion in order to accommodate the additional AB139 production. At present there are insufficient US market sales to make this project viable.

Using Amarillo will significantly increase the US content of the AB139, a key element in Federal, State and local government sales. This market has already shown significant interest in the AB139. [AW]

Tech-Tool Plastics, Inc. has expanded its product line and displayed some of its newest helicopter replacement windows at Heli-Expo 2004.

The company is introducing an array of replacement windows for Bell 407 and EC 120 helicopters. FAA certification is in hand for both product lines.

Last year, Tech-Tool Plastics certified a new line of B0 105 replacement windows and FAA approval is imminent for an all-new line of BK 117 replacement windows.

Among this year's new products is a pilot door window for the EC 120 that will be available without a slide for enhanced visibility. Also, an aft door window for the Bell 407 will be available with a large slide, making it ideal for photography or observation.

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Tech-Tool Plastics manufactures a full line of standard and custom replacement windows for a wide range of helicopter models, including Bell, Eurocopter, MD Helicopters, Robinson, and Schweizer. Agents across the World handle them on behalf of the manufacturer.

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Last year **Bennett-Davis-Nakazawa (BDN)** caught the eye of marketers at The Boeing Company and Sikorsky Aircraft Corporation. In December, BDN won a rigorous competition involving top firms to develop a two-year advertising strategy and campaign for the RAH-66 Comanche armed reconnaissance helicopter. Although the U.S. Army has since announced its intent to cancel the Comanche program, BDN consider its decisive win earned them a place among the nation's elite aerospace advertising firms. That same creative force has now put itself in the news.

BDN were the first advertising and marketing company to exhibit at any Heli-Expo to let the industry know more about their capabilities.



Based in Mesa, Arizona BDN specialise in serving the aerospace industry with a strong emphasis on rotorcraft-related clients. They have been linked to Boeing and MDHI for many years and this has given them a high level of expertise that is increasingly reading across to other industries. BDN represent Aerospace Filtration Systems, Kaman Aerospace Corp., MD Helicopters, Inc., Tech-Tool Plastics and Wulfsberg Electronics, to name a few.

Turbomeca reaffirmed its position as world leader with its large scale of activities, particularly within North America, during Heli Expo. They announced the production of the 35,000th engine, of which 20,000 are turbo-shaft engines.

In the last five years, Turbomeca's fleet of engines in North America has increased by more than 30% and now consists of over 1,400 engines. Turbomeca USA sales represent 14% of global Turbomeca sales.

Arriel engines are particularly popular in this market and represent more than 80% of the total fleet. To date, Turbomeca has completed the retrofit of 200 Eurocopter AS 350 helicopters with the Arriel 1B and 1D1 engines and that number continues to grow. The 1,000th Arriel 2 has been delivered to Sikorsky. The US Coast Guard prototype HH-65 helicopter fitted with the Arriel 2C2 CG, has made its maiden flight. The engine received its qualification in October 2003.



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Turbomeca provides local support for its North and Central American customers from plants in Mirabel, Quebec, Canada and the Grand Prairie, Texas, USA. These facilities serve as support, repair and overhaul centres. Turbomeca USA produces 50% of Turbomeca's worldwide distribution of Arriel engines and 100% of the Arriel 1S1 and 2S1 engines. An additional TurboSupport Center was opened in Las Vegas in 2003. Ten Field Representatives and a network of Turbomeca approved maintenance and repair centres (ACRO, Heli-Support and Keystone) are located throughout the Americas. [T]

Meeker Aviation which introduced their isolation collar late last year has now installed in excess of 40 isolation collars on over 14 types of helicopter and fixed wing aircraft in 6 countries. The 6 axis passive isolation mounting system is designed specifically for the very popular FLIR Systems / Inframetrics MK II, III, 7000, MicroSTAR, 7500, SeaFLIR II, and the new Ultra series of gimbals.



An LAPD AS350 was a handy platform to show off Meeker's products and the Tyler Platforms.

The isolation/mounting collar can dramatically improve the image quality by reducing airframe vibration transferred to the flir camera. This reduction in vibration can result in extended camera life. Significant image quality improvements have been achieved in testing on Bell OH-58 / 206 / 407, Eurocopter EC-120, AS-350/355, MBB-105 and Dauphin, the MD Helicopters 500/520 series, as well as the Cessna line of single engine fixed wing aircraft.

The collar is designed to be a direct replacement for any current configuration of gimbal mounting and can be specifically tuned for each aircraft, either fixed or rotary winged for optimum picture quality.

For additional information visit [Meeker](#) or telephone +1 604 644 1125

Thales Avionics has announced the recent signing of a new support contract with Eurocopter de Mexico covering the Meghas avionics suite onboard the Eurocopter fleet. Some 350 Meghas systems are in service on the American market, out of a total of 1,200 delivered worldwide.

Thales Avionics has introduced an innovative new system that combines navigation and digital map functions to give helicopter pilots a user-friendly human-machine interface (HMI). This system is said to greatly improve situational awareness whilst significantly reducing pilot workload.

The new Interactive Flight management & digital Map System for helicopters shows flight management (FM) information on the map display (waypoints, flight plans, etc.), and allows pilots to change their flight plan or create waypoints by simply moving a joystick.

It comprises two main subsystems:

- A new flight management subsystem directly derived from our current model already installed on several aircraft including the C-130 and CASA295 and on the Agusta A109 helicopter, with TSO approval.
- A digital map subsystem, the latest version of the moving map system developed by Thales, coupled to a multifunction display through a STANAG 3350B video connection.

The digital map generator works with the FMS to generate a 3-layer interactive image:

Map background (raster only, or raster combined with terrain elevation, or terrain elevation combined with vector planimetry).

- Navigation symbology (fixes, rates, flight plans).
- Interactive menus.

Pilot control is through a fixed handgrip joystick, or Digital Map Control Device (DMCD), connected to the Digital Map Module (DMM).

In addition, this system is designed to complement the Thales TopDeck avionics suite on offer for helicopters as either line fit or a retrofit solution.



MD Helicopters Inc [MDHI] of Mesa, Arizona celebrated its fifth anniversary at Heli-Expo. Deliveries are up and the mood upbeat as the company exhibited at its sixth Heli-Expo. The company was first introduced to the industry at the 1999 rotorcraft event, just after MDHI purchased The Boeing Company's commercial light helicopter product lines.

This year MDHI displayed a just one helicopter on its booth – it was the fifth and final MD Explorer® destined for a German Police unit.

The Police of Baden-Württemberg based at Stuttgart have replaced an earlier fleet of Eurocopter BO105 and BK117 helicopters with five Explorer's and two EC155s.



MD Explorer exterior and interior

Outside the hall the company were undertaking demonstration flights in examples of the MD 600N®, MD 520N® and MD 500E®.

As MDHI celebrated the anniversary, the company is looking ahead to a better 2004 after closing out a year that again failed to meet predictions given at the previous Heli-Expo.

The company delivered 15 helicopters in 2003, including eight MD Explorers, one MD 600N, three MD 530F and three MD 500Es.

'Our 2003 deliveries were up from the previous year, but they did not meet our expectations,' said Schaecken. "While we are not fully satisfied with our results, we continue to make positive strides toward ensuring that each one of our great products meet their full potential.'

Schaecken said MDHI has completely resolved technical difficulties that had slowed deliveries of heavily equipped MD Explorers to the Dutch Police and German Police. The fifth and final aircraft for the German Police will be delivered after Heli-Expo.

MDHI has modified some of the MD Explorer's subsystems, including the transmission, based on customer input, to further enhance reliability. A variety of new customer options also are being offered across the board, including a highly effective engine barrier filter for MD 500s.

On the eve of Heli-Expo, MDHI was at the centre of numerous reports about the US Army's interest in MH-6 Little Bird Helicopters.

Despite some reports to the contrary, MDHI has sole responsibility for manufacturing and supporting the aircraft, which are modified MD 530Fs known as MH-6s and AH-6s. The U.S. Army's 160th Special Operations Aviation Group ('Night Stalkers') at Fort Campbell, Kentucky, has operated an unspecified number of the versatile rotorcraft since 1980.

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'We are hearing the reports like everyone else,' Schaeken said, 'but we don't have any official information about a specific requirement. If the US Army determines that they want more aircraft, we are ready, willing, and fully able to support them.'

Ed: MD has had another bad year and it is clearly struggling. For once there seems to be a general acceptance of a position that has been there for years. The critical situation is now talked about without the histrionics that some clearly thought would mask the obvious. In the cold light of day many still believe MDHI will survive into better times - another year at least even if the situation does not improve significantly.

Whether the Little Bird contract will save the day remains to be seen. MDHI is an assembly plant and apparently manufacturers very little these days. Even if it were to sweet talk Kaman into supplying fuselages again would there be enough clear profit to be made to save the day?



PolyTech AB

PolyTech AB, one of the few independent manufacturers of sensor pods based in Malmköping, Sweden, announced that the company is introducing a new family of high-performance gyro-stabilised IR/Video camera systems aimed at the Law-Enforcement market. The company have regularly exhibited at shows but it is mainly a line of power line inspection systems that have taken centre stage. Systems are already in operation on six continents. Employing PolyTech's proprietary SP digital laser gyro technology, the new family of high-performance products offers state-of-the-art stabilisation in a lightweight fibercomposite turret.



The new WhiteStar SP Line is a highly integrated design including such in-turret features as laser range finder, real-time target location computation, and Ethernet interface. They are aimed at Law Enforcement, SAR and Border Surveillance.

Israel Aircraft Industries Ltd. Tamam Division and Argos Vision Systems have reached agreement with Helipro International to provide full product support for Tamam's POP 200 day/night/laser pointer optronic payload for the law enforcement market. The POP 200 is a modular, lightweight, gyro stabilised observation system for surveillance applications that is installed on various airborne vehicles including helicopters.



An upbeat **Eurocopter** was to be seen everywhere and spoilt for choice in which product to promote first. Its best-selling, new-generation light twin, the EC 135, continues to be the preferred choice of international law enforcement agencies and EMS operators. On average, the company books one EC 135 order per week, and 55 aircraft were delivered in 2003. Due to high demand in the Parapublic sector, growing popularity in the VIP/business aviation and aerial work markets Eurocopter will increase its annual production rate to 60 in 2004. Total deliveries to date exceed 320. The order backlog currently stands at more than 40. After the glitch over the Portuguese military order even the military version - the EC635 - ended up being launched successfully with the Royal Jordanian Air Force last year.

Latest orders for the aircraft include three for Delta Systems Air a.s. in the Czech Republic for EMS; two for Copterline in Finland for EMS; three for Norsk Luftambulans in Norway for EMS; two for Deutsche Rettungsflugwacht (DRF) in Germany for EMS; one for ADAC Air Rescue in Germany for EMS; two for ÖAMTC (Austrian Automobile Association) in Austria for

EMS; one for the Queensland Government in Australia for EMS. To date, a total of 150 EC 135 are in service or on order with EMS operators worldwide.

Going into police service soon are two EC 135 with the City of Hamburg (Germany), one with the German State of Rhineland-Palatinate and one with the Police of Norway. To date, a total of 90 EC 135 are in service or on order with law enforcement agencies and police forces worldwide.

Just ten years after its maiden flight (February 15, 1994), the EC 135 has become a rugged and reliable workhorse within Eurocopter's product family.



Half the price as NAT is the claim by airborne public address equipment manufacturer [PowerSonix](#). The company, based in Martinsburg West Virginia also claim that the range and voice clarity on their equipment beats the opposition hands-down and that is before its lighter weight and user friendliness are taken into consideration. Call them on +1 304 267 7560 or [E-mail](#)

ECMS Aviation Systems GmbH of Ludwigsburg Germany were displaying an external cargo system that features a special suspension system that seeks to dampen load movements, provide load heading control and simple handling of up to 1,100 lbs. [500kg] loads. They were also offering a fast-roping system and a multi-lift rescue beam capable of carrying five survivors.

ECMS is an LBA certified design organisation that has already worked with Eurocopter, MDHI and others and can be contacted at +49 7141 7020990. They have a [Web](#) site.

Pratt & Whitney Canada Corp. (P&WC) expects deliveries of PW200 and PT6 turboshaft engines to increase by 30% this year thanks to the company's exceptionally strong showing in helicopter competitions in 2003. PW200 engines are being selected by a large majority of operators to power their new light-twin helicopters. From December 2003 to February 2004, PW200 engines were selected on 47 new light-twin helicopters.

The PW200 engine family claims to be increasing its share of the light twin helicopter market. PW200 engines have powered approximately 70% of new deliveries in the sector and PWC now expect this market share to increase even further this year. The PW200 series powers the Agusta 109E Power, the Bell 427 twin, the

Eurocopter EC135 P2, the MD902 Explorer, and the Kazan Ansat.

P&WC's PT6B/C/T engine models also chalked up significant wins in 2003, powering the Agusta A119 Koala, Agusta Bell AB139 and Bell 412 helicopters.

Air Methods Corporation has announced a major order for ten Eurocopter EC135 twin-engine helicopters as part of the Company's long-term fleet expansion and modernisation programme. The aircraft are scheduled for delivery to Air Methods throughout 2004.

Air Methods also announced that its Air Medical Services Division has secured an additional hospital-based contract in Florida. It has been selected to provide air medical transportation services to Baptist Health South Florida in Miami. Under this new agreement, which commenced on March 1, Air Methods are operating a Bell 430 helicopter. Baptist Health has been providing air medical transportation services to South Florida since 1995.

CJ Systems Aviation Group will be putting two new American Eurocopter EC135s into operation at its air medical services (AMS) located in Martin County and Sebring. Both replace BK117s.

When they were offered the upgrade in airframe Martin County-based LifeStar jumped at the opportunity. The new aircraft will be faster, quieter and will offer greater ease and safety with regard to landing zones due to its smaller footprint and greater visibility than the BK117.

To the northwest, the Sebring-based Aeromed II AMS is also awaiting delivery of a new EC135 helicopter that has just been completed by Heli-Dyne Systems. Based out of Tampa General Hospital, Aeromed is split into three base sites located at Tampa General, in Sebring and at Inverness Airport in Citrus County. The programme serves a very large geographic area and that provided a primary motivation in the decision to upgrade the base site's BK117 and take up

the EC135's offer of improvements in speed, reliability and cost efficiencies. The average flight time for Aeromed II is close to an hour and a half. CJ Systems has managed the flight operations at Sebring since 1989.

The two new EC135s will provide quieter operation, enhanced safety features of the JAR27 build, updated avionics and GPS technology as well as an overall improvement in operating and maintenance costs.



Simplex announced the securing of a purchase order from Aviation Defence Service or 'Avdef' for five Simplex Fire Attack Systems that will be operated in France. AVdef are a government contractor based at Nîmes Airport near Arles in the Camargue.

AVdef are a company previously better known for fixed wing operations using Dassault Falcon jets and Beechcraft King Air turbo-prop aircraft.

The recent award of a fire fighting tender in the le Var region of France has resulted in the acquisition of helicopters. Régis de Lassus, Business Development for AVdef said; 'We will operate two Simplex Model 304 Fire Attack Systems on our Bell 205's and three Simplex Model 310 Fire Attack Systems on our Eurocopter AS350B3 Ecureuil Helicopters.'

Simplex now has more than one hundred and twenty Fire Attack Systems worldwide. The Simplex Model 304 and 310 Fire Attack System were selected based on the strength of performance in water volume, Vne speed, ease of installation/maintenance, durability and aviation certification. Simplex has been awarded formal certification on this system from both the Federal Aviation Administration (FAA) and Dirección General De Aviación Civil (DGAC).

Simplex also announced that LG International Corporation of Seoul, South Korea had awarded the company its largest contract ever.

The order, which consists of the design, development and delivery of nine systems with options for six additional units to be used on the Ansat helicopter manufactured by Kazan Helicopters for use in South Korea beginning later this year. The order includes Fire Attack and Spray Systems of approximately 900-litre capacity.

The order follows the recent delivery of three 900 litre Model 310 Fire Attack systems delivered to the same Korean customer for the Eurocopter AS 350 through LG. Simplex already has had multiple Fire Attack and Spray Systems in use in Korea for the KA-32 helicopter.

Rounding off a good week for fire fighting announcements for Simplex, at HAI the company also announced that it had just delivered another order of four of its 2,000 gallon (7,600 litre) Big Dipper Fire Fighting Buckets. The recipients are US Army units based at Fort Campbell, Kentucky for use with the Army CH-47 helicopters in fire fighting operations.

The Big Dipper is newly redesigned unit that uses a hermetically sealed hydraulic power source contained within the nearly indestructible bucket for reliable and rapid operation of the valve plate. This unit allows full travel from closed to open of the valve in less than one second

and permits up to five or 6 multiple drops from one load. The Big Dipper is currently in use with several US Army National Guard units and has seen duty in several fire fighting campaigns.

Acquisition of a third **Sikorsky** S-70 Firehawk helicopter has been authorised for the California's Los Angeles County Fire Department.

Three Sikorsky S-70 FIREHAWK helicopters are now in service on the US west coast, two with LA County and a third with the U.S. Army National Guard in Oregon.

The Firehawk's payload ability allows it to carry water and fire suppressant in its 1,000-gallon tank to the fire scene. It also can carry crews, fuel and equipment to support the operation.

LA County took delivery of its first two Firehawk's in 2001 to serve emergency needs in the sprawling metro area, the first local government agency to purchase the aircraft.

Stung by continued US Coast Guard moves in favour of a re-engining programme for the HH-65 Dolphin fleet **Honeywell** were promoting the fortunes of their engine in the same aircraft.

They announced that LTS101 engines are delivering the highest reliability for both their Coast Guard and civilian applications since service introduction.

LTS101 engines, with more than 8.5 million hours of service, are delivering 0.508 engine-caused removals per 1,000 hours of flight, or one engine caused removal for every 2,000 hours of normal flight operations.

Honeywell have invested more than \$30M in engine improvements and we are continuing to invest in new products – FADEC - and derivative engine models.”



Honeywell's latest LTS101 turboshaft engine, the LTS101-850B-2F, with dual channel FADEC, is expected to be certified in mid-2005. And the Honeywell HTS900 growth engine model, with an advanced compressor, will deliver more than 30% more takeoff power than the current engine and is expected to be certified in 2005.

The LTS101 engine family is reported to have demonstrated a four-fold improvement in reliability since 1996 as well as improved aerodynamics and increased Gas Producer disk life, from 6,300 cycles to 15,000 cycles for the -850. Honeywell plans to introduce additional technology improvements resulting in additional power increases for this engine series, including a new axial-centrifugal compressor design and a full authority digital electronic control system.

Honeywell's 6th **Turbine-Powered Civil Helicopter Purchase Outlook** projects deliveries of approximately 2,350 new civil use helicopters during the five-year period 2004 - 2008, driven in part by increased demand for light single and intermediate twin-engine models offering newer technology.

Corporate, emergency medical services (EMS) and law enforcement helicopters combined are expected to account for almost two thirds of all new civil rotorcraft sales during the five-year forecast period.

Some highlights revealed by the annual survey of helicopter operators' purchase expectations are:

Although helicopter sales in 2003 were flat compared to 2002, they are likely to increase about 8 percent in 2004 compared to 2003.

Helicopter sales during the five-year period 2004-2008 are predicted to be 6.8 percent greater than in the five-year period 1999-2003.

Helicopter sales are forecast to enjoy a 2 percent annual compounded growth rate during the 11-year period 2004-2014.

In North America, law enforcement received 30% of all mentions this year. It remained the most frequently mentioned helicopter use segment although this represented a decline from almost 40 percent in 2003. One possible reason was that expected funds to purchase new helicopters for increased Homeland Defense and border patrol requirements never materialised.

EMS applications held steady at almost 30% of planned new purchases in North America, while planned corporate purchases fell again to 18.4% of the total.

North America continues to have the greatest demand for new helicopters, accounting for almost 46% of expected future purchases.

Survey responses indicate that North America will predominate in the purchase of light single-engine helicopters. On average more than 60 percent of future new aircraft purchases in this region are expected to be light singles, and with no regulatory activity on the horizon likely to change this.

European Sales Expected To Contract

The survey showed a pronounced decline in European purchase expectations, from 39.5% fleet replacement/expansion in 2003 to 18.7% in 2004. All of the declines were in light and intermediate multi-engine machines. The primary reason for the 2003 spike was the upcoming Joint Aviation Regulation (JAR) restricting single-engine aircraft operations over populated areas. Many European operators had planned to take delivery of new twins prior to the new rules coming into effect in January 2004.

Demand by Helicopter Size Category

Light Single-engine Helicopters: Operators continue to express a strong preference for light single-engine helicopters in their purchase expectations, naming this class of aircraft 50.3 percent of the time, up slightly from a year ago. Popular helicopters within this class include the Bell 206 and 407, Agusta A119, Eurocopter EC120, AS350/EC130 and MD 500 and MD600 series. Regionally, the light single class is highly popular in North America, cited in 62% of new purchase expectations.

Light Twins: The next purchase expectation grouping for new helicopters remains the light multi-engine class, exemplified by the Bell 427, Eurocopter EC135, AS355, Agusta A109 series, and MD 902. Expectations for the future purchase of aircraft in this segment during the next five years fell sharply and unexpectedly in the 2003 survey (from 30.7% in 2001 to 18.6% in 2003) and then again in 2004 to 13.3%. Expectations fell in all world regions except Asia, Oceania, Africa and Middle East where there was a slight increase.

The largest regional demand for light twins will be in Europe, with 25 percent of total regional purchases.

Intermediate Twin Helicopters: New intermediate twin-engine helicopters as a class received an all time high six-year purchase expectation ranking, rising to 29.1% of mentions, an increase of 1% over 2003. The models mentioned included the Bell 412, and 430 models as well as the Eurocopter BK117/EC145, AS365 series, the EC155, the Sikorsky S-76 and Agusta/Bell AB139. [Honeywell]

PEOPLE IN THE SIDE SHOWS

Lieutenant Dale Taylor was presented with the Eurocopter Maritime Rescue Heroism Award at the Eurocopter Press Conference for his actions on December 9 last while flying a Dolphin HH65B and putting his own life on the line to save the life of a mariner in trouble.

Late in the afternoon of December 9, USCG pilot Lieutenant Dale Taylor was conducting a law and order mission at the controls of his Dolphin HH65B when he received a distress call from a yacht lying about 45 nautical miles south east of Key West, Florida.

On the scene, the helicopter crew found the 27 ft. yacht 'Jada' bobbing about in raging seas whipped up by violent winds. The two yachtsmen managed to contact the helicopter but the communication was lost due to the bad weather. Lieutenant Taylor decided to hoist up the two yachtsmen, an operation requiring them to don their life vests, jump into the water, and grab on

to a rescue basket suspended via a sling from the helicopter. Everything went smoothly for the first victim and a few minutes later he was on board the helicopter, unharmed. But the difficulties were only just beginning for the second victim, who was 81 years old and already very weak.

Once in the sea, he lost his life vest and was unable to catch hold of the yacht. The copilot and mechanic lowered the basket for a second attempt, but the old man was too exhausted by his struggle with the elements to grab on to the basket. Clearly the crew had to give him a helping hand, so Lieutenant Taylor handed over the controls to his copilot and went down in the basket. The Lieutenant then swam to the man and managed to pull him into the rescue basket despite the onslaught of the waves. The man, by this time unconscious, was hoisted up to the helicopter but the mechanic had problems getting him inside. Meanwhile below, Lieutenant Taylor was still in the water. All's well that ends well, and a few minutes later he was back on board the helicopter.

The U.S. Coast Guard currently have 96 HH-65 Dolphin helicopters in service that have achieved over 800,000 flight hours.

CAE SimuFlite named Pamela de Castro and Kelli Lynn Cowart winners of its training scholarships awarded through **Women in Aviation International**.

Pamela de Castro of Oakland, California, has received a Citation type rating scholarship, and a King Air C90 initial pilot training scholarship has been given to Kelli Lynn Cowart of Douglasville, Georgia. The awards were given at the Women in Aviation's 15th annual conference held March 11-13 in Reno, Nevada. The two will begin training this summer at CAE SimuFlite's Dallas/Fort Worth facility.

CAE SimuFlite's scholarship program was launched 18 years ago, and through its Women in Aviation scholarships, promotes business aviation as a career choice for young female aviators and aircraft maintenance technicians.



In Las Vegas **The Whirly-Girls International** presented their 2004 scholarships to nine women at the annual Whirly-Girls Scholarship Banquet held at the Embassy Suites Hotel. The President of the Association is the wife of James di Giovanna the head of the Los Angeles County Sheriff Air Bureau.

Together, the scholarships are worth a total of \$40,490 of helicopter flight training. Some scholarships were donated by training facilities and helicopter manufacturers while \$19,000 in cash gifts to the scholarship fund were also awarded.

The scholarships and winners are as follows:

- **American Eurocopter Flight Training Scholarship**, awarded to Terri Watson, WG#548, of Lander, Wyoming.
- **Bell Helicopter Textron Flight Training Scholarship**, awarded to Patricia Boyer, WG#1206, of Wilbrahm, Mass.
- **Doris Mullen Flight Training Scholarship**, awarded to Angela Wittenberg, WG#1112, of Medford, Ore.
- **Doris Mullen Flight Training Scholarship**, awarded to Angela Wittenberg, WG#1112, of Medford, Ore.
- **Esther "Jerry" Gardiner Memorial Scholarship**, awarded to Lisa Pendergrass, WG#1204, of Tryon, N.C.
- **Flight Safety International Instrument Refresher Course Scholarship**, awarded to Pam Gallina, WG#744, of Ft. Lauderdale, Fla.
- **International Whirly-Girls Helicopter Flight Training Scholarship**, awarded to Patricia Calder, WG#1213, of Wuppertal, Germany.

- **Robinson Safety Course Scholarship**, awarded to Melanie Real, WG#998, of San Pedro, Calif.
- **Vortex Flight Training Scholarship**, awarded to Cathy Yelle, WG#768, of Schenectady, N.Y
- **Whirly-Girls Helicopter Flight Training Scholarship**, awarded to Danielle Smiley of Vancouver, British Columbia.



LifePort, Inc.

LifePort Inc., of Woodland WA recently shipped the 12th in a series of Eurocopter AS350 aeromedical interiors, fulfilling a long-term contract with Petroleum Helicopters.

These medical interiors include the LifePort MedDeck patient loading system with AcroSled RS stretcher, along a MedWall pilot/patient barrier and cabin service outlet station. The advanced life support module or MedPak is located in the cargo area and includes an oxygen cylinder, suction, compressed air system and electrical components.

This interior will also feature the LifeGard MedFloor an extremely durable and seamless medical floor with both biocide and igicide properties.

Other recent equipment supplied include a system supplied to the Irish Air Corps for a new Lear 45 aircraft..

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