

Rotorbreeze[®]

Bell Helicopter

A Textron Company

June 2006 • Vol. 55 No. 2

FUTURE MARINE ONE

The first VH-71 Presidential Helicopter test vehicle taxis in front of the new air traffic control tower being built to help augment the requirements needed to test and evaluate the Presidential Helicopter program's aircraft.



U.S. Navy photo by Jim Jenkins

What's Inside...

Accident Rate by Mike Blake	2	Marine Medium Tiltrotor Squadron	7	Huey II Kit Deliveries Strong	9
CSF Corner	3	The Simple Things in Life.	8	Bell LUH SSPD	10
First Presidential Test Helo	4	Warranty on Torsion Straps	8	V-22 is Going to War	10
First Osprey Crew Chiefs Graduate	5	Ground Broken on Army Programs Center	9	Iraq's Wild West Tamed	11
Det-A Marines Logistics Support.	6			Shop Talk	12

CURRENT HELICOPTER ACCIDENT RATE IS EXCESSIVE AND UNSUSTAINABLE

From **Michael Blake**
Exec Vice President & COO
Commercial Programs & Services

The public perceives helicopter travel to be unsafe compared to travel by plane and that is reflected in insurance rates. This is, perhaps, ironic when we in the industry understand the important life-saving missions that only helicopters can perform. And it must be noted that helicopters typically operate in relatively unforgiving environments (e.g. low altitudes and over-water operations).

The International Helicopter Safety Symposium is made up of over 260 members in many countries around the world. During their meeting in Montreal last September, it was noted that the helicopter industry accident rate trend is not improving. As a result, an International Helicopter Safety Team was established with the goal to achieve an 80% reduction in accident frequency of helicopters in 10 years. For turbine-powered helicopters, achievement of this goal would result in the same risk as flying in an average global airline. Bell Helicopter Textron is committed to playing an active role in achieving this goal.

It was stated at the Symposium:

"This will not be a one-shot effort providing near-term gratification, but rather life-work because lives are dependent on our success."

Bell's safety efforts over the years have resulted in a 33% accident rate trend reduction worldwide, on our turbine-powered fleet over the latest 10-year period and 50 million flight hours. This success is not enough for a premier company. We will



continue keeping airworthiness (AW) failures to a minimum and increase our efforts on reductions of human errors.

Significant improvement in helicopter industry safety will be achieved by the active support of industry participants including manufacturers, operators, regulators, trainers and crews.

We believe that accident reduction will follow from:

- Improving crew and maintenance training to provide better understanding of helicopter operations and improved pilot decision making. Note that Bell has found that 86% of its

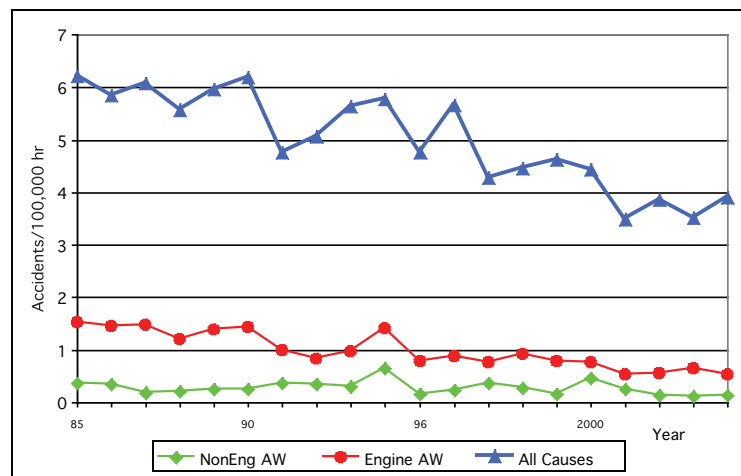
civil turbine accidents arose from human or unknown factors. We must better understand what is actually occurring in the cockpit to allow improvement identifications. Improvements include improved awareness, judgment that comes from knowledge and experience, and decisiveness.

- Designing aircraft not to fail – e.g. safe life design, parts retirement, improved equipment, such as:
 - Increasing use of accident-avoidance technology – e.g. Terrain Avoidance Systems, Synthetic Vision Systems, Global Positioning Systems.
 - Mitigating the results of aircraft and human failure – e.g. Redundancy, back-up systems, autorotation training, Wire Strike Protection System, etc.
 - Minimizing occupant injury in the event of aircraft failure – e.g. rugged structures, shoulder harnesses, energy-attenuating seat design, and crash-resistant fuel systems. Bell introduced these crash safety features 9 to 10 years before they became rules.

As Bell senior leadership committed to the objective of the IHST in Montreal in

September 2005, so have we re-committed to this objective in Phoenix, Arizona on May 8, 2006. This breakthrough initiative will result in raising the public perception of the helicopter as an acceptable and safe means of transportation for many generations to come.

Mike extends his thanks to Roy Fox and Ron Clegg in compiling the information contained in this article.



As the Bell Customer Support & Services team (CSS) drives forward to expand its service offerings to operators of the installed base of military and commercial products, we will continue to strengthen our team by adding talented leaders who will help us reach our goal of becoming the premier customer service organization in the aviation industry. We believe that one thing that we can do to get closer to reaching this target is to reinforce and leverage our relationships with our existing network of 153 licensed Customer Service Facilities around the globe. Accordingly, we are very pleased to introduce you to a new member of the CSS management team!

Trey Wade joins CSS as the new Director of Strategic Partnering. In this role he will have responsibility, accountability, and authority for all aspects of Bell's CSF worldwide network, including the development and implementation of changes to the network structure. Additionally, he will lead the Customer Support & Services growth strategy to include partnerships and mergers and acquisitions. Wade is a 1996 graduate of the United States Military Academy at West Point. He holds a bachelor's degree in history and systems engineering. He joined Bell Helicopter in 2001, and is a certified Textron Six Sigma Master Black Belt.

As a first step towards establishing

dialogue with our CSF's, Bell hosted the 1st Annual Worldwide CSF conference in Dallas, Texas in February during HAI. Over the course of the two-day event we discussed Bell's overall direction for 2006, upcoming product enhancements, compliance regulation changes, key Customer Support initiatives, and most importantly took advantage of the unique opportunity to recognize some key individuals for achievements, milestones, and exceptional customer service to Bell operators. In exchange, the CSF's were able to share their views with the Bell management team and express their ideas for continued growth and success.

One of the high priority initiatives that stemmed from the CSF conference was for Bell to improve its communication and administrative support level. In response to this challenge, we created a "CSF Corner" in Rotorbreeze, we will generate regular email updates, provide website postings, and establish a CSF Advisory Board. Numerous longer term enhancements to the network are also being studied. Some ideas under consideration are improved Marketing support throughout the CSF network, more service partnerships with Bell, fleet management, changes in administrative requirements, and numerous other concepts. We are targeting such implementation for Fall of 2006. If you have any ideas or



Trey Wade

recommendations for improving the service levels of our CSF network, please contact Trey Wade, Director of Strategic Partnering, Office Phone: (817) 280-2069, E-mail: twade@bellhelicopter.textron.com

BA609

achieves another First!



The BA609 on April 19 achieved another first – **304 knots true air speed!**
Congratulations to the team!

ROTORBREEZE is a quarterly publication of Bell Helicopter Textron Inc., a subsidiary of Textron Inc., P.O. Box 482, Fort Worth, TX 76101, (817) 280-8779
E-mail: mdewey@bellhelicopter.textron.com
The newsletter is distributed free of charge to persons associated with the helicopter industry.

EDITORIAL STAFF

Michael Dewey, *Editor*

Ella Maclin, *Support Administration*

ADVISORY COMMITTEE

Jack Denham, *Ex. Director Product Support*

Leslie Ferry, *Business Development Marketing Manager*

Mark Kocurek, *Manager IPT Customer Support*

Andy Kelley, *Product Support Engineering*

©2006 Bell® Helicopter Textron Inc.

FIRST PRESIDENTIAL TEST HELO ARRIVES AT PAX RIVER

By Jim Jenkins, NAWCAD Public Affairs

NAVAIR Patuxent River, MD – The first VH-71 Presidential Helicopter test vehicle landed here Nov. 2 and immediately began undergoing familiarization training for pilots and maintainers.

“What we will be doing with the airplane is largely training. Getting Marines, Navy guys, contractors, pilots and maintainers a jump start in learning this thing,” said Doug Isleib, Presidential Helicopters program manager. “There was a lot of excitement last week as we got the aircraft in. It pretty much emptied out our whole building. The whole team has been working on it since well before source selection in January. To see it here at Pax was a great morale boost for us.”

The VH-71A will provide the office of the president a mobile command and control capability featuring seamless and secure informational connectivity essential in the post 9-11 security environment. Presidential helicopters provide helicopter transportation to the president and vice president of the United States, heads of state and other official parties.

As an integrated “system of systems,” the VH-71A will feature latest generation technology with open systems architecture to provide not just a transportation platform, but also a complete, compact and mobile command and control capability. The VH-71A will provide: increased performance, improved mission, communications and navigation systems, improved maintainability, and expanded potential for future growth.

The current helicopter fleet that supports the presidential mission, VH-3D and VH-60N helicopters, includes 30-year-old aircraft that were designed in the 1960s, fielded in the 1970s and, while still safe and reliable, no longer have the growth capability to incorporate the equipment necessary to provide suitable presidential support in the post 9-11 environment.

Technically, TV1 is a leased Italian Navy EH-101 helicopter.

Because of the challenging schedule the program is under, leadership decided to lease the initial test article to get a head start on flight and maintainer training, Isleib said. Also having the EH-101 here now will allow the program team to figure out where to place system antennae and other communication systems.

TV1 will act as sort of a practice test bed before the three actual test vehicles arrive in the spring of 2007. Flight-testing of the VH-71A began with engine integration testing on a contractor vehicle in December

week’s arrival represents the first tangible part of development flight test that the team has seen, Isleib said.

“They’ve been working for a couple of very hard years on putting this program together and getting out of the starting chocks,” Isleib said. “They went through a very aggressive, very high-profile and very rigorously executed selection process and now they’re seeing the first fruits of that. Now they have a no-kidding helicopter here and it’s just the first of many to come.”

A \$1.7 billion, cost plus award fee contract awarded to Lockheed Martin Systems Integration of Owego, NY launched the VH-71A’s system development and demonstration phase Jan. 28.

Flight testing of the VH-71A began with engine integration testing on a contractor vehicle in December of 2004. Additional flight testing began June 10 at Owego using TV-1.

The program plans to procure 23 VH-71 operational aircraft and three test aircraft at an expected per unit cost of about \$82 million per aircraft (initial increments) and approxi-

mately \$110 million per aircraft in the final configuration.

As the prime contractor and systems integrator, Lockheed Martin is basing the VH-71A on its US101 helicopter. The US101 is an American-built variant of AgustaWestland’s successful EH101 multi-mission helicopter that currently serves with five allied armed forces and has logged more than 80,000 flight hours, including combat operations in Iraq, Afghanistan and Kosovo.

The VH-71A features components provided by more than 200 suppliers in 41 states.

Lockheed Martin’s team includes AgustaWestland (aircraft design), Bell Helicopter (aircraft production) and General Electric (engines).



FIRST TEST VEHICLE ARRIVES — The first VH-71 Presidential Helicopter test vehicle lands at Naval Air Station Patuxent River Nov. 2. Test vehicle one is being used to train pilots and maintainers with the new platform. In the background is the framing of the new Presidential Helicopter hangar and support facility.

U.S. Navy photo by Jim Jenkins

2004. TV1 arrived at Owego June 10 and shortly after began more involved flight-testing.

The new hangar facility, to be completed sometime next fall, will house all the test and evaluation, program management and depot work on the VH-71 aircraft.

“There has been a lot of effort in getting everything we can in there,” Isleib said. “Both the tower and the hangar are ahead of schedule. When we’re done with it as a test facility, the hangar will turn into the depot facility for the president’s helicopters instead of sending them back to the original equipment manufacturer.”

Despite the morale boost for the team, the arrival of TV1 is just a small, preliminary step in the beginning phases of test and evaluation of the VH-71. But last

VMMT-204 Graduates First Osprey Crew Chiefs

Story and Photos by: Lance Cpl. Samuel D. White



Lance Cpl. Jacob A. Stinson, Marine Medium Tiltrotor Training Squadron-204 crew chief, holds out his newly acquired wings after graduation.

Marine Corps Air Station, New River, NC (Feb. 8, 2006)

Two years ago, six men made the decision to become United States Marines. The future Marines had little in common, several were still in high school planning for spring break and their school's upcoming prom while others worked odd jobs. Most of them didn't know what an MV-22 was.

Since then, those six men have turned into warriors. They tackled the famous sand fleas of Parris Island or the treacherous

hills of San Diego, each of them earning the title "United States Marine," and each earning the right to wear the eagle, globe and anchor.

On Jan. 25, through hard work and dedication, these Marines earned another significant emblem – their aircrew wings. These Marines became the first MV-22 crew chief graduating class of Marine Medium Tiltrotor Training Squadron-204.

"I never thought I'd be where I am today," said Lance Cpl. Jacob A. Stinson, VMMT-204 crew chief and one of the six graduates. "It's an honor to be one of the first graduates for the Osprey crew chief program."

"Think of all the people you went to high school with, and I don't care if they went off to Harvard or Yale or Brown or are studying to be a brain surgeon, none of them will probably ever have the responsibility that those six Marines will have," said Col. Joel P. Kane, VMMT-204 commanding officer.

"Now, imagine someone saying to you when you were in high school ... 'you are going to become a crew chief and certify safe for flight the MV-22, an \$80 million aircraft.' The amount of money and the number of lives, for a high school or college graduate, is a huge responsibility," added Kane.

Certified as one of the first crew chiefs to graduate from VMMT-204 might seem like a lot of pressure to handle; to the newest crew chiefs it's just another day in their life in the Corps.

"Being the first to graduate from the squadron and to be trusted with the Osprey is a lot of responsibility," said Stinson. "I just hope I can live up to it all."

The graduation of these Marines is not only a significant event for the Osprey program and the graduates, but also to Marine aviation.

"This is a big deal for us as a squadron. This class is the first that we've put through since we as a squadron have returned to flight last October," said Kane. "We're pretty excited about the graduates making it through our current training program."

A syllabus that took the Marines through a nine-month-long course, the graduates are ready to put their newly acquired skills to the test against the future of the aviation wing, said Kane.

"I know all the graduates are going to be successful," said Kane.

Within the next few months, while three of the six Marines will stay with the "Raptors," the other half of the graduating class will transition to the future Marine Medium Tiltrotor Squadron-263, which will stand up in March.

"I'm eager to get out there and join up with my new squadron," said Lance Cpl. Yauncey A. Long, a future VMM-263 crew chief. "I just hope I don't let the Marines, my leaders or the Corps down."



Left: The newest group of MV-22 crew chief students show off their newly acquired wings while standing in front of an Osprey.



Right: Lance Cpl. Yauncey A. Long, Marine Medium Tiltrotor Training Squadron-204 crew chief, inspects an MV-22 Osprey after a flight. Along with five other Marines, recently became one of the first Osprey crew chiefs to graduate from VMMT-204.

Det-A MARINES Bring Aviation Logistics Support to Al Taqaddum

Submitted by: 3rd Marine Aircraft Wing
Story and Photos by Cpl. Jonathan K. Teslevich

Helicopters break down, especially ones subjected to the rigors of combat missions like those flying out of Al Taqaddum, Iraq.

AL TAQADDUM, Iraq (April 29, 2006) Always ready to apply their unique repair abilities to the helicopters are the Marines with Detachment A, Marine Aviation Logistics Squadron 16, Marine Aircraft Group 16 (Reinforced), 3rd Marine Aircraft Wing, who provide aviation logistics support day and night to Marine Medium Helicopter Squadron 268 and Marine Light Attack Helicopter Squadron 369.

The detachment of more than 40 Marines is broken down into different sections, each focusing on a specific piece of aviation logistics support.

Working out of scattered wooden shacks, cargo containers and a dirt covered hangar, the detachment's Marines manufacture and repair the hundreds of parts making up CH-46 Sea Knights, UH-1N Hueys and AH-1W Super Cobras.

"We have 24 Marines working in our maintenance section," said Gunnery Sgt. Sean P. Bosh, Det. A staff noncommissioned officer-in-charge. "Their job is repairing components on all three aircraft types so the work varies, especially with three different engine types. They troubleshoot the aircraft's mechanics, always attempting to save parts through our extensive repair ability before pulling them and getting a replacement."

According to Bosh, three Marines in the electronic countermeasures section provide limited repair ability for the protective systems, but also fill the important role of

Left: Cpl. Clifford A. Davies fills out the necessary paperwork to check out batteries to Marines with Marine Light Attack Helicopter Squadron 369 March 26. Davies is an aircraft electrical/instrument/flight control systems technician and Seattle native.



Cpl. Jensen J. Miller cuts a piece of steel inside the metalworkers' shop for Detachment A, Marine Aviation Logistics Squadron 16, Marine Aircraft Group 16 (Reinforced), 3rd Marine Aircraft Wing, at Al Taqaddum, Iraq, March 26. Miller and more than 40 other Marines with Detachment A are responsible for providing support to Marine aviation units here.

escorts for the sensitive equipment when it is transported to a higher level facility for repair.

The smallest detachment section, manned by Cpl. Clifford A. Davies, is the battery section.

"I handle all the battery support for the squadrons and control hazardous materials for the detachment," said Davies, an avionics technician and Seattle native.

According to Bosh, six Marines split evenly across three small sections are perhaps the busiest of all the Det. A personnel.

"Two Marines in the van maintenance section are constantly busy with maintaining the generators across the squadrons and the ones at the airfield here," said Bosh, a Jacksonville, Fla., native. "Our two metalworkers are integral to the helicopter's airframes. Their work saves the squadron a lot of time and money by keeping the birds up and flying."

The busy schedule of the helicopter airframe mechanics, also known as metalworkers, and van maintainers is mirrored by two hydraulic technicians, who unceasingly inspect hydraulic parts aboard the helicopters for cracks and defects.

"If problems are found, then we have the ability to manufacture and repair the necessary parts to keep the aircraft up," stated Cpl. Jeffery M. Wells, a hydraulic mechanic and Powder Springs, Ga., native. "We can manufacture low- and medium-pressure lines, but the ones we can't fix are sent up to MALS-16 at Al Asad."

Continued on bottom of next page ...



Lance Cpl. Charles A. Hutson holds up a helicopter rotor blade prior to placing it on a scale March 26. Hutson is a helicopter/tiltrotor dynamic components mechanic and Exeter, Mo., native.

Marine Medium Tiltrotor Squadron 263 Activated

The Marines Medium Tiltrotor Squadron 263 was activated on March 3 in New River, North Carolina.

Marine Corps News | Samuel D. White | March 07, 2006

Photos by Sheldon Cohen

MCAS New River, N.C. – The future of Marine Corps aviation took a large step forward as hundreds of Marines, Sailors, Airmen, Soldiers and family members gathered to watch a ceremony in which the first operational MV-22 Osprey squadron was activated here March 3.

“Commissioning [Marine Medium Tiltrotor Squadron-263] is a historic day for the ‘Thunder Chickens,’ for our Corps and for our nation,” said Maj. Gen. Thomas L. Moore, 2nd Marine Aircraft Wing commanding general. “We have introduced a transformational aircraft into our nation’s forces with the ‘Thunder Chickens.’”



A transformational aircraft because it capitalizes on both the best aspects of the rotary wing and the best aspects of the fixed wing turbo-propeller, Moore explained.

“The [Osprey] is much more survivable than the [CH-46E ‘Sea Knight’] because of its range and its speed,” said Moore. “It’s a much more capable aircraft and we expect it to perform [excellently] in battle.”

The Tiltrotor is a capable aircraft that has been in the making since the early 1960’s; some feel the delay has produced the best result.

“I have to tell you, waiting for something this good has been worthwhile,” said Gen. Robert Magnus, assistant commandant of the Marine Corps. “This is a tremendous aircraft. While we are at war, it is a tremendously more survivable platform for the Marines who are in the fight.”

VMM-263, home to more than 150 Marines and the successor to Marine Medium Helicopter Squadron-263 which cased its colors in June 2005, will carry on the proud name, “Thunder Chickens,” and also the legacy of the former CH-46E “Sea Knight” squadron.

Honored to carry on the name, “Thunder Chickens,” the Marines of VMM-263 are thrilled by the chance to become the first operational Osprey squadron, said Sgt. Maj. Grant VanOostrom,

VMM-263 sergeant major.

“They are very excited because they see it as a culmination of those who have gone before them,” said VanOostrom. “They just happen to be the chosen ones who get to bring it into its current existence; we get to reap the rewards of others.”

And VMM-263 can be expected to reap the almost countless rewards, such as being able to travel at speeds of nearly 300 mph (twice the speed of any current helicopter), having up to five times the range of travel, and carrying three times the payload.

“The Osprey will allow us to self-deploy these aircraft from New River, or [Air Station] Miramar, across the Atlantic and Pacific Oceans, to anywhere this great nation wants to plant its flag within two to three days,” said Magnus.

Uncertain of the exact date when the Osprey will be supporting ground forces overseas, the squadron feels assured that it will be in the near future.

“We expect VMM-263 to be deployed within the coming year,” said Moore. “We can’t give an exact date, because we aren’t 100 percent sure.”

“There are two things the American people should know about this aircraft,” said Gen. Michael W. Hagee, 33rd commandant of the Marine Corps, during his visit to Marine Corps Air Station New River Feb. 24. “One, it will change the way we fight; it’s faster,



larger, air refuelable and the technology is state of the art. Two, it’s the safest aircraft in our inventory. It’s been tested and proven ready to perform.”

And though tremendous efforts will have to be made by the “Thunder Chickens” before the first Osprey squadron is ready to deploy, a sigh of relief can be breathed by the Marines, families and friends of the program who sacrificed so much to get to where the stand up could be possible, said Moore.

“We are bringing forth the new capability to replace what has been the backbone of Marine aviation in the CH-46,” said Moore. “With that capability, we take rotary wing assault support, now tiltrotor wing assault support, ahead into the future and assure the success of Marines in battle. We are committing the Osprey to the gunfight.”

Det-A MARINES *(Continued from previous page)*

The Det. A supply Marines provide the last link in the aviation logistics chain, supplying all the other sections and squadrons with the parts that they need.

Working nonstop, day and night, forces the Marines to learn new skills and become accustomed to intermittent sleep hours.

“I am a hydraulic mechanic, but today I’m learning how to bend steel in the weld shop,” said Wells. “You have to make yourself universal down here.”

Despite being detached from their squadron and living and working under austere conditions, the aviation logistics support Marines here expressed their affinity for their current role.

“It could be two in the morning when I get awakened to weld something,” said Cpl. Jensen J. Miller, an airframes mechanic and Onawa, Iowa, native. “Even with that, I love it down here. You get to see your work go up in the air right in front of you, knowing that the helicopters are going out to help the Marines in the field, be it casualty evacuation or air support.”

The *Simple* Things in Life

Bierck Saxton II
Product Support Engineer
Electrical and Avionics

As anyone knows, troubleshooting avionics problems can sometimes lead you to the brink of insanity. Simple boxes can have complex problems, and the most sophisticated systems can suffer from the simplest of malfunctions. The more integrated the system becomes, the more places our “techno bugs” have to hide, and the more tricks you need to uncover them in a timely way. To help you get the upper hand, here are a few troubleshooting tips to help you out. Some may be basic, others insightful. But they all can help you save time the next time you’re called on to hunt a problem down.

Talk to the pilots. Debriefing the pilots. You’ll get an invaluable picture of what the fault is. At the time of the problem, what was it doing and what is it supposed to do? Could the problem have been caused by operator error?

Know the system involved. Without a clear picture of the system in question, you can’t know what you don’t know. Make one up for a simple circuit. In many cases another unit or a sensor within the system or other related system, will

cause a problem with a cockpit unit. Begin your search with the part or component that is most likely to have caused the problem. The more sophisticated the system is the greater chance you have of this happening.

Power? Could it be as simple as is the unit getting power? Check switch position; check circuit breakers; is it getting the right voltage? Power drops, surges and spikes can lead to a lot of intermittent problems. It’s amazing how many hours technicians waste chasing things as simple as these.

One thing at a time. When troubleshooting a sophisticated system, and they are getting there, it’s not very wise to change more than one component at a time. You won’t know which piece is the bad one. Start at the most logical point of failure and work your way out from there.

Check antennas, wires and connectors. If a pilot reports that the tower can’t hear his transmissions or the ADF is erratic, an often-overlooked source for the problem is broken antennas, wires and connectors. Dirt, corrosion, vibration

and grease can play havoc with reception. Add a little turbulence and the connection can jump on and off. Also, make sure antenna wires are properly connected. Check belly-mounted antennas due to possible breakage when the aircraft is washed.

Check your equipment. Make sure all of your tools and test equipment are properly calibrated. If you do a test and the outcome just doesn’t make any sense, maybe your test equipment is in need of repair. Take a step back and make sure the test was done properly and try the test again with another piece of equipment and compare the outcomes.

Just remember, the simple things can and will drive you insane if you don’t stop, take a step back and look at a problem sometimes. Also, pilots can make mistakes. Sometimes pilots might think they know how a system works, but if they don’t keep up on the current technology, they could be mistaken. Pilots can be looking at something, and think, “That’s not supposed to work like that,” when truly it does. *Keep up with the technology and remember the basics.*

A Reminder for **WARRANTY** on Model 206, TH-67A, and TH-57A Tension Torsion Straps

By Mike Rich, Sr. Warranty Administrator

It has been brought to the Warranty Department’s attention that some customers are unsure if Bell Helicopter provides special warranty credit for mandatory calendar removal and replacement of model 206 Tension Torsion Straps. This “Special Warranty” applies to model 206, TH-67a, and TH-57a only. *The answer is yes, if certain criteria are met.*

The criteria are as follows:

- The installed straps must be removed at the 24-month mandatory removal date.
- The Warranty Department will allow the special warranty for straps removed at 22 months from date of installation to 24 months from date of installation. Any claims submitted for straps removed outside the above mentioned parameters will not be approved.
- A MMIR (Maintenance Malfunction Information Report) must be filed with the appropriate information within 90 days from the date the straps were replaced. Claims filed past the 90-day period will not receive the special credit.

- The customer must provide the Warranty Dept. with a copy of the historical records for the straps removed from service in conjunction with their warranty claim.
- Straps that accumulated 600 hours or less of service at time of removal and that have been removed in accordance with the mandatory removal dates mentioned above are eligible for a maximum of 15% special warranty credit per strap. Straps that have accumulated over 600 hours of use, up to 1199 hours of use and meet the removal criteria mentioned above are eligible for special warranty credit, however, the percentage is prorated downward based upon the hours used on the straps.

Should you have questions concerning this special warranty consideration, please feel free to contact:

Bell Warranty Department
Telephone: 817-280-3406
Fax: 817-280-8898

E-mail: warranty/cpr@bellhelicopter.textron.com

GROUND BROKEN ON ARMY PROGRAMS CENTER

Bell Helicopter broke ground on a new building that will help build a stronger relationship with the United States Army.

Chief Executive Officer Mike "Red" Redenbaugh noted the groundbreaking for the Bell Helicopter Army Programs Center was the second ceremony involving a new building. A ribbon cutting for the Repair & Overhaul Center, which deals primarily with military aircraft, was held earlier the same day.

"Bell Helicopter needs to keep our focus on the war fighters, because we are at war," Redenbaugh said. "We, as the Bell Helicopter organization, have a responsibility and an obligation to bring our entire wherewithal to bring that forward."

Brig. Gen. E. J. Sinclair said the Army appreciates the work Bell employees put into their products.

"As we continue to fight this global war on terror – and we know we're going to be fighting it for years to come – the product you produce is going to give them the best opportunity to kill the enemy and survive," Sinclair said. "There's no doubt in my mind you'll meet that challenge."

Sinclair is commanding general of the United States Army Aviation Center in Fort Rucker, Ala. He was commissioned a second lieutenant of armor upon graduation from the U.S. Military Academy in 1976.

Redenbaugh, Sinclair, Hillwood Development Corp. Chairman Ross Perot Jr., Fort Worth City Councilman Jungus Jordan and John Bean, executive vice president and chief operating officer for government programs, handled shovels to toss a few spadefulls of dirt for the ceremonial groundbreaking, as heavy machinery operated in the background and a few trucks and a backhoe stood in silent formation.

Once complete by the end of this year, the center will house about 206,000 square feet of offices and work space adjacent to the Bell/Agusta building on Horizon Drive in Fort Worth. It will employ

about 600 employees related to the armed reconnaissance helicopter program, as well as 100 safety enhancement program employees.

Workers will upgrade and assemble OH-58D helicopters, modify 417 models into the new armed reconnaissance helicopter, and paint the aircraft.

The Alliance corridor has seen a lot of activity recently, but is still only about a quarter full, Perot noted.

"Red, we've got a lot of room left for you guys, so keep building," he said.

Perot, a Bell Helicopter customer for decades, said the Army had selected an outstanding company and helicopter for its missions.

Sinclair echoed Perot's sentiment.

"I can't overstate the importance of what Bell helicopters do for Army aviation," he said.

The general related an incident where a Bell helicopter under fire saw both pilots shot. Once the helicopter was safely on the ground, crews found nearly 20 bullet holes in the craft.

"You saved both those soldiers' lives because of the work you do," Sinclair told Bell workers. "It withstood the damage of those bullets."

The Army recently hit the 1-million-hour mark in combat flights in Iraq, Sinclair said. Pilots fly their OH-58D Kiowa Warrior helicopters about 100 hours a month.

Bell has a 50-year relationship with the Army, Bean said, but it has been about two decades since the company had a "hot, new build" for the Army like the armed reconnaissance helicopter.

The Army Programs Center marks a "revolutionary day" for Bell, he said.

"In record time, we're going to deliver the first aircraft in April of next year," he said. "You have our word we'll deliver on that commitment."



John Bean, executive vice president and chief operating officer for government programs; Chief Executive Officer Mike "Red" Redenbaugh; Brig. Gen. E. J. Sinclair; Hillwood Development Corp. Chairman Ross Perot Jr.; and Fort Worth City Councilman Jungus Jordan get ready to break ground on the new Bell Helicopter Army Programs Center.

— Photo by Kalee Appleton

Strong Huey II Kit Deliveries in First Quarter 2006 Support Iraqi Air Force

The Huey II program posted a record high 17 deliveries in the first quarter of 2006, with nearly half of those kits being allocated to the Iraqi Air Force rebuilding program.

Airinc, based in Warner Robbins, Ga., and prime contractor for this program, selected the Bell Huey II kit as the preferred UH-1H upgrade, with US Helicopter as the airframe integrator.

Airinc, in conjunction with the U.S. government, is upgrading a total of 16 UH-1Hs to Huey II configuration with the first several aircraft already in work at US Helicopter.

"The US Helicopter UH-1H refurbishment and upgrade to the Huey II gives the Iraqi Air Force the increased hot weather performance dictated by the extreme climactic conditions of Iraq, meeting the customers' demanding mission requirements," states Bob Pope, Bell's Marketing

& Sales manager responsible for Iraq.

The current plan is for the aircraft to begin induction into service during the first half of 2007.

In addition to the Iraq initiative, the remaining kits will be supporting the U.S. Air Force (TH-1H Program), the U.S. Department of State Air Wing, and the Argentina Ministry of Defense.

"This strong quarter is just another indication of how the marketplace is craving a reliable, low-cost, multi-mission platform," explains Steve Woolston, program director for the Huey II. "This kind of aggressive program execution is also a testimony to the whole Huey II IPT (integrated product team), including our build team at US Helicopter and our logistics team at Eagle Global Logistics."





Bell Helicopter completes Army's Light Utility Helicopter (LUH) Source Selection Performance Demonstration (SSPD)

On March 1, Bell Helicopter successfully completed the U. S. Army's Light Utility Helicopter (LUH) source selection performance demonstration (SSPD). The SSPD is one phase of the Light Utility Helicopter competitive bid competition. Bell Helicopter submitted its proposal for the

Bell 412 to the U.S. Army in late October 2005, participated in oral presentations to the contracting officer and evaluators, and was found to be in the competitive range for participation in the SSPD. The LUH Request for Proposal seeks 322 aircraft with options for 30 additional as well as B Kits for MEDEVAC configuration, Contractor Logistics Support, and training.

The Bell LUH SSPD team of managers, test pilots, engineers, maintainers, and the Bell 412 LUH aircraft arrived on Jan. 31 at Fort Rucker, Ala., and upheld the high standards and proud name of Bell Helicopter throughout the five-week demonstration.

"The team's performance could not have been better," said Mike Miller, LUH campaign leader and program manager. "We were most often the first team to arrive and always performed with a positive attitude. I believe we reinforced with the evaluators and the Army at Cairns Army Airfield that Bell stands for performance, service and quality."

During the SSPD, the Bell 412 was evaluated for human factors engineering, crashworthiness components and design, hoist operations, MEDEVAC operations, external load operations, night vision goggle operations, performance at mission representative weights, flight handling qualities, and reliability and maintainability. Working six days a week, the team flew more than 25 hours of demonstrations and tests from hover to high altitude. Most notable was the 100 percent operational availability of the one 412 aircraft that Bell brought to the SSPD.

Competitors that participated in the SSPD were MD Helicopter's 902 Explorer, Eurocopter's EC-145, and the Agusta Westland 139.

Contract award for the LUH competition is April 30, although it is expected to slip to May.

V-22 IS GOING TO WAR, Marine General Says

Aviation Chief says he will order the aircraft to Iraq next year

Richard Whittle

The Dallas Morning News, May 5, 2006

WASHINGTON – The V-22 Osprey will make its combat debut next year in Iraq, despite a recent mishap in which one of the tilt-rotor aircraft broke a wing, the Marine Corps' aviation chief said Thursday.

"We're conducting the tactical training; the aircraft is cleared to go," said Lt. Gen. John G. Castellaw, deputy commandant for aviation. "Next year we're going to put it into combat with great confidence."

Built by Bell Helicopter Textron Inc. of Fort Worth and Boeing Co.'s helicopter division, the Osprey, a troop transport aircraft, uses two tilting wingtip rotors to take off and land like a helicopter but fly like an airplane.

Two crashes that killed 23 Marines nearly led the Pentagon to cancel the \$50.5 billion program six years ago. But after redesign and retesting, the Defense Department approved full production last year.

Gen. Castellaw said the problem that caused the March 27 accident at Marine Corps Air Station New River, N.C., in which



no one was injured, can be avoided by rewriting some of the Osprey's software.

The Marines also will install and test a gun on the ramp of the Ospreys by January.

The Marine Corps, which plans to buy 360 Ospreys to replace its Vietnam-era CH-46 troop transport helicopters, has established three V-22 squadrons at New River.

Gen. Castellaw declined to predict in which month the V-22 would get to Iraq, and planners are still deciding whether the first Ospreys deployed will be based on ships in the Persian Gulf or on the ground.

One option is to station them at al-Asad, an airbase about 110 miles west of Baghdad, where CH-53 helicopters that fly supplies and carry Marines to outposts in western Iraq are based, Gen. Castellaw said.

The V-22 has roughly twice the speed and three times the range of the helicopters it is meant to replace.

"It can operate unrefueled in a radius anywhere from al-Asad all the way out to the western borders up to Mosul, way past Baghdad to the Iranian border and south to Kuwait," he said.

Saying he had flown the V-22 four times in the past six weeks, Gen. Castellaw said it is "a stable, powerful, extremely capable aircraft ... and it's going to do everything we expect it to do."

Iraq's *Wild West* Tamed by Gunfighters' Deadly Ordnance

Submitted by: 3rd Marine Aircraft Wing
Story and Photos by
Cpl. Jonathan K. Teslevich

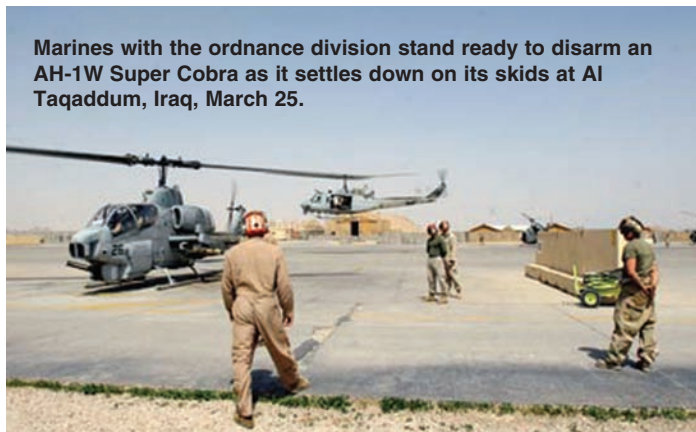
AL TAQADDUM, Iraq (May 1, 2006) — More than 100 years have passed since the fastest pistol-drawing gunfighters dominated the saloons and streets of the American West. Halfway around the world, a different kind of gunfighter is leaving its own mark on insurgent forces in Iraq's own wild west, the Al Anbar Province of Iraq.

Known as the Gunfighters, Marine Light Attack Helicopter Squadron 369, Marine Aircraft Group 16 (Reinforced), 3rd Marine Aircraft Wing, have been patrolling the Iraqi skies with UH-1N Huey and AH-1W Super Cobra helicopters for nearly seven months, ready to fire their deadly suite of weapons on insurgent forces.

The helicopters' weapons, ranging from mini-guns to missiles, would be simple window dressings in Iraq, if not for the swift efforts of the Gunfighters' ordnance division Marines.



Lance Cpl. Micah E. Vogen puts a AH-1W Super Cobra helicopter's M197 20mm automatic gun on safe, after the helicopter returns from a mission to Al Taqaddum, Iraq, March 25. Vogen and the ordnance division Marines with Marine Light Attack Helicopter Squadron 369, Marine Aircraft Group 16 (Reinforced), 3rd Marine Aircraft Wing, are responsible for quickly arming Cobras and UH-1N Hueys before they fly out on missions. Vogen is an aircraft ordnance technician and Kansas City, Mo., native.



Marines with the ordnance division stand ready to disarm an AH-1W Super Cobra as it settles down on its skids at Al Taqaddum, Iraq, March 25.

At the sound of the alarm, like colts bolting out of the gates at the Kentucky Derby, ordnance Marines race from their bunker-like trailers to the line of Hueys and Cobras to prepare for battle.

"When the alarm goes off, we're on the run. A four-man team runs out to get the helicopter ready for the pilot," said Lance Cpl. Nick W. Molthen, an aircraft ordnance technician and Seattle native. "This saves a lot of time because two separate Marines can arm the weapons on each side while the others inspect, making sure everything is safe."

Less than thirty seconds passed when the last weapons' safety pins were pulled and the helicopters were ready for take off.

"Back in the United States, it's common for the arming process to take a few minutes, but we're not in a training environment here, so we instituted a new system to speed things up," said Master Sgt. Alan W. Jones, the ordnance division chief. "Our goal was to get the birds out safely and as fast as possible without cutting any corners."

Right: Vogen loads an AGM-114 Hellfire missile aboard an AH-1W Super Cobra helicopter at Al Taqaddum, Iraq, March 25.



Five days into the deployment I sat down with the team leaders, took their input and [the new system] has worked ever since."

The world record arming time is not why the ordnance Marines perform their jobs with such urgency. They do it to save lives.

"Every second saved in the arming process means we give the guys on the ground a better chance of making it," said Jones, a Taylorville, Ill., native. "We hear back from the ground commanders expressing their appreciation for the quick support we give them."

According to Molthen, the Marines hear rumors coming back to the squadron from ground units that whenever the Cobras and Hueys show up on the scene, the shooting stops from the enemy.

"That's why I love this job! Arming the birds, doing what I'm trained to do, and getting the mission done," he said.

It is that zeal for their role in the fight against insurgent forces in Iraq that has made it possible for the ordnance Marines to work long hours, and still stay focused on the task of arming the helicopters throughout their deployment.

"These Marines have done an outstanding job over the past six months. Their performance has always been at the highest level," said Jones. "There is no doubt in my mind that I have the best Marines in the Corps, and I have been doing this for 22 years."

Model 206 A/B/L and 407 series aircraft. If after maintenance your transmission oil pressure is fluctuating, ask these questions: *Was the transmission oil pump replaced ... was it repaired ... was it overhauled? Was it disassembled for any reason?* If the answer is “yes” to any of these questions, remove the pump assembly and check that the C ring or snap ring in the cap is installed correctly. The ring is beveled on the OD of the ring and should be facing you when correctly installed. If the C or snap ring is installed incorrectly, the pump will have increased end play in the shaft, and the pump will cavitate. This movement is very subtle and not noticeable until compared with a correctly assembled pump. Fluctuating oil pressure can be intermittent as the cap moves in and out of position and the pump cavitates.

Q: Can the FAA AC43-13 be used as data source in the accomplishment of structural repair?

A: The Structural Repair Manual BHT-206-SRM-1 and BHT-MED-SRM-1 Foreword, third paragraph, states: “Minor repairs may be accomplished using the data contained in FAA publication AC-43-13-1A or later revision and the data contained in this manual. This manual does not restrict the use of FAA publication AC-43-13-1A or later revision for minor repairs to cowling, firewalls, fairings and non-structural doors. Furthermore data contained in the FAA publications may be used in other cases if all the following conditions are met: the user has determined that (1) the data is appropriate to the part being repaired; (2) the data is directly applicable to the repair being made; and (3) the data is not contrary to manufacturer’s data. Local Aviation authority approval is required when using data other than supplied by the manufacturer.

Major repairs that deviate from or are not covered specifically in these manuals will require engineering approval. Approved sources of approval are: (1) manufacturer’s data, (2) outside engineering approval (DER), or (3) FAA engineering approval.”

Q: We cannot get the cotter pin hole in the nut and bolt to line up within the specified torque range specified in the manual.

A: Additional plain, flat washers of the same part number as those specified by the parts manual may be used when required for proper nut or cotter pin installation, or to allow specified torque to be attained. Refer to BHT-SPM-All, chapter 2-00-00, paragraph 2-3-1.

Q: Where will I find parts lists and instructions for repairing my 212/412 Ground Handling Wheel hand pump P/N RBU0953B and hydraulic rams P/N BU0954B?

A: Parts lists and repair instructions are available from Porter-Ferguson Division of Lowell Corporation at (508) 835-2900 or (800) 456-9355. Information for other vendor pumps and rams is available from PSEMEDIMUM.

Q: We recently have ordered a new tail rotor blade P/N 206-016-201-131 and received a tail rotor blade P/N 206-016-201-135. Nowhere in the manuals we can find this part number. Can you answer these questions below?

1. Does blade P/N 206-016-201-135 replace the -131?

A: 1. Yes, blade P/N 206-016-201-135 replaces blade P/N 206-016-201-131

2. Can blade P/N 206-016-201-135 and the -131 be intermixed?

A: 2. Yes, they can be intermixed.

3. What is the retirement life of blade P/N 206-016-201-135?

A: 3. The blade P/N 206-016-201-135 has the same retirement life as the -131, a life of 2,500 hours.

4. Does the hub and blade assembly dash number change when installing blade P/N 206-016-201-135?

A: 4. It depends on the hub assembly and the pitch horn used. Until the manuals are revised, contact Product Support.

5. What is the difference between these blades?

A: 5. There is no physical difference, only the manufacturing process has been changed.

The above information is also valid for blade P/N 206-016-201-137. Blade P/N 206-016-201-137 replaces blade P/N 206-016-201-133, considered the short blade. Blade P/N 206-016-201-137 can be mixed and matched with blade P/N 206-016-201-133. Blade P/N 206-016-201-137 also has a retirement life of 2,500 hours. Blade P/N 206-016-201-137 is applicable to helicopters Bell 206A/B prior to serial number 2212 that do not comply with the service instruction # 206-112.

Q: What is the recommended cleaning procedure used during the scheduled inspection of the 222/230/430 main driveshaft and tail rotor driveshaft couplings?

A: It is recommended that during the scheduled cleaning, inspection and repacking of 222/230/430 main driveshaft (222-044-006) and the tail rotor driveshaft coupling (222-044-002), that no solvents be used. Solvents have a tendency to wash away the thin film of surface lubricant which acts as a corrosion preventative when the driveshaft is disassembled. Use a clean dry cloth to remove the grease. During the cleaning, inspection and repack process, it is also recommended that gloves be worn to reduce the likelihood of surface contaminants in the form of the natural oils in our hands being transferred to the couplings. These recommendations, along with a clean work area, have no additional cost and should be beneficial.