Flightfax

ARMY AVIATION RISK-MANAGEMENT INFORMATION

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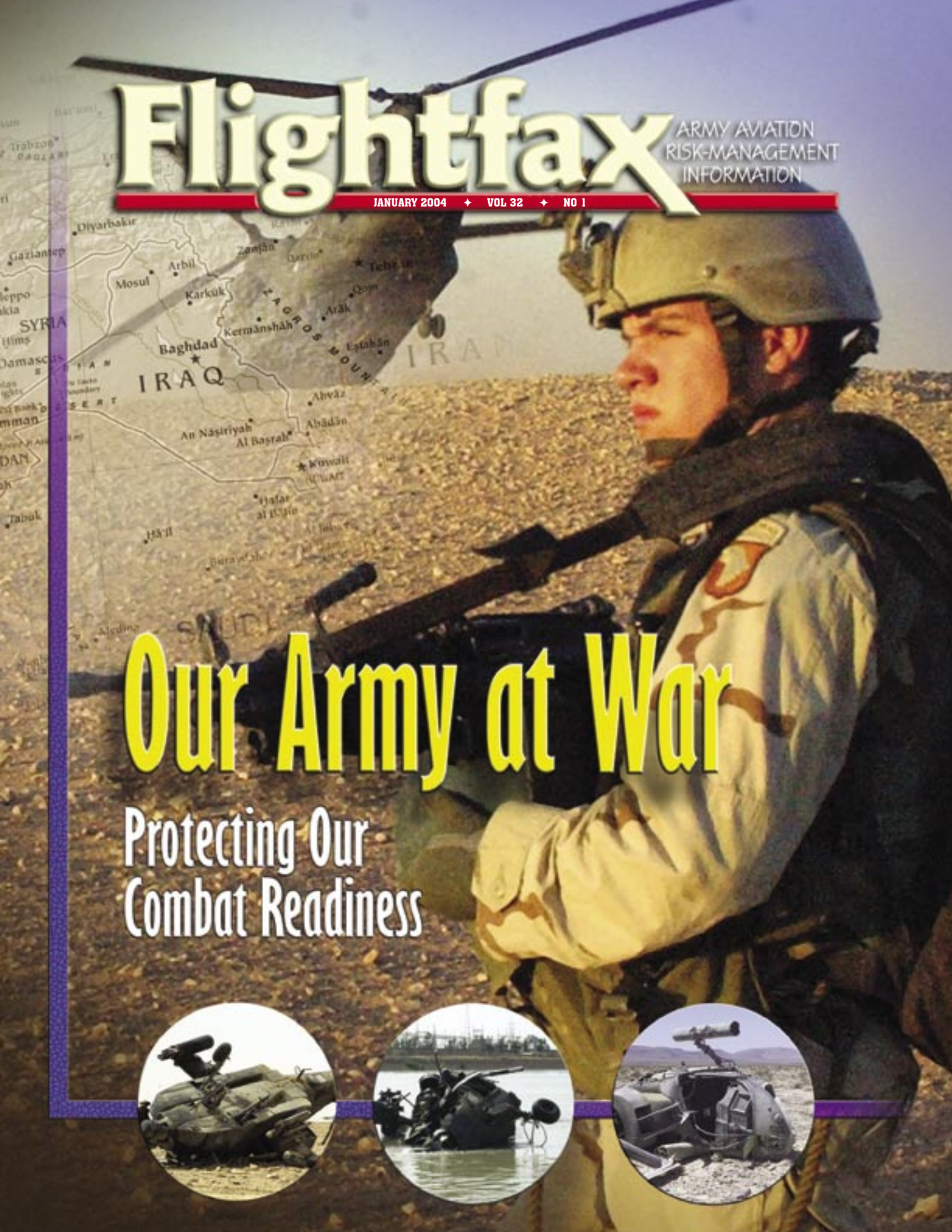

Our Army at War

Protecting Our Combat Readiness

Flightfax

ARMY AVIATION RISK-MANAGEMENT INFORMATION

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U.S. ARMY SAFETY CENTER

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JOSEPH A. SMITH
Brigadier General, U.S. Army
Commanding

DASAF's Corner
FROM THE DIRECTOR OF ARMY SAFETY

Blowing the Dust Off Brownout Initiatives

Last fiscal year brought some sobering statistics for Army Aviation: 35 crewmembers (including 1 Department of the Army Civilian) died in aviation mishaps. That number doubled from the aviation-related fatalities in FY02 (17), and more than tripled the number from FY01 (11). We are going in the wrong direction and getting there fast!

From my experience in Afghanistan and Iraq, I know commanders and aviators are doing everything in their power to mitigate risk. However, the high cost of training, combined with the harsh environments we expect our aviators to operate in daily, equals high risk. Some level of risk simply must be accepted in order to accomplish missions, but the risk must be acknowledged and accepted at the right level.

We at the Safety Center recognize this challenge and are committed to helping commanders mitigate risk at all levels to preserve combat power. Specifically, we are applying modern technology to attack brownouts. Brownouts caused 39.1 percent (11) of the Army's Class A aviation accidents last year. In Operation Iraqi Freedom (OIF), 75 percent of Class A accidents were attributed to brownout situations, resulting in one fatality. Since we can't change the environment, we must change our crews' ability to handle the environment. These are three of the Army's initiatives on the forefront.

FY03 Class A Aviation Trends OIF AOR

Events**

Brownout	**9 (75%)**
Collision w/Ground	1 (8.3%)
Wire Strike	1 (8.3%)
Material Failure	1 (8.3%)

Causes*

Individual failure	8 (88.9%)
- Crew coordination	6 (66.7%)
- Overconfidence	3 (33.3%)
Environment	**8 (88.9%)**
Support failure	2 (22.2%)
Leader failure	4 (44.4%)
Training failure	3 (33.3%)
Standards	2 (22.2%)
Risk Management	1 (11.1%)

Profile*

Night	**58.3%**
IP	**25%**
Single ship	**41.7%**
IP (total/type)	1271/unknown
PC (total/type)	1166/993
PI (total/type)	602/431

Type

(ClassA/Fatal)	
AH-64	5/0
MH/CH-47	1/0
OH-58D	2/0
MH/UH-60	5/8

*Three accidents still under investigation/Non-materiel failures

As of 21 Oct 03

Numbers do not add up to 100 percent due to more than one possible cause per accident.

Advanced simulators

Most units lack the resources to take their aircraft into desert environments on a regular basis; therefore, the effectiveness of our simulators is an extremely important factor. Our current simulators lack the proper feel and visual cues to build muscle memory and improve our aviators' confidence and control. The next generation of simulators have the capability to provide excellent training. I recently visited an advanced simulator complex that can develop a country database in 30 hours. The terrain replicates visual cues, such as grass moving while at a hover and the building of brownout at slow airspeeds. I see future simulators allowing units to fly collective missions at home station, preparing them for any possible area of responsibility (AOR).

Attacking Brownout

Tactile Situation Awareness System (TSAS)

The Navy has developed a vest with a series of quarter-sized vibrotactile stimulators, known as tactors, embedded in strategic locations. The tactors will add light pressure to the pilot in the direction of movement (e.g., starting a roll will put pressure on the pilot's right or left side, allowing for a natural correction in the opposite direction). During testing, the vest allowed Navy helicopter pilots to land with their eyes closed, using only the tactors' pressure as cues. The 160th Special Operations Aviation Regiment (SOAR) is currently exploring the TSAS for their aviation life support equipment (ALSE) suit. We are strongly supporting the program so we can expedite the concept into a fielded reality.

Aircrew coordination training

No one doubts the importance of crew coordination; 66 percent of the Class A accidents in OIF had "lack of crew coordination" as a contributing factor. Recognizing the need for training to help compensate for the reduced flight hours of today's crews, Army Aviation's leadership has re-energized the program. The new program provides computer simulation training at home station, developing positive habits prior to deploying to theater. The next generation of crew coordination training will be integrated into the Centralized Aviation Flight Record System (CAFRS), currently beginning an 18-month development fielding process.

Until technology becomes fielded in equipment and programs, I encourage you to use innovation and flight discipline to lower your environmental risk. Just because you don't have the resources to train in the desert doesn't prevent you from training. To mitigate your risk, consciously limit your power while flying at home station and develop good habits in the simulator. Furthermore, by complementing a well-planned reception, staging, onward movement, and integration (RSOI) training program, good units can and are overcoming these challenges.

Operating in limited-visibility conditions, whether those conditions are caused by the weather or blowing dust or snow, can be challenging, risky, and potentially destructive. But it can be done safely and without the loss of life or equipment. There isn't a single golden nugget to significantly reduce brownouts, and nothing is going to take the place of safe, well-executed desert training. However the Army Safety Center, in conjunction with Army Materiel Command, Assistant Secretary of the Army for Acquisition and Logistics Technology, and the Army Aviation Center, is aggressively pushing tools through the acquisition process to provide the future Army aviator with a safer way to fly and win our Nation's wars. FY04 can be the best year ever in aviation safety. It's up to all of us to make it happen through reinforcing the basics each and every day!

Keep your leader lights on!

Joe Smith

GEN Schoomaker Sends...
Protecting Our Combat Readiness

GEN Peter J. Schoomaker
Chief of Staff, Army

We are an Army at war. The challenge of the Global War on Terrorism demands the highest level of leadership and Soldier proficiency. We cannot be risk-averse; our Soldiers are our most valuable combat asset. Therefore, reducing preventable accidents throughout our formations is fundamental to protecting our combat readiness.

Last year the Army experienced the highest accident rate in 10 years. The current trend, if not abated, will exceed last year's losses. Leaders must understand the impact of inexperience on their formations and where it will require education, training, direct leadership, and enforcement of standards to overcome. I hold myself and leaders at all levels accountable for meeting this challenge.

Since World War II, over half of our combat losses were caused by accidents. Risk management integration has proven to be effective in reducing accidental losses. In Operation Iraqi Freedom (OIF), our accident rate remained at 38 percent, a tribute to the performance of combat leaders' effective use of risk management. However, in order to win the Global War on Terrorism and protect the force, we must aggressively attack adverse trends in three key areas.

I expect senior leaders to focus aviation training on potential operational environments and aircrew coordination. Brownouts attributed to 75 percent of aviation Class A accidents in OIF. Aircrew coordination was a factor in half of those accidents.

Almost half of ground combat losses occurred during vehicle rollovers. The primary cause was speed, aggravated by the failure to wear seatbelts. In addition, far too many of our Soldiers have been killed in theater by negligent discharges. I challenge our Noncommissioned Officer Corps to train Soldiers to standard, enforce those standards, and supervise.

During the last 10 years, over half of our accidental fatalities happened in POVs. This year is no exception. Our programs are not effective. To make an impact we must change our culture. Risk management is a 24-hour leader responsibility, and Soldiers must be held accountable for their actions. I have provided you with tools, accessible through the Army Knowledge Online Web site, to drive our culture change and reduce risk. We will win the Global War on Terrorism, but we must not accept any unnecessary risks that place our Soldiers in jeopardy. ♦

—Adapted from CSA's message dated 11 December 2003

LTC R.M. Beckinger
4th Squadron, 2d ACR
Operation Iraqi Freedom

One of our goals in *Flightfax* is to encourage aviation units to share ways they have solved problems. In the November 2003 issue, LTC Daniel L. Ball presented his unit's approach to safer brownout operating techniques while serving in Operation Iraqi Freedom (OIF). Here is another unit's success story of training effectively at the Joint Readiness Training Center (JRTC), Fort Polk, LA, and how this training brought success in the Iraqi desert.

The 4th Squadron, 2nd Armored Cavalry Regiment (ACR) Sabre Squadron's mission in OIF was to conduct limited combat operations, reconnaissance, security, and air movement. In addition, we also conducted force protection at Red Catcher Base to help provide a safer environment for the Iraqi people.

Starting point

Our journey to Baghdad really finds its origins in our unit's rotation to the JRTC in August 2002. During that deployment, our aviation task force (TF) was task organized as a 500-man, 42-ship TF in support of the 5,000-man 2d Regimental Combat Team (RCT). The combined arms "full spectrum" operations at JRTC laid the foundation for the unit's training program, which prepared us for success in Iraq. The after action reviews allowed us to assess measures needed to not only sustain strengths, but also correct weaknesses in warfighting skills from the individual up to collective level. Specifically, we were able to validate our mission essential task list (METL) collective troop-level battle tasks (i.e., reconnaissance, security, air movement, logistics, command and control [C2], and force protection).

As warfighters, we were able to focus on air-ground integration (AGI) during 24-hour combined arms operations down to the ground platoon leader level. We also refined our procedures

From JRTC

concerning fighter management of crews and battle staff, to include fratricide prevention; aviation operations; tactics, techniques, and procedures for urban environments; maintenance and sustainment logistical procedures; ground convoy training; and force protection measures.

JRTC was the backdrop for not only our "road to war," it also influenced our ease in expediting our reception, staging, onward movement, and integration in Kuwait. It encompassed the approach, march, and mission assumption in Iraq; the doctrinal crosswalk of task to purpose for daily operations; and, finally, our activities for day-to-day air maintenance and force protection. The training program we developed over a period of months leading to our successful deployment in April by air, ground, and ship was shaped by our JRTC experience.

The road to war

After completing recovery from JRTC, our first training focus was on small arms and aerial gunnery proficiency. In September, the squadron focused primarily on individual and crew small arms proficiency training and followed this training up by completing crew tables III through VIII (UH and OH) aerial gunnery in October.

In November, the squadron blocked a 3-week period focused on combined arms lanes training in support of all regimental ground cavalry troops (GCTs). During this training, the ground cavalry squadrons (GCSs) conducted live fire exercises (LFXs), which helped to refine the lessons learned at JRTC for AGI. Conducting this training served to enhance our squadron's capability beyond the habitual association of the air cavalry troops (ACTs) to more flexible interchangeable teams, to include integrating table VIII qualified staff crews as liaison officers in support of the GCTs.

Our training focus in December was on refining individual training proficiency via common task testing; nuclear, biological, chemical (NBC) lanes training; combat lifesaver training; drivers' training (individual and collective); and advanced individual marksmanship ranges. At the end of the first quarter, Sabre Squadron was ready for collective level refinement and final preparation for deployment in support of the looming war in Iraq.

Sabre Squadron started out the new year scheduled to conduct one field training exercise and two LFXs. Our emphasis was on refining, augmenting, and validating lessons learned from JRTC and the first quarter training plan. The squadron deployed in January for the FTX, which included an attachment of GCTs, the regimental Military Intelligence company, and the air defense artillery (ADA) battery for force-on-force training. During the FTX we conducted 24/7 operations and focused on assembly area (AA) operations, AGI, ground convoy operations (which included main supply route reconnaissance), and force protection (with emphasis on perimeter security integration of the air and ground quick reaction forces [QRFs] with Kiowa Warriors [KWs] and using a refined reconnaissance and surveillance plan for likely ADA, mortar, and squad-size attacks on the TF assembly area). In addition to the training emphasis, we were capable of refining aircrew and staff battle rhythms, as well as augmenting and validating first quarter training by conducting NBC individual and collective lanes training.

In February we incorporated collective LFXs, to include ground convoys (III/V and logistics package) with KW teams and 3 weeks of ACT AGI live fires with every GCS.

With the arrival of the warning order in March, the squadron completed a regimental STAFFEX (JANUS) and made final deployment preparations, to include validation of load plans, final certification of combat lifesavers, completion of theater-specific

to Baghdad

individual readiness training, soldier readiness processing, and the third evolution of small arms ranges in 6 months.

We completed the road to war in April with aerial gunnery tables III through VIII and a table X with a joint air attack team LFX. Ultimately, it was JRTC Rotation 02-09 that allowed the regimental commander to set the conditions over two training quarters for our success for operations in Iraq.

Lessons learned

The squadron is conducting full-spectrum operations, which is evolving into steady state stability and support operations. The key to our success so far has been our aircrews' understanding of commanders' intent, the unit's METL, and the doctrinal crosswalk to the type of mission we conduct daily in Iraq.

Ultimately, it was JRTC Rotation 02-09 that allowed the regimental commander to set the conditions over two training quarters for our success for operations in Iraq.

Our flying OPTEMPO is twice the rate of home station. The III/V platoon is the hardest-working platoon in the squadron and has been a linchpin of our success to date. Reconnaissance (route, zone, and area), security, air movement, and C2 missions have been in support of not only the regiment, but also conventional combined arms members.

Our fighter management program supports this OPTEMPO and was validated during our JRTC rotation. We maintain a 24-hour steady state and surge capability (with table VIII qualified staff crews, a total of six) tied directly to the enemy's battle rhythm. The three ACTs rotate from Day (0500-1700) to Night 1 (1200-2400) to Night 2 (2200-0600) every 30 days, while the lift troop splits its crews between two 12-hour shifts. We also maintain a 30-minute KW team and a UH QRF capability.

The tactical operations centers operate on three overlapping, 9-hour shifts, conducting current operations and planning future ones. Flight operations are collocated with the TOC to sustain our 24-hour capability. We maintain the marathon pace required on a long deployment, ensuring every trooper has one day out of seven off. Life support and morale upgrades have been constant.

Embedded in our mission success has been a tremendous team maintenance effort on the part of our troop commanders and first sergeants, NCOs, crew chiefs, support squadron, and contractors. We could not maintain our current OPTEMPO without their commitment to mission accomplishment. Tracking the Class IX parts flown from the United States or Germany into Kuwait or Baghdad International Airport is difficult at best, as well as tracking the corps and division support area by ground or air. To supplement a developing Class IX air system, personnel have been placed at the key resupply nodes to assist in tracking the Class IX flowing into theater.

A lack of spare parts has led to frequent partial mission capable conditions on the mast-mounted sight (MMS) and aircraft survivability equipment (primarily the ALQ144). To help alleviate and expedite the turnaround process, we have taken two courses of action. First, we conduct bi-monthly UH-60 shuttle flights to the forward repair activity in Arifijan, Kuwait, to deliver priority non-operational MMS components for testing and to secure repair parts. This has helped us to maintain better reliability rates on the MMSs. Secondly, we now do UH-60 phases at the aviation intermediate maintenance (AVIM) level. Our first external phase took 10 weeks, and our second in-house phase took 3 weeks (averaging one UH-60 going into phase every 6 weeks). We believe this dramatic difference can be attributed to ownership and better responsiveness to unit needs. We have found AVIM provides better visibility on controlled substitution and allows more timely requisition on previously unforecasted parts.

A final lesson learned concerning maintenance in this environment is that aviation assets should work from a hard stand (ours is on two paved parade fields) when possible. It reduces the stress on and untimely replacement of engines, auxiliary power units, and rotor blades, not to mention the enhanced safety for aircrews not forced to operate from a desert field-like environment.

Force protection was noted as a weakness during our JRTC rotation. The squadron command sergeant major oversees the guard force while the squadron executive officer (SXO) administers overall base security because of his knowledge of force protection projects needed, planned, and completed. Additionally, the SXO maintains a close relationship with the other tenet units and is well-versed in their unique security capabilities

and needs.

Externally, we have identified likely threats and targeted our countermeasures accordingly. We use KWs for area reconnaissance of named areas of interest for all regimental base camps with the purpose of locating and destroying possible enemy mortars, rocket-propelled grenades, ADAs, car bombs, and small arms threats posed by small groups of terrorists or paramilitary forces. A threat in an urban environment poses some unique challenges but has some similarities to the one posed at JRTC in a heavily vegetated terrain. Specifically, the ability to attack and fade into the surrounding environment can only be prevented by measures designed to locate and defeat the attack before it occurs.

We merged with other units and learned that our different capabilities complement the strengths inherent in substantial numbers sharing security needs. We share a proportional portion for defense of a 360-degree perimeter and an integrated base defense plan, to include an air and ground QRF and C2 under one unit for base defense needs under the base defense operations cell. Manpower requirements for force protection represent 15 percent of our TF (we surge to 30 percent guard and QRF based on elevated threat levels while still conducting flight operations). It includes a robust, well-trained, and responsive ground QRF under the control of the headquarters troop XO. The QRF conducts active patrols both inside and outside the perimeter, apprehension and detention of hostile individuals, and seizure of weapons and vehicles, as well as participating in ride-along patrols with infantry, armor, and ground cavalry units outside the AA.

The guard force is responsible for roving patrols (random check points) and manning a mix of fixed towers with crew-served weapons and checkpoints. To date, we have used a graduated response on several occasions, to include the use of deadly force to maintain base camp security. Additional internal measures include placing military-owned demountable containers in front of the aircraft and emplacing concertina wire around all key locations on Red Catcher Field. Finally, all of these assets are under the regimental support squadron C2, which retains overall responsibility for incorporating all units into the force protection plan.

Force protection extends not only to the fixed base and soldiers at dismounted points, but also to daily ground convoy operations. We established "TF Hammer" for convoy operations in response to the increased paramilitary and improvised explosive device threat. It is an NCO-led, 30-person, 10-vehicle, mission-specific, task-organized force rehearsed and trained to be responsible for daily convoys that must leave Sabre Base for sustainment and coordination needs. Ground convoy operations are requested, planned, and tracked by the S3 shop in Iraq. Missions are given to TF Hammer 48 hours in advance for detailed route planning and rehearsals to defeat the known threat and train for likely contingencies with the appropriate upgraded force protection measures.

Summary

JRTC provided us with the road to war that successfully prepared us for daily ground and air combat in Iraq. Our current operations are best described by flexibility—as only a cavalry organization could respond—to an ever-changing threat in an unforgiving environment. We have been privileged to work under and support the Marne Division (3ID) and now the Iron Division (1AD), as part of the Dragoon Battle Group. The long-term outlook in Iraq is positive. We make daily improvements in access to basic services for every citizen (water, sewage, electricity, housing, food, and gas or propane access). Coalition forces are providing a safe and secure environment for the Iraqi people, and we are marching inevitably to not only the defeat of former regime elements and terrorists, but also the establishment of a democratic, representative government in the coming months. ♦

Editor's note: *This article was written in Oct 03, we have since received an update from LTC Beckinger. Updated stats follow for the past 9 months: 4/2 ACR has flown over 12,000 combat hours, pumped over 750K gallons of jet fuel, and supported every maneuver battalion in 1AD as part of the Dragoon Battle Group. They have assisted TF 1AD (35K strong) in the capture of countless violent former regime loyalists and terrorists, as well as the seizure of hundreds of weapons and thousands of tons of ammunition. They have performed all this safely since arriving in Iraq.* ♦

—LTC R.M. Beckinger is the Squadron Command Officer of the 4th Squadron, 2d ACR, OIF. He is a master Army aviator (2,800 hours) and has a Masters in National Security/Strategic Studies from the Naval Staff College. LTC Beckinger has 28 years in service. He can be reached at DSN 587-4912/10 or e-mail richard.beckinger@us.army.mil.

Tactical Risk Manage

LTC Thomas McDermott
U.S. Army Safety Center

Risk management is a layered tool used from commanders down through every subordinate. The process of identifying, assessing, and controlling hazards arising from operational factors and then making decisions that balance the risk costs with mission benefits is the definition of risk management. So, from where do we get "tactical risk management?" Is there a field manual in the Army system that we can go to and read the doctrine for tactical risk management? The answer is no.

Tactical risk management is a lot like morale. You can't reach out and touch morale, and you can't order somebody to be satisfied and happy, but you can create a climate where soldiers are happy and satisfied to perform their duties. Risk management and tactical risk management are performed in the same manner by the soldier as he performs whatever mission or task he is assigned.

How is this done? Tactical risk management is the result of four key elements. These four elements are not that different from the principles of risk management. The first of these elements is that risk management must be integrated into planning. Second, you must not accept any unnecessary risk. "Unnecessary" is the key word! This does not say, "…accept any risk." Third, you must make the risk decisions at the proper level. The fourth and final element

ment: It's for Real!

is that you must accept the risks if the benefits outweigh the costs, and only if those costs cannot be mitigated. Whether it is the commander planning a mission or crew chiefs ground-handling an aircraft to the flight line, the hazards associated with task accomplishment must be weighed.

To put this into perspective, during World War II, 43 percent of battlefield casualties were due to enemy fire, compared to 56 percent of casualties caused by accidents. More recently, during Operation Desert Storm, 20 percent of the battlefield casualties were due to enemy fire, compared to the accident casualty rate of 75 percent. Is tactical risk management a key factor on the battlefield, or is plain old risk management of missions and everyday tasks adequate in the tactical environment?

This brings us to where the "rubber meets the road." Can we tell the difference between a gambler and a risk manager? The Army tries to foster bold and aggressive leaders who will take calculated risks to accomplish the mission. The problem with this leadership trait is that when the gambler is successful, he is hard to separate from the calculated risk taker. Eventually, the gambler will always lose. The reason the gambler always loses is that he will perform an operation without regard to the risk. A good risk manager, whether the mission is tactical or training, evaluates the risk versus the benefits. Control measures will be placed on the risks, and all soldiers involved in the operation will be made aware of them.

During World War II, 43 percent of battlefield casualties were due to enemy fire, compared to 56 percent of casualties caused by accidents. During Operation Desert Storm, 20 percent of the battlefield casualties were due to enemy fire, compared to the accident casualty rate of 75 percent.

While performing your troop leading procedures, whether it is receiving the mission, issuing a warning order, or making tentative plans, do not forget to IDENTIFY THE HAZARDS. Once the hazards are identified and assessed, place control measures against those hazards and re-evaluate the level of risk. The two biggest factors in tactical risk management will be the time available to make the decision and the time available to implement the control measures. Soldiers must understand and then apply those control measures, execute the controls, perform to standard, and crosscheck each other.

So who benefits from the results of tactical risk management? None less than the individual soldier who has to make the correct decision at the correct moment in the fluid flow of battle. Just as the aura of morale can't be touched with a finger, a soldier's safe operation through situational awareness and employment of good common sense will keep us alive on the battlefield at the day's end. ♦

—LTC Thomas McDermott, Aviation Accident Investigator, U.S. Army Safety Center, DSN 558-3644 (334-255-3644),

Risk Management During Deployment

Whether deploying for mission training—such as rotations to the National Training Center or Joint Readiness Training Center—or deploying for combat or humanitarian relief missions, effective risk management is critical in the planning and execution phases. From planning for takeoff at home station to tiedown at the destination, strict adherence to the risk management process and rules is the best way to ensure a safe deployment.

Diligently applying the risk management process and rules enhances a unit's ability to safely deploy crews and equipment. But application of the risk management process and rules is not a one-time, before-deployment step. Once the initial planning is completed and units are en route, crewmembers must continue to carefully manage the risks and apply the risk management rules to handle the unexpected events that frequently occur.

Don't allow the desire to save a few of the unit's dollars sway you into ignoring the hazards and making a poor risk decision during deployment.

For example, crews sometimes get "weathered in" while en route to their destination. Weather forecasting is not an exact science! It is just a forecast—a best guess on the information available. While en route, many places don't have weather reporting points available to make a good forecast. And sometimes, the weather just isn't what was predicted. Other times, the weather can change so rapidly that crews are forced to delay until conditions improve.

If the weather deteriorates while en route, crews should quickly identify the hazards, assess the risks, and make a decision to proceed or land. If the benefits of continuing don't outweigh the risks, land and just wait it out—even if it means overnight stays in unplanned places. Don't allow yourself to be pressured into pressing on if the risks are too high.

Chip lights, pressure lights, and other warning systems let us know when there is a problem with the aircraft. These devices are designed to warn of impending failure of some system, and crewmembers don't hesitate to use that information to make a decision to get an aircraft on the ground promptly. Likewise, deteriorating weather should warn crews of hazards that are likely to be encountered. Do not hesitate to land or to keep an aircraft on the ground if the weather is bad.

Although crew endurance or limitations should be considered carefully while planning the deployment, the fatigue of a long deployment affects each crewmember differently. Sometimes, it's hard for an aviator to admit fatigue when among peers. However, it is obvious that fatigue is a hazard and imposes an unnecessary risk. Let the unit pilots know that it is okay to say they are tired and need to stop for the night.

In peacetime, it's prudent to be conservative. The crewmembers and aircraft lost in training will not be available for the next combat, support, or humanitarian relief mission. Even well-planned deployments sometimes require unplanned stops. When unexpected events such as deteriorating weather and fatigue are encountered, start the risk management cycle over: identify and assess the hazards, and then make a risk decision.

Everyone knows that in these times of constrained resources, it's important to use dollar resources wisely. But don't allow the desire to save a few of the unit's dollars sway you into ignoring the hazards and making a poor risk decision during deployment. ♦

Aviation
Port Operations Safety

CW4 Scott Dillon Fort Carson, CO

In the first part of 2003, we saw an enormous deployment in preparation for and in support of Operation Iraqi Freedom. As we prepare for the return of these forces and deployment of future forces, we should review the risks and controls associated with port operations.

Port operations offer many challenges. Split-base operations and unfamiliar operations and locations are just a few. But prior planning and risk management can offset these challenges.

Planning

During the planning process, the leadership must develop a robust maintenance support package. Aircraft might have been in transit for over a month and will require scheduled and unscheduled maintenance, as well as the necessary personnel to prepare the aircraft for flight. The flow of aircraft to or from the port must be managed to prevent overcrowding at the dock. In addition, ships can be late and equipment slow to be offloaded, adding to the frustration and friction of port operations.

Port operations

Once port support teams are identified and in place, it is important to familiarize them with the hazards at the port. The best people to conduct these briefings are the port representatives, who should brief the dangers of being at the dock's edge or near the railings of ships. Leaders should identify these areas as off limits to soldiers and mark them, if possible. Every work shift should begin with a safety brief on the hazards present. All soldiers working in the port are required to wear head protection when unloading operations are underway. An American National Standards Institute (ANSI) helmet is preferred, but the Kevlar helmet will suffice. Also, soldiers need the appropriate clothing and hydration for the type of climate they will be working in.

Aircraft maintenance

Space at ports is at a premium. Prior planning will be needed to sequence aircraft into port for the space available. Aviation units need to identify an area for conducting aircraft maintenance. The area should be marked to prevent unauthorized vehicles from traveling through the area. By-the-book maintenance is a must, and maintainers must be aware of antennas under the aircraft that can be damaged when being loaded on ships. Also, use proper vehicles for towing and ensure only licensed personnel operate them.

Test flights

Ensure fuel samples are taken prior to the first flight of aircraft coming off the ship. Condensation could build up in fuel tanks during shipment. A test flight area should be coordinated and used. A local pre-accident plan should be implemented and tested prior to conducting flights.

Once all your aircraft are off the ship and ready, it is time for the flight home. Ensure the proper DOD flight information publication (FLIP) is available for the route of flight and that you have coordinated for fuel at en-route stops. Remember, weather along the coast is sometimes worse than forecast; have a plan if you encounter bad weather en route. Also, when receiving your aircraft, monitor crew aircraft currency status and ensure all crews are current and qualified for the mission. Another consideration is to have a flight medical team at the port. Offloading and preparation for movement can take up to a week or more, and flight personnel could become ill or be injured and require clearance from a flight surgeon.

Port operations can be complex and frustrating. Being prepared for contingencies can reduce the frustration, and by using risk management you can prevent the loss of time or equipment and move smoothly back to your home station. ♦

—CW4 Scott M. Dillon, Installation Aviation Safety Officer, Fort Carson, CO, DSN 691-3672 (719-526-3672), e-mail scott.dillon@carson.army.mil

Flying in the Snow

Bob Brooks
U.S. Army Safety Center

It's time to talk about snow. In some parts of the world, it's been here for months. In others, it's just getting ready to fall. Whichever is the case for you, it's never too late to get up to speed on winter flying.

Units that haven't reviewed training in cold-weather flying should do so immediately. Once an aircrew is involved in a whiteout during an approach or experiences spatial disorientation over a snowy field, it's too late to talk about training.

Inexperience and lack of recent training are frequent contributors to snow-related accidents. If you are new to an area of frequent snows, get into Field Manual (FM) 1-202, *Environmental Flight*, as well as all the local standing operating procedures (SOPs). Also ask questions—lots of questions—of local safety folks and instructors.

Even if you have lots of winter flying experience, a few months' time in temperate weather can erode winter flying proficiency. Remember, overconfidence can lead to an accident just as surely as inexperience. Consider the following accidents.

Blowing snow

The instructor pilot (IP) was fairly confident in his abilities. He had more than 2,200 hours of helicopter flying time, with more than 1,200 hours in the OH-58.

The crew was conducting a night vision goggle (NVG) blowing snow checkout. The pilot (PI) had completed three hover down approaches and five constant angle approaches into the training area. The crew departed that training area in order to continue training in a more restrictive landing zone (LZ). The PI successfully executed three approaches into the LZ and was attempting his fourth approach as a constant angle approach. As the aircraft proceeded inbound at an altitude of 8 to 10 feet, the IP announced that a snow cloud was at the rocket pods. The PI acknowledged this and proceeded forward and down. The snow cloud engulfed the aircraft as it approached the terrain. The PI lost his visual references, and the aircraft began to drift to the right. The IP announced they were drifting to the right, but the PI did not acknowledge the drift.

The aircraft continued to advance forward and drift right until the main rotor blades made initial contact with several small trees. The drift continued until the main rotor blades struck and severed an 11-inch diameter pine tree, upon which the fuselage began a rotation to the right. The rotational momentum continued as the main rotor blades disintegrated and the severed pine tree fell toward the aircraft. The aircraft came to rest among the trees in a level, upright position. The two crewmembers received minor injuries.

Lessons learned: No matter how many of these approaches you do, anticipate and prepare to go around at any time during the approach. IPs, be prepared to take the controls regardless of who you are flying with.

Snow-covered landing areas

It was winter, and two flights of five UH-60s were on a troop-insertion mission to unimproved landing areas. In one flight, the unit operations officer was piloting Chalk Three. Because of his unit duties, he had flown only 17 hours in the preceding 4 months. Moreover, he had not been able to attend mandatory unit training in which snow landing techniques and procedures were reviewed, nor did he attend make-up classes or engage in hands-on snow landing operations training.

The flights were proceeding normally with 7 miles visibility and 1,000-foot ceilings in scattered snow

showers. Then the two flights separated and began a series of false insertions.

Chalk 3's flight encountered a snow shower as they began a formation approach. Visibility was reduced to about a mile. The LZ was a large, open, snow-covered field with an apparent upslope in the direction of the landing. The crew of Chalk 3 could see a large amount of snow circulating through the rotor systems of the two aircraft ahead of them.

The pilot of Chalk 3 selected a touchdown point downslope and to the left rear of the lead aircraft. Using the upslope aircraft and distant tree lines as visual references, the pilot made his approach. A snow cloud enveloped the aircraft as effective translational lift was lost about 20 feet above the ground, with a left quartering tailwind of 15 to 25 knots.

The pilot decided to continue the approach without outside references and reduced power to put the aircraft on the anticipated upsloping terrain. In a complete whiteout condition, the UH-60 touched down hard on a combination upslope to the front and downslope to the left. The helicopter rolled over and came to rest on its left side. Fortunately there were no fatalities in this accident.

Several factors contributed to the difficulty of landing at this site:

■ The flight was landing downwind to an upslope.

■ The aircraft were landing during a snow shower to an LZ with very loose, dry snow.

■ There were only limited stationary visual clues.

The worst thing that happened was the pilot continued the approach when he lost visual contact with his ground references. He had to monitor two slopes and his position simultaneously. This would be a difficult task even if the pilot had a wealth of recent snow experience, which was not the case. Moreover, the rate of descent was excessive, even if the approach had been to level terrain. FM 1-202 states that an approach to the ground should not be made in dry, powdered snow unless the touchdown area is known to be level and free of obstructions. In this case, the pilot was aware of both the slope and the looseness of the snow. However, he was not aware of his downwind condition.

The aircraft continued to advance forward and drfit right until the main rotor blades made initial contact with several trees.

Lessons learned: Approach and go-around planning are essential for any formation flight; however, they are crucial in snow environments. Planning should include:

■ Instructions to execute a go-around if visual contact with ground references is lost or if it becomes apparent that visual contact will be lost.

■ Timing and spacing aircraft into LZs to reduce the effects of blowing snow.

■ Specific go-around instructions in pre-mission briefs (what direction to turn, where to land on subsequent approaches, and takeoff procedures).

Other snow hazards

One of the most dangerous snow environments just might be the main airfield. The large, open areas found at most airfields do not provide the contrast and definition needed to maintain orientation, especially when snow starts circulating through rotor blades.

Moving around the typical airfield is a little easier when you can "air taxi." When you are cleared by ground control, remember to keep a good scan going to keep from inadvertently descending.

Summary

Many aviators have their own ideas about how to mitigate risks associated with blowing snow. As part of the winter academic program, it might be useful to survey aircrews to determine which hazards they consider the most severe and evaluate the effectiveness of the controls that are in place. From such a survey, necessary upgrades to winter training plans and development of new controls can be put in place.

Winter has been a regular on the calendar for a long, long time. There's nothing we can do about that, even if we wanted to. In fact, the very predictability of changing seasons gives us time to plan our training for the different kinds of flying problems each season brings. If you haven't already done it, get your refresher training, review FM 1-202, and be alert to the hazards associated with winter flying. ♦

Editor's note: *We are continuing to learn valuable lessons involving dust landings, and units are developing the tactics, techniques, and procedures (TTPs) for coping with some of those treacherous operating environments. We request that you forward those TTPs to our Flightfax office. We'll consolidate and staff them, and then publish them in a future Flightfax article as lessons learned.*

—Bob Brooks, Operations Division, DSN 558-9860 (334-255-9860), robert.brooks@safetycenter.army.mil

Broken Wing AWARDS

The Broken Wing Award recognizes aircrew members who demonstrate a high degree of professional skill while recovering from an in-flight failure or malfunction requiring an emergency landing. Requirements for the award are listed in Army Regulation (AR) 672-74, Army Accident Prevention Awards. The Army Review Board met recently and approved the following awards.

WO1 Andrew F. Smith and WO1 Jamie T. Naquin
B Co., 1/223 Aviation Regiment
Fort Rucker, AL

While on a cross-country visual flight rules (VFR) training mission, an instructor pilot (IP) and two Initial Entry Rotary Wing (IERW) students, WO1 Andrew F. Smith and WO1 Jamie T. Naquin, spotted three large birds in their flight path about a half-mile ahead. The IP, who was at the controls in the left seat, gestured with a "thumbs up," shook his head, and continued with his radio call. Both student pilots were on flight training Day 29. W01 Smith, in the right seat, had a total flight time of 32.9 hours. WO1 Naquin, in the right rear seat, had a total of 32.7 flight hours.

The TH-67 was cruising at approximately 1,400 feet mean sea level (MSL) and 93 knots indicated airspeed (KIAS) when a fourth large bird, a 15-pound black vulture, suddenly appeared in front of the aircraft and struck the left front windscreen. The bird exploded through the windscreen and struck the IP full in the face and neck area, immediately rendering him unconscious. The IP fell forward onto the cyclic and slumped to the right, pushing WO1 Smith's collective down. The bird flailed inside the cockpit, knocking WO1 Smith's radio pin switches down, and eventually came to rest on the right side of the console.

The aircraft pitched down violently in an estimated 60- to 70-degree nose-low attitude while rolling right 30 to 40 degrees. WO1 Naquin yelled to WO1 Smith: "Get it, Get it." WO1 Smith immediately grabbed the controls and attempted to regain control of the aircraft, but was initially unable to move the cyclic or collective due to the weight of the unconscious IP on the controls. WO1 Naquin quickly assessed the situation, unbuckled his lap belt, grabbed the IP, and pulled

him away from the controls. Seconds later WO1 Smith announced, "I think I got it, I got it." The aircraft was level but still losing altitude. The loud noise of the impact and the wind noise had caused WO1 Smith initially to think they had had an engine failure. WO1 Naquin called out to check the gauges. WO1 Smith checked the gas turbine speed (N_1) and turbine outlet temperature (TOT) gauges and saw they were stable, and the torque gauge was indicating 10 percent. As he pulled up on the collective, the rate of descent began to decrease. WO1 Smith finally regained control of the aircraft at 900 feet MSL.

Looking ahead, WO1 Smith saw the runway of a local airport and placed his radio pin switches back to the up position. He made a "Mayday" call while starting an approach to the airport. Both WO1 Smith and WO1 Naquin began searching for traffic while landing at the airport. WO1 Smith looked over at the IP and shouted, "Sir, are you OK?" The IP did not talk, but did raise his hand off his leg. He continued to drift in and out of consciousness.

WO1 Smith landed the aircraft on the runway, and he and WO1 Naquin completed the aircraft shutdown procedures by the checklist, with WO1 Naquin reading the checklist so they would not miss any steps. They then began administering first aid to the IP and made sure he was breathing. The IP was still in and out of consciousness and showing signs of shock, but he did give a "thumbs up" to WO1 Smith and WO1 Naquin when they asked if he could breathe. The IP was MEDEVACed shortly after landing and taken to a local hospital, where he was diagnosed with a broken palate, broken nose, and fractured jaw. The IP's injuries could have been much worse had his visor not been in the down position.

WO1 Smith and WO1 Naquin's superior airmanship (in spite of their lack of experience), remarkable crew coordination, and risk management in response to the emergency thrust upon them is reflected in their pivotal decisions and actions. The outstanding manner in which they worked as a team during this emergency is displayed in the successful outcome of this event, especially for student pilots of their experience and hour level. The presence of mind and quick actions WO1 Naquin displayed to unfasten his seatbelt and pull the IP off the controls helped save the lives of all aboard the TH-67. WO1 Smith took the controls and continued to fly the aircraft until he had regained control of a potentially deadly situation. Both student pilots displayed remarkable poise and composure above their experience level in a very serious situation that easily could have become a catastrophic event. ♦

Mr. Billie Loucks
Advanced Division
Lear Siegler Services, Inc.
Fort Rucker, AL

During instrument flight training at 3,000 feet MSL, Mr. Billie Loucks, an IP, and two IERW students experienced a complete engine failure on their aircraft. Mr. Loucks assumed control of the aircraft and autorotated in instrument meteorological conditions (IMC) while declaring an emergency with Air Traffic Control (ATC).

With insufficient altitude to attempt a restart, Mr. Loucks continued the autorotative IMC descent. The aircraft entered visual meteorological conditions (VMC) at 400 feet above ground level (AGL).

Mr. Loucks selected a landing area and banked the powerless trainer into a 90-degree turn for a final approach. Noticing the flight path was obstructed by power lines, he S-turned to lose altitude and successfully avoided the obstruction. Mr. Loucks safely completed an autorotational landing without injury to the crew or damage to the aircraft. ♦

Mr. Robert C. Smith
Primary Division
Lear Siegler Services Inc.
Fort Rucker, AL

While at 1,000 feet MSL, Mr. Robert C. Smith, an IP, and two IERW students heard a loud grinding noise, which was followed by a severe airframe vibration and aircraft yaw. Mr. Smith took control of the aircraft, initiated a "Mayday" call, and began a descent. He quickly recognized the aircraft had lost tail rotor thrust and, owing to the loud banging noise, suspected some aft airframe components might have ripped free.

Although powered flight was possible, all indications were that a catastrophic loss of the tail boom was about to take place. Deciding to land immediately, Mr. Smith approached the selected landing area with the aircraft approximately 50 feet above the trees and at 60 KIAS. As he slowed the crippled aircraft, it began to yaw. Mr. Smith maintained heading control with throttle, collective, and airspeed management until no longer possible. Mr. Smith completed the emergency approach, just skimming the treetops circling the selected landing site. Mr. Smith safely completed an autorotational landing without injury to the crew or damage to the aircraft. ♦

CPT Tim Dickinson
Camp Robinson
North Little Rock, AR

Following a reconnaissance mission, CPT Dickinson dropped off a law enforcement officer at a local airport and resumed the flight to his home airfield. The OH-58 RAID aircraft was at approximately 1,200 feet AGL and had been in the air about 5 minutes when it began yawing violently to the left and then to the right, finally remaining in a left yaw. The N_1 gauge was noted as decreasing at a rapid rate, along with the engine tachometer. The LOW ROTOR RPM audio sounded, and rotor RPM was observed at approximately 92 percent. CPT Dickinson immediately lowered the collective and began an autorotation. During this time, he also made a "Mayday" call, which was transmitted and heard by the local flight operations.

CPT Dickinson noted the only acceptable landing site was 150 degrees to the right rear of the aircraft and contained several large hay bales, trees, and a large ditch. He immediately initiated a hard right turn in order to make the landing area. The obstacles in the landing area made a "no run auto" necessary. The autorotation to the ground lasted about 43 seconds based on altitude and the descent rate of about 1,800 feet per minute. The

autorotational descent and landing were accomplished successfully, with no damage to the aircraft or injury to personnel. Once on the ground, CPT Dickinson saw the engine was not running and completed an emergency engine shutdown. He then called the local flight operations on his cellular telephone and informed them of the aircraft's and crew's status. ♦

—Comments regarding this article may be directed to Ms. Julie Shelley, U.S. Army Safety Center, DSN 558-1218 (334-255-1218), e-mail julie.shelley@safetycenter.army.mil.

New Look, Same Great Message!

The U.S. Army Safety Center is proud to announce improvements to the Broken Wing Award. Submission requirements have been streamlined, and the award has received a long-needed and deserved facelift.

A newly designed certificate and plaque honors Broken Wing awardees for their extraordinary skill in preventing or reducing personnel injury or aircraft damage. The upscale certificate is printed on deluxe parchment paper with an embossed Army seal. It is signed and framed along with a Director of Army Safety coin. The stylish "Aviation Blue" plaque features the awardee's name and the coveted Broken Wing emblem.

Director of Army Safety Message dated 1 October 2003 streamlines the nomination process: "Nominations will be forwarded through command channels to the first O-6 level commander, then to the USASC, ATTN: CSSC-PT (Broken Wing Award), Fort Rucker, AL 36362-5363."

The changes to the Broken Wing highlight our initiatives to renovate the Army Accident Prevention Awards Program. Look for more improvements to the safety awards program in future articles of *Flightfax* and *Countermeasure*. ♦

ASMIS-1
Clearing the Road Ahead

Julie Shelley
Staff Editor

You're finally coming home from that long deployment in the "sandbox." Family and friends are anxiously awaiting your return, and you can't wait to get back home and celebrate. Once you return stateside, you begin thinking about the quickest way home. Should you fly, or maybe drive? After all, your car has been in storage all these months and these are real roads. Why not take the scenic route home and enjoy the view?

The thousands of Soldiers redeploying home in the first few months of this year will finally be away from the dangers of combat. However, these Soldiers might not think about the risks on American roadways. Privately owned vehicle (POV) accidents are the leading cause of accidental death in the Army: In Fiscal Year (FY) 2003 alone, 109 Soldiers died in POV accidents.

In response to this and other emerging trends, the U.S. Army Safety Center (USASC) has developed a tool to mitigate on- and off-duty risks. The Army Safety Management Information System-1, or ASMIS-1, is an automated, centralized tool that features a question-and-answer session designed to assess the potential risks of a Soldier's planned activities. The system features three modules—POV, ground, and aviation. The POV module is currently available in a beta version, and the aviation module is scheduled to be released early this year.

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The POV module is designed to be completed by all Soldiers on leave or pass (including those returning from deployment) for all planned trips outside the immediate local area. The tool helps the individual Soldier plan every aspect of the trip before departure. Questions about travel and factors such as the type of vehicle, seatbelt use, sleep, rest stops, and time of departure are asked in drop-down, multiple-choice fashion. When a Soldier completes the questionnaire, the system builds a profile based on the information collected and displays actual accident cases

In Fiscal Year (FY) 2003 alone, 109 Soldiers died in POV accidents.

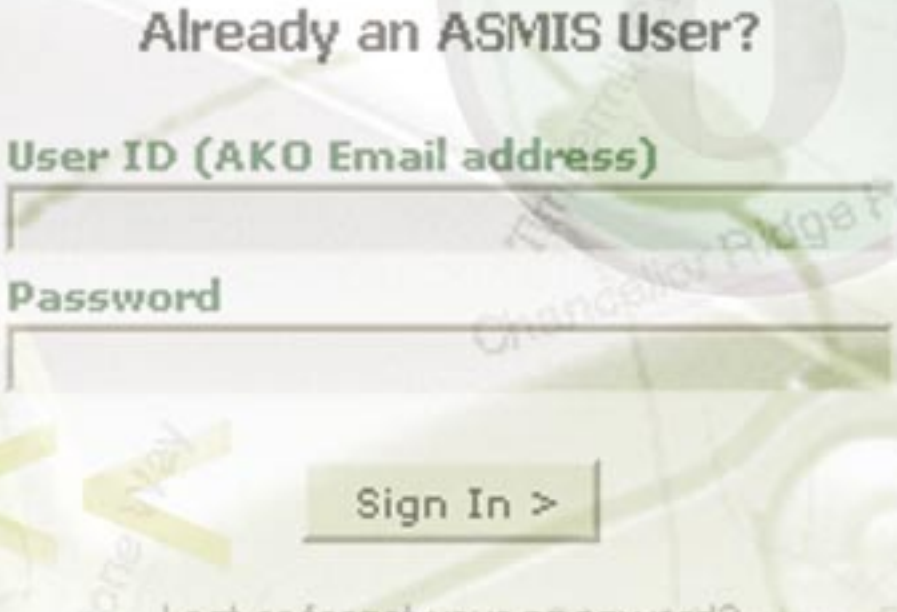
found in the USASC database that match the profile. The Soldier then gets to see real accidents involving other Soldiers just like them. From there, the Soldier is routed to a "Hazard Assessment" page, where a score of 1 (lowest risk) to 10 (highest risk) is assigned based on the Soldier's responses. Also featured on the page are a risk management matrix card and links to Mapquest and The Weather Channel. This assessment will then be forwarded to the Soldier's supervisor for his or her review, risk mitigation, and approval.

A new feature in the POV module is a page that lists check-the-box controls in response to the personal and travel factors selected in the questionnaire. The information includes statistics on seatbelt use and drunk driving, along with other dangers such as fatigue. Here the Soldier can lower his or her risk by checking the appropriate control measures. The system then navigates the user to the final hazard assessment page, where the final score and risk level are figured based on combined responses from the questionnaire and controls pages. The Soldier should print the last page of the assessment to keep for their personal use.

Soldiers and their supervisors should work hand-in-hand when using this system. When completed, the supervisor listed in the Soldier's profile will receive an e-mail listing the results of the assessment. It's important to note the results are confidential and non-retributional; ASMIS-1 was developed to help, not punish. The use of this tool by the Soldier and his or her supervisor allows for the exchange of information regarding the Soldier's travel plans and the associated risks. The hardest thing for young Soldiers to understand is that they don't know what they don't know. This tool will show Soldiers what has gone wrong for other Soldiers with similar travel plans and what the consequences were.

Begin the planning process by going to **https://safety.army.mil/asmis1**. First-time users should click the "Register" button and create an account. (Leaders have a separate login link just above the FY03 fatality chart.) Once login is complete, step-by-step directions will follow on every page. The entire process is complete in just a few easy steps and takes only a few minutes to finish. Take the extra time and try it out. You were victorious in Iraq. Now help us win the War on Accidents! ♦

—Julie Shelley, U.S. Army Safety Center, DSN 558-1218 (334-255-1218), e-mail julie.shelley@safetycenter.army.mil



NEWS & notes

UAVs Are Now Aviation

Effective 1 October 2003, unplanned damage involving unmanned aerial vehicles (UAVs), drones, or other remotely piloted vehicles will be investigated and reported as aviation accidents. Mishaps of this nature should be reported on "Technical Report of Army Accident," DA Form 2397 series, or "Abbreviated Aviation Accident Report," DA Form 2397-AB-R. ♦

—Bob Giffin, Systems Safety Manager, U.S. Army Safety Center, DSN 558-3650 (334-255-3650), e-mail robert.giffin@safetycenter.army.mil

CH-47 Cargo Hook Release Switch and Accidental Jettison of Loads

Aviation Safety Action Message (ASAM) CH47-97 ASAM 02 was released on 30 December 1996. This ASAM was introduced to help prevent crewmembers from accidentally releasing the cargo they were sling-loading using the cargo hook system on their CH-47 aircraft. This ASAM directs maintainers to visually inspect the aircraft for installation of the Winch/Hoist Operator's Control Grip Assembly 145ES017-1, NSN 1680-01-123-7645, or the Cargo Hook Release Switch Guard EGD-1001, shown in Technical Manual (TM) 55-1520-240-23-10. Task E-311 of the Winch/Hoist Operator's Control Grip Assembly P/N 114ES250-2, NSN 1680-00-963-1051, directs maintainers to visually and functionally check the cargo hook release button to ensure it is recessed and cannot be opened prematurely by accidental bumping or dropping.

Since this ASAM has been out to the field, incidents of accidental releases of external loads have dropped greatly. This ASAM has helped tremendously, and the Aviation Division of the Army Safety Center would like to keep this awareness alive. The crewmember (either the flight engineer or crew chief) that has the responsibility for "calling the load" must always be aware of the location of the pistol grip. Keep the crewmember "calling the load" rather than calling the supported unit because of a dropped load. ♦

—MSG Shane Curtis, Aviation Systems Safety Manager, U.S. Army Safety Center, DSN 558-9859 (334-255-9859), e-mail shane.curtis@safetycenter.army.mil

We Want to Hear From You

Because the cost of accidents is paid in lives, dollars, and readiness, we cannot afford to learn every lesson first-hand. Instead, we must learn from each others' experience whenever we can and share what we know.

Our number one request from *Flightfax* readers is for more first-person and lessons-learned articles. And that's the idea behind "*War Stories*," a recurring feature in *Flightfax*. The purpose of this column is to provide a forum for the entire Army Aviation community to learn from each others' experiences and to share how risk management works in real-world Army Aviation operations.

"*Crew Commo*," another recurring feature in *Flightfax*, gives aircrews and other aviation personnel an informal forum in which to communicate with each other. We hope to hear from all of you on a variety of topics, including maintenance personnel issues regarding safety and risk management in Army Aviation.

We make it easy to contribute. Here are a few notes so everybody understands the deal:

- Space in *Flightfax* is limited, so please be as brief and to the point as possible.
- We won't publish items that are submitted anonymously, but we will keep your identity confidential if you ask. It's the lesson, after all, that's important.
- If we edit your story for length or clarity, we'll get your approval before publishing the revised version.

That's pretty much it. You can mail your story to: Commander, U.S. Army Safety Center, ATTN: *Flightfax*, Bldg. 4905, 5th Ave., Fort Rucker, AL 36362. You may also fax your story to DSN 558-3003 (334-255-3003), or e-mail flightfax@safetycenter.army.mil.

Please let us know how we can serve you better—we truly want to know! And we look forward to working with you as you contribute to Army Aviation safety through *Flightfax*. ♦

—Paula Allman, Flightfax Managing Editor, DSN 558-9855 (334-255-9855), e-mail paula.allman@safetycenter.army.mil

ACCIDENT BRIEFS

Information based on preliminary reports of aircraft accidents

AH-64

D Model

■ **Class A:** During flight the aircrew received an APU FIRE warning light. The crew attempted to fly the aircraft back to a safe area. The crew landed the aircraft and egressed without injury; however, the aircraft burned and was considered a total loss.

■ **Class A:** On final approach to landing during emergency procedures training, the aircrew heard a grinding noise. The noise was followed by illumination of the APU FIRE and ENG 2 FIRE buttons. The crew immediately landed the aircraft and armed and discharged the fire bottles. They egressed the aircraft without injury. Crash rescue personnel extinguished the fire. The aircraft suffered extensive fire damage from the main transmission to the tail boom.

CH-47

D Model

■ **Class C:** The aircraft was flying at 3,500 feet mean sea level (MSL) and at 140 knots during a post-phase maintenance test flight when the co-pilot's door separated from the aircraft. The aircraft landed normally, and no other damage was noted during the post-flight inspection.

EH-60

A Model

■ **Class C:** During engine start-up the #2 engine accelerated to 150 percent engine torque and 1,000 degrees turbine gas temperature (TGT), resulting in Class C damage.

OH-58

D(I) Model

■ **Class B:** Aircraft experienced a bird strike, resulting in Class B damage. No further details were reported.

■ **Class D:** The instructor pilot (IP) failed to recover the throttle to full open during a simulated engine failure (SEF). The IP discovered the error at approximately 50 feet above ground level (AGL) and touched down to an improved surface with the throttle at idle. The aircraft experienced a hard landing. Visible damage to the vertical fin was noted.

D(R) Model

■ **Class C:** The aircraft was at an out-of-ground effect (OGE) hover at an observation point during a close air support (CAS) tactical mission under night vision goggles (NVGs) when the pilot on the controls felt a bump from the aircraft's tail. All other aircraft indications were normal. The aircrew continued the mission until relieved and returned to the field site. Damage to the tail rotor system was noted during the post-flight inspection. A tree strike is suspected.

UH-60

A Model

■ **Class C:** During the post-flight walk-around following a training flight, the pilot in command (PC) noted a 3-inch by 1-inch tear in the right-hand upper surface of the stabilator. The aircraft was flown on a one-time flight to another base, where a subsequent investigation revealed separation of the trailing edge of one tail rotor blade paddle. An intact composite paddle bearing retaining bracket also was found trapped within the damaged stabilator. Destructive inspection (DI) of the tail rotor blade further revealed a second composite bracket free within the blade.

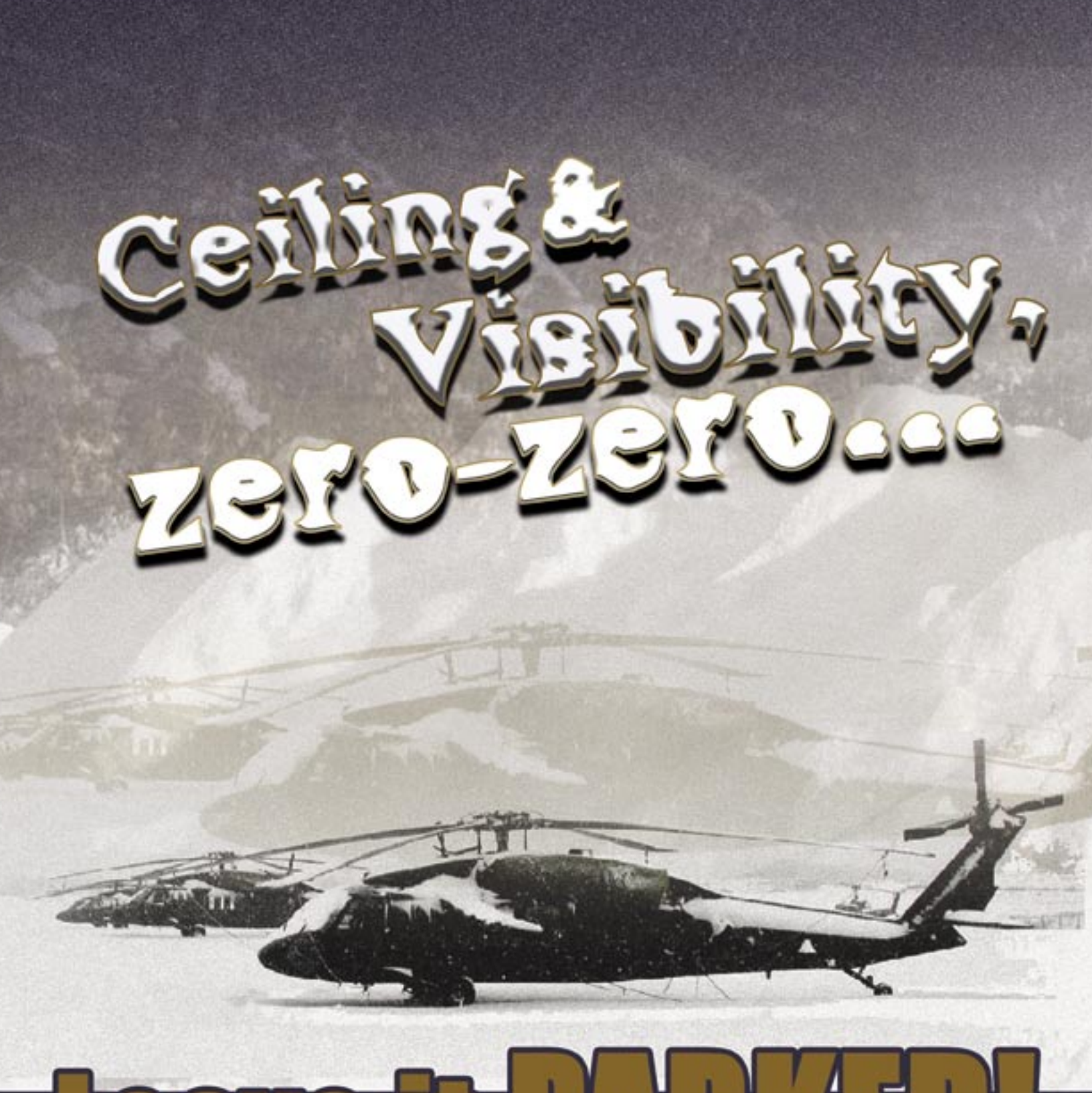
■ **Class C:** While ground taxiing to the takeoff pad, the #1 engine oil pressure dropped below 35 psi at 93 percent engine gas generator speed (N_G). At 90 percent N_G the oil pressure dropped to 20 psi, and the LOW OIL PRESSURE light illuminated. Oil pressure remained at 20 psi while ground taxiing back to the parking pad. At the parking pad, the #1 power control level (PCL) was retarded to idle. The oil pressure suddenly dropped to zero, so an emergency shutdown was completed. Post-flight inspection revealed the #1 oil cap was not secure. More than 3.5 quarts of oil were needed to refill the engine.

L Model

■ **Class A:** One Soldier was killed and another Soldier suffered a permanent total disability (PTD) when a tire of the parked aircraft they were servicing exploded. The Soldiers were servicing the tire with a nitrogen cart when the rim separated, causing the tire to explode. The aircraft suffered structural damage due to the explosion.

■ **Class D:** During straight and level cruise flight at 800 feet AGL and 140 knots indicated airspeed (KIAS), Chalk 2 of a flight of two banked right to avoid an oncoming bird. The bird dove to avoid the aircraft, passed through the rotor system, and struck the horizontal stabilator. The pilots analyzed the aircraft's flight characteristics after the impact and determined flight to the nearest airport was possible. The aircraft landed safely back at home station with no further problems.

***Editor's note*: Information published in this section is based on preliminary mishap reports submitted by units and is subject to change. For more information on selected accident briefs, call DSN 558-9552 (334-255-9552) or DSN 558-3410 (334-255-3410).**


Ceiling & Visibility, zero-zero...
Leave it PARKED!