You’re in the Army now!

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Since I accepted the job as president of PHPA, I have found myself paying great attention to all areas of our profession. Of all the problems I see affecting us, the one which distresses me most is the number of accidents we are experiencing. PHPA is working on the establishment of an active “Safety Committee” to work every issue regarding our member’s safety in the cockpit.

Early in the formation of the Safety Committee, Mr. Al Duquette offered to set up a PHPA Flight Safety Award which would be used to honor those members who showed extraordinary skill, courage, and presence of mind in emergency situations. Al has completed his work and I am proud to announce PHPA will implement his program in its entirety. I want to thank Al for all the hard work he put into this, and point out that he has been devoted to the formation and continued success of PHPA since its inception in October of 2000.

On another note: PHPA will be holding its first convention, September 19-21, in New Orleans at the Fairmont Hotel. Following the convention, PHPA will be hosting the IFALPA (www.ifalpa.org) Helicopter Committee meeting 22-24 September at the same hotel. This equates to six days of helicopter pilot meetings, seminars, discussion groups and presentations by manufacturers and the FAA. It also means we will have a group of professional helicopter pilots from around the world meeting to discuss everything from safety to wages and benefits. This will be an exciting six days in an exciting city so I hope to see each and every one of our members in New Orleans as a show of support for our profession and our organization.

Butch Grafton
President, PHPA

A. Recipients: PHPA members and Non PHPA aircrew, when they are performing authorized flight duties with a PHPA member are eligible to receive this award.

B. Eligibility requirements: An aircrew member must, through outstanding airmanship, minimize or prevent aircraft damage or injury to personnel during an emergency situation. Normally, only one person will be nominated to receive the award for a single in-flight emergency. However, if more than one crewmember materially contributed to successful recovery from the emergency, all those involved should be considered for nomination and a separate nominee form must be filled out. An emergency will not be considered for award if –

a) It is self-induced.

b) It actually occurs during a simulated emergency requiring no added skill to land the aircraft successfully.

c) It occurs because of noncompliance with published FARs, AIMS, Operators Manual or Procedures.

d) It is determined that no emergency actually existed.

e) In the committee’s opinion, a lack of discipline or aviator judgment may have induced the emergency.

f) The aircraft was in a phase of flight with no unfavorable circumstances to prevent a safe landing.

C. Initiator: Only a PHPA member, may submit a nominee for a PHPA Flight Safety Award

D. Nominations: will be forwarded to PHPA’s Safety Committee Chairman, who will ensure that all necessary documentation has been completed.

Completed documentation will then be forwarded to PHPA’s Executive Board for disposition and presentation.

E. Documentation: Nominations will contain the following information.

1) Full Name, Pilot Assignment (PIC, SIC) and Crew Duty (PF, PNF)

2) Date, time, and location of emergency.

3) Model of aircraft.

4) Type of mission (EMS, Offshore, Fire Fighting, Sight Seeing, Logging).

5) Phase of flight when the emergency occurred (hover, takeoff, climb, cruise, descent, approach to landing or autorotation.)

6) Flight Plan (VFR, IFR) and Flight Conditions (VMC, IMC)

7) Kind of terrain over which the emergency occurred (offshore, snow, ice, marsh, mountainous)

8) Landing Area: Type, Obstructions, Condition and Dimensions.

9) Altitude above ground level and Density Altitude.

10) Wind direction and speed

11) Gross Weight of the aircraft when landing

12) Lapse time from onset of emergency to termination.

13) Concise description of the emergency from inception to termination.

14) Action taken by the nominee to cope with the emergency and what was done to recover from the emergency or minimize damage or injury. The circumstances surrounding the occurrence must be documented to show the skill, knowledge, judgment,
and technique required and used in recovering from the emergency.

15) Supporting documents: Incident Reports, Photographs, and Drawings.

F. Panel: PHPA’s Executive Board will convene a panel consisting of at least three aviators. At least one panel member will be qualified in the mission type and model of the aircraft involved in the emergency.

USE THE FORM BELOW TO NOMINATE A RECIPIENT

---

Submitted by:

Name: __________________________ Address: __________________________

Phone: ( _ )-_______ - _______ E-mail: __________________________

Nominee Information:

Name: __________________________ Address: __________________________

Phone: ( _ )-_______ - _______ E-mail: __________________________

Pilot Assignment: PIC, SIC, IP, Other: Crew Duty: PF, PNF

Date: __________ Time: ________ (local) Location: ________________

Type Aircraft: __________

212, 412, 876, 105, 206, 230, AS 355,

Other:

Type Mission: EMS, Offshore, Fire Fighting, Other:

Phase of Flight: Ground Ops, Hover, Takeoff, Climb, Cruise,

Descent, Approach, Landing, Autorotation.

Flight Plan: IFR, VFR, Flight Condition: VMC, IMC.

Kind of Terrain: Offshore, Snow, Ice, Marsh, Mountainous,

Other:

Landing Area: Type: __________ Obstructions: __________

Conditions: __________ Dimensions: __________

Altitude: _______ Density Altitude: _______ Wind Direction: _______ Speed: _______

Gross Weight: _______ (at landing). Lapse Time: _______

Description of Emergency:

Description of Action by Nominee:

Supporting Documents (if available): Incident Report, Photographs, Drawings.

Forwarded By: __________________________ Date: __________________________

Panel Members:

Name: __________________________ Name: __________________________

Name: __________________________ Name: __________________________

Name: __________________________

Action: Approved: _______ Disapproved: _______ Date: __________________________

Photography: The Boeing Company and U.S. Army photo.
Here’s a riddle for you. Everything is green: trees, fields, even the clothes. Searching for my rental car, I have more bugs trying to get in my ears than there are pages in the AIM. Driving along a broad, tree lined highway (green of course), my eyes are drawn to the side of the road by a small dead thing. It is light brown in color, about the size and shape of a volleyball with four stiff little legs pointing straight up. It is devoid of fur and if another fly lands on it, it’s gonna blow. Later, I confirm this is an armadillo. I’m on a roll!

Passing through a narrow stretch of road with a forest of trees close in on both sides my selected radio station is interrupted every few seconds by highly irritating staccato bursts of static. I occasionally catch words and phrases like “Apostle Paul,” and “salvation.” This is not too surprising since approximately every third radio station, in fact, is of a religious bent. Final clue. About 20 minutes into my drive, a Black Hawk intersects my path, about 100 yards ahead, flying at about 1000 AGL. Where am I?

If you guessed Ft. Rucker, Alabama; you’ve probably been here.
The home of Army aviation

Ft. Rucker is the U.S. Army’s aviation headquarters and the training center for all Army and most military rotorcraft pilots.

If you trained here in the 60s, 70s, 80s and even early 90s you might not recognize the place. A large renovation project affectionately known as the “War on Wood” is rapidly replacing most of the W.W. II wood frame structures with contemporary brick buildings. The new Soldier Service Center, dominating the landscape near the Daleville entrance, stands in bold testimony to this effort.

Ft. Rucker is big and a lot gets done here. They produce about 1,200 new aviators every year. The fort has more than doubled its original size and now occupies over 60,000 acres. 5 basefields (primary airports/heliports), 17 stagefields (developed practice areas) and 102 tactical training sites are housed within or around the fort. On any given day, over 26,000 souls can be found within the confines of the post: military (U.S. and foreign), civilians, and resident family members. In addition to the fort’s command structure and the aviation training brigade, Ft. Rucker also houses the Army’s Warrant Office Career Center and NCO (Non-commissioned officer) Academy. You know how much it costs to fly your helicopter(s). Well, to operate Ft. Rucker takes just under $800 million dollars a year.

Sound interesting? Think you may want to check out a military aviation career? Hold on mister! Stand at attention and listen up! Being a military aviator is not just about flying choppers. You’re in the Army now!

**Soldier, Officer, Pilot—in that order**

If there’s one thing that stands out most about Ft. Rucker, it is that this is a military base and if you’re wearing the green suit, you are in the military—100%. As far as I could tell, the most frequently used word at Ft. Rucker was “sir.” Usually preceded by “yes.”

To be a military pilot, you must first become either a Warrant Officer or a commissioned (branch) officer. Most branch officers (lieutenants, captains, majors, etc.) enter the service from college ROTC programs. Other’s gain entry via the nation’s military academies and a third group comes from the ranks of the military itself by completing OCS (Officer Candidate School). But, the bulk of the Army’s aviators are Warrant Officers.

Warrant Officers represent a distinct career path in the military. Aviation Warrant Officers (AWOs) serve as experts, leaders and trainers who operate, maintain and manage the bulk of Army Aviation. They are the Army’s primary aircraft operators. The Warrant Officer rank progresses from Warrant Officer 1 (WO 1) followed by Chief Warrant Officer 2 (CWO 2) through CWO 5. Becoming an army pilot typically means first becoming a Warrant Officer and that requires that you be accepted into and then survive the Warrant Officer Candidate School (WOCS).

“Sir, Yes Sir!”

My introduction to WOCS was graciously provided by the Commander of the 1st Warrant Officer Company, CW4 David Williams, after which he let me borrow CW3 Jerry Forrest as my guide to the facility. Mr. Forrest (male Warrant Officers are addressed as “Mr.”) is a TAC officer (Training, Advising, and Counseling). TACs provide instruction, conduct inspections, lead PT and provide counseling at WOCS. This is not the type of counseling you get when you’re not sure why you hate your father. This counseling serves to critically analyze, assess and direct your Warrant Officer training. “Look me in the eye when I’m talking to you candidate!”

WOCS is an intensive, stress filled, 24 x 7, six week program of military and academic training. There are no days off and no breaks. It is mentally and physically demanding and candidates are closely observed, ‘counseled’ and evaluated for the traits and attributes required of Warrant Officers. According to CW4
Williams, the training focuses on “leadership, officership and mentorship.”

Every aspect of daily life is controlled and regimented: dress, speech, standing, sitting, living quarters, meals, class rooms and, of course, exercise or PT (physical training). Lots and lots of PT.

The day begins at 5:35 a.m. when soldiers are awakened and given 7 minutes to get up, take a leak, get dressed and fall out for PT. Then, it’s time to return to your quarters for personal hygiene and preparation for inspection.

The bulk of the day is spent in formal training on leadership, time management, military history, team building and other core skills. A well-deserved “lights out” is called at 2245 (10:45 pm for you civilians) and just short of 7 hours later, the whole cycle begins again. This may very well be the longest 42 days of a candidate’s life, to date.

If you’re new to the Army, this is also a time to become familiar with a new language composed entirely of acronyms. Examples include: DWL (display wall locker, i.e. closet); BDU (battle dress uniform); AIT (advanced individual training); FW (fixed wing); IERW (Initial Entry Rotary Wing (training)); PCS (permanent change of station); POV (personally owned vehicle); and not even last, nor least; WOTTCC (Warrant Officer Technical/Tactical Certification Course). Acronym exclusive conversations can be heard, punctuated only with the occasional verbal or adverb. For example, “Get your BDUs out of your DWL and into your POV for your PCS.” This statement would, of course, be acknowledged by the ubiquitous, “Sir, yes sir!”

Now, I don’t want to give the impression that there are no “Mams” in WOCS or in Army Aviation. Somewhere between 3% and 5% of the Warrant Officer candidates are women. And every aviation class I attended was approximately 5% to 10% women.

You’ve got to walk before you can fly

Finally, the day arrives. You’ve passed WOCS, attended your graduation ceremony where, with friends and family watching, you receive your WO 1 bars. You and your buddies have completed the requisite 10K “victory” run and you’re off to primary flight training. But, hold on, that cockpit’s going to have to wait just a little bit longer.

First, there’s two weeks of ground school where students are provided with an overview of the Army flight program, the organization and mission of the various aviation units and the different “go to war” helicopter career tracks available to them: AH-64 A & D (Apache); UH-60 (Black Hawk); CH-47 (Chinook); and OH-58D (Kiowa). As in civilian training, students are instructed and tested in the concept of aviation medicine, including vibration, stress & fatigue, altitude physiology, G-forces, spatial disorientation, noise, and toxicology. Unlike the civilian world, this level of training also includes aspects of military medical fitness and protective gear including the SPH-4 flight helmet. Then it’s on to helicopter systems.

I don’t know about you, but when I received training in the Robinson R22, we didn’t happen to have one in our classroom. In fact, now that I think about it, we didn’t have a classroom either. Not so at Ft. Rucker. While the instructor delivers a Power Point presentation on the TH-67’s ‘dual accumulator double check valve’ you can also go over and try to find one, in a real TH-67, in the classroom, if you know where to look. For the valve that is. The helicopter is hard to miss.

This aspect of the training is very detailed and focuses on major systems and their functions, preflight inspections, and typical malfunctions. Students receive in-depth instruction on the power train, rotor, electrical, fuel, and hydraulic systems. And, let’s throw in some weight and balance while we’re at it. The classes are highly interactive with lots of questions asked and ‘volunteers’ chosen to answer them. Any slouches stick out like a sore thumb. There aren’t many.

Time to jump in the cockpit?

Not exactly. We’re going to jump into the cockpit procedural trainer (CPT) first. The CPT is a limited function simulator used to practice engine start procedures and certain emergency procedures. Before students have an opportunity to go out and burn up a jet engine, they spend some time in the CPTs.
One aspect of the training that I really appreciated is that students are expected to know key emergency procedures verbatim. Civilian training needs to be just as demanding and while in many cases it is, sometimes it falls short in this area. OK, get out of the way, these young aviators are headed to the flightline.

**Cairns Army Airfield. 0600. I'm looking at about 200 TH-67s**

Students arrive by bus at Cairns Army Airfield at around 0530. They meet with their IPs (Instructor Pilots) for a pre-flight discussion or table talk. Once completed, they fill out the equivalent of a company flight plan and grab the keys for their assigned aircraft. They then board buses to take them out to the flight line. From there—well you have to see it to believe it. I was fortunate to have CW3 Kenneth Arrington, Cairns Army Airfield Commander and Operations Officer as my guide. He accompanied me to both the flight line and later to Allen Stagefield where we watched about 20 TH-67s and their crews do everything from hovering autos to full downs. Just like any flight school, some maneuvers were brilliantly executed by the book and others were, well let’s just say, a work in progress.

This part of the training process is called the IERW (Initial Entry Rotary Wing) Core. This is where students learn to fly. But, as we all know, learning to fly involves a lot of ground too.

During the next 10 weeks students will receive a half day of flight training and a half day of classroom instruction, daily. Classroom time starts with everybody’s favorite—aviation weather. It includes all the fun stuff we’ve all grown to know and love, but which helps keep us safe: basic weather phenomena; the adiabatic process; fronts; METARs and TAFs; surface weather analysis charts; radar summary charts; winds aloft, etc.

Additional sections of ground school include the theory of rotary flight (aerodynamics); instrumentation; avionics and radio phraseology; cross country flight and navigation; flight planning; VFR flight rules; and some military specific categories like aircraft forms and records; and aircraft mishap prevention and investigation. While the ground training and flight training curricula are synchronized, they are taught by different instructors. In fact, most of the flight training is provided by civilian contract IPs under a contract administered by LSSI (Learn Siegler Services, Inc.). (For more on LSSI go to www.lsirucker.com.)

During this same 10 week period, students receive 60 hours at the controls of the TH-67 (A Bell 206 with a few mods) learning all the basic maneuvers. They hover, fly straight and level, practice normal takeoffs and landings, work on max performance takeoffs and steep approaches, hovering autos, straight in autos, emergency procedures, slopes, confined areas, and simulated engine failures (IGE and OGE). But, unlike most civilian training these aircraft are on a flight line with nearly 200 other aircraft all vying for take off clearance in the same half-hour window. Aircraft recovery (returning to base) is a whole ‘nother’ story altogether.

There were several other notable differences between primary military and civilian training. First, in the Army training, there are usually three people in the aircraft at any one time—two students and their IP. Even when flying solo, students will have their “stick buddy” in the left seat. Another major difference is that military autos are taught as full down procedures. Definitely, the right thing to do. Those who learned to fly in R22s and Schweizers may think this is odd, since the civilian flight training world largely trains students to do power recovery autos. This is a civilian reality predominantly driven by pressures from the insurance industry and the somewhat ‘fast paced’ nature of autorotations in civilian training aircraft.

But, keep in mind, compared to an auto in a two seat, piston aircraft, a 206 train-
ing auto is a much gentler, slower procedure. Though still requiring a good deal of skill and training, it is not the drop like a rock, flare “NOW”, level, cushion, and slide, E ticket ride the civilian pilot community experiences. In fact, I think I could get two autos in during the time it took the TH-67 to make its gentle glide to the ground, followed by a delicate flare and ballet like touchdown.

Another aspect of training where civilian and military differ is in certain advanced procedures like running landings and 180 autos. While military students are instructed in these maneuvers, they are not emphasized or practiced to precision. The logic being that these students will end up in dual engine aircraft when all is said and done and the directive there is to fly away or look for a good place to land with your remaining engine.

**Getting on the instruments**

Military rotorcraft students undergo 8 weeks of dedicated instrument training. This includes half days of classroom instruction coupled with half days of either simulator or actual flight training. Ground instruction covers the gambit: attitude flying, hold procedures, approaches, precision approaches, ATC communications, IFR flight planning, instrument flight rules, radio navigation, etc. Simulator time is used to teach instrument relationships, selective instrument failure, approaches, and holding patterns. Four weeks in an instrument equipped TH-67 complete the training. Just as in the civilian world, instrument training is very difficult and demanding. The reward? Students get to move on to the much anticipated—Basic Combat Skills (BCS) training phase.

**“Get this thing down on the trees”**

This is not a statement often uttered by civilian flight instructors, believe me. But, at Ft. Rucker, it happens. BCS is looked forward to by all Ft. Rucker students. And who wouldn’t—this stuff is fun.

CW4 David Degginger, the Shell Airfield Commander, introduced me to BCS. “Students arrive here on day 101 of their training. They spend their first 12 days learning to fly the OH-58 A and C (the military version of a Jet Ranger).” Students work on traffic patterns, autos, slopes, and hovering autos. When they’re checked out in the OH-58, they move on to basic combat skills.

BCS begins with low level flying. Low level flying is defined as flying point to point at 200’ above the surface (treeline, ground, etc.) maintaining a constant altitude and constant airspeed of 80 knots. Students develop their dead reckoning skills using time, speed and distance concepts to determine their locations. Now let’s take it down about 150 feet.

Contour flying involves following a particular contour or relief at 50 feet above the terrain maintaining an airspeed of 80 knots. Looking for obstacles and trying to maintain a sense of position while following a river or dry stream bed is tough. Students sharpen their pilotage skills while trying to keep from getting lost in a world of green.

“Two areas of BCS prove the most difficult for students, slope landings and navigation,” offered CW4 Degginger. To execute contour flying, students use tactical maps with a scale of 1:50,000.

Compare this to the sectional chart at 1:500,000. The additional detail helps, but still, flying over nonsensical terrain with no meaningful relief features to talk about is difficult at best and getting lost is part of the training process.

The third phase of the low level flying portion of BCS involves Nap of the Earth flying or NOE. NOE flight, in training, is restricted to 40 knots, but the students are instructed to get low. How low? “As low as possible,” says Degginger. To maintain safety, instructors often follow known corridors through the area and students must develop their own tactical maps. Looking something like an army version of a coloring book attacked by a five year old with a crayon box, the tactical map highlights, in meaningful colors, wires, objects, hills and restricted areas. Still, the training area is large and both students and instructors must remain on the alert at all times for poles, wires and other obstacles fond of bringing down low level aircraft.

All training aircraft at Ft. Rucker have very large identification numbers painted on them. “Why is that,” I asked. So people in the area can easily identify an aircraft thought to be violating fly friendly, noise abatement procedures or flying through restricted (noise sensitive) areas. If we had huge N numbers printed on the sides of our aircraft we might fly a little more friendly too.

When the students can demonstrate their ability to fly NOE and not get lost...
all the time they progress to a new area of BCS: actions on contact, AKA what you do when you run into the enemy. At a basic level, students learn how to provide spot reports (procedures for reporting observations); how to call for fire; how to hand over a target and fundamentals of reconnaissance.

Reporting actions are guided by yet another acronym—SALUTE: Size, Activity, Location, Unit Type, Time of Day and Equipment—all the important information you’d want to communicate in the event of enemy contact.

Three types of basic reconnaissance are taught: Zone, Area, and Route. Zone reconnaissance involves scouting for LZs (Landing Zones) or PZs (Pick-up Zones) while Area Reconnaissance focuses on techniques used to search for suspected enemy locations. Route reconnaissance entails scouting out potential travel lanes, roads, etc. Are they heavy enough for tanks? Is the surface susceptible to rain or snow? Are there any choke points or ambush sensitive points?

The BCS class also instructs students in fundamental security techniques. They learn to screen (fly out in front of a main force acting as forward observers) and they learn to guard and cover. Guarding involves flying along the flanks of a main body, protecting them from surprise attacks. In a flat desert environment, like much of Iraq, the advantage of the visibility gained by being even several hundred feet above the surface greatly extends the protective zone around a main body. Helicopters are perfect for this task. BCS is also a place where students refine their slope and confined area skills as they repeatedly land to remote areas.

The last four weeks of BCS involve night flying. After only 4 hours of unaided night flight, students move on to 17 hours of NVG (Night Vision Goggle) flight training. Everything they’ve learned to do in the day, they now learn to do at night.

Phase III

Helicopter training is over, but a few tasks remain before we can get our wings—Phase III. For branch officers this phase lasts for 6 weeks. For Warrant Officers, four. In these last few weeks, students learn more of the skills required to be army leaders: including people skills and management training, field operations, war preparations, and the social skills required of a military officer.

The most challenging aspect of this training phase is the Survival & Evasion Training Exercise (SETEX). Here students learn how to survive alone while evading enemy detection and making their way to a series of recovery areas. “Many of these young officers are city kids,” relates Captain Matt Fox, himself an Air Cav Scout pilot and an instructor at the Aviation Officer Basic Course. “They thought that food came from Safeway,” he adds. That illusion, however, is shattered when students are required to catch, kill, clean, cook and eat either a real live rabbit or chicken. They learn how to identify and prepare “food” that they find in the field (read as “boonies”), rig primitive shelters, and generally stay alive, all while avoiding being detected by enemy soldiers out looking for them.

Getting your wings

At this point, students have been at Ft. Rucker from 40 to 42 weeks depending upon whether they are commissioned officers (40) or Warrants (42). They’ve learned the basics of being a military officer and they’ve earned the civilian equivalent of a commercial rotorcraft license with instrument rating. They have approximately 130 hours in the TH-67 and OH-58 and nearly 30 hours in the simulator. By the way, completing military training does not give you an FAA
pilot’s license. However, military aviators who’ve earned their wings can take the FAA Commercial Rotorcraft Knowledge Test and receive their Commercial Pilot’s License.

So what’s next? Students move on to advanced training in their assigned combat aircraft. Training times range from six weeks for the UH-60 to 14 weeks for the AH-64D. After completion of IERW aviators will spend a minimum of 6 years in the Army.

Young people fortunate enough to attend the Army aviation program drink from a fire hose of knowledge, training and skills. In a very short time, they learn not only how to fly helicopters, but, they learn to fly helicopters in war. And, perhaps as important, or even more important, they learn the skills and disciplines required to succeed in life and to lead others to success. From then on—well the sky’s the limit.

My sincere thanks to everyone at Ft. Rucker who made this article possible, with their gracious support and assistance. This includes LTC James Bullinger, USAAVNC Public Affairs Officer; LTC Gregory Brockman, Director of the Aviation School (recently reassigned); Capt. Matt Fox, Aviation Officer Basic Course; CW4 David Williams, Commander 1st Warrant Officer Company; CW3 Jerry Forrest; CW4 Brett Smith, Chief of Academics Division for the Aviation Training Brigade; SFC David Turner at the Flt Simulator Complex; CW3 Kenneth Arrington, Cairns Army Airfield Commander and Operations Officer; CW4 David Degginger, Shell Airfield Commander; Major Ramirez and Capt. Sanchez of the Helicopter School Battalion; Captain Todd Turner, Company Commander, U.S. Army Recruiting Company, in Tucson, Arizona and their respective staffs. Special thanks to Bill Hayes, PAO at Ft. Rucker for organizing the most comprehensive and professional research trip I’ve ever experienced. And thanks to Ted Walls for putting up with me for 2 days.

The military aviation training program, as it is primarily taught today, and as it is described in the article is called the Legacy Flight School. The Legacy Flight School methodology is being phased out, over a number of years, in favor of the military’s new training program, Flight School XXI. Training for the 21st century.

FS XXI is being undertaken for a number of reasons, some having to do with improving the level of capability of pilots exiting the training program and others having to do with efficiency and cost reduction. The Army is seeking to improve the proficiency of new pilots by having them exit the school in a higher state of combat readiness in their ‘Go to War’ aircraft. Aviators assigned to their combat units are rated either RL 1 (Readiness Level 1), 2 or 3. An RL 3 pilot knows how to fly his or her target aircraft. An RL 2 pilot is a step ahead. They are also familiar with the generic mission tasks of their particular combat assignment, while an RL 1 pilot is ready to assume a combat role immediately.

Legacy school graduates typically leave Ft. Rucker as low level RL 3 pilots. In comparison, FS XXI graduates enter their permanent assignments as advanced RL 3 or even RL 2 pilots. The net result is improved combat readiness and availability sooner with less expense.

Field commanders who have been receiving transitional FS XXI graduates have only good things to say about the program. “These guys are coming in with a whole different capability than the regular flight school students. They require minimum training and RL progress is 50% faster in 50% of the flying hours.”

A quick review of the Legacy methodology shows that new pilots receive the bulk of their training in TH-67s and OH-58 As or Cs. These are not their combat aircraft. Only after they’ve completed the bulk of the flight program in these ‘training’ aircraft are they permitted to train in their ‘Go to War’ helicopters. Consequently, the amount of time they spend in their ultimate aircraft is somewhat limited. FS XXI, on the other hand, accomplishes the bulk of the Basic Combat Skills course (BCS) training in the pilot’s combat aircraft. Consequently, you’re learning to fly NOE and perform Reconnaissance, Security and or Attack missions in your ultimate aircraft.
Because combat aircraft are somewhat limited in availability and the cost of flying them is much higher than the cost of flying the current training aircraft, a portion of the combat aircraft training will be accomplished in a new fleet of advanced simulators. These simulators will far surpass the current generation in realism and simulation possibilities and will allow pilots to receive, in some cases, more realistic training than they would in a real aircraft in training scenarios.

FS XXI is being phased in over the next four years with the critical path being the availability of new simulators and additional combat aircraft. But, it’s worth the wait. Students trained in FS XXI will reflect a 73% increase in Combat Aircraft hours flown over Legacy students. In addition to producing improved readiness levels in aviation graduates, the FS XXI program provides another dramatic benefit—more experienced instructor pilots (IPs).

Today, the bulk of the IERW program, including primary flight training, instrument training, BCS and Night Flying are performed by civilian instructors in Legacy aircraft (TH-67, OH-58). In FS XXI the shift in emphasis to combat aircraft means that military IPs will provide more of the combat related training. Consequently, they too will gain additional experience in their combat aircraft. Both students and IPs will be more combat ready if and when the need next arises.

Lieutenant Colonel Gregory Brockman, prior Director of the Aviation School says it well. “FS XXI creates a more strategically responsive, lethal aviation force across the entire spectrum of military operations. It is not a change for the sake of change. It is a change for the sake of the future force that will fight on some unknown battlefield in defense of freedom.”

Training military helicopter pilots is a very expensive, resource intensive proposition, requiring experience and talents very difficult to identify and assemble. Consequently, Ft. Rucker serves as the helicopter training center for more than 30 countries worldwide. In 2003 alone, nearly 400 foreign students will receive instruction at Ft. Rucker.

English speaking foreign students are usually trained side by side with American trainees. In fact, it is not uncommon to wind up with a “stick buddy” from another country as is the case with 1st Lt. John Boynton (U.S. Army) and Cadet Yvonne Ringma of the Netherlands (see photo page 7).

Recent events in Iraq and elsewhere in the world have dramatized the impact of cultural and historical differences between societies. Achieving a better understanding of each other’s values and cultures can only serve to create enhanced harmony in the world. And, from a strict military perspective, increase the effectiveness of multination fighting forces. The Ft. Rucker experience is seized as an opportunity to provide foreign students with exposure to American values and ways of life.

The International Military Student’s Office has installed a number of programs to help visiting students obtain a balanced understanding of American society, institutions and ideals. The U.S. commitment to the basic principles of internationally recognized human rights is emphasized. Lasting, personal friendships between foreign students and U.S. students, instructors and military personnel are encouraged.

The United States has a particular interest in Central and South America and recognizes the opportunity to promote U.S. values while providing a much needed service to governments and citizens in these areas. The Helicopter School Battalion provides aviation related training, in Spanish, to Latin American personnel in support of the United States’ security cooperation programs. Since 1984, more than 2,300 have graduated from the program, representatives of 22 different countries. These programs and the personnel trained to conduct them engage in counter-narcotics operations, combat operations, disaster relief, and enhanced maintenance and safety programs.

A significant effort is expended in improving aviation safety throughout
Latin America. This is accomplished in a number of ways beyond emphasizing safety practices in individual student pilots. Specific programs have been implemented to increase standardization and modernization throughout the region. Also, ongoing efforts are in place to translate and disseminate critical aviation field and technical manuals.

Bilingual instructors with the necessary aviation and operational experience are hard to come by. Of the instructors currently on staff, 60% are civilian and have an average of 28 years of relevant experience. 40% of the instructors are active duty military, averaging 17 years of experience. Experienced teams are periodically deployed in country to assess current situations and future requirements in supported nations.

Many of the young officers attending these programs ultimately rise to prominent positions in their respective governments. Their time at Ft. Rucker serves to help them establish high standards for excellence in the areas of safety, maintenance and piloting that they then take home with them and help to propagate in their respective commands. Even beyond that, the humanistic experiences and friendships resulting directly from their time at Ft. Rucker have an opportunity to create permeating, lasting change at home.

1. Be at least 18, but not have reached your 29th birthday. You must be a U.S. citizen. You must speak, read and write English.
2. Have a high school diploma or GED. Two years of college or more is an advantage.
3. Meet minimum/maximum height/weight standards as determined by a matrix. If you are somewhere between 4’10” (women)/5’0” (men) and 6’8” (both) and your weight is acceptable, according to the matrix, you’re probably in the ball park. You must also meet certain % body fat criteria as well. These will be measured during your physical.
4. Score 110 or higher on the general technical aptitude area of the Army Classification Battery or the Armed Services Vocational Aptitude Battery (ASVAB).
5. All applicants must score 90 or higher on the Alternate Flight Aptitude Selection Test (AFAST).

The AFAST is an aptitude test used to measure your suitability as a military rotorcraft pilot. There are a total of 200 questions divided into 7 subtest areas. The test is timed. The first section of the
test is a background information form consisting of 25 questions.

Subtest 2- Instrument comprehension test. In this test applicants will be asked to determine the position of an airplane in flight by looking at two dials, one showing the artificial horizon, the other showing the compass heading.

Subtest 3-Complex movements test. Questions in this subtest measure your ability to judge distance and visualize motion. Five pairs of symbols are given, representing direction and distance. You will choose the one pair that represents the amount, and direction of movement required to move a dot from outside a circle into the center of the circle.

Subtest 4-Helicopter knowledge test. This subtest deals with your general understanding of the principles of helicopter flight.

Subtest 5-Cyclic orientation test. In each of the 15 questions in this section you are shown a series of three sequential pictures that represent the pilot’s view out of the windshield. They change from top to bottom. You will determine which position the cyclic would be in to create the changes in the view indicated by the pictures.

Subtest 6-Mechanical functions test. This test determines your understanding of general mechanical principles. The example provided in the sample test deals with a suspended bar with a weight on it and you are asked to identify the point at which you should pull down to raise the weight most easily, A or B.

Subtest 7-Self-Description form. You are asked 75 questions dealing with your interests, likes and dislikes.

There are no right or wrong answers. This is a profiling instrument.

To obtain a copy of an AFAST Informational Brochure, go to www.army.mil/usapa/epubs/pdf/p611_256_2.pdf. You’ll need a copy of Adobe Acrobat. There are also AFAST study guides available at bookstores, or so I’ve been told.

6. Meet Class 1A medical standards as required for flying duty in AR 40-501.

The medical requirements defined in this specification are extremely detailed and comprehensive. Applicants must submit to and pass a medical fitness exam that must be reviewed and approved by the AeroMedical Center at Fort Rucker. Your recruiter will arrange for you to take your test. Be prepared to have anything and everything analyzed, questioned and inspected: Head, ears, nose, mouth, blood, skin, spine, heart, lungs, brain, all internal organs and systems, and mental stability.

One of the most difficult standards to meet is for visual acuity. In addition to a lengthy list of visual measurements and criteria that can disqualify a candidate, all applicants must have an uncorrected distant visual acuity greater than 20/50 in each eye. Distant visual acuity in each eye must also be correctable to 20/20 with no more than 1 error per line on the vision test.

7. Applicants who’ve made it this far must receive a favorable National Agency check (Security clearance).

8. Board reviews. The applications of those who successfully pass all tests and meet the necessary requirements must then be reviewed by a local review board. If they pass this step, their applications are then reviewed by a Warrant Officer selection board. This board serves as the ultimate selection group. If you pass—you’re in (almost).

9. At this point you will be inducted into the military, sent to basic training, and then on to WOCS (see article). Note: Applicants must score 180 points or higher out of a possible 300 points on the Army’s Physical Fitness Test (APFT) at the time of entry into WOCS.

10. Applicants agree to accept appointment as a Warrant Officer and serve as an Army aviator for no less than 6 years after successful completion of IERW.

From time to time, waivers may be granted for selected applicants who don’t meet certain standards for entrance, but who otherwise represent excellent candidates. Your recruiter can help you with this process, should it be necessary.

END
Although military and civil aviation differ in some ways, there are many things that both sides can learn from each other to enhance safety and mission accomplishment. One item that the military does very well is the process of Risk Management. The entire military process may not be applicable to all aspects of civil aviation. But, there are components of the process that directly relate. It is the intent of this article to describe the military risk management process and how it can be utilized in civil helicopter aviation.

The four branches of the United States military have been utilizing the process of risk management for a number of years. More commonly known as Operational Risk Management (ORM), the process is an effective tool for balancing safety with getting the job done. The risk management process is mainly used as a decision making tool by enhancing the ability to make informed decisions and reducing risks to the lowest possible level.

The U.S. Navy utilizes three levels of ORM:
1. Time-critical
2. Deliberate
3. In-depth

The type used is determined by the time and complexity of the task at hand.

Three of the four branches (U.S. Army, U.S. Navy, and the U.S. Marine Corps) utilize a five-step risk management process. The U.S. Air Force utilizes a six-step risk management process. The steps between all services have identical content. However, the U.S. Air Force added a sixth step whereas the other three branches combine two of the steps into one.

The five steps are:
1. Identify hazards
2. Assess risks
3. Develop risk controls and make risk decisions
4. Implement risk control measures
5. Supervise and assess the effectiveness of the control measures.

In the U.S. Army, prior to any flight, the PIC is responsible for completing a unit-level risk assessment. This process identifies the anticipated hazards of the proposed flight in a written format. The format and scope of this process is similar throughout the Army. However, the process is normally tailored specifically to each unit.

Once all anticipated hazards are identified, a method of totaling the hazards is used to determine the overall risk level. Whether this is a numerical tally or simply defaulted to the highest risk value of the items selected, depends on the individual unit Standard Operating Procedures (SOP). Once the overall risk level is determined, the PIC must be ‘briefed’ by the appropriate level of unit command ‘management’. The higher the total risk value, the higher the level of management required to approve the proposed flight. Since flying is not without risk, there will always be some risk involved in every flight.

It is up to the appropriate manager to decide if they are willing to accept the associated risk. Normally, the PIC is the first step in developing risk controls and will adjust the complexity of the flight, if possible, to keep the overall risk at the lowest possible level. If the appropriate manager is not satisfied with the overall risk level of the proposed flight, they will attempt to implement risk control measures, elevate the risk decision to the next higher level of management, or cancel the flight.

Once the flight is ‘briefed’ by the appropriate manager, the PIC and manager normally both sign the risk assessment. If during the flight the PIC encounters additional hazards that would place the overall flight into a higher risk category, the PIC is normally required to contact the appropriate manager by any means available prior to continuing the flight. This procedure falls under the risk management step of supervise. Since the manager is normally not in the aircraft with the PIC during the flight, faith and trust are necessary to ensure the PIC is conducting the flight in accordance with the predetermined brief. Although this process is not perfect, it does a pretty good job of allowing the command to still accomplish its mission while trying to remain as safe as possible. In other words, keeping the residual risk as low as possible.
We military pilots often perform risky missions under adverse weather with sometimes very inexperienced pilots. The accident statistics show that the military services do a pretty good job at aviation safety, although there is always room for improvement.

So, how can this process apply to civil aviation? Normally, during flight, helicopter pilots utilize the time-critical level of risk management. The deliberate level would be applicable during the flight planning process. Once again, the amount of time available and the complexity of the flight determine the level of risk management. A maximum range, cross-country flight at high gross weight, in high DA conditions, with adverse weather would certainly require more thought in regards to risk assessment than a short flight from point A to point B in VFR weather conditions.

During the flight planning process all potential hazards should be identified. Having knowledge of common accident causation in operations similar to your own is the best tool for determining hazards. This information can be found in NTSB accident reports and various publications such as Autorotate! The rest of the potential hazards should come from your own experience or thought process. At the very least, determining the hazards of the proposed flight will, at a minimum, raise your level of awareness.

Since you, as a civil PIC, are normally your own flight clearance authority, especially in Part 91 operations, the risk decision is up to you. The benefits should clearly outweigh the risks. Don’t accept unnecessary risks! Normally, some level of risk controls are put in place for us in the form of insurance policies, regulations, written company policies, programs, instructions, and SOPs. Additionally, training and limiting the exposure to the hazard are other important risk control measures. The helicopter manufacturer does this process for us by providing suitable warnings, markings, placards, signs, and notices to us in the flight manual. But the ultimate responsibility for risk assessment and intelligent decision making belongs to you, the PIC.

Risk Management for the civil helicopter pilot needs to become a mindset since you don’t have Uncle Sam giving you a helping hand. The important point is to have a heightened level of risk management awareness because all of us have different experience levels and personalities.

Editor’s Note: To read more on risk management, see Test pilot article in the previous issue (v3i4).

Kent Sapp holds Helicopter CFI, CFII, and ATP ratings as well as Airplane Commercial/Instrument/Multi-engine, CFI and CFII ratings. He is an active duty Army Instructor Pilot, Instrument Flight Examiner, and Aviation Safety Officer stationed in Japan.
(The following events are true. Though they took place a while ago now, and I have changed the names, the danger described remains just as real today.)

“Let’s go out and get some time.” That statement has bothered me for over 30 years now, and I still hear alarm bells whenever someone says it around me.

It seemed innocent enough in 1971 when Dan said that to a group of us sitting around operations at Fort Hood, Texas. Roger and I volunteered to go, and we swiftly made preparations for a flight of 3 Scouts and a Huey chase. The official mission was low level training, but we had picked up the brand new OH-58 Kiowa Scout helicopters only a few months earlier, and all of us were looking for any excuse to go out and “play.”

We rounded up crew chiefs to go along, since there was little maintenance being performed on the new birds, and most flights back then were single pilot. At the last minute, the crew chief for Dan’s aircraft volunteered to let a new man take his place. The new mechanic had just signed in to the unit that week and was sent along to see how we did things.

We all liked going out on “missions” with Dan. He was the most experienced scout pilot in the unit, having recently returned from a tour in Vietnam. Dan had been shot down several times in OH-6’s, and survived with barely a scratch. He had just signed in to the unit that week and was sent along to see how we did things.

We all liked going out on “missions” with Dan. He was the most experienced scout pilot in the unit, having recently returned from a tour in Vietnam. Dan had been shot down several times in OH-6’s, and survived with barely a scratch. He knew that wires are invisible. You found them by looking for the poles. That’s the way it was done. This field was the perfect trap.

The flight progressed in a very loose trail formation at tree top level, occasionally dropping down to the deck in the larger open fields. The Huey followed at altitude, taking care of the flight following reports. I was in the chalk 2 position, 5 or 6 seconds behind Dan. We were perhaps 30 minutes into the flight when Dan descended into an open field and was momentarily hidden from view by the tree line. Seconds later my Kiowa crossed the tree line and there was Dan’s OH-58 right in front of us - pointed nearly straight up. The radio squeelch broke with the chilling call; “I’m going in!”

The Kiowa seemed to hang vertically by the nose at 100 feet for a moment, and then, seemingly in slow motion, rotated nose down and descended towards the open field. It dropped quickly, but at the last moment, the nose came back up and the Kiowa hit the ground in a nearly level attitude. I was relieved that the impact didn’t seem that hard. It stayed there, upright, rotor still turning, looking like it would take off again.

Then, it exploded in a huge ball of fire.

This all happened within the few seconds it took me to overtake and flash past the downed aircraft at 90 knots. Pulling a hard bank to get back around we were horrified to see a single person stagger from the inferno, on fire from head to foot–a human torch.

I landed as quickly and as close as I dared, my crew chief leaping from the aircraft almost before we touched down. He tackled the staggering torch, rolling him on the ground to extinguish the flames. Things got kind of crazy for a few minutes after that. Chalk 3 was screaming for the Huey to get down here NOW! Within moments, the critically burned crew chief was taking his second flight with the unit, enroute to the hospital at VNE + 10 kts.

The rest of us sat there staring at the flames waiting to see Dan somehow step out unharmed, as the tragic reality started to sink in.

Some time later, I have no idea how long, another of the unit’s Hueys arrived overhead with the accident investigation team on board. The flames had died down by then, but smoke was still drifting upward from the wreckage. I watched idly as the fully loaded Huey made its approach to the site, cringed for the pilot at the very rough landing with so many “experts” on board, and prepared to tell what I had deduced while helplessly watching the flames die down.

Dan’s aircraft had taken out the lower of two fairly stout wires that extended entirely across the large open field. The broken, twisted cable snaked across the ground and the end of it was actual lying in the center of the burned wreckage. The other cable, still intact, ran from a single pole hidden in the center of the field by a large tree. The wires disappeared into the trees on either side of the field. From the air, not a single pole was visible.

Now, we knew all about wire hazards. We were always on the lookout for them on low-level flights – where scout pilots lived. We knew about wire hazard maps too, but there was no way one could read a wire hazard map flying single pilot low level in a Kiowa with no doors. We also knew that wires are invisible. You found wires by looking for the poles. That’s the way it was done. This field was the perfect trap.

I was explaining all of this to the investigator taking my statement. As I did, I pointed up to show him the intact top wire that Dan had somehow missed. But as we both looked up, there was no cable to be seen. I assured him that it had been there, and searched again, confusion setting in as another of the unit’s pilots walked up to us. I explained to the new-
were just going out to log some time….

tal in the country.

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for the ride, succumbed to his burns

the crew chief, who had just gone along

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the instrument panel during the impact,

designed hinge and he was thrown into

Dan’s seatbelt had failed due to a poorly

equipment on most modern helicopters.

It wasn’t a very complicated accident

investigation. The wire had sheared the

pitch change links below the rotor, ren-

dering Dan’s flight controls useless. This

was before wire cutters were standard

equipment on the OH-58. It was also

before the Kiowa came equipped with a

crashworthy fuel cell – now standard

equipment on most modern helicopters.

Dan’s seatbelt had failed due to a poorly

designed hinge and he was thrown into

the instrument panel during the impact,

possibly knocking him out and prevent-

ing him from escaping the inferno along

with the crew chief, though it probably
didn’t matter. Ten days after the crash,

the crew chief, who had just gone along

for the ride, succumbed to his burns
despite making it to the best burn hospi-
tal in the country.

It started out as such a great day. We

were just going out to log some time….
When *autorotate* published its very 1st issue, in April of 2000, a core of loyal supporters was there with us in the form of paid advertising and encouragement. Neal Jones, founder and president of Quantum Helicopters was 1st in line. And he’s still there with us and PHPA today. Like most entrepreneurs, Neal is not just the president of a company. He is a man with a vision and the talents and perseverance to make his vision a reality. That vision is Quantum Helicopters. It’s a story worth telling.

“I’ve been smitten with helicopters since my early high school days,” relates Neal. “But, at that time (late 70s) civilian helicopter training was practically unheard of, so I began flying airplanes and began working for a crop dusting company in the summers.” But, in 1980, the world of helicopter training was changed forever by a man named Frank Robinson. With the introduction of the R22, the cost of training dropped by half and by 1982, Neil had earned his commercial add-on and CFI ratings in rotorcraft. He immediately went to work for AZ Wing & Rotor a large operator in Southern Az. He was there for 9 years, learning the business and flying everything from R22s to Twin Stars. But, in the early 90s when his employer hit a down turn, Neil had a choice to make. Quantum Helicopters was born.

“Starting over from scratch was difficult,” understates Jones. “The first four years were hand to mouth with our new company.” However, by 1996, Quantum began seeing solid, consistent growth and that pattern has persisted. They now have 10 helicopters and employ 14 full time instructors. The helicopters are busy all day, 6 days a week. While so many flight schools are struggling, why has Quantum continued to excel?

There are a number of reasons. While it doesn’t hurt that the Southern Arizona area has clear skies nearly every day of the year and the Phoenix Metro area is consistently one of the high growth sectors in the country—there’s more to it.

“We’re serious about the training business—it’s what we do,” Neal says. “We focus all our attention on it and are committed to it 100%. This commitment results in continuous improvement.”

Among those improvements is the schools 141 status. They are also among only a handful of “accredited” helicopter flight centers in the country. This means, among other things, that their international students can obtain J1 visas, allowing them to receive their training in the U.S. and then work for a limited time, as flight instructors, where most can attain that critical 1000 hour mark. This helps to explain Quantum’s high percentage of international students.

Additionally, Quantum pays their instructors well and has a comparatively high retention level in what is normally a fast turn around business. “There are very few cases where an instructor leaves our company and makes more money in a turbine aircraft. I’m proud of that,” Neal relates.

But, I’ve worked at Quantum as a flight instructor and I’ve known Neal as a friend for years and there’s something else that makes Quantum a success. A large part of it has to do with the man’s personal integrity. If you were to ask me for a list of names of people that I trust explicitly and believe entirely, the list would be short. But, Neal Jones would be at the top of that list. And whether you’re looking for training, or want to buy an R22 or R44 from a reputable dealer, or want to get your aircraft repaired by a capable and honest shop, those are the qualities you look for.
1. d. AIM Pilot/Controller glossary.

2. d. Class D airspace is tailored for airport approaches and the local terrain but is usually 4 nautical miles in radius.

3. b. FAR 91.131(a) you must be cleared into or through the airspace.

4. c. FAR 91.155 Says that VFR helicopter flight may operate in Class G airspace at speed that allows the pilot adequate opportunity to see any air traffic or obstruction in time to avoid a collision.

5. False. 61.56 clearly states that no pilot may act as pilot in command unless that pilot has completed a flight review within the past 24 months. Thus, if the biennial has expired, the pilot may not act as pilot in command during the flight review.

6. True. You must not only have an operating tower but also weather reporting.

7. a. This is required for IFR flight only

8. a. It would read higher than normal because the static pressure is lower inside the cockpit.

9. False. There is no specific requirement to report a change in your medical condition; however, FAA encourages the reporting of any condition that might make you unable to meet the requirements of your certificate.

10. d. All of the above were correct. Also a check ride given in the Armed Forces would meet the requirement. In addition if you have satisfactory completed one or more phases of an FAA sponsored pilot proficiency award program.
The following information was extracted from the NTSB files. It has been edited for available space and is subject to change as investigations continue. Reports were selected based on the importance of the information to the broader helicopter industry.

Hughes 269C; Auburn, CA, April 30; 2 Fatal Injuries

On April 10, 2003, about 1730 PDT, a Hughes 269C collided with terrain about 1 mile south of the Auburn Municipal Airport. The helicopter was destroyed. The certified flight instructor (CFI) and student pilot were fatally injured.

A witness, located about 3 miles northwest of the accident site, saw and heard the helicopter maneuvering over his farm. He reported that the engine got quiet and the helicopter hovered, powered up again, and then "dropped" into a ravine area northwest of his location. As he was walking back towards his house he heard the helicopter again. He looked back and saw the helicopter had regained some altitude, and was headed back towards the airport.

Another witness, southwest of the accident site, stated that he saw the helicopter "really low." He stated that the helicopter's main rotors were almost perpendicular to the ground. The helicopter looked like it was attempting to turn, but was descending. He further stated that the helicopter had forward momentum, but it appeared it wasn't getting any lift. The helicopter dropped below the tree line, and he didn't see it again. The next morning he saw an article about the accident in the newspaper.

The accident site was located on a sandbar submerged in approximately 4 feet of water. The helicopter was recovered by Plain Parts, Pleasant Grove, California, on April 11, 2003, and moved to their facilities for the airframe and engine inspection.

Bell Shelby Aero 47G2; Airdrome, OK, May 2; 2 Fatal Injuries

On May 6, 2003, at 1915 CDT, a Bell Shelby Aero 47G2 helicopter was destroyed when it impacted terrain during a forced landing following a loss of throttle control. The certificated flight instructor/pilot designated examiner and the commercial pilot were fatally injured.

According to the air traffic control tower controller after completing a precision instrument landing approach (ILS), the pilot of the accident helicopter requested a clearance for another ILS approach. Prior to the outer marker, the pilot broke off the ILS approach and executed a (VOR) approach. After completion of the VOR approach, the helicopter overflew the airport and departed the area to the south. Shortly thereafter, a witness (a pilot who recently departed), reported that he heard a radio call from the pilot of the helicopter that they were having "throttle control problems and were trying to make it back to the airport." A few minutes later the witness heard the pilot state "they were in the pattern and for all aircraft to clear the way," no further radio calls were heard.

Hughes OH 6A1; Pan Tak, AZ, May 31; 1 Serious, 1 Minor Injury

On May 12, 2003, about 1206 MST, a Hughes OH 6A, collided with terrain near Pan Tak, Arizona. The helicopter was owned and operated by U.S. Border Patrol as a public-use aircraft under the provisions of 14 CFR Part 91. The pilot reported that while flying about 300 feet above ground level (agl) he heard a loud bang followed by the helicopter becoming uncontrollable. The helicopter came to rest on mostly level desert terrain. Most of the major components to the helicopter were located in the area of the main wreckage. The tail rotor gearbox and tail rotor blade assembly were missing from its attachment point of the tail boom. A search of the area for the tail rotor assembly or other related pieces of the helicopter was negative.

During the search for the missing components, searchers found a U.S. Border Patrol flight jacket. The jacket was located approximately 0.7 miles west of the accident site. Examination of the flight jacket revealed that the jacket had been shredded. The jacket also had red and white colored paint transfers. The tail rotor blades on the accident helicopter reportedly were painted with red and white colored paint.

Bell 407; Franklin, LA, May 24; No Injuries

On May 19, 2003, at 0945 CDT, a Bell 407 helicopter, registered to and operated by the Louisiana Department of Public Safety, was substantially damaged following a loss of tail rotor pitch control near Franklin, Louisiana.

The pilot reported that while he was approaching a helipad for landing, he realized that the anti-torque pedals were not effective. Due to obstacles, the pilot aborted his approach to the helipad and turned eastbound toward a sugar cane field. Subsequently, the helicopter started to rotate and the pilot realized he had no control of the tail rotor with the anti torque pedals. The pilot then rolled the throttle to idle and initiated an autorotation from approximately 75 feet AGL. The pilot further reported that a high sink rate developed and the helicopter impacted the ground hard on the main landing skids.

Hughes 269C; Watkins, CO, May 26; 1 Fatal, 1 Serious Injury

On May 28, 2003, approximately 0905 MDT, a Hughes 269C was destroyed when it impacted the ground during landing. The private pilot was seriously injured. The commercially certificated flight instructor was fatally injured.

A witness, working on an oil derrick 1/2-mile from the accident scene, observed the helicopter practicing landings. He said that on the last landing, the helicopter "came down and clipped what looked like the front right skid, and it caused [the helicopter] to spin out of control." The helicopter spun approximately 15 times, "very fast," before it impacted the ground and came to rest on its right side.

The on-scene investigation revealed no evidence of structural or powerplant malfunction or failure.

Robinson R22; Brazos Blk 532, GM, May 29; 1 Fatal Injury

On May 29, 2003, approximately 0400 CDT, a Robinson R44 single-engine helicopter was destroyed when it impacted the water while maneuvering near Brazos Block 532, Gulf of Mexico. The airline transport rated pilot, who was the sole occupant, sustained fatal injuries. Dark night visual meteorological conditions prevailed, and a company flight plan was filed for the 14 Code of Federal Regulations Part 135 unscheduled, on-demand air cargo flight.

The 73-year old pilot departed HOU with a load of parts for an offshore platform. For the flight from HOU to the platform, the pilot estimated an en-route time of 1 hour and 30 minutes and estimated a total fuel on board of 2 hours and 30 minutes. On May 29, 2003, approximately 1100, the body of the pilot and debris from the helicopter were located by the U.S. Coast Guard. The crash site has not been located and is presumed destroyed.

At 0353, the Palacios (PSX) Automated Surface Observing System (ASOS), Palacios, Texas, located on-shore approximately 15 nautical miles northwest of the debris field, reported the wind from 280 degrees at 3 knots, 8 statute miles visibility, sky clear, temperature 21 degrees Celsius, dew point 19 degrees Celsius, and an altimeter setting of 30.03 inches of mercury.

Robinson R-22; Montpellier, VA, June 3; 2 Fatal Injuries

On June 3, 2003, about 1103 EDT, a Robinson R-22 Beta helicopter was substantially damaged when it collided with trees, then terrain, near Montpellier, Virginia. The certificated commercial pilot and the passenger were fatally injured. According to the operator, the purpose of the flight was to conduct power line inspections.

According to a witness, it (the helicopter) flew low over her property, then became "suddenly quiet," which intensified her attention. Immediately afterwards, she heard "two really loud bangs, like a hammer banging on metal," followed again by silence. The witness thought the helicopter had crashed, so she investigated the area around her back yard and peered into the heavily wooded area behind her home. She did not see smoke or any signs of the helicopter.

A second witness was in her yard with her husband, when she first observed the helicopter flying above the power lines. She commented to her husband that it seemed "kind of loud." The helicopter then flew out of her view, and shortly afterwards, she heard a "backfire." The witness and her husband went to the area where they last heard the helicopter, but did not see any smoke. The witness commented that, other than the loudness, nothing seemed unusual about the helicopter's flight.

The helicopter was located approximately 0800 the following day, in a heavily wooded area on private property.

Examination of the trees surrounding the main wreckage revealed impact scars to the tops of 2 or 3 standing trees. Located near the base of the trees, in the area just south of the main wreckage, were several pieces of angular cut wood (approximately 45 degrees), and exhibited black transfer marks.

The helicopter wreckage was examined at the accident site (and all major components were accounted for at the scene. A weight and balance calculation was performed, using data provided by the medical examiner, and the airframe manufacturer. The maximum gross weight for the helicopter was 1,370 pounds. At takeoff, the estimated gross weight of the helicopter was 1,485 pounds, with a center of gravity location of 96.78 inches. At the time of the accident, the estimated gross weight of the helicopter was 1,382 pounds, with a center of gravity location of 95.92 inches.
PHPA, a non-profit organization dedicated to the well being and future of the helicopter pilot, available to all helicopter pilots, civilian and military, worldwide.

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Postal Code/Zip__________Country______
Phone_________E-mail____________________

Type of payment:
Check □ Visa □ MC □ Exp. Date ______
Number__________________________
Signature________________________
1. If ATC uses the word “cruise” in an IFR clearance what does that authorize the pilot to do?
   a. Maintain any altitude from the minimum IFR altitude up to and including the altitude specified in the clearance.
   b. Climb/descend to/from any altitude from the minimum IFR altitude up to and including the altitude specified in the clearance.
   c. Proceed to and make an approach at the destination airport.
   d. All of the above
   e. None of the above

2. What is the size of Class D airspace?
   a. Four nautical miles
   b. Four statute miles
   c. Five nautical miles
   d. Usually four nautical miles in radius

3. When approaching Class B airspace you call approach and ask to pass through the airspace at six thousand feet. You receive the following clearance “Helicopter 94 alpha romeo, roger, New Orleans altimeter two niner niner two.” Can you enter the airspace?
   a. Yes, since you have established two-way communication
   b. No, you must be cleared into or through the airspace.
   c. No, until you receive a transponder code.
   d. Yes, provided you maintain your altitude.

4. You’re at a non-towered airport, which is in Class G airspace at 700’ AGL and below. The ceiling is estimated to be at 700’ AGL with about 2 miles visibility. You’re at 600’ AGL and just ahead of you an airplane pops out of the clouds and lands ahead of you. The pilot of the airplane says he was IFR on the GPS approach. Who is legal in this case?
   a. Since IFR approaches aren’t published to airports in Class G airspace the airplane was not legal.
   b. You are. The airplane must cancel IFR before descending into Class G airspace.
   c. Both of you. IFR and VFR can share Class G airspace.
   d. The airplane, since IFR has the priority.

5. If it has been 26 months since your last flight review you may act as pilot in command during your new flight review with a current flight instructor?
   a. True
   b. False

6. A tower must be operating in order to have Class D airspace.
   a. True
   b. False

7. FAR 91.411 requires a static system check every 24 months
   a. Only if the aircraft is to be flown IFR.
   b. Required for any flight VFR or IFR.
   c. Required only for large and turbine aircraft.

8. If you were using an alternate static source from inside the cockpit what would you expect the airspeed indicator to read?
   a. Higher than normal.
   b. Lower than normal.
   c. The same as at sea level.

9. If you know or have reason to know of a medical condition that may make you unable to meet the requirements of your medical certificate you must report that condition to FAA.
   a. True
   b. False.

10. Who is authorized to administer the biennial flight review?
    a. Flight instructor
    b. Examiner
    c. Approved pilot check airman
    d. All of the above
    e. Only a certified flight instructor or flight examiner

Answers on page 19
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An open letter to my fellow Air Methods, Rocky Mountain, Arch and Mercy Air aviators:

Nearly seven years ago I began utilizing my talents as an Emergency Medical Service helicopter pilot. After about one year it became very apparent to me that something was absent that is crucial to any group that would identify itself as “professional.” That crucial ingredient is direct influence.

In our industry, those of us who are actually on the business end of those marvelous machines, often lack direct influence. Sure, we can write letters to editors, have articles published, join a safety organization and talk to our management. But, the fact remains that pilots should, but do not, directly influence the process for which they are responsible. It is this process that generates our industry’s revenue and is crucial to its success.

In the absence of direct influence, corrective change becomes the result of a lumbering, frustrating and sometimes deadly process driven by those, who by our own default, act as our agents of change. That may have worked in our infancy, but our industry is now mature, and the agendas of federal agencies, medical organizations and owner/operators do not always match the needs of its pilots.

Pilots must take the lead in influencing the process and establishing proper levels of compensation for that which we are held accountable—FLYING. Our courts, government agencies and corporate enterprises recognize union organization as the proper agent for labor to directly influence industry. It is woven into the fabric of America as part of our country’s way of doing business. Without a change to OUR way of doing business, we pilots can only rail about what needs to happen. We do not directly influence our industry and without organization it is ultimately our fault.

Those who are hard core against organization have old prejudices and they will not be convinced otherwise. But the mass of pilots in the middle are open to the idea of organization. They merely lack confidence that unionization can improve our situation. Consider the gains in pay and benefits realized since the union push of a few years ago. Those gains were the direct result of a union push by pilots. For the first time, our corner of the industry felt our direct influence and we pilots benefited with a positive outcome. Our industry can tolerate negotiations for fair wages, benefits and protections but only if we pilots are ready to assume our responsibility for direct influence.

I am not asking you to change religious affiliation, political party or give money to the mob. I am asking you to share a common vision for professional growth. I am asking you to understand the current state of our industry and I’m asking you to help us take our place of rightful responsibility in shaping its future. Directly influence our industry by SIGNING YOUR BALLOT and mailing it in. Without organization and direct influence we are but voices in the wind.