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FlightFax

REPORT of ARMY AIRCRAFT ACCIDENTS
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"You're on fire! Get out, get out, GET OUT!!!"

Words we hope you never have to hear, but you could. And if you do, you will have no time to waste. Seconds could mean the difference between living and burning to death.

In this issue of FlightFax, one pilot recounts the most horrifying 18 seconds of his life—18 seconds from the time he knew his aircraft was on fire until he bailed out and ran, his flight suit smoking, from the inferno that had been his AH-64.

From out of the fire!

PC: "Lieutenant, before-landing check, please."

PI: "Hold on, let me grab the checklist. Okay, weapons systems safe."

PC: "Safe and off."

PI: "Tail wheel locked."

PC: "Tail wheel locked."

PI: "Parking brakes released."

PC: "Handle in and verified."

PI: "TADS/PNVS, anti-ice off."

PC: "Off in the back; verify in front."

PI: "Front's off."

PC: "Okay boss. I've got the FARP out the left. Leads on it and turning. Everything looks good. We'll be going into point four. Remember the log pile they briefed, so keep an eye out for it."

PI: "I think I've got it in sight. Should be no problem."

Chalk 3: "35 this is 55. I'm going to go ahead and scoot on over to point four and give you guys three. That way you don't have to worry about the woodpile."

PC: "'Roger, we've got it.' Okay lieutenant, everything looks good. Watch for the ground guide and keep me off of the grounding rod."

PI: "No sweat, looking good. Roll forward about a foot."

PC: "Okay, if you'll block, I'll set the brakes."

PI: "Blocking."

PC: "Brakes set. I have the flight controls."

PI: "You've got 'em."

PC: "Number two is back at idle. Okay, I'll monitor refueling. Start putting all your notes together so we can debrief the guys as soon as we get back. I'll go through mine too. HOLY S___!"

PI: "What's the matter???"

Chalk 3: "Skip, you're on fire. Get out, get out, get out!"

PC: "Get out'ta here lieutenant. We're on fire! Get out!"

This is not some fictional scenario out of a novel. How I wish that it were. Unfortunately, this was the last few minutes of a normal training flight that ended in disaster. I was the PC in the back seat.

The reason for writing this article is not to point fingers or to place blame but to give a little insight into this accident from the unique point of view of one of the pilots who lived through it. Valuable lessons were learned, and I want to share them in the hope that should you ever be involved in an aircraft fire, you will be able to respond quickly.

What caused it?

Until this accident, I had no idea that the Army had purchased an emergency breakaway connector (EBC) for the D-1 nozzle on the HEMTT tanker aviation refueling system (HTARS) or that it had been fielded and was in use. The purpose of the connector was to allow a crew to pull pitch in the event of an emergency while still refueling and have the hose separate from the nozzle in a controlled, safe manner.

It was a good idea in principle, but there was a serious shortcoming in the design of the system that allowed the EBC to be installed backwards. The locking pins were not properly seated, which allowed the coupling to back off as the refueler manipulated the hose from the stand to the aircraft and partially decouple after he attached the D-1 nozzle to the aircraft refueling port and began refueling.

*(**Editor's note:** In May of 1994 the Aviation and Troop Command issued a message stating that "effective immediately . . . use of the frangible coupling [emergency breakaway connector] in refueling operations using HTARS is no longer authorized and the coupling shall be removed from the HTARS assembly." As of this date, use of the EBC is still unauthorized.)*

When the fuel line separated at the EBC connection (not a failure of the actual EBC), between 2 and 6 gallons of fuel per second sprayed over the refueler and the running AH-64. Fortunately for the refueler, he knocked the hose down and ran backwards when this happened and this took him out of the fireball when the fuel ignited.

The HEMTT crew got the fuel shut off in a matter of seconds, but too much fuel was already on the aircraft and on the ground. When fuel sprayed up into the rotor system, it atomized, forming a vapor cloud. Whether it was an engine or an electrical spark or some other source, something ignited the fuel. There was no actual explosion, but the entire forward portion of the aircraft from about the engines to the nose was almost instantaneously engulfed in flame.

How did we deal with it?

When I first saw the fuel spraying all over the cockpit, all I could think was "this can't be happening." I looked out the right canopy in utter disbelief—it was completely obscured by fuel running down it. I remember looking up and over to the left as I followed the trail of spraying fuel. It was just as bad on the left side. Even as I muttered a few choice expletives, one of the guys in another aircraft was on the radio telling me I was on fire and to get out. In the time it took me to turn my head back to the right, fire was already spreading from the right wing forward. I still can't believe how fast it started—a matter of only seconds.

I told the lieutenant in the front to get out. I grabbed the power levers and pulled them off, shut the fuel switches off, and initially turned the battery switch off in my hurry to get out. I immediately turned it back on as I remembered the warning in the dash 10 about leaving it on in the event of an emergency egress with the rotors turning. (This is to keep the magnetic control brakes functioning so the rotor system doesn't flop around as you're trying to get away from the aircraft.)

I took an extra second or two to glance at the cockpit instruments and switches to make sure that I had done everything I could to shut the aircraft down and minimize any chance of an explosion or the aircraft coming apart while still running and injuring someone on the ground. I looked out the left front as the pilot of the aircraft in the refueling point on my left pulled pitch. As I looked back to the right, I could barely see through the fire now and I couldn't tell if the aircraft to my right was gone or not. I could see that the lieutenant was on the forward avionics bay so I knew he was almost out.

Finding a way out

I had done all I could, now it was my turn. I made the same mistake here that most people make when they are in a hurry to get out of a cockpit in an emergency: I forgot to release my shoulder harness. I reached down to grab the door handle and in the 2 or 3 seconds since I had first seen the fire there, it was already so hot that it burned my hand right through the glove.

I threw the canopy door open, and it was instant inferno. The fire hit the open door, and it was channeled right into the cockpit, across the top inside of the canopy, and down the left side. Even if I had released my harness, at this point natural reaction wasn't going to let me go out. I remember turning my face to the left and trying to breathe and get away from the fire. It felt like my face was melting from the heat. There was nowhere to turn to get away from it. I reached up and grabbed the canopy release to let the canopy door back down. Another habit of mine is that when I turn the canopy release handle, I flip it back down so that the door will lock in the open position. This allows the door to lock in the intermediate position when lowered. When the door came down, it locked as advertised so now there was about a 3- to 4-inch-wide opening funneling the fire into the cockpit with me.

My mind was racing a million miles per hour as I tried to deal with my situation and find a way out. By now the whole right side of the aircraft was nothing but flames. I couldn't even see the ground. The left wasn't much better. I remember thinking briefly about blowing the canopy and going out the left side, but something told me not to. Looking back on it, it was the right decision. I didn't know it at the time, but the left side was burning worse than the right, and the winds were blowing from the left rear to the right front. I very probably would have flash fried if I had blown the canopy.

Probably because of the adrenaline rush, my hand was not hurting yet from the severe burn it had received. I released my harness and started to reach for the cockpit door handle again, but human nature wouldn't let me reach into that fire to close the door even though the heat was unbearable. I remember thinking "I've got to get out of here before it blows up" as I half stood in the cramped cockpit and with my right foot kicked the door to break the locking mechanism. As the door closed, I grabbed a big breath of air.

The pain from the burn on my face was intense, but that wasn't my primary concern as I looked around the aircraft, searching for an easier way out. Not finding one, I made my decision to go. Then I threw the door open and half dove, half fell out of the cockpit.

AH-64 in refueling point three (second aircraft from left) at 14:50:00.

As fuel ignited, aviator in nearby aircraft began snapping pictures. This photo at 14:51:30 was made only 1 minute and 12 seconds after CW3 Tackett ran through the fireball to safety.

This photo at 14:52:30 shows how quickly aircraft was destroyed.

Into the fire

Jumping out into that fire was absolutely the hardest thing I have ever done, but I was determined not to sit in that cockpit and burn to death. If I was going to die in the fire, then they would find my charred body trying to crawl away. I kept thinking about my wife and four sons and how badly I wanted to see them again as I hit the ground.

The heat was extremely intense, and I remember screaming at the top of my lungs as I began to really burn. As it turned out, that was exactly what I needed to do. It kept me from inhaling not only the fire and smoke but also the toxic fumes from the composites as the aircraft burned. Because of this, I had only very minor damage to one small portion of my left lung.

I half crawled and half stumbled as I tried to get my feet underneath me to keep going. Somehow in all of this confusion, I remained oriented to where "out" was and ran in the right direction. I was later told that I set the land speed record for covering distance as I came out of the fire, but I don't remember. All I knew was that I was burning and had to get away from the fire.

Making it out of the fireball

As I came out of the fire, I ran a few more feet, then stopped and started gulping air. It really felt good! I looked down at my front to see if I was on fire and needed to do the old "stop, drop, and roll." No fire. I was only smoking from my chest to my boots, and for some reason, I found this humorous. I guess it was just a relief action from making it out of the hell behind me. From the moment I knew the aircraft was on fire until I ran out of the fireball was only 18 seconds!

First reactions

I saw the lieutenant in front of me and asked him if he was okay. He looked at me and said the same thing. Neither one of us answered; we just looked at each other. The unasked question that each of us was thinking was "If he looks like that, how bad am I?"

The majority of the pain had not really set in yet, but I knew that I was burned pretty badly. My face hurt the worst. It felt like it had melted, and I could smell my burned skin and sort of see my charred nose when I looked down. I looked back at the flaming inferno behind me and couldn't believe that I had just come out of that.

What I didn't know at this point was that at least three people were trying to use the 25-pound fire extinguishers to help us out, but the heat from the fire was so intense that they couldn't get close enough for the extinguishing agent to even reach the edge of the fire. In all of the confusion, they had not seen us get out.

I started walking over to where the FARP guys were by the HEMTT. I remember feeling really weak all of a sudden, and I began to stumble as one of the other pilots came running up. He helped me over to a cot that someone had brought out of the tent for us and I sat down. He popped the chin strap in my helmet and took it off. I didn't have my visor down, but it wouldn't have mattered anyway because the third-degree burns that I received on my face were along my lower jaw and mouth. My sunglasses saved my eyes.

Unharmed skin protected by cotton underwear contrasts sharply with burns on CW3 Tackett's face, arms, and hands.

To those who helped

From this point on, everything got fuzzy. The intense pain began to set in, and my body began to shut down to deal with the injuries. There were so many people trying to help us; people literally giving the shirts off their backs to cover and protect us. All I can say to all of them who were there: the medics, those who tried to fight the fire to help us out of the cockpit, the ones who just gave us moral support, and to those who helped in ways that I don't even know about—**Thank You** from the bottom of my heart!

The end results

I received burns to 41.5 percent of my body, and 10.5 percent of those were third-degree burns. The rest were medium to deep second-degree burns. The lieutenant had medium to deep second-degree burns on 21 percent of his body with 3 percent third-degree burns.

Thanks to our *leather* boots, our feet were not burned at all. With the exception of our faces, the majority of our burns were on the back part of our bodies where the Nomex was pulled tight either as we were exiting the cockpit or as we were getting up from the ground.

My chest, back, and buttocks were spared from any burns at all due to the cotton underwear that I had on. The burns literally went to where the underwear was and stopped.

The bottom line is this: If I hadn't been wearing my Nomex protective equipment and wearing it properly— Velcro fastened, collar up, rings in the pocket, and so forth—there is no doubt in my mind that I would very probably have either died in the fire or died as a result of the burns I would have received. Luckily enough, I was wearing an almost new flight suit and had just DX'd my gloves with all the fingers hanging out for new ones just before going to the field. It truly paid off.

The lieutenant and I were extremely lucky to have survived this ordeal. According to the experts at the burn center, another 3 or 4 seconds and we very probably would not have been able to get out. The lieutenant is back at work now and flying. For me, it will take a longer time to recover. Unfortunately, there will be some things that we will never recover from such as an extreme sensitivity to heat and cold—but we can live with that!

It can happen to you

No amount of training can prepare you for a situation like the one we had to face, especially when there are no emergency procedures that deal with an almost instantaneous total envelopment of the cockpit by fire. But that doesn't mean that it can't be dealt with **quickly** and professionally. The key is not to panic. Let the survival instinct take over, and do what you have to do to get out. Keep going and never quit!

I hope this account of my routine refueling that went bad has caused you to think about what you would do in a similar situation. And hopefully you won't make the mistake of thinking it couldn't happen to you. All it takes is the blink of an eye to go from "it can't" to "it did." Learn from our experience. Trust me, you wouldn't want to have to experience this for yourself.

POC: CW3 Boyd A. Tackett III, B Company, 1-502d Attack Helicopter Battalion, Fort Hood, 817-539-5745

The Army Safety Center is in the process of producing a video of CW3 Tackett recounting the events leading up to and causing this AH-64 refueling accident, lessons learned, and his personal struggle to recover from the burns he received. As soon as copies have been distributed to audiovisual libraries, we will publish the product identification number and FlightFax video number so that you may acquire a copy for use during your next safety briefing.

Close calls and near-miss accident info needed

This is one of those good news, bad news stories. The good news is that over the last few years, we (make that you) have driven the accident rate down and lives are being saved and equipment protected that only a few years ago would have been lost. The bad news is that because the accident rate is down, it is becoming harder for us to discover trends and develop proactive programs to prevent further losses of people and equipment. The gross trends of the past just aren't there anymore. At times, we find ourselves trying to perform a trend analysis based on one or two accidents. Needless to say, this does not provide an effective data base from which to draw conclusions and implement prevention programs.

In our analysis of current accidents, we are down into second- and third-order effects—the real subtleties. And even in analyzing accidents to greater degrees, we are still being reactive, not proactive and ahead of the power curve. We are not spotting problems and correcting them before they become an accident. By no means are we advocating that we need more accidents in order to develop lessons learned and implement prevention programs. Information is readily available; we just have not capitalized on it.

Academic studies have shown that for each serious accident, 59 minor accidents and 600 near-misses occur (*Management Guide to Loss Control*, Frank E. Bird, Jr. Institute Press, Atlanta, 1974). Imagine the benefit that could be gained from the lessons learned in those 600 near-misses.

Sharing lessons learned

Other services, for example the Navy, have means for their pilots to share lessons learned from their missions that almost went wrong. Navy pilots write to *Approach* magazine and tell their "there I was," "this happened to me" stories so that other people can benefit from them.

From comments, it appears that pilots everywhere like to read about those death-defying events. Probably a lot of Army aviators can even relate to some of those precarious situations. They, on the other hand, may not have shared their experiences because of concern about repercussions or just simple pride.

In the profession of arms, we are all charged with the responsibility to mentor subordinates. Young members of the aviation team listen when the old aviators speak. They realize that they have not experienced every situation and probably will not get the chance to during their aviation career. Granted, aviators learn through hands-on experience and repetition; however, with dwindling resources, "there I was" talks may be the only experience upon which to base a decision.

We have all heard the saying "There are old aviators and there are bold aviators, but there are no old, bold aviators." This may stem from the fact the old aviators lived through enough close calls to develop respect for the profession and the ability to recognize their individual limitations. "There I was" stories could help fellow aviators vicariously experience difficult situations without the risk of injury.

Fixing the problem is more important than affixing the blame.

—Anonymous

Accident prevention—the next level

The time has come to take accident prevention to the next level. We are trying to capture the valuable lessons from near accidents and share them with others so that they, too, can learn from the close calls or near-misses that are occurring in our daily operations.

A recent survey of aviation brigade commanders showed unanimous support for this effort. However, when I recently addressed students in an Aviation Safety Officer Course, there was some concern about repercussions. We need and intend to do this in a way that pilots and crews will feel secure enough to tell their stories without fear of reprimand or self-incrimination.

Ways of capturing needed info

■ *Operational hazard report (OHR)*. There are already successful reporting programs out there such as the OHR. We do not want to increase the official reporting burden, but we do encourage you to continue to use the already-established process and submit OHRs. However, two problems are readily apparent with using the OHR system to report close calls and near-misses.

The OHR program is set up to be handled at the lowest level of command that can correct the identified hazard. As a result, the rest of the Army aviation team does not benefit from the information contained in the OHR. One course of action could be to forward the completed OHR to the Safety Center where a data base could be established, especially when there are Armywide implications.

The other problem area centers around the fact that crews are often reluctant to submit a formal report such as the OHR if the close call or near-miss was a result of their own error. Sometimes the prevailing attitude is that we didn't have an accident, so why tell on ourselves and risk any repercussions?

■ *New FlightFax forum*. In an effort to capture lessons learned, the Safety Center is establishing a "There I Was" forum in *FlightFax* similar to the one used in the Navy's *Approach* magazine

The purpose of the stories is not to incriminate you or question "Why did you do that?" or "Why didn't you do this instead?" Second-guessing your actions is up to you. By sharing your experiences—the what, when, where, why, and how of the accident that almost happened but didn't—you can assist others who might find themselves in similar situations. We just want other members of the aviation team to benefit from the lessons you learned the hard way.

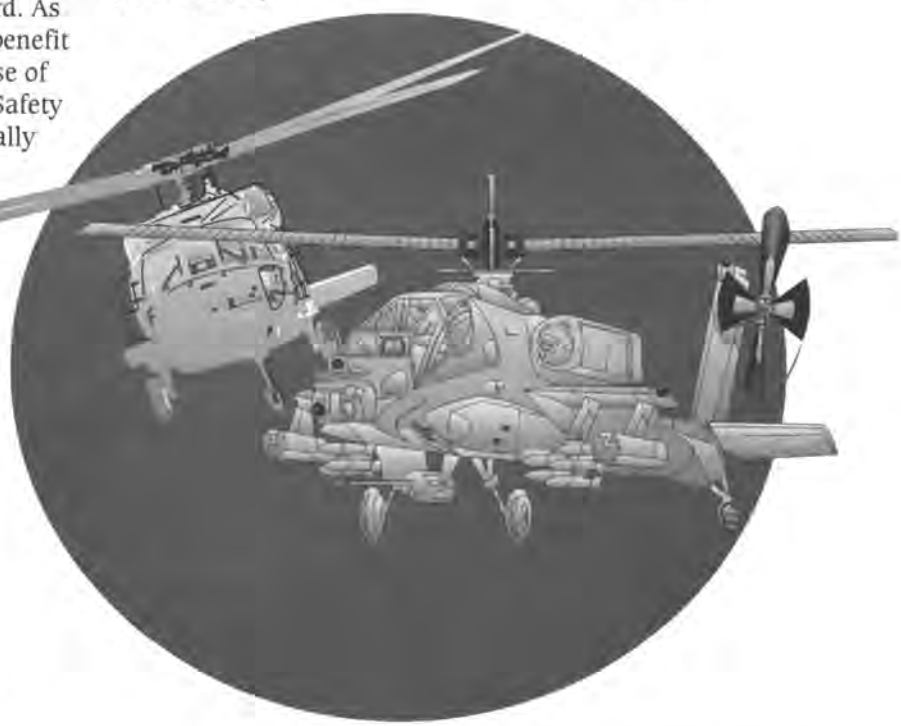
Do you have a story to tell? If so, we would like to hear from you. Don't worry about the grammar, style, punctuation, and so forth. We'll help you. Just send us your story, along with your name, address, and a telephone number where we can reach you if we have any questions about your story.

If you have a story to tell but don't want your name associated with it, we understand. If you want anonymity, just tell us so. We'll respect your request and withhold your name from the article. However, be sure to include your name and phone number so we can contact you if we have any questions and to give you the opportunity to proof the story prior to publication.

Close calls and near-miss scenarios can take us to the next level of accident prevention. The effectiveness of this program will depend upon the level of participation by the aviation community. We are even looking for your feedback on how to get those close calls and near-miss stories, videos, and so forth coming in.

If you, too, want to be proactive in accident prevention, send your stories and ideas to Commander, U.S. Army Safety Center, ATTN: *FlightFax* (Ms. Jane Wise), Fort Rucker, AL 36362-5363. If you prefer to talk one-on-one about your story before writing and submitting it, please call DSN 558-3770 (334-255-3770).

—MAJ James Dunn, USASC Aviation Branch, DSN 558-3754 (334-255-3754)



Need good safety training material? Try a video!

Safety videos presently available at local audiovisual support centers are valuable training aids. They are designed to stimulate discussion in unit safety meetings and to lead to self-examination not only by individual aviators but by the unit as a whole.

The following are synopses of the aviation safety videos that have been distributed to audiovisual information libraries throughout the Army. You may obtain a copy by contacting your local audiovisual library.

Crashfax videos

■ **UH-60 Midair** (CFV 46-1, PIN 707996). A re-creation of the midair collision of two Black Hawks during a night vision goggle training mission. All 7 crewmembers and 10 soldiers on board the 2 aircraft were killed. The absence of evasive action by either crew indicates they never saw each other.

■ **High-Risk Aviator** (CFV 46-2, PIN 707997). Re-creation of the events leading up to the crash of an OH-58 into a lake. The warning signs were there that this pilot was a high-risk aviator, but he was allowed to continue to fly until the inevitable happened and he was killed in a crash.

■ **Surviving in the Wire Environment** (CFV 46-3, PIN 708002). This video is targeted at air mission leaders and operational pilots. It focuses on five key wire strike prevention actions and the importance of strict adherence to standards.

■ **Good Pilots, Bad Decisions** (CFV 46-4, PIN 708405). Re-creation of an accident caused by experienced pilots who decided just once not to fly by the standards. This decision to abandon their professionalism and give a group of soldiers a "ride to remember" cost 10 people their lives.

■ **Performance Planning: What the Aircraft Can and Can't Do** (CFV 46-5, PIN 708403). This video shows the results of poor performance planning in two helicopter accidents: a UH-1 accident in which the pilot misfigured performance data and a CH-47 accident in which the pilot used the wrong charts. The dangers of ignoring established safety practices and the importance of correctly filling out the log are also emphasized.

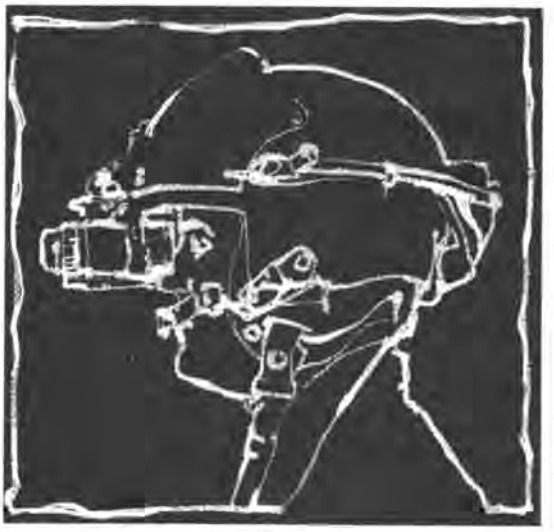
■ **Performance Versus Reality** (CFV 46-6, PIN 710612). This video is an actual crash of a CH-47 helicopter while landing in a mountainous area. Although a reconnaissance had been made of the site, the pilots had been given the wrong information. The area had burned, and water had been dropped on the site to keep down dust while landing, causing a lack of contrast the pilots could use for visual cues. This video shows the importance of an effective landing reconnaissance and how contrast can distort slope perceptions.

NVG videos

■ **Flying Goggles: A Special Report** (TVT 46-14, PIN 707999). This video is targeted at operational pilots and focuses on NVG capabilities and limitations. It is intended for use in unit training programs.

■ **Critical Procedures for Night Vision Goggle Training** (TVT 46-15, PIN 708000). This video is targeted at aviation unit commanders and focuses on the development of a night operations SOP for a typical UH-60 unit.

■ **NVG Distortion Evaluation** (TVT 46-18, PIN 708321). Although this video was developed to aid those performing a one-time evaluation required by an AVSCOM



message, aircrews can also benefit from viewing it. The video shows examples of actual distortion as seen through goggles. This footage can be helpful in judging what is and what is not acceptable distortion.

■ **Aviation Night Vision Goggle Operations—Desert Environment** (TVT 46-62, PIN 708404). This video demonstrates low-level and NOE flight operations in a variety of desert conditions. It also illustrates essential mission planning, to include risk assessment and the identification of specific hazards. Included in the video are flight demonstrations over three different types of desert terrain. The video also emphasizes the need to follow all safety precautions when flying low level as well as NOE.

Other videos

■ **Crew Error in Night Rotary Wing Accidents** (TVT 20-943, PIN 709224). This video identifies major causes of night rotary wing aircraft accidents. Four major operational situations are emphasized in which crew-error accidents occurred:

- Improper scanning
- Improper decision making
- Improper crew coordination
- Improper scanning and crew coordination

Four common factors emerge from these crew errors and operational profiles:

1) The primary crew failure is when the pilot on the controls stops scanning to focus attention either inside or outside the aircraft and fails to coordinate with other crewmembers to maintain obstacle clearance.

2) Most accidents occurred while operating at low altitude: hover, taxi, landing, or en route at terrain flight altitudes.

3) Most accidents occurred when illumination was low, and more than half happened when environmental conditions such as haze, dust, fog, rain, and snow were present.

4) Accidents experienced en route in terrain flight showed median altitude has decreased without a corresponding decrease in airspeed.

■ **Desert Shield Mobilization Safety Lessons Learned** (TVT 20-952, PIN 709291). In the first 3 months of Operation Desert Shield, accidents caused death and countless injuries to soldiers. The fast-paced start-up climate of Desert Shield began when the mobilization started. This video emphasizes the importance of using safety measures in all activities during mobilization in a desert environment. Actual safety lessons learned during Operation Desert Shield are depicted. Statistics show that 80 percent of all accidents are caused by human error, and supervision is the key to preventing human error.

■ **Eliminating the Avoidable Accident** (TVT 46-145, PIN 710219). In this roundtable discussion video, MG John D. Robinson, (former) Commander of the U.S. Army Aviation Center and Fort Rucker, is joined by other leaders within the aviation community in a discussion of the causes of many Army aviation accidents. Drawing from their own personal experiences, leaders discuss specific incidents and accidents and make recommendations on how the accidents could have been avoided.

■ **Army Safety Leadership on Risk Management** (TVT 20-1012, PIN 710271). In this video, BG R. Dennis Kerr, (former) Director of Army Safety, and CSM Samuel R. Reynolds, (former) Sergeant Major of the Army Safety Center, discuss the basics of risk management and how they apply to today's smaller Army. This video is designed to help commanders understand what risk management is and how to use it to make their commands safer. The video also shows how accidents can happen when risk management is not used.

■ **Safety Alert: UH-60 Fuel Boost Pump Operation** (TVT 20-1040, PIN 710601). This video provides information on outgassing, which occurs when air in fuel is released, in the UH-60. This released air can collect in fuel lines, creating large bubbles. Under the right conditions, these bubbles can cause the engine boost pumps to cavitate (outpressure drops to zero), resulting in fuel interruption that can cause an engine to flame out regardless of what type fuel it's burning. Explained in the video is an interim fix for the problem and a possible long-term solution.

Coming soon

■ Video on AH-64 refueling fire with pilot recounting events leading up to and causing the accident, lessons learned, and his personal struggle to recover from burn injuries received in the fireball.

■ Video on inadvertent IMC. The presentation is based on an OH-58 that went into inadvertent IMC and crashed, killing both crewmembers. Also addressed in the video are five Cs—control, coordination, clearance, course, and call—to help aviators handle those first critical seconds of flight into IMC.

These videos and many others are available and easily accessible from your local audiovisual library. Don't miss out on these valuable training aids and the beneficial discussions that result. When planning your next unit safety meeting or safety standdown, remember the videos.❑

Accident briefs

Information based on preliminary reports of aircraft accidents

Utility

UH-1 Class C

H series - During ILS approach under IMC, engine chip light illuminated at 3,000 feet AGL and engine failed at 1,000 feet AGL. Crew autorotated aircraft into field, and aircraft landed hard.

H series - Aircraft was at 8,400 feet MSL during troop insertion into LZ when pilot received radio call from troops on ground informing him that LZ was at his 2 o'clock position. On short final with near-zero airspeed, PC started right pedal turn. When PC tried to stop turn with left pedal, aircraft continued uncommanded right turn. PC raised collective to miss obstacles and rotor began to bleed off. PC then reduced collective, began descent into trees, and applied collective to cushion impact.

UH-1 Class E

H series - While performing contour flight to field site, complete hydraulics failure occurred. Aircraft was not in level attitude, and crew elected not to immediately pull hydraulic control circuit breaker. While positioning aircraft to level attitude, hydraulic power was restored. Crew decided to make running landing to nearby suitable area in desert. While on short final, hydraulic power was once again lost and crew experienced cyclic feedback which they misinterpreted as a cyclic hardover. Crew initiated emergency procedure for cyclic hardover and completed landing without further incident. Maintenance discovered hydraulics elbow tube had failed, causing loss of hydraulic fluid.

H series - While on approach, PC felt feedback through cyclic control. Feedback increased and PC completed landing without delay and shut down aircraft. Inspection revealed that the servo retaining nut located at the base of the servo had come loose, backing off the threads. It appeared that the locking tang washer used to safety the retaining nut had not been bent into place during manufacturing or remanufacturing.

H series - During MTF for completion of compressor-stall inspections, MP was performing baseline TEAC with 50 pounds torque applied, N1 at 99.5 percent, EGT at 525°C, pressure altitude of 2,000 feet, and climbing at 1,500 to 2,000 feet per minute when aircraft experienced apparent compressor stall/overtorque. Due to severity of torque fluctuation and aircraft yaw, MP was unable to get N1 and EGT indications during incident. Although torque fluctuated between 46 and 54 pounds, crew landed aircraft without further damage. Inspection revealed loose P3 air line that had been repaired prior to flight.

UH-60 Class A

A series - Aircraft crashed for unknown reason in wooded area. Postcrash fire occurred. One fatality.

UH-60 Class C

A series - During medevac mission, crew initiated approach to field landing zone. After landing, crew chief noticed that aircraft was sitting tail low. Believing that tail wheel was in rut, crew elected to move aircraft. After aircraft was lifted to hover, crew chief saw damage to tail wheel. PC elected to proceed to area where landing could be accomplished with crash crew available. Postflight inspection revealed failure of the tail strut.

A series - During loading of VIPs, APU compressor section came apart and compressor blade punctured skin of aircraft.

UH-60 Class D

A series - During door gunnery at range complex, M-60D jammed every 20 to 30 rounds. Crew decided to change weapons. After aircraft landed, crew got out of aircraft and took malfunctioning weapon off mount. Later crew moved weapon, which had not been properly cleared, safetied, and rodded before being taken off mount, and weapon fired. Crew confirmed that discharge was inside aircraft and directed up toward No. 1 engine. PC decided to shut down aircraft where it was. During shutdown, No. 1 engine did not respond to power control lever movement. PC then shut off fuel to No. 1 engine, waited for it to quit, and completed aircraft shutdown. No injuries.

A series - On takeoff from confined area, aircraft rotor blades struck tree.

A series - Drive shaft was removed and hardware was placed inside drive shaft. Different mechanic installed drive shaft and did not know hardware was inside. Aircraft was run up, causing damage to inside of drive shaft.

UH-60 Class E

A series - During MOC, starter failed to disengage, causing shaft to shear and oil to blow out of starter. Oil ignited upon contact with engine. Crew extinguished fire with onboard equipment.

Attack

AH-64 Class C

A series - Pilot practiced out-of-ground-effect hovering turns and unmasking maneuvers for 20 minutes, then PC took controls and accelerated to 100 knots at 50 feet AGL heading east. PC then executed left climbing turn to about 200 feet AGL heading west, allowing airspeed to decrease to about 60 knots. PC continued left turn and pitched nose of aircraft down to gain airspeed. His intent was to make continuous descending left turn to east to terrain flight altitude. Midway through descending and accelerating left turn, pilot became concerned about high rate of descent and high closure rate and announced "watch out for the trees." PC applied power and pulled nose of aircraft up to stop rate of descent, but aircraft continued descent and struck several trees. Crew completed landing about one-half mile from point of tree strike.

AH-64 Class E

A series - For about 60 seconds during cruise flight, strong smell of melting plastic entered cockpit through environmental control unit. TADS electronic unit had failed 30 minutes earlier. Smell dissipated, and crew aborted mission. No caution or warning lights illuminated. Inspection revealed environmental control system was defective.

A series - During cruise flight at 500 feet AGL and 100 knots, No. 1 engine nose gearbox oil PSI segment light came on. Crew cross referenced fault detection location system to verify gearbox was losing oil. Crew brought engine to idle and flew about 14 kilometers before making precautionary landing.

A series - Aircraft was in cruise flight when CPG's TADS made uncommanded slew to -60 degrees in elevation. CPG unsuccessfully attempted to regain control of TADS. PC in backseat confirmed with CPG that no caution/warning lights had illuminated at any time. Crew returned aircraft to home base and completed shutdown without further incident.

Cargo

CH-47 Class C

D series - While four-wheel taxiing, right rear landing gear collapsed. Drag brace failed. Aircraft was recovered by maintenance.

CH-47 Class E

D series - On downwind leg of traffic pattern, crew heard noise, followed by severe aft transmission oil leak. Crew completed landing in field. Investigation revealed failure of aft transmission oil

cooler fan. Maintenance replaced assembly and quill shaft, cooler fan, and cooler assembly.

D series - During test fire of M-60D machine gun in flight, gun malfunctioned twice. Each time crew chief cleared weapon, removing a round each time. Following third malfunction, crew chief opened feed tray, did not see round, closed feed tray, and removed weapon to cargo area floor. During aircraft shutdown, crew chief tried to pick up weapon but bipod was caught on some equipment. Crew chief tugged on weapon and it discharged. Round penetrated floor and exited bottom of aircraft.

D series - Heater was on, and smoke started coming from heater compartment. Crew turned heater off, but it continued to glow red. Crew completed landing, shut down aircraft to allow smoke to dissipate, and flew aircraft back to base.

D series - Flight of five CH-47Ds were on approach to land at parking area. Landing area was not large enough to accommodate all aircraft at one time. Therefore, Chalk 1 extended approach to land on taxiway behind parked aircraft. After landing and taxiing to parking and shutting down aircraft, Chalk 3 informed Chalk 1 that CH-47 blade box sitting near taxiway had been blown around while Chalk 1 and 2 were on short final.

Observation

OH-6 Class E

A series - After conducting normal start, runup, and two successful deceleration checks, crew reduced throttle to idle stop and engine quit. Fuel was JP-8 and OAT was about 15°F. Crew completed remaining shutdown checks without incident. Maintenance replaced fuel nozzle and inspected main fuel filter and fuel control and inlet screen. Engine flamed out again during MOC. Maintenance then replaced fuel control and tightened air lines. Engine operates within limits.

J series - Aircraft had been performing numerous nonstandard manuevers as part of instructor pilot course. After last low-level autorotation, aircraft had come to complete stop. Upon attempting to hover, aircraft left rear strut broke. Apparent metal fatigue.

OH-58 Class B

D series - While hovering on ramp, aircraft nose pitched up and tail rotor struck ground. Aircraft started spinning, and pilot initiated hovering autorotation. Aircraft sustained damage to belly and tail rotor.

OH-58 Class C

D series - During daily inspection, maintenance personnel found damage (wrinkling) to all four main rotor blades. Aircraft had last been flown for p.m. contact training during which IP had been performing autorotations.

OH-58 Class D

D series - While performing zone reconnaissance at 50 feet AGL and near-zero ground speed, PC instructed pilot on controls in right seat to orient aircraft from south to west. While making right pedal turn, aircraft entered right crosswind condition. Pilot then pulled collective and added left pedal to prevent aircraft from descending into trees. Aircraft's multifunction display (MFD) showed "high torque time" caution message with simultaneous audio caution. PC read message to pilot. Pilot continued to increase collective. Aircraft MFD displayed warning audio. Pilot completed normal landing and shutdown. During shutdown, PC noted 118 percent mast torque and 131 percent engine torque.

Fixed wing

C-12 Class C

F series - While on descent during authorized service mission, aircraft was struck by lightning. Crew was unaware of strike until aircraft was inspected at home station. Inspection revealed arc tracings on both propellers, left outboard wing flap, right aileron, static discharge wick on right elevator, weather radar antenna, and radome.

C-12 Class E

D series - During rollout, aircraft developed severe vertical vibration that worsened as airspeed decreased. Crew stopped aircraft on runway. Postflight inspection revealed missing torque knee retaining bolt on right main landing gear.

OV-1 Class A

D series - Aircraft was returning to base after experiencing radio failure. During descent, aircraft suffered total electrical failure, followed by dual-engine failure. Both crewmembers successfully ejected, and aircraft crashed into field.

OV-1 Class B

D series - During MTF landing, engine thruster failed. Aircraft landing gear collapsed, damaging undercarriage and propellers.

OV-1 Class D

D series - During runup check, aircraft brakes released. Crew attempted to reset brake. Left pedal went full forward. Pilot noticed flame out left side of aircraft and alerted TO. Crew exited aircraft on right side. Crash rescue arrived and put out fire. Metal-to-metal contact from interior brake pucks caused brakes to overheat. Hydraulic fluid on brake assembly ignited, causing tire to burn.

OV-1 Class E

B series - During reverse thrust check, NR No. 2 propeller reversed properly but feathered upon returning power lever to forward thrust position. Crew repeated check with the same result. Crew returned aircraft to parking and shut it down without further incident. Investigation revealed malfunctioning solenoid.

D series - During start of second engine, crew chief saw smoke coming from engine and signaled for pilot to abort start. PC executed emergency shutdown. Inspection revealed propeller mag plug had been installed improperly, causing propeller fluid to be ingested into engine.

D series - After takeoff, pilot attempted to contact departure control on both UHF and VHF radios. PC was unable to contact any controlling agency on either radio, squawked lost commo code, performed entry into traffic pattern under lost commo procedures, and completed normal landing without further incident. Inspection revealed that when radios had been replaced the day prior, antenna leads had been connected improperly.

Flight related

UH-60 Class C

L series - As part of company NVG air assault, PC initiated slingload procedure for M1025 HMMWV. Aircraft landed next to load and picked up three passengers. Ground crew hooked load, and aircraft ascended to 40-foot hover for power check. Aircraft stabilized at 108 percent for about 15 seconds. PC pulled in torque of 116 percent, below maximum torque available, to sustain hover. This caused rotor RPM to decay, and low rotor audio sounded. PC descended aircraft to regain rotor RPM. At 30 feet, rotor RPM was still decreasing so PC instructed pilot to release load. Pilot verified PC's intentions and released load. Vehicle dropped about 15 feet. PC landed aircraft without further incident. Crew chief and door gunner inspected load and noticed damage to HMMWV.

CH-47 Class A

D series - During night tactical training multiship fast-rope exercise, flight crews

inserted assault troops into densely wooded area with heavy undergrowth rather than into designated helicopter landing area. As troops attempted to descend through trees, soldiers struck trees and sustained multiple injuries. One fatality.

CH-47 Class E

D series - While ground crew was attempting to hook up slingload, aircraft descended, pinning one soldier between belly of aircraft and slingload. Second soldier was injured while jumping clear of or falling from vehicle.

Messages

■ Aviation safety action informational message concerning procedural change for all Army aircraft to aircraft records processing when aircraft is transferred between activities (GEN-95-ASAM-02, 251505Z Jan 95). Summary: Due to a lack of adequate instructions and complicated requirements, records are being lost or destroyed when aircraft are transferred. This message clarifies and simplifies record processing for transferred aircraft and will remain in effect until the next revision of DA Pam 738-751: Functional Users Manual for the Army Maintenance Management System-Aviation (TAMMS-A), 15 June 1992, is published. The records for aircraft being transferred or reclassified will be processed per this ASAM. Contact: Mr. Jim Wilkins, DSN 693-2258 (314-263-2258).

■ Aviation safety action maintenance mandatory message concerning change in retirement life for servo beam rails, P/N 70209-22103-050/052/054/056 for all EH/UH/MH-60A/L aircraft (UH-60-95-ASAM-05, 231334Z Jan 95). Summary: The overhaul/retirement life table in TM 1-1520-237-23 presently lists the P/N 70209-22103-050/052/054/056 servo beam rails as retirement-life items. The purpose of this message is to change the overhaul/retirement life table and to implement a recurring inspection to be conducted during PMS 2. Contact: Mr. Lyell Myers, DSN 693-2438 (314-263-2438).

■ Aviation safety action maintenance mandatory message concerning one-time torque verification of the nuts securing the No. 1 and No. 2 power transfer unit (PTU) motor/pump, P/N 145HS140-8 on all CH-47D, MH-47D, and MH-47E aircraft (CH-47-95-ASAM-02, 18002Z Jan 95). Summary: An inspection at Boeing Helicopters revealed that the nuts securing the motor to the pump on the PTU, P/N 145HS140-8, were not properly torqued. Loose motor/pumps could possibly cause cracks in the unit and eventual component failure. The purpose of this message is to perform a one-time torque on the four nuts (figure 219, item 48 of TM 55-1520-240-23P for CH-47D and MH-47D aircraft and figure 7-20, item 48 of TM 1-1520-252-23P for MH-47E aircraft) on the PTU motor/pump to 85 inch-pounds and provide a torque value for the nuts. Contact: Mr. Jim Wilkins, DSN 693-2258 (314-263-2258).

■ Aviation safety action maintenance mandatory message concerning one-time inspection of OH-58D directional control tubes on all OH-58D aircraft (OH-58-95-ASAM-03, 251559Z Jan 95). Summary: Army personnel at Fort Bragg have found a directional control tube in the nose of the aircraft to be chafed where the tube passes through a web. Twelve aircraft were inspected. Four control tubes have chafing through the paint and into the tube. The purpose of this message is to require inspection of the directional control tubes—items 13 and 14, figure 183 of TM 55-1520-248-23P—located in the nose of the aircraft and maintain aircraft safety. Contact: Mr. Jim Wilkins, DSN 693-2258 (314-263-2258).

For more information on selected accident briefs, call DSN 558-2119 (334-255-2119).

Our job is to develop bold audacious leaders, competent enough to know the difference between risk and gamble...

—LTG Gerald T. Bartlett

In this issue:

- From out of the fire!
- Coming attraction! (video)
- Close calls and near-miss accident info needed
- Need good safety training material? Try a video!

60984 81800

Class A Accidents through January

		Class A Flight Accidents		Army Military Fatalities	
		94	95	94	95
1ST QTR	October	2	0	0	0
	November	3	0	0	0
	December	2	1	2	0
2D QTR	January	1	1	2	1
	February	2		0	
	March	0		0	
3D QTR	April	5		2	
	May	0		0	
	June	0		0	
4TH QTR	July	4		5	
	August	1		0	
	September	1		0	
	TOTAL	21	2	11	1

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