Flightfax

ARMY AVIATION
RISK-MANAGEMENT
INFORMATION

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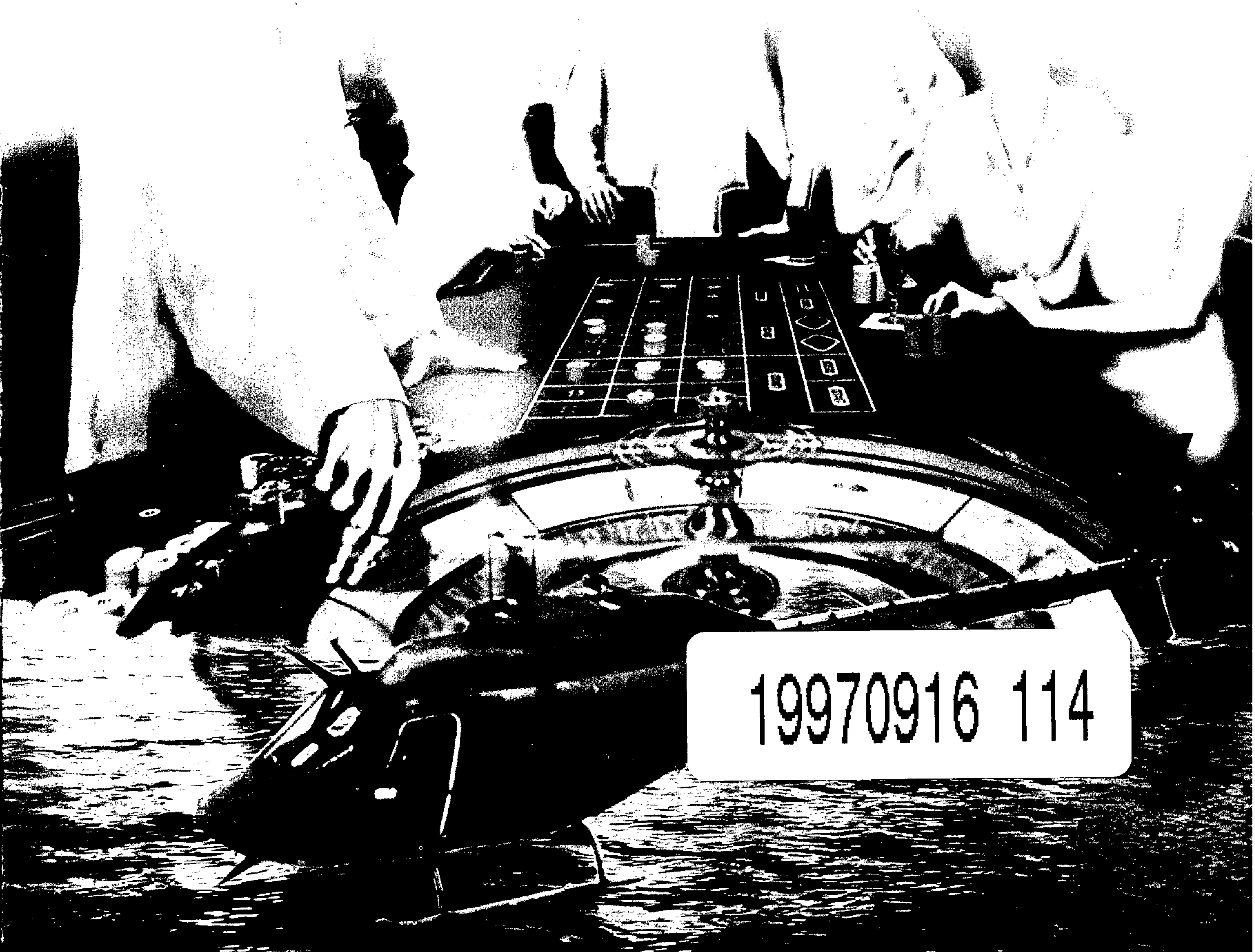
VIRTUALLY EVERYBODY IN THE UNIT KNEW HOW THE PC FLEW, BUT NOBODY STOPPED HIM. EVENTUALLY HE TOOK ONE CHANCE TOO MANY AND PAID FOR IT WITH HIS LIFE.



Everybody knew

As Army aviators, we've all heard it, and most of us have said it at one time or another: "I knew something like this was going to happen!" These words are almost always uttered after a breach of flight discipline results in an accident.

When an Army aviator routinely takes unnecessary risks, somebody in the unit knows about it. Sometimes a lot of people know about it. That was true in the following case, which happened several years ago. However, accidents from similar causes continue to this day.

The accident didn't just happen on the day the OH-58 crashed into a lake. It really began long before then. It had its roots in the kind of flying the PC had been doing for the past year—and maybe even longer. In the 12 months before the accident, four operational hazard reports (OHRs) had been filed against him in addition to at least two verbal reports about his flying.

So, a lot of people knew.

Other aviators knew

Several aviators had reported the PC for his "cowboy" style of flying. They called him a "hot dog," and some of them refused to fly with him. OHRs mentioned seeing him accelerate down a runway at 60 to 70 knots during takeoff from an airfield that was below VFR minimums. Two pilots reported him for placing his helicopter in an extremely nose-low attitude during takeoff. Another aviator—the pilot of the lead aircraft in a flight of five OH-58s—had to execute a go-around to avoid this PC's aircraft when it taxied onto the runway in front of him. The PC then brought his aircraft to a hover as the third aircraft in the flight terminated its approach, endangering the landing aircraft.

The crew chiefs knew

Some of the enlisted crewmembers in the unit enjoyed the "thrill" of flying with this PC. They liked his aggressive style of flying; they found other aviators boring by comparison.

The standardization officer, the safety officer, and the platoon leader knew

Not only were they aware of the OHRs and other reports about the PC's flying, they had heard rumors about still other incidents. They had discussed the problem among themselves, and after the second verbal OHR (the last of a total of six), they went to the acting unit commander and requested that the PC be grounded.

The unit commander knew

Although he knew about the OHRs, written and verbal, and rumors about the PC's flying habits, the commander apparently looked at each of the reports as a separate incident and never considered them as an indication of a pattern. When his staff recommended that the PC be grounded, the commander decided that verbal counseling was the better route to take, although he had grounded aviators in the past for one reason or another. He had flown with the PC several times, and each time it was a "by-the-book" flight.

The accident

The mission was cross-country training. The aircraft took off around 0900, and the flight proceeded normally. After two stops for fuel and to eat lunch, the crew removed the doors from the OH-58 and again took off. The PC was at the controls from the left seat. As the aircraft neared a large lake, he brought the helicopter to within 5 feet of the water and began flying along the long axis of the lake at 90 to 100 knots. After about 3 minutes, the aircraft hit the water with explosive force and immediately sank.

VIDEO AVAILABLE

The accident described in this article was recreated in a Crashfax Video ("High-Risk Aviator," CFV 46-2, PIN 707997), which is still available through Training Aids Service Center film libraries at installations Armywide. The video opens the door to self-examination, not only by individual aviators but by the unit as a whole. It prompts commanders, ASOs, and aviators alike to ask, "Could that happen in my unit? Do those conditions exist here? Could that be me?"

History of flight

The copilot had been at the controls during the early stages of the mission, handling not only the flying but also the navigation and the radios. When he began falling behind the aircraft, the PC took over the controls and the radio, leaving the copilot to handle navigation.

When they took off after lunch, the PC was still at the controls and the copilot was navigating. The PC initially descended to about 30 feet agl, although that was below the 400-foot restriction for the OH-58. The PC continued to allow the aircraft to descend as it approached the lake. He told the copilot to navigate a direct route back to the airfield and to handle the radio calls. The copilot was looking at his map when the aircraft hit the water.

The copilot managed to surface and grab hold of a piece of floating debris. Two boats reached the crash site, and the crew of one pulled the copilot from the water while the other began searching for the PC. It was several days later before Navy divers recovered the PC's body from the bottom of the lake. He was still strapped in his seat.

Why?

Why did this PC continue to fly the way he did even after he had been reported and counseled? Why did his friends delay in reporting his unsafe behavior? Why didn't the crew chiefs realize that a "thrill" could cost them their lives? Why didn't the unit commander see the reports on this aviator for what they were: not isolated incidents but signs pointing almost inevitably to an accident?

Why didn't somebody stop this aviator before he killed himself? After the accident, he was described as "high risk." But he was also described as intelligent, bright, and an aviator who loved to fly. While his fellow aviators recognized his technical proficiency in the cockpit, everybody knew he was headed for trouble.

Acting on that knowledge might have saved his life.

SPEAK UP

You may know about aircrews or aircrewmembers who may not have four to six OHRs filed on them but are beginning to become overconfident. Sometimes it's enough to just say something like, "Is that type of flying really necessary?" or, more pointedly, "I think you're getting too aggressive. No joke."

As Barney Fife always said, "Nip it in the bud!"

TOUGH CARING

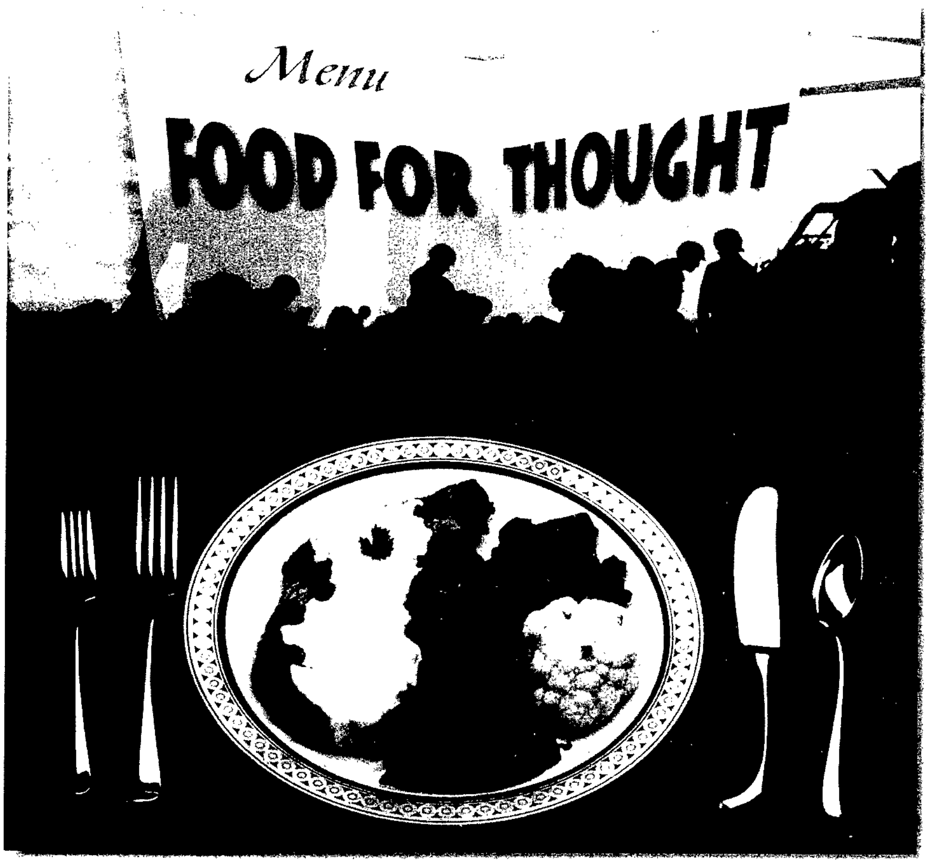
This accident graphically illustrates what can happen when there is a lack of "tough caring." Tough caring is people caring enough about their own professional performance and the performance of other members of their unit to police themselves and their fellow soldiers. Tough caring is also leaders caring enough to fix accountability, tighten supervision, set standards for performance and parameters for operations, and require that all operations be conducted within those parameters.

All in the family

We members of the Army aviation family fly aircraft, maintain aircraft, rearm and refuel aircraft, and drive Army vehicles. And most of us do it safely most of the time. But sometimes—for some reason—some among us will abandon professionalism and take unnecessary risks. They'll push themselves or their equipment beyond safe limits, and they'll have an accident. And one or more members of our Army family will die.

In FY 96, accidents took the lives of 16 Army aviation family members. Through July of this fiscal year, we've lost 15 more. In some of these accidents, there was a pattern of unsafe behavior or unprofessional attitudes, but nobody said or did anything to correct it. And somebody died.

Awareness of unsafe behavior or unprofessional attitudes is important. But awareness alone is not enough. We must care enough to ***take action*** to prevent that unsafe behavior or unprofessional attitude from causing an accident. The longer it goes uncorrected, the more likely it is to continue. Undisciplined behavior rarely corrects itself. It continues until someone is killed or someone cares enough to take corrective action.



When there's an undisciplined member in our unit family, it's never a secret. We know. We talk. The question is, do we care? Do we care enough to do the tough thing—the caring, professional thing—and report our brother or sister? That's tough to do, but it's not as tough as wondering after an accident whether something we could have done might have saved someone's life.

Are we our brothers' keeper? In Army aviation, we have to be. To just stand by and watch one of our own endanger himself and others is a violation of the special trust and responsibility we have as members of the Army aviation family. We must care. We must act.

It's a family matter.

The consequences of silence

How seriously do we take our professional and personal responsibility for the safe-keeping of our fellow aviators? When we see substandard performance or a reckless attitude, do we look the other way and hope nothing bad happens? Do we avoid personal conflict by convincing ourselves that a fellow aviator's lack of professionalism is none of our business?

On the other hand, how receptive are we ourselves? How would we react to a fellow aviator calling our hand about a breach of flight discipline or an occasional failure to perform to standard? Would we take offense, or would we take it to heart as a sign of caring?

We hesitate to confront each other for many reasons. The main one is that confrontation is hard. But even harder would be living with the consequences of our silence when the worst happens.

Think about it.

Aircraft recording devices

What to do if the worst happens

Many Army aircraft today contain flight data recorders (FDRs), cockpit voice recorders (CVRs), voice and data recorders (VADRs), or other recording devices. These devices provide important data to the accident-investigation process and, even more important, to the accident-prevention process. Most ASOs know that, in the event of an accident, they should secure any recording device and report its presence to the Army Safety Center during the initial mishap-notification process.

However, these days, aircraft recording devices are incorporated into a wide variety of aircraft systems beyond the easily recognizable and labeled FDR and CVR "black boxes," which, by the way, are often painted bright orange. Recording devices today are built into mission processors, backup controllers, fire-control computers, data-transfer systems, and other aircraft system "black boxes" that really are painted black. This can result in their being overlooked during the confusing and stressful first hours after an aircraft accident. In addition, many of these recording devices have volatile memory, which means that, if the device loses electrical power, the data will be lost. Therefore, time is of the essence when dealing with these systems before their internal power reserves (i.e., batteries) bleed down.

The best you as a unit ASO can do is become familiar with the different types of recording devices installed in your unit's aircraft and how to deal with them before an accident occurs.

FDRs, CVRs, and VADRs

For aircraft equipped with a crash-survivable recording device (FDR, CVR, or VADR), all you need do is to notify the Army Safety Center during the initial notification message. Do not attempt to remove these devices from the aircraft; simply secure the wreckage from further damage.

Volatile-memory devices

For aircraft containing mission processors, ANVIS/HUD processors, engine monitoring systems, or other noncrashworthy volatile-memory devices, notify the USASC as soon as possible, providing as much information about the device as possible. However, never delay initial accident notification in order to gather information on recording devices. That information can be provided in a later message or fax. And remember, if the recording device has volatile memory, it becomes a race against time to return the device to its manufacturer for downloading before its internal power sources degrade.

Data-transfer systems

The OH-58D(I) uses a data-transfer cartridge (DTC) to load data into the mission processor. The DTC also acts as a noncrashworthy FDR that records up to 79 flight, engine, and system parameters. The Army Safety Center has the capability to download, process, and display this information and will do so not only for Centralized Accident Investigations but also for unit-level investigations.

If your unit has an accident that the Army Safety Center will investigate, do not remove the DTC. Simply secure the wreckage. If the investigation will be done at unit level and you want the Army Safety Center to handle the DTC data processing for you, carefully remove the DTC from the aircraft, package it securely, and contact the Army Safety Center for further instructions.

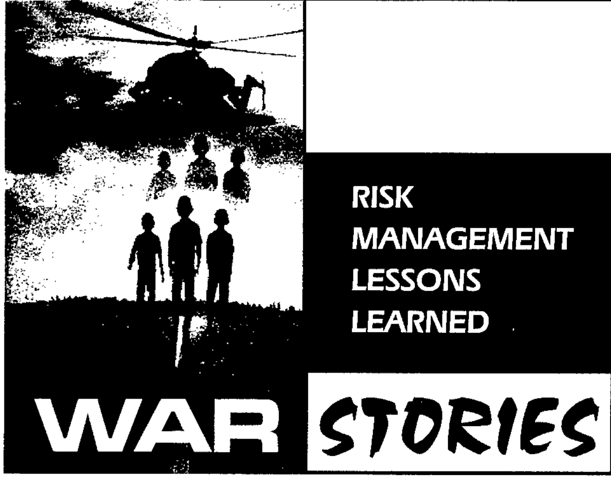
Video/audio tapes

Onboard video or audio recording devices can also be a valuable source of information. If an aircraft with such a device is involved in a mishap, protect the tape from further damage; do not remove the tape device cartridge from the wreckage. Simply secure the wreckage, and notify the Army Safety Center that a recording device was installed.

Other recording devices

If your unit's aircraft have test instrumentation, nonstandard recording equipment, or other recording devices that may have been installed to support a special program, you should follow the same general processes described above. If the recording device will be exposed to further damage if left in the wreckage, then take the appropriate steps to protect it. Do not remove the device. Simply secure the wreckage and notify the Army Safety Center that a recording device was installed in the aircraft. Again, do not delay the initial notification in order to gather information on recording devices. That information can be provided in a later message or fax.

POC: Mr. Gary Rasponi; Chief, Investigations Branch, USASC; DSN 558-2194 (334-255-2194); rasponig@safety-emh1.Army.mil



There I was . . .

. . . in the front seat of a Cobra with a No. 1 hydraulic system failure, halfway down a 4800-foot runway, doing 50 knots about 3 inches above the pavement. Just the normal emergency procedure for this particular situation, with one pesky little difference: We were flying sideways.

Gee, glad you asked.

Gary and I were going out to fly some SIP vs. IFE training (for me) and a few PARs (for him). We'd flown together for about 20 years and our crew briefing usually consisted of, "We're going out for a stan (or instrument) ride. You know the maneuvers we'll be doing. Got any questions? Okay, let's go do it!" Today, though, the briefing was a little different because Gary was now the honor graduate of our flight facility's second Aircrew Coordination Course. (Modesty *almost* prevents me from revealing that I was his trainer.)

After a by-the-book crew briefing, he added, "Let's prebrief two specific emergencies—first, an engine failure at altitude; second, a dual-system hydraulic failure." After he detailed each pilot's responsibilities for each emergency (again, by the book), he said, "If we do get a failure, I'll fly because I've got that good ol' three-to-one mechanical advantage in the back seat."

"Sounds good," I said, "and if you don't ask me for the emergency collective hydraulic pump when we're a mile out on final, I'll announce and then turn it on."

"Okay, let's go do it!"

We were 5 minutes into our flight when a noise like a blender full of gravel caused both of us to shrink down into our armored seats. I've long-since forgotten the rpm of a cavitating hydraulic pump, but it's a figure only Carl Sagan would comprehend. Two seconds later, the amok blender was joined by its friends, Messrs. Master Caution and #1 HYD PRESS lights. (For those of you unfamiliar with the idiosyncrasies of the AH-1F, a No. 1 system hydraulic failure means your antitorque controls are now about as movable as the division commander's desk.)

As briefed, Gary continued to fly while I read off the checklist. As briefed, he turned toward a suitable area for a "run-on landing at a speed of 50 KIAS or higher"—which just happened to be home station. As briefed, I called the tower, declared an emergency, and told the controller we'd be coming in for a run-on to the duty runway.

Suddenly, the grinding noise stopped, and Gary said he had normal pedal control back. While we mulled over this new development, the pump began to cavitate intermittently for several seconds. Aha! We were losing fluid, but we hadn't lost it all; the pump was operating intermittently (bear that in mind for later). The pump now resumed its annoying cavitation, and (again, as briefed) I provided some additional pressure to the appropriate pedal whenever Gary called for an assist in maintaining heading. We then performed our by-the-book before-landing check—as briefed.

Cut to final approach (and yes, I had announced, "We're at one mile. Emergency collective hydraulic pump coming on," and Gary had acknowledged—as briefed). "We've got a slight crosswind; help me out with a little left pedal to straighten out the nose."

"Okay, left pedal coming in; nose is straight down the centerline. Approach angle's good, airspeed's at sixty, and before-landing check still valid." We touched down at 60 knots in an impressive display of sparks, smoke, and textbook aircrew coordination. As we slid through 50 knots, we came to the intersecting runway, which has a slight crown, and became airborne—just as the hydraulic pump stopped cavitating.

Go back and reread the first paragraph. It's okay; I'll wait.

When the pump grabbed the last few ounces of fluid, several things happened simultaneously: the nose snapped left 90 degrees, we rolled right about 10 degrees, Gary uttered a scatological expletive, our airspeed decreased rapidly (due to the "barn door" effect), we began sinking back to the runway, and the pump resumed its manic cavitation.

We hadn't briefed this!

Since my aviation career objective (living through the next 5 seconds!) now appeared to be in serious jeopardy, I, too, did something we hadn't briefed. I planted both size thirteens on the right pedal and shoved—just as Gary hollered, "Right pedal!"

The nose s-l-o-w-l-y reoriented right, the right skid heel grabbed the runway (followed rapidly by the rest of the right skid), and we wobbled down the runway for several interesting seconds until the left skid decided to get with the program too. We ground to a halt next to the crash-rescue folks, who gave us a standing ovation for not plowing into them.

We performed a normal shutdown, but it took me three eternities to get two feet unstuck from an area that Bell had designed to accommodate only one.

All right, so we started out with the deck stacked in our favor: SIP/ASO in the back seat, IP/IFE in the front, with a combined flying-hour total sufficient for a trip to the moon and back at 90 knots—twice. The point is, we'd stacked the deck even more in our favor with our brief, and we trusted each other to comply with the brief and to react properly (and rapidly!) if something really ugly jumped out at us.

I've even taken to briefing specific duties for both single- and dual-system hydraulic failures.

—CW4 William S. Tuttle, New Jersey ARNG, DSN 445-9261 (609-530-4251)

New firefighting system authorized

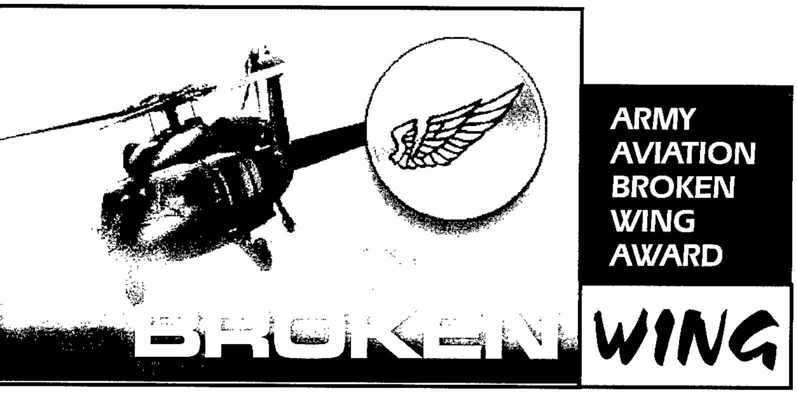
Heat from fuel fires can become so intense that flight-line personnel cannot get close enough for the extinguishing agent to reach the fire. The Army recently authorized the use of compressed air foam system (CAFS) fire extinguishers as an alternative to the dry-powder flight-line fire extinguishers specified in AR 420-90: *Fire Protection* (25 Sep 92).

A small, mobile CAFS (NSN 4210-01-429-3863) is now approved as a substitute for the wheeled dry-powder extinguisher. The CAFS has a discharge range of 80 to 100 feet, which allows effective firefighting from a safe distance. In some models, the range can be extended by adding up to 300 feet of hose.

The CAFS provides a vapor-sealing blanket of foam designed to eliminate ignition or re-ignition of any flammable source. Some models have an environmentally friendly foam, which makes them ideal replacements for Halon 1211 fire extinguishers whose use destroys the ozone layer. Another feature of the new CAFS is that hands-on training can be conducted economically using ordinary dish-washing liquid. DA requires specialized CAFS training before using these extinguishers. Training requirements are outlined in OACSIM message 131237Z June 1997.

For regulatory guidance on use of the CAFS, contact Mr. Bruce Park, Director of Fire and Emergency Services, OACSIM, HQDA, at DSN 328-6174 (703-428-6174), parkbr@pentagon-acsim3.army.mil. For information on product selection, contact your installation fire chief.

POC: Mr. John Langhammer, USASC, DSN 558-2644 (334-255-2644), langhamh@safety-emh1.Army.mil



The Army Aviation Broken Wing Award recognizes aircrewmembers who demonstrate a high degree of professional skill while recovering an aircraft from an inflight failure or malfunction requiring an emergency landing. Requirements for the award are in AR 672-74: Army Accident Prevention Awards.

■ *CW2 Frank Almeraz, Jr.*

1-212th Aviation Regiment
Fort Rucker, AL

The student pilot was on the controls, flying at 100 feet agl and 80 knots over wooded terrain, when he and CW2 Almeraz, the IP, simultaneously saw a large buzzard-type bird fly up toward their OH-58C. CW2 Almeraz took the controls and began a left banking maneuver to avoid the bird. His effort, however, was unsuccessful, and the bird hit the red "push-pull" tube of the main rotor, causing it to deflect and become shortened by about 2 inches. The aircraft began to shudder and vibrate so violently that both pilots were tossed around in the cockpit. It was nearly impossible for CW2 Almeraz to keep his feet on the antitorque pedals, and his right lower leg sustained a 4-inch-long cut when it hit the center console. He attempted to continue the left turn to land to the only open field in the vicinity while instructing his student to contact flight following. The aircraft initially would not respond, and it continued on a course toward one of two large lakes in the area. Then, as the vibrations continued, the aircraft began a slow left turn and CW2 Almeraz was able to estimate the control input necessary to land to the grassy hillside. He grew concerned about dynamic rollover as he neared the field and realized the angle of slope. With no option available, he elected to terminate the approach with forward airspeed and touched down with about 5 feet of ground run. The aircraft sustained no further damage.

■ *CW4 Marian Francis Clemens*

West Virginia Army National Guard,
Parkersburg, WV

During climbout, the UH-1V yawed hard to the right. CW4 Clemens, the IE, was on the controls and initiated emergency procedures for engine overspeed while the PI made a Mayday call. The nearest available landing area would require a 180-degree turn to the left. Closer inspection revealed that a large set of power lines was located on the approach path, so the IE turned the aircraft sooner and about 60 degrees more to the left to avoid the wires. At about 500 feet agl, as CW4 Clemens maneuvered the aircraft for landing, the engine failed. He entered full autorotation and landed the aircraft, without damage, to a damp sod field that sloped uphill.

■ *1LT Michael P. Corcoran*

A Company, 1-228th Aviation Regiment
Fort Kobbe, Panama

During cruise flight at 2000 feet agl over double-canopy jungle in mountainous terrain, the UH-60's low rotor rpm warning light and audio came on. The crew confirmed that rotor rpm was decreasing below normal levels and realized they could not reach their intended destination 3 miles away. The only suitable landing area was a small swampy field to the left of the aircraft. 1LT Corcoran immediately entered a left turn with an autorotational descent to the field. During the autorotation, the main generators dropped off line due to insufficient rotor rpm, which caused loss of all cockpit indications. 1LT Corcoran maintained aircraft control throughout the autorotation and touched down in the small field with only minor damage to the aircraft.

The Black Hawk had experienced sudden and unrecoverable loss of rotor rpm, which is known as "dual-engine rollback." 1LT Corcoran had less than 1 minute from onset of the emergency to diagnose the problem and land the aircraft. Any delay would have forced the autorotation into the jungle, increasing the probability of severe damage and injury.

■ *CW4 Charles H. Emmons*

Delaware Army National Guard
New Castle, DE

At 1500 feet and 90 knots over the mid-point of a large river, the UH-1H experienced a drop in engine and rotor rpm, accompanied by a left yaw. The only available landing area was a chemical plant that included numerous industrial structures. The area was also immediately adjacent to a large twin-span suspension bridge structure.

CW4 Emmons, the PC, took the controls, established a maximum-glide-distance autorotative descent, and turned toward the emergency landing area. Emergency procedures failed to restore engine power. On final approach, he had to maneuver the aircraft to avoid pipelines, power lines, and small trees that had not been visible when the area was initially selected. He landed the aircraft without damage on a small, unimproved road across uneven terrain.

Cause of the engine failure was determined to be failure of the N1 gearbox accessory drive turbine.

■ *CW2 John S. Tomkowski, III*

Company A, 1-212th Aviation Regiment, Fort Rucker, AL

CW3 Tomkowski and his two students were conducting NVG terrain flight navigation training in a UH-1H. While in level flight over trees at 50 feet AHO and 50 KIAS, the aircraft suddenly and rapidly yawed 20 to 30 degrees to the left. The yaw was accompanied by activation of the rpm warning light and audio. Engine rpm decayed to approximately 5800, and the engine could be heard winding down. Telling the student in the right seat to place the governor switch in the emergency position, CW3 Tomkowski was able to gain control of the engine rpm and continue powered flight while manually controlling the engine rpm with the throttle. He flew the aircraft about 800 meters under partial power conditions to the nearest open landing area. As he began a power-on approach, coordinating collective and throttle to maintain rotor rpm, he noticed that lowering the collective resulted in no significant increase in rpm. At about 10 feet above the ground with throttle full open, rotor and engine rpm began to bleed off when collective was increased to slow the rate of descent. At this point, CW2 Tomkowski completed the approach with an autorotational landing. The aircraft landed safely with approximately 20 feet of ground run and with no damage or injuries.

CW2 Tomkowski made two quick and critical decisions. The first was immediately getting the governor switch to emergency. At the altitude and airspeed when the emergency occurred, any delay would have resulted in the aircraft settling into the trees. The second critical point was recognizing that insufficient power was available to continue the approach with power. He was able to conserve enough rotor rpm to safely land the aircraft with no damage.

■ *CW3 Charles A. Robbins*

National Training Center Aviation Company (AA) Fort Irwin, CA

CW3 Robbins was the PC of a UH-1H flying at low level over extremely uneven desert terrain. The aircraft was at 100 feet agl and 90 knots when the crew felt a momentary yaw just as the rpm warning light came on. Immediately thereafter, the engine lost all power and the master caution and engine chip detector lights came on. CW3 Robbins identified the emergency and executed a successful low-level autorotation.

In the 6 seconds between the engine failing and the aircraft touching down, CW3 Robbins was able to maneuver the aircraft to avoid striking wires to the left of the aircraft while touching down with minimum ground run—about the length of the helicopter. The terrain in the ground path consisted of loose sand and dirt and was very uneven. During the slide to a stop, the front of the skids caught in a sand berm, causing the aircraft to rock forward. As the aircraft rocked back on the heels of the skids, the main rotor blade severed the tail boom forward of the 42-degree gearbox. Although this resulted in Class C damage, it prevented possible loss of life and destruction of the aircraft that could have resulted from the aircraft's rolling over.

The cause of the engine failure was later determined to be failure of the N2 spur gear.

■ *CW4 Ammon Webster, pilot in command*
■ *SSG Paul Chambers, crew chief*

West Virginia Army National Guard, Parkersburg, WV

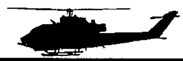
On climbout during paradrop operations, the master caution and engine chip detector lights came on, followed by a severe yaw to the right and an increase in engine and rotor rpm. The aircraft was at 300 feet agl over a populated area. To cope with the emergency, CW4 Webster increased collective and reduced throttle to control rpm as he made a Mayday call. He then banked hard left to align the aircraft with the only available landing area: a football field with houses on two sides, a service station on the third, and a river on the other.

During the emergency, the jumpers were attempting to exit the aircraft. SSG Chambers repeatedly told them to assume the crash position and physically restrained them from jumping from the aircraft as CW4 Webster landed the UH-1H without damage or injury.

Accident briefs

Information based on *preliminary* reports of aircraft accidents

AH1



Class D

E series

■ After normal autorotation landing, rear crosstube broke on right side where it enters fuselage. Front crosstube bent when aircraft settled, and aircraft settled onto UHF antenna and tail stinger. Minor sheet metal damage resulted around right rear crosstube and UHF antenna.

AH64

Class A

A series

■ No. 1 engine flamed out during hover at 220 feet over riverbed. Aircraft descended and crashed in riverbed. Aircraft sustained significant structural and fuselage damage, and main rotor blades were destroyed. Neither crewmember was injured.

Class E

A series

■ Shaft-driven compressor failed during cruise flight. Aircraft was landed and shutdown without incident. Maintenance replaced shaft-driven compressor.

CH47

Class B

D series

■ As aircraft flew over heavily wooded area during slingload training, cracking sounds were heard and slingload (M119 howitzer) was lost. Postflight inspection revealed that hook was still closed. Suspect apex failure.

Class C

D series

■ Crew was conducting NVG blowing-snow landings. Rotor blades struck small trees during first landing, but crew was unaware of the strikes. During second landing, rotor blades again struck small trees. When PC applied power to reposition aircraft, crew felt moderate vibrations. Postflight inspection revealed rotor-blade damage.

Class E

D series

■ Aircraft with external load was approaching LZ during NVG RL progression training for enlisted flight crewmember. As crewmember reached for winch/hoist control grip, he inadvertently jettisoned load. Aircraft landed without further incident.

■ No. 1 engine caught fire during cruise flight. Crew shut down engine and discharged No. 1 engine fire bottle, which extinguished fire. Aircraft landed without further incident. Maintenance investigation continues.

■ During up-slope landing on sandy soil, forward landing gear settled into sand during thrust reduction. VOR and FM homing antennas were broken off.

■ After hooking up water buffalo slingload, front sling leg caught on fenders. FE was trying to free legs with shepherd's hook and by having aircraft move forward. Back sling leg became tight and lifted back of buffalo, causing the water to shift and flip buffalo onto end. Tongue raised up and scraped along belly of aircraft, eventually hitting lower rescue hatch door, causing two rivets to pop loose on door.

■ Just prior to takeoff, aircraft started to vibrate. Extreme vibrations were felt throughout the aircraft but mainly in forward transmission area. Crew performed emergency shutdown of both engines. Maintenance replaced forward transmission.

OH6

Class E

J series

■ Engine failed in cruise flight, and crew completed autorotation to open field without damage. Cause of engine failure not reported.

OH58

Class A

A series

■ Low-rpm audio and warning light came on in cruise flight at 500 feet agl and 90 knots. Pilot entered autorotation with turn to align aircraft into the wind. During descent, aircraft hit 5-foot fence post and crashed, severely injuring the pilot and killing the PC and passenger. Aircraft was consumed by postcrash fire.

Class C

D series

■ Following normal startup during overspeed check, engine flamed out. During restart attempt after 5-minute wait, tgt rose rapidly when throttle was opened. PC closed throttle and aborted start. Engine temperature monitor peaked at 1085° for 2 seconds. Cause under investigation.

Class D

D(I) series

■ Main rotor struck tree, cutting branches and throwing them into tail rotor during OGE hover. Main rotor had only minor repairable damage, but one tail rotor blade had a hole in its leading edge that could not be repaired.

Class E

A series

■ Pilot detected faint odor of fuel during flight. Aircraft landed without incident. Maintenance inspection found fuel fitting seeping.

C series

■ High frequency vibration was felt in pedals, cyclic, and floor during NOE flight. Generator was replaced.

■ Transmission oil hot light came on during flight. Transmission thermo switch was replaced.

■ Engine failed during hovering autorotation. Maintenance determined that excessive play in pilot's forward tongue-and-groove throttle connection (idle detent stop) caused throttle to position fuel control past idle position. Throttle connection was replaced.

D(I) series

■ Crew heard change in rotor noise during low-level formation flight. After landing, inspection revealed section of sheet metal had debonded from underside of main-rotor blade, 1 foot from tip. Blade was replaced.

■ Low-hydraulic-pressure caution message came on during hover taxi, and PC felt feedback in flight controls. Post-landing inspection revealed hydraulic fluid covering left side of aircraft. Hydraulic pressure line had chaffed against return line and ruptured. Both lines were replaced.

UH1

Class B

H series

■ Aircraft was in cruise flight at 2000 feet agl and 100 knots KIAS when crew heard loud bang. PC reduced power and executed a 180-degree turn to a hayfield. During approach, another loud bang was heard, followed by engine failure. PC executed autorotation to hayfield, where aircraft touched down on hilly terrain. Tail stinger hit ground, and aircraft rocked forward and became airborne again, touching down and coming to rest 8 feet forward of initial touchdown point. WSPS separated, main-rotor blades severed tail-rotor drive shaft, skids collapsed, and aircraft frame twisted. None of the nine personnel on board was injured.

Class C

H series

■ Maintenance contractor was relocating aircraft to another airfield. Aircraft tiedown chain had not been removed from skid, and during takeoff to hover, aircraft plummeted to ground. Main rotor blade contacted WSPS, resulting in 10-inch hole in one main rotor blade.

Class E

H series

■ During cruise flight, crew noticed fuel gauge continued to read 850 pounds. After precautionary landing and normal shutdown, aircraft was refueled. Fuel-quantity calculations confirmed failure of fuel gauge. Gauge was replaced and aircraft returned to flight.

■ Aircraft was in cruise flight when bird struck right windshield. Aircraft landed and shut down at field site without further incident. Windshield was replaced.

Class F

H series

■ While climbing through 9000 feet, aircraft experienced compressor stall as evidenced by loud engine reports, vibrations, and fluctuation in N1 and N2 egt. Immediate action steps were initiated, and aircraft was landed and shut down with no further incident. Caused by engine FOD.

UH60

Class A

L series

■ Aircraft was seen flying low and fast into a hard, right, banking turn prior to striking trees. Postcrash fire ensued. Eight fatalities.

Class E

A series

■ Aircraft settled during hot refueling. Settling allowed No. 1 tank to contact hose carrier, resulting in 1-inch puncture at midway point on underside of tank. Puncture did not penetrate ESSS tank.

■ No. 1 engine chip light came on during maintenance test flight. Crew returned to field and landed without incident. Maintenance found excessive chips on detector. Engine will be replaced.

■ During hover with cargo net, No. 1 engine torque went down to 60 percent, and No. 2 engine torque went to 101 percent. Crew diagnosed torque split and landed without incident. Inspection of No. 2 engine revealed that cannon plug on ECU was not completely seated.

■ During hover, aircraft shuddered and whining noise was heard from No. 1 engine. Tgt was 850° to 860°C with No. 2 engine Nr and Np rising into yellow range, IP took controls and landed aircraft without incident. Caused by alternator failure.

V series

■ Master caution and engine chip lights came on just after takeoff. Maintenance found significant amount of brass filings and other particles. Engine was replaced.

■ Crew chief noticed fuel dripping onto tail rotor drive shaft cover during startup. Aircraft was shut down. Start fuel manifold was found to have a break, and it was replaced.

C12

Class E

D series

■ During cruise flight, right fuel gauge indicated 300 pounds less than actual (full) amount in right main tank. Mission was aborted, and aircraft returned to home base. Suspect faulty probe.

■ Aircraft started to vibrate and shudder after takeoff, and aircraft landed without incident. Maintenance found that internal wheel balance weight of nose tire had separated, causing vibration. Nose tire was replaced.

G series

■ Cabin filled with smoke during taxi, and crew performed emergency shutdown. Inspection revealed flap motor burned out in the up position. Maintenance replaced motor, relay, and transistors.

C23

Class E

A series

■ During descent on instrument approach, left generator caution light came on. Aircraft landed without further incident. Maintenance replaced left starter generator.

B series

■ During cruise flight, aircraft yawed, No. 1 prop slowed to 770 rpm, and torque increased to 4700 pounds. Engine was shut down and aircraft landed without further incident. Prop governor was replaced.

O5

Class E

DHC-7

■ When landing gear was raised after takeoff, right main gear indicator light stayed green. Gear was lowered, visual inspection confirmed that gear was normal, and uneventful landing was made. Troubleshooting revealed faulty main landing gear proximity switch.

For more information on selected accident briefs, call DSN 558-2785 (334-255-2785).

Aviation messages

Recap of selected aviation safety messages

Aviation safety-action messages

UH-60-97-ASAM-14, 041645Z Aug 97, maintenance mandatory.
Bell-crank supports (P/N 70400-08158-101) manufactured by American General (cage code 1W160) have not been tested and, therefore, must be removed from service. Engineering estimates are that 100 hours of additional service is acceptable without incurring a significant risk due to this component. The purpose of this message is to require removal of subject part manufactured under contract DAAJO9-84-C-A333.

ATCOM contact: Mr. Dave Scott, DSN 788-8620 (205-842-8620), scott-dc@redstone.army.mil

UH-60-97-ASAM-15, 041707Z Aug 97, maintenance mandatory.
The lower pitch change link bearing, rod end (P/N 70101-08202-101), manufactured by Island Engineering (cage code 40137) has recently completed engineering testing. Results indicate that its fatigue strength is significantly below that of the original-equipment component and, therefore, must be removed from the aircraft. Engineering estimates are that 100 hours of additional service is acceptable without incurring a significant risk due to this component. The purpose of this message is to require removal of subject part.

ATCOM contact: Mr. Dave Scott, DSN 788-8620 (205-842-8620), scott-dc@redstone.army.mil

UH-60-97-ASAM-16, 041636Z Aug 97, maintenance mandatory.
The swashplate linkage, clevis connector (P/N 70400-08151-050) manufactured by Airborne Apparel (cage code 2A622) has not been tested and must be removed from service. Engineering estimates are that 100 hours of additional service is acceptable without incurring a significant risk due to this component. The purpose of this message is to require removal of subject part.

ATCOM contact: Mr. Dave Scott, DSN 788-8620 (205-842-8620), scott-dc@redstone.army.mil

NSC web page: http://www.nsc.org

Need new, interesting, thought-provoking, attention-getting topics for your safety meetings? If so, check out the National Safety Council's web page. They have all sorts of interesting things we can use. Note that I'm not getting paid by the NSC for this announcement! I just wanted to share another tool we can use in our risk-management toolbox.

—CW5 Scott Johnson, Aviation Branch Safety Office, Fort Rucker, AL, DSN 558-3000 (334-255-3000)

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Class A Accidents *through July*

Qtr	Month	Class A Flight Accidents 96	Class A Flight Accidents 97	Army Military Fatalities 96	Army Military Fatalities 97
1ST QTR	October	1	0	0	0
	November	0	0	0	0
	December	0	1	0	0
2D QTR	January	1	2	0	2*
	February	0	0	0	0
	March	2	2	7	1
3D QTR	April	1	2	3	2
	May	0	1	0	1
	June	1	3	6	1**
4TH QTR	July	0	1	0	8
	August	1		0	
	September	1		0	
	TOTAL	8	12	16	15

*Excludes 1 USAF pilot trainee fatality
**Excludes 1 Air National Guard passenger

U.S. ARMY SAFETY CENTER

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