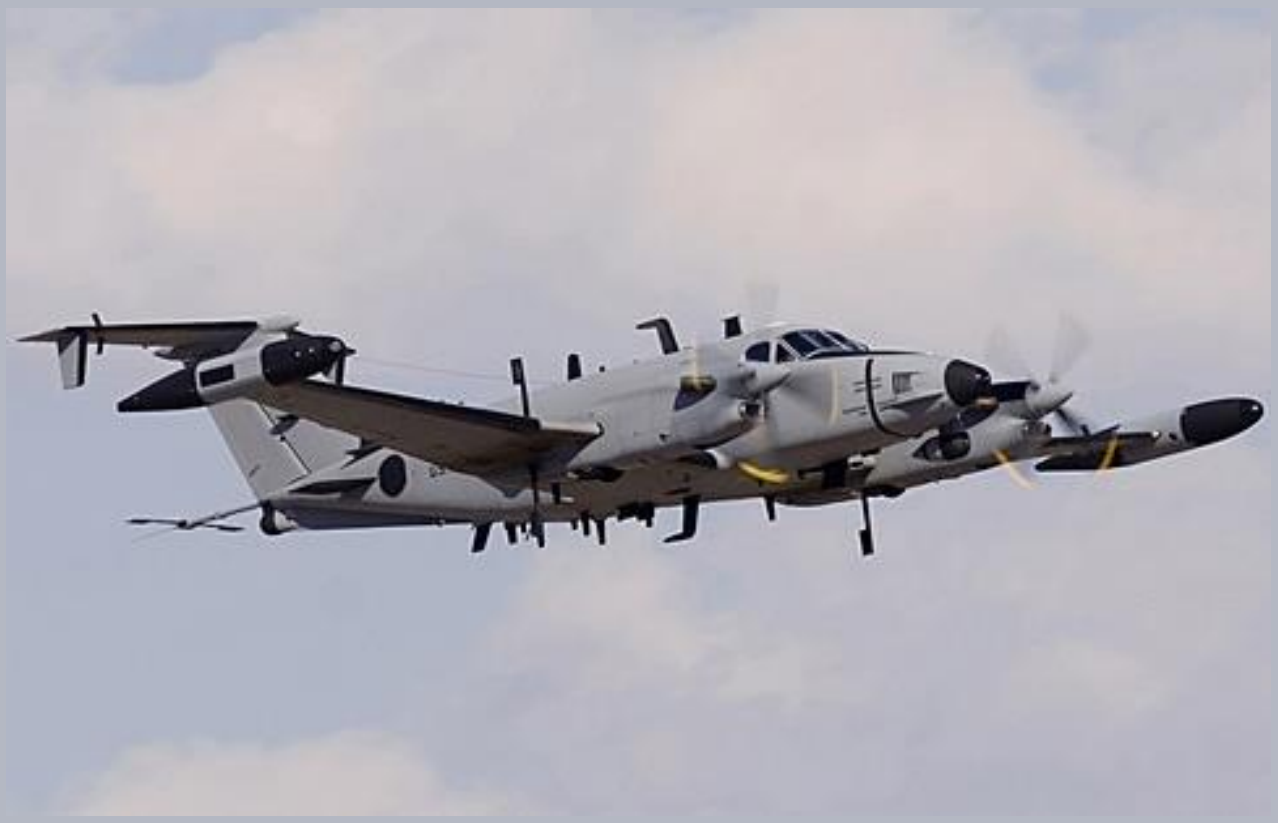
Number 45 January 2015

Flightfax®

Online newsletter of Army aircraft mishap prevention information



This edition of Flightfax continues the five-year airframe safety reviews with a look at fixed wing aircraft. Awareness of the types of mishaps occurring in our aviation fleet is key in addressing risk assessments and countermeasures, regardless of aircraft type.

Also found in this issue: DES covers emerging concepts for training of emergency procedures, safety lessons learned in maintaining the UH-72 Lakota, a mishap review addressing unforecast weather and proper mooring, and a blast from the past covering why it is important to use our checklists properly.

Happy New Year and thank you for your efforts in the aviation safety arena. The Army Chief of Staff's safety objective for aviation is to remain under a rate of 1.0 mishaps per 100K flight hours. Through mid-January we are just slightly above the mark at 1.10, and will continue to improve with your focus on good risk decisions. Until next month, fly safe and manage your risk levels!

LTC Mike Higginbotham
Aviation Director, Future Operations
U.S. Army Combat Readiness / Safety Center
Email: michael.d.higginbotham.mil@mail.mil
334-255-3003

Fixed-wing Five Year Accident Trend Review

During the last five fiscal years (FY10 – 14), there were six recorded fixed-wing Class A mishaps resulting in six fatalities. Four mishaps occurred during the day with two at night. Two were in OEF and one in OIF. Additionally, there were three Class B and 29 Class C mishaps. A review of the mishaps reveals the following:

Three (50%) of the six Class A mishaps were caused by human error. Two (33%) had materiel failure as causal and two were unknown/not yet reported. Class B's consisted of two materiel failures and one unknown/not yet reported. Of the 29 reported Class C mishaps, 12 (41%) were human error, four materiel failures (14%), 11 (38%) environmental cause factors (lightning, hail, bird, etc.) and two unknown/not yet reported.

Leading accident events (Class A)

Human error.

(1) While on a night visual approach into the airfield, the aircraft flew within 1.5 NM of a cargo jet and entered into its wake turbulence. The aircraft departed controlled flight, entered the incipient stage of a right-hand spin, and crashed into the ground at a high velocity and high angle of impact. The three crew members were fatally injured and the aircraft was destroyed by post-crash fire.
(2) While conducting a daytime pilot-in-command evaluation, the aircrew landed the aircraft without the landing gear extended. The aircraft sustained extensive damage to the lower fuselage and aircraft mission equipment. Neither crew member was injured.
(3) Aircraft landed hard with an excessive vertical rate of descent from altitude. This excessive rate of descent and hard landing caused the airplane to bounce off the landing surface and impact the ground a second, and then a third time before coming to a stop.

Materiel failure. There were two materiel failure mishaps resulting in three fatalities.

(1) Crew reported loss of engine power during go-around for engine-out training. Aircraft descended to ground impact and Class A damage is reported.

(2) While returning from a recon mission at night, the aircraft departed controlled flight and initiated a near-vertical descent from 25,000 feet MSL and impacted terrain resulting in fatal injuries to all three crewmembers and a destroyed aircraft. Materiel failure suspected.

Additional.

- Aircraft crashed on take-off during single-pilot training and contacted the tree line, sustaining significant damage. Aircraft has been deemed not economically repairable and had been turned over to DRMO for disposition.

FW Flight Mishap Rate FY10 – 14

The flight mishap rate for fixed-wing aircraft was 1.09 Class A mishaps per 100,000 hours flown. The rotary-wing aircraft mishap rate for the same time period was 1.57. For comparison, the previous five year period (FY05 – 09) had a FW rate of 0.37 and a RW rate of 2.17.

Fixed-wing CLASS A – C Mishaps																
FY	Class A (6)						Class B (3)					Class C (29)				
	C-12	UV-20	C-26	UC35	EO-5	Fatal	C-12	UV-20	C-26	UC35	EO-5	C-12	C-37	C-26	UC35	EO-5
2010	3					3	1			1		5				1
2011												5		1		
2012					1							7			1	
2013		1										4		1		1
2014	1					3				1			1	1	1	
Total	4	1			1	6	1			2		21	1	3	2	2

By the Book Maintenance and the UH-72

CW5 JOSEPH T. WITMER
28th CAB ASO

With the addition of the UH-72 to the National Guard fleet we are getting accustomed to the differences between the traditional Army way of doing maintenance, and the civilian style. The Army uses technical manuals or TMs, while civilians use aircraft maintenance manuals or AMMs. Like other new aircraft we are exposed to, we are finding all the little glitches involved with the design of the airframe and power systems. We are also discovering the flow of the different manuals can lead to confusion with the maintainers.

As the aviation safety officer for a facility, I get to work with the crew members and maintenance personnel. Since I'm not a test pilot, I've been spending a great deal of time learning how the maintenance programs with an FAA certified aircraft differ from how the rest of our facility operates. We're also learning how to read these new AMMs. You would think one manual is the same as others, but that would be far from the fact. One seemingly simple maintenance practice led to a near miss with one of our UH-72A 'Lakotas.' As we dug into the near miss, I wanted to share with others what we found.

So there I am, coffee in hand walking through the hangar first thing in the morning when I am asked to come look at the intermediate gearbox of the UH-72A that had the filler cap come off in flight the night prior. As I inspected the filler cap, it was clear that I was back in learning mode. The cap is completely different from the UH-60, CH-47 and AH-64 caps I am used to seeing. Being a UH-60 instructor pilot and safety officer I took some time to ask questions about how the gear box is serviced and how often. Unlike the UH-60, the UH-72 does not require regular servicing AND there is a special requirement not required with other Army aircraft that caught me off guard. The little O-ring at the end of the filler cap is required to be replaced every time the cap is removed for service.

The UH-72 unit instructor pilot and safety officer, CW2 Carey Blake, did a great job researching the requirements and ensuring the maintenance personnel were retrained on this requirement. We reviewed the maintenance manual (AMM 65-32-00, 3-2) and there it was clear as day, step-by-step instructions on the service that requires the removal of the O-ring and installation of a new one. Normally, this would end my investigation as a near-miss report and retraining complete. However, I wanted to know WHY this simple, clearly required, step was missed. Was it a simple individual failure or was there something deeper at work? I spoke with our other maintainers and called other units that have the UH-72A in their fleet to ask if they were aware of this requirement to change an O-ring every time the cap was removed. I was surprised that some units, like ours, were not aware of the requirement.

Continued on next page

Continued from previous page

So how could this be missed? The steps are clearly in the maintenance manual. The O-ring is readily available and maintenance personnel are fully certified AMPs. I routinely walk around the hangar and see the maintenance manuals out when the maintainers are working on the aircraft. Maintainers for multiple aircraft were questioned about replacing O-rings. The general consensus was to inspect for damage and, if none, place back in service.

We always preach "by the book maintenance" in aviation. Here is a prime example of why that is so important. I would like to say this was an isolated incident involving one maintainer at one AASF, however, that would be far from the truth. After several calls and discussions, it turns out we are not alone with this one issue. I can only imagine how many other issues we will discover as we get used to the new airframe and new manuals. The transition from typical Army technical manuals to civilian-style aircraft maintenance manuals will also be something we need to get used to.

Manned Aircraft Class A – C Mishap Table as of 15 Jan 15

	Month	FY 14 Class A Mishaps	FY 14 Class B Mishaps	FY 14 Class C Mishaps	FY 14 Fatalities		FY 15 Class A Mishaps	FY 15 Class B Mishaps	FY 15 Class C Mishaps	FY 15 Fatalities
1st Qtr	October	0	0	2	0		0	1	3	0
	November	3	0	5	0		2	0	2	2
	December	1	0	3	0		1	1	1	0
2nd Qtr	January	2	2	4	4				1	
	February	1	0	3	0					
	March	0	3	0	0					
3rd Qtr	April	1	1	5	0					
	May	3	1	2	2					
	June	2	0	6	0					
4th Qtr	July	2	0	5	0					
	August	0	0	0	0					
	September		1	2						
	Total for Year	15	8	37	6	Year to Date	3	2	7	2

Class A Flight Accident rate per 100,000 Flight Hours

5 Yr Avg: 1.31	3 Yr Avg: 1.25	FY 14: 1.42	Current FY: 1.10

Emergency Procedure Training and Execution

DAC Charles W. Lent
Directorate of Evaluation and Standardization
U.S. Army Aviation Center of Excellence
Fort Rucker, Ala.

As a H60A/L/M standardization instructor for the Directorate of Evaluation and Standardization (DES), I have had the fortunate opportunity to be involved in the revision of emergency procedures in the H60 flight manuals and recent revisions of the aircrew training manuals. Many are now aware of the Aviation branch chief's "defragging the hard drive" campaign. Due to this initiative, I believe the time is right for taking an honest look at how we train and execute emergency procedures in the Army's aircraft operator's manuals and aircrew training manuals (ATMs). It is important to remember the initiative is not about relieving aviators of the requirement to have knowledge and understanding of aircraft systems, but to rethink, reorganize, and ensure our training and procedures are as effective and efficient as possible. One thing is for certain, as we review our strategy we must take into account history of failure and reliability of today's systems when determining immediate action steps in the aircraft flight manuals and selecting emergency procedure tasks for the aircraft ATMs. The use of simulation as the primary emergency training device must be used to the maximum extent that the device capability allows, saving costly flying hours and allowing more effective training and evaluation of aircrews during emergencies. There is no doubt that emergency procedure training is an essential part of the Aircrew Training Program and a cornerstone to an effective safety program; therefore we must continue to evolve our process to be effective and as safe as possible.

The most important single consideration is helicopter control. All procedures are subordinate to this requirement.

In my career as an Army aviator, I have seen many positive improvements made to the way we train and execute emergency procedures. When I was assigned to Germany in 1995, my unit lost an aircraft in the Mediterranean Sea, killing all five crewmembers onboard. The aircraft was lead in a formation of two UH-60s flying NVG's on an overwater mission approximately three hundred feet over water at an airspeed of 130-140 KIAS when an engine failed. The aircraft was operating above single engine airspeed maximum and the aircrew did not decelerate, the rotor drooped and the aircraft hit the water at 120 Gs. Unfortunately, the aircraft was above maximum single engine airspeed and the rotor drooped very quickly. The point of this example is, for a reason we will never know, the pilots failed to control and continue to fly the helicopter when it was capable of single-engine flight. The accident influenced how I view emergency procedure training and enforced what I believe to be the most important rule during an emergency – the most important single consideration is helicopter control or simply known as "aviators must continue to aviate" during emergencies. Unfortunately, there are too many where pilots failed to control the aircraft when it was within the aircraft capability to continue to fly. Fortunately, we have made some improvements in the flight manuals and in our doctrine to convey this point – but we have still much room for improvement. Integrating aircrew coordination training into all ATM tasks has greatly improved the way we think and perform during emergencies. Improvements in technology , such as the fielding of the GE-701D engine in the AH-64 and H-60 have expanded our power margins and single-engine

Continued on next page

Continued from previous page

capabilities to a much greater extent than ever before - resulting in a reduced need for quick reaction time. This has made our aircrew safer by allowing pilots more time to identify the malfunction, perform the correct procedures and, most importantly, continue to fly the helicopter.

Aircrew Training Manual Task 1070 Standard #1 - Identify the malfunction and perform the appropriate immediate action procedures.

All of the aircraft ATMs and aircraft flight manuals emphasize the criticality of identifying the malfunction and ensuring the correct procedure is followed. This point cannot be understated. Many times as instructors we create a false sense of urgency during the training and evaluation of emergency procedures as we train inside a limited traffic pattern or attempt to get in all the progression or evaluation tasks. The fact is, there is no artificial time limit for describing emergency procedures, only a subjective call by the instructor on performing the immediate action steps.

Immediate-action steps for engine malfunctions for the pilot on the controls must always incorporate maintaining rotor RPM and controlling the helicopter within single-engine limits. Once the aircraft control requirement is met, the aircrew must ensure the correct procedure is followed by utilizing the checklist. My experience has been that during training or evaluations many aircrews perform the entire procedure from memory. The emphasis must be on getting the procedure right (which is the first standard) and not performing steps quickly or recalling the entire procedure from memory. The H-60 ATM crew briefing and the performance planning card (PPC) both include an emergency airspeed for the pilots to fly during emergencies. The airspeed is selected to ensure the aircraft is capable of flying within the single-engine limits. If followed during every emergency, it ensures the aircraft will fly within the single-engine limits of the helicopter. During an engine malfunction, failure to rush to put an engine into lockout during a partial-engine failure becomes null, since the aircraft is within single-engine limits and the rotor will not decrease.

The point is although there have been improvements in the ATM and ability to get accurate performance data and mandatory briefing of performance items, our training must be updated to reflect performance upgrades. Since most Army aircraft do not fly single-pilot, I believe regurgitating steps from memory during an annual evaluation while on the flight controls is an outdated concept and not an effective measure of a pilot's ability to react effectively during an emergency. The evaluation must include the team concept and utilize the entire crew to identify the malfunction, analyze the situation and perform the proper procedures and I believe we need to incorporate and enforce this in training.

Utilization of simulation and conducting effective emergency procedure training is an area we need to improve. The flight simulators are the best way to train and evaluate crew interaction during emergencies. It is essential to ensure we continue to perform the flight maneuvering required for certain tasks like autorotation, and flight with degraded AFCS until they can be fully replicated in the simulator, but the fact is that simulators allow the evaluator more variety and latitude when conducting emergency procedure training and evaluations with zero risk to the aircraft or aircrew. The current methods of training assume more risk than necessary when we disable systems or fly the aircraft in degraded condition to replicate an emergency, even though historically there is a small or nonexistent rate of failure. The latest revision of the H-60 ATM includes allowing engine (DEC/ECU/DECU) lockout to be trained and evaluated in the simulator and task 1070 prohibits disabling of systems other than those specified in the task in order to reduce risk while training emergency tasks.

Continued on next page

Continued from previous page

Many emergency procedures tasks teach pilots valuable skills in handling the aircraft, but I believe the way we train must be reviewed to ensure we are getting the most effective and safest training possible. For example, flight with degraded AFCS, and autorotation in the H-60 are not accurately replicated in the simulator (2B38, 2B60) and must continue to be trained and evaluated in the aircraft. Ultimately, the aircraft simulator should be the primary training and evaluation device if the capability of the simulator allows. Every aircraft ATM must be updated to ensure maximum value is gained from these devices. All tasks taught in the actual aircraft must be required in the aircraft because there is historical data that supports the requirement or the flight maneuvering part of the task must be taught in the aircraft due to a simulator limitation.

MG Lundy's campaign to "defrag the hard drive" gives us great opportunity to update and improve the way we train, execute and incorporate emergency procedure training into our ATMs and flight manuals. An effective review must update procedures in order to take advantage of the safety margin and redundancy some of the aircraft systems that our aircraft provide. Simulation must be utilized as a primary training device to the maximum extent possible in order to reduce risk during emergency procedure training and evaluations. As aviation professionals, it is up to all pilots to ensure the emergency procedures contained in the aircraft flight manuals and the training of emergency procedures mandated by our ATMs is as effective and safe as possible.

UAS Class A – C Mishap Table as of 15 Jan 15

	FY 14					FY 15			
	Class A Mishaps	Class B Mishaps	Class C Mishaps	Total		Class A Mishaps	Class B Mishaps	Class C Mishaps	Total
MQ-1	6		3	9	W/GE				
MQ-5	1	1		2	Hunter	1		`1	2
RQ-7		12	11	23	Shadow		1		1
RQ-11			1	1	Raven				
RQ-20			1	1	Puma				
YMQ-18									
SUAV					SUAV				
UAS	7	13	16	36	UAS	1	1	1	3
Aerostat	3	2	3	8	Aerostat	0	0	0	0
Total for Year	10	15	19	44	Year to Date	1	1	1	3

When a Soldier dies in an accident - every supervisor and contemporary who ever spoke to him or her had an opportunity to influence their judgment, so a little bit of all of us goes in with every troop we lose. - Author Unknown

Several variations of the above statement have been floating around for years. Instead of Soldier or troop it might say pilot or aircrew member to give it an aviation flair - that sort of thing. Pretty sure we've all seen something similar. It's a good message. One that should make you stop and think - how could I, as a contemporary, supervisor, or peer, have been able to prevent that mishap?

It was summer during a JRTC rotation. The assault battalion was the aviation task force element in support of an infantry brigade. Although a brigade staffer (ASO), I was attached to my designated flight company for the rotation. Having been a SP in the unit before moving to the brigade position, I maintained a habitual relationship with the company and supported their operations frequently. On this rotation I was teamed with a new aviator recently progressed through the RL chain. He seemed relatively mature, on the younger side (aren't they all?) and eager learn. His flight skills were on par with his experience level.

We'd been in the box a couple days and the flying OPTEMPO was high with numerous support missions being conducted on a 24-hour cycle. Our morning mission was multiple single-ship insertions of scout teams into various remote sites on the reservation. Having just completed putting a team into a confined area surrounded by fairly tall trees, the PI initiated an altitude over airspeed takeoff to clear the tree line. As we crested, an OPFOR aircraft filled our windscreen passing from our right to left. He was as surprised to see us as we were him. Our gunner monitored the opponent trying to circle back to our position as we transitioned into a high speed low altitude profile utilizing the existing cover. As the PI flew I monitored the instruments and noted he had pulled the power into the upper transient torque limits. I gently guarded the collective, giving it an adjustment into the normal operating range with the comment of "watch your power." We escaped to fly again.

Following the mission we discussed the incident and he acknowledged he had no clue he was pulling that much torque and had got caught up in the urgency of the moment. I reinforced the need to monitor the instruments and some of the ramifications of operating near power margins – overtorques, TGT limiting, decreasing rotor, etc. Enough said - point made – no harm no foul.

So why did this seemingly minor incident stay in my memory cells? Fast forward a year. The same pilot is part of a crew flying a low level mission in the training area. While attempting to make a high speed hard right turn on the flight route, the aircraft bleeds rotor and descends into the trees resulting in a totally destroyed aircraft and fatal injuries to all crewmembers and passengers.

Did I crash that aircraft? Of course not. Did I have an opportunity to influence the judgment of one of the pilots flying that aircraft? Absolutely. Would it have made a difference a year prior if I had sat down with that new aviator and discussed more in-depth the effects of TGT limiting and increased power requirements in turns? I can't possibly know with certainty but it surely would not have hurt and maybe would have been decisive in preventing the mishap. *Never stop learning - never stop teaching.*

Jon Dickinson, Aviation Directorate

Accident findings: From the archives for your review

Finding 1 (Present and contributing: Human error – Individual Failure) During a day, visual flight rules contour flight at approximately 25 feet above the highest obstacle and 100 knots airspeed, the aircraft pilot in command (PC) and the pilot (PI) did not adequately consider and accommodate for the added power needed to maintain obstacle clearance in a 90-degree heading change, 60+ bank-angle turn. The power needed to maintain altitude was not available, and the aircraft descended and crashed through the 60 to 65 foot tall trees. The aircraft was destroyed in the crash and the post-crash fire. All aircraft occupants were fatally injured.

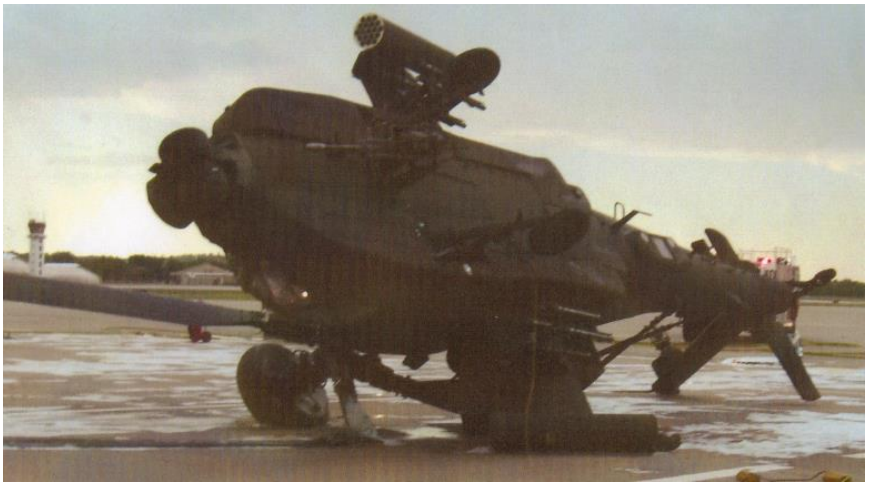
The PC and the PI were fatally injured in the accident and the aircraft was not equipped with a flight data/cockpit recorder. Therefore, the specific cause for their actions could not be determined. It is suspected that a lack of flight discipline may have influenced their actions. Both the PC and the PI had flown the route many times and were familiar with the required heading change, the corridor flight restrictions, the maximum bank angle restrictions, and the aircraft power requirements. The observed, low, fast, steep, banking turn exceeded the allowable flight parameters which was not required for the route or the mission and could have been avoided. A lack of flight discipline was also identified during witness interviews of both rated and nonrated crewmembers who had recently flown similar missions with the PC. Low, fast turns in excess of 60-degree bank angles were noted with the PC, indicative of a lack of flight discipline.

Finding 2 (Present and contributing to the severity of injuries): The aircraft was being operated with two 230-gallon extended range fuel system (ERFS) tanks mounted on the external stores support system (ESSS). As the aircraft with the full, partially crashworthy, external fuel tanks descended through the trees, the external fuel tanks ruptured and separated from the aircraft. The fuel ignited and the flames engulfed the aircraft, causing fatalities in an otherwise survivable crash.

Service personnel come blessed, or cursed, with the same lavish helping of human nature as other mortals, including pilots. They react the same way to fatigue, pressure, anxiety, extremes of discomfort, and dim-witted self-satisfaction. The best of them can and do make mistakes. All top-flight mechanics know this. Like mature pilots, they are keenly aware that their capabilities and experience have their limits and that they have to maintain a constant, all-points lookout against the creeping complacency and overconfidence which can turn them into zombies before they know what has hit them.
BFTP this issue.

Mishap Review: Microburst damages

A microburst weather event developed which overturned one AH-64D, leaned two others onto their right rocket pods, and damaged a third as well as one UH-60M.



Summary

A severe and unexpected thunderstorm impacted an airfield, produced a microburst, and damaged four AH-64D, one UH-60M and a cargo van. One of the AH-64Ds was turned over on its side. The damaged aircraft were not moored and had untied blades due to on-going flight operations. The total cost of the incident was over $4.3 million.

Timeline

1650 Aircraft return from training mission. No refuel due to lightning in the area
1723 Weather warning (WW) issued for lightning within 5 nm
1725 Last training aircraft recovers to airfield
1759 WW issued for severe thunderstorms winds ≥ 50 kts, ½ inch hail valid till 1830 hours
1800 Unit ops notified of WW, battalion ops not notified
1810 Winds: 170/27 Gusts to 33
1819 Winds: 180/42 Gusts to 57
1820 Multiple aircraft overturned
1821 Winds: 170/43 Gusts to 63
1836 Winds: 120/15 Gusts to 23

Commentary

Isolated severe winds as a result of the thunderstorm was the primary environmental cause factor for the incident. Also noted was that after the aircraft returned from their missions, they were not moored and rotor blades not tied down prior to the severe weather. The aircraft were scheduled for follow-on flights in the evening. There was no established SOP for mooring and tie-down procedures or for notifying key personnel/sections for dissemination of weather warnings.

The fast-moving system overloaded the weather center. There were forecast products available but not used that could have helped forecast the microburst.

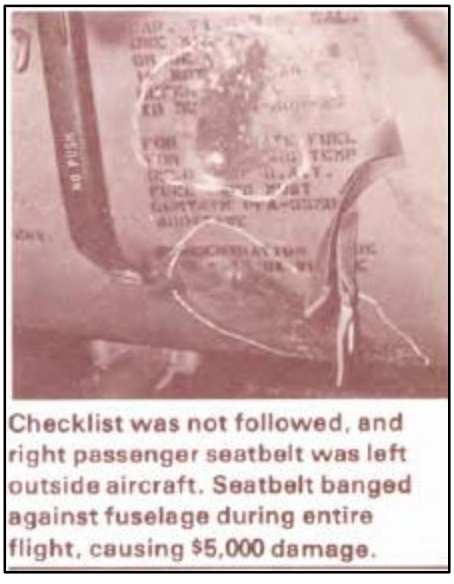
Check and double check

29 Nov 79 Flightfax

In a hurry to take off, pilot did not require removal of rear seat backrest cushion assembly. Cushion blew out of OH-58, which was flying with all doors removed, and hit tail rotor blades. Blades separated from tall rotor, aircraft crashed, and pilot was killed.

You are fooling nobody, including yourself, when you skip or do an inadequate job on a preflight check because of too much pressure, not enough time, fatigue, or a self-induced idea that the checklist isn't all that important in the first place. Mishap experience shows that some Army pilots obviously believe that checklists are not worth the time and patience they require in the face of some really important task which should have been finished yesterday at the very latest. Unfortunately, the checklist is one of the first things to go out the window when time and patience run short. In a depressing number of cases, when the checklist goes out the window so do the pilot and his crew, sooner or later.

Failure to make an adequate preflight or use the checklist correctly was listed as a cause factor in 484 mishaps for the period FY 77 through FY 79. Seven resulted in accidents and 42 in incidents, with 6 people killed and 10 injured. However, over different terrain and under different circumstances, these could easily have turned out to be major accidents. More than once you have probably heard somebody say he has the checklist so thoroughly engraved on his mind he could recite it backwards and forwards. To be sure, if you stick around Army aviation for a while, you will become familiar with the checklist, maybe even thoroughly familiar. So familiar, in fact, that you can become complacent and fall into that ho-hum attitude which can do you in. And that's when you overlook a checklist item at just the wrong moment. No use suddenly remembering it after you are aloft and your turbine starts giving off not-so-funny noises.



Checklist was not followed, and right passenger seatbelt was left outside aircraft. Seatbelt banged against fuselage during entire flight, causing $5,000 damage.

Loose nut on accumulator end of air tube assembly resulting from improper torque caused power loss. Aircraft was landed on paved road, with major damage to cross tubes. Luckily, there was a landing area available.

Carelessness, or complacency (and is there any difference, really?), concerning the checklist probably stems from the fact that relatively few checks, no matter how detailed and careful, turn up anything seriously wrong. So why bother when the odds are with you? Why go to your dentist twice

Continued on next page

a year? Complacency isn't the only item on the list of potent checklist troublemakers. There are people who not only know everything they need to know but know it better than most. Operating on the usually sound theory that no matter how good something is it can be made better, people in the grip of this kind of self-hypnosis have been known to take pencil and shears to the prescribed checklist, performing drastic surgery. They will tell you proudly that their home-grown versions not only save time but get things done just as well. The person who allows complacency or know-it-allness to lead him into procedures the book would never condone is asking for what he is sure to get. Your aircraft is no better than the person who flies and maintains it and if it is being asked to perform with an oily rag lodged somewhere in its craw, something a thorough check would have turned up, it can't be blamed if it falls out of the sky. Service personnel come blessed, or cursed, with the same lavish helping of human nature as other mortals, including pilots. They react the same way to fatigue, pressure, anxiety, extremes of discomfort, and dim-witted self-satisfaction. The best of them can and do make mistakes. All top-flight mechanics know this. Like mature pilots they are keenly aware that their capabilities and experience have their limits and that they have to maintain a constant, all-points lookout against the creeping complacency and overconfidence which can turn them into zombies before they know what has hit them. Like homemade preflight checklists, homemade maintenance procedures just won't do. Sticking to the book is the only answer. Every unit commander has a responsibility to see that all personnel follow the checklist from top to bottom all the time! And the only way to do this is to do it with book in hand.

Check and double check

It is a matter of positive thinking. No mature, normally confident person who knows his job likes to have it dinned into him night and day that he must perform in a certain way and only that way. But we are all human. And accidents do keep on happening in which failure to follow the checklist is a factor. How often have you heard (or said yourself when you were in a hurry to get back home): "The aircraft's okay. Let's give it a quick onceover." Or have been handed a "revised" checklist with the famous last words: "Never mind what they told you at school. We do things differently out here." Do you always insist on an oral call-out when you are following the checklist? When a fuel line has been taken off and put back in place, do you always check for leaks around the connections? If you are interrupted during a check, do you take up where you left off, giving human nature a gap wide enough to drive a truck through, or do you start all over again?

All this is a matter of individual responsibility, particularly when the unit's aircraft are operating over a wide area out in the field. The safety officer and the unit commander share the common human inability to be in more than two or three places at the same instant. A large part of the time, aircraft crews and even mechanics are on their own to a considerable extent; and, in fact, indications are that most of them are doing a good job most of the time. But what we want is all of the people all of the time. Check and double check•

I used to be a lifeguard but some blue kid got me fired.

Selected Aircraft Mishap Briefs

Information based on Preliminary reports of aircraft mishaps reported in December 2014.

Utility helicopters

UH-60 

-M Series. Crew was conducting a roll-on landing to the runway when all 4MRB made contact with the tail boom. Aircraft was landed w/o further incident; Damage reported: all 4MRB and scoring of the tail rotor drive shaft. (Class C)

-A Series. Crew experienced an un-commanded yaw and "severe" vibration following climb-out to altitude and initiated an emergency landing. Post landing inspection revealed damage to one main rotor blade/ potential de-bonding/ separation of the trailing edge and tip cap. (Class B)

Fixed wing aircraft

C-12 

-Crew experienced a bird-strike on the starboard wing during an instrument approach to the runway. Aircraft was landed w/o further incident. Damage reported at the class C level. (Class C)

C27J 

-Aircrew was conducting a training flight when the aircraft made contact with a USAF C-130 at 1,500 FT MSL. Both crews were able to land their aircraft and both sustained class A damage.

Unmanned Aircraft Systems

MQ-5B 

-UA struck the arresting gear drum during landing to the airstrip. The main landing gear subsequently separated, potentially resulting in total loss damage. (Class A)

When one barber shaves another, who talks?

Subscribe to Flightfax via the Aviation Directorate Website: https://safety.army.mil/atf/

Current number of *Flightfax* subscribers: 1359

If you have comments, input, or contributions to Flightfax, feel free to contact the Aviation Directorate, U.S. Army Combat Readiness Center at com (334) 255-3530, DSN 558-3530

U.S. ARMY COMBAT READINESS CENTER

Online newsletter of Army aircraft mishap prevention information published by the U.S. Army Combat Readiness Center, Fort Rucker, AL 36322-5363. DSN 558-2660. Information is for accident prevention purposes only. Specifically prohibited for use for punitive purposes or matters of liability, litigation, or competition. Flightfax is approved for public release; distribution is unlimited.