

# Flightfax<sup>®</sup>

Online Report of Army Aircraft Mishaps

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**Back by popular demand is an online version of Flightfax.** The intent of Flightfax Online is to provide Army aviators a monthly publication with a look at near-term accidents, aviation safety issues and a blast from the past out of the "old" Flightfax.

**Take note that we now include aerostats under aviation accidents.** Also worth noting is that unmanned Class A aviation accidents are currently outpacing our manned assets. "Knock on wood," Army aviation is having a pretty good year when it comes to manned accidents. Given the operating environment of some of our units and a sustained high OPTEMPO, this is truly a remarkable achievement. Yet, if you take a look at the trends that currently exist, operating in degraded visual environments (DVE), such as dust, IIMC or overwater at night, is our biggest challenge in terms of executing operations safely. The obvious question becomes, "are we adequately training our crews to operate in these environments?" If the answer in your unit is no, consider ways to add rigor to your training process in order to build crew proficiency when it comes to operating under DVE conditions. This type of focused training at home station leads to better readiness.

**Next month we will discuss** the pros and cons of developing a formal hazard reporting system for Army Aviation. It is "**a way**" to get at the large percentage of accidents involving human error. Programs such as this have been in use by the airline industry for some time.

Until then, stay safe.

LTC Dave Fleckenstein, Director, Air Task Force, USACR/SC

# Report on first half FY11 aircraft accidents

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In the **manned aircraft** category there were 42 Class A - C aircraft accidents during the first half of the fiscal year. These accidents resulted in four Army and three civilian fatalities. Six of these accidents were Class A's, five were Class B's, and thirty-one were Class C's. Seventy-one percent of these accidents involved human error, seventeen percent involved materiel failure, and five had unknown or suspected causes. Dust landings were associated with seven aircraft mishaps. There were three ground taxi mishaps, one wire strike, and two spacial disorientation/IIMC. Also included were four reported overtorques/overspeeds and one whiteout incident. Materiel failures included two FADEC failures, two strut failures, one engine drive shaft failure, and a reported compressor stall.

Synopsis of selected accidents:

## **Manned Class A**

- \* MH-47G contacted a sand berm during a NVG training mission. Damage to both fuel cells, front landing gear, and undercarriage antennas.
- \* UH-60L experienced dust conditions while landing to a non-standard LZ and drifted into a bulldozer.
- \* OH-58D crashed during Stage 1 NVG Advanced Combat Skills gunnery training. Aircraft was consumed in post-crash fire. Suspect materiel failure. One fatality.
- \* UH-72A crashed into the ocean waters during poor weather. Suspect spacial disorientation. Six fatalities.
- \* OH-58D engine failure during maintenance test flight. Aircraft damaged during landing to unimproved area.
- \* UH-60L upon touchdown at an LZ featuring rising terrain, passenger rose to the upright position and moved rearward into the moving rotor blades.

In the **unmanned aircraft systems**, there were twenty-seven Class A – C incidents with eight Class A's, nine Class B's, and ten Class C's. The Class A's included four Aerostat balloons, three MQ-5Bs Hunters, and one MQ-1C Gray Eagle. High winds and tether breakage were the prominent cause factor in the Aerostat incidents. RQ-7Bs comprised thirteen of the nineteen Class B and C mishaps with cause factors relating to engine failures, landing problems, and lost link.

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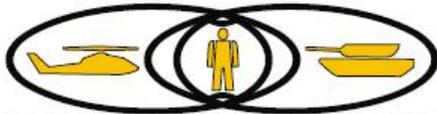
## UAS Class A

- \* MQ-5B missed both sets of arresting gear during night landing sequence. The air vehicle operator attempted a go-around but the UAV failed to gain altitude and crashed. Front section of UAV and payload were destroyed.
- \* MQ-5B lost link during flight. UAV crashed after attempts to regain control failed. System was recovered with significant damage.
- \* MQ-5B impacted terrain during flight. Suspect altitude programming error.
- \* MQ-1C crashed during test flight. Suspect software error.
- \* Aerostat was ripped from platform due to high winds.
- \* Aerostat broke from mooring point due to high winds.
- \* Aerostat suffered possible lightning strike.
- \* Aerostat broke away due to high winds.



# Major Accident Review (MAR)

RMIS Case # 20101124001



U.S. ARMY COMBAT READINESS/SAFETY CENTER

The crew of a UH-60L executing an approach to a partially improved HLZ stopped their descent at approximately five feet AGL as they lost visual reference with the ground. The aircraft began drifting to the left, struck a small dirt berm with the main landing gear and rolled left striking an armored bulldozer with the main rotor blades.

## Mission: Day Battlefield Circulation

### Hazards

- Low crew environmental experience
- High desert environment
- Dusty helicopter landing zone conditions



### Controls

#### Results

- Two minor injuries
- Aircraft damaged
- Develop environmental training areas that better represent anticipated environmental conditions
- Include environmental considerations in crew selection
- Consider all options for terminating or aborting an approach when visual contact with the ground is lost

While conducting a daytime battlefield circulation mission in a high desert environment, the pilot on the controls lost visual reference with the ground during a dust landing to a partially improved HLZ. After losing visual reference with the ground, the pilot on the controls stopped the descent at approximately five feet AGL. The pilot in command did not ensure the approach was continued to the ground or direct the landing be aborted by executing a go-around. The aircraft, while engulfed in a dust cloud so severe the crew was unable to read the cockpit instruments, began to drift to the left. As the aircraft continued its left drift, the left main landing gear made contact with a small dirt berm near the edge of the HLZ. The contact with the berm initiated a left rolling moment immediately after which the main rotor blades struck a D7 bulldozer stopped next to the HLZ. All main rotor blades were destroyed, the last 1/3 of the tail cone separated from the aircraft and the bulldozer was damaged. The aircraft came to rest on its left side with its roof leaning against the blade of the D7.

#### Findings:

- Pilot on the controls did not complete a VMC approach to the ground
- Pilot in command failed to act in a timely and appropriate manner

#### Recommendations:

- Develop environmental training areas that accurately reflect the environmental conditions under which missions are anticipated to be conducted.
- Develop environmental training programs that utilize a crawl, walk, run approach to training, in regards to the task level of difficulty
- Develop role reversal scenarios for the Pilot in Command training program to improve PC response in demanding situations

All information contained in this report is for accident prevention use only.  
Do not disseminate outside DOD without prior approval from the USACRC.  
Access the full preliminary report on the CRC RMIS under Accident Overview Preliminary Accident Report  
<https://rmis.army.mil/rmis/asmis.main1> AKO Password and RMIS Permission required

# Selected aircraft mishap briefs

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Information based on Preliminary reports of aircraft mishaps reported in March/April 2011.

## Utility helicopters

### **UH-60**



- L series. Passenger walked up slope and was struck by main rotor blade. (Class A)

- L series. Aircraft started with engine inlet cover installed. (Class C)

- L series. During supply drop, tip caps were damaged. (Class C)

- L series. Normal maintenance procedures following the aircraft's last flight mission revealed damage to Section 4 drive shaft cover, one tail rotor paddle, and the APU door was missing. Separation is suspected to have occurred during the last leg of the final flight. (Class C)

- M series. Crew experienced smoke in the cockpit in conjunction with #1 Engine Generator failure indication. Aircraft was still on the airfield and landed and an emergency shutdown was accomplished. (Class C)

### **UH-1H**



- Aircraft experienced compressor stall and descended into trees. (Class C)

## Attack helicopters

### **AH-64D**



- Four AH-64 helicopters were conducting a multi-ship cross country flight. The lead aircraft struck a cable resulting in aircraft damage, one fatality, and one injury. (Class A)

- Crew experienced smoke in the cockpit accompanied by main transmission CHIP and OIL warning indications. Crew reported experiencing loss of collective input response and executed an emergency landing. (Class A damage reported)

- During mountain training, #2 engine drive shaft failed. (Class C)

- Aircraft experienced an overtorque condition (132%) as crew was climbing to clear rising terrain. Acft was returned to home base without further incident. (Class C)

## Observation helicopters

### **OH-58D**



- Engine failed during test flight. Aircraft landed hard. (Class A)

- Crew received an MMS Fail instrumentation reading in conjunction with a 'smoke' odor in the cockpit. Crew landed aircraft and extinguished the onboard fire and returned the aircraft to the base for a one-time recovery flight. (Class C)

### **MH-6M**



- Overtorque during infil mission (Class C)

### **TH-67A**



- Aircraft encountered spike knock following autorotation. (Class C)

## Cargo helicopters

### **CH-47**



- D series. Aircraft struck wires departing from LZ. (Class B)

## Fixed Wing

### **KA300**



- Damage to camera current found on post-flight. (Class C)

## UAS

### MQ-1C



-UAV crashed during engine test flight. (Class A)

### RQ-7B



- On landing UAV veered off landing strip. (Class B)

### RQ-16A

- UAV inverted and crashed (Class C)

### Silver Fox

- Generator belt broke, battery lost power resulting in crash. (Class C)

### Aerostat



- While lowering in high winds, cable snapped. (Class A)

- Tether broke during wind shift, payload damaged. (Class B)

- Lost due to high winds, limited info reported. (Class B)

FY 11 UAS Class A – C Mishap Table									
	FY 10 UAS Mishaps					FY 11 UAS Mishaps			
	Class A Mishaps	Class B Mishaps	Class C Mishaps	Total		Class A Mishaps	Class B Mishaps	Class C Mishaps	Total
MQ-1	2		1	3		1		1	2
MQ-5	3			3		3		1	4
RQ-7		14	21	35			7	10	17
MQ-18A	1								
SUAV			1	1				3	3
Aerostat		2	2	4		5	6		11
Total Year	6	16	25	46	Year to Date	9	13	15	37

As of 24 May 11

FY 11 Manned Aircraft Class A – C Mishap Table										
	Month	FY 10					FY 11			
		Class A Mishaps	Class B Mishaps	Class C Mishaps	Army Fatalities		Class A Mishaps	Class B Mishaps	Class C Mishaps	Army Fatalities
1 <sup>st</sup> Qtr	October	4	1	3	1		1		3	
	November	1		5	2		1	1	13	
	December		1	4			2	1	4	4
2 <sup>nd</sup> Qtr	January		2	3					7	
	February	2	2	9	5			2	2	
	March	2		4			2	1	4	
3 <sup>rd</sup> Qtr	April	2	1	5	1		2		11	
	May	1	2	2	1		1	1	2	
	June	6		5	1					
4 <sup>th</sup> Qtr	July	1	2	4						
	August	2	2	5						
	September	2	1	5	5					
	Total for Year	23	14	54	16	Year to Date	9	6	46	4

As of 24 May 11

# Blast From The Past

articles from the archives of past Flightfax issues

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## **Thurman emphasizes safety to Aviation Officers Advanced Course graduates. (From 14 November 1984 Flightfax)**

Safety was a major point of emphasis when General Maxwell R. Thurman, Vice Chief of Staff Army, addressed the first class of officers to graduate from the Aviation Officers Advanced Course at the U.S. Army Aviation Center, Fort Rucker, on 24 October 1984. The VCSA briefly recapped for his audience the history of Army aviation from the time 75 years ago when Wilbur and Orville Wright conducted the first military aviation flight. The Wright brothers were given an order to provide the United States Army with one airplane, two pilots, the necessary spare parts, and two crewmen to repair the aircraft. LTG James M. Gavin wrote in an article entitled "Calvary, and I Don't Mean Horses," published in Harper's magazine more than 30 years ago, of the potential of the helicopter and air assault tactics on the modern battlefield. As G3, DCSOPS, General Gavin was able to lay some of the early groundwork for this new type of cavalry. General Thurman spoke of other pioneers who in 21 years of Army aviation brought the airmobile concept into being, developed air assault tactics and doctrine, participated in the research and development of aircraft, and became the

first leaders of air cavalry units forged in the crucible of Vietnam.

"You must be the most professional and professionally demanding branch in the Army. Your responsibilities on the modern battlefield – in fighting the Airland battle – far exceed those duties that aviators have shouldered in the past," General Thurman told the graduates. "Part of the professionalism for which you must strive is in aviation safety. Aviation safety has two important aspects: flight safety and reliable maintenance. No branch operates in a more dangerous environment...and there is no branch in the service in which the lives of its officers are more in the hands of the soldiers, the crew chief and aviation mechanic, than the Aviation Branch." Paraphrasing a statement by a journalist in Southeast Asia, general Thurman added, "Planes have wings and want to fly; a helicopter has ten thousand parts trying to tear themselves apart."

"Kick the tire. Light the fire. First one off is lead. We'll brief on guard. That's an old saying in the Air Force about aviation procedures. That was a 'seat of the pants' kind of flying operation in an environment where equipment was cheaper, flying was less dangerous, and the world in which we and our adversaries lived was much more forgiving. Those days are gone forever – if

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they were ever here at all for Army aviators,” General Thurman warned. He compared the position of the Advanced Course graduates to that of earlier aviation pioneers. “Your challenge is integration of Army aviation into the heavy forces. You will have the chance to develop the tactics and procedures, the standards and values, and to establish the enduring traditions of the Aviation Branch.” At the same time that there is the onrush of equipment to the heavy side, the VCSA emphasized that attention will still be given to insure that the United States Army has the world’s best light forces. General Thurman told his audience that they must be not only aviators but the most technically and tactically competent of all the Army’s leaders. “Technically you must know more about the mechanics of slight and flying than those whom you will lead...You must also be tactically competent, able to plan and execute support of an Armored brigade in a 30km deep counterattack, using M1/M2/M3 with multiple launch rocket systems in support.”

Aviation accident reports are among the significant events on which the VCSA is briefed every day. Invariably, investigations show all too many of these accidents are the result of pilot error – usually because a pilot was flying beyond his own capabilities or outside the safety envelope of his aircraft. “Aviation flying hours will increase up to 40 percent in the next 2 years. You officers of the first advanced class will be going into the force at a time when flying hours will be as high as 2.4 million. You

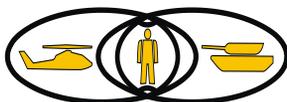
understand that the more you fly, the more risk there is associated with it. We need your very best efforts on safety,” General Thurman emphasized. General Thurman related some of the things he was asked when as the DCSPER he was the Army’s chief safety officer. One of them was to let units remove seats from the Black Hawk so that the aircraft could carry 23 troops. His answer was a resounding “No!” “That aircraft was designed with seats that would be crashworthy so that people riding in them might live if there was an accident. If we had wanted an aircraft to hold 23 people without seats, we would have designed it that way.” Similarly, people have asked why a pilot-in-command must fly the aircraft from the pilot station. “because it was designed to b flown from the pilot’s station – that’s why.” “Everybody doing their own thing is simply not in the cards, so get your head straight and those of your subordinates straight about what your obligations are on the way the equipment is designed to operate.” The VCSA added, “Last December, when I took stock of the first quarter FY84 accident data, I directed a stand-down for a day for aviation safety. I asked people, ‘Is one day too much for aviation safety?’ Of course it’s not and when you take command of whatever unit you get, remember rule number 14 – ‘When in charge, take charge.’ That means you can stand down your unit anytime you choose to in order to have an aviation safety day so that it can be

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rammed home to every single member of your organization what your standards are in aviation safety.” Accountability from people who give briefings is another Thurman initiative. He directed the Army Safety Center to report to him the names of individuals who briefed each Class A aviation mishap. (Class A mishaps involve a fatality, \$500,000 in damages, or a destroyed aircraft.) “The final point is we must hold ourselves accountable. . . . You must not permit yourselves the luxury of not holding people accountable. You must do that; it’s part of your job as an officer. You understand that no one has an inherent right to fly an aircraft. I repeat, **no one has an inherent right to fly an aircraft.** They have to demonstrate their competency to fly it. Bear that in mind, and that’s true in any job we have in the United States Army. I ask your support in that. . . . We can’t do otherwise. Equipment is expensive, but most important of all is the loss of life. That is the greatest price of all.”

General Thurman concluded, “Equally important to being technically and tactically competent is developing your skill and potential as leaders. You must care for your soldiers. Today’s Army has dynamite kids – whom you will lead – and dynamite equipment – which you will fly. But never forget the soldier and his sacrifices and aspirations.”

**If you have comments, input, or contributions you would like to make, feel free to contact the Air Task Force, U.S. Army Combat Readiness/Safety Center at com (334) 255-3530; dsn 558**



**U.S. ARMY COMBAT READINESS/SAFETY CENTER**

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