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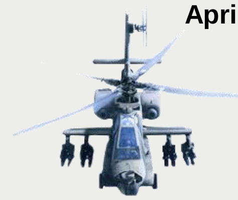

Online newsletter of Army aircraft mishap prevention information

This issue of *Flightfax* is the midpoint review of the FY14 mishaps. The intent behind this issue is to learn the lessons of other pilot's mistakes so that we can reduce the accident trend for the remainder of the fiscal year. The consistent trend that has remained true within Army Aviation is that human error causes the majority of our mishaps, and this year is no different.

To date, we have had nine Class A mishaps resulting in four fatalities (3x military, 1x contract) which is higher than the total number of Class A accidents for all of FY13. Of the nine Class A accidents, six resulted from human error and three are attributed to material failure. Within the six human error accidents, two have elements of improper training, three have individual failure / decision making errors, one has pre-mission planning failures, two mishaps had power management failings, and two mishaps occurred during DVE.

A common thread within each of these human error accidents can be traced to the decision making process of the pilot in command and aircrew. The aircrew's challenge, though, is to have sufficient situational understanding of their circumstances in enough detail to make the right decision. A good way for a pilot in command to think about this, is to constantly ask the question "is my risk increasing or decreasing?"

The answer to this question will vary over the course of the flight depending on the circumstances. Given that we often ask aircrew to execute dangerous missions, there are numerous situations where the answer to the increasing risk question is a definite "yes", but it is a command approved risk inherent in completing your assigned task; such as landing in dusty HLZs with suspected enemy presence, MEDEVAC missions to points of injury, and hasty attacks supporting troops in contact in rapidly changing conditions.

On the other hand, the most dangerous circumstances are those where you notice your risk is increasing but the commander has *NOT* approved operating within those hazards. Flying toward decreasing weather, unforecast adverse weather conditions, HLZs dustier than reported, unexpected enemy threat, and longer-than-planned duty days are good examples. A pilot in command earns his pay in these situations, and the decisions made at these points will have the biggest impact on the safe completion of the flight and the unit's safety program. Commanders should clearly articulate their intent for the mission to be flown, and the pilots in command / air mission commanders should be empowered to make decisions in the flight within the scope of this intent to modify the mission as necessary to remain within their approved risk levels. The Army's new ATP 5-19 Risk Management an excellent decision making model with four principles: *Integrate RM into all phases of missions and operations, make risk decisions at the appropriate level, accept no unnecessary risk, apply RM cyclically and continuously*. If you follow these principles and constantly assess your changing risk levels during the flight, the decisions you make will lead you to safe mission accomplishment.

Until next month, fly safe and manage your risk levels!

LTC Mike Higginbotham
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Preliminary Report on 1st Half FY14 aircraft mishaps

In the **manned aircraft** category, Army aviation experienced 28 Class A - C aircraft accidents the first half of this fiscal year. These mishaps resulted in four fatalities. Nine of the accidents were Class A's, four were Class B's, and 15 were Class C's. For comparison, the first half of FY13 had 33 Class A – C aircraft accidents – five Class A's (six fatalities), three Class B's, and 25 Class C's.

For the first half of FY14, six of the nine Class A mishaps and three of the four Class B mishaps were the result of human error (69%) with three materiel failures and one unknown/not yet reported. All of the 9 Class A and two of the B mishaps occurred at night. Materiel failure was contributing in three Class A's. There were two bird strike Class C mishaps. Six of the 13 Class A and B mishaps occurred in OEF.

Dust landings were contributing factors in two Class A and one Class B mishap. Additionally, there was one Class A UH-60 ground taxi incident and one AH-64 mid-air collision.

	Class A	Class B	Class C
UH/MH-60	2	1	4
AH-64	4	2	3
CH/MH-47	0	1	2
OH-58D	2	0	4
LUH-72	0	0	0
TH-67/OH-58A/C	0	0	0
AH/MH-6	0	0	1
C-12/KA-300/UC-35	1	0	1
Total	9	4	15

Synopsis of selected Class A accidents (OCT – MAR 14). N/NVD denotes night/night vision device mission:

Manned Class A

-AH-64D (NVS). Crew was conducting aircraft qualification training, conducting slope landing when crew reported un-command cyclic input. Aircraft contacted the ground and sustained class A damage.

-AH-64E (NVS). Crew was participating in night operations when they detected smoke odor in the cockpit. While conducting emergency landing, the crew experienced electric power outage in the cockpit and subsequently impacted the ground. All four MRB's made contact. Crew was able to egress.

-AH-64D (NVS). Aircraft crashed just after take-off from the airfield and came to rest on its left side. Class A damage reported. One CM suffered abrasions in the impact.

-OH-58D (NVG). Crew was en route for range training when they experienced a low rotor RPM warning while at low-level flight. Crew initiated an autorotation and the aircraft descended into a tree line. Crew was able to egress with minor injuries and aircraft was destroyed in post-crash fire.

- KA-300 (N). Aircraft was on base leg approach when approach tower personnel lost radio

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contact with the crew. Aircraft crashed approximately 1.8nm from the runway. All crew members were fatally injured in the crash.

-HH-60L (N). Aircraft was being ground-taxied for parking when it made contact with the wing of a parked privately owned plane. Aircraft was shut down w/o further incident.
-MH-60M (NVG). Crew was conducting routine ATM training in the traffic pattern when the aircraft impacted the ground. One crewmember sustained fatal injuries in the crash and the remaining crew (pilot and CE) sustained survivable injuries.

-AH-64D (NVS). Crew of aircraft #1 was conducting assault training with a sister ship when it collided with aircraft #2 whose crew was conducting aerial RECON of an objective in the vicinity. Both aircraft crash-landed but crewmembers suffered no significant injuries.

-OH-58D (NVG). Crew was conducting take-off during NVG environmental training when they experienced dust conditions Aircraft entered an uncontrolled descent and contacted the ground hard. Aircraft came to rest upright but sustained separation of the tail rotor and vertical fin. Class A damage reported.

In the **unmanned aircraft systems** for the first half FY14, there were 17 Class A–C incidents with four Class A's, six Class B, and 7 Class C's. For the same time period in FY13 there were four Class A's, two Class B's, and 14 Class C mishaps. The four FY14 Class A's were two MQ-1C Gray Eagles, one MQ-5B Hunter and one aerostat. The six Class B's included five RQ-7B Shadows and one MQ-1B. The seven UAS Class C's included three RQ-7Bs, one MQ-1C, one RQ-20A, one RQ-11, and one aerostat.

	Class A	Class B	Class C
MQ-1	2	1	1
MQ-5B Hunter	1	0	0
RQ-7B Shadow	0	6	3
Aerostat balloon	1	0	1
RQ-11 Raven	0	0	1
RQ-20A Puma	0	0	1
Total	4	1	14

Synopsis of selected UAS Class A mishaps (OCT 12 – MAR 14):

UAS Class A

-MQ-1C. Controller lost link with the system as it was descending to land on the runway and it crashed, resulting in Class A damage.

-MQ-5B. System had reached 250' AGL following launch when it initiated an un-commanded descent and impacted the runway. System was deemed a total loss as a result.

-MQ-1C. UAS had uncommanded movement during taxi, the ground crew pulled GDT and LGDT circuit breakers but the vehicle continued forward until striking a hangar, Class A damage reported.

-Aerostat. Balloon suffered loss of helium at 13,000 feet and descended to ground contact.

Unmanned Aircraft Systems (UAS) Integration into Aviation Branch

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Chief of Standardization

Since the inception and integration of UAS into Army Aviation, the methods for maintaining standardization and managing the Aircrew Training Program (ATP) have been treated separately from manned requirements. In regards to regulations and doctrine, they have been operating with a separate capstone regulation (AR 95-23), and standardization and training manuals (Training Circulars (TC)1-600, 3-04.61, 3-04.62, 3-04.63). Due to decisions made early in the fielding of these units , UAS units were not located or integrated with manned aviation units until deployed and assigned to a CAB. The end result was the loss of the expertise and lessons learned from manned aviation in terms of standardization and ATP.

The Directorate of Doctrine and Training at Fort Rucker has recently staffed TC 3-04.11, Commander's Aviation Training and Standardization Program, which will serve to integrate UAS requirements into one capstone branch training and standardization document. This will ensure commanders are developing and maintaining a standardized training program for both manned and unmanned aircraft. Standardization personnel will have one reference for managing the ATP for both manned and unmanned aircraft.

During a recent assessment visit to the Army's first full spectrum CAB, (101st CAB, Fort Campbell, Ky), the positive effects of integrating the UAS unit into the unit were noted and specifically lauded during the out-brief to the chain of command. The integration of the UAS into the CAB SOPs, pilots' briefs and overall flight operations has demonstrated that when commanders, senior standardization and safety personnel are involved in UAS operations, the outcome is positive, leading to a more tactically proficient and cohesive unit.

There is no doubt the experience of manned aviation has been slow going in terms of fully integrating UAS into manned aviation units. The integration will not only be required in the regulatory, doctrinal, and training publications but a mindset to fully integrate UAS into as part of the unit under the same SOP. Commanders, standardization and safety personnel at all levels will be required to reach out to assigned UAS units and offer the same mentorship and oversight of the standardization and training programs as required by manned units.

--CW5 Paul Druse, DES Chief of Standardization, may be contacted at (334) 255-1582, DSN 558.

Don’t Let the Automation Fly You

Chief Warrant Officer 3 Matt Loiacono

(Editor’s note: Aviation technology in both Army and civilian aircraft has changed since this article was written in 2009, but the lessons learned by this pilot are timeless and apply today as much as they did then.)

As a National Guardsman and regional airline pilot, I have the opportunity to straddle several decades of automation in the matter of a few hours.

In the Guard, I am lucky enough to fly the OH-58A (yes -‘A’-, not ‘C’ or ‘D’) dating back to 1970. When I fly as an airline pilot, I fly a Canadair CRJ-200 which is a 50 passenger jet with a moderately automated flying deck from the early 90s.

Compared to the OH-58A, the cockpit automation of the CRJ is ‘Star Wars’ technology. While the mission equipment on the OH-58A is getting continuously updated with moving maps, third generation FLIRs, and complex law enforcement radio units, the operation of the aircraft itself is virtually the same as it was 38 years ago.

The CRJ, on the other hand, is extensively automated and has computers integrated into nearly every function a pilot needs. In the CRJ you become a ‘systems manager’ and assume ‘stick and rudder’ operation generally only on take-off and landing phases.

When climbing or descending, you get a tone 1,000 feet before the altitude that has been entered into the altitude selector. This, along with the ‘pilot flying’ call out of: “One thousand to go,” are two items designed to keep the crew in the loop.

Another helpful automation feature of the CRJ is the blinking altimeter setting display. The altimeter setting displayed on the primary flight display begins blinking prior to the aircraft climbing or descending through 18,000 feet. This is to alert the crew to set the appropriate setting because of the use of 29.92 above 18,000 feet altitude. Failing to reset the altimeter to the local altimeter setting on descent can cause large errors when there is a large deviation between the local altimeter setting and 29.92. If the crew becomes distracted with other cockpit duties, loses situational awareness and fails to see the blinking reminder, then trouble can ensue.

On the day I failed all three of the above nothing happened beyond bruised pride, but we could not have been in a worse place to try our luck. I was the ‘pilot flying’ (PF) on a flight from Buffalo, N.Y., to LaGuardia International Airport in New York City. During the Rockdale 2 STAR, we were given a last minute hold at VALRE intersection as published but with 10 NM legs. In violation of the procedures outlined in our flight operations manual, as the PF, I became overly focused on the programming of the flight management system (FMS) for the hold. The captain encountered an error in the hold programming that she had not seen before. In the recent past I had watched another captain clear this particular issue and began to explain the procedure to this captain.

We had already briefed the approached listed on ATIS and loaded the ILS 04 approach at KLGA in the FMS. Due to the associated hold at GREKO (MAP holding fix for ILS04), the FMS took an extra step to correctly establish the assigned hold at VALRE given to us by ATC.

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After the hold programming was completed, we discussed the 45 minute expect further clearance (EFC) that ATC advised, fuel considerations, and the possibilities of diversion airfields. Because I focused too much on the programming of the FMS, we missed the "18,000 descending, altimeters 30.14" call. I did not prompt the other crew member to switch her setting as well. After we entered the hold and flew several circuits we were given a second descent with an improper altimeter setting. The setting in the primary flight display (PFD) was 220 feet off the local setting because it was still set at 29.92. Once noticed, I immediately corrected the error. ATC did not query us nor correct us and we had no traffic collision avoidance system (TCAS) warnings.

While our altitude error was not extreme and did not endanger other aircraft, it was bordering on the level that begins 'certificate action' (suspension, revocation, etc.) on the part of the Federal Aviation Administration. While I need to keep my career intact and certificate action would be unfortunate, the consequences of this in perhaps the most congested airspace on earth was bad. We were flying in the vicinity of LaGuardia, Newark and JFK. The ATC system there is very compact and usually operating well above 100 percent of its capacity.

There were several causal factors that lead up to the situation we found ourselves in, the overriding issue was my failure to maintain situational awareness because of my overconfidence in the automation systems. Because I didn't stay in my lane and relied on the automation to do everything while we as a crew corrected a 'software glitch' in the FMS programming, we descended 220 feet below our assigned altitude. Everything looked right on the surface. The altitude shown on the PFD was the right number. It was just useless information because the altimeter setting next to it was wrong.

There are several different methods I could have used to correctly perform my duties and show the captain what I had been taught just a few days prior. When I identified that the captain was experiencing difficulties I could correct, I should have stepped back and assessed the flight environment (past, present, & future) and the timing and sequence of upcoming critical tasks. When I had 're-caged my gyros' and with an updated view of the current situation and the next few minutes of our flight, I could have prioritized the required tasks (transitioning to local altimeter setting & subsequent level off) and corrected the FMS programming when workload subsided. Once we passed through 18,000 feet, had the altimeters set correctly, and leveled off; I could have begun to help fix the problem.

Another possibility was to transfer controls to the captain and corrected the issue myself. This would have saved critical time by distributing workload during a dynamic period of high demands, so that one person was always primarily focused on flying the plane. Upon arrival at the gate, with passengers safely offloaded, I could have explained why the problem arose and how I fixed the FMS issue with no distractions or degradation to operations or safety. This is a direct correlation to my days flying AH-64As, where both pilots could become fixated with an issue inside the aircraft and the one flying let his duties become secondary to fixing the issue.

While automation is a great tool if it is used properly, when used as a crutch it can lead you down a path of complacency.

Class A – C Mishap Tables

	Manned Aircraft Class A – C Mishap Table									as of 20 Apr 14
	Month	FY 13					FY 14			
		Class A Mishaps	Class B Mishaps	Class C Mishaps	Fatalities		Class A Mishaps	Class B Mishaps	Class C Mishaps	Fatalities
1st Qtr	October	1	0	7	0		0	1	2	0
	November	0	1	5	0		3	0	5	0
	December	2	1	0	0		1	0	3	0
2nd Qtr	January	0	0	6	0		3	1	2	4
	February	0	0	2	0		1	0	3	0
	March	2	1	5	6		1	2	0	0
3rd Qtr	April	1	1	6	2				2	
	May	0	0	6	0					
	June	1	1	4	0					
4th Qtr	July	0	0	7	0					
	August	1	1	9	0					
	September	0	1	1	0					
	Total for Year	8	7	58	8	Year to Date	9	4	17	4

UAS Class A – C Mishap Table									as of 20 Apr 14
	FY 13					FY 14			
	Class A Mishaps	Class B Mishaps	Class C Mishaps	Total		Class A Mishaps	Class B Mishaps	Class C Mishaps	Total
MQ-1	5	1	0	6	W/GE	2	1	1	4
MQ-5	2	0	3	5	Hunter	1			1
RQ-7	0	4	10	14	Shadow		6	3	8
RQ-11					Raven			1	1
RQ-20	0	0	6	6	Puma			1	1
YMQ-18									
SUAV					SUAV				
Aerostat	2	3	1	6	Aerostat	1		1	2
Total for Year	9	8	20	37	Year to Date	4	7	7	17

TGT limiting and warning devices.

A few years back there was a Class A accident with fatalities involving a UH-60:

While initiating a go-around under night vision goggles from a mountaintop helicopter landing area, the pilot on the controls applied excessive forward cyclic and collective, entering the aircraft into a descent with a 19-degree nose low attitude. When additional collective power was applied, the rotor rpm decreased and the aircraft descended, impacting a rock formation.

Essentially, the aircraft exceeded the power available for the maneuver that was being performed. The engines reached the TGT limiting value, fuel flow was regulated to hold that value, the crew asked for more power through their application of the collective, power wasn't available, the rotor bled and the aircraft crashed. No question that there were errors made in the application of power and improved situational awareness on power management would go along way to prevent future occurrences of this type of event. Sounds good, done deal - except - this type of event has occurred time and time again over the last 30 plus years. Let's take a closer look.

Although all of the big four (UH-60, AH-64, CH-47, OH-58D) address TGT limiting in some form or fashion, it's the UH-60 and AH-64 that actually limit during the production of power. From the Black Hawk operator's manual: The temperature limiting system limits fuel flow when the TGT TEMP reaches the dual engine 10-minute limiting value of approximately 866°C. The automatic contingency power limiting will switch to a higher single engine 2 ½ minute temperature limiting value of approximately 891°C when the opposite %TRQ is less than 50%. Fuel flow is regulated to hold a constant TGT. With the ENG POWER CONT lever at LOCKOUT, the automatic TGT limiting system is deactivated and TGT must be manually controlled.

The description is similar in the Apache manual (should be – it's the same engine) but they do caveat one very important note: *An impending engine TGT limiter activation will not provide any cues prior to functioning.* Performance limiting will continue to display normal NG and oil pressure indications; as power demand increases, NP and NR will collectively decay and the TGT will remain at the engine limiter setting; torque indications will vary as a result of collective manipulation. Proper use and understanding of the PERF page and the application of PERF calculations will significantly reduce the potential for engine performance limiting. Caution must be exercised when operating close to an engine performance limit. For example, when operating near the dual engine TGT limiter setting, a gust of wind from the aircraft's rear or left, or an activation of the engine anti-ice could result in a reduction of available engine power.

Basically, under normal circumstances, the engines will limit their power at the 10-minute limiting value. Under single engine conditions it will allow your good engine to go to the 2½ minute temperature limit. If you want to bypass limiting altogether ,you have to go to LOCKOUT and control it manually. You will also be controlling your NP manually as well.

I was a big fan of TGT limiting when I got out of the Black Hawk transition 30 plus years ago. Never having to worry about exceeding TGT limitations appealed to me. I'm sure there were maintenance advantages. The A model had plenty of power to shuttle around a full load of troops. Our PPC wasn't as refined as it is today, but careful planning, especially with sling-loads, prevented

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most occurrences of decreasing RPM R conditions due to TGT limiting. But they did occur. Ten ships in a PZ trying to pick up a heavy load would tax the aircraft. Apaches coming out of FARPs, fully loaded, faced much of the same. The same could occur occupying battle positions with narrow power margins and encountering not so favorable winds. Later, as performance improved with upgraded aircraft models, the load requirements also increased. Slim power margins still remained with the emergence of more challenging operating environments. High and hot became the expectation, not the exception.

Flying an approach with slim power margins to the taxiway is pretty straight forward when all you have to do is monitor approach angles and engine performance. It becomes a whole new animal under goggles with talcum dust climbing your windshield, turbulence from other aircraft in the formation, and mission urgency pushing your limits. Your visual senses become saturated as the complexity of the situation rises. Your scan can become more channelized omitting or not comprehending some of the information you are monitoring, especially the info that requires concentration and interpretation, like many of our numerical digital displays.

I am no longer a fan of TGT limiting. My simple rationale is this: It restricts access to power that could be usable but is not available - by design. Segmenting the bands of limits (10 min, 2½, 12 sec) makes little sense. If both engines are on line you can go to one limit, but if only one engine is operating you get to go to a higher setting. I don't think the temperature comfort level in an engine cares if one or both engines are online when a temperature is applied to it. Generally, that little extra you get in the single engine zone you don't need for 2½ minutes, just a few seconds to get out of a difficult situation. Something to get you through the dust cloud a little quicker or handling that unexpected wind gust or change in direction. In some occurrences there may be a need to pull more than the maximum posted limit to prevent a mishap. Over-temping engines should always be preferable to having an accident.

Compounding the issue of having engines that limit themselves is the fact you don't get a heads up when it is activated unless your focus is glued to the gauges. There are no warnings as you approach a TGT limit. In the spotlight mishap for this article, the low rotor audio was the main indication the accident crew noticed when they were in performance limiting. Under their circumstances, the warning occurred too late in the accident sequence to overcome. The rotor was already well below operating parameters to recover at their altitude. Had the crew received an audio prior to activation of limiting rather than at the low rotor indication, measures might have been taken to adjust the demands placed on the aircraft.

So what am I trying to say? Yes, responsibility lies with the pilots to monitor their power requirements and adjust as necessary. How about a little help to the aircrews that are placed in those narrow power margin situations where high visual work loads tend to cause one to rack and stack the critical tasks as they pop up? OH-58D and CH-47s have limiting during starting but no top end limiting. What they do have is advisories/warnings that tell the pilots when operating limits are being approached. Integrating a similar system into the Black Hawks and Apaches would add situation awareness to the crews during critical times of their flight and allow adjustments to be made before a more dangerous emergency develops with decreasing RPM R.

Do I conceive a change to the fleet that would disable TGT limiting functions and/or add advisories when limitations are being met? That would be nice, but of course not. Would I like the acquisition folks who will be developing the follow-on engines and upgrades to take this into consideration? Absolutely.

--Robert (Jon) Dickinson

Human factors - errors in judgment 22 Aug 1984 Flightfax

The following article by L. Homer Mouden and John H. Enders, Flight Safety Foundation, was adapted for our readers from **Flight Safety Digest.**

It is only relatively recent that the term "human factors" has really become recognized as a discipline in its own right within aviation. Earlier aviation human factors work was often done in an incomplete fashion and within a highly skeptical aviation community.

Evolution years

In the years following World War II, the continual search for higher performance military aircraft also placed more demands upon the control systems and the display of flight and systems information in the cockpit.

This evolution was happening to the airplane, not to the man. No such improvements were concurrently taking place in man's physical capabilities: his speed of reaction, the power in his muscles, the strength of his skeletal structure, or the overall capacity of his brain. Today, we are operating newer, more sophisticated aircraft with the same type of human beings. We face the problem, therefore, of making it possible for that same human to assimilate the vast amounts of information necessary to make the proper judgments and decisions and to control the modern, high-performance machine in a safe and efficient manner.

At the same time, we recognize that the man is the most versatile factor in the man/ machine flight "system." If properly maintained, the machine will repeatedly operate as designed. Man is less predictable. He is subject to moods, to the lack of timely information, to fatigue, to illness, and to damage to his ego. Yet, the human mind possesses remarkable capabilities to receive, process, and store information, to recall that information and use it in a decision-making process. Judgment is a unique attribute of the human mind, drawing on far more bits of information and experience and making decisions based upon the assembly of this knowledge and experience than any computer yet designed.

We tend to think of human error mostly occurring in the cockpit. We used to call it "pilot error." We tend to forget that human error can be - and often is - committed in design, in maintenance, in ramp servicing, in weather forecasts, and even in the board room or operations directorates. Human error on the flight deck gets most of the attention, however, because that is where everything comes together to present the pilot with a decision problem at a critical time in flight.

With adequate training and a thorough knowledge of the capabilities and limitations of himself, the aircraft, the environment, and the operating system and if he has received timely and effective information - each crewmember will be able to exercise good judgment in evaluating any operating problems, and taking the correct action. Then why do they fail?

Human judgment factor

We have built much of our safety record on lessons learned from accident investigations. Whether the probable cause was determined to be materiel failure, power plant failure, pilot confusion, or inadequate fuel load, there was a human judgment problem associated with it.

Unfortunately, accident investigators are sometimes unsure why the flight crew took certain reactions that have been deduced from an examination of the wreckage. The tragedy about

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accident-derived information is that it is after the fact. Incident data, on the other hand, can be a gold mine of information. Incidents that involve design faults or maintenance problems are generally shared - eventually. However, if we are concerned about human error and want to collect incident data about human mistakes, the attitude quickly changes.

Admitting a mistake is sometimes a difficult thing to do. So, every day, somewhere, people are making mistakes. In the design process, mistakes are made, but several levels of checking catch most of the errors. In manufacturing, mistakes are made, but there are procedures for detecting faulty parts or misassembled pieces.

Operational disadvantages

In maintenance, a mechanic or engineer may make a mistake, but inspection procedures are developed to discover these mistakes. When we get into the operational regime, however, the pace quickens and mistakes do not enjoy the luxury of comparatively leisure re-inspection.

If these potentials for incidents or accidents were known before they eventually became an actual incident or accident, it might be possible to analyze them and identify the real reasons why they happened. It would then be possible to identify the actual contributing factors.

With an accurate indication of what occurs, the frequency of similar occurrences and the benefit of self-analysis by the individual involved as to why it occurred, it should be possible to identify the real contributing factors even human factors. Was it a design deficiency, inadequate marking, insufficient knowledge of the system or procedures, or information which had been presented in such a way that it could be misunderstood?

Such questions can seldom be answered with the knowledge gained from one single accident or incident, but all are the result of errors in judgment somewhere in the system.

Pilots, engineers, controllers, and, in fact, all employees of an organization know this. And, yet, they are often reluctant to disclose the information which could contribute to corrective action.

Incident reports are some of the most valuable tools available to management for assessing the validity or effectiveness of an airline's policies, procedures, and practices. However, unless all incidents are reported objectively and factually, an analysis of such incident reports as are available could present a false or unreliable picture of the real problems.

Thus, any program that can encourage the reporting of incidents, occurrences, or events that could have been serious or hazardous will assist in evaluating the potential problems. If these are identified and can be eliminated or modified, the next catastrophic accident may have been averted. We may have increased the overall margin of safety for one flight-or for the entire aviation industry.

Army hazard report

The Army has a means of reporting aviation hazards. The Operational Hazard Report (OHR) , DA Form 2696- R, can be signed or submitted anonymously. The purpose of the OHR program is to obtain information pertaining to mishap-producing conditions before mishaps occur and to take timely corrective action to change or eliminate the conditions. The OHR program has brought about many changes in aviation operations, maintenance, and systems during its lifetime, increasing the margin of safety for the aviation user.

There are many aviation hazards out there yet to be identified. Old ones abound and new ones crop up every day. You see them, but do you report them so they can be corrected?

Selected Aircraft Mishap Briefs

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

Observation helicopters

OH-58D

-Crew was conducting take-off during NVG environmental training when they experienced dust conditions (at mast-torque limit). Aircraft entered an uncontrolled descent and contacted the ground hard. Aircraft came to rest upright but sustained separation of the tail rotor and vertical fin. (Class A)

Attack helicopters

AH-64D

-Aircraft experienced an Nr exceedance (132%) during descent for landing. Crew was able to land w/o further incident. Component-replacement required. (Class B)

-On approach, aircraft lost altitude and contacted the ground with the tail wheel. Aircraft sustained damage to the tail and left main landing struts, gun turret, and rear airframe mounts. Suspect aircraft experienced rotor wash effects of Chalk 1. (Class B)

Unmanned Aircraft Systems

RQ-7B

-Crew experienced a suspected engine failure during flight and initiated the FTS. System was recovered with minimal damage. (Class C)

-Crew lost link with the system while loitering in preparation for landing. UA descended to ground contact on a public road and was struck by an approaching vehicle. UA was destroyed and the privately owned vehicle sustained minor damage. No reportable injuries. (Class C)

Aerostat

-Tether snapped at the base trailer as the system was being lowered in response to a lightning advisory and elevated winds. Aerostat descended to the ground. Payload was destroyed. (Class C)

FAA Safety Briefing is the FAA safety policy voice of non-commercial general aviation. Published six times a year, FAA Safety Briefing, formerly FAA Aviation News, promotes aviation safety by discussing current technical, regulatory, and procedural aspects affecting the safe operation and maintenance of aircraft. Visit http://www.faa.gov/news/safety_briefing/

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

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