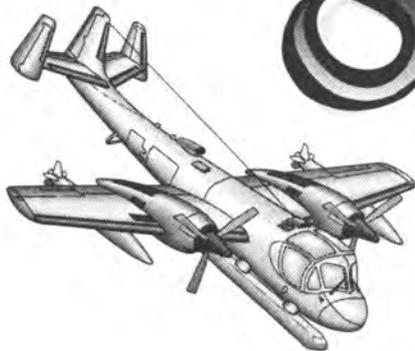


FlightFax

REPORT of ARMY AIRCRAFT ACCIDENTS

June 1994 ♦ Vol 22 ♦ No 9



The time to think about and check your aviation life support equipment (ALSE) is before the flight, while you're still on the ground and have the opportunity to correct any deficiencies. Are you wearing or do you have all the required items, do you know how to use them, and will they work if you need them? An I-think-so or they-should-work answer isn't good enough. If you can't answer these questions with an unqualified "yes," it's definitely time for you to get back to the basics of ALSE: know your equipment, know how to use it, and know how to wear it properly. Failure to do so could put your life in serious jeopardy in the event you were to be faced with a survival situation.



It
could
be a

Matter of Survival



ALSE—back to the basics

Some kind of ALSE has been around as long as aviation itself. Early aviators quickly realized that if they got sand or blowing debris in their eyes, they wouldn't be able to see and if they hit their head a little too hard, their flying days could be over. Simple common sense compelled most early aviators to wear

goggles to protect their eyes and leather helmets to help protect their heads.

Today's Army aviator is equipped with ALSE that offers a lot more protection than that which was available to the aviation pioneers. However, one thing hasn't changed: aviators must be willing to properly wear and know how to use their life support equipment for it to function as designed.

The need for ALSE

Several recent accidents indicate the need to reemphasize the importance of ALSE and the value of training with ALSE. A lack of training on the proper use of life support equipment and selectively ignoring Army regulations and unit SOPs requiring the use and wear of ALSE can seriously jeopardize a crew's chances of survival should they be involved in an accident.

■ While conducting a night training mission in marginal weather, an AH-64 crashed near a farmhouse. Both crewmembers were injured and were unable to contact a sister aircraft because their PRC-90 radio did not work. Fortunately, nearby residents had heard the crash and called 911. Further inspection of the crew's survival vests showed that several required items were missing, unserviceable, or outdated.

■ During a tactical refueling operation, an AH-64 was destroyed by fire when the refuel assembly separated, sprayed fuel in the aircraft engines, and the fuel ignited. The crewmembers' initial attempt to escape was thwarted by the fire ball. The backseat pilot tried to close the rear canopy but couldn't close it completely when it locked in the mid-range position. Because neither pilot was wearing his visor down during the refueling operation, their facial injuries were worsened. Both crewmembers

escaped but sustained major burn injuries. The front-seat pilot had chosen not to wear any underwear (shorts) as required by AR 95-1. The lack of insulation that would normally have been provided by the extra layer of clothing intensified the pilot's injuries. It was later discovered that several pilots in this unit routinely did not wear undershorts when flying. Although the chain of command and several fellow pilots knew about this practice, no one had made any effort to correct it. As a result, the pilot sustained a dangerous thermal injury that will significantly extend his hospitalization.

■ On a single-ship mission, a UH-60 with a crew of three and a rated passenger on board crashed in an isolated desert environment. In direct violation of AR 95-1, the crew had departed without a single PRC-90 radio on board. The pilot had turned in his radio for inspection and could not get the radio checked or a replacement radio issued before deployment. Luckily, the crew was not injured because they had to walk 14 kilometers down the mountain.

■ While on a night mission in a remote mountainous area in a snowstorm, an AH-64 crashed. The crewmembers survived the initial impact only to be faced with a difficult survival situation that was complicated by PRC-90 radios that could transmit beacon signals but would not receive. To compound the situation, the unit had not anticipated cold weather in a desert environment in April and only hot weather survival kits were on board the aircraft. Even though the external auxiliary fuel tank had ruptured on impact, there was no fire and the crew were able to retrieve their sleeping bags and jackets from the aircraft. To escape the weather, the crew decided to walk down to a lower altitude. Not knowing how long it would be before help arrived, the crew attempted to start a fire to stay warm and help rescuers locate them only to find that the matches in their survival vests wouldn't ignite. The crew survived in these difficult circumstances for several hours before they were rescued. (Note: During the investigation of this accident, all individual ALSE in the group was checked. None of the matches in any of the survival vests worked. All PRC-90s had current inspection dates; however, when tested in the field, none of them would work consistently and transmissions beyond one-half to one mile could not be received.)

■ In several recent accidents, there have also been incidents of crewmembers wearing unserviceable flight gloves—seams in the fingers torn, dirty from preflight oils and grease—or rolled down on the wrist



during flight in order for crewmembers to have access to their watches. In at least two accidents, crewmembers received hand injuries that might have been prevented or the severity lessened if the crewmembers had been wearing serviceable gloves or had been wearing them properly.

For example, in one UH-60 accident and postcrash fire, the PC who was correctly wearing all required protective clothing and equipment escaped through the blaze with only superficial burns to exposed skin. The PI, on the other hand, had worn gloves that were unserviceable—seams were separated on several of the fingers—and had worn unauthorized synthetic pants liners. He received injuries to his hand and both his legs during the fire.

The basics—training and following procedures

How many of you have actually tested the matches in your survival vest, fired a pen flare, laid out the fish net, used the thermal blanket, operated (voice and beacon) the survival radio, or used the items in the medical kit? Often crewmembers are not afforded the opportunity to fire the pen flare because it is too difficult and costly to replace.

Take a look at your equipment and assess your knowledge of its use. Will it be operational and will you know how to use it when your life could depend on it? Obviously, we do not program accidents into our flight plans, so we must be prepared every time we fly. Training on the use of ALSE must be conducted more frequently and

must incorporate actual use of the survival equipment. Aviators must check their flight equipment and ensure they are wearing the required equipment/uniform and that it is clean and serviceable.

Commanders must ensure that crewmembers are following the regulations and unit SOPs requiring appropriate wear of ALSE. Commander support of the ALSE training requirements is essential, and the importance of a strong ALSE program must be continually reinforced.

Remember that aviation life support equipment can't protect you unless it is maintained, worn, and used properly. And you may one day find yourself in a situation in which your life could depend on your ALSE. It can happen to you! Get back to the basics of ALSE: know your equipment, know how to use it, and know how to wear it properly.

POCS: MAJ ERNIE NAGY, INVESTIGATIONS DIVISION, DSN 558-3262 (205-255-3262) AND CW4 STEPHEN V. RAUCH, TRAINING DIVISION, DSN 558-9868 (205-255-9868)



Need more info on ALSE?

Points of contact in the ALSE Project Manager's office are—

- Mr. James Dittmer, DSN 693-9140 (314-263-9140)
- Mr. Kent Wieter, DSN 693-3575 (314-263-3575)
- SSG Stan Marmuziewicz, DSN 693-3573 (314-263-3573)

The address is Aviation and Troop Command, Aviation Life Support Equipment, 4300 Goodfellow Blvd, St. Louis, MO 63120



Taking ALSE to the field

"Hey, Joe, how did the mission go?"

"Fairly well until my mike broke while we were in the battle position. After that, I was just along for the ride. But this will give me a chance to go back to the rear to get it fixed. I probably won't make it back until tomorrow."

"Don't count on going anywhere tonight. The weather is rolling in pretty quick. Maybe Bill brought some extra mikes out."

"No, he didn't. I've already asked him."

Sound familiar? It has probably even happened to you. When an aviator or an aircraft is missing operational equipment, a quick flight back to the hangar is usually the only option. This can be a minor problem when the "field" is near the hangar, but what happens when we deploy great distances from home station? In most units, the ALSE shop is not in the limelight nor is it usually a major consideration when the field operation order comes out.

As the Army continues to modernize with new and upgraded systems, it is also important to look at the mobilization capability for them. I'm sure that some units are ready to deploy at a moment's notice with every contingency accounted for. However, in April of 1990, I was given the opportunity to manage a battalion ALSE shop that definitely was not ready to deploy for sustained ALSE operations in a field environment.

How to deploy the ALSE shop?

I had an NCO who was very conscientious and definitely a worker, and each of the line companies had a school-trained ALSE officer. Although our shop was nowhere near the recommended size, we did have a battalion commander who gave ALSE the emphasis needed for a good program. As each of the line companies got ready to go to the field for a week, we tried a new approach. We acquired three portable prescribed load list (PLL) cases, put together a critical parts list, and sent a case with each company ALSE officer.

This worked well, giving us the capability to replace items as they became unserviceable. However, one big question still remained: If we should be required to deploy to a battlefield situation, how would we be able to take all of our additional tools, spare helmets and assorted parts, test equipment and necessary publications, and so forth?

My NCO and I tossed the question around but we really couldn't find an answer to it. We were just glad that we didn't have to have an answer right then. For about 4 months, everything was fine until one afternoon at about 1645 when my company commander told me to plan on leaving for a while—a long while.

Preparing to deploy

The next day I was told to let the battalion XO know of any shortages that we had in the ALSE shop and to also let him know what items were in higher maintenance. We had 42 PRC-90 radios in maintenance, but that wasn't my highest priority. We needed some mobility!

Wrong time to be looking for mobility, right? We requested an "air mobile (trailer) shop" and that was turned down. I asked if there was anything that had been turned in from a unit standing down. Nothing was available.

Later that day, our S4 came to me and told me to have the ALSE NCO go sign for an M109 van from the brigade. What an answer! We were deploying to Southwest Asia with another brigade, so before we left, our parent brigade gave us all the support we could ask for.

I couldn't have asked for a more industrious NCO. He worked day and night to put shelves, counters, and cabinets in our van. Then while I was working other issues—such as PRC-90 radios and extraction straps—he packed that van like no one else could. I was surprised to see that he had left the walls in the old shop—it was so empty. But we were now definitely mobile.

ALSE in the desert

We arrived in Saudi Arabia and while we were getting settled in, I went to a number of different units to make contacts and find out where the supply lines were. To say the least, I wasn't really surprised to see an entire battalion ALSE shop being run out of footlockers, lockers in tents (shared with the medics), or a small CONEX.

We had indeed been fortunate to get the M109 van. It was definitely an asset to the battalion in maintaining its operational readiness. We had a shop that could be taken anywhere and used anytime. It was also an asset to our convoy operations, as we were able to use the van to pull the QC shop trailer. The unit ALSE officers still had the PLL cases with them as they continued to do the inspections. The van was used to replenish these cases, assist in helmet fittings, and carry larger PLL items as well as all of our shop tools and publications. Our mission was a success, and that success was in a large part due to the fact that we were given the equipment necessary to deploy our ALSE.

Suggestions for ALSE officers

FM 1-508: Maintaining Aviation Life Support Equipment (ALSE): Maintenance Program, chapter 2 states, "The unit must provide mobility for the ALSE shop and its related equipment." Identifying the mobility requirements for the ALSE shop and acquiring the necessary equipment for mobilization are crucial.

FM 1-500: Army Aviation Maintenance, chapter 2 gives a short paragraph of things to be included in a mobile shop. I suggest that the ALSE officer be more specific by beginning with an inventory of all items needed for prolonged maintenance. These items must include test equipment that may be peripheral to your operations (NVG hi/low light test equipment, NBC mask fitting requirements, and so forth). Your unit may have some unique equipment, so plan for these maintenance requirements.

Remember, your command cannot provide mobility if it does not know what the needs are. I recommend that the ALSE officer identify two or three alternative pieces of equipment that could provide the mobilization needed to deploy the ALSE shop. Document the advantages and disadvantages of each piece of equipment. To a commander, an asset doesn't qualify as an asset until its capabilities are known. After the different alternatives are documented, present them to the commander so that he

or she can identify what alternative would best meet the deployment needs of the unit.

As a commander, it is to your unit's advantage to have the best type of vehicle identified to deploy your ALSE shop. The next step is requesting the vehicle. As units draw down and equipment becomes excess, this could be a good time to requisition the equipment necessary for your mission.

Concurrently, a change in the Modified Table of Organizational Equipment should be requested. This change will solidify to commanders at all levels what is required for your unit to perform its mission while deployed.

I hope these suggestions will help ALSE officers and commanders make some dynamic changes that will assist them in their mission. Waiting until the phone call comes for your unit to deploy may be too late. As a commander or ALSE officer responsible for mission success, can you really afford to wait?

POC: CW3 JAMES K. ADDINGTON, ASD CLASS 94-01, DSN 737-7270

ALSE Technician Course



The Aviation Life Support Equipment (ALSE) Technician Course is designed to develop the skills and knowledges required for a soldier to efficiently and safely perform ALSE tasks. The ALSE course has 18 instructors with a combined experience of more than 50 years. Since the school began in March 1982, over 6,000 students have graduated with an additional 500 graduates projected for 1994.

Course description

A description of the ALSE course is in DA Pam 351-4: U.S. Army Formal Schools Catalog. Members of the Active Army and Reserve Components are eligible to attend. For further information on course eligibility requirements, see AR 611-101 for commissioned officers, AR 611-112 for warrant officers, and AR 611-201 for enlisted personnel. Attendance is by DA selection, and students selected are given a class number at least 6 months prior to the class start.

The ALSE course is divided into three training phases of approximately 9 days each. Each phase includes two examinations with a possible total of 1,000 points for the course.

■ A phase includes course introduction, ALSE management and operations, publications, forms and records, and supply procedures.

■ B phase includes flotation equipment, anti-exposure suits, first aid kits, survival kits, survival vests, radios, harnesses, and body armor.

■ C phase includes the survival training program, helmets, chemical masks, oxygen equipment, flight clothing, new systems, and ALSE shop setup.

The additional skill identifier 1F is awarded to commissioned officers who complete the course, H2 to warrant officers, and Q2 to enlisted personnel.

A word of advice for commanders

A common problem is that there just aren't enough ALSE-qualified personnel. And qualified ALSE technicians are essential to ensure that a unit has a comprehensive ALSE program with a top-notch ALSE shop. A simple check of the DA Form 2A may reveal unknown qualified personnel.

Commanders should not wait until their ALSE technicians receive PCS orders to arrange for replacements. A DA Form 4187 (Personnel Action) should be completed on newly assigned soldiers so that after the soldier completes the course, he or she will have 2 or more years of retention in the unit.

Course location and phone numbers

The course is taught at the Department of Aviation Systems Training, U.S. Army Aviation Logistics School, Fort Eustis, VA. Students selected to attend the course should report to Building 1018, G Company, 71st Transportation Battalion.

For additional information concerning the Aviation Life Support Equipment Technician Course, call DSN 927-3379/4655 (804-878-3379/4655) or FAX 927-1597.

—ADAPTED FROM U.S. ARMY AVIATION LOGISTICS SCHOOL
Quarterly Update

ALSE— it's an ASO's responsibility too

The "ALSE—back to the basics" article in this issue of *FlightFax* describes several failures of unit ALSE programs. These failures were not just the responsibility of the ALSE officer. As your unit's ASO, you should also realize that these situations illustrate shortcomings in the unit's safety program, and that is your responsibility.

Regulatory responsibilities

ASO participation in and supervision of the unit's ALSE program is essential and clearly required by Army regulations. AR 385-95, paragraph 1-6(c)(18) states the ASO "monitors unit ALSE and related survival training programs." AR 95-1 adds in paragraph 7-1h that "Aviation Safety Officers will monitor all aviation activities to ensure the proper use of protective equipment and ALSE."

Reevaluating ALSE

Does your unit safety program include a strong ALSE program? Does your unit have an ALSE steering committee? If so, are you a member? Ask yourself when was the last time—

- You really spent time talking and listening to the ALSE officer about the ALSE program?
- You went to the commander with an ALSE issue?
- The commander spent any time in the ALSE shop?
- The unit did hands-on training with any piece of their life support equipment?
- You spot-checked individual aviators for knowledge on the use of their ALSE?

ALSE program weaknesses may involve inadequate facilities, supply budget problems, insufficient personnel and equipment, maintenance deficiencies, or training deficiencies. As the ASO, your relationship with the commander gives you the access you need to bring these or other critical ALSE issues directly to the commander.

Receiving the attention it deserves

Make sure that ALSE receives the attention that it deserves in your unit. One unit found that because their ALSE officer was assigned to one of the platoons and therefore rated by the platoon leader, the ALSE officer

was under pressure to put more emphasis on platoon missions than on ALSE duties. Consequently, the unit ALSE program suffered. The safety officer identified this system defect and recommended the supervision of the ALSE program be given to the ALSE officer's platoon leader. As a result, the platoon leader gained a new perspective on the value of the ALSE program.

Deploying ALSE

A major lesson learned from Desert Shield/Storm concerned ALSE. The old axiom "train as you fight" applies to the ALSE program. If you leave the ALSE program (and the ALSE shop) in garrison when you deploy to the field, your transition to combat will suffer predictable consequences. Be sure to read the article "Taking ALSE to the field" for information on one unit's experience in deploying its ALSE to the desert.

Weak ALSE programs can contribute to the severity of injuries incurred during accidents or lessen the chances of survival should your crewmembers be faced with a survival situation. Members of your unit as well as your commander expect you to identify and eliminate problems before they result in injury or damage. Reexamine your ALSE program and accept your responsibilities for it.

Changes to Army accident investigations

The requirements and procedures for investigating, recording, and reporting Army accidents have been revised. AR 385-40 has been updated to reflect the changes instituted by Department of Defense Instruction (DODI) 6055.7. DA Pam 385-40 will replace DA Pam 385-95 and will include the procedures for conducting ground accident investigations. Both documents are due to the field in July or August 1994. The following is a brief description of the major changes:

■ The Army Safety Center (USASC) has developed an Abbreviated Aviation Accident Report (AAAR) to replace the preliminary report of aircraft mishap (PRAM). The AAAR will be used for reporting—

- Class C, D, E, and F accidents and incidents.

Note: Class F is new and will be used for reporting FOD incidents occurring to turbine engines.

- All aircraft ground accidents/incidents.
- Class A and B flight/flight-related accidents in combat when the DA 2397 series is not practicable.

■ An Abbreviated Ground Accident Report (AGAR) has been developed and will replace the DA Form 285 for certain ground accidents. The AGAR will be used for reporting—

- All off-duty accidents.

- Class C and D on-duty ground accidents.
- Class A and B on-duty ground accidents in combat operations when the expanded DA Form 285 would not be practicable.

Note: When the senior tactical commander deems necessary, the AAAR and AGAR may be used for Class A and B accidents that happen during combat. The AAAR and AGAR should reduce Class C and above administrative reporting requirements and should not affect the quality or the extent of the accident investigation.

■ An expanded DA Form 285 report will be used for all on-duty Class A and B ground accidents. These accidents will require supporting documentation such as findings and recommendations, witness statements, photographs, and so forth.

■ Time guidelines for submitting accident reports will also be changed. See figure 1 for submission requirements.

- All Class A and B and aviation Class C accidents will require immediate telephonic notification to the USASC. The only written reports required are the DA

Form 2397 series, AAAR, expanded DA Form 285, or AGAR (as appropriate).

- Class A and B on-duty ground accidents will require an expanded DA Form 285 be sent through channels within 90 calendar days. All other ground accidents will require an AGAR within 30 days.

- Class A and B aviation flight and flight-related accidents will require a DA Form 2397 series accident report be sent through channels within 90 calendar days.

- Aircraft ground Class A and B and all aviation flight/flight-related Class C accidents will require that an AAAR be sent through channels within 30 calendar days.

Note: The AAAR will be supplemented with the appropriate DA Form 2397 series when the accident involves personnel injury, deformation of occupiable space, survival/protective/rescue equipment issues/deficiencies, or any other data the investigation board feels should be brought to the attention of the chain of command for research or corrective action.

AVIATION ACCIDENTS NOTIFICATION & REPORTING REQUIREMENTS & SUSPENSES

ACCIDENT CLASS	PEACETIME			COMBAT *	
	NOTIFICATION	REPORTING		NOTIFICATION	REPORTING
	TELEPHONIC WORKSHEET	DA FORM 2397	AAA REPORT	TELEPHONIC WORKSHEET	AAA REPORT
A	IMMEDIATE - TO USASC (TELEPHONIC NOTIFICATION - NO HARDCOPY NOTIFICATION REQUIRED) DSN 558-2660/2539/3410 OR COMMERCIAL (205) 255-2660/2539/3410	(CA/IAI) 90 CALENDAR DAYS	AIRCRAFT GROUND ACDTs ONLY - 30 CALENDAR DAYS	SAME AS PEACETIME TO USASC OR SAFETY REP. FORWARD	(ONLY WHEN CDR DETERMINES DA FORM 2397 INVESTIGATION/REPORT NOT FEASIBLE) SUBMIT AS SOON AS CONDITIONS/SITUATION PERMIT - DO NOT EXCEED 30 CALENDAR DAYS
B	IMMEDIATE - TO USASC (TELEPHONIC NOTIFICATION - NO HARDCOPY NOTIFICATION REQUIRED) DSN 558-2660/2539/3410 OR COMMERCIAL (205) 255-2660/2539/3410	(IA/CAI) 90 CALENDAR DAYS	AIRCRAFT GROUND ACDTs ONLY - 30 CALENDAR DAYS	SAME AS PEACETIME TO USASC OR SAFETY REP. FORWARD	(ONLY WHEN CDR DETERMINES DA FORM 2397 INVESTIGATION/REPORT NOT FEASIBLE) SUBMIT AS SOON AS CONDITIONS/SITUATION PERMIT - DO NOT EXCEED 30 CALENDAR DAYS
C	IMMEDIATE - TO USASC (TELEPHONIC NOTIFICATION - NO HARDCOPY NOTIFICATION REQUIRED) DSN 558-2660/2539/3410 OR COMMERCIAL (205) 255-2660/2539/3410	N/A	30 CALENDAR DAYS	SAME AS PEACETIME TO USASC OR SAFETY REP. FORWARD	SAME AS PEACETIME
D	N/A (UNLESS SOF ISSUE INVOLVED/SUSPECTED)	N/A	10 CALENDAR DAYS	SAME AS PEACETIME	SAME AS PEACETIME
E	N/A (UNLESS SOF ISSUE INVOLVED/SUSPECTED)	N/A	10 CALENDAR DAYS	SAME AS PEACETIME	SAME AS PEACETIME
F	N/A (UNLESS SOF ISSUE INVOLVED/SUSPECTED)	N/A	10 CALENDAR DAYS	SAME AS PEACETIME	SAME AS PEACETIME
SUBMISSION METHODS	CLASS A-C TELEPHONIC (IMMEDIATE) CLASS D,E,F - IF SOF	MAIL	TYPED OR HAND PRINTED AAA REPORTS BY MAIL/FAX/ OR COURIER/MESSAGE FORMAT/ELECTRONIC SUBMISSION. INCLUDE ATTACHMENTS AS REQUIRED.	SAME AS PEACETIME	SAME AS PEACETIME

* Only when the senior tactical commander determines that the situation, conditions, and/or time does not permit normal peacetime investigating and reporting.

• Aviation Class D, E, and F accidents/incidents will be reported using the AAAR and will be sent through channels within 10 calendar days.

Note: For Class D, E, and F aviation accidents or incidents not involving human error or injury, only the front page of the AAAR is required.

■ Investigation board requirements have been modified. A minimum of three members is required for all Class A and B on-duty ground and Class A and B aviation accidents. A one-member board is required for aviation Class C accidents or for any other accident not requiring a three-member board when the appointing authority deems it warranted.

■ The DA Form 2397 series has been revised in order to capture the data for the modern aircraft and modes of operation. The number of forms required remains the same (15). However, the data required to be reported and the report preparation time should be significantly reduced.

■ The criteria to declare an aircraft a total loss has been revised to less than the fly-away cost (see TB 43-0002-3), regardless of the aircraft disposition by ATCOM. Also, the actual manhour cost will be reported if known; otherwise, \$16 per manhour will be used.

■ The definition of intent for flight has been significantly revised. Intent for flight begins when aircraft power is applied, or brakes released, to move the aircraft under its own power with an authorized crew. Intent for flight ends when the aircraft is at a full stop and power to move the aircraft is completely reduced.

Note: The purpose of this change is to limit flight and flight-related accidents to those situations that occur during the in-flight portion of a mission.

■ Fratricide will be reported as an accident, and the definition and investigation requirements have been incorporated into AR 385-40.

■ The interface between safety/CID/collateral accident investigations and accident scene priority has been outlined in AR 385-40.

■ Promise of confidentiality procedures and form requirements have been changed. Personnel giving statements under enhanced recall and aircrewmembers with access to the controls must be offered a "Promise of Confidentiality."

■ Addresses for shipment of equipment (aviation and ground) for teardown analysis are included in DA Pam 385-40.

■ The responsibility for costs associated with conducting an accident investigation have been assigned by AR 385-40. Basic responsibility for these costs will remain with the appointing authority.

These changes will improve the accident prevention goals of accident investigations, reduce the overall administrative requirements, and align the Army procedures with the other services. This information is only a summary of some of the major changes. Each unit safety officer must take the time to thoroughly review these documents when they become available.

Points of contact

■ Mr. Lee McCown, DSN 558-3913 (205-255-3913), Policy, Installations, and Evaluations Division.

■ CW5 Mark Barker, DSN 558-2376 (205-255-2376), Training Division.

■ Mr. Ray Kennamore, DSN 558-3493 (205-255-3493), Operations.

GROUND ACCIDENTS NOTIFICATION & REPORTING REQUIREMENTS & SUSPENSES *

ACCIDENT CLASS	PEACETIME			COMBAT ²	
	TELEPHONIC NOTIFICATION WORKSHEET	AGAR	DA FORM 285	TELEPHONIC NOTIFICATION WORKSHEET	AGAR ONLY By Any Means Possible (Message, Electronic, FAX, Phone, Hand Carry, Mail)
<i>ON-DUTY</i>					
A	Immediately ¹	Not Required	IAI/CAI - 90 days	Immediately ¹	As Time Permits (Not to Exceed 30 days)
B	Immediately ¹	Not Required	IAI/CAI - 90 days	Immediately ¹	As Time Permits (Not to Exceed 30 days)
C	Not Required	Within 30 days	Not Required	Not Required	As Time Permits (Not to Exceed 30 days)
D	Not Required	Within 30 days	Not Required	Not Required	As Time Permits (Not to Exceed 30 days)
<i>OFF-DUTY</i>					
A	Immediately ¹	Within 30 days	Not Required	Immediately ¹	As Time Permits (Not to Exceed 30 days)
B	Immediately ¹	Within 30 days	Not Required	Immediately ¹	As Time Permits (Not to Exceed 30 days)
C	Not Required	Within 30 days	Not Required	Not Required	As Time Permits (Not to Exceed 30 days)
D	Not Required	Within 30 days	Not Required	Not Required	As Time Permits (Not to Exceed 30 days)

NOTE: 1. USASC must be notified IMMEDIATELY by phone at DSN 558-2660/2539/3410 or Commercial (205) 255-2660/2539/3410 or notify USASC Safety Rep forward (during combat).

2. ONLY when the senior tactical commander determines that the situation, conditions, and/or time does not permit normal peacetime investigating and reporting.

* Army civilian injury only accidents should be reported on appropriate Department of Labor (DOL) IAW this regulation.

Broken Wing award



The Broken Wing award is given in recognition of aircrewmembers who demonstrate a high degree of professional skill while actually recovering an aircraft from an in-flight failure or malfunction necessitating an emergency landing. Requirements for the award are spelled out in AR 672-74: Army Accident Prevention Awards Program.

■ **CW3 Darnell Jordan, Company B, 1-3 Aviation Regiment, 2d AD, Fort Hood.** CW3 Jordan was performing night, single-ship flight instruction in an AH-64. After about 1 hour of low-level flight, the aircraft was flying north over rolling and wooded terrain when the pilot experienced binding and ultimately lost pedal (yaw) control with no associated lights. Thinking CW3 Jordan, the standardization instructor pilot, was giving him a simulated emergency, the pilot began calling out the emergency procedures over the intercom. CW3 Jordan informed the pilot that he was not on the controls and he was not inducing a simulated emergency. After checking the caution warning panel and hydraulic PSI gauge, CW3 Jordan took the controls. He acknowledged the emergency, attempted to move the pedals, and felt feedback in the cyclic. After confirming that the pilot was not on the controls, CW3 Jordan made the necessary radio calls. Seeing a large field in front of his flight path, he elected to make a roll-on landing there. Before touchdown, he requested that the pilot assist him on the controls for the landing. Reducing power, CW3 Jordan executed a straight-in landing without yaw control and with feedback in the flight controls. CW3 Jordan was able to land the aircraft without further incident. Maintenance inspection revealed the aircraft had a faulty yaw servo actuator that caused the pedals to freeze and a faulty DASE computer that may have caused the feedback in the cyclic.

■ **CPT Brendan G. Squire, 377th Medical Company (Air Ambulance), Unit # 15248, APO AP 96205-0021.** The UH-60 was returning to home station while performing a unit support mission. Flying at 800 feet AGL and 120 KIAS, the aircraft was cleared to enter right downwind for landing. While setting up on a 45-degree entry to enter the right downwind, CPT Squire noticed that the No. 2 engine fire T-handle and

the master fire warning light were illuminated. CPT Squire immediately took the controls, declared a precautionary landing, and cross-checked his initial indications of a No. 2 engine fire. During this time, he also initiated a 45-degree right turn to visually verify any smoke or flames that were coming from the No. 2 engine compartment. As he rolled out of the turn, the aeromedical evacuation aidman (who was sitting in the right-side gunner's seat) confirmed that flames were coming from the No. 2 engine compartment. CPT Squire slowed to about 100 KIAS and instructed the pilot to positively identify the No. 2 engine power control lever and place it in the off position. He then instructed the pilot to identify the No. 2 engine emergency-off T-handle, pull it back, and discharge the main fire bottle. During this time, CPT Squire executed an abbreviated traffic pattern in order to perform an emergency roll-on landing. Shortly after initiating the descent for landing, he noticed that the No. 2 engine fire T-handle was still illuminated. His crewmember again verified that flames were still coming out of the No. 2 engine compartment area. While CPT Squire was on short final, tower personnel also informed him that they, too, saw flames coming from the No. 2 engine compartment area. As he was approaching the landing threshold and making the final adjustments for a roll-on landing, CPT Squire commanded the pilot to discharge the reserve fire bottle. The No. 2 engine fire T-handle light remained on. Sensing that the fire was about to engulf the aircraft, CPT Squire touched down at 45 KIAS, applied maximum brakes, and began preparation for an emergency shutdown of the No. 1 engine in order to expedite passenger egress. After the aircraft came to a complete stop, CPT Squire instructed the passengers and crew to immediately exit the aircraft and he completed an emergency shutdown.

Closed-circuit refueling nozzles

A universal closed-circuit refueling nozzle, NSN 4930-01-363-6449, has been procured and is now in stock. However, the universal nozzle will not be issued until interchangeable stock on hand is exhausted.

Closed-circuit refueling nozzles for the AH-64 and UH-60 series aircraft that function properly and provide acceptable refueling rates are still currently available in the supply system. Units should continue to request the closed-circuit refueling nozzles for AH-64 and UH-60 series aircraft using NSN 4930-01-264-2067. When all available closed-circuit refueling nozzles for the AH-64 and UH-60 are exhausted, requisitions will automatically be filled with the new universal nozzle.

Stocks of interchangeable closed-circuit refueling nozzles for the UH-1, AH-1, OH-58, and OH-6 series aircraft have been exhausted. Units should begin requesting the universal closed-circuit refueling nozzle for these aircraft using NSN 4930-01-363-6449.

Do not use the make model unspecified NSN 4930-01-194-8324 when requesting the closed-circuit refueling nozzle or the universal closed-circuit refueling nozzle. This number is for reference purposes only.

POC: MS. MARILYN ARNOLD, AVIATION AND TROOP COMMAND, DSN 693-7535 (314-263-7535)

Use of C-12C/D/F passenger seats in forward- and aft-facing positions

In accordance with AR 70-62, the Aviation and Troop Command (ATCOM) has recently issued an airworthiness release (AWR) allowing all C-12C/D/F aircraft operators to use chair assembly P/N 101-530195-1 and 101-530195-2 passenger seats in both the forward- and aft-facing positions without the 170-pound-occupant weight restriction. Any chair assembly that cannot be verified to match part number 101-530195-1 or 101-530195-2 will be subject to the 170-pound-occupant weight limitation when used in the aft-facing position.

The aircraft flight envelope, configuration, and operating procedures and limitations will be in accordance with TM 55-1510-218-10: Operator's Manual for Army Model C-12A, C-12C, C-12D, and C-12F Aircraft, dated 22 April 1985, including all changes. If any conflict arises between this AWR and the operators manual, this release will govern.

Units should obtain a copy of the AWR and insert it in each aircraft logbook and insert a copy in each aircraft historical record file.

Points of contact:

■ ATCOM—Mr. Paul E. Lutz,
DSN 693-1069 (314-263-1069).

■ USASC—SFC John M. Morthole,
DSN 558-2119 (205-255-2119).

Use of global positioning system

The Aviation and Troop Command (ATCOM) has recently issued an aviation safety action operational message concerning use of the global positioning system (GPS) on all U.S. Army aircraft (GEN-94-ASAM-07, 261935Z Apr 94). According to the message, the Secretary of Defense announced on 8 December 1993 to the Department of Transportation that GPS had achieved initial operational capability as defined in the 1992 Federal Radio-Navigation Plan. On 28 April 1994, phase three of the Federal Aviation Administration (FAA) implementation program began with the publication of approximately 300 instrument approach procedures (IAPs) indicating "or GPS." Thereafter, an additional 600 "or GPS" civil IAPs will be added to National Ocean Survey Flight Information Publication (FLIP) products each 56-day cycle until approximately 3,900 IAPs have been published. (Many of these civil IAPs also will appear in the DOD FLIP.)

This program exists only in the U.S. National Airspace System (NAS). So far, other than the U.S. and Fiji, no other nations have established standards for or approved the use of GPS for any aeronautical purpose. Therefore, outside of the NAS, the use of GPS as a sole or primary means of navigation in civil airspace is not authorized, not even for VFR flights. ATCOM will advise you as other nations adopt the use of GPS within their airspace.

Presently there are no known DOD/U.S. Army global positioning systems designed or configured to meet the equivalent levels of FAA TSO-C129 safety and performance standards required to fly en route, terminal, or nonprecision approaches under instrument flight rules (IFR). Accordingly, until ATCOM can certify a GPS for IFR operations, U.S. Army use of GPS to fly IFR or to participate in the FAA's civil GPS overlay program is not authorized. Also, GPS may not be used to fly IAPs designed for other area navigation systems such as VOR/DME-based or Loran-C radio-navigation procedures.

U.S. Army installations within the NAS desiring to establish GPS overlay procedures for their airfields should provide justification and submit requests to the U.S. Army Aeronautical Services Agency in accordance with AR 95-2, chapter 11. Due to an FAA procedures development backlog, we expect the process to be lengthy. However, validated requests will be prioritized and submitted to the Defense Mapping Agency for publication as production cycles permit. For the near term, we do not expect to develop any pure GPS radio-navigation IAPs IAW FAA Order 8260.38. Neither DOD nor the Army has established a requirement to acquire avionics capable of executing pure, GPS-only instrument approach procedures.

POC: MAJ VICTOR P. MALMBREN, AVIATION AND TROOP COMMAND, DSN 693-2258 (314-263-2258)



Accident briefs

Information based on preliminary reports of aircraft accidents

Utility

UH-1 Class A

H series - Aircraft landed hard following loss of engine power during maintenance test flight. No fatalities.

UH-1 Class C

H series - While preparing for NVG PC evaluation, IP untied main rotor blade and rotated it 90 degrees but failed to remove tiedown. During engine start, crew heard loud noise and performed emergency engine shutdown. Main rotor blade tiedown had struck one tail rotor blade.

H series - During cruise flight, engine chip detector light came on. Crew made immediate landing to open field. Maintenance evaluated debris on engine chip plug and directed removal of engine.

UH-60 Class C

A series - At 10- to 20-foot hover, PC who was on controls in left seat repositioned aircraft to load cargo for service mission. During hover, pilot in right seat asked PC if he saw tree. PC confirmed that he saw tree and turned aircraft nose right to avoid tree. PC moved aircraft to new location and performed normal shutdown procedures. After shutdown, crew chief found damage to all four main rotor blade tip caps. Crew was unaware they had actually struck tree.

A series - During deceleration for approach, nose compartment door came open. Crew completed landing without further incident.

A series - After performing boost-off landing from hover, pilot noted that aircraft was resting in nose-high attitude. Inspection revealed that tail wheel landing strut had collapsed.

A series - During preflight, PC noticed damage on underside of all four main rotor blades. Investigation ongoing.

A series - During landing into dusty unimproved area, crew allowed aircraft to drift off final approach course and strike tree with main rotor blades.

A series - During day VFR flight, aircraft was about 50 feet AHO following tank trail. Crew continued to follow trail as it proceeded up ridge, descending to about 25 feet AHO. At the top of the ridge, trail angled left with pole on the right and trees on the left. Crewmembers were watching pole on right and pilot was banking left to make turn when rotor blades hit trees on left. Pilot leveled aircraft, felt slight

vibration with no unusual aircraft control, and continued to station. Inspection revealed damage to all four tip caps.

L series - During takeoff after brownout landing, crew felt lateral one-to-one vibration. Crew immediately landed and completed emergency shutdown. Postflight inspection revealed one main rotor blade had contacted tail rotor drive-shaft cover.

UH-60 Class D

A series - During NVG desert roll-on landing to unimproved area, pilot maintained excessive rear cyclic control input. IP tried but was unable to apply forward cyclic in time to prevent red main rotor tip cap from contacting tail boom when main gear touched down. Crew heard no unusual noises nor felt any vibrations or control inputs. However, as main rotor was coasting down, crew did hear chirping noise from rotor system. Postflight inspection revealed damage to aircraft.

Attack

AH-1 Class C

F series - Following day VFR training flight, crew discovered damage to two main rotor blades, main rotor hub, mast, and transmission. Investigation ongoing.

F series - During NOE MILES-enhanced battle-drill training, crew was engaged twice by MILES and performed aggressive evasive maneuvers to break engagement. During one engagement, crew allowed aircraft's main rotor blades to descend too close to trees. Unaware of tree strike, crew continued mission and later returned to airfield because of master caution and aft fuel boost segment lights. Postflight inspection revealed damage to main rotor blades.

Observation

OH-58 Class A

C series - While conducting multiship orientation flight, aircraft experienced engine-out light and crew attempted to land aircraft. Pilot was forced to take evasive actions to avoid stand of trees, and aircraft landed hard. Aircraft sustained extensive damage. No fatalities.

C series - During NVG NOE mission, aircraft was lead in flight of two. While executing cyclic climb during takeoff, airspeed bled off, tail of aircraft impacted ground, and aircraft rolled. No fatalities.

OH-58 Class B

D series - Following power-recovery phase of autorotation, aircraft landed hard, receiving extensive damage.

OH-58 Class C

C series - During NVG NOE single-ship training mission, aircraft struck tree at about 25 feet AGL and fell nose first to ground. Crew sustained only minor injuries, but aircraft received extensive damage.

OH-58 Class D

C series - While hovering in battle position, PC applied collective to stop descent caused by downdraft and reduced collective when he noticed torque was at 100 percent. Pilot told PC that he saw torque reach at least 109 percent. Crew completed landing at field site.

Fixed wing

C-12 Class C

D series - During cruise flight at FL 220 under IMC with no precipitation, no weather within 80 nautical miles on weather radar, and minus 8°C, aircrew saw lightning discharge on right side of aircraft and heard thunder. No. 2 generator caution and master caution lights came on, and No. 2 generator went off line. Aircrew reset generator, and it worked properly. No visual damage was noted in cockpit. All controls and all instruments worked normally. Crew continued to destination without further incident. Postflight inspection revealed burn hole on right trailing edge of outboard flap section. Maintenance inspection revealed damage to propeller assembly, engine assembly, and flap bearings.

H series - Crew made normal ILS approach. Landing was normal after touchdown. About 1,200 feet from threshold, aircraft began uncommanded veer to right. PC applied left rudder pedal. As aircraft slowed, right turning tendency increased. Aircraft left runway to right about 1,800 feet from threshold. Left main gear hit runway light. Aircraft traveled about 200 feet through grass and soft dirt. Nose strut collapsed as aircraft came to a stop.

EO5 Class C

B series - While climbing through FL 160, crew observed bright flash and noticed that No. 2 VOR had failed. Suspecting lightning strike, crew elected to terminate

mission and return to base. Inspection revealed lightning damage.

Messages

■ Safety-of-flight operational message concerning flight maneuver prohibition for all OH-58D and improved OH-58D helicopters (OH-58-94-02, 192127Z May 94). Summary: Recent engine flameouts have occurred during maneuvers involving rapid throttle movements. All instances have involved an overhauled engine and/or fuel control. The exact cause has not been determined, but investigations are underway and future updates will be forthcoming as soon as possible. The purpose of this message is to prohibit all maneuvers requiring rapid throttle movements, except in an emergency, for all OH-58D aircraft with overhauled engines and/or fuel controls. Contact: Mr. Lyell Myers, DSN 693-2258 (314-263-2258).

■ Aviation safety action maintenance mandatory message concerning one-time inspection of tail rotor drive shaft hanger bearing, P/N 204-040-623-005, on all UH-1 and AH-1 series aircraft (UH-1-94-ASAM-05, AH-1-94-ASAM-06, 101839Z May 94). Summary: Bell Helicopter Textron has recently been informed of a supplier/maintenance contractor who furnished industrial grade bearings that were marked as the Bell 204-040-623-005 bearings. There is a possibility that these suspect bearings may have been installed on Army aircraft. All UH-1 and AH-1 aircraft must be inspected to ensure that the unapproved tail rotor hanger bearings are not installed. The purpose of this message is to alert the operators of UH-1 and AH-1 aircraft that these unapproved bearings

may have been installed on their aircraft. Contact: Mr. Jim Wilkins, DSN 693-2258/2085 (314-263-2258/2085).

■ Aviation safety action maintenance mandatory message concerning one-time inspection of the 5,000-pound tiedown receptacle assemblies and to provide instructions to correct defective tiedown receptacle assemblies, P/N 114S2893, on all CH-47D, MH-47D, and MH-47E aircraft (CH-47-94-ASAM-05, 251350Z Apr 94). Summary: Two incidents have been reported of crewmembers' safety harness becoming unsecured from the 5,000-pound tiedown receptacle P/N 114S2893 when the tiedown adapter became unscrewed from the tiedown fitting. Upon landing, the tiedown fitting and adapter were visually inspected, and it was found that the tiedown adapter had unscrewed from the receptacle retaining bushing. There was no evidence of sealant on the adapter stud threads, which is required to keep the fitting from unscrewing. Additional investigation revealed that the exact cause of the problem was missing MIL-S-22473 sealant coating on the retaining bushing threads and seizure of the bushing due to paint overspray, allowing the tiedown ring to unscrew on rotation. The purpose of this message is to direct a one-time inspection of the 5,000-pound tiedown receptacle assemblies and provide instructions to correct defective tiedown assemblies. Contact: Mr. Lyell Myers, DSN 693-2258 (314-263-2258).

■ Aviation safety action maintenance mandatory message concerning one-time and recurring inspection of pumping unit, hydraulic, on all CH-47D, MH-47D, and MH-47E aircraft (CH-47-94-ASAM-06, 261246Z Apr 94). Summary: This is a

reissue of CH-47-93-ASAM-03. In addition, this message establishes recurring inspections. ATCOM has received reports from the field of leaking and pressure fluctuations being experienced with the Strato-Power hydraulic pumps. A typical scenario is that during normal flight, the hydraulic system pressure indicates pressure fluctuations from a maximum of 4,000 to a minimum of 2,000 PSI, followed by illumination of the hydraulic flight control segment light. Also, high temperatures in the hydraulic system have been noted when the aircraft is shut down. An intensive investigation is being conducted. The suspect pumps are manufactured by Strato-Power and the serial numbers have a suffix "BO," NSN 1650-01-249-4341, P/N 64WE075102 and/or 938555. Further information and instructions will be disseminated as soon as it is available. Report all failures through the QDR system. The CH-47 has three hydraulic pumps on board and any one is capable of powering the flight controls. The power transfer unit (PTU) can be used in emergency conditions when powered by the utility hydraulic pump or APU motor pump. In the event such a failure occurs, use current procedures in TM 55-1520-240-10, paragraph 9-49. The purpose of this message is to alert users of the potential problem, to implement recurring inspections, and to inspect pump serviceability. The CH-47D has a triple redundant system; therefore, this is a low-risk safety issue. Contact: Mr. Lyell Myers, DSN 693-2258 (314-263-2258).

FOR MORE INFORMATION ON SELECTED ACCIDENT BRIEFS, CALL DSN 558-2119 (205-255-2119).

In this issue:

- *ALSE—back to the basics*
- *Taking ALSE to the field*
- *ALSE Technician Course*
- *ALSE—it's an ASO's responsibility too*
- *Changes to Army accident investigations*
- *Broken Wing award*
- *Closed-circuit refueling nozzles*
- *Use of C-12C/D/F passenger seats in forward- and aft-facing positions*
- *Use of global positioning system*

Class A Accidents through May

		Class A Flight Accidents		Army Military Fatalities	
		93	94	93	94
1ST QTR	October	6	2	2	0
	November	2	3	6	0
	December	0	2	0	2
2ND QTR	January	1	1	0	2
	February	5	2	8	0
	March	1	0	5	0
3RD QTR	April	4	6	0	2
	May	1	3	1	0
	June	0		0	
4TH QTR	July	0		0	
	August	1		0	
	September	2		0	
TOTAL		23	19	22	6



Report of Army aircraft accidents published by the U.S. Army Safety Center, Fort Rucker, AL 36362-5363. Information is for accident prevention

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