

THE COMBAT EDGE

APRIL 1994



Patley '94



THE COMBAT EDGE

Air Combat Command
Safety Magazine

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HQ ACC/DR
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ALCOHOL AND BOATING

Throughout the country each year, over 2,000 safe boating courses are offered by groups such as the U.S. Coast Guard Auxiliary, the U.S. Power Squadrons, the American Red Cross, and individual states. Courses cover many aspects of boating safety — from boat handling to reading the weather. All courses include knowledge and warnings about alcohol and boating.

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ABOUT THE COVER

Here is your chance to let us know what you would like to see on the cover of *The Combat Edge*. Maybe you would like to see a certain type of aircraft, personnel, equipment, or maybe you have some other idea for the cover or even the Center Art. We welcome your suggestions. Just write your idea down and send them to us or call us at: DSN 574-3658 Comm. (804) 764-3658.

APR 94

ACC SP 127-1 VOLUME 2 ISSUE 11

ACCent on Safety

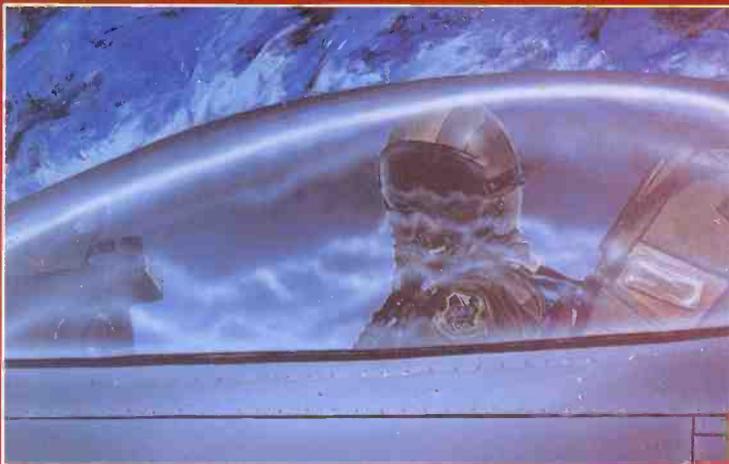
Having just returned from a productive Safety Conference in Israel, it was very rewarding to reconfirm that our operational and safety focus is still second to none and the envy of most other allied programs. The Israeli Air Force, however, did have some very worthy programs worth looking at as benchmarks for a viable and effective mishap prevention program. Their totally open approach to reporting "Significant Events" (basically our HAPS), has yielded significant progress in identifying and eliminating numerous unnecessary risks in their flying programs. This is only one of several programs we here at ACC will be looking at for better application in ACC.

February proved to be a tough month for mishaps. ACC and our gained forces suffered 3 Class A aircraft mishaps. Three aircraft were destroyed, but luckily, no lives were lost as a result. The Command suffered 2 Class A Ground mishaps in which 2 personnel were killed. On the Weapons side, the Command had no Class A mishaps — a well-done for Weapons! We are at present, well behind in accomplishing our Command objectives for "Improving our Safety Performance for FY 94." Again, I can only emphasize that each and every one of you are the keys to a successful and proactive effort to reduce the command's mishaps — our safety professionals cannot do it alone!

We are rapidly approaching the first of our ACC Safety Days for FY 94. As Lt Gen Croker, 8 AF Commander, said in a recent letter to his commanders, "solid, 'meaty', and useful inputs" are needed to make the overall program a success. This month's article will hit the "streets" in April. If you aren't already working on your Safety Day program for May, you are probably behind the power curve. Again, I offer the assistance of the Safety Staff here at ACC to assist you in your efforts.

Finally, the bonny spring weather most of us are enjoying right now is about to change soon to the hot sweltering days of summer. Plan ahead now and get yourself and your people/co-workers ready. Watch your duty schedules, crew rest, and other activities to ensure proper hydration and rest periods are provided. Our people will always be the most important key to our success in mission accomplishment as well as mishap prevention.

*Colonel Bob Jones
Chief of Safety*





Operational and Safety

*Brigadier General William S. Hinton, Jr.
HQ ACC/DR
Langley AFB VA*

Operational Requirements covers a broad spectrum of system improvements and new capabilities for the Combat Air Forces. By tri-command agreement, ACC/DR has the responsibility to develop and coordinate those requirements for the CAF, and to advocate them in the planning and budgeting cycle. Most are focused on combat capability, but many reflect the important impact of safety in current and future weapon systems.

Safety improvements are just as important to us as more effective munitions and more capable aircraft, and they receive appropriate emphasis in our prioritization process. Their importance is fundamental: in peace or war, a crew or weapon system lost as a result of a mishap equals combat capability lost; the result is the same as if it had been shot down.

The bottomline is we need to mitigate the loss of our assets both from hostile action and preventable mishap. I'd like to take this opportunity to describe very briefly how the Requirements Directorate approaches safety, and particularly, cover some programs that offer safety and combat capability improvements in major weapon systems.

The various Theater Commanders (we refer to them as the "warfighting CINCs") rely on HQ ACC/DR to provide them the capability to fight and win quickly, decisively, and with low casualties, when called on by our national command authority. Winning decisively is a bleak hope if safety hasn't been a part of the entire requirements process. The operator must be able to focus on the task, without undue worry that apart from engaging the adversary, his equipment will support him safely. Some programs are purely safety oriented, like the Ground Collision Avoidance System, GCAS. Other systems like Night Vision Goggles and the Combat Edge G-suit are items which primarily

expand the operational envelope, allowing the user to carry out demanding missions more safely than previous equipment or tactics allowed. The result is the same regardless of the intent—better capability available over and over again.

We get involved in the outset of a program (and remember, a program can take as much as 15 years from concept to operational readiness) and ask more than just the "how fast?" and "how much?" questions. We examine operating concept, user interface, human engineering, maintainability, and safety, just to name a few. The Directorate of Requirements is one of the largest directorates in the headquarters because we pull the best folks from the field, bringing significant operational experience to bear on each program. Safety starts at the beginning of each program, and carries through the cycle. Here are a few programs with a brief description to illustrate my point.

Night Vision Systems. Air Combat Command maintains a 24-hour combat capability. This freedom to operate beyond daylight hours and in most weather

Requirements



conditions overpowered the Iraqis and continues to sober would-be adversaries. A key ingredient in this capability is to fly safely, close to the ground, at night. Night vision systems, including LANTIRN (Low Altitude Navigation, Targeting for Infrared, Night), various goggles, and cockpit lighting arrangements, allow aircrews to see and avoid terrain and other obstacles under the darkest conditions, while still providing safe cockpit instrument visibility and interaction. Significant testing in both developmental and operational criteria surfaced the typical bugs for a new system. What limitations must be considered, how good does "acceptable night vision" have to be to meet standards, and what physiological effects does the aircrew experience are all questions that must be more completely answered.

Ground Collision Avoidance System (GCAS). There's an old saying that any competition to see who can fly the lowest must invariably end in a tie. We lose aircraft and aircrews every year to "inadvertent contact with the ground," to quote the accident report jargon. GCAS is a system

designed to give the pilot an extra set of eyes which constantly watch the ground. The system produces a visual and aural warning when the aircraft exceeds a preset absolute altitude (above ground level versus mean sea level).

Identification Friend or Foe (IFF). Murphy's Law of Combat contains the statement that "friendly fire isn't." IFF is a means of identifying adversaries from allies, well before the trigger squeeze occurs. This technology faces new challenges as many potential adversaries operate similar and often identical systems. For example, during Desert Storm, both the Coalition and Iraqi forces flew French-built Mirage aircraft. Now there are former Soviet Block aircraft in the NATO force structure.

Combat Edge. Our high-performance aircraft literally test the limit of human endurance. After continued high-g episodes, pilots experience fatigue and a comparable loss of stamina. This system is designed to deter not only the costly (and often lethal) G-induced loss of consciousness (G-LOC), but also the fatigue associated with sustained, high-g

flight regimes.

Virtual Reality Simulators. Red Flag was built on the premise of getting fighter crews through their first ten combat sorties, for the survival rate doubled after the tenth combat mission. Additionally, a telling fact of training costs is that more fighters were destroyed as a result of training than actual combat in World War II. Simulation is a force multiplier that gives accurate training while reducing the risk of loss in a non-operational environment. This technology is in a growth explosion and promises great training capabilities with less and less hardware limitations.

Each of these systems demonstrate the emphasis on improved combat capability while also providing wider safety margins for the user. Presently, DR is monitoring over 200 Operational Requirements Documents (ORDs). Easily 15% of those documents are directly or indirectly related to safety. That's a sizable percentage, and an appropriate reminder that we take safety very seriously as we look to the future. ■

THEY'RE STILL OUT THERE TELLING ME,

"But it doesn't say you can't..."

Lt Col James D. Teigen, HQ ACC/SEF, Langley AFB VA

It amazes me how often I've heard that phrase used to justify some feat of airmanship. I guess the part that amazes me is the fact that I'm having the conversation with the lucky aviator at all, instead of his next of kin.

I know it wasn't the first time I had heard the phrase, but it was the time when it burned an indelible hole in my memory. It's stayed there since then and maybe now is the best time to pass it on — again.

The crash phone had just rung; we had a T-38 coming home with only the back seater on board. The front seater had ejected during the mission, but we didn't know why.

As the base Flight Safety Officer, I sat near the end of the runway on the hammerhead waiting for the jet to clear the runway. Sure enough, here came a "perfectly good" T-38 without a front canopy, front seat, or occupant. It was a weird sight to say the least. The back canopy was blackened, and I could hardly see the IP in the rear due to the sooting and burning from the student's ejection seat firing.

"If you'll stop there and hold the brakes, I'll climb up the side and shut down the engines for you," I told the IP.

The response was a weak and dejected reply.

After shutdown, I informed the IP of the AFR 127-4 statement for witness interviews and asked him if he wanted to tell me what had happened.

It was a dollar ride (first sortie in a new aircraft) for the student pilot. The training syllabus mission profile called for a rudder effectiveness demonstration. The IP went on to tell me that normally the demo was accomplished with the gear up, but he

always liked to get the student's attention with a fully configured (read: gear down) aircraft. (The difference was a 6 degree rudder throw - clean, versus 30 degree rudder throw with the gear down!) During the maneuver, the rudder is moved to show how effective it can be at slow speeds, like in the pattern. Of course, these are practiced at altitude, and for good reason as our IP learned.

So the IP set up for the demonstration, lowered the gear, and showed how effective the rudder was at slow speeds. He went on to say, "You know, it really does put on one heck of a show!"

The aircraft departed controlled flight.

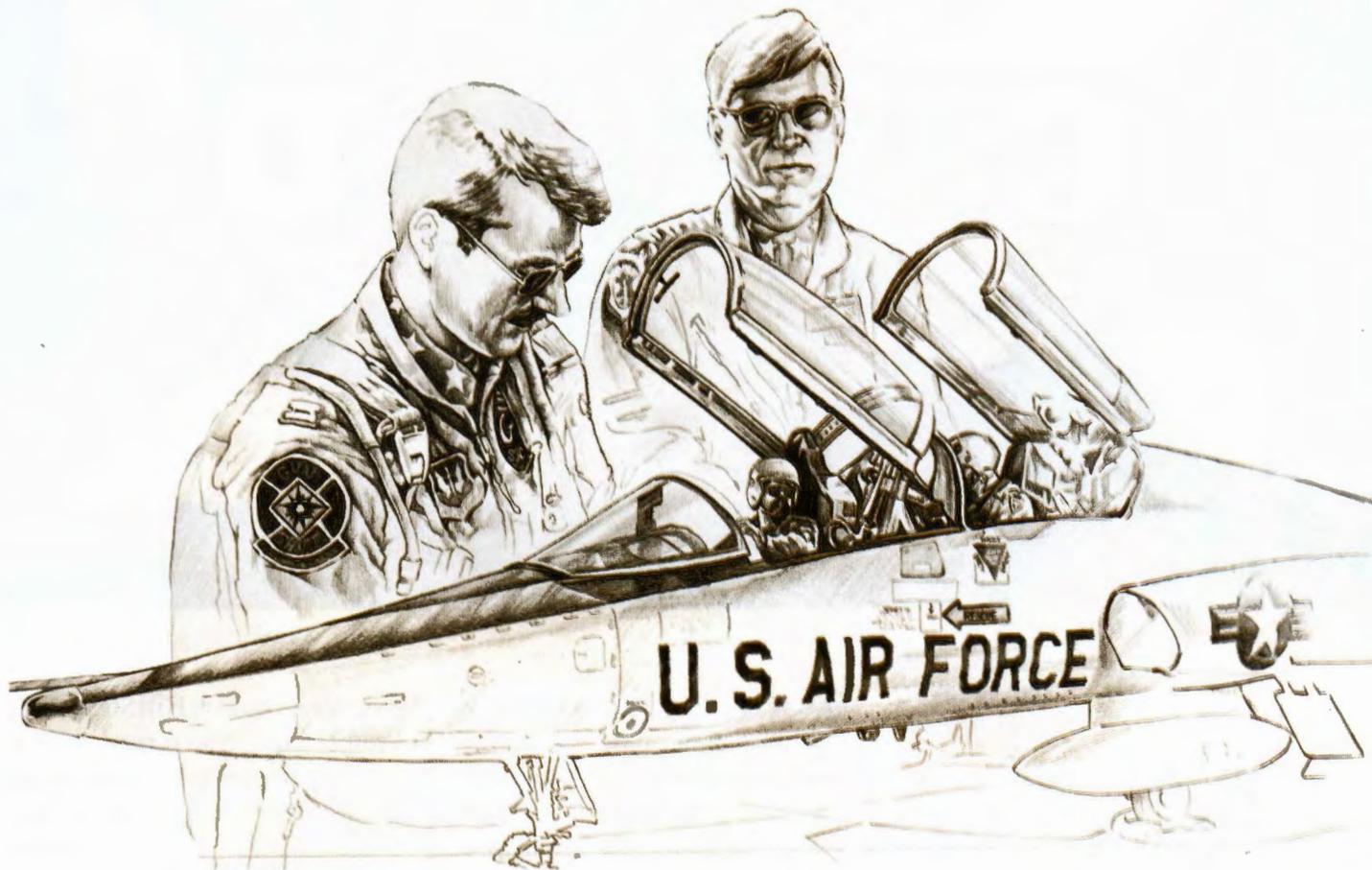
The story got really bizarre about this point. Inverted, right side up, oscillations, nose not tracking, stick unresponsive, you name it, it was a *real wild* ride.

The IP tried all kinds of control inputs, but none worked. He even tried some old T-37 anti-spin and spin recovery techniques; and sure enough, they didn't work either. As I listened to the story, I wondered what the student must have thought looking out over the nose on his first T-38 ride. It must have been a wild one at that.

As they approached 10,000 feet, with still no success in getting the jet to fly, the IP told the student, "I think it's time to get out." That was the extent of the discussion. After all the table discussion and the prebriefs, that was the sole comment from the back seat. The student was waiting, waiting for the IP to go first per tech order guidance.

Nothing. Just the same old wild ride.

The student finally got the idea passing about 8,000 feet MSL and ejected.



The student's ejection helped drive the nose into the recovery zone, then the resultant shift in the center of gravity helped pull the jet out. The T-38 was flying again. It had lost about 20,000 feet in less than a minute!

I asked the IP why he did the demonstration configured.

His reply was those fateful words, "It doesn't say you can't do it....!"

We were lucky; the student got a good chute. The canopy and seat were a write-off, as was the rear canopy. Both the student and the IP survived to fly another day. The plane was repairable. There were no widows to interview.

Needless to say, today the syllabus specifically states that the rudder demo is a gear up maneuver. It also gives direction that the maneuvers specified are to be performed per the guidance. **PERIOD!**

So what's the point of this story?

In the last year and a half, we have had unauthorized airshows, self-designed maneuvers practiced but not perfected, and practicing "what if's." Lest you think this is strictly for the aviators, we've had failure to follow standard maintenance practices, failure to follow technical manuals, taking short-

cuts, failure to get required training, failure to properly supervise, failure to document, the list goes on and on.

It has cost us and the taxpayers hundreds of millions of dollars worth of aircraft, equipment, and too many lives. A common thread throughout was "but it doesn't say you can't..." You know, in all the rule books and technical manuals I haven't seen one that says, for example, that "Lomshavecks" (power-off vertical, rolling maneuver with a tumble recovery) are prohibited either.

The books are written for a purpose. Fly the aircraft in complete compliance with the rules. Do all the required maintenance actions, get all the required training, supervise your people. Doing so will mean that the mission will be accomplished, the aircraft will be returned, and best of all the people will live to work, serve, and fight another day. If you see a need for a new or different way of doing things, ask for a regulation change or a technical order change. Don't go out to wing it and reinvent the wheel.

Let's not meet at the end of the runway (or worse), talking about "but it doesn't say you can't..." ■

CONFINED SPACES

*Mr Cal Faile
HQ ACC/SEG
Langley AFB VA*

No, we are not talking about small rooms, jail space, or personal space. What we really want to talk about in this article is confined space where we may have to work. Sometimes we deal with confined spaces and don't recognize them as such. Read on for the definition of a confined space.

Confined space is defined as space that: Is large enough and so configured that a person can physically enter and perform assigned work; but has limited or restricted means for entry or exit (for example, tanks, hoppers, vaults, and pits are examples of spaces that may have limited means of entry); and is not designed for continuous personal occupancy.

There are many hazards associated with confined spaces. Most of us are well aware of the young girl, shown recently on TV, who fell into an abandoned well and was trapped for many hours. She was only saved from death and/or serious injury by the heroic

efforts of many volunteers working around the clock to extract her. Among the hazards awaiting a person trapped in a confined space are suffocation, dehydration, starvation, hypothermia, and poisonous gas, just to name a few. Any one of these can cause serious debilitating injury or death. Sometimes death is agonizingly slow and painful.

I remember an incident from when I was a young boy. Yes, Judy, I was once a young boy. Seriously, I was riding home from school on the bus one warm, beautiful spring day. I couldn't wait to get my fishing pole and put a line into the water and catch some big fish. I looked around the bus to ask my friend Bill to go with me, but I realized that he was not on the bus. I figured at the time that he had gotten another ride home from school or had to stay after school for some reason. He was always getting into trouble with a couple of his teachers.

When we arrived at Bill's bus stop, his mother was waiting. She asked the bus driver where her son was. He replied that he had seen him walking towards the

abandoned mill on Hill Street with another boy. She turned, with a sad look on her face, and walked towards her home without another word. I didn't think anymore about it and went fishing by myself. Later, I decided to go home early because I wasn't catching the big fish I expected. When I arrived home, my mother was on the phone. She turned and asked me if I had seen Bill and I replied, "No." It was getting late and everyone was getting concerned about him. I sensed that something else was wrong, but I didn't pursue it at the time.

My uncle, a Deputy Sheriff, arrived at the house later that evening just before dark. He knew that I was a friend of Bill's and asked me to help in a search for Bill. I agreed to assist and told him what the bus driver had told Bill's mom. We immediately headed for the abandoned mill. When we arrived, we saw several other people in the area with flash lights. My home town is a small place and the word about Bill got around real fast. I had an idea where to look, so Uncle Ray and I headed to the north end of the

building. As we entered the old mill, we both heard what we thought was a cat meow. We stopped to quietly listen. A few seconds later we heard it again and realized that it was a weak moaning sound coming from somewhere in the darkness. Uncle Ray had the flashlight, so I was following him trying not to fall while stumbling over rubble. After several minutes of searching and calling out with no success, we decided to stop and listen again. After several more minutes, which seemed like an eternity, we called out and waited for a response. Finally, we heard a response that seemed to come from directly underneath us. We pointed the flashlight beam in the direction of the sound. At first, we didn't see anything. Then we saw an opening which looked like part of a culvert, and I wondered what it was doing inside the building. It should be underneath a road somewhere, I thought. Uncle Ray bent down to shine his light into the opening. He said, "I think we've located Bill. Go get help!" I stumbled to the entranceway and called for help. Within minutes we had an army around us. We then realized that what we were looking at was a metal pipe approximately 20 inches in diameter. The pipe went from one part of the plant to another. We later learned that it was used to transfer chemical agents used in plant processes. The problem was that it was narrower at the other end and Bill and his buddy were stuck inside. In addition, the pipe was sealed on the far end. Why they decided to enter the pipe in the first place we may never know. Rescuers had to cut them out with special

metal saws. After extraction and medical examination, the doctor determined that Bill had suffered permanent brain damage from lack of oxygen and possible exposure to chemical residue in the pipe. His buddy, Mike, didn't make it and was pronounced dead at the scene.

I was with my uncle when he broke the news to Mike's family and later to Bill's family. It was only after we notified Bill's family that I realized what a double tragedy this really was for them. Bill's father had been injured in an industrial mishap earlier in the day and had died at about the same time Bill was rescued from the pipe.

Confined spaces, whether on or off the job, have many hidden dangers. For on-the-job operations, you should have an on-going, well established confined space program. For off duty around the home or in the local community, you should teach your kids about the dangers of entering any unknown area or small spaces — especially an area that is dark with no readily apparent means of egress. Community officials should be encouraged to restrict access to such areas and should be required to board up or otherwise positively secure or remove abandoned buildings and similar structures. These areas are just like a magnet, drawing youngsters to them by providing adventures only limited by individual imagination. I am appalled at the number of children who have died in abandoned refrigerators with doors left on and unsecured. In addition, many USAF personnel have lost their lives because they entered con-

finied spaces without the proper clothing or protective respiratory equipment. It's truly a waste of our most valuable resource. It is up to us to stop these losses. If there is any question regarding the safety of the area to be entered, then don't enter it until it is tested and confirmed safe or the proper protective equipment is provided. For additional information on confined spaces contact your local safety office. ■

THE PROCEDURES WORK

Safety procedures and well rehearsed rescue efforts saved a fuel cell repair worker's life. A member of a three-man fuel repair team (three individuals made up the team, two 5-levels and one 7-level trainee) entered a C-130 fuel tank to replace a flapper unit. All team members were task qualified for the operation. The supervisor ensured that tech data was adhered to and that all safety precautions were followed. While attempting to install the flapper unit, the worker noticed that his respirator wasn't working properly. As he began backing out of the tank, he removed his mask to determine the reason for the interrupted air flow. As he drew closer to the dry bay hatch, his body blocked more of the hatch opening reducing the amount of air that could be forced through the opening. The worker eventually lost consciousness due to the lack of fresh air. Realizing that something was wrong, the supervisor immediately made the necessary emergency notifications and began rescue operations. Fire department, maintenance, and hospital personnel arrived within minutes and extracted the worker. Extraction exercises were practiced on a quarterly basis, keeping rescue teams highly proficient. The supervisor's strict compliance with tech data and safety procedures, combined with the well rehearsed efforts of the rescue team undoubtedly saved the worker's life.

PILOT SAFETY AWARD OF DISTINCTION

Capt Bruce T. Desautels, 75 FS, 23 WG, Pope AFB NC



While flying a Functional Check Flight (FCF) of an A-10, Capt Desautels had just completed the manual reversion (emergency flight controls) check and was about to switch back to normal flight when the aircraft suddenly went into an uncommanded 4“G” pitch-up. Capt Desautels attempted to counter the pitch-up by pushing full forward on the stick with both hands; but due to high aerodynamic forces on the control surfaces, the stick would not move from the full aft position and the aircraft continued the pitch-up over onto its back and began a slow roll to

the right. At the top of the inadvertent loop, as the aerodynamic forces decreased, Capt Desautels was able to decrease the “G” loading to prevent the aircraft from stalling. As the aircraft continued through the back side of the loop, passing the 90 degree vertical point and into a 60-70 degree nose low dive, Capt Desautels returned the aircraft to normal flight controls and was able to recover the aircraft. The uncommanded loop and subsequent dive recovery took less than 30 seconds and resulted in an approximate 9,000' altitude loss.

AIRCREW SAFETY AWARD OF DISTINCTION



Capt Kevin C. Nesbitt, Capt David A. Allred, SSgt Steven Scar, SSgt Louis Lucas, SrA Billy Kalow, 41 RQS, 1 FW, Patrick AFB FL

Capt Nesbitt and his crew were returning to Patrick AFB after an HH-3 cross-country training sortie to Savannah GA. Approximately one and a half hours into the flight, flying 500' above the ground and one mile off shore, Capt Allred noticed both engine torque needles dropping to zero indication. As this is indicative of possible transmission problems, Capt Allred notified the crew and turned the aircraft immediately toward land. Capt Allred identified the nearest airport, a small airfield five miles to the west, and directed the aircraft there. SSgt Scar then noted transmission fluid pouring down the

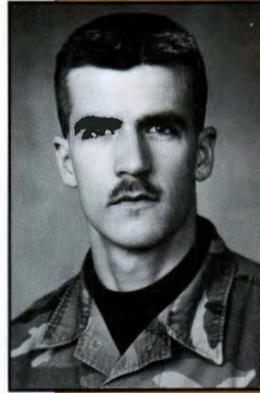
side of the aircraft and smoke coming from the #2 engine bay. Capt Allred declared an emergency with approach control, confirmed winds and relayed the crew's intentions. With zero torque indication and transmission oil pressure dropping to zero, seizure of the engine high-speed inputs to the main gear box was imminent. The crew determined that they would be unable to continue the flight to the airfield, now only two miles ahead. Capt Nesbitt spotted a school football field and, after one pass to assure the field was cleared of people and obstructions, landed the helicopter safely.

CREW CHIEF EXCELLENCE AWARD

SrA Stephen A. Baran, 4 FS, 388 FW, Hill AFB UT

While performing his preflight inspection of aircraft 90-0837, SrA Baran noticed that the cotter pin was missing from the throttle rack assembly. Knowing the severity of this discrepancy and that the aircraft was on the flying schedule, he reacted immediately. SrA Baran notified his expediter of the missing pin and began a thorough FOD inspection of the entire cockpit area. After determining the cotter pin was not in the cockpit, it was replaced and the aircraft was able to fly its scheduled mission for the day. If this cotter

pin had been overlooked and the throttle bolt that it retains had fallen out, the result could have been devastating. An engine auto-acceleration could have occurred. The danger to aircraft and personnel in the vicinity could have been disastrous especially if after-burner had been initiated. Due to his strict attention to detail and continuous safety awareness, SrA Baran located an item that is not part of the preflight inspection and prevented a major incident from occurring.



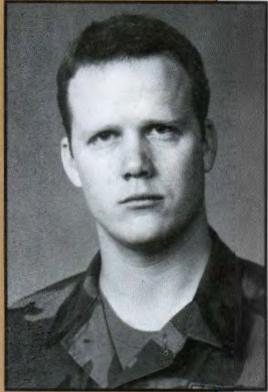
FLIGHTLINE SAFETY AWARD OF DISTINCTION

SSgt Timothy R. Palmore, 33 MS, 33 FW, Eglin AFB FL

I was returning to the repair and reclamation/crash recovery shop after completing some flightline maintenance. It was already dark as I drove the crash truck down the isolated taxi way adjacent to the runway. Just as I drove by the end of the runway, my eye caught something unusual about an aircraft on its landing roll. It took several seconds to focus on the bright light trailing the right main landing gear before I realized the brake was on fire. My training took over. I simultaneously turned on my emergency crash recovery lights and notified the maintenance operations center of the situation. I then coordinated clearance onto the

runway from the control tower and requested fire rescue assistance, and relayed to tower personnel a recovery plan of attack. Using my vehicle's emergency lights as a visual aid, I directed the pilot to the closest area off the active runway for shutdown. After emergency shutdown procedures, I ensured a safe ground egress by the aircrew. I then turned my attention to the blazing brake fire; and since the fire department was still minutes away, I grabbed two fire bottles off the crash truck and proceeded to extinguish the fire. By the time the fire rescue arrived I had the brake fire out.





GROUND SAFETY INDIVIDUAL AWARD OF DISTINCTION

SrA Gary A. Lovely, 729 ACS, 388 FW, Hill AFB UT

During a wing exercise, SrA Lovely deployed with his squadron to the Utah Test and Training Range in field conditions. While working in the area, he noticed black smoke coming from the vicinity of three communications shelters containing more than 1.25 million dollars worth of equipment and three fuel trucks containing 3,600 gallons of fuel. Looking for the source of the smoke, he discovered the top of a ten person tent had caught fire from embers of

the tent heater flu. He quickly entered the tent, shouted a warning and then jumped on top of the tent to remove the hot embers. Realizing the tent fabric had ignited, he yelled for water. When another squadron member arrived with some water he quickly extinguished the flames. SrA Lovely's instantaneous reactions provided a life saving warning and undoubtedly serious damage to property and possible explosion.

A NATURAL BEE MODEL

Imagine the frustration of the maintenance officer when the radio call came in saying that the crew chief "red X'ed" a scheduled flyer due to bees in the cockpit.

Imagine the surprise of the crew chief when he walked up to his F-16A model and saw that it was now a "Bee" model. Over 10,000 Italian Honey Bees had decided to move into a new multi-million dollar hive.

The crew chief closed the canopy while most of the bees swarmed on the outside of the aircraft. From aft of the canopy back to the tail and all along the right leading edge of the wing, it looked like a scene only Alfred Hitchcock could contrive.

Here in Ohio, May is swarm season for bees. A passing queen bee and her swarm decided to land on one of our F-16s. One could not see the gray surface of the aircraft. The bees resembled caramel covered popcorn thrown over the aircraft.

The queen bee found her way into the 1-inch square hole in panel 2406, and the rest of the

colony moved in after her. After an hour, the entire colony had moved into the hydrazine tank bay with no bees to be found on the outside.

Luckily, one of our Air Reserve Technicians (ART) is also a beekeeper and came to the rescue. After opening panels 2406 and 2408, the bees were manually scooped out until an industrial vacuum sweeper could be used to get into the tight spaces. The aircraft was not damaged despite minor wax accumulations which had to be cleaned from metal surfaces inside the hydrazine bay. Most of the bees survived the ordeal and were taken to another bee colony away from the flightline.

The lesson learned from this — when it's swarming season, always know where to find a beekeeper! The experienced beekeeper minimized the potential damage to both personnel and aircraft. Just when you think you've seen it all on the flightline, "Bee" advised — you haven't! ■

*MSgt Lawrence E. Stultz
906 FG/SEG
Wright-Patterson AFB OH*

SNEAK
PREVIEW

*Coming Soon to
Your Base...*

ACC SAFETY DAY

Look for the debut sometime between 9 and 23 May 1994. Advance tickets and information will soon be available from your local safety office. Be the first to view this block buster on "101 Critical Days of Summer," ground and recreational safety, and summer flying operations.

**DON'T MISS
IT!**

ACColades

QUESTIONS OR COMMENTS
CONCERNING DATA ON THIS
PAGE SHOULD BE
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	TOTAL			ACC			ANG			AFR		
	FEB	THRU FEB		FEB	THRU FEB		FEB	THRU FEB		FEB	THRU FEB	
		FY94	FY93		FY94	FY93		FY94	FY93		FY94	FY93
CLASS A MISHAPS	4	9	9	2	5	4	2	4	4	0	0	1
AIRCREW FATALITIES	0	3	5	0	2	4	0	1	1	0	0	0
* IN THE ENVELOPE EJECTIONS	3/0	6/0	8/0	2/0	3/0	3/0	1/0	3/0	4/0	0	0	1/0
* OUT OF ENVELOPE EJECTIONS	0	0/1	0	0	0/1	0	0	0	0	0	0	0

* (SUCCESSFUL/UNSUCCESSFUL)

CLASS A MISHAP COMPARISON RATE

(CUMULATIVE RATE BASED ON ACCIDENTS PER 100,000 HOURS FLYING)

		MONTH											
		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
ACC	FY 93	2.0	3.1	2.2	1.6	1.7	2.1	1.7	1.7	1.7	1.6	1.6	1.8
	FY 94	0	1.1	1.5	1.7	2.3							
8 AF	FY 93	0	5.2	3.7	2.7	2.1	1.6	1.4	1.2	1.0	0.9	0.8	2.3
	FY 94	0	0	0	0	0							
9 AF	FY 93	6.7	6.5	4.4	3.3	3.9	3.1	2.7	2.3	2.7	2.4	2.2	2.0
	FY 94	0	0	0	1.7	2.8							
12 AF	FY 93	0	0	0	0	0	0	0	0	0	0	0	0
	FY 94	0	0	2.1	1.6	1.3							
DRU	FY 93	0	0	0	0	0	2.8	2.4	4.2	3.7	3.3	4.4	4.0
	FY 94	0	14.9	9.9	7.4	12.0							
ANG	FY 93	0	0	0	0	0	0	0	0	0	0	0	0
	FY 94	0	2.2	2.9	2.1	3.5							
AFR	FY 93	0	2.2	2.9	2.1	3.5	2.9	3.1	2.7	3.4	3.0	3.2	3.3
	FY 94	0	0	0	0	0							
TOTAL	FY 93	0	0	8.0	5.9	4.8	4.0	3.4	3.0	2.7	2.4	2.2	4.0
	FY 94	0	1.4	1.8	1.7	2.6							

* (HOURS NOT AVAILABLE)

Writing An Article For



THE COMBAT EDGE

The Combat Edge is Air Combat Command's mishap prevention magazine dedicated to providing command personnel with flight, weapons, and ground safety information. It is ACC people writing about their experiences for their fellow ACC team members. Your articles are the fuel needed to keep the magazine running and help us fulfill our mission of *mishap prevention through safety education, recognition, and marketing*.

When you write an article for The Combat Edge, you're writing for a world-class publication. We print and distribute over 17,000 magazines each month for a reader population estimated at 170,000 people. Our audience includes Air Force, other military services (Army, Navy, Marines), DoD, private industry, and allied foreign national readers. We routinely receive requests from other safety agencies and magazines including foreign magazines and schools to reprint our articles. Writing an article for The Combat Edge is truly an opportunity to become

"world famous."

Our purpose in life is to educate — to stimulate thought in order to learn from the pages of a magazine rather than from painful personal experience or the pages of a mishap report. From the beginning, the magazine has relied on you — ACC team members and readers — to produce much of each issue. After all, The Combat Edge is **YOUR** magazine. Only you possess full knowledge of the active undercurrent of ACC's growth, the problems you encounter, and the solutions you reach. The Combat Edge is your communications medium to get your ideas to others within the command and the Air Force. The magazine will only be as good as **YOU** make it through **YOUR** articles, inputs, and feedback. If you aren't seeing a particular type of article — it's largely because you, or someone like you, hasn't written it. We are committed to giving you the best quality product possible; but we can't do it alone — we need **YOUR** ideas to continually enhance the ACC culture of safety. By working to-

gether, we can make ACC safer and more effective!

AUTHORS

Perhaps you've never written an article before. Don't let that scare you. It can be surprisingly easy and the results can be quite rewarding. You don't have to be a professional writer to contribute to The Combat Edge. Our authors come from all branches and services, with ranks varying from airman to general, and from civilians as well. Most of them felt as insecure as you when they decided to write for a magazine. But they had something that needed saying, and they said it. After all, that's really all anyone has to do. Contributions are welcomed from anyone who has something to say about safety. Don't let anything in this guide scare you away from contributing. Please, make the effort.

THE STORY

Writing an article is a lot easier than it may look to you — trust me. I believe that's why a lot of people don't write articles for us; they think it's a "mission impossible." Really it's not! And once you've

done it the first time, the second, third, and so on will be even easier.

How do people talk to each other? They tell stories and compare experiences. In the Air Force, we often refer to these shared experiences as "war stories" or "there I was..." stories. War stories are experiences that have left a lasting impression on you. Everyone has a war story because that's how we learn — by experience.

People like to trade these stories because it gives them a chance to share experiences and possibly to learn things they haven't encountered before. Sometimes we find ourselves in an emergency situation and our readers want to find out how we handled it. What were we thinking about? What was our first impression? What would we do differently if it happened again? Answering these kind of questions holds the reader's attention. However, you don't have to be flat on your back, running out of airspeed and ideas, or in the middle of a fully loaded munitions storage area surrounded by a raging fire to have a valid war story. Many times we have an emergency or a problem; and although nothing exciting happens, a lesson is learned. These first-hand experiences are extremely effective in teaching, proving a point, or supporting your way of doing things; and everyone can identify with them.

Sometimes we don't have a war story but rather a thought or idea about a better way to do something. Again, share these ideas and thoughts with others. If your thoughts or ideas are safety related in any way, write them down and

send them to us. Don't pre-judge the applicability of your article — we get paid to make those calls. Send us the material, and we'll decide if the theme is appropriate for The Combat Edge.

WHAT TO WRITE ABOUT?

Each one of you has a myriad of experiences, personal stories, and insights which you can share with the rest of us. If you're a wing commander, perhaps you can share a great idea which your wing has developed and proven in the field. Senior leaders in both the officer and enlisted ranks can share personal experiences they've had and pass along the "lessons learned" to the younger folks who look up to them.

Here's a quick potpourri of potential areas and subjects where we'd love to see articles:

OFF DUTY: Seatbelt experiences, recreational incidents, sports safety, home workshop tips, how to survive the summer/winter/spring/fall at home safely, safety in the kitchen, how to get to and from work without a mishap.

FLIGHT: Great ideas on how to keep from being that next flight mishap statistic, flying safely and effectively in the low level/deployed/air-to-air/air-to-ground/over-water/bad weather/night/on the tanker/mass gaggle/on the range/in combat/clear VFR (certainly not all at the same time) environment. How does your squadron pass along the hard-learned lessons from other flying incidents or mishaps from throughout the CAF? What does your squadron/wing/NAF do effectively that seems to get the word out?

What's the role of a good aviator/flight leader/element leader/wingman/flight commander, etc.? What have you done (unwisely or for whatever reason) which got your attention (i.e., scared the wits out of you) that you'd rather not see anyone else have to experience? What's the dumbest thing you ever did?

GROUND: What does it take to be a great maintenance person or crew chief? What are the important ingredients to having a good flying jet/Top Wheels vehicle/safe work place? How does your organization ensure the mission gets done right the first time — safely? What's the role of the maintenance/supply/security/POL/transportation/operators all working together? What sort of experiences have you had in or around the flightline/office/hospital/dining hall/work site that you don't ever want to have again? What happens when complacency, misprioritization, lack of attention to detail, etc., get the upper hand?

WEAPONS: Have you ever dinged a bomb/missile/TER/jammer, etc.? What could you have done to prevent it from happening? What's it take to operate day in and day out safely and mishap-free with munitions — both training and live? How can you ensure the most efficient and successful combat turn-arounds? What lessons did some of you pick up on getting the mission done right during DESERT SHIELD/STORM/PROVIDE COMFORT/SOUTHERN WATCH/etc.?

Well, that should give even the most non-creative thinking reader

some germ of an idea for a potential article.

HOW TO WRITE THE STORY

Remember, you are writing for people just like yourself. How do you tell a story to your friends, your family, or around the coffee bar? It's the same for the magazine. Most people don't talk about the energy scaling of phase-conjugate solid-state lasers and the ramification on eye protection while operating laser test equipment. So, don't write like that for the magazine.

Figure out what point or lesson you're going to try to relay to the reading audience and build your entire article around that idea. Don't try to write about the entire history of USAF maintenance or every possible sortie that can be flown by a C-130. Just pick one idea and work on that. If we need to broaden it a little, we'll tell you.

Don't be afraid to tell it like it really happened. You get more points for spreading the word than you lose by admitting to an error. Tell the reader why you think you made a mistake. Give a good reason. No one has ever gotten into trouble by writing an article for The Combat Edge.

INTRODUCTION.

One good way to get your readers' attention is by sharing a short story or scene which relates to the subject you want to discuss. Whatever you use, there needs to be something to lead your readers into the article.

MAIN BODY.

This is the area where you go into greater detail about the subject

you're writing on. If it's a personal experience, then tell us about it. If you're telling us about a great idea to eliminate flight/weapon/ground mishaps, give us the story "1,2,3, etc."

CONCLUSION.

Finally you come to the part where you summarize what you've been telling the readers and bring the article to a close. Perhaps this is the only time where you actually say what it is that you're trying to get across to your audience. Sometimes it's effective to summarize your entire article in only a short phrase or a single sentence.

Which of the following styles would make you want to read the story?

The Military Unique Work area is impacted by OSHA standards and their application.

or

"Can't Do!!" is NOT a PROACTIVE attitude, especially when dealing with safety issues and deficiencies. When a safety deficiency is discovered, there is usually something that can be done to correct or minimize the hazard.

Emergencies are very serious and can be dangerous.

or

There are three judges that sit on the Aviation Court of Last Resort: Mind, Senses, Hand. If you have an emergency and slowly or quickly enter the court, these judges will determine whether you live or die. One thumbs-down and you'll be sentenced to death.

Write accordingly — the goal is to communicate!

In summary, if the article logi-

cally and interestingly communicates the experience or idea intended and is written in an appropriate tone with acceptable English — send it to us!

SUBMITTING ARTICLES

There are no regulations, supplements, or directives concerning the submittal of articles. We are completely dependent on voluntary submission of articles written by people who care and have something to share with their team members. The magazine, however, has 32 pages each and every month and needs many more stories than we receive. Since emergencies, learning experiences, and great ideas occur on a less than regularly scheduled basis, it is best to submit articles as incidents occur or ideas are conceptualized.

We have no requirement that articles be routed through any OPR or review process other than from the author directly to us. However, be sure to check with your chain of command as to the acceptability of this process. We will look at any article sent to us, no matter where it originates or who writes it.

In planning on specific topics, keep in mind that it takes 2 to 4 months to get an article into print. The hot weather/heat stress article we receive in August doesn't help until the following May.

Drafts should be submitted double-spaced and typewritten. Feature length articles of approximately 1000 to 1500 words or about 4 double-spaced pages normally allow us to do a 2 page layout with artwork. Longer is acceptable as is shorter. The bottom line — use whatever length is necessary to

tell your story. When we receive your article, we will send you a letter acknowledging receipt and explaining our article review process. As your article progresses toward publication, you will receive periodic updates on its status. If at any time you have a question concerning your submission, give us a call. Remember to include some information about yourself and your organization.

PHOTOGRAPHS

Pictures and drawings are fantastic additions to any story. Photos often make the difference between an article that is read and one that is ignored. They draw the reader's interest. The reader sees the photo and wants to know more. Our magazine is always in need of current photographs to put in the magazine and to use as a reference for illustrations. Please include the photographer's name on any submissions.

MISHAPS. Any photos that depict an actual mishap go a long way in breathing life into an article. In almost all mishaps, an official photographer will exhaustively document the scene. A little coordination on your part can yield spectacular results. We will take care of protecting sensitive information and identities.

ACTION. Strive to portray action. Avoid static, overly posed photos. Photograph people actually doing something, not just pretending to do it. Photos for an article do not necessarily have to be literal versions of the words. Small details or unusual perspectives can attract the reader and illustrate a story without being obvious or predictable.

EXTRA PHOTOS. We are in constant need of photography of anything that goes on in the Air Force. We like to credit the photographer, so please include his/her name with the submission. A standard PA shot of aircraft, buildings, ceremonies, etc., would be greatly appreciated as well as any candid shots of activity in your organization. If you're cleaning out your photo files, think of us.

TECHNICAL. Photos for use inside the magazine should be black and white or color glossy prints, at least 5-by-7 inches. They must be sharp and clear throughout. Flaws in the print (such as excessive grain) will be magnified in reproduction.

LIGHT. Try not to use direct flash. If you cannot shoot in available light, use diffused or bounced flash to avoid the impression that the subject is looming out of the darkness.

CAPTIONS. Photo captions explain the action, identify the subject(s), and credit the photographer. Keep captions short—don't repeat information contained in the article. Type or write the caption in double-space, smooth, and tape it to the back of the photo. Do not use staples or paper clips. Do not write or mark on the photograph.

MISCELLANEOUS. Protect your prints and slides in the mail. Label them as photographic material, and use stiff cardboard to protect them from bending. Include your full name, address, and DSN phone number.

A stunning picture from your files may find its way to our cover. You'll never know until you send it in. All pictures, drawings, and artwork will be returned, undam-

aged, after the magazine is published.

ANONYMITY

The question of anonymously written articles has arisen in the past. We prefer to use the author's name and organization so that they can be appropriately recognized and rewarded for their efforts. However, if you feel anonymity is essential, send us the article along with your name and phone number so we can contact you concerning any questions about the article. When the article is published, your anonymity request **WILL** be honored and your identity protected.

REWARDS

Unfortunately, as an official publication, The Combat Edge cannot offer monetary rewards for material published. What we can offer is the opportunity for you to make our safety culture better. By sharing your knowledge you make a valuable contribution to those who need your information to do their jobs more safely. It may sound trite, but your input—whether a long feature or a simple tip—might just save someone from injury. It might even save a life.

If you still have questions about your article or need to refine your approach to a subject, pick up the phone and call the editor at DSN 574-3658. If I can't give you at least 4 different ways to approach your topic or some suggestions for articles, then I'm not doing my job. Send **YOUR** articles to:

Editor, *The Combat Edge*
HQ ACC/SEP
130 Andrews St Ste 301
Langley AFB VA 23665-2786

Fleagle

FLEAGLE, DO YOU HAVE ANY INFO ON MIGRATION LANES IN THIS AREA?

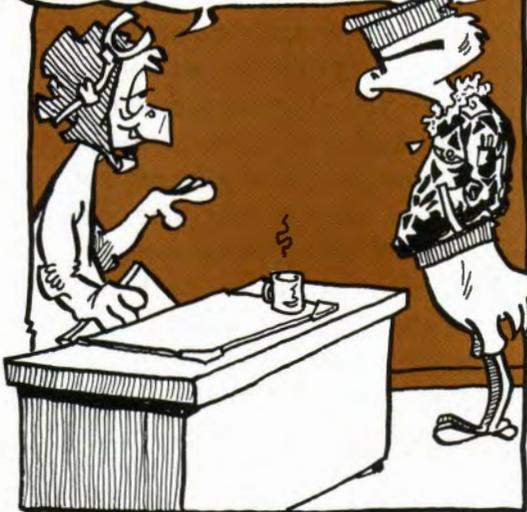


YEAH, BUT I DON'T SEE HOW IT'S GONNA DO YOU MUCH GOOD.

WHY'S THAT?



IF YOU SEE SUMPIN' IN FRONT OF YOU, JUS' FLY 'ROUND IT.



OKAY... JUST THOUGHT I'D CHECK.



WHAT IN TH' WORLD WOULD THESE FOLKS DO 'ROUND HERE WITHOUT ME.



TH' NEXT DAY

FLEAGLE...

YEAH?



I THINK MAYBE... IT BEST I DO HAVE A LOOK AT THAT INFO I ASK YOU FOR YESTERDAY.

PEDO...?



HARRISON

A Great Way To Clean Your Floors!

While assigned to an Air Launched Cruise Missile base, I tasked 3 newly assigned airmen to clean the high bay floors in the Integrated Maintenance Facility (IMF). They had only been assigned to the unit for about 4 weeks and had been working in the IMF the entire time. Although the airmen weren't task certified to perform nuclear weapons maintenance, they were fully PRP certified (well, sometimes PRP is quick).

It was Friday afternoon, and the scheduled work for the week was finished. As the airmen entered the high bay, they turned the volume on the music box up a couple of decibels. Since the weekend was approaching and they all had big plans for that evening, the airmen decided to do an especially good job the first time hoping I would then let them off early. So not only were they going to sweep the floor, but they also planned to clean the cobwebs that had accumulated on the walls, in the corners, and around the miles of pipes and conduits adorning the high bay's walls. Using a broom and reaching as high as he could, one of the airmen began sweeping the cobwebs from the walls. About an hour later, I went into the high bay to check on the cleaning crew's progress. Well, as fate would have it, just as I walked in, the airman cleaning the cobwebs completed down stroke number 132 and snagged the broom on the fire alarm pull box. The "PULL DOWN" handle went down, the alarms went off, and everyone asked, "What the H@*#\$?"

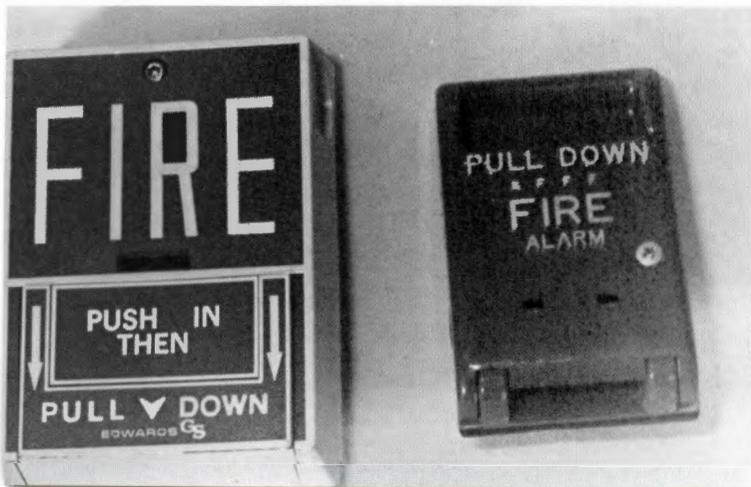
That particular fire alarm box was smarter than your average bear-of-a-box that sounds the alarm and flashes a light at the fire station. This box was the superb model of boxes. Not only **could** it sound the alarm and contact the fire dispatcher, but it **could** also activate a valve that allows umpteen gallons of aqueous film forming foam (AFFF) and water to surge through the miles of pipes that decorate the ceiling in the high bay — **and it did!**

But what's the problem you may ask? All the airman had to do was walk over and push the abort button to stop the deluge of AFFF that was on its way. Right? Wrong! The abort button in this particular IMF only worked if the alarm activated on its own. The fire suppression system figures that if you pull my handle, **you want me** and there's no stopping me now come H@*#\$ or high bay water!

Sadly to say, 5 warheads, 4 lift trucks, 3 load frames, 2 mortified airmen, 1 cruise missile and a shop chief, fit to be tied, were soaked with 200 gallons of AFFF before the flow could be shut off. The warheads were turned red, the trailers rinsed off, the load frames dried, the airmen selected for crew of the month, the missile identified for GLOBAL CRUISE '94, and I went to the club. All was well for a few weeks, then the suspended load frames started giving abnormal position readings; the frame power drive controllers had corrosion in them; and two MHU-174/Ms stopped lifting — moisture was found in their control panels. It appears that electronic parts and AFFF don't go together well.

I decided to broom-proof the AFFF pull boxes. Figure 1 shows our old box on the right and the new broom-proof box on the left. The new box requires dual action — push in, then pull down to activate.

Hopefully you can learn from my experience by asking yourself these questions. What type(s) of



AFFF pull boxes do I have? Do I know exactly how the abort buttons work? Does everyone working in the IMF fully understand the system? Does cobweb removal need to be a certifiable task? If you haven't

taken a close look at your fire suppression system and personnel training, now is the time to look — not after the pull test. That is, unless you think this is a **great way to clean your floors!** ■

FOR WANT of a Clip

*MSgt William R. Stout
52 EMS/LGEMW
APO AE 09126*

As the leadership of the munitions storage area sat around discussing how it had happened, the chilling facts of the potential consequences began to sink in. Make no mistake; we knew it could have ended in the death of several pilots and destruction of multi-million dollar aircraft.

The wing was scheduled for a live drop of 144 MK-82 low drag bombs. As usual, the sequence began with the initial ordering of parts from munitions operations. Instead of using the Combat Ammunition System-Base (CAS-B) weapons code and letting the computer decide which components to order, the AFR 50-21 Munitions custodian used the manual method. The AF Form 2005 for arming wire clips requested FZU-18s. Munitions operations, in filling the request, cross referenced an incorrect stock number and found a zero on-hand balance. They then erroneously concluded that FZU-17 clips could be substituted.

During the build-up the following week, the conventional maintenance crew used what was delivered by storage to the build-up site. T.O. 11A-1-61, Para 5-9.1, Step 8, states install clip. No reference is made to Table 4-3, MK-82 Compatibility Data, where it specifically points out that the FZU-18 is the only authorized arming wire clip.

During the last and most crucial step, another

mistake was made. The weapons loaders noticed the incorrect clip during their preloading inspection. They called munitions control for an explanation and verification of the configuration. Munitions control called the build-up crew who took the question as a personal criticism. They adamantly stated the munitions were built in accordance with technical data and, besides, they didn't have any FZU-18s. With that assurance and the pressure to make the launch time, the bombs were loaded.

Well, we can all imagine the look on the pilot's face as he glances out of the cockpit to see the vanes on the M-904 fuzes on the front of his live bombs turning unimpeded in the wind. To his consternation, he knows the weapons are armed and begins to worry if he can drop the bombs and avoid a landing with live munitions, or if a bird strike could possibly cause detonation. These and probably a thousand other thoughts race through his head.

We all read these articles every month and wonder how anyone could be so stupid and assure ourselves it could never happen to our crew, element, or flight. But next time you're briefing staff notes and you must use the obligatory phrase "make sure everyone understands how to use tech data," you'll have an example of how a string of seemingly small errors could turn into a deadly mistake. ■

THINK AGAIN... WE CARE

*Mr Cal Faile
HQ ACC/SEG
Langley AFB VA*

Do you think the “We Care” program is new? It’s not. Think it’s a labor intensive paper program? It’s not. Think that it’s directed at off-duty activities only? It’s not. Think it’s a punishment program? It’s not. Think it’s only for upper level management to administer? Well, it isn’t. If you think supervisors are not important to the program — you’re wrong. If you believe the program was designed to be reactive rather than proactive — it wasn’t. If you think the program will not work for you — think again!

The “We Care” program was initially developed to curb the catastrophic rise in mishaps and loss of our most valuable resource — people (both military and civilian members of the command). The losses, occurring both on duty and off duty, were perplexing. “We Care” was born out of desperation and was based on the belief that we had to do something NOW!

Looking back, we capitalized on the military concept of taking care of our own — a proud Air Force tradition for many years. In the past, as well as today, if a military member approached you with a problem, you would try to help the person eliminate the problem or direct the individual to an agency or individual that could help. Right? Well, it’s no different with the “We Care” program. The primary objective is to render assistance to resolve problems and get individuals back to a productive state of well-being.

The way the program is managed varies from

base to base, but the overall objective remains the same — taking care of our own. Sudden attitude shifts, recurring mistakes, tardiness, failure to follow directions, inattention, drug/alcohol abuse, mood swings, and other personality changes are indicators that something may be wrong with an individual. It could be a minor problem that can be resolved through face-to-face conversation. On the other hand, it could be a major problem requiring professional help. Problems left unresolved could lead to serious injury or death in a mishap or (let us not forget) suicide.

Some members will voluntarily talk to you while others keep their problems inside until they react with violent behavior. It’s not easy to detect problems with some individuals; however, the better you know a person, the better attuned you’ll be to unexplained change. This is where supervisors come into the picture. Usually, when something starts to go wrong, they are the first to notice and are in the best position to correct problems in their earliest stages. It is an awesome responsibility, but it’s part of the job.

If we can save just one person from injury or death, or change just one attitude, or make one person more productive, then we have met our objective. It’s all up to you. Won’t you take a second look at the “We Care” program and think about putting an “I” into the program for the benefit of those who work so hard for you. Let’s truly take care of our own before someone else has to!



SITUATIONAL AWARENESS:

It's Not Just For Aircrews

Capt Raymond E. Roessler
36 FW/SEW
Bitburg AB GE

Situational Awareness (commonly referred to as "SA") is a term heard mainly in the realm of pilots or flight surgeons. The cockpit of an aircraft represents an aircrew's most important SA environment. Loss of SA in the cockpit is a serious human factor issue and can be fatal. But what if you aren't a pilot and have never seen a cockpit? Many people may not know that loss of SA can affect everyone and all areas of safety (flight, weapons, and ground). Loss of SA can be equally as dangerous for non-aviators as it is for fliers. The consequences of losing SA are never pleasant and can happen to anyone — at any time. Let me explain.

Put quite simply, SA can best be defined as a cognitive comprehension of your environment. A loss of SA is a disorientation of your points of reference. You may find yourself daydreaming or thinking about something else, when your mind and/or motor functions should be doing something totally different. Has the person behind you at a traffic light ever "reminded" you that the light just turned green by honking his horn? You just lost your SA for a moment, and he politely helped you find it.

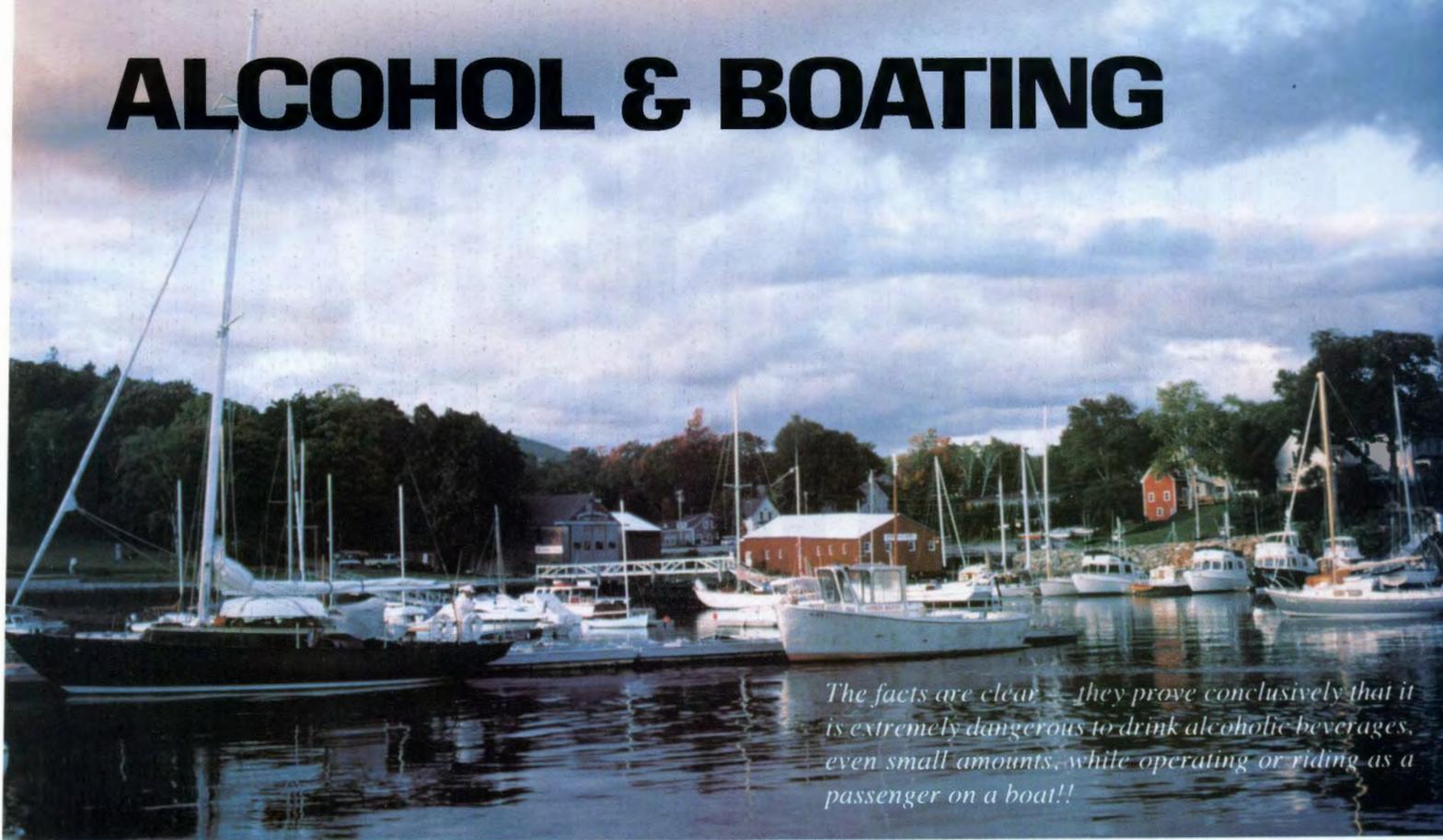
A momentary loss of SA is all you need for its

wicked curse to begin wreaking havoc. Weaving off the paved surface of a curvy highway because you were thinking about yesterday's problems at work is not the answer! Your SA, or loss thereof, can affect others around you. For example, a person operating a forklift loaded with live munitions can quickly cause a disaster, unless the driver remains totally focused on the task at hand. Now, further complicate the task by adding some environmental conditions such as snow and ice on the road surface, extreme heat, thunderstorms, etc. It soon becomes clear how your environment affects your SA. Ultimately, the primary responsibility for maintaining SA rests with the individual performing the task.

Unique taskings, such as mission transfers and base closures, will offer Air Force members ample opportunities to excel; it is critical that each of us — aircrews and load crews alike — take the extra minute to do our jobs safely the first time. We work in a potentially dangerous environment of jet noise, explosives, and severe weather conditions; it's up to each one of us to make it a safer place for all of us. Think about situation awareness...don't let distractions do your thinking for you. It could be the difference between a little time and a lifetime.



ALCOHOL & BOATING



The facts are clear — they prove conclusively that it is extremely dangerous to drink alcoholic beverages, even small amounts, while operating or riding as a passenger on a boat!!

Alcohol, with its well-known ability to impair performance, creates an even more hazardous situation when added to the stress of the marine environment. This is because the marine environment — the fluid base, motion, vibration, engine noise, and elements of sun, wind and spray — accelerates impairment. The operator's coordination, judgment, and reaction time are reduced by fatigue caused by these stressors. Tests have proven that only 1/3 of the amount of alcohol that makes a person legally impaired on the road is enough to make a person equally impaired on the water. Further, alcohol can be more treacherous for boaters since they are less experienced, less confident on the water than on the highway. Recreational boaters do not have the advantage of experiencing daily operation of a boat. In fact, boaters average only about 110 hours of boating in a whole year. And in areas with seasonal boating, there can be months between boating outings or fishing trips.

PASSENGERS BEWARE, TOO

Alcohol is noted for affecting equilibrium — and so is a rocking boat. Together they could result in “man overboard.” Last year alone, “falls overboard” con-

tributed to 431 accidents — falls within the boat another 167.

EFFECTS OF ALCOHOL CONSUMPTION

Add boating stressors to those usual factors resulting from drinking alcohol, and a truly perilous condition is present. Drinking alcohol produces certain physiological responses that directly affect safety and well-being.

- * Judgment and skill deteriorate, affecting peripheral vision, balance, and ability to process information.

- * Physical performance and reaction time are reduced.

- * Alcohol reduces depth perception, night vision, focus, and the ability to distinguish colors, especially red and green.

- * Alcohol consumption can result in inner ear disturbance, which can make it impossible for a person suddenly immersed in water to distinguish up from down.

- * Alcohol creates a sense of warmth and may prevent a person in cold water from getting out before hypothermia sets in.

APPROXIMATE BLOOD ALCOHOL PERCENTAGE									
DRINKS	BODY WEIGHT IN POUNDS								INFLUENCED
	100	120	140	160	180	200	220	240	
1	.04	.04	.03	.03	.02	.02	.02	.02	RARELY
2	.09	.07	.06	.06	.05	.04	.04	.04	
3	.13	.11	.09	.08	.07	.07	.06	.06	POSSIBLY
4	.18	.15	.13	.11	.10	.09	.08	.07	
5	.22	.18	.16	.14	.12	.11	.10	.09	DEFINITELY
6	.26	.22	.19	.17	.15	.13	.12	.11	
7	.31	.26	.22	.19	.17	.15	.14	.13	
8	.35	.29	.25	.22	.20	.18	.16	.15	
9	.40	.33	.28	.25	.22	.20	.18	.17	
10	.44	.37	.31	.28	.24	.22	.20	.18	

Subtract .01% for each 40 minutes or .03% for each 2 hours since the last drink. One drink is 1 & 1/4 oz of 80 proof liquor, 12 oz beer, or 4 oz table wine.

BOATING WHILE INTOXICATED (BWI) IS ILLEGAL NATIONWIDE

It is unlawful in every State to operate a boat while under the influence of alcohol or drugs. In addition to State BWI laws, there is also a Federal law, enforced by the Coast Guard, prohibiting BWI. This law applies to all boats, including foreign vessels, in U.S. waters and U.S. vessels on the high seas.

PENALTIES FOR BWI ARE SEVERE

The Coast Guard and every State have stringent penalties for violation of BWI laws, including the possibility of not only a large fine, suspension or revocation of operator privileges, but perhaps a jail term. (See Summary of State BWI boating laws on page 28.) The

Coast Guard and the States, in a mutual effort to remove impaired boat operators from the water, cooperate fully. In sole State waters, States have authority to enforce their own BWI statutes. Within State waters that are also subject to the jurisdiction of the U.S., there is concurrent jurisdiction. If, in these waters, a boater is apprehended under Federal law, the Coast Guard will, unless precluded by State law, request that State enforcement officers assume custody of an intoxicated boater.

WHAT WILL HAPPEN TO THE IMPAIRED OPERATOR

When the Coast Guard determines that an operator is impaired, the voyage will be terminated. The vessel will be brought to mooring either by Coast Guard tow, a member of the Coast Guard crew, or a

competent, unintoxicated person on board the recreational vessel. Depending on the circumstances, the operator may then be arrested, detained until sober, or turned over to State or local authorities.

HOW THE COAST GUARD DETERMINES IMPAIRMENT

The Coast Guard has two separate and independent standards of evidence for determining impairment. Exceeding either standard can result in a citation, which could mean, as previously warned, a fine, suspension, or revocation of operator privilege, or possibly even a jail sentence.

Blood Alcohol Concentration (BAC) Standard. A violation occurs when an individual operates a boat with a blood alcohol concentration in excess of that allowed by

regulations. In a State where a BAC standard has been enacted, the Federal regulations require that the State's BAC level be enforced as the Federal standard. Where there is no State standard, the Federal BAC standard for recreational boaters is 0.10 percent by weight in the blood.

Behavioral Standard. A BWI violation occurs when an individual is operating a vessel in a manner in which disposition, speech, muscular movement, and general appearance or behavior make it apparent by observation that the substance consumed is rendering the person impaired. This behavioral standard is based on the premise that impairment may be caused by factors that do not make the blood alcohol level exceed the standards — factors such

as non-alcoholic drugs, or a combination of drugs and alcohol. This behavioral standard facilitates enforcement action against seriously impaired boaters against whom no action could be taken if the BAC level were the only applicable standard for determining intoxication.

IMPLIED CONSENT

The Federal BWI law and many State laws also include "Implied Consent." This means that a boater's refusal to submit to a reasonable blood alcohol test may be presumed to "imply" intoxication. The refusal is admissible as evidence in any proceedings against the boater.

DETERMINING BLOOD ALCOHOL CONTENT

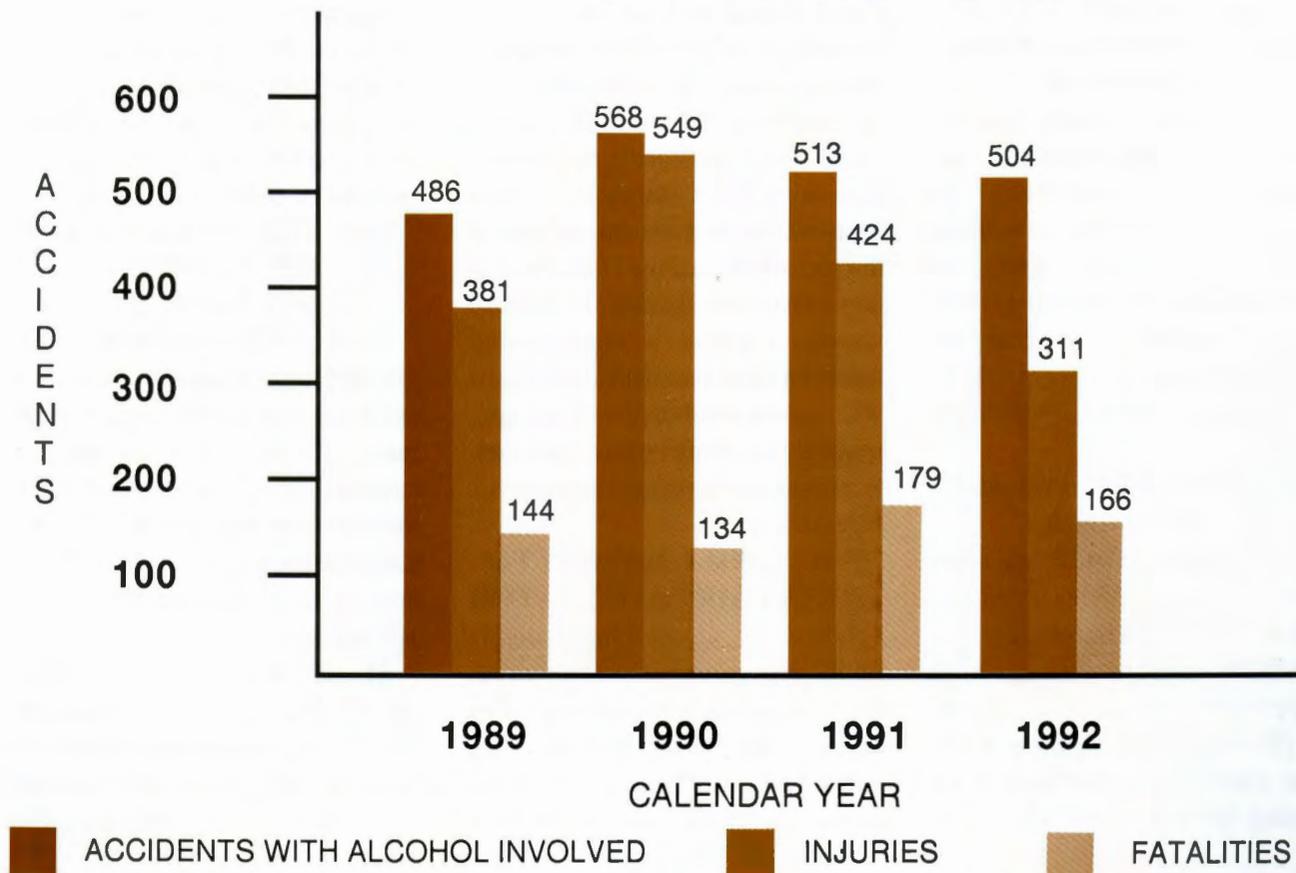
To determine BAC, the Coast Guard will administer a breathalyzer breath test. However,

if testing is done by State or local authorities, other types of chemical tests and equipment may be used. The Coast Guard does not conduct random testing. Before directing a recreational boater to submit to a sobriety or BAC test, a Coast Guard law enforcement officer must have evidence constituting reasonable suspicion that an operator is intoxicated or that a marine casualty has occurred.

THE HARD FACTS — BOATING ACCIDENT REPORTS

Before you drink and operate or ride in a boat, consider these facts — then think again. Statistics emphasize the fact that alcohol abuse creates serious problems for the boating community. They point to a strong link between boating accidents and alcohol consumption.

BOATING ACCIDENTS



The Coast Guard believes that as high as 50 percent of all boating accidents are alcohol-related. A recent study estimates that boaters with a blood alcohol level above 0.10 (the Federal threshold for intoxication) are 11 times more likely to have a fatal accident. The latest recreational boating accident figures show that in 1992 there were deaths in 33 percent of the alcohol-related accidents and personal injuries in approximately 62 percent of these accidents.

THREEFOLD APPROACH

Because operating a boat "under the influence" is so dangerous, the Coast Guard is using a threefold approach to reducing alcohol-related accidents.

- * Improved law enforcement in cooperation with the States.

- * An improved accident reporting system to identify alcohol-related accidents.

- * Widespread education and public awareness of the dangers of alcohol. Every boater, whether an operator or passenger, should cooperate in spreading this word.

BOATING SAFETY EDUCATION

Throughout the country each year, over 2,000 safe boating courses are offered by groups such as the U.S. Coast Guard Auxiliary, the U.S. Power Squadrons, the American Red Cross, and individual States. Courses cover many aspects of boating safety — from boat handling to reading the weather. All courses include knowledge and warnings about alcohol and boating. For more information on finding a course near you that will fit your schedule — call the toll-free Coast Guard Hotline.



U.S. Coast Guard HOTLINE

To Report Possible Safety Defects in Boats
For Boating Safety Recall Information
For Answers To Boating Safety Questions
To Comment On USCG Boarding Procedures
Call, Toll Free!

800-368-5647

SUGGESTED WAYS TO AVOID THE HAZARDS OF ALCOHOL

Boating doesn't need any stimulus to make it fun. Fishing doesn't need any liquid bait to improve the catch.

Consider these alternatives to alcohol and boating.

- * Take along a variety of sodas, a jug of water, ice tea, coffee, or lemonade, or take along non-alcoholic beer.

- * Take along plenty of food.

- * Wear clothes that will keep you cool.

- * Plan to limit your trip to the number of hours you can spend on the water without becoming tired, restless, or bored.

- * Enjoy your outing more by having the party ashore after you dock — in the picnic area, in the Yacht Club, in your backyard — where you'll have time between the fun and getting back into a boat or your car.

- * If you dock somewhere for

lunch or dinner and drink alcohol, wait a reasonable time before heading back home.

- * If necessary, be sure to have a sober designated driver as the boat operator. Or better yet, in case of emergency, have two designated non-drinking operators.

- * No alcohol aboard is the safe way to go — remember, intoxicated passengers can fall overboard, too.

BOAT SMART -- BOAT WITHOUT ALCOHOL!

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Consumer Fact Sheet # 3,
August 1993

SUMMARY OF STATE "BWI" BOATING LAWS

July 1993

	BLOOD ALCOHOL CONCENTRATION STANDARD	BEHAVIORAL STANDARD	FIELD TEST METHODS DEFINED	IMPLIED CONSENT LAW	MAXIMUM PENALTIES FIRST OFFENSE	SUSPEND OPERATOR PRIVILEGE
ALABAMA	.10	NO	YES	NO	\$500/6 MOS.	YES
ALASKA	.10	NO	NO	NO	\$500/6 MOS.	NO
ARIZONA	.10	NO	NO	YES	\$1000/6 MOS.	NO
ARKANSAS	-	NO	NO	NO	\$500/6 MOS.	NO
CALIFORNIA	.08	NO	YES	NO	\$1000/6 MOS.	NO
COLORADO	.10	YES	YES	YES	\$1000/6 MOS.	YES
CONNECTICUT	.10	NO	YES	YES	\$500	YES
DELAWARE	.10	NO	NO	YES	\$1000/6 MOS.	YES
FLORIDA	.08	YES	YES	YES	\$500/6 MOS.	YES
GEORGIA	.08/.10	YES	YES	YES	\$1000/1 YR.	NO
HAWAII	-	NO	NO	NO	\$2000/1 YR.	YES
IDAHO	.10	YES	YES	YES	\$300/30 DAYS	YES
ILLINOIS	.10	YES	YES	YES	\$1000/1 YR.	YES
INDIANA	.10	YES	YES	YES	\$500/60 DAYS	YES
IOWA	-	YES	YES	NO	\$1000/1 YR.	NO
KANSAS	.08	YES	YES	YES	\$500/1 YR.	YES
KENTUCKY	-	NO	NO	NO	\$100	NO
LOUISIANA	.10	NO	YES	YES	\$500/6 MOS.	YES
MAINE	.08	YES	YES	YES	\$500/6 MOS.	NO
MARYLAND	.07/.10	NO	YES	NO	\$500	NO
MASSACHUSETTS	.10	NO	YES	YES	\$500/6 MOS.	NO
MICHIGAN	.10	YES	NO	YES	\$500/90 DAYS	YES
MINNESOTA	.10	YES	YES	YES	\$700/90 DAYS	YES
MISSISSIPPI	-	NO	NO	NO	\$250/30 DAYS	NO
MISSOURI	.10	NO	NO	YES	\$500/6 MOS.	NO
MONTANA	.10	NO	YES	YES	\$500/6 MOS.	NO
NEBRASKA	.10	NO	YES	YES	\$1000/6 MOS.	YES
NEVADA	.10	YES	YES	YES	\$1000/6 MOS.	NO
NEW HAMPSHIRE	.08	NO	YES	YES	\$1000	YES
NEW JERSEY	.10	NO	NO	YES	\$400/1 YR.	YES
NEW MEXICO	-	NO	NO	NO	\$500/30 DAYS	NO
NEW YORK	.10	NO	YES	YES	\$500/90 DAYS	YES
NORTH CAROLINA ⁵	.10	NO	YES	NO	\$500/6 MOS.	NO
NORTH DAKOTA	.10	YES	NO	YES	\$500/30 DAYS	YES
OHIO	.10	YES	YES	YES	\$1000/1 YR.	YES
OKLAHOMA	-	NO	NO	NO	\$1000/6 MOS.	NO
OREGON	.08	YES	NO	YES	\$2500/1 YR.	YES
PENNSYLVANIA	.10	NO	YES	YES	\$5000/90 DAYS	YES
RHODE ISLAND	.10	NO	NO	YES	\$1000/1 YR.	YES
SOUTH CAROLINA	.10	NO	NO	YES	\$200/30 DAYS	YES
SOUTH DAKOTA	.10	NO	YES	YES	\$1000/1 YR.	NO
TENNESSEE	.10	NO	NO	YES	\$2500/1 YR.	YES
TEXAS	.10	YES	NO	YES	\$1000/6 MOS.	NO
UTAH	.08	YES	YES	YES	\$1000/6 MOS.	NO
VERMONT	.10	YES	NO	YES	\$750/1 YR.	YES
VIRGINIA	.10	NO	NO	YES	\$2500/1 YR.	YES
WASHINGTON	.10	NO	NO	NO	\$1000/90 DAYS	NO
WEST VIRGINIA	-	NO	NO	NO	\$300/90 DAYS	NO
WISCONSIN	.10	YES	YES	YES	\$333	NO
WYOMING	.10	NO	NO	NO	\$750/6 MOS.	YES
AMERICAN SAMOA	.08	YES	YES	YES	\$1000/1 YR.	YES
D C	-	NO	NO	NO	\$300/10 DAYS	NO
CNMI	-	NO	NO	NO	\$1000/1 YR.	YES
GUAM	-	NO	NO	NO	\$1000/1 YR.	YES
PUERTO RICO	.10	YES	YES	YES	\$500/2 MOS.	NO
VIRGIN ISLANDS	.10	NO	YES	YES	\$1000/1 YR.	NO

NOTES:

1. Unlawful in all States to operate a vessel under the influence (BWI) of alcohol or drugs.
2. Blood Alcohol Concentration (BAC): Where the column shows two figures, this indicates the State has established progressively stiffer penalties for different levels of intoxication.
3. Field Test Methods Defined means that the general method of determining blood alcohol concentration, or other standard of intoxication, is prescribed in the law or regulation.
4. Implied Consent Law means that the refusal of a boater to submit to a test for intoxication (e.g. breathalyzer, blood tes, etc.) may be introduced in court as evidence of intoxication; and in some States, it may be considered as a separate offense.
5. Applies to operators in reportable accidents

Safety Professional Spotlight



SMSgt Jerry Gibson
12 AF Weapons Safety Superintendent
Davis-Monthan AFB AZ

Earlier this year, Headquarters Twelfth Air Force relocated from Bergstrom AFB TX to Davis-Monthan AFB AZ. This move resulted in a significant turnover of assigned personnel, especially in the Safety directorate. With one exception, the Safety staff that emerged at Davis-Monthan AFB had a completely new look — an entirely new staff except for one individual. SMSgt Jerry Gibson, the Weapons Safety Superintendent, was the only individual that relocated from Bergstrom AFB. Through hard work, perseverance, and dedication, his efforts ensured 12 AF Safety continued to operate effectively as the rest of the staff members were making their way on board.

SMSgt Gibson hails from Parsons TN. He has spent his entire Air Force career, spanning 22 years, in the weapons career field. In 1983, he brought this unique weapons knowledge to 12 AF as the Weapons Safety NCO — knowledge he gained through 10 years of flightline weapons loading experience.

SMSgt Gibson entered the USAF in 1972 under the Delayed Enlistment Program. He completed basic military training at Lackland AFB TX and weapons technical training at Lowry AFB CO. Once he completed training at Lowry AFB, he reported to Cannon AFB NM as a weapons loader. His

other assignments include tours at RAF Lakenheath UK, Mt Home AFB ID, Kunsan AB ROK, and Bergstrom AFB TX, all in the flightline weapons loading area. He joined the 12 AF Safety staff in March 1983.

As a member of the 12 AF Safety staff, and the only weapons expert assigned to the headquarters, Jerry keeps himself busy. Besides being the 12 AF Commander's weapons expert, he provides weapons safety and technical expertise to 10 active duty wings and over 20 gained units. Before submission for approval at ACC, he reviews, coordinates, and corrects explosive site plans ensuring protection of critical resources through adherence to strict safety standards. Jerry spends a great deal of his time on the road TDY providing valuable staff assistance to our active wings and to our assigned gained units. Periodically, he attends the ACC Weapons Safety Program Management Course at Dyess AFB TX, as the command's Subject Matter Expert (SME). In this capacity, he provides his knowledge, experiences, and insight to those new to the weapons safety business.

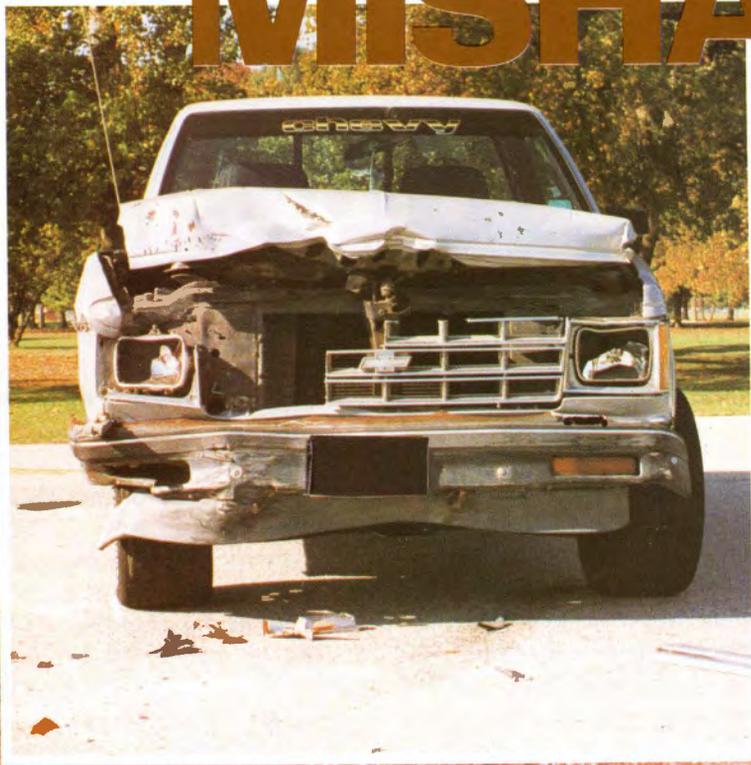
Recognized as an expert in the weapons field, SMSgt Gibson possesses attributes and qualities that mark him as one of our "BEST." His desire to help newly assigned weapons technicians is unmatched. These individuals often lack the background to develop viable weapons safety programs. SMSgt Gibson works with each individual to ensure they acquire the tools necessary to develop top-notch programs. Quickly getting them the formal training they need to do their jobs, he then spends several days with

each individual putting into practice what was learned. What makes SMSgt Gibson so unique is his hands-on approach to getting the job done. One of our wing commanders recently noted, "Sergeant Gibson not only told us what to do, he rolled up his sleeves and started the work right along with us." That statement more than any other best exemplifies what SMSgt Gibson is all about.

Along with his weapons safety responsibilities, SMSgt Gibson handles the 12 AF Safety Awards Program. In this area he excels like no other. A strong supporter for recognizing our talented people, he is the driving force behind the 12 AF Safety Awards Program — recognized as the best in ACC. He talks the program at every opportunity, encouraging our units to submit their people for this prestigious recognition. He knows our units contain talented young people doing their best to make our Air Force the best in the world. He strongly believes that commanders and supervisors are the key to a strong awards and recognition program and that the level of their involvement will dictate the success of their program. SMSgt Gibson's efforts in the awards program were not in vain. For FY 93, 12 AF units captured 12 of the 30 ACC Safety Awards given, a tribute to his dedication and persistence in promoting this highly rewarding and visible program.

As 12 AF establishes itself in its new home at Davis-Monthan AFB, SMSgt Jerry Gibson continues to do those things that make the ACC Safety program the best in the world. Whether the issue be training, developing a site plan, or recognition of our people, be assured SMSgt Gibson is committed to providing you — the customer — his best each and every time. ■

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