

# THE COMBAT EDGE

JULY 1993



Bailey '93



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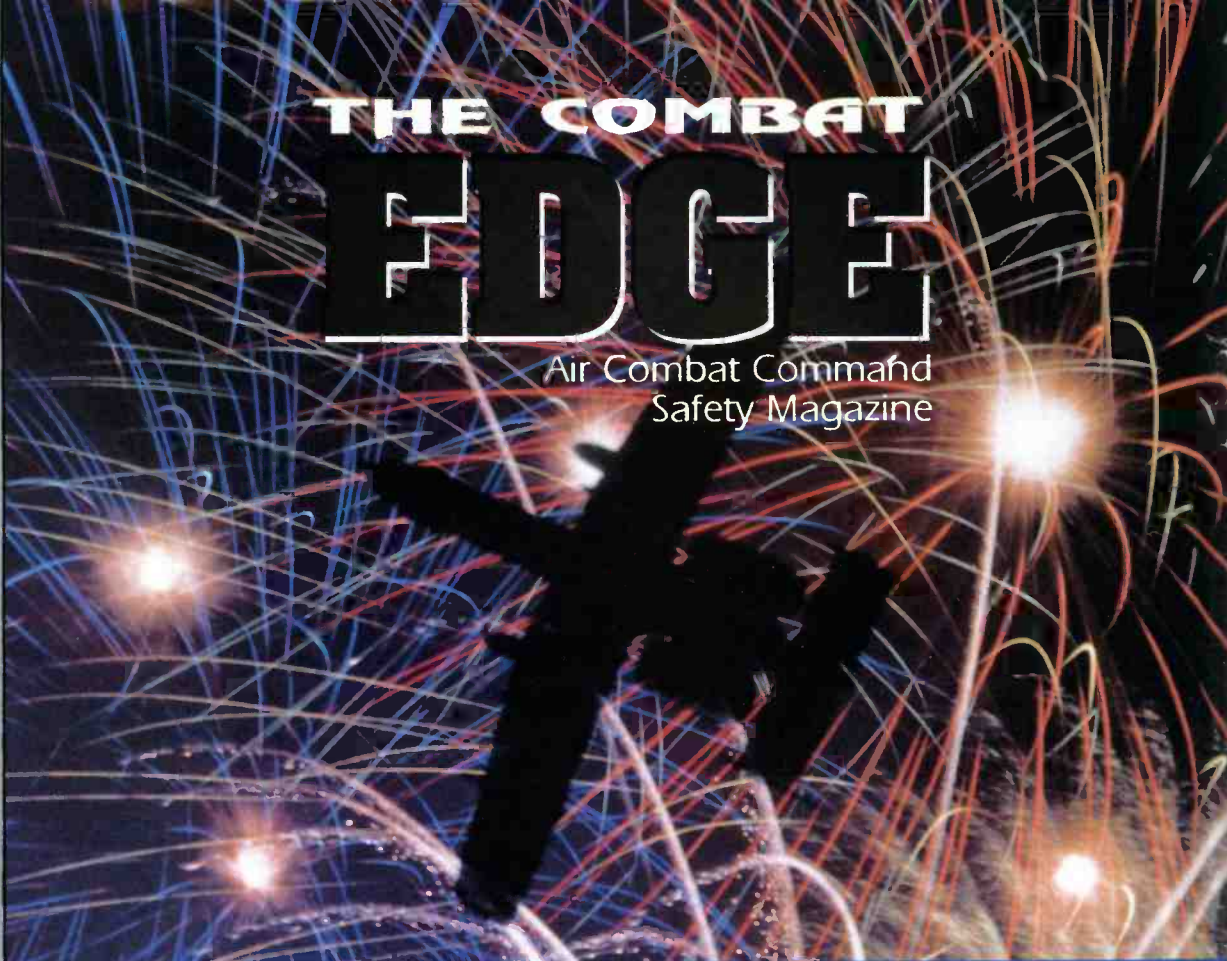
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# THE COMBAT EDGE

Air Combat Command  
Safety Magazine



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Langley AFB VA

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### ABOUT THE COVER

Fighter aircraft have always held a special fascination, from the apparently flimsy scout biplanes of the First World War, through the legendary Spitfire, Mustang and Zero of the Second World War and the F-86 Sabre that fought over Korea to the F-4 Phantom of the 1960's. Even compared with such predecessors the F-15 Eagle sets a completely new standard.

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# ACCent on Safety

**O**n 1 July 1993, the ICBM force transferred from Air Combat Command to Space Command. For the last 30 years, the men and women who operate, maintain, guard and support America's ICBM force have had an ironclad contract to carry out their enormous responsibilities with absolute safety. Throughout their history, missileers have had a reputation for being consummate professionals with a tradition of attention to detail, careful preparation, checklist discipline, and strict adherence to technical data and regulations. To these outstanding professionals we say, "Good luck - God speed - thank you." Your contributions to the ACC culture of safety are greatly appreciated and will be long remembered.

We're well into the summer season and prime vacation time. It's quite an adjustment to be on the job one day and vacation the next. In addition to the fun things, there are the inevitable PCS moves, TDYs, deployments, and exercises. The challenge facing commanders and supervisors is how to keep people safe both on and off duty during this period of increased activity. The key -- communication and awareness.

It is our contention that the more people are aware of safety, the safer they will be. How do we make them aware? Communicate! Communicate! Communicate! Yes, people may become tired of hearing the "dreaded" safety briefing; but there are ways to convey the safety message without the "dreaded" part. Search out and use new, fresh, and innovative ways to put the safety message in front of people. Use the base newspaper, base marquees, and all meetings to communicate to people that they are ACC's most valuable resource and that "WE CARE!"

What is the objective of all this communication? AWARENESS! Heightening safety awareness is the number one way to prevent mishaps. The use of every means of communication available will have significant bearing on the success of our safety efforts. Constant reminders of safety will lead to an automatic, reflex reaction in the right direction -- the safe direction -- when confronted by mishap potential both on and off the job. The idea is to keep people thinking and living safety -- almost unconsciously.

Our 101 Critical Days are not going well! Off-duty mishaps are exceeding last year at this time. But the vacation season is young. We still have the opportunity to influence the outcome and have a safe and healthy vacation time period for ourselves, family and friends. Teamwork and personal involvement are the keys to reducing summer mishaps. Let's meet the challenge!

*Colonel Bodie R. Bodenheim  
Chief of Safety*



# Just What Were They **THINKING**



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

**T**he Mishap Board President concluded his briefing to COMACC as the whispers began in the back of the briefing room, "Just wonder what they were thinking of anyway?" The scenario set up along the following lines, the aircraft had ceased to aviate. It was over, time to give it up, give it back to the taxpayers as they say in the trenches; but something happened. They didn't get out; they stayed with the jet too long and paid the ultimate sacrifice. They gave their lives. Let their lesson be the last one we have to learn in this process. I remember back to a crew I picked up years ago whose story had identical beginnings, but the outcome was markedly different. Today, this might shed some light on what was going through the minds of the latest crew.

The mishap crew was made up of an instructor and a student pilot on his dollar ride (first ride in the jet). The instructor was a senior instructor in the wing, highly respected and a leader within the unit. To say he was the resident expert in the jet was an understatement. The student was briefed according to the book with everything covered in complete detail. Each maneuver and how the jet would react was discussed. Every detail was covered including emergency procedures; what if they had to bailout, etc.

The student was to fly in the front cockpit; and if an ejection scenario should arise, the instructor would command "Bailout" three times in rapid succession and then would eject, followed closely by the student in the front seat. The student was not to eject first because the rocket motor for the front seat would/could burn the IP in the back seat if the front seat came out first. If communications were lost, a check of the mirrors would show the imaginary face curtain being pulled over the face of the IP, or in worst case, the ejection of the IP would leave little doubt of the need to eject. They agreed that the minimum out of control altitude for ejection was 10,000 feet AGL (above

ground level). With the briefing complete, they stepped to their jet.

The ride progressed as briefed with little to indicate that their lives would be changed in a few moments. The instructor set up for a stability demonstration to show the inherent stability of the new jet to the student. Instead of performing the maneuver in accordance with the guidelines, the instructor reverted to a word of mouth technique he had learned years before which had "really enhanced" the training of the stability demo.

With the guidelines tossed out the window, the instructor used the old technique he had most probably used countless times before with much success.

Maybe it was the rigging, maybe it was a small twitch in the controls, or maybe it was just Murphy finally catching up to someone who went to the well one time too many. The jet departed -- rolled right over on its back and began to plummet to the ground.

The initial altitude was over 25,000 feet, approximately 24,500 feet above the ground. Plenty of altitude you say, hang on because the bottom just dropped out. The initial reaction of both crewmembers was shock and disbelief. This couldn't be happening. The jet rocked and rolled upright

yet remained in a deep stall with the nose wandering and wallowing around as the jet plummeted to the ground. The instructor immediately released backpressure to get the nose to drop, but the jet refused to budge. The rocking of the jet and the wallow pattern began to toss the pair of aviators about in the cockpit.

The instructor having exhausted the Dash 1 procedures for the aircraft tried other techniques from other aircraft. T-37 spin and spin prevention procedures popped up from somewhere down deep in the mind of the instructor. They didn't work either! The jet was putting on quite a show for our twosome. T h e

*The student made what proved to be the decision in the cockpit. He reached down, grabbed the handles, raised the handles, exposed the triggers and said, "Bailout, bailout, bailout!" He squeezed the triggers and was gone in a flash.*

student in the front seat had to brace himself with both arms on the canopy just to keep his helmet from banging into the canopy as the aircraft tossed them about. The student remembered the instructions from the prebrief, wait for the ejection signal of, "Bailout, bailout, bailout!" Don't go before the instructor, wait until the signal. They hadn't reached 10,000 feet, but the student had figured that aircraft control had been lost a long time ago.

The student and instructor recounted later that the altimeter was spinning like a top. The needle was spinning around as if it was being driven by an electric motor on fast forward. The number drum could hardly keep up. The student thought about lead time, with the altimeter spinning like that, and wondered how much to lead the altimeter to make it out by 10,000 feet. The student also recounted that he wondered what the instructor was doing trying to fight the jet; it was dead.

The instructor told me during the interview that he couldn't believe that this was happening. It just couldn't be. How many times had he been out demonstrating this same maneuver, and the aircraft had never departed before. Something else was definitely wrong with the aircraft. He had "put it into a maneuver and by golly, (he) was going to get it back out." He was one of the premiere instructors in the unit and wasn't going to let this quirk of fate, roll of the dice, get the best of him. He'd be the laughing stock back at the unit, losing a jet to a "stability demo." This would be a black mark against his career if he lost a jet. Each and every control input he could think of, he tried in those few precious moments as they plummeted toward the ground. None worked.

The student really came unglued as the altim-

eter drum went through 10,000 feet. Still no word from the back seat. In the rear view mirrors, the instructor could be seen attempting to get the aircraft under control; the stick and the rudders were being manipulated, to no avail.

Finally, the student heard the instructor say, "I think it's time we think about getting out."

The student was in a quandary. Those were not the agreed upon orders to get out. Could he possibly want me to get out now? Why isn't the instructor ejecting already? If I leave now, I'll burn the instructor with my rocket motor. Why doesn't he eject?

The altimeter passed 8,000 feet MSL, already below the 10,000 feet AGL bottom limit for an out-of-control ejection. The student made what proved to be the decision in the cockpit. He reached down, grabbed the handles, raised the handles, exposed the triggers and said, "Bailout, bailout, bailout!" He squeezed the triggers and was gone in a flash.

It took an aero-engineer and a few design guys to explain what happened next. I wouldn't have believed it except I got to interview both crewmembers and personally reached into the front cockpit of the jet after it landed to shut down the two engines.

When the student ejected, it started a series of events. First, the canopy came off, creating some drag and a weight shift to the rear. Next came the seat leaving, with an associated reaction to a rocket motor which thrust the seat up the rails. Then a loss of weight to the front of the aircraft with a shift of weight and C.G. aft. Bottom line the aircraft started flying!

The instructor knew in an instant when the student left. The light show was really impressive. The instructor was relieved that the student

*The student thought he had made a mistake. As soon as he settled into a good chute, he saw the aircraft circle his position, roll out and climb away en route to the base. I can't repeat the exact words, but he was convinced he should have stayed with the jet.*

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was safe; and as the feeling of relief washed over the instructor, a stronger message was taking over, the aircraft was responding to the flight controls!

The instructor found himself in a 60 degree left bank turn near level flight. A little backpressure and less bank killed the descent rate at about 4,000 feet MSL. The instructor couldn't see out the front windscreen due to charring from the student's seat. The top and most of the sides of the instructor's canopy were also charred. He climbed on a rollout heading back toward the base, joined up with another like aircraft and flew an uneventful wing landing. After the aircraft rolled out into the hammerhead, I climbed up, reached in and shut down the aircraft.

The student thought he had made a mistake. As soon as he settled into a good chute, he saw the aircraft circle his position, roll out and climb away en route to the base. I can't repeat the exact words, but he was convinced he should have stayed with the jet, his student days were over, and his wings were in jeopardy.

During the investigation I asked both about what was going through their minds. Both recounted the initial shock and surprise. This was later replaced by the feeling, I got us into this, I got to get us out of it. I am the "supreme aviator," I can do it. I won't be beaten! I've heard of other stories of fellow aviators who have gotten out of worse jams than this; I'm better than that; I will fly this back out.

Of course, the other aviator not flying the jet is a pep squad for the one trying to recover the jet. In their mind comes the question when is he/she going to give this up? It's not recovering; we've got to get out, NOW! Surely, it doesn't take a rocket scientist to figure out this jet isn't going to fly anymore. But, if I eject us out now, it might recover in just one more turn; then I'm the cause of the mishap. Surely, it's time to get out; just look at the altimeter!

This almost sounds like a GO-TO loop in a computer, somebody hit ctrl/alt/del and reboot

the computer. One aviator trying hard not to admit it's over, trying not to face the fact that the jet is not responding, and the other wondering just when the individual flying the jet will come to their senses and direct bailout.

We discovered that the jet was dropping at a rate of 25,000 feet per minute. This was confirmed by the FAA center tapes that showed a set of "X's" right on top of each other from the mode four readout, complete with altitude readout. That figures out to losing 1,000 feet every 2.4 seconds. Remember that the student saw 8,000 feet on the altimeter before he went for the handles. The aircraft recovered around 4,000 feet (3,500 feet AGL). That left 8.4 seconds until ground impact. I asked the instructor how much longer he was going to stay with the aircraft, trying to recover. His answer told it all, shedding some light on this issue. He kept on thinking that it was "going to recover, just a little more time, and it was going to pop out." I told him he had only 8.4 seconds left, and with reaction time and seat activation time he didn't have that much time left. He looked at me and shrugged his shoulders; he really believed in himself, his abilities. He was a dead man, and he knew it.

The ACC/DO recently published a Flight Crew Information File (FCIF) Item concerning adherence to flight manual established minimum altitudes for ejection during out-of-control situations. It discussed the loss of two highly experienced crewmembers who failed to follow the prescribed minimum ejection altitudes. They stayed too long in the cockpit, trying to recover the jet; and they paid the ultimate price.

We'll never know what went through the minds of those two. Maybe by retelling stories about other aviators who had been there, who had experienced it, we might gain some insight. The **Bottom Line** has to be that the latest two aviators should be the **last**. All I'm trying to do is shed a little light on the story, just trying to figure out what they were thinking. ■



# Another Successful FOT&E Launch

**I**magine the following scenario -- you are flying out of Castle AFB to Vandenberg AFB to do touch-and-go training at one of the longest runways in the Air Force. During your flight planning you notice a flight restriction from 2300 to 0500 local. You ask the question why and are not given a clear answer. Let's look at the major reason this happens at Vandenberg AFB.

It's 2259 PST at Vandenberg AFB. The Western Range radars are all ready, and the instrumentation package on the missile looks good. The Commander says, "Go." The men and women of the Task Force and Vandenberg AFB are ending a process that takes 6 months to complete. The Commander gives clearance to proceed, and the Test Conductor directs the final launch vote at T-40 seconds. The Countdown Control Officer continues the countdown; here we go -- the final launch vote is in. The missile enters terminal count-down and we have lift-off.

Let's look at what it took to get us to this point. In the five months before the launch of an Intercontinental Ballistic Missile (ICBM), the men and women at two bases are very busy. In this article we will follow the life of a Task Force from missile selection to launch and mission completion.

Beginning roughly 180 days before the scheduled launch, personnel at Air Warfare Center notify the 310th Training and Test Wing (TRTW), Operational Missile Wing and the 576th Test Squadron's Follow-on Operational Test and Evaluation (FOT&E) launch team of the missile to be pulled from an active Launch Facility (LF) at one of the operational missile wings. The selected missile will undergo a series of electronic tests and inspections to ensure it is fit to perform its critical mission. These tests check the guidance, enable and launch capability of the missile. After these checks,



*Maj David C. Sharp  
310 TRTW/SE  
Vandenberg AFB CA*

the missile is removed from the LF by the wing's maintenance personnel, returned to the support base and prepared for shipment to Vandenberg AFB. During the entire process at the wing, maintenance teams closely monitor the missile's nuclear surety and missile safety required configuration. This is done with the help of the wing's Safety and Quality Assurance personnel watching every task and ensuring teams use only approved technical orders, equipment, and well established day-to-day maintenance, operations and safety procedures.

Thirty days after selection, the wing ships the individual missile to Vandenberg AFB via airlift, rail or overland truck. When the missile and related parts arrive, they undergo critical receipt inspections and configuration checkouts. If anywhere along the way problems are noted, replacement items are ordered from the air logistics center or the wing. Dull Swords and other necessary maintenance reports are generated through safety and maintenance channels to account for these discrepancies. Once this process is completed, 310th Maintenance Group (MAG) personnel start to configure the missile for launch from the Western Range.

When a missile is launched from Vandenberg AFB, the Missile Flight Control Officer must retain control of the missile from the time it leaves the LF until impact in the target area at the Kwajalein Atoll. Control is guaranteed when 310 MAG destruct ordnance technicians

install a linear shape charge down the length of the lower ICBM stages. This allows for the destruction of the missile if it strays from the range corridor or begins to fly erratically. The shape charge is a class/division 1.1 explosives

detonation package installed on the outside of the missile. Missile performance is monitored using radar and telemetry systems stationed up and down the coast of California and across the Western Range to the impact point. While explosive destruct ordnance is being installed, 310 MAG munitions personnel are also building up the reentry system with the required telemetry packages and reentry vehicles supplied by the wing or depot.

Thirty to 45 days before the scheduled launch, a 25-member Task Force, consisting of officers, enlisted and civilian personnel from the selected wing arrive and prepare to complete their part of the mission. Two days after they arrive, the Task Force undergoes a series of briefings and training. Their first and most critical briefing consists of an orientation outlining the parameters of their specific launch, the operating instructions peculiar to Vandenberg AFB, procedures for dealing with the Western Range and

the safety procedures they are to follow.

During the remainder of the week, the launch crew undergoes training on the interaction of operational procedures and test countdown checklists. The week ends with the start-up of the launch control center and the beginning of maintenance on the LF. The three operations

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pick up the standard 24-hour alert schedule, while maintenance personnel do the required tasks to place the missile on alert.

These critical tasks must be accomplished with the utmost accuracy and with the greatest safety. With 310 TRTW ground, missile and explosives safety personnel inspecting all hazardous procedures, the Task Force installs all stages of the missile. 576th Test Squadron, 310 MAG and wing Safety personnel perform confidence checks after each installation. Finally, two weeks prior to the launch, the reentry system is placed on the missile. This is a critical turning point in the mission completion path.

Once the reentry system is installed, the missile begins a series of system verification tests and confidence checkouts of the range destruct packages and missile guidance system. The capsule launch crews rerun the tests using the same operational technical orders used when the missile was pulled from the wing's LF. These tests re-verify the enable and launch capability of the missile and guidance system. During any enable, launch or destruct package check, local Safety personnel close the road passing the launcher to reduce the risk to passing traffic.

After the missile system passes the tests, the missile is declared on alert. The missile will remain on alert for 10 days to allow the guidance system time to settle into the proper configuration. The final range check is done 3 to 5 days prior to launch. This final check ensures the missile will launch and verifies range control over the destruct package.

After the missile goes on alert, Task Force and wing personnel monitor the status ensuring no problems arise. Two days before launch the final processing begins. If nothing untoward happens mechanically, launch will occur on the scheduled date.

On launch day, personnel perform their safety checks to ensure safe operations. Local Range Safety personnel issue marine warnings through the Coast Guard office and flying restriction notices through FAA channels. This is what the

average pilot sees -- the shutting down of airspace. These restrictions go into effect 4 hours before the launch. Helicopter support takes off and ensures hazard and caution corridors are clear. Three distinct Safety teams are operating concurrently to ensure a positive and mistake-free launch. The first is the Complex Safety Office (CSO). CSO duties include the monitoring of maintenance activities during missile installation and working with the security police to establish the road blocks needed prior to every hazardous task, including launch. The second is the Launch Support Team (LST), who works with and monitors the Disaster Response Force and Post-launch safing teams. Finally, the Launch Operations Control Center (LOCC) Safety Officer has the final go/no go recommendation for the Wing Commander and the Range Commander. Concurrently, the Safety teams ensure the area contains only essential personnel required for the safe completion of the launch. They are also the first line of response for any incident or accident during the launch.

If for some reason the launch is not perfect and the missile must be destroyed, the LST, CSO and LOCC Safety Officer become the core of the safety investigation team for the Class A missile mishap. However, these instances are few.

For post-launch actions, the CSO and LST coordinate the actions of the Safing Team, which includes Bio-Environmental, Fire, EOD and Maintenance personnel. The Safing Team enters the LF and controls all hazards. The Bio-Environmental team performs the sniff test to check the launcher for toxic air; the fire department extinguishes any fires in the surrounding grasslands or in the launcher; EOD checks for live ordnance; and maintenance safes the launcher.

So when you hear that some of the airspace around Vandenberg AFB is closed, it may be that an ACC or AFSPACECOM sponsored launch is taking place. ■

# JUST ANOTHER DAY ON THE JOB

**N**uclear surety and missile safety programs provide the concepts, philosophy and guidance necessary for missile maintainers to perform their jobs. You the team chief, supervisor, and commander are integral factors in these programs. Your understanding and compliance with these programs is mandatory. Specifically, technical data usage, vehicle and equipment inspections and training directly impact your duties and affect your workers.

Technical data is an historical accumulation of procedures for safely working on a nuclear weapon system. Your training is centered around the procedures contained in tech data. The only authorized "field procedures" are those which have been incorporated into technical data over the years. Supervisors are responsible for ensuring the task is performed in accordance with tech data. The integrity of tomorrow's supervisors, today's young technicians, is formed by the standards you instill in them now. Technical data use provides a time-proven road map to safely bring the missile to operational status.

Inspections for nuclear certified vehicles and equipment ensure their integrity for transporting or working on nuclear weapons. Whether you are the individual performing the inspection/maintenance, using these items, or issuing/recovering them, the inspection process is everybody's responsibility. Inspections ensure the equipment is serviceable and functions in the intended manner. As for the user, you play the most critical role. Discrepancies are most often discovered by the technician in the field. Documenting discrepancies is essential to correct the problems and to maintain the integrity and serviceability of the equipment.

The issuing/recovery of equipment is the final aspect of maintaining the serviceability of your equipment. Before issuing equipment/vehicles, it

is necessary to ensure they are loaded properly and tied down, as well as serviceable. Recovering these items properly also contributes to their proper operation. Technicians informing personnel receiving the equipment about any discrepancies is essential -- specific descriptions of problems allow for lasting corrective action. Working together to resolve problems with equipment/vehicles results in items capable of performing safe and efficient mission operations. Attention to detail results in preventing discrepancies from slipping through the corrective action process. Uncorrected discrepancies could result in a disaster if the equipment were to be used on a nuclear weapon system. By performing a thorough inspection, the nuclear surety program remains on track.

A great deal of experience, from training materials to personnel, is found in a comprehensive training program. Nuclear surety, missile safety and weapon system training are all strongly stressed to each technician working with nuclear weapons. You have a personal responsibility to devote your full efforts toward the training you receive. Your desire to be the best trained and qualified technician results in safer, more effective work with nuclear weapons. Complacency on your part is just a time bomb waiting to explode. You are entrusted with maintaining the nuclear deterrent capability of our country. Anything less than your best effort in each aspect of your job, from initial or recurring training to working on nuclear weapons/components, is not conducive to a quality Air Force. Continuous improvement in the way we train and perform our job provides the foundation for our future leaders. If you see a better way to train or perform a task, incorporate this into the ever evolving training program. The result is a more effective, efficient, safer technician working in the nuclear community. ■

*Capt Keith A. Jackson  
90 FMMS/MBFSV  
F.E. Warren AFB WY*



# TEAM

The HQ ACC **TEAM SALUTE** recognizes a person, group of people or unit for notable displays of quality performance in the area of mishap prevention. **TEAM SALUTE** recipients are selected by the ACC Safety Awards Board from the monthly nominees for ACC safety awards. Periodically, **TEAM SALUTE** recipients will be featured in *The Combat Edge* magazine. Our congratulations to these recipients of the **TEAM SALUTE**.

**Capt Robert N. Polumbo**  
**Maj William B. Binger**  
**442 TES, 57 WG**  
**Nellis AFB NV**

On 3 February 1993, Maj William B. Binger, flight lead, and Capt Robert N. Polumbo, wingman, were conducting an F-16C Basic Fighter Maneuvers (BFM) mission. During the battle damage check, Maj Binger noticed vapor trailing Capt Polumbo's F-16. Maj Binger directed Capt Polumbo to check his instruments, which revealed Capt Polumbo had abnormally high fuel flow indications. Maj Binger directed an immediate climb to Nellis AFB, the Supervisor of Flying, and covered the Fuel Leak 1F-16C Checklist procedures while Capt Polumbo climbed to 36,000' MSL, and minimized his fuel flow. Forty miles from the field and down to 300 pounds of fuel, Capt Polumbo

set up a one-to-one glide to the field. At 24,000' MSL and 23 miles from the field, Capt Polumbo's engine flamed out. Capt Polumbo landed 600 feet down the runway, stopped 3/4 down the field, turned the EPU off, set the parking brake, safed his seat, and ground egressed. The inflight discipline, teamwork, and superior airmanship displayed by Maj Binger and Capt Polumbo earned them a Team Salute.

**Capt Darrell L. Thompson**  
**71 FS, 1 FW**  
**Langley AFB VA**

On 5 November 1992, Capt Thompson, an F-15C pilot, was flying a night two-ship escort combat mission over 120 miles into Southern Iraq in support of

**OPERATION SOUTHERN WATCH** when he heard a loud thump from the rear of the aircraft. The cockpit warning light initially indicated a Utility A circuit hydraulic malfunction. In a matter of seconds, the reservoir level sensing system cycled to shut off the Utility B circuit and the pressure rapidly dropped to zero. The result was a total venting of utility hydraulic pressure, the cavitation of both hydraulic pumps, and the loss of normal landing gear extension, brakes, and nose wheel steering. Once close enough to the base so that fuel would not be a factor, Capt Thompson successfully extended his landing gear using alternate extension procedures, then his flaps and arresting hook. Flying a flawless ILS approach, Capt Thompson landed 500' from the cable and engaged it on his first attempt.

# SALUTES

*TSgt Johnny K. Robinson*  
70 FS, 347 FW  
Moody AFB GA

Sergeant Robinson displayed outstanding safety awareness while preparing F-16 89-2003 for flight during the wing's Phase II combat employment exercise. After assisting the aircraft crew chief with a right main tire change, he walked to the back of the aircraft where he noticed the aft center body was turned down on the F110-GE-100 engine. After noticing a difference, the engine shop was subsequently called out, and they determined the engine had to be changed. Later follow-up to this incident revealed that if the aircraft had flown in this condition, the engine exhaust would have burned through the engine and airframe. Although the need to check the aft center body is not specifically required during an integrated combat turn, Sergeant Robinson's keen awareness and dedication in providing quality aircraft to our pilots prevented an almost certain aircraft mishap.

*SSgt Victor Caudillo, Jr.*  
555 FS, 58 FW  
Luke AFB AZ

Sergeant Caudillo was performing pre-launch ground operational checks on F-15E aircraft 87-0178. After an uneventful start of the right engine, he noticed flames coming from the Jet Fuel Starter (JFS) area. He informed the aircrew of a JFS fire, but made the unusual request that they not shut down at that time. He then discharged the Halon into the JFS, extinguishing the fire. After verifying the fire was out, he directed the aircrew to shut down and egress the aircraft. This departure from normal procedure was due to his clearheaded assessment of the situation and quick recognition of a potentially greater problem. Had the engines been shut down prior to the JFS fire being extinguished, JP4 would have been expelled from the combustion chamber drain ports. The winds on that day would have blown the expelled JP4 into the JFS fire, engulfing large areas of the aircraft exterior in flames. SSgt Caudillo's outstanding attention to detail and sound judgment prevented extensive damage to the aircraft and possible loss of life.

*SSgt John E. Clark*  
4 FS, 388 FW  
Hill AFB UT

SSgt Clark's many contributions to safety reflect his dedication, devotion, and commitment to excellence in the performance of his duties. His expertise was put to the test when he deployed on a short notice TDY to Michael Army Airfield, Utah, in order to service an aircraft that had "emergency diverted" due to numerous engine problems. Upon inspection of the aircraft, he discovered foreign object damage (FOD) to the engine. He then supervised the removal and replacement of the engine at the remote location, allowing the aircraft an uneventful flight back to home station. On another occasion, while performing a preflight inspection, he noticed that the external fuel tank pylon mounting bolts were coming loose. He immediately grounded the aircraft and promptly notified the appropriate personnel. His action resulted in a one-time inspection being conducted within the wing. Due to this inspection, several more unserviceable fuel tank/pylon combinations were found and removed from service.

SSgt Brian Rutherford  
442 FW/SEG  
Richards-Gebaur AFB MO

# Seasonal Ladder Safety

*Summer traditionally brings with it a season of increased activity, particularly in our spare time away from work. Softball, barbecues, vacations and warmer temperatures are awaited with much anticipation by those of us stuck indoors for the last several months. But summer also brings those annual chores that most of us could do without. Whether you are painting, cleaning the house or making other home repairs, chances are that using a ladder figures somewhere into your plans.*

We all laugh at slapstick actors when they fall off ladders in the movies, but in real life people are injured from just this type of accident -- and injured seriously. Thousands of people around the country are injured while using ladders each year. A few basic reminders can be the difference between an enjoyable summer and an agonizing injury.

Selecting the proper ladder is the first step in using one safely. Be sure that the ladder you choose is rated for an appropriate capacity to hold you, your tools and any other materials you will be taking with you up the ladder. An extension ladder should be long enough to reach the working area with at least three rungs left over. Inspect the ladder for damage such as dents, sharp edges, splits, cracks or other unsafe defects.

You should never work from an extension ladder in strong winds or block a door that could

be used by a family member or pedestrian. When climbing or descending a ladder, be sure to face the ladder, use the center of the rungs and use both hands for support. Do not use an aluminum or metal ladder in the vicinity of power lines; the ladder need not touch power lines to conduct electricity.

Most of these precautionary measures also apply to using stepladders. Stepladders should only be used on a flat, level surface. The legs should be fully extended and the spreader locked. The top platform and the top step should not be stood upon.

These tips do not by any means make up an all-inclusive list. Thoroughly read any manufacturer's instructions and heed all warning labels. Ladders, just as any other tool we use in our daily lives should be treated with respect. Their safe use will allow us all to reach great heights. ■

# AIRCRAFT MAINTENANCE

## *What is Required*

**A**ir Force manuals, regulations and technical data are a way of life. These directives were written by experts, many through trial and error. Mission capable rates (MC) will always be emphasized and rightfully so; however, making ETICs (estimated time in commission) should never be construed as a license or demand to avoid critical maintenance, cut corners, or to fly aircraft that are not airworthy.

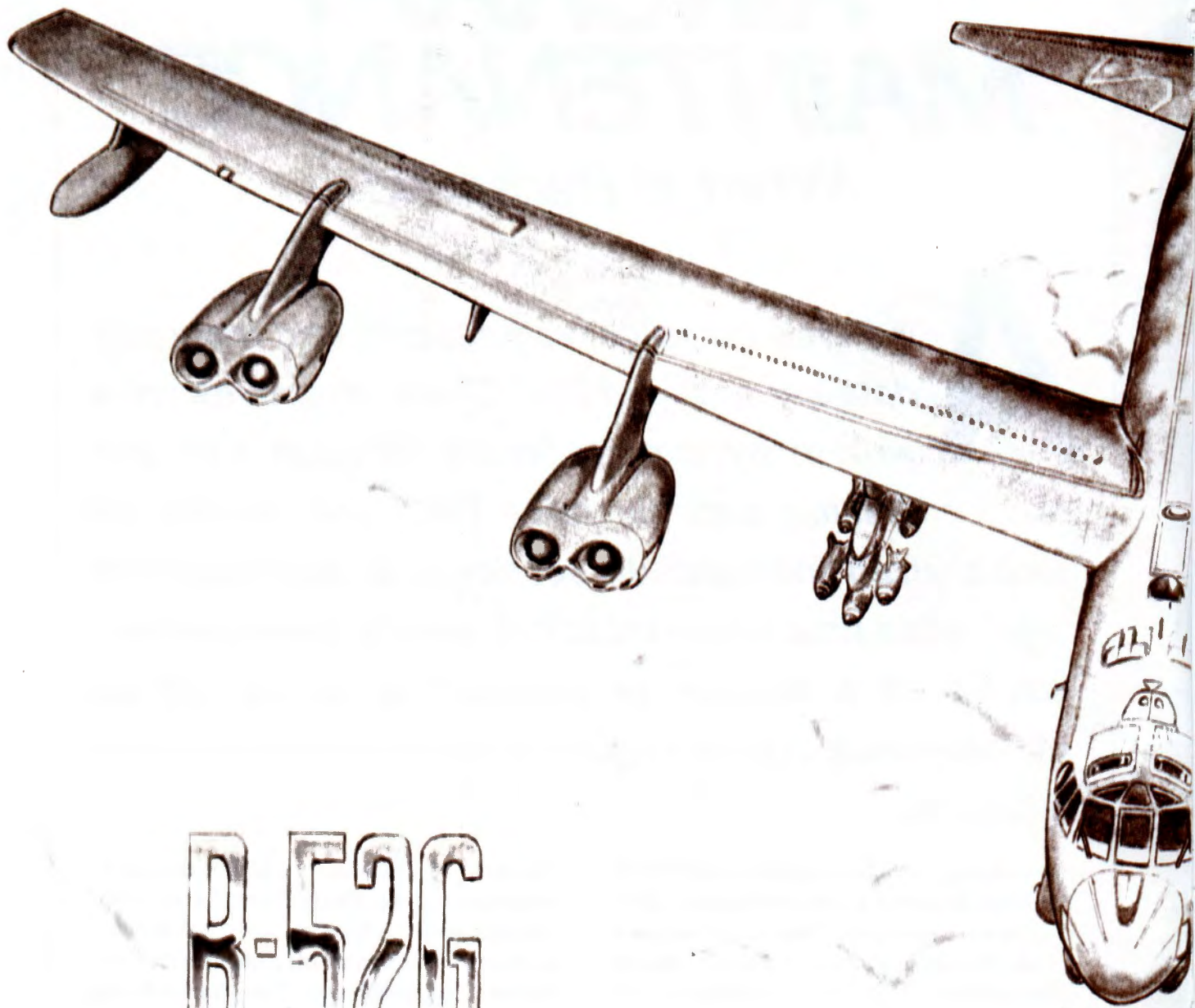
Commanders should always expect to see hustle, but never scramble; a sense of urgency, never complacency or anxiety. There have been many words of wisdom written on what is required. These subjects cannot be over emphasized. We in maintenance are required to follow directives -- these are not options. If you don't agree with prescribed procedures or think you know a better way, it is easy to request changes. AFTO Form 22 is used for recommending improvements in formal Technical Orders. See your Quality Assurance Section.

As the old saying goes, "The job is not complete until the paperwork is done." Truer words

were never spoken when completing an aircraft maintenance task. There should be no doubt that every step was taken and accomplished per directives when signing off a maintenance discrepancy in aircraft forms. There cannot be any other way.

Every task demands our highest degree of professionalism in terms of attitude, preparation and quality. Quality is an attitude, a demand for perfection and a stake in seeing it happen.

Let your policy always be quality! Remember, doing your best is not good enough; what is good enough is what is required. ■

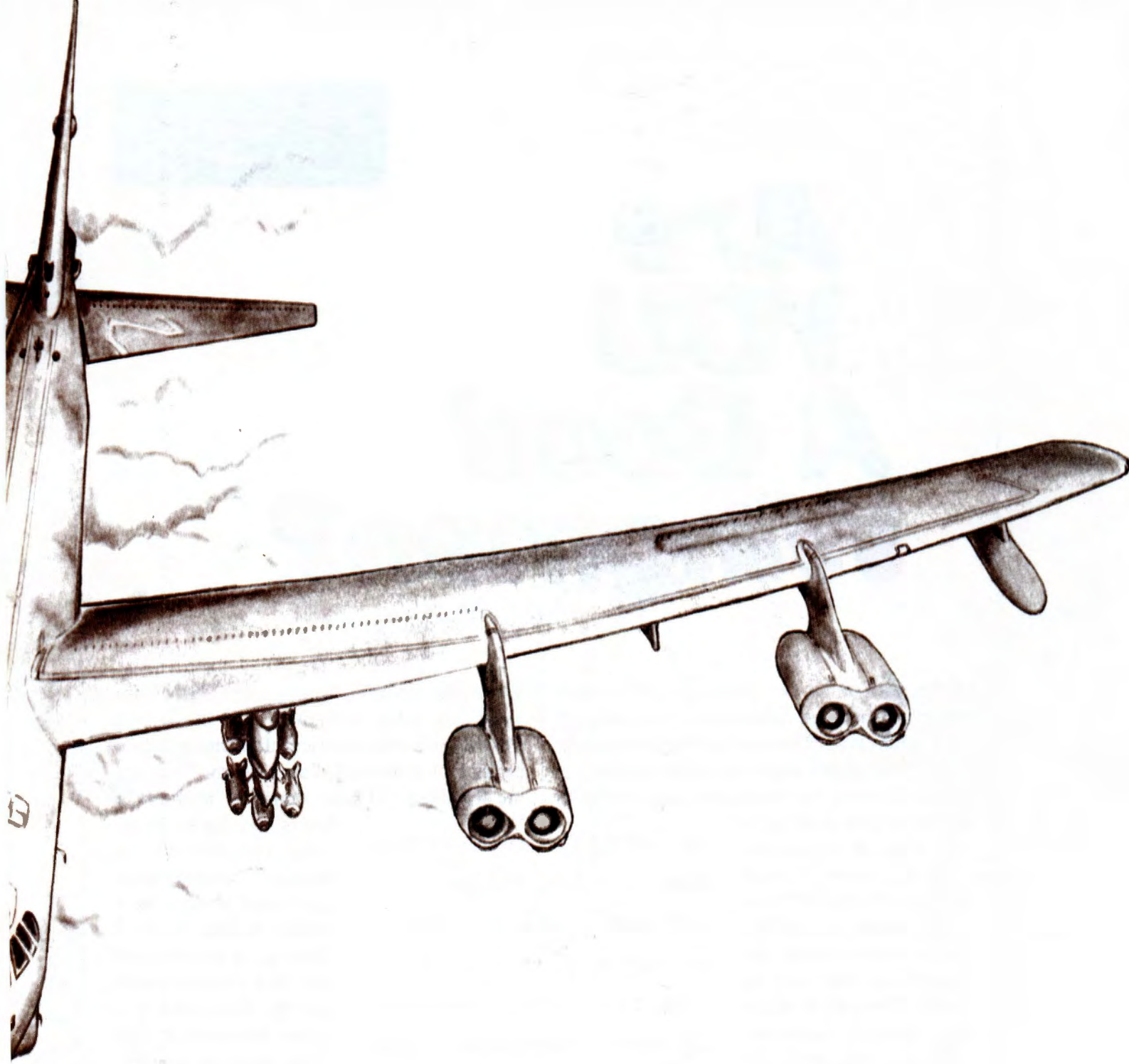


B-52G



AIR COMBAT COMMAND





*Handwritten signature and date:*  
39/1944

Maj William J. Woodworth  
163 FS  
Fort Wayne IN

# Are YOU A Good Wingman?

We're well into a new year again, filled with hope, promise, and resolutions. How are your resolutions toward becoming a better aviator in 1993? Each year I resolve to re-read the Dash 1, but most times my enthusiasm and ability to remain awake aren't up to the task. Is it even possible to become a more proficient F-16 pilot? What with us being out of RTU, no simulator in sight, and scrambling like mad for sorties, it would seem that we've already reached our limit and may never get better. I hope this article makes us all think about the little things we can do to improve ourselves, our wingmen, and the squadron in general, as we strive for excellence in tactical aviation.

Are you a good wingman? It's a thankless job, but each day someone's gotta do it. Few things in military aviation are as inspiring as leading

*Are you a good wingman? It's a thankless job, but each day someone's gotta do it. Few things in military aviation are as inspiring as leading around the squadron "young pups," full of vim and vigor, ready to impress their flight lead (maybe even whip him) and climb the squadron pecking order toward superstardom.*

around the squadron "young pups," full of vim and vigor, ready to impress their flight lead (maybe even whip him) and climb the squadron pecking order toward superstardom. They are the definition of a good wingman: attentive in

the brief, crisp on the radio, and always in position. Certainly these guys work hard not for a career as Blue 2 or 4. They do it for recognition and eventual entry into the flight lead program! Who in their right mind wants to continually listen to some other guy's plan and take hits in the debrief for doing what he thought was right? Let's face it—we're all fighter pilots and the aggressive leadership instinct is bred into us by

countless role models in flight suits. I think our young guys definitely fit the description of good wingmen. But how about their role models in

the fighter squadron? I know there have been times I've rolled into the squadron, thrilled to find out I'm Snake 2 or 4, and head to the coffee pot while some other poor slob gets to figure out a gameplan and match wits with the satanic MSS-II (a pre-mission planning computer).

The most important function of a wingman is to assist his flight lead in any way possible to ensure mission effectiveness and efficiency. That may include anything from mission planning to flying the briefed formation to shacking the target after lead goes through dry for a switch error. Three easy, simple things we all can do prior to the time hack are:

1. Find out the flight lead's game plan and assist, if needed.

2. Know your status. Are you on a red X for an FCIF? Are you current for the formation landing your lead is planning? Must you do a non-demanding sortie?

3. Research and brief a threat, MCM 3-1 item of interest, or weapon of the mission. Don't ask for permission - just do it. Most flight leads will gladly yield the floor to someone who can add spice to the 146th range briefing he's had to do. Yep, it's cool to be a fighter pilot and we know flying should be fun, not work; but doing the little things are free and they benefit us all.

As a youngster in the F-4, I worked hard to meet expectations; those of my flight commander, the entire squadron, and most importantly, my own. Not all of us aspire to be a squadron commander or Weapons School IP, but it's safe to assume that we all strive for safety and basic competence in the jet. The guidance provided by the HHQ is explicit: train with an eye toward the fundamentals. To me, as flight lead, that means I should probably pick one phase of flight to emphasize during the brief. It might be low level nav, timing techniques, or how to tighten the INS; but time permitting, each flight brief needs dialogue on how to do it, do it safely, and do it better. To tie in with that, what expectations do I set for my wingie? Did I adequately brief the en route

formation, commit/abort criteria, and IP to target contingencies.....or just fill in the blanks with "standard"? What is the standard when we go to combat? Wingmen: if your flight lead or element lead fails to completely detail your inflight actions, raise the BS Flag and raise it high! The time to find out what the flight lead meant is prior to step. Flight leads: before you hammer Joe Wingman in the debrief, think about how you conveyed your message in the brief. Let's get out of the "I'm okay, you're okay" debriefs - there's got to be a happy medium between backslapping bull sessions and RTU-like marathons.

A flight lead is only as good as his wingmen. The best Weapons School Graduate leading 3 idiots into war is in for wholesale trouble. Don't get complacent as #2, 3, or 4. Number three in a four-ship is very often the deputy lead; and while he should remember that he is still a wingman (there's only room for one leader out there, guys), he may get the whole enchilada dumped on him in EOR when #1 ground aborts. It's not the time to wish you'd stayed awake in the brief! Here are four nuggets I was given by my first flight commander:

BE READY FOR EACH JOB  
CONTRIBUTE  
FLY TO MEET YOUR OBJECTIVES  
DEBRIEF WITH PURPOSE

I'm not preaching here. In fact, my own shortcomings prompted me to think about how I could snap out of my "status-quo" funk and get my youthful attitude toward flying fighters back. It's there. It's in MCM 3-1, a *Fighter Weapons Review* article, and even in the Dash 1. Now's as good a time as any to take stock of yourself and get better. ■

Check 6,  
"the WOODMAN"



Photo courtesy of Approach Magazine

*AMSC David Spencer  
VFA 97  
FPO AP 96601-6225*

# The Safety Chain



This article is about a true life incident which occurred aboard the USS Kitty Hawk while on station in the Persian Gulf. The accident occurred when a drop tank still containing fuel was lowered off an FA-18 aircraft. Procedures were not followed, resulting in a servicemember breaking his leg. Not only was the drop tank lost, but more importantly, the member had to be medically evacuated ashore for surgery. He will be lost for the duration of the deployment, but thankfully will not incur any permanent disability.

The Safety Chain is a wonderful thing. It is that thing which encompasses every task, at work or play, ensuring everything is completed without incident. This chain is made up of numerous things, some animate, some inanimate. Examples include safety guards and covers, tagouts, maintenance publications, operating instructions and most of all -- you!

Even the very best commands have an opportunity to add their "two cents" to that pool of "recurring errors." That includes us. We recently injured one of our most valuable assets, one of our people. Why did this happen? How could this happen? These questions and others will be asked for weeks to come in an attempt to prevent it from ever occurring again. One fact is clear. Everyone involved was, and continues to

be, top performers on the Warkhawk team. Yet everyone involved let a piece of the safety chain slip through their grasp as they progressed with their job. One weak link in the safety chain caused one of our shipmates considerable agony and numerous lost work days. Everyone has heard that safety regulations/instructions are written in blood. In this case, it is painfully obvious that correct procedures were not utilized. Any one of the individuals involved could have stopped the evolution and prevented an injury. They did not.

I for one do not wish to have the next chapter of safety regulations written with my blood, and I don't wish to see it written with yours either. We will only be as good as we make ourselves. With the people and leadership within this command we have been and will continue to be a great squadron. That kind of performance is never free. It takes time, effort and concern. We cannot let our guard down for a moment.

What is the anti-climatic point of this article? A simple obvious answer. Use your publications, personal protective equipment and common sense! We have all been trained on the right way to do business. Don't become a statistic. ■

**Fleagle**



# ACCOLADES

QUESTIONS OR COMMENTS CONCERNING DATA ON THIS PAGE SHOULD BE ADDRESSED TO HQ ACC/SEA, DSN: 574-3814

	TOTAL			ACC			ANG			AFR		
	MAY	THRU MAY		MAY	THRU MAY		MAY	THRU MAY		MAY	THRU MAY	
		FY93	FY92		FY93	FY92		FY93	FY92		FY93	FY92
CLASS A MISHAPS	1	13	21	1	7	9	0	5	9	0	1	3
AIRCREW FATALITIES	0	6	10	0	5	1	0	1	6	0	0	3
* IN THE ENVELOPE EJECTIONS	1/0	11/0	11/1	1/0	5/0	5/0	0	5/0	5/1	0	1/0	1/0
* OUT OF ENVELOPE EJECTIONS	0	0	0/1	0	0	0	0	0	0	0	0	0/1

\* (SUCCESSFUL/UNSUCCESSFUL)

## CLASS A MISHAP COMPARISON RATE

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

	FY 92	3.4	1.9	2.0	2.5	2.0	2.0	2.0	2.3	2.5	2.4	2.6	2.5
ACC	FY 93	2.0	3.1	2.2	1.6	1.8	2.1	1.8	1.8				
1 AF	FY 92	0	0	0	0	0	0	0	0	0	0	0	0
	FY 93	0	0	0	0	0	9.5	7.9	6.8				
2 AF	FY 92	0	0	0	0	0	0	0	*	29.1	16.4	11.2	7.8
	FY 93	0	0	0	0	0	0	0	0				
8 AF	FY 92	0	0	0	0	0	8.9	7.6	6.6	7.9	5.8	4.4	5.2
	FY 93	0	5.2	3.7	2.8	2.2	1.8	1.8	1.8				
9 AF	FY 92	4.4	2.4	3.4	2.6	2.1	1.7	2.2	2.6	2.4	2.7	2.4	2.0
	FY 93	6.7	6.5	4.4	3.3	3.9	3.2	2.6	2.2				
12 AF	FY 92	0	0	0	1.5	1.3	1.0	.9	.8	1.4	1.3	1.8	2.1
	FY 93	0	0	0	0	0	0	0	0				
ANG	FY 92	0	6.7	6.3	8.8	7.1	6.6	5.6	5.5	4.9	4.9	4.9	4.9
	FY 93	0	2.2	2.9	2.1	3.5	2.9	3.1	2.7				
AFR	FY 92	0	10.9	7.7	5.7	4.7	3.9	6.7	8.7	7.8	7.0	8.4	7.7
	FY 93	0	0	8.0	5.9	4.8	4.0	3.4	3.0				
TOTAL	FY 92	2.3	3.7	3.5	4.3	3.5	3.3	3.3	3.6	3.5	3.4	3.6	3.4
	FY 93	1.3	2.7	2.6	2.1	2.5	2.5	2.3	2.2				
MONTH		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP

\* (HOURS NOT AVAILABLE)

Ron Smith  
HQ ACC/SEP  
Langley AFB VA

**T**here seems to be a lot of confusion about the requirement and deadline for the use of full street addresses and zip+4 codes. Am I confused? Yes, but rather than try to interpret and publish schedules and quotes from this directive and that, I'll only make one request. If

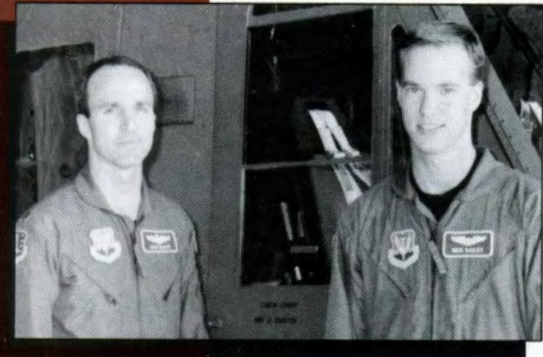
you receive *The Combat Edge* as a direct mailing from the printer (packaged and labeled to you), and you have been assigned a full street address/nine-digit zip code and it doesn't match the one we're using to mail with, then please inform us. If you are Air Force, check the new AFD 37-135, dated 31 Mar 93. Other services and agencies contact your information management officials for current guidance. The more addresses we can get upgraded now, the less traumatic it will be when the "real" deadlines are known to all. Drop me a line or give me a call; everything you need is just inside the front cover. This might also be a good time to get some of those ancient Functional Address Symbols (FAS), more commonly referred to as office symbols, brought up to date! If magazines are returned as undeliverable because of incorrect or inadequate addresses, they are automatically deleted from the mailing list. If your copies of the magazine suddenly stop coming, this could be the reason. Our charter is "Mishap Prevention Through Education and Recognition" and if

you don't receive *The Combat Edge*, we can't accomplish our goals. Don't let a precious life be lost or a multi-million dollar asset be destroyed because no one took the time to tend to a little administrative detail. "T'aint worth it!"

Are  
You  
GUILTY

# AIRCREW SAFETY AWARD OF DISTINCTION

*Maj John McKoy, 1Lt Nicholas Bailey  
44 OG, 44 MW, Ellsworth AFB SD*




Aircraft Com-

mander 1Lt Nicholas Bailey and Copilot Maj John McKoy displayed exceptional aircrew safety achievement during a ten-day deployment in support of an investigation board for a recent B-1B aircraft accident. Lt Bailey and Maj McKoy deployed with their HH-1H "Huey" helicopter from Ellsworth AFB SD, to Dyess AFB TX, then to Van Horn TX, to expedite on-scene investigation efforts. During the deployment, the aircrew performed numerous time-critical support missions under poor weather conditions. Flying from Dyess AFB to Van Horn TX, the aircrew flawlessly performed a navigation divert when extreme winds forced an unplanned refueling stop. Arriving near the B-1B accident site, Lt Bailey and crew made four landing attempts on top of a 6500' cliff. High density altitudes and ex-

tremely high winds led the crew to decide against further attempts to land. The next morning, the crew executed a flawless cliff side landing enabling the investigation team to perform a crucial accident site survey. Later, Lt Bailey and Maj McKoy landed at five restricted high altitude remote sites enabling environmental technicians to perform essential water sampling. During the return flight to Dyess AFB, the aircrew utilized excellent decision-making when they encountered hazardous storms causing three different mission diversions to ensure safety of flight. En route, the crew also encountered unforecast icing precluding further flight. They located and landed at a private airstrip in spite of near-zero visibility through the windscreen. Lt Bailey and Maj McKoy performed numerous time-critical support missions in hazardous terrain under poor weather conditions.

# FLIGHTLINE SAFETY AWARD OF DISTINCTION

*Sgt James F. Barton, 61 FS, 56 FW, MacDill AFB FL*



While performing a number two phase inspection on aircraft 87-0364, I discovered a discrepancy that threatened the safety of flying operations. I discovered the engine main fuel line chafed between the main engine control and the fuel oil cooler. The chafing in the fuel line could have caused a massive fuel leak leading to a possible explosion, loss of an aircraft, and aircrew. I immediately contacted

Quality Assurance, and a one-time inspection was initiated to inspect all 56th Fighter Wing aircraft. To date, 47 aircraft have been inspected with eight found to have chafing on the main fuel lines beyond limits." Sgt Barton's alertness and thorough inspection procedures identified and corrected a condition which, if gone undetected, could have caused the possible loss of an aircraft and aircrew.



# ICBM CREW SAFETY AWARD OF DISTINCTION

*1 Lt Elizabeth A. McCarthy, 2 Lt Brian W. Gaude  
66 MS, 44 MW, Ellsworth AFB SD*

Shortly after changeover, the crew received indications of primary power fluctuations at E-03 and E-04 launch facilities. The crew was responsible for the Echo Flight area as well as Charlie's facilities because E-01 LCC's digital storage and processor was inoperable. The crew notified Wing Job Control (WJC) and continued to monitor the situation. As the alert progressed, the crew noticed a loud humming sound and light smoke coming from the motor generator (MG). The crew began electrically isolating the MG and coordinated their actions with WJC. Increasing smoke indicated initial isolation actions had failed to solve the problem. The crew notified Wing Command Post and WJC and executed a controlled shutdown of the capsule. When smoke became too thick for them to safely stay in the LCC, the crew

members evacuated the capsule and established control of the access door. Once upstairs, they contacted the remaining squadron LCCs, briefed all concerned agencies on the situation, and coordinated the transfer of C-01 and E-01 flight responsibilities to A-01, the only other operational LCC in the squadron. Later investigation confirmed shutdown steps had successfully removed all electrical power to the MG and eliminated the overheat condition. Components were charred and it had taken some time for the smoke to dissipate to a safe level. Crew R-035's quick action ensured their safety while limiting damage to only the MG. The outstanding leadership and proficiency of this crew prevented a possible loss of life.



# ICBM SAFETY AWARD OF DISTINCTION

*SrA Scott J. Deppel, 742 MS, 91 MW, Minot AFB ND*

"I was the Facility Manager on-duty at Launch Control Facility (LCF) Mike-01, when I received a call from the on-duty flight security controller (FSC) who complained of a headache and an aching neck and shoulders. I entered the Security Control Center (SCC) and immediately smelled heavy fumes in the air. Due to the launch control center being under Rivet MILE depot-level maintenance, there wasn't an on-duty missile combat crew (MCC) for me to report the situation to. I quickly reported the situation to the Kilo-01 MCC who promptly called the appropriate base agencies. The on-site flight security NCOIC decided to evacuate the SCC, transferring Mike flight security responsibilities to

the Kilo-01 FSC. I discovered that the Rivet MILE crews had recently painted in the launch control equipment building (LCEB) using a zinc chromate primer which is highly toxic. I proceeded down to the LCEB clean air room and energized the exhaust system. After midnight, I made the decision that the fumes had dissipated enough that the FSC could safely return to duty." SrA Deppel's prompt actions dispelled a potentially life-threatening situation and ensured the continued security of the flight's 10 Minuteman missiles. With only one month's experience as a qualified facility manager, he learned a valuable lesson — ALWAYS BE PREPARED!



# CREW CHIEF EXCELLENCE AWARD

*TSgt Clifton A. Hawkins, SSgt Carl G. Azzarelli  
107 CAMS, 107 FG, Niagara Falls IAP NY*



Sergeants Hawkins and Azzarelli were dispatched to launch a F-16ADF to the unit's alert detachment at Charleston SC. The pilot show and all preflight checks were accomplished with no problems noted. The aircraft launch proceeded with Sgt Hawkins on the headset and Sgt Azzarelli performing as the fire guard. All engine start and flight control checks were normal and all ground safety pins were pulled. Sgt Hawkins disconnected his headset and went to the front of the aircraft to await the chocks out signal, while Sgt Azzarelli took his position to remove the chocks. At this time, the pilot signaled Sgt Hawkins to hook up his headset because he, the pilot, was experiencing a problem. Sgt Hawkins hooked up and the pilot told him that he was having a

problem with an "A" system hydraulics high reading. Sgts Hawkins and Azzarelli proceeded to check out the problem. As the two were standing by the right wheel well, they saw smoke and flames coming from the centerline area of the wheel well. Sgt Hawkins notified the pilot that there was a fire and to shut down the aircraft and he would assist him in the emergency ground egress. Sgt Azzarelli got the fire bottle, placed it behind the right wheel well, and proceeded to fight and extinguish the fire. Meanwhile, Sgt Hawkins assisted the pilot, called the fire department, notified maintenance control, and then proceeded to help Sgt Azzarelli. By the time the fire department arrived the fire was out. The problem was later traced to a wiring problem in the centerline pylon.

# GROUND SAFETY INDIVIDUAL AWARD OF DISTINCTION

*SrA Claude A. Kerby, 347 SUPS, 347 FW, Moody AFB GA*



As primary safety monitor for his Flight, Materiel Storage and Distribution (MS&D), SrA Kerby is responsible for conducting weekly safety briefings, monthly spot inspections, and safety training classes. He also coordinates fire extinguisher and Scott Air Pack training with Moody's Fire Department, not only for his flight, but for the entire Supply Squadron. Through his efforts keeping fellow employees informed, he has gone "above and beyond" simply posting flyers and conducting weekly briefings. By gathering briefing materials, training aids and mishap prevention bulletins, he has compiled a flight safety library, allowing easy access to all flight personnel wishing to use these materials. He has also made available in the library, mishap reporting

forms. Having easier access to these forms enable supervisors to expedite mishap reporting through proper channels. During the Supply Squadron's Annual Ground Safety Inspection, several areas were noted as commendable. SrA Kerby's development of an extensive newcomer's orientation program that consists of overhead slide presentations, a hands-on walk through of each section of the supply warehouse, and a continuity folder that must be reviewed by each individual is noteworthy. SrA Kerby's continuing support to the squadron's safety program contributed directly to the "Excellent" rating received in Feb 93 on the annual ground safety inspection, as well as the overall "Outstanding" rating his squadron received on the HQ ACC Quality Air Force Assessment.

Barbara Taylor  
HQ ACC/SEP  
Langley AFB VA

# SAFETY AWARDS

## Where do we stand

The ACC Safety Awards program has been in existence now for 7 months, and overall the program has been going well. Our ACC Sup 1/AFR 900-26 has been published and distributed to the field. We've had a few changes since publication, so we're working on an IMC. In order to keep the program effective, we need your continued support and input. What works/doesn't work for you? What can we do to make the program better?

Responses to the recent ACC Safety Processes Survey indicated concern from the field that most of our ACC Aircrew Safety Awards have gone to fighter wings rather than the "heavies." Perceptions, whether based on facts or not, are powerful mental images and impressions of events which motivate further action. This perception disturbed us greatly because it is diametrically contrary to the purpose of an awards program and not indicative of a quality effort.

As we frantically searched for a way to combat this mistaken impression, the answer came from the field -- the customer!

Capt Ted Lemieux from the 42 BW at Loring AFB had ascertained that this perception existed and offered us a two-part solution. First, explain the two types of "flying" awards. Second, make some adjustments to the awards program.

The ACC Pilot Safety Award of Distinction honors a **pilot** for outstanding airmanship. This does not preclude a pilot of a "heavy" or a helicopter from being nominated for this award. However, since pilots of multi-place airplanes rarely operate other than in concert with the rest of their crew, there have been no nominees in this category other than single-seat pilots. The ACC Aircrew Safety Award of Distinction honors an **aircrew** for outstanding air-

manship. This is the logical award category for multi-place aircraft. Thus, possibly a contributing factor to the perception is confusion over the two different awards. One award is for pilots only, the other is for aircrews.

Capt Lemieux proposed holding over award nominations that were not selected to give them another chance at the following awards board and somewhat level the playing field. He feels this will give nominees a second chance at winning an award and reduce the importance of timing (a month when there are lots of nominees versus a month when there are only a few nominees) and help dispel the perception that your aircraft can't have more than two seats to win an award.

Capt Lemieux's proposal was presented to the ACC Awards Board -- result: adopted into the program with some minor changes and expansion. Basically, this new procedure will give some nominees in all the **monthly** award categories a second chance to compete. Specific details of this change will also be forwarded in the IMC.

Just for the record, statistics actually show that of 4 "heavy" aircrew award nominations submitted, **3 WERE WINNERS!** But perceptions aren't always based on fact, Capt Lemieux's idea was worthwhile and worthy of implementation. **Way to go Capt Lemieux!**

It's feedback like this that helps us continually recognize deserving individuals and units. We appreciate your comments and welcome any suggestions/feedback you may have. Help us improve your awards program! Delay no longer. Send us your nominations today. If you don't submit, you can't expect to win. ■

*MSgt James K. Kivell  
HQ ACC/SEG  
Langley AFB VA*

# Parents, Kids and Safety

Two very recent events at ACC bases highlight an area which has the potential to virtually destroy not only a member's Air Force career, but their family life as well. Both of these events could have been avoided so easily that one must wonder why either incident took place -- yet they did.

Reviewing the information on these events reminded me of times in the past when I returned from work and found there was nobody home. I'm sure many of you can relate to that hollow empty feeling when you anticipated a greeting from your spouse and children and it didn't happen. How would you feel if those greetings were lost forever because you didn't realize the consequences of your actions or inaction?

So much of our effort is focused on providing safe work areas that we sometimes forget to take the same precautions in our home. However, a culture of safety should be pervasive. Home, work, on duty, off duty, it doesn't matter. Safety should be an ingrained way of doing everything. I am sure that the parents of the child injured at an open house never dreamed that they would spend many many months hoping their child would recover and be able to lead a normal life. I also doubt the parents of the four-year-old thought their child would find the loaded hand gun in their car and discharge it while mom was loading things in the trunk. Yet, both of these incidents happened and they could have been avoided.

Children do not always have the capability to judge their limitations or the consequences of their actions; that is our job as parents. We must determine what behavior or activities are appropriate for our children based on our knowledge of their abilities and the risks associated with the activity. As parents, we are responsible for ensuring that our children are not exposed to needless danger. We wouldn't let our children think it was safe to play with a rattlesnake or go swimming in a storm drain. We see these things as being so obvious that just mentioning them seems silly. Yet, we keep loaded guns within our children's reach and expect them not to touch the gun. Or we let our children climb on a weapons trailer. The bottom line is we as parents must protect our children; we must ensure any potential sources for injury are removed; or accept the possibility of someday coming home to an empty house.

# SLEEK, BUT DEADLY

**D**id you ever hear the saying, "He knows just enough to be dangerous?" If you're like me, you know that's wrong, because the more you know about flying the better you are. Right? Well, I'm alive to tell you even the most highly motivated people need to remember that experience without a sense of danger can make you the next candidate for an accident. **Even an experienced flier can be dangerous!**

First, a story, which like all good safety stories begins with... There I was, Blue Three in a three-ship of FB-111's on a standard night formation profile out of Plattsburgh AFB NY, with a formation takeoff to air refueling and proceeding single-ship through low level and return to the pattern. All six fliers were highly experienced instructors. We were all hard liners on briefing and formation discipline, so flight lead's review of squadron standards specifically included the actual numbers that made up the standards. It was a normal pre-flight, which meant Blue Two was maintenance delayed. Since he was the one who needed the for-

mation flying, we decided to delay the flight for him. Always motivated to get the most out of every flight, we took off as a two-ship on a local area clearance directly into the pattern to log some night approaches.

It wasn't much longer until #2 canceled for the evening. Lead was climbing out from his low approach, and just before we reported initial he called for a standard rejoin.

"Heat 23, cleared right wing."

"Two," came the crisp reply from us.

We assumed standard speeds would be used when no speed was given. A little alarm bell was going off in my head, though, and I had long ago learned to trust those alarms. "What speed did he give?"

"He didn't, but he briefed climb out at 350. I'm holding 400, but give me a good one mile call and I'll slow to 380. Passing through 1500 AGL now." My pilot, ace instructor that he was, sure knew the night rejoin limits.

I called "one mile, assume 380" and transitioned to visual. I had my hand on the mike switch and was just about to call traffic off

lead's nose when my pilot went to idle power and abruptly dumped the nose. Although it was pitch black, I could distinctly make out the tail number printed on the gear door (194 -- the first FB-111 I ever flew); and I very clearly heard the roar of lead's engines as we streaked just underneath him. Except for the quick reactions of my pilot, we nearly became 4 very experienced, very dead instructors!

"I've got it," my pilot said as the windscreen now filled with the dark reflections of Lake Champlain. His next call to lead displayed the best composure I could imagine. "Lead, Two. We'll stay in cell awhile." You can believe there was a spirited post-flight debrief back at the squadron.

It's not just one thing that leads to any mishap situation, but a string of events. This time, however, it was a string of altered perceptions that almost did us in. Lead distinctly remembered his rejoin call being "Heat 23, cleared right wing, 250." He wanted to give us a power advantage and he was already approaching 250 on his climb out, so he decided to maintain 250. Although this was a deviation from

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what was briefed, it was within standards and normal limits, and he was sure he notified us of the change.

The problem is we remembered the briefing's emphasis on standards and discipline too well. We were comfortable in our sleek and deadly 'Vark and just as distinctly "heard" what we expected to hear in lead's standard radio call. Being hard core instructors and strict about radio discipline, we chirped our acknowledgment of his call, comfortable in what we were already doing. Having just departed the dogleg for initial, we had to **slow down** to reach what we believed was 30 knots above lead. Actually, we had **130 knots of overtake at night!**

And what about the crossing traffic -- a trivial distraction in the story? Actually, it was lead's wing tip light. Our closure was so fast and the night was so black that his wing tip light was "separating" from his tail light in a visual illusion I'd never experienced. His tail light was dead still in our windscreen, neither moving nor growing until almost too late.

Accident figures clearly show experienced fliers are involved in accidents even as they gain experience. The Air Force Safety Agency's Data Analysis Branch studied pilot flying experience in Class A mishaps between 1 January 1981 and 21 May 1992 and found that operations-related mishaps involved surprisingly high pilot experience levels, yielding a USAF average of 1762.8 hours of total time and 623.5 hours in the

aircraft per mishap pilot. While they are careful to point out that 60.67 percent of operations-related incidents happen to pilots with less than 500 hours in the mishap aircraft type, that still leaves almost 40 percent with more than 500 hours. By specialty, the watershed marks for total/aircraft hours were 1712/638 for attack, 2046/704 for bomber, 3019/1408 for cargo, 1622/532 for fighter, 2332/21 for glider, 2264/915 for helicopter, 1100/294 for trainer and 1208/69 for observation. Somewhere around these points even the most conscientious people may become conditioned by their experience to believe they're insulated from the mistakes other "less knowledgeable and less experienced" people make. Don't confuse this with complacency; it happens to even the best fliers despite great efforts to stay sharp.

At this level of experience mistakes often occur because of altered perceptions and earned comfort rather than complacency or ignorance. Our experience gets us to the point where we're comfortable doing dangerous things. Let's face it -- night rejoins, touching another plane (a.k.a. refueling), and intentionally contacting the ground (a.k.a. landing) are just a few of the dangerous things we soon take for granted as we gain more experience and exposure to them.

What's this got to do with you? Here comes the proactive part -- what you can do about it. You can do more to overcome the dangers of experience than more briefings and another FCIF. **USE YOUR**

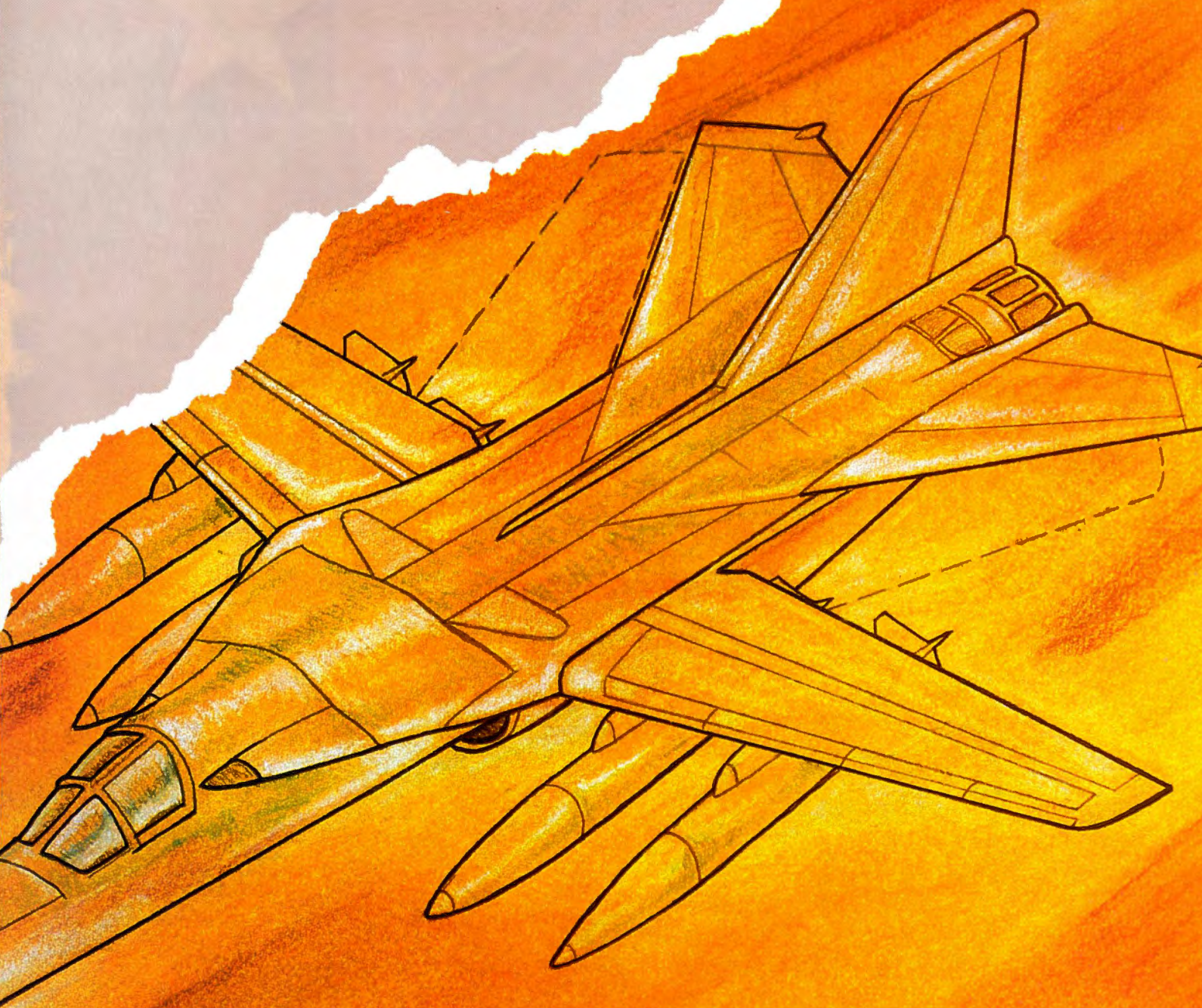
**SIMULATOR!** Cockpit Resource Management and the Aircrew Attention Awareness Management Program already use simulators to recreate documented crashes and phenomena such as wind shear and micro burst, but go the extra step and use it to train perceptions, not just procedures. Use it to teach things too dangerous to do in the air -- like running into another airplane so you can see what "excessive" closure is, developing an excessive sink rate on final, or completing a classic target fixation scenario. Use the simulator to take the cockpit crew back to the point of no return and let them study what it looks like when they're committed to ejection or death.

The way we've used simulators in the past often created the perception we can survive any situation in what you can consider the "I've never crashed and burned before" syndrome, when we could use it to train how to recognize impending danger. If we **train people how to PERCEIVE a developing crash**, we're arming them with an additional tool to avoid wasting themselves and their aircraft.

That's my story and my lesson learned, and it applies to the fighter

jock who's comfortable dive bombing, the trash hauler who's heart rate no longer goes up facing a min weather strange field approach, or the rotor head who's got good enough hands to consider autorotation something other than a controlled crash. With all the changes in our operations (SERBs,

RIFs, "feet on the ramp"), there are more people than ever in the "danger zone." One of the most important things we do as instructors is give others the knowledge they need to come back alive. Let's make sure we're maintaining the same edge on our more experienced people too! ■





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**MISSION**

**To defend the United States through  
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