

# ANGLE OF ATTACK

WHEN IT GETS HOT-THINGS DON'T WORK LIKE THEY NORMALLY DO. It doesn't take a rocket scientist to figure out that statement. You know-you've been taught-to treat your airplanes, trucks, and machines differently as the temperatures soar. But what about the most important "machine" out there-YOU? Do you treat yourself differently when it gets hot, or do you just carry on business as usual? I realize you don't wear as many clothes and you dress differently. But do you take care of the inner functions of your machine? Do you keep it as well watered? Do you keep it as well fueled with the right type and quantity of foods?

I like the illustration we previously shared about security police sitting in a parked truck near the flight line. Because of the jet noise, they rolled up the windows and suddenly are in an "unscheduled" sauna. As supervisors, are we checking to see which "saunas" we can eliminate? Are we making sure the new troop who grew up in a different part of the country understands just how hot it gets at our "air patch"? For example, does the crew chief from Florida, who is newly assigned to Nellis, understand that even in a "dry" heat, he is still losing a lot of fluids even though his T-shirt isn't dripping wet?

Supervisors need to be especially involved to ensure the troops are not only encouraged to drink more fluids, but that water is made more accessible during this time of the year. Some extra coolers placed in strategic spots could be just the oasis needed by a hard-working guy or gal. Yet even a hot and very thirsty crew chief or aircrew might turn down the chance for some cool water, if they felt their peers wanted them to "press on" and not stop now "to wet their whistle."

How many of you reading this believe peer pressure is only for the young guy? That as you get a little older, you are no longer influenced by peer pressure. Well that's bogus guys! For example, imagine you are driving down a highway with only a few other cars sharing the road. You've set the cruise control and are comfortably clicking off the miles. A major traffic artery merges from the left



into the road you've been traveling. It isn't congested, but the traffic is now flowing about five miles an hour faster than you. The tenth car (an old VW van straining to climb the hill) is passing your polished chariot and a stream of cars are in the left lane slowly overtaking you. You know that you are within five mph of the flow of traffic and that you don't need to speed up for safety reasons (there is plenty of room for passing and traffic is not congested). But how many of us would not reset the cruise control a little bit faster? You guessed it—peer pressure. But what has that got to do with the thirsty guy we left at the end of the previous paragraph?

Simply this: If the "old pros" take along a frozen flask of water on the mission, the new guys will think it's a good idea also. If the senior airman takes the new guy over to the water cooler, they can both get a drink. This type of positive peer pressure can help us all do our jobs better. As a supervisor you can tell your folks to drink more water, but if you take the time to drink a few cups with them, they will know you really meant what you said.

Finally, I would like to say goodbye this month to two people who have done a lot for TAC. First, Major Bill Barber from TAC Flight Safety who is leaving to go make his mark in the world of leadership. Hill AFB, Utah, is fortunate to be gaining such a valuable member. And secondly, Colonel Marv Esmond, who is leaving to go to the National War College in Washington, DC. His guidance and friendship have been especially important to me.

Happy 4th of July, pardner!

Jack Gawelko

JACK GAWELKO, Colonel, USAF Chief of Safety

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# COMPOUND EMERGENCIES

Maj Dan Runyan TAC Flight Safety

his article may seem more appropriate for "Ripley's Believe it or Not," rather than TAC Attack. One of our F-16s recently experienced a bird strike, but this was no ordinary bird. It first struck and blocked the pitot tube, giving the pilot ADC, Flight Control, and DUAL FC fail lights. It then went down the engine intake, causing the EEC light to illuminate along with a corresponding loss of thrust. Along the way it damaged the nose gear extension mechanism so when the pilot configured for landing, the nose gear would not extend. The avionics warning light illuminated and, for no apparent reason, the main generator dropped off the line with subsequent activation of the EPU. This bird exacted a high price for its death!

The point of this article is not about bird strikes and F-16s, It's about compound EPs and how to handle them, something we all need to rethink every now and then.

## ARE THEY THEY REALISTIC ?

If you're counting, there are now 12 warning/caution lights illuminated, with no fewer than seven separate EP checklists for the pilot to follow. This sounds like something only an overzealous SEFE would give during an emergency procedures evaluation, but the fact is—it happened. The point of this artie is not about bird strikes and F-16s. It's about compound EPs and how to handle them, something we all need to rethink every now and then.

The final outcome of this incident was successful. The pilot landed safely and gave the aircraft back to maintenance. The key to the successful outcome of this, or any compound emergency, is simply prioritization of tasks. This pilot was faced with analyzing all his indications, individually and then as a whole (i.e., how they affected each other). Then he had to develop a viable game plan to recover his iet. And, he had to maintain aircraft control while all this was going on. This pilot did it right, so what can we learn from it?

The priorities are rather simple.

• Number one, as always, is

intain aircraft control. This means work whatever flight control problems exist first. Only press to the next step once the aircraft is controllable. Decisions are easy here - if the aircraft is not controllable -eject!

• Next, keep the jet flying by solving any thrust problems. Determine if altitude can be maintained and/or set up a glide for either a flameout approach or a controlled ejection (over a safe area). Again, if there is no thrust, and no flameout landing option, the decision is easy eject!

• With a controllable jet and useable thrust, you can now unpucker yourself and start working the secondary problems (like the electrical malfunction). Normally these are serious EPs in themselves, requiring immediate attention. But in the context of a compound emergency, they now have "solve when time allows" priority.

• When it's time to land—then work the configuration problems. Obviously, the landing is the most critical part of any successful EP. The key is not to rush the landing. Take the time to ensure everything is right(i.e., three green, barrier configuration, runway clear). You don't want any unpleasant surprises during this stage of the EP.

• Finally, at some point in the procedure, *if* time allows, clean

up the cockpit (resettable switches, lights, etc.).

These situations can be confusing and frustrating. The actions required may not fall in to the

The successful completion of a compound emergency requires a depth of systems knowledge that can only come from Dash One study.

precise checklist order our fighter pilot minds are used to seeing. The successful completion of a compound emergency requires a depth of systems knowledge that can only come from Dash One study. It requires judgement and patience, and time must be taken to think about the ramifications of every action before it's done.

The best preparation for successful handling of incidents like this is practice—in the simulator and SEPTs. So the next time you're in one of those boxes, try working this scenario, or some other that involves compound EPs. As this incident shows, they don't just happen on EP evaluations - so be ready! >>

## INTERESTING ITEMS, MISHAPS WITH MORALS, FOR THE TAC AIRCREWMAN

### Are you ready or not?

A n upgrading F-16 pilot was on a B-course syllabus sortie with an instructor pilot (IP) in his rear cockpit. Everything went normally during the preflight and engine start except for an interruption due to a problem with the crew chief's communication cord.

After takeoff, the flight accomplished a G warmup as they entered the working area, then split up for horn awareness flight maneuvers and a 9-G familiarization maneuver. While attempting the 9-G maneuver, the upgrading pilot initiated a hard turn at 450 knots. He only pulled 8 Gs through the first 30 degrees of turn, so the IP prompted him to pull harder; and when the flight leader called for a rejoin, the IP took control of the aircraft and initiated an intercept for the rejoin. During the intercept, the IP noticed the upgrading pilot's head jerk a couple of times and felt rudder pedal inputs which he interpreted to be G-induced loss of consciousness (GLC) for 10-15 seconds.



When the jet was safely back on the ground, a thorough examination was made of the aircraft, the mishap pilot and his G-suit. Egress technicians found nothing wrong with the aircraft. The flight surgeon found that the pilot was in excellent health and his physical conditioning program was progressing normally. The instructors who had flown with the young pilot did not feel that there were any problems in his capacity to handle the high-G environment in the F-16.

The pilot's G-suit? Yes, there was a problem there that also tied in with the pilot himself. The pilot had never connected his G-suit and hadn't done a G-suit test on the ground before takeoff as prescribed by the checklist, nor did he catch the absence of its inflation during the G-warm up. In retrospect, the mishap pilot said that he had been distracted and his normal strap-in habit pattern interrupted by the comm cord problem. The pilot admitted that he routinely did not perform a Gsuit check.

While the G-suit technically only assists the pilot by handling approximately one extra G, it does subconsciously, during inflation, prepare the lower extremities to begin the straining maneuver. These actions allow the pilot's body to stay ahead of the Gs and not succumb to GLC. While the pilot's profile indicated that he was in the low risk category for GLC, any pilot's G-tolerance and execution of the G-straining maneuver may not be at the same level each day.

The main point is—why knowingly go into the high-G environment without all of your G-coping equipment (your aerospace body, your G-suit, your G-awareness) as up to speed as possible? This is what the G-warm up maneuver is supposed to do. The G-warm up is not a square-filler; it has an important purpose and should be handled as such. We've lost too many valuable aircrews to GLC. There's no reason to go into the fray with less than your best.

## Why did I do that?

A fter an F-16 aircraft had been armed up by the crew in the end-of-runway (EOR) area, the pilot selected the Chaff/Flare program switches to Single and put the Chaff/Flare arm switch to Arm. As soon as he did that, the dispense lights lit up and the pilot immediately moved the Chaff/Flare arm switch back to Safe. Before he could get the system safed up, however, 12 bundles of chaff and 12 flares were shot out onto the EOR pad. Fortunately, the arming crew had already finished arming the aircraft and moved on to other jets.

Munitions and weapons systems are like a gun. Don't arm them up unless you plan to use them. Sure, they're not supposed to work on the ground, but sometimes Murphy's Law comes into action to keep us humble. Make sure it's not you that gets humbled. In fact, JR 55-79 clearly states that "Chaff/Flare will not be armed unless in an

oproved area with an intent to dispense chaff and/or flares." That's not in the EOR area.

## Beware of airborne ice

A n A-10 driver was returning to home base single-ship after flying as a chase aircraft for a practice tactical check ride. He began a descent from 15,000 feet on an instrument approach, but his approach clearance was can-



celled as Approach Control began working an emergency aircraft recovery to the base. As the pilot held in the assigned area (in clouds), he noticed rime ice buildup on the wing leading edges.

After holding for approximately 10 minutes, the pilot was finally cleared for a TACAN approach. At about four miles on final, he felt vibrations from both engines, and rime ice was noted on the aircraft after it landed. When maintenance investigated the reported engine vibrations, they discovered that 34 engine fan blades had been damaged beyond limits.

Beware of icing. When you can, avoid it. When you find yourself in it, get away from it as soon as possible. Don't wait until a problem develops before taking positive action. The best way to deal with icing is to prevent it from occurring in the first place.

TAC Personnel Who Have Made Noteworthy Accomplishments To Unit Effectiveness

Capt Paul E. Smith 33 TFS, 363 TFW Shaw AFB, SC

Sgt James L. Scott 31 TFW/SE Homestead AFB, FL TSgt Donald Cheney, Jr. Sgt Everett W. Owen A1C Elvin A. Delarosa 1 CRS, 1 TFW Langley AFB, VA

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#### CMSgt Ronald C. Christiansen Chief, Ground Safety Division HQ TAC/SE

Over the last several years, I've discussed with you the value of leaders who cared about you and me. The first sergeant, the line chief, your immediate boss, and the commander who always seemed to be there. There's also a lot of "them" in our command. You may not always see "them," but they care and can provide you and me with a great deal of assistance if we will just let them.

"Them" are the family services volunteers, the medical service, legal staff, financial advisor, social actions, chaplain, and, believe it or not, the safety folks at your base. There are more of "them" who are in business to help you and me and through my career I've needed them. Sometimes, it took a lot for me to swallow my

You may not always see "them," but they care and can provide you and me with a great deal of assistance if we will just let them.

pride and ask for help. I certainly didn't want everyone to know that I couldn't afford to buy milk for my young son. because I had overextended myself by having to own (me and the bank) a new car! I didn't want my supervisor or commander to know that I'd gotten into this kind of situation. But because the master sergeant I worked for looked after his people and was aware of their attitudes, he found out I wasn't up to my normal speed and I was making mistakes. He called me in to talk about it and I skirted the truth by tell-

ig him I was just having some afficulty at home — first time I'd been a father and all that! He wanted to make an appointment for me at the hospital or with the chaplain to get my

The worst thing was that payday wasn't until Monday and we were broke.

mind straight, but I asked him to give me a few days before anything happened. Since it was Wednesday, he agreed to see me on Monday morning at 0900 hours to see how I'd made out. The worst thing was that payday wasn't until Monday and we were broke. That night went around searching for

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bottles to turn in for deposit money so I could get some milk. I got enough and was able to get a quart of milk for the young son.

When I got home, my boss was sitting with my wife and baby. I could tell by her look that she'd spilled the beans. He commenced to give me a tongue lashing for not telling him the truth and especially for putting my family through such hardships in the name of personal pride.

He opened his wallet, gave me twenty bucks, and made me sign a note to pay him five dollars a payday for two months. He left and told me to be in his office Monday.

When Monday came around, I went to see my boss. He had scheduled me for an appointment that afternoon for financial counseling, and I was to take the rest of the morning off and gather all my bills for the counselor. Before I left, he said a few words that have remained with me my entire



career. "Son, give us a chance when you need help. We may have given you some rough times, but it's meant to develop you as a person and to be an asset to this unit. Don't turn away from us when you need help. We may not have all the answers, but we sure can get you to someone who does. Your NCOs will give you the most they can, but you've got to give them the opportunity."

We may not have all the answers, but we sure can get you to someone who does.

During the following 29 years, I've attempted to practice and mirror that master sergeant's way of doing business, because often you make the wrong decision and it. gets you in a lot of hot water or can even cost you your life. Me. I've learned a lot from experience. You can learn without having to go through the hard knocks. Regardless of all the PME and leadership philosophies you've heard. digested, disregarded or whatever, by caring about yourself, family, and others. you'll be the winner. Between you, me, and them, we're an unbeatable team and there's no way we can lose - let's just give US a chance.



## For the lack of a flashlight

A maintenance crew was sent out to install an F-100 engine in an F-16 aircraft in support of a locally scheduled mobility and sortie generation exercise. In preparation for the exercise, the engine specialists assigned to the swing shift had been released early so they could return the following day and process through the mobility line. This left only one person who was trained on engine installation procedures to perform the job.



## Incidents and Incidentals with a Maintenance Slant

The rest of the crew was made up of other specialists who were not certified on engine installation procedures.

During the engine installation, the task supervisor concentrated his efforts on installation procedures and lost track of the various tools used to install the engine. Later it could not be determined that an inventory of the tool kit (CTK) had actually been accomplished once the engine was installed. QA personnel inspected the engine and approved it with no problems noted; and the aircraft was then repanelled and towed to the flight line for an engine run.

According to the tech data, the engine inlet, fan inlet case and visible vanes were to be checked for cracks, nicks and general condition prior to the planned engine run. Unfortunately, the aircraft was parked in such a way that the ramp lights did not illuminate the front of the aircraft and a lightall was not used. Worker #1 was responsible for checking the engine intake inlet and area around it for foreign objects prior to conducting the run; however, he did not do it because a flashlight was not available. Despite that omission, the engine run screen was subsequently installed and the engine started. About 30-45 seconds into the run, one crew member yelled "Fire," the engine was shut down and emergency procedures initiated.

An inspection of the engine revealed that two sets of pliers, one pair of long-nosed and one pair of diagonal, had been ingested into the engine during the maintenance run, resulting in considerable damage. Apparently the pliers had been left in the inlet during the installation process and were never detected due to the omitted CTK inventory and intake inspections.

You've heard the old cliche about "an accident waiting to happen." This incident had all the necessary ingredients: a misplaced sense of urgency, unqualified personnel assigned to perform a task, failure to follow the tech data, failure to complete required inspections, and a failure to ensure that all required equipment was available to complete the job. Mix them all together and you have it—a seriously damaged engine.

## Following the book

A fter an A-10 returned from a mission, the crew chief performing the postflight inspection discovered a water intrusion plug missing on the right side of the aircraft. He subsequently found extensive damage to several number two engine fan blades, the inlet extension ring and the leading edge cowling. Fortunately, there were no abnormal engine indications or performance during the flight.

The missing water intrusion plug had been left in the aircraft during preflight and ingested into the engine sometime during the sortie. The crew chief who performed the preflight inspection did not follow the appropriate checklist and failed to heed the warning, "Do not remove water intrusion plugs by pulling interconnecting cable." By doing so, a loose camlock lever was pulled out of the plug, leaving the rubber plug and two metal squeeze plates still on the aircraft.

The aircraft was also parked temporarily in a poorly lit ramp area due to a local exercise. As a result, the crew chief, who did the preflight, and the pilot didn't notice the plug in the aircraft during their prelaunch inspection and walk-around.

Failure to follow the tech data and a poorly lit parking spot are excellent ingredients for an inferior preflight. Add a touch of complacency or lack of attention to detail and you've got foreign object damage (FOD) or a flight mishap just waiting to happen.

## Overlooked - but still there

A n engine maintenance run was performed on an F-15, apparently without any problems. However, when the post-run intake inspection was performed, a hole was found in a first stage fan blade as well as damage to the second and third stages.

When the maintenance folks looked further into the incident, they discovered that a pre-run intake inspection had been performed; but the worker who did it stated that he had done it very quickly and could have overlooked the signs of a foreign object's presence. The maintenance folks also found that no postflight intake inspection had been performed even though the jet had been flown on the same day that the FOD was discovered.

It's hard to discover the potential for foreign object damage if you don't do the necessary inspections or don't do them thoroughly. Why do we perform intake inspections after all? Isn't it to detect a condition, trend or object that isn't like it should be? If you don't feel you have the time to do the job right, step back and ask yourself "why" and don't allow the job to be done halfway.





Lt Col Scott Wales ANG/AFRES Advisor TAC Safety

Each human being is born with at least two fears—a fear of falling and a fear of loud noise. As we grow, we learn others—fear of the dark, fire, dentists, final exams, etc. Those of us in the Air Force have a number of other fears; fliers, in particular, have grown adverse to flight surgeons, high places (without airplanes around us), and no-notice stan/eval rides.

However, depending on your approach to your flying duties, the realization of your worst nightmare may not be any of the above. It won't be a paternity lawsuit or an armed intruder in your house either. If you let complacency take its predictable course, your own personal nightmare may be a Class A mishap investigation. If you're a "by the book" and "by the numbers" kind of guy, read no further. This article is not meant for you. However, if you've ever operated on the personal philosophy of "that's close enough for government work," read on—**this one's for you.** 

If you let complacency take its predictable course, your own personal nightmare may be a Class A mishap investigation.

First, it should be pointed out that the sole purpose of any safety investigation conducted under AFR 127-4 is mishap prevention. None of the testimony or contractor evaluations gathered in this process may be released outside Air Force channels: the promise of confidentiality is explicit and is normally stated openly prior to the interview of a witness or a mishap "victim" (or perpetrator). Factual information concerning the mishap will be handed over to a mishap investigation board which conducts its own separate investigation. This factual information is releasable. The latter investigation, conducted under AFR 110-14, is fully releasable to the public (AFR 127-4 forbids release of witness testimony to the public). None of this, however, prevents your mishap from being reviewed exhaustively within Air Force safety channels. Paranoia concerning this process is a part of most fighter aircrews' akeup and understandably so.

Few fliers look forward to this sort of scrutiny. The common view in the field seems to be that the safety investigation board's attitude is to "give the guilty party a fair trial and then hang him." Having witnessed a number of safety investigation board presentations at MAJCOM and numbered air force levels, I know that this is almost never the case. Most mishap boards lean over backwards to prevent even the appearance of this sort of attitude.

Despite all this, there is no reason to think that anything pleasant is going to come out of these deliberations if you are involved in a mishap. To some extent, you will be "guilty" of something (aren't we all?) unless you are a truly extraordinary person. Unless it can be conclusively determined that only logistics/materiel or miscellaneous factors were at fault, cause will most likely be assigned in some way to operations (that's you, the aircrew, as often as not). Unless you lead an impeccable lifestyle, you probably have done something which violates some regulation. We do have a lot of regulations. You may have done something seemingly minor, like taken an over-the-counter cold remedy or failed to wear glasses prescribed by the flight surgeon. We all presumably know what we're supposed to do, but somehow these "basics" of commonsense still elude us.

Few of us lead such blameless lives that we can't be held to account for *some* failing. As long as you are mishap-free, you may think you can get away with doing things "not quite by the book." However, as soon as you have a mishap, *all* your activities are going to be subject to scrutiny. If



# R WORST NIGHTMARE

it's a Class A mishap, it will probably be the most intense scrutiny you've ever had. Your entire Air Force career will be reviewed and your last fourteen days will be subject to microscopic investigation-what you ate and drank, how long you slept, etc., will be checked over. Your personal habits and offduty activities will also be reviewed. This is not just idle curiosity; it's a very thorough method of examining your personal lifestyle to see if it may have contributed to the mishap's occurrence.

You may have done something seemingly minor, like taken an over-the-counter cold remedy or failed to wear glasses prescribed by the flight surgeon.

Activities and procedures which seem logical to you may not be seen as such by the board.

be questioned, both military and nonmilitary. Not all of them will view your actions the same way vou do. Activities and procedures which seem logical to you may not be seen as such by the board. Some people may attempt to shield you from this process while others may be tempted to "throw you to the wolves" to keep from being blamed themselves. Most interviewees are likely to give you the benefit of the doubt, but don't count too heavily on this. This is predictably more common when the mishap victim is deceased; most people speak kindly of the deceased.

Unfortunately, most of us are not as "squeaky clean" as we certainly should be. We cut corners and make mistakes. Most of us have a skeleton or two in our personal closets. However, if you perform to the best of your abilities *all* the time, chances are good that no one will ever have to look for them. No one will ever know that you aren't just about perfect. Unfortunately, after you have a flight mishap, *everyone* will know you're not perfect.

The interview process is generally conducted in a friendly manner; these are your peers after all, probably much more so than any judge or jury is ever likely to be. However, as pleasant as they seem and as much as they empathize with your situation, the fact remains that there is some possibility that you and that smoking hole are connected in some way—and the relationship is most likely an unspoken expectation of cause and effect.

We all presumably know what we're supposed to do, but somehow these "basics" of common-sense still elude us.



Our recent mishap history supports this—operator factors are up recently; you *may* be seen as part of that trend. Despite the fact that there are no Perry Mason-type histrionics and no rubber hoses, the board is under some pressure to find a cause you *are* a prime suspect.

Think about all of this before you "slip the surly bonds" next time around. And as you're "dancing on laughter-silvered wings," give a little thought to how your performance might be judged. Can you survive this sort of scrutiny? Try to put yourself in the mishap investigation board president's shoes. Chances are there's something you can do to improve your everyday performance, and prevent yourself from realizing that "worst nightmare." It may even save your life.

Your friends, your squadron mates, and your wife or girlfriends (as applicable) will be interviewed. Witnesses will also



Nirst Lieutenant Brian MacLeod had just descended on the wing through weather in an A-7 during recovery to home base. While in the clear below the weather, the flight leader split him off for a single-ship instrument approach, but then Lt MacLeod's aircraft radio began an increasing static hissing noise. This was immediately followed by a blinding flash and a loud bang. A lightning bolt had entered through the canopy, passed through Lt MacLeod's helmet, head, body, and exited out the metal survival seat kit attachments. All aircraft antennas were darnaged and the ALR-46 RWR amplifiers were destroyed.

Lt MacLeod's muscles involuntarily contracted, leaving him stunned and temporarily blinded. Through extreme mental effort, he was able to level the aircraft and establish an orbit about a tower until his flight leader rejoined with

m. Exhausted and disoriented, he men flew on the wing for a formation approach to final and a single-





ship landing. During the landing roll, he was initially unable to raise his legs to put his feet on the brakes. Again through intense mental effort, he was able to move his feet to the top of the rudder pedals and safely stop the aircraft. Lt MacLeod turned off the runway and shut down the aircraft, but was

# TAC AIRCREW OF DISTINCTION

unable to exit the aircraft without assistance.

The outstanding determination and airmanship demonstrated by Lt MacLeod averted a potentially disastrous situation and saved a valuable TAC combat aircraft, earning him the TAC Aircrew of Distinction Award.



1 Lt Brian MacLeod 162 TFS, 178 TFG Springfield-Beckley Municipal Airport, Ohio







2d Lt Keith J. Lirette 1912 CSG Langley AFB, VA

fire in your home? Lose everything you own-your valuables, clothing, years of memories, and possibly even a family member or beloved pet? Most of us probably don't think it could ever happen in our homes-but it can! Listen to your local news and notice how frequently someone in your area experiences a home fire. The National Fire Protection Agency (NFPA) estimates that over 800,000 homes will be struck by fire this year, killing almost 6,000 people. What can you do to stay out of these statistics?

The best way to survive a house fire is to make sure it never starts.

Have you taken the few minutes necessary to perform a detailed inspection of your house in order to identify and eliminate all possible fire hazards?

If you've just been thinking about it, now's the time to do it.

The best way to survive a house fire is to make sure it never starts. Have you taken the few minutes necessary to perform a detailed inspection of your house in order to identify and eliminate all possible fire hazards? If you've just been thinking about it, now's the time to do it. Carelessness with smoking materials is the top cause of house fires. NEVER smoke in bed. Dispose of smoking material by soaking it or leaving it overnight in a noncombustible ashtray before placing it in a trash container.

Eliminate any accumulated rubbish around your home (particularly in garages, work areas, storage shed and closets) which could fuel a fire. Keep matches and lighters out of the reach of children. Explain to kids that these are not toys, and if found, they should be given immediately to an adult. If space heaters are needed during cool times of the year, use only laboratory/ULapproved space heaters, and keep them at least three feet away from furniture, drapes and other flammable objects. When using a tove, be constantly aware of what you're doing. If wearing long shirt sleeves, keep them buttoned or tightly rolled up. Never climb on or reach over a stove in use.

Eliminate any overloaded electrical outlets by using an approved strip outlet which has a built-in circuit breaker. (Make sure you don't place them where they present a possible tripping hazard.) Ensure that all power cords and plugs are in good condition. If an extension cord is used, make sure it is a sufficient gauge for the load to be handled, and never run power cords under rugs or furniture.

The next important factor in surviving a fire is the ability to escape when a fire does occur. Early warning is the basis for any fire escape plan. The smoke detector is the most widely

vailable fire warning device. The NFPA recommends having one detector on each level of your



house and one outside each sleeping area. According to the NFPA, the use of smoke detectors cuts the probability of death in a house fire by one-half. Test, clean, and replace the batteries in each detector at least yearly. There is nothing more tragic than fire fighters being called to a home fire where the smoke alarms are inoperative or disconnected.

Early warning alone is not enough to protect your family from a fire. Establish a fire evacuation plan, and ensure that everyone thoroughly understands it and can safely carry it out. Have two escape routes established from each room approved portable ladders are available and provide exit from upper level room windows. Upon hearing a fire alarm (or sensing the fire), ACT IMMEDIATELY. Ensure that all power cords and plugs are in good condition.

If an extension cord is used, make sure it is a sufficient gauge for the load to be handled, and never run power cords under rugs or furniture.

Feel every door before opening. If the door is hot, DON'T open it. Use a window as an alternate route if possible. If smoke is present, crawl low and quickly on your hands and knees away from the smoke. Seventy-five percent



## VIVING A FIRE

Establish a fire evacuation plan, and ensure that everyone thoroughly understands it and can safely carry it out.

of deaths in fires are caused by inhalation of toxic substances in smoke. If your clothes catch fire, drop and roll to extinguish the flames. If you're trapped in a room without an escape ladder, keep smoke out by closing the door, stuffing cracks with clothing or towels, and covering vents.

Make sure you have designated a central meeting place somewhere in front of the house (this is where the fire department normally arrives) so you can figure out who needs rescue. Never reenter a burning house. Never reenter a burning house. Don't call the fire department from inside a burning house. Use the nearest outdoor firebox or neighbor's phone to call the fire department.

Fire extinguishers may be adequate for extinguishing small, contained fires. It is imperative that the right type of extinguisher is used and used properly. Don't wait until you have a fire to learn how to use an extinguisher. There are three types of house fires: A—ordinary combustibles (wood, paper); B flammable liquids (gasoline, grease); and C—electrical (wiring, fuse boxes). A Type C fire extinguisher is designed to put out all three types of fires and is recommended for household use. Install the extinguisher near the exit from the room. This avoids unnecessary exposure to a fire to

It is imperative that the right type of extinguisher is used and used properly.

Don't wait until you have a fire to learn how to use an extinguisher.



get the extinguisher. Again, know the proper use of the extinguisher, and don't fight a large fire with a household extinguisher. Also, periodically check that the extinguisher is full and functional.

Don't be caught in a fire. Locate and eliminate possible fire hazards; install safety devices such as smoke detectors, escape ladders, and fire extinguishers; and have a workable fire evacuation plan. Take the steps now to make sure you're never a home fire statistic. We need you.



# TAC OUTSTANDING ACHIEVEMENT IN SAFETY AWARD



SrA James D. Hill 4507 CAMS, 507 TAIRCW Shaw AFB, SC

During a basic postflight inspection on an OV-10A aircraft, SrA James D. Hill found the egress ejection seat striker plate misaligned to the canopy striker pad, exceeding the auorized tolerance. He immediately alerted the production superintendent of the problem. Airman Hill's attention to detail went beyond the basic visual alignment check requirement and prompted a one-time inspection for Shaw's entire OV-10A fleet. He worked many overtime hours to correct the aircraft problem and ensured safe aircraft were ready for the next day's mission.

Airman Hill's keen observation and extra effort corrected a serious condition which prevented possible aircrew injury or loss of life in the event of an ejection, earning him the TAC Outstanding Achievement in Safety Award.





#### Mr. Cal Faile TAC/SEG

t's truly amazing sometimes Lthe ways in which some people disregard their own personal safety. For example, jogging in streets or other congested traffic areas; wearing dark, nonreflective clothing at night; or with radio headsets. Sometimes people are seen running with traffic and sometimes against it. In either case, the practice of jogging in traffic is extremely hazardous. While we have to commend the joggers for the initiative to improve their health and fitness, I have to question their methods. Regardless of who is at fault, if a mishap occurs between a vehicle and a jogger, the person will always lose. Usually the vehicle can be driven away and repaired very easily. However, your human body may take weeks, even years, to repair if that's possible. Some folks never get over the painful injuries.

Is it worth going through all the hard work and exertion of building up your body only to have it shattered and broken in an instant during a collision with a vehicle? I don't think so and you probably don't either. At many bases jogging trails are provided. As a minimum, sidewalks should be used for jogging

whenever possible. Jogging with headsets or ear protectors on that reduce sounds around you are taboo and could lead to an untimely death. In fact, traffic regulations prohibit jogging with headsets. The decision of where and how to jog rests with the individual. We highly support the initiative, but recommend avoiding hazardous areas for your own safety and the well-being of others. We also strongly recommend if you run at night that you wear light-colored clothing, marked with reflective tape or. as a minimum, carry a flashlight. The decision for your personal safety is yours. It's a matter of choice.



TSgt Donald J. Smith, 833 CES, 833 CSG, Holloman AFB, NM, has made tremendous accomplishments in improving the sheet metal shop's safety program to provide a safe and healthy workplace for shop personnel, contributing to a record of no lost time mishaps during the past six years. He ensures all personnel are thoroughly briefed prior to leaving for a work project, and then personally checks on use of personal protective equipment and whether potential hazardous conditions exist at the work site. He designed and helped fabricate eight covers that prevent water from entering vents and contaminating gaso-

# FLEAGLE SALUTES

line on petroleum, oil, and lubricants storage tanks. His efforts have saved the cost of separating gasoline and water when transferring to separate tanks.

Through innovative management. Sgt Smith initiates and monitors contract repair and certification of over 150 installed hoists, cranes, and elevators on Holloman AFB. He has fostered a new safety attitude within his shop that transcends both military and civilian workers. To improve his operation, Sgt Smith has contacted other sheet metal shops throughout TAC to determine if he can incorporate any of their safety information into his shop's safety training outline. For example, he contacted Bergstrom AFB for information on job safety training guides and Myrtle Beach AFB for Employee Safety and Health Record information. Through his dedication, job knowledge and attention to detail in safety, he has earned the respect of other supervisors and workers and made a significant contribution to the unit safety record, earning him a Fleagle Salute.

Maj Charles J. Simmons, Jr., 160 TFS, 187 TFG, Dannelly Field, Montgomery, AL, was flight lead of a four-ship F-16 surface attack tactics sortie. On takeoff, the red light in the gear handle remained illuminated, so

he lowered the gear handle and noticed that the right main gear was partially extended. He cycled the gear handle once without success, and an alternate gear extension was also unsuccessful. As Maj Simmons held at 20.000 feet, contractor assistance was requested and a chase aircraft launched to obtain a more accurate picture of the malfunction. The chase pilot determined that the shock/strut had separated and the ends of the inner and outer pistons were resting on each other. The contractor's opinion was that this configuration would not support any weight and recommended an 11-degree angle of attack approach to an approach-end arrestment.

Maj Simmons planned his approach so that he would be able to maintain enough flight control authority to hold the right wing up until successfully engaging the arresting gear and to minimize the landing forces on the right main gear. After "shacking" the Maxwell AFB controlled jettison area with the six BDU-33s he was carrying, he flew a flawless approach and landing to a successful arrestment. Due to Maj Simmons' skill in landing the F-16, the landing gear did not collapse and further damage was avoided. Maj Simmons' skill and airmanship prevented a major mishap and the loss of a valuable Air Force aircraft, earning him a Fleagle Salute.

THE INTEGRATED

MSgt Donald Shannon 33 TFW/SEW Eglin AFB, FL

t was a perfect spring day. The sun was shining and, best yet, it was Friday. Our load crew was scheduled for an integrated combat turn (ICT) on an F-15 aircraft, consisting of four live AIM-7s and 100 rounds of target practice ammo. We arrived at the turn site early to ensure everything was set up properly. The sun was warm and comforting as we double checked all our equipment. Our spirits were high, we were one of the wing's best load crews, and we had no doubts in our ability to accomplish another outstanding ICT.

Soon the turn supervisor and

Our spirits were high, we were one of the wing's best load crews, and we had no doubts in our ability to accomplish another outstanding ICT.







# COMBAT TURN

aircraft crew chiefs arrived, and we proceeded with our pre-ICT safety briefings. Once this was out of the way, we kidded each other about life in general. You could feel the comradery, as we had all worked together for some time. There was nothing "'re being on a winning team.

The aircraft were due down from their sorties any time now; and we grew anxious to get the ICT over with and start planning for the weekend. We could see the aircraft in the pattern, but they were in no hurry to land as we watched them shoot touch-and-goes. We checked our watches because we knew if they didn't land soon, we would have to put in some overtime. We halfheartedly joked about the overtime pay, but we were all thinking; come on, you guys, put it on the deck this time. All of us breathed a sigh of relief when we noticed the puffs of smoke as the main tires and the nose tires settled gently onto the runway.

As the weapons crew chief, I immediately began to plan my ottack. After all, if I had my about it, we would be out

of there by quitting time. My mind kept rushing back to all the things I had to take care of after work. I had an important date and would not be late. The rhyme made me smile.

My mind kept rushing back to all the things I had to take care of after work.

The aircraft was finally turning toward the parking ramp ICT spot. Thank goodness, now we can get started. The pilot stopped short of the spot and began fumbling in the cockpit. and I wondered what could be wrong now. Couldn't he do that while in the chocks? Come on, come on, I gotta get out of here on time. Finally, he looked up and began to taxi forward. As I waited for him to hit first chock. I kept thinking to myself; this is all your fault, Mr. Pilot.we should be almost done by now. At last, we slid the chocks under the main wheels and began the aircraft prep. My mind was racing with a new plan on how to accomplish all the necessary items after work as my body went through the motions of an ICT. I wasn't really concerned about the ICT; after all, how many had I done since I'd been here? A couple thousand?

With the aircraft prepared and put in the simulated tab vee, we began the load. I prepped my stations as the number two and three persons began the ammo load. I noticed out of the corner of my eye that they were having problems with the loader head; and I wondered to myself if we would ever get the new universal ammunition loading system. Come on you guys, get it together! I could feel precious time slipping away. It took an eternity, but they finally finished with the ammo. We began "humping" the AIM-9s and my mind raced back to the watch in my pocket; what time is it now? The 9's went up without a hitch and I thought to myself, finally

The prepositioned AIM-7 went up on station 3 without a problem; and I knew we might get out of here at a decent time.

# E INTEGRATED MBAT TURN

something is going right. The number three man jumped on the MJ-1 and the smell of diesel exhaust filled the air. The prepositioned AIM-7 went up on station 3 without a problem; and I knew we might get out of here at a decent time. We grabbed the missile for station 4 from the trailer and raced to the aircraft. The jammer driver misjudged his initial alignment and had to back up and try again. I was not a happy camper. We finally got the missile in position and proceeded to lock it in, but as luck would have it, it wouldn't go. I played with the jammer controls moving it this way and that, but still no luck. I finally applied a little body english and felt it go into place. I immediately told the jammer

I could see the missile falling in slow motion and my heart stopped.

driver to go down and out as I reached for the safety pin; only two more missiles to go.

As I watched the jammer driver back out, I noticed some slight movement of the missile and was just about to insert the safety pin when I realized it was too late. I could see the missile falling in slow motion and my heart stopped. I instinctively reached for it, but it was a futile gesture. The missile impacted the ramp and a ball of fire erupted. I could feel the hot fragments of metal penetrating my body, but there didn't seem to be much pain. As I laid on the ground watching the fire department through half-closed eyes, I could feel the warm sticky blood on my hands and I wondered what time it was.

This story is fiction, but one careless mistake could make it a reality. When dealing with explosives, you must concentrate on the task at hand, 100% of the time. In our business, complacency is a killer. We have the guidance, training and ability to safely load any weapon, but take away one factor and it's all over. We all say to ourselves "this could never happen to me" but would you bet your life on it?







## Stop and look around

You have everything you need to do the job you've been assigned in the shop. The tech order is laid out in front of you, the necessary tools for the job are available and you're ready to



go. Right? Well, maybe. Have you checked around the area and ensured that there aren't any obstacles to the efficient, unobstructed movements that you may need to make in getting the job done?

Here's an example of that important step being left out. An AIM-9 missile guidance and control (G&C) unit was placed on a work bench and a static ground cable mounted from the ceiling of the building connected to it. While the work on the G&C was going on, a manual overhead hoist was moved from the front of the maintenance bay to the back and, when it came into contact with the ground cable, the G&C unit was pulled off the bench onto the floor. That turned out to be a \$25,000 mistake. Take a few minutes to "what if" your work area and make sure all of your hard work is not wasted as a result of someone's oversight.

## Where are we at?

Four AIM-7M missiles, without wings, loaded on an MHU-12M trailer, were to be crossloaded to another trailer. The missile maintenance crew, which had performed a similar crossload operation earlier, was briefed on the operation; and then crew member number one started the nearby jammer and positioned it at the trailer to pick up the closest missile. Crew member number two positioned himself at the nose end of the missile and crew member number three was on the trailer's opposite side removing the trailer's shackles and securing deck pins. While all this was happening, the crew chief was spray painting missile fin/wing containers.

After the jammer was positioned to pick up the closest missile, crew member number two attached the strap from the jammer's sling to the missile nose section. At the same time, the crew chief stopped his painting and informed the jammer driver that an empty trailer was not available, so they were to stop the crossload operation. He then returned to painting the containers as crew member number one proceeded to back the jammer away from the trailer, not realizing that one strap was attached to the missile. Crew member number two yelled for the driver to stop; however, the missile was pulled out of the trailer chocks and suspended by the single strap before the driver could stop. The heavier missile motor end began to rotate downward. Crew member two straddled the missile nose section to counterbalance the rotation, but the motor section continued downward and scraped the concrete floor.

The missile maintenance crew chief was not fulfilling his responsibility of being in control of the operation and allowed it to start without ensuring all required equipment was available. When the crossload operation was started and then cancelled, the crew chief was not aware of the extent of the crew's progress and didn't properly control the termination and reversal of the actions already completed. Of course, the crew chief wasn't the only person that could have prevented this incident, was he? This was a qualified team so there were three others on the scene who weren't using their heads as well. Being the member of a team or a crew means just that—being an *active participant of the team*.

# TAC OUTSTANDING ACHIEVEMENT IN SAFETY AWARD

he 56th Supply Squadron Fuels Management Branch naintained a dedication and commitment to safety awareness resulting in the branch achieving an Outstanding rating and laudatory comments on its recent ground safety annual inspection. The Fuels Management Branch, consisting of 79 individuals who work in a highly industrial environment on a daily basis, is the only base unit to receive Outstanding ratings in ground safety for seven consecutive years. There were no reportable on-duty injuries during FY 1988, which included driving 198,305 miles on base (including flight line areas) with no reportable government motor vehicle mishaps. This accomplishment is the result of an aggressive, effective, and comprehensive program within the branch which has been essential to the health and safety of per-

onnel and to mission accomplishment. This program includes a very detailed AFOSH



Fuels Management Branch 56 SUPS, 56 TTW MacDill AFB, FL

briefing guideline which is being used as a model throughout the squadron.

Safety briefings are conducted on a weekly, quarterly, and seasonal basis, and supervisors are very cooperative and quick to make suggestions on ways of making their operations safer. One such suggestion involved painting an alignment line on each lug nut of their refuelers in order to enhance the visual check of each nut during daily inspections, thus preventing FOD damage and safety mishaps to aircraft on the flight line.

Individuals who are involved in minor mishaps discuss the circumstances during weekly safety briefings. Furthermore, the safety self-inspection program is thorough, discrepancies are well documented, and follow-up corrective action is accomplished in a timely manner.

The outstanding efforts of the Fuels Management Branch have greatly enhanced the effectiveness of both the squadron and wing safety programs. Their sincere interest and efforts have made safety an integral part of the supply mission. Due to their superb contributions to safety and accident prevention through professional performance, knowledge, and devotion to duty, the Fuels Management Branch has earned the TAC Outstanding Achievement in Safety Award.



# Blasting caps are dangerous

MSgt Gary R. Reniker 442 TFW Richards-Gebaur AFB, MO

Tread in the newspaper recently where some inquisitive children found a blasting cap and were "showing it off" to their peers. Fortunately, one of the bystanders knew enough to recognize what it was and notified the authorities before any harm was done.

Such blasting caps are sometimes lost or stolen, and when children subsequently find and play with them, explosions frequently occur and injury or death may occur. When a cap explodes, hundreds of small pieces of metal fly out in all directions-sometimes as much as 200 feet.

Comparatively few persons know what a blasting cap looks like. Blasting caps are small copper or aluminum cylinders about as big as a lead pencil between one and six inches long. They contain a highly sensitive explosive substance used to explode dynamite for mining, quarrying and construction purposes.

There are two kinds of caps. The "ordinary" cap is exploded by sparks from a burning fuse inserted in one end of the cap. The other kind of cap is an electric blasting cap. It has two wires coming out of one end. These two wires are connected by a very thin wire that is sunk in the explosive charge in the cap. When electric current is applied, the thin wire becomes red hot and detonates the cap.



The explosives in blasting caps are very sensitive so that they will be sure to detonate the dynamite charge. An experienced person knows how to handle them safely, but in the hands of an inexperienced person they are extremely dangerous.

Children and adults alike should know what a blasting cap looks like and what great damage it can do. If one is found, it should be left alone. Other people around the vicinity should be warned and a report made to authorities so that any blasting caps can be disposed of properly.

CLASS A MISHAPS AIRCREW FATALITIES • IN THE ENVELOPE EJECTIONS • OUT OF ENVELOPE EJECTIONS					<b>Tota</b> <b>THRU</b> <b>FY 89</b> 18 6 13/5 1/1	MAY FY 88 21 12 13/0 0/5	TH   MAY TH   FY 1   2 2   1/1 1	RU MAY 89 FY 88 3 14 4 9 /3 9/0 /1 0/4	MAY 0 0/0 0/0	THRU N   FY 89 F   5   2   5/2   0/0	1AY Y 88 5 2 4/0 0/1	A MAY FY 0 0 0 0 0/0 0 0/0 0	FR IRU MAY 89 FY 88 0 2 0 1 /0 0/0 /0 0/0	
TACS TOP 5 thru MAY 1989														
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CLASS A MISHAP-FREE MONTHS					CLASS A MISHAP-FREE MONTHS					CLASS A MISHAP-FREE MONTHS				
40 57 FIS					48 507 TAIRCW					30 37 TFW				
19 48 FIS					23 1 TFW					26 49 TFW				
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222 ITO TASG					105 482 TFW					22 USAFTAWC				
197 138 TFG					95 924 TFG					14 USAFTFWC				
179 177 FIG				-	83 906 TFG					8 28 AD				
174 114 TFG					44 917 TFW					-				
CLASS A MISHAP COMPARISON RATE														
TAC	FY 89	1.7	2.7	3.0	3.2	2.6	2.4	2.3	3.0				1990	
	FY 88	6.4	3.4	3.0	2.7	2.6	3.3	3.0	3.1	3.3	3.2	3.0	3.4	
ANG	FY 89	0.0	0.0	1.5	2.3	2.8	3.1	3.3	2.9	20	20	3.5	20	
Δ_	FY 89	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	5.0	0.0	0.2	
FR	FY 88	0.0	10.6	7.7	5.9	9.5	7.9	6.7	5.8	7.5	6.8	6.0	5.5	
Hotal	FY 89	1.2	1.8	2.5	2.8	2.5	2.5	2.5	2.8					
lou	FY 88	4.3	2.9	2.4	2.2	2.5	3.2	3.1	3.1	3.4	3.3	3.3	3.5 SED	
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