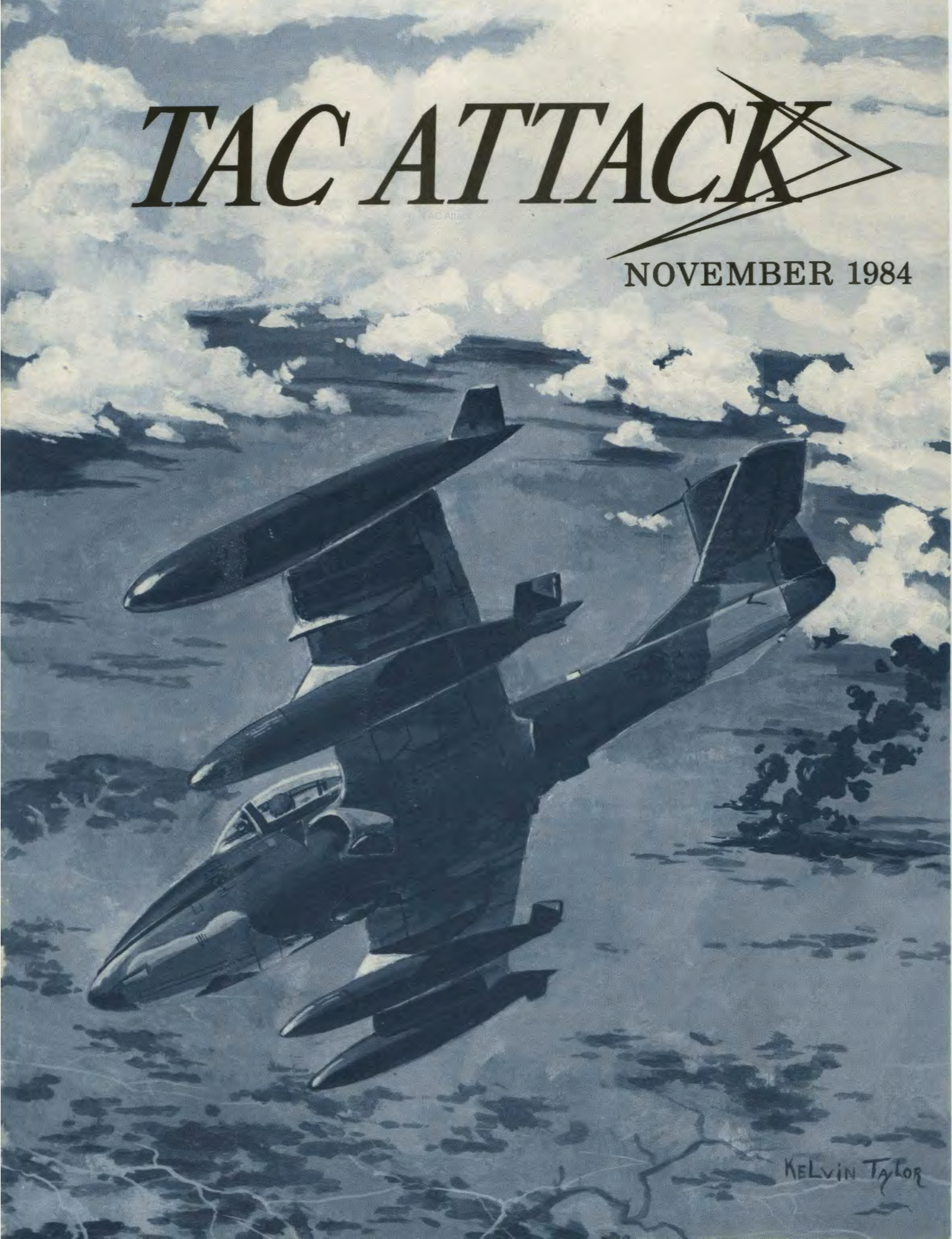
TAC ATTACK

NOVEMBER 1984



ANGLE OF ATTACK

Looking back at our record over the last six and one half years, we see a dramatic decrease in Class A flight mishaps, from 7.5 per 100,000 flying hours on 30 April 1978 to 3.7 at the end of 1983. The result of this 63 percent reduction is 133 aircraft that didn't crash, 104 aircrews that didn't die, and $1.5 billion that wasn't wasted. These statistics are especially meaningful in light of increases in the depth and scope of our mission. We are flying more hours, training more realistically, deploying more often, and conducting more ambitious exercises more frequently.

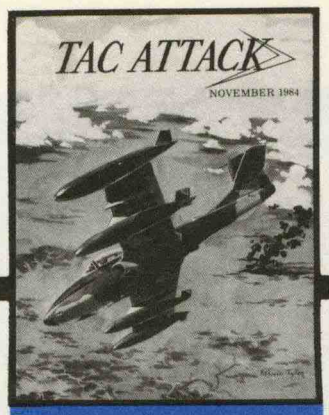
At the end of September our Class A flight mishap rate was 2.8, a 28 percent improvement over our record year, 1983. Yet there is room for more improvement. Our command-controlled rate (mishaps that are caused or could have been prevented by actions of people within TAC) is too high. Operator error, failure to follow tech data, and violations of rules and regulations are in this category. Our command-controlled rate on 30 April 1978 was 6.2; on 30 September 1984 it was 2.0. While that represents an impressive reduction, it pales with the thought that it has remained rather constant near 2.0 for the past three years.

Some people say that a command-controlled rate of 2.0 is the cost of doing business and can't be reduced. I don't believe it. Most of our command-controlled mishaps are triggered by known but ignored compromises to professional performance. Examples include continuing an engagement beyond the learning objectives · area boundaries and intentionally violating ROE. Our detailed investigations of command-controlled mishaps sometimes turn up unknowns. Most of the time, however, the investigation team only finds documentary proof that the mishap could have been prevented by professionalism. The finished report then becomes a record of how substandard performance or compromises that led to the mishap were ignored when they were observed in earlier incidents.

I strongly believe the solution involves each of us doing two things: not only professionally accomplishing our jobs, but also diligently identifying (instead of ignoring) whatever poor operating procedures, compromises in discipline, and hazardous situations we see, *before* they result in a mishap.

Harold E. Watson

Harold E. Watson, Colonel USAF
Chief of Safety



ON THE COVER:
THE OA-37 DRAGONFLY
ON THE ATTACK

NOVEMBER 1984

DEPARTMENT OF THE AIR FORCE

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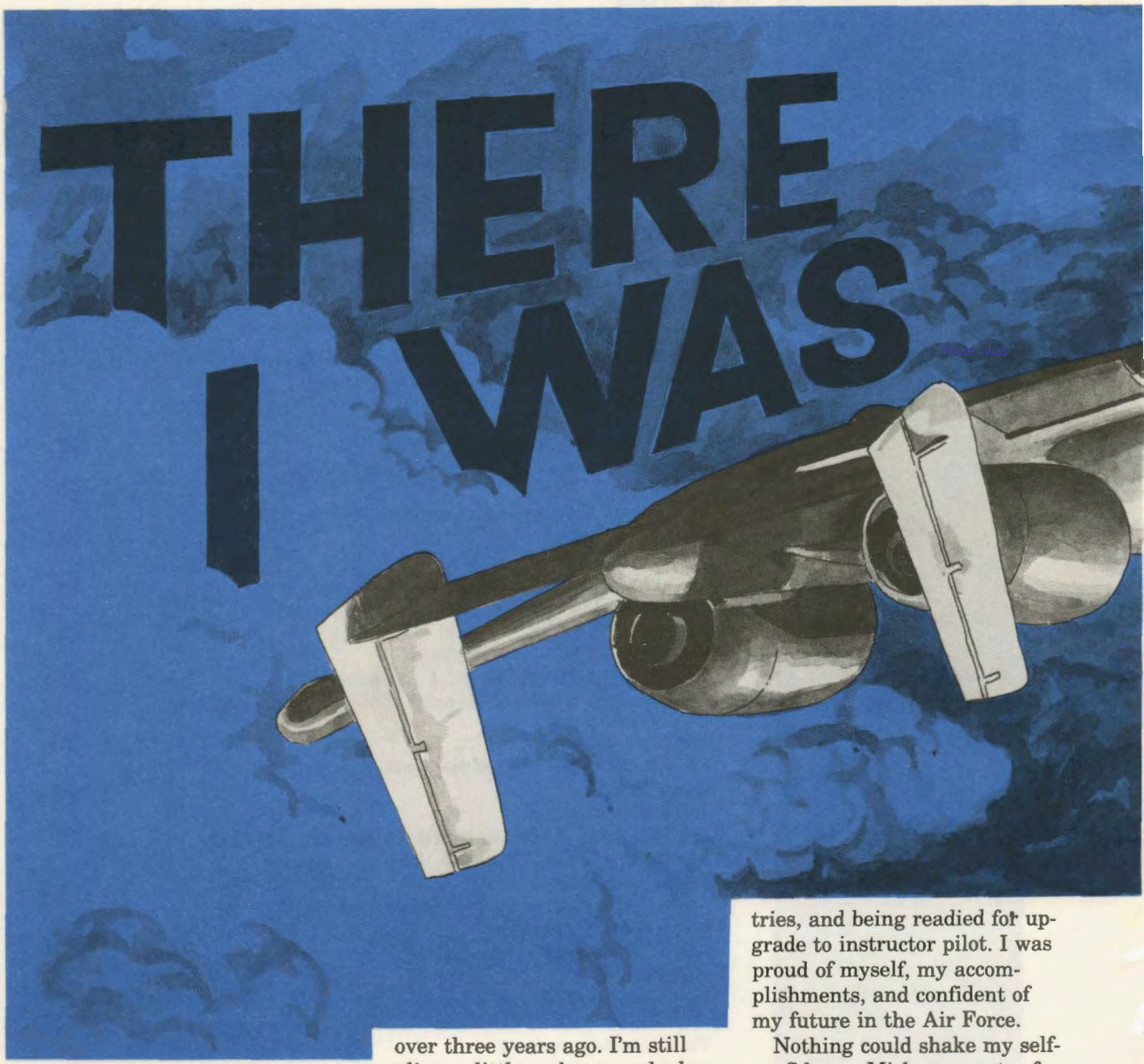
THERE I WAS



By Anonymous*

There I was, instantly into a situation which should not have happened. There was no time for careful analysis or regrets, only time for one quick yank of the stick into my lap and a hope I would survive. Well I made it. It happened over three years ago. I'm still alive, a little embarrassed when I think about it, but grateful enough to pass this story on to someone else in the hope it will help them avoid a very avoidable situation as well.

I was an A-10 pilot flying in Europe, qualified to lead four-ship formations, comfortable with the complexities of flying throughout the NATO countries, and being readied for upgrade to instructor pilot. I was proud of myself, my accomplishments, and confident of my future in the Air Force.

Nothing could shake my self-confidence. Mishap reports of pilots who lost their airplane—or worse, their life—did not faze me in the least. There were obvious *reasons* why they lost the airplane: they couldn't hack the mission that day. It didn't matter what the situation was, a DACT engagement, a range mission, a low-level flight, whatever the profile,

these unfortunate individuals didn't have their "Sierra" together. They couldn't hack it. I was almost amused; it would never happen to me.

One day it did.

The mission that day was to fly to a tactics range in Scotland, make dry attacks on mobile SAM batteries located on the rocky hillsides, and then RTB. The weather was typical for the region: low ceiling, high winds, but surprisingly good visibility underneath a solid 1,500-foot overcast. Flying low level into the target area from the south, we noticed the top of the hills around us were scraping the bottom of the clouds. The visibility below it, however, was excellent, and we were not about to turn around.

We found our RAPIER battery spread along a low ridge, and after several dry passes, I decided to overfly the target to get a closer look at their defensive layout. I noticed the cloud deck was not much higher than the top of the ridge, and beyond it the mountain tops disappeared into the clouds, but I wasn't worried. I knew my Warthog could easily stay beneath the weather.

But that's not what happened. Looking down at the SAM launchers as I flew up the shallow ridge, I never saw the clouds approaching. Instantly, without warning, I was in the weather. I wasn't worried however, I was comfortable flying in IMC conditions. I'd just route abort, tell my wingman, and initiate an IFR pickup with the local ATC facilities. I was confident.

The route abort should have been easy. I pushed the power up to MIL (I had throttled back to get a longer look at the target), established a 10-degree pitch attitude on the ADI to climb away from the ground, made my radio call to my wingman, and then looked outside. I knew VMC was only a couple of thousand feet up, and I waited expectantly.

Blue sky never appeared. Instead, brown and green blurs began to rapidly pass beneath my wings. I couldn't understand it. A quick glance inside at the ADI explained it all. No longer was I climbing through the clouds; instead I was descending, and the blurred shapes were the ground passing *very* close beneath my plane. My reaction was automatic, right from the gut. I pulled the stick back into my lap, established 30 degrees of pitch, and began hoping the mountains I had seen in the clouds beyond the target were not very high. It was an incredibly long, short period of time before I broke out into the beautiful, blue sky above. It was longer yet before I trusted myself to talk on the radio to anyone.

I couldn't believe it. How could this happen to me? As I waited for my wingman to climb up and join me, it suddenly dawned on me . . . If I had flown myself into that obscured hill in Scotland, the reaction of those briefed on the facts would be, "He couldn't hack a simple route abort." I couldn't fault them for such comments; I had said the same thing about others who became statistics while attempting to perform what I believed to be simple, "standard" procedures.

THERE I WAS

The casualties were flyers who couldn't hack it. It was a stunning realization.

Although my learning curve shot up drastically, my self-confidence was shaken. I wanted to understand why I allowed the nose of my airplane to fall when it needed to climb, and why my descent went so *unnoticed*. I didn't have vertigo, I felt in control right up to the moment the ground came rushing by.

AFM 51-37 explained my case as classic spatial disorientation. What a surprise. I always thought of spatial disorientation as confusion leading to vertigo, not as some insidious phenomenon which could deceive an experienced, confident pilot into flying into the ground. The gradual, unobserved change from a positive climb to a descending vector is explained by the Somatogravic illusion. This illusion occurs when our vestibular senses interpret acceleration forces as increases in pitch attitude. My best guess is that I unconsciously relaxed back pressure on the stick in reaction to the acceleration when I moved the throttles to MIL (yes, the A-10 will accelerate in a slight climb).

Having discovered the reasons behind my own near-demise, I began to rethink my attitude towards those who had failed to "hack it" and who ended up as statistics. Could it be that many of the people we lose are not weak but rather strong performers who overlooked something in the procedure or situation? Possibly, self-confidence became fatal overconfidence. Although a needed characteristic in all flyers, self-confidence becomes an enemy when it allows us to overlook the basics in the attempt to perfect the complexities of a particular mission. Overconfidence is *always* our enemy. Always. It was in my case, and I'm lucky to be alive.

I don't have a new or spectacular recommendation to avoid getting into a hair-raising situation. I just suggest you force yourself to always stay *aware*. When things seem to be going quite well, and you find yourself comfortable with the situation, *beware*. Don't allow self-confidence to slip you into a corner of the envelope you can't get out of.

* We often learn our best lessons from mistakes we've made. But sometimes we don't give others the benefit of our education for fear of tarnishing our reputation. That's a shame.

Do you have a "there I was" story with a moral that might help someone else? (If you've been flying tactical aircraft for any length of time, I bet you do.) Well, you can earn yourself a Fleagle T-shirt if we print your story—even if it's *anonymous*.

We'll guarantee your confidentiality—but you'll have to tell us where to send the T-shirt. Send your tale/faux pas/lesson in a plain brown envelope to: Editor, *TAC Attack*, HQ TAC/SEP, Langley AFB, Virginia 23665.

AIRCREW OF DISTINCTION

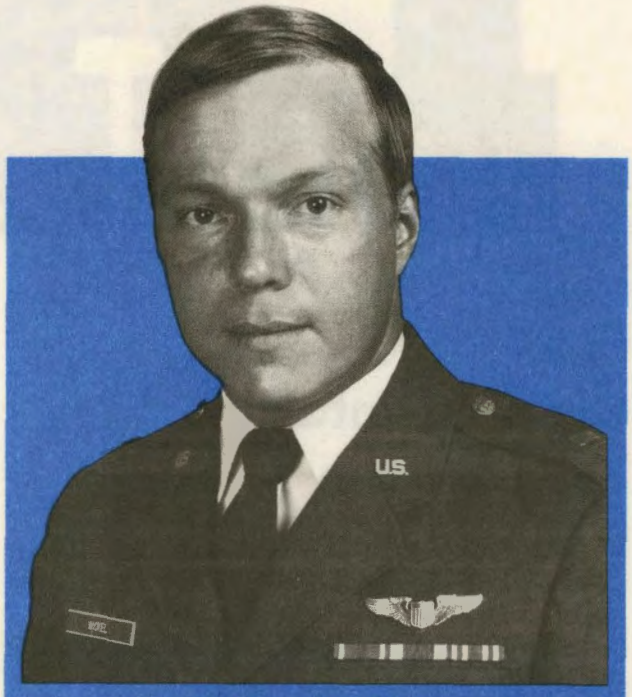
On 13 June 1984, CAPTAIN ALBERT S. WICKEL was returning his single-seat F-106A to Loring AFB, Maine, following an air defense practice scramble. With only 170 hours in the "Six," Captain Wickel had been the wingman on the intercept mission. The weather at Loring was 500 feet overcast with 2 miles visibility, and the cloud cover was solid up to 21,000 feet. Because of the weather, the flight lead split the flight for separate instrument approaches and landed first.

In the weather on final approach, three miles from touchdown, Captain Wickel noticed abnormal airframe vibrations and erratic instrument indications. Soon he no longer heard the GCA controller's transmissions and saw many of his instruments freeze. Electrical failure. About two miles from touchdown, in the weather with no approach guidance, Captain Wickel transitioned to his emergency attitude indicator and executed a comm-out missed approach.

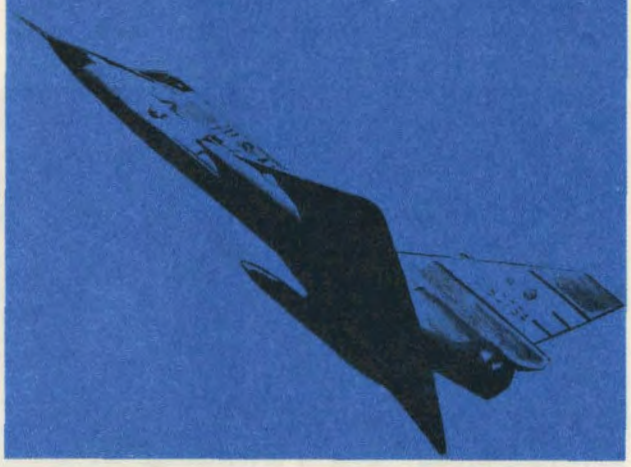
Captain Wickel climbed to the minimum safe altitude and flew by dead-reckoning to an uninhabited area. As well as disabling the radio and primary instruments, electrical failure precluded retracting the landing gear or speed brakes. With no way to get down through the weather, the fuel supply being depleted by cruising in the landing configuration, and only nine minutes of reliable information available from the emergency attitude indicator, bailout was probable.

While reviewing the pre-ejection checklist, electrical power returned for a few moments, then became intermittent. Regaining radio contact with GCA, Captail Wickel declared an emergency and requested a minimum-fuel, gyro-out precision approach. Despite inconsistent radios and instruments, he safely landed the aircraft before running out of fuel.

Captain Wickel's exceptionally cool presence of mind, positive aircraft control in the weather, and adept flying skills allowed him to recover the aircraft. He has earned the Tactical Air Command Aircrew of Distinction Award.



Capt Albert S. Wickel
49 FIS
Griffiss AFB, New York



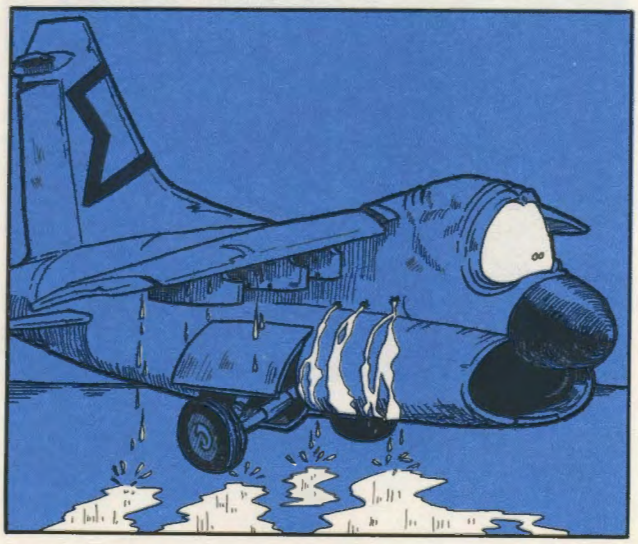
TAC tips

TAC Tips

INTEREST ITEMS,

Dipping into the Frag bag

A couple of A-7s were on a realistic training mission with the job of knocking out a simulated SAM site with their live MK-84 2,000-pound bombs. They flew low-level tac formation into the target area where the leader saw the target. He popped up for a low angle low drag delivery, dropped his bombs on the target, and pulled off towards the egress route. Two wasn't about to lose any quarters on this mission; so he did likewise. Coming off his pass, two acquired lead and noticed that his leader appeared to be dumping fuel. He joined on lead and discovered fuel venting through several holes in the A-7's fuselage and wing. The two-ship returned directly to base and landed uneventfully.



No, they didn't happen to tackle a real SAM site by mistake. A more subtle enemy caused this close call.

At the apex of the leader's pop-up, he rolled over and began pulling down towards the spot where he expected the SAM site to be. But he didn't see it right away. Once he acquired the target, he pressed the attack, and released both of his MK-84s—about 300 feet below the minimum release altitude.

No matter what the scenario, we can't afford to let ourselves forget that the minimum release altitude is just that—the absolute minimum. The odds on frag damage increase *dramatically* with each ten feet we fly below the min.

Wrong job for the man

There used to be a contractor who worked at one of our ranges using various equipment to pick up the accumulated metal debris from training ordnance. But he doesn't work there any more. Rumor has it that he decided to take up wallpapering instead. Here's why.

Picture a range complex that's divided in half by a blue line on the map. Place nuclear targets (with concentric circles and plowed run-in lines leading to the circles) on each half of the range. Next, close the eastern half of the range so our contractor friend can go out and safely do his thing. Now bring on a three-ship of F-111s with lots of fuel and practice bombs. Do you see the connection?

The three Aardvarks had made about eight uneventful passes when one of them turned out

wide. The pilot was momentarily distracted inside the cockpit, lost sight of the aircraft in front, and saw a run-in line (to the nuke target on the wrong half of the range). About the right interval had elapsed since the crew in front called final. So when the aircraft was target-bound, the pilot made his call.

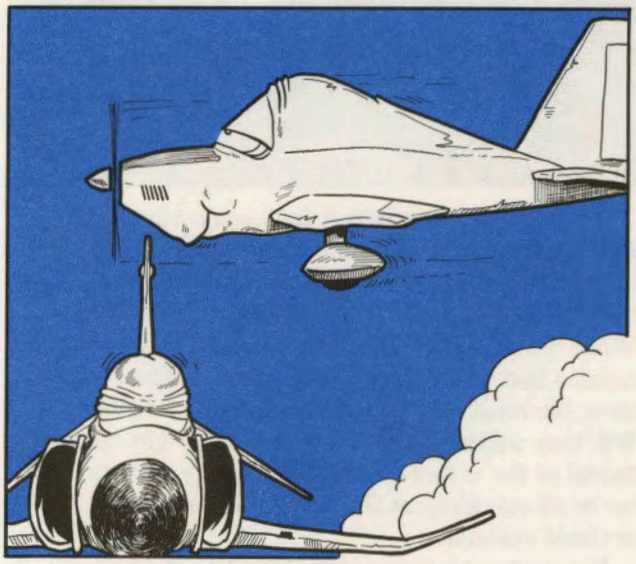
The range control officer looked up to see another F-lll just turning final, assumed it was this crew, and cleared them hot. But when the other aircraft also called final, the ranger realized something was amiss. He checked way over at his 10 o'clock and fouled the crew that was temporarily disoriented. But not before their BBU-33 practice bomb missed the contractor by about 50 feet.

A short lapse in concentration during range work can be hazardous or fatal—to aircrews and others.

Lookout below... and above, and to the side...

After individual takeoffs 10 seconds apart, the F-4 flight lead was in a sweeping right-hand climbing turn while number two was closing to the inside of the turn. When number two was about 1,000 feet out, a small, white Cessna flew between the aircraft passing just below the leader and just above the wingman. The F-4 crews estimated the miss distance at 100 feet. The Cessna pilot later called the tower and apologized for accidently stumbling into the airport traffic area.

On another day at a different air base, a single F-4 pulled up for a closed pattern and configured the aircraft for a normal landing. Just before beginning the base turn, the crew looked up and saw a small white Cherokee in their path. The Phantom pilot pushed the nose over and passed about 200 feet below and in front of the smaller aircraft.



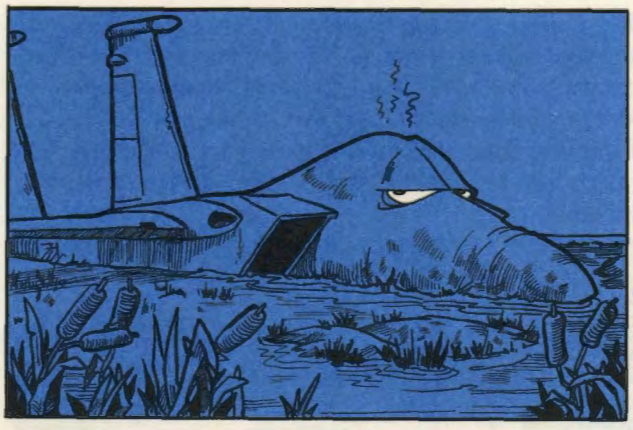
We stress the importance of an aggressive lookout doctrine in tactical formation because it will help improve our chances for mission success and survival in the tactical realm. That doesn't mean we can let our guard down in the local area during peacetime. It won't matter who was in the wrong if you're dead. Neither IFR service nor the familiarity of your own traffic pattern guarantee separation from VFR traffic. Your Mark-1 eyeballs are still your best bogey proximity warning system.

How's your lookout?

TAC TIPS

Take your pick

The scene is a rainy day or night, take your pick. An F-16, F-15, F/RF-4, A-10, or F-111 (take your pick) lands on a wet runway. The aircraft hydroplanes. The pilot applies brakes. The wheels lock. Both main tires blow. The aircraft swerves and skids off the runway (left or right side, take your pick). Familiar story, and it's not fiction.



All these tactical aircraft (and some others we didn't mention) have a common limitation. The importance of this limitation increases in proportion to decreases in RCR. They all lack reverse thrust. While we read with anticipation about experimental nozzles that make thrust directional, in the meantime, we must rely on the equipment we have. Whether we're trying to stop a lightweight sports model or the armor-plated, heavy-duty variety, we're all currently at the mercy of brakes and antiskid systems.

But we keep hearing this same tale of whoa, Nellie. Is there a common denominator? Maybe. One factor that seems to keep coming up after incidents like this is faulty aircrew knowledge or application (take your pick) of the finer points of the antiskid system.

Inherent to the antiskid systems of all these aircraft is a feature that requires the wheels to spin up to a certain rotation speed before antiskid protection is available. On a dry runway, it's almost automatic; you're there just after touchdown. But on a rain-drenched runway, the wheels may hydroplane. If they haven't spun-up past the antiskid's threshold value before the pilot applies brakes, the wheels will lock. The antiskid threshold value is different for individual aircraft (take your pick):

F-16—5 knots
F-15—15 knots
F/RF-4—30 knots
A-10—15 knots
F-111—20 knots

The moral? We can change the ending of this tired old story. The key is undestanding how the touchdown protection feature of the antiskid works.

The test usually comes at about 100 knots on a wet runway. You've safely landed, aerobraked, and now it's time to get on the binders. Once you've applied brakes, if you don't perceive any deceleration or hear the antiskid cycling, don't assume anything is wrong yet. Get off the brakes, let the wheels spin up, and then reapply the brakes. *Then* if you're still whistling on down the runway, follow your Dash One procedures for brake/antiskid failure.

ECM (PTOOEY) Pod and donuts

Over the years we've demonstrated several innovative ways to damage ECM (electronic countermeasures) pods. They can be dropped, mismounted, flown through rain showers at 500 knots-plus, and exposed to excessive G-loads. Well, it looks like we've found a new way.

During a two-week period at one unit, four ALQ-119 ECM pods were all damaged by BAK-12 cables. The pods were mounted on the centerline stations of F-16s where there's not a lot of ground/cable clearance. After landing, as each of these aircraft rolled across the departure-end BAK-12 arresting cable, the cable bounced up just in time to contact the nose or an appendage of the dollar nineteen pod.

It's a tough problem—we need the cables, and there are limitations on where else we can hang the 800-pound electronic drag device.

Evidently the worst bounce occurs when the nose wheel runs over a donut (the circular rubber pendants that support the cable above the runway surface). So this unit requires their pilots to slow down as much as prudently possible before crossing the departure-end BAK-12 and try to steer between the donuts.

AVOID THE DONUTS—sounds like a wise doctor's advice.

Between a rock and a hard place

Because of a favorable forecast, you've planned to arrive at a distant cross-country base with VFR fuel. Now, you find that the front that was supposed to arrive tonight beat you there leaving recovery weather that's below TACAN minimums. The ILS is down for maintenance (consistent with the good forecast). The fast-moving weather also took all the nearby alternates down below minimums except one. You head there, but en route, ATC tells you that it too is now below minimums. It's 30 miles back to your original destination, and you're looking at minimum fuel. What'cha gonna do now, Ace?

Just for grins some day when the weather's good and the radar traffic pattern isn't too saturated, tell approach control on initial contact that you want a minimum fuel GCA. It's a request they don't hear often, and one that some pilots have never made. You might find that both you and the GCA controller can use the practice.

We all assume we can hack it if we're called to fly one; after all, flying instruments is pretty basic. But actually flying a short, tight pattern in the weather with few options and only a sparse amount of fuel can be a rather sporty challenge. Practice in good weather may be just the edge you need to make it work safely for you on the day when nothing seems to be going your way. There are several things about this pattern that would be helpful to know *in advance.*

It might surprise you while you're flying a practice min-fuel GCA how rapidly the directions are given and the magnitude of some of the heading and altitude changes that must be made in order to expedite your trip to a short final. They seem greater because the pattern is compressed into considerably less airspace.

Listen intently. Several instructions may come at once. There's no provision for missing a heading change.

Fly precisely. Being slow to comply or not complying with the controller's instructions only makes the controller's problem more difficult. If you mess it up, it may take more time and fuel to set up for another min-fuel approach than it would have taken for a normal GCA at the outset.

Remain aware of your position with respect to the runway. That's the key to remembering and making airspeed and configuration changes while you're concentrating on turning to a new heading and descending to a new altitude.

You'll probably be told to "begin descent" while still on base leg. You're not on final, so standard rate turns apply. Since you still need to maneuver, you should be above final approach airspeed; so what pitch change is necessary to nail the vertical velocity? Once on final approach heading, how are you going to slow down to final approach speed without sinking?

Be prepared. A fogged-over canopy or distractions like having to retrieve approach books that have been blown all over the cockpit by a zealous defogger can spoil all that good work.

Even if you do everything correctly, there's no guarantee that the controller will. We're all human, and in such a situation everybody is under stress. The runway may not be squarely at twelve when you're at decision height. Your odds will be better if you've already told them to turn up the rabbits (sequenced flashing strobe lights).

A minimum-fuel GCA can be a handful. Don't let your first attempt at one be in the weather when you're short on JP-4.

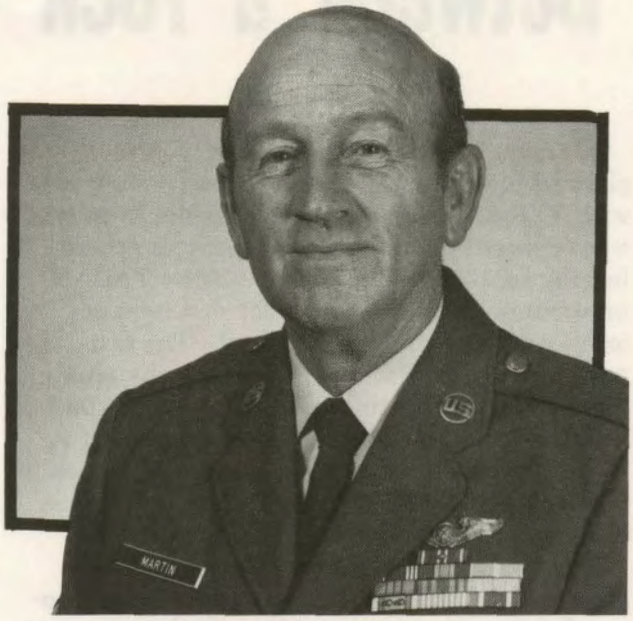
TAC SAFETY AWARDS

Individual Safety Award

SMSgt Earl E. Martin, Jr., reacted quickly and minimized damage to an aircraft that was experiencing an engine tail pipe fire.

The 116 TFW was deployed to Savannah Field Training Site, Georgia, for an operational readiness exercise. An F-4D was taking off, but the afterburner failed to light; so the aircrew aborted and shut down the engine according to the checklist. However, because the afterburner didn't ignite, fuel pooled in the engine tail pipe causing a fire to start. There were no indications of the fire in the cockpit. The aircrew started taxiing the aircraft to the dearming area.

As the plane taxied by, Sergeant Martin saw the tail pipe fire. He quickly realized the cause of the fire since the engine wasn't running, and took immediate action. He connected a tug to a M32A-60 starting unit and headed toward the dearming area; at the same time he alerted the crew of the fire. With some assistance from other maintenance people, Sergeant Martin then connected the air nozzle to the aircraft and motored the engine extinguishing the fire.



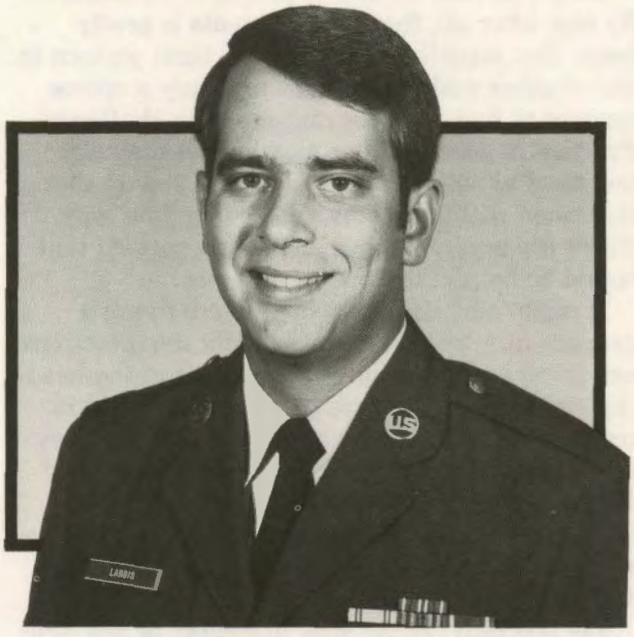
SMSgt Earl E. Martin, Jr.
116 CAMS, 116 TFW (ANG)
Dobbins AFB, Georgia

Individual Safety Award

During engine start, an A-10's number two engine flared up in flames. The pilot shut down the aircraft and scrambled out of the cockpit. But the flames continued. Then someone else entered the cockpit and tried incorrectly and unsuccessfully to motor the engine in an attempt to extinguish the fire. But that only made matters worse; the fire continued.

At this time SSgt David C. Landis took over. He got the other person out of the cockpit, entered it himself, and performed the correct procedures to extinguish the fire: he started the APU; pulled the number two fire T-handle, which cut off fuel to the engine; pulled the bleed air circuit breaker, which has to be done after the fire T-handle is pulled; motored number two engine until the flames were out; then shut down the aircraft.

Sergeant Landis remained calm, knew exactly what to do, and acted quickly. His actions kept someone else from being hurt and saved a valuable aircraft.



SSgt David C. Landis
Jet Engine Mechanic
355 AGS, 355 TTW
Davis-Monthan AFB, Arizona

CHOCK TALK

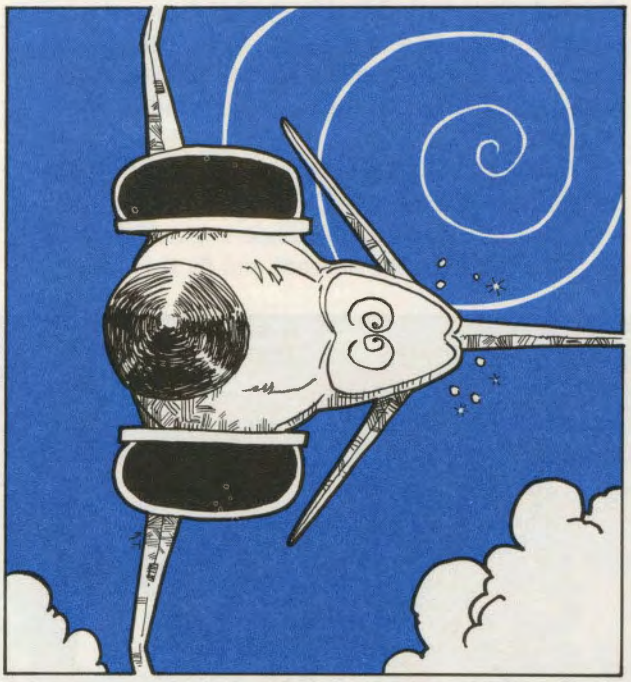
Phantom Phacts

Crew chiefs who launch and recover F-4s are required by TO to check for the proper operation of several control surfaces. One control surface that receives a lot of attention is the spoiler. Soon after starting the number two engine, the pilot moves the control stick one inch toward the dead engine (left) while the chief confirms that the spoiler does not fully deflect. Next, the pilot neutralizes the stick, and the chief confirms that the spoiler returns flush with the wing. Then, after the mission (when the Phantom taxies in with only the number one engine), they check the spoiler on the opposite wing the same way. It's an easy check. And it's easy to slight when you're in a hurry. A number of pilots and crew chiefs have wondered "Why bother?" because the spoiler always seems to pass the test. Most of us never heard of a case where one didn't behave properly.

Recently a D model demonstrated the reason why we do spoiler checks. After the pilot started the right engine, he said, "Stick cleared left for spoiler check?" The crew chief cleared the pilot and was then surprised to see the left spoiler drive full up and the right aileron drive full down.

The culprit was the power cylinder on the right aileron. With the input rod connected to the power cylinder, when the control stick was moved slightly left, the cylinder drove the stick full left *unassisted*. With the input rod disconnected, the direction of stick travel could not be reversed until the cylinder pushed the aileron full down.

This condition means that whenever the pilot made a small left correction with the control stick,



the Phantom would have responded with controls for full left stick. And the danger was only discovered during the spoiler check while attempting to launch the aircraft.

Any old grease won't do

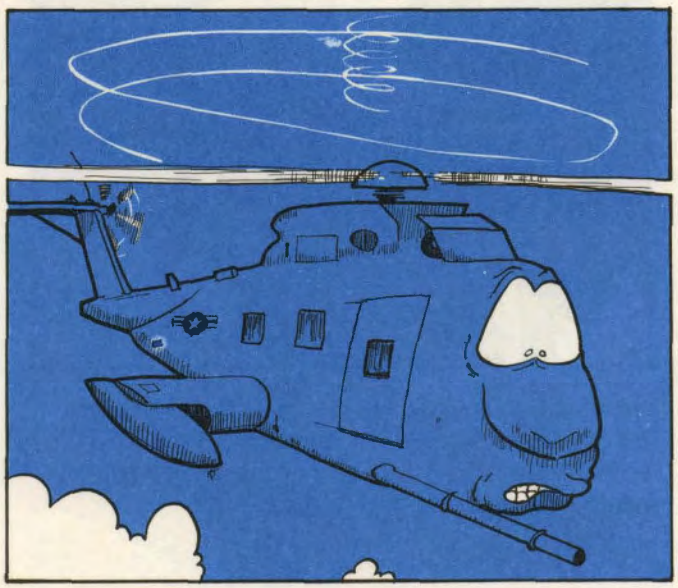
Following a number two engine change, an HH-3 helicopter was scheduled for the long redeployment home. The aircrew tried to crank the number two engine twice without success. The third try was

CHOCK TALK

INCIDENTS AND

aborted when pooled fuel ignited and caused a hot start. No damage was evident. After a thirty-minute wait for cooling the starter, the engine finally started, and the aircraft launched on the mission.

Five hours into the flight, without warning, the number two engine failed. The pilot initiated the emergency procedures for single-engine failure and was able to arrest the descent and fly the helicop-



ter. Four restart attempts were unsuccessful. The crew diverted and landed uneventfully.

Troubleshooters found the drive section of the engine's fuel pump completely worn out. Results from the material deficiency report (MDR) showed that the pump failed because the wrong grease had been used as a lubricant. Apparently, when the new engine was installed, the engine specialist applied whatever grease was handy instead of looking for MIL-G-81322 which the tech data required.

We may never know whether this was a case of *not reading* or *not heeding* tech data. But the results are the same. The *consequences* of not doing the job correctly always show up. Maybe not today, maybe not tomorrow, but the consequences always show up. Using the wrong fuel in an aircraft usually shows up soon after the engine starts. Using the wrong lubricant or the wrong part or not correctly torquing a nut may not show up as readily—but it will.

Sometimes it's downright inconvenient to do some of our tasks by the book. And often no one looks over our shoulder to make sure we are complying with each letter of the law. But someone's life may be at stake. Considering the consequences, can we give anything less than our best?

Aardvark in a bind

When the pilot of an F-111 advanced the throttles to go-around from a low approach, the right engine did not respond to the throttle movement. So after the aircraft was safely flying on the good (left) engine, the pilot retarded the right throttle to idle. He intended to keep the right engine in idle while he flew the Aardvark around the pattern to land. Fortunately, he was able to carry out most of his plan and land. Unplanned was the flameout that occurred when he brought the right throttle to idle.

Troubleshooters found a broken throttle cable between the right engine's fuel control and the throttle. That explains why the engine didn't respond. But why did the engine flame out? And

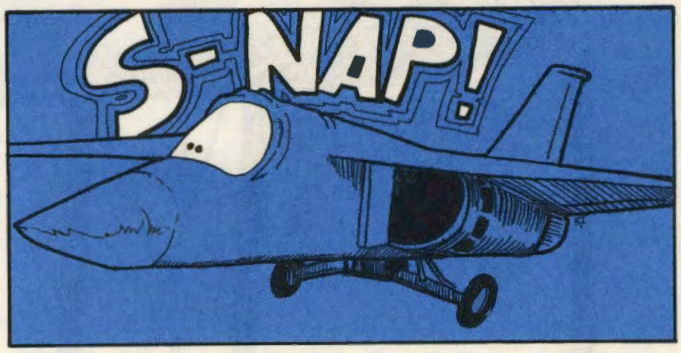
INCIDENTALS WITH A MAINTENANCE SLANT

why did the cable break in the first place?

Within the Aardvard's throttle cable is a band (ribbon) that slides back and forth between teflon sleeves. Ball bearings along the sleeves ease the ribbon's movement. But when a ribbon snaps, the little balls fall into the gap which effectively makes the ribbon longer.

The ribbon in this incident broke with the throttle moving forward from about 85 percent. When the pilot selected MIL for the go-around, the ribbon separated, and several ball bearings fell into the gap. Then, when he brought the throttle to idle, the cable length (increased by the bearings in the gap) was sufficient to move the fuel control to the cutoff position.

And what started this whole sequence? Way back when the throttle cable was changed, a full two years prior, someone installed a phenolic block (one of the hanging brackets which support the cable



along its length) backwards. The reversed block caused an extra bend in the throttle cables which resulted in binding. Pilots never noticed the binding because the throttle boost system overcame it. Eventually the binding caused the ribbon in one of the twisted cables to snap.

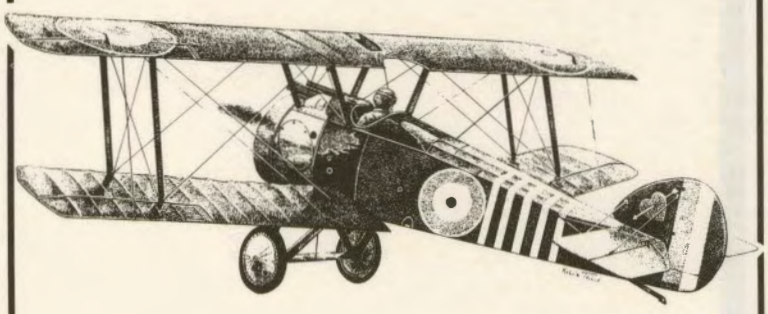
Strange how our mistakes seem to come back to haunt us—and others. Strange not funny.

IN THE CENTER

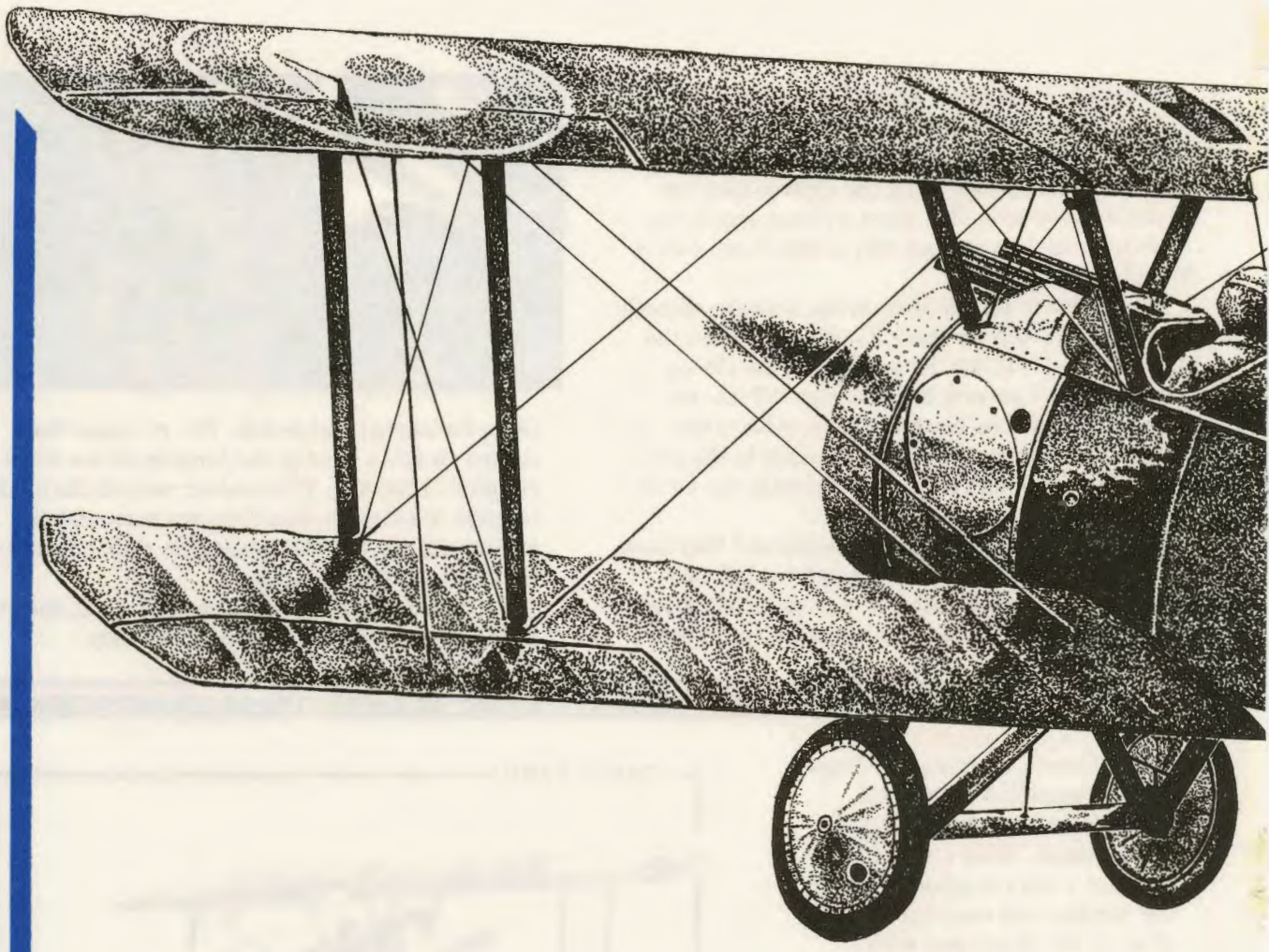
The Camel, a product of England's Sopwith Aviation Co., Ltd., was a superb WWI fighting machine. With a short, compact rotary engine, most of the weight was near the center of wing lift. Equipped with four, nine square feet ailerons, she could respond virtually immediately to the lightest touch on the controls.

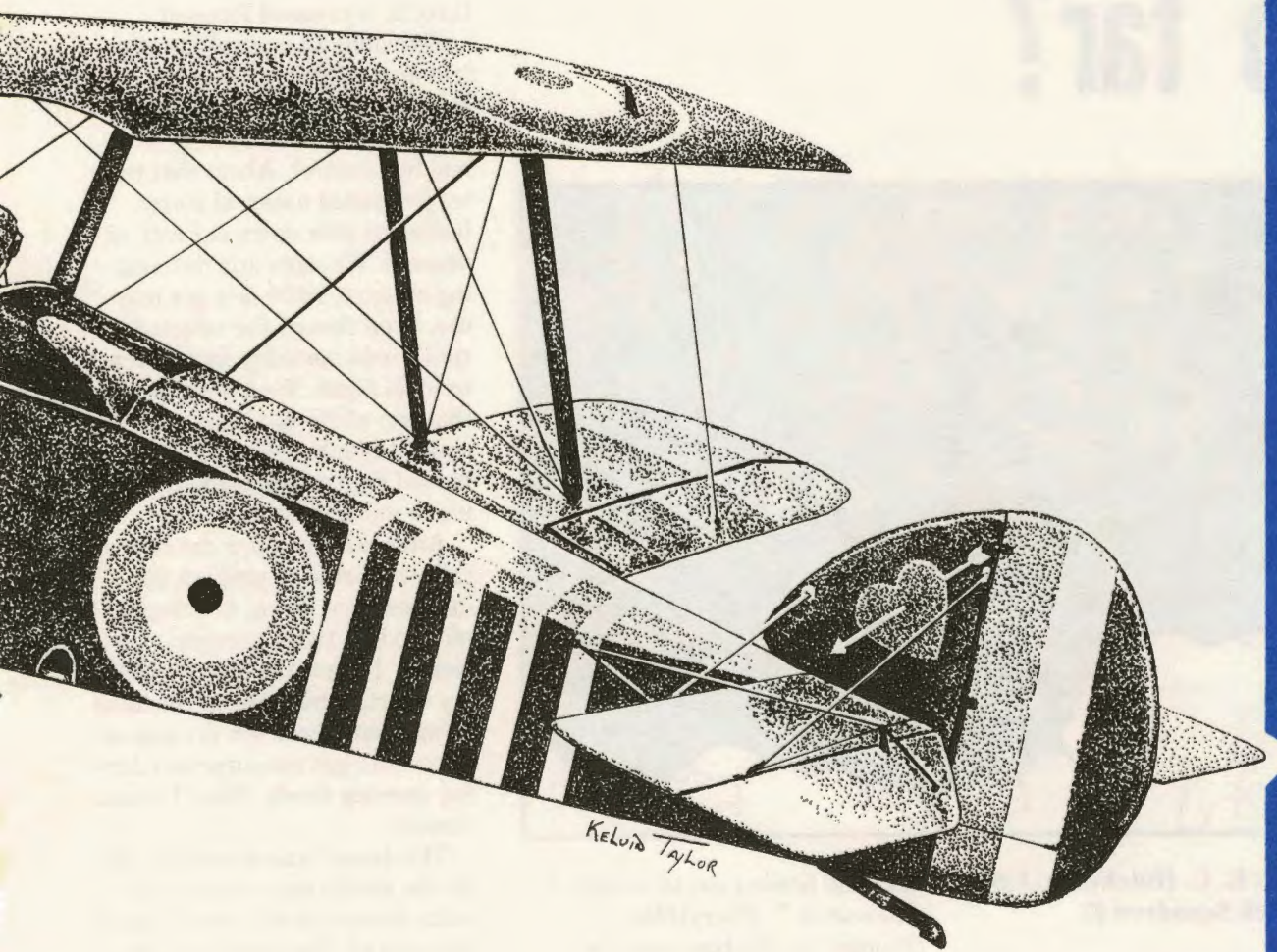
Top speed: 112.5 mph
Length: 18 feet, 9 inches
Wing span: 28 feet

SOPWITH CAMEL

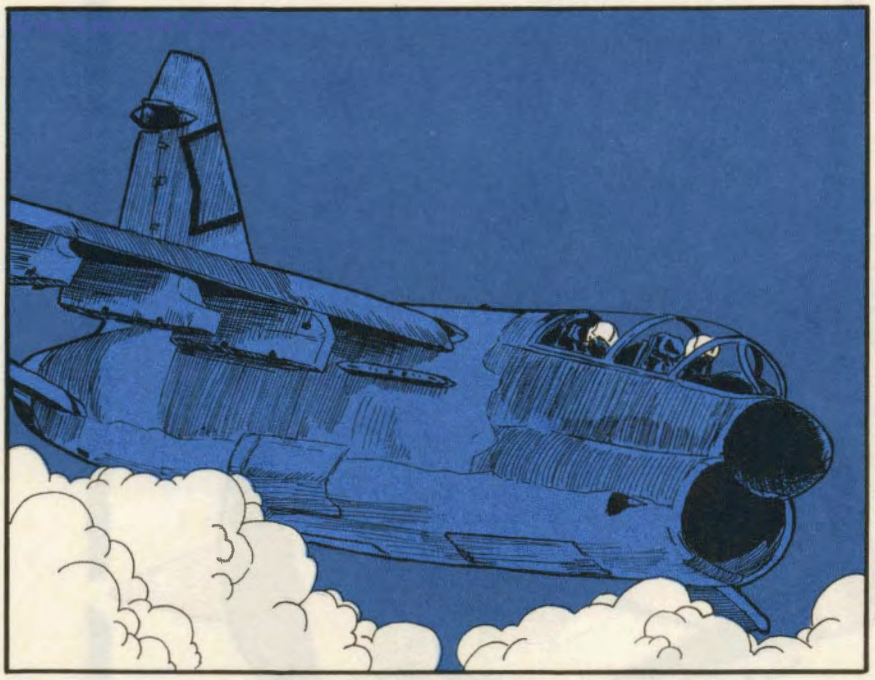


SOPWITH CAMEL




KELVIN TAYLOR

So how do you like the A-7 so far?



By LTJG K. C. Hutcheson, USN
Attack Squadron 27

I was really excited to start my RTU training and get my first flight in the A-7E CORSAIR II. I didn't realize how exciting that first flight was going to be.

After an extensive brief with my instructor, we put on our gear and headed out to our jet, a two-seat A-7. Everything through the climbout went as briefed. Over the mountains in the working area, we started doing our thing. After a few turns, it was time for a stall series. No sweat. Power back, nose up, hold it . . . buffet, recover, MIL power and optimum angle of attack. Looking good. The rate of descent was almost back up to zero, when . . . bang!

It wasn't just a loud bang, it was a loud, metallic bang. A sickening sound that put my heart up under my tongue. I gulped, "What was that?" My IP immediately pulled the power back, unloaded, and said, "I've got the aircraft." We started gliding toward China Lake while trying to figure out what had happened. The rpm was reading 80 percent and stayed there even when the throttle was eased forward.

Switching to manual fuel control immediately produced compressor stalls that went away when we switched back to normal fuel control. About that time we jettisoned external stores hoping to slow down our rate of descent. We were still descending at about 1,000 feet per minute, even though the selected rpm would normally have given us level flight. We found out later that one of the burner cans started breaking apart and fodded the turbine blades resulting in minimal thrust.

After making a few distress calls, I started to prepare for ejection; seat down, kneeboard off, lap belt tight, harness locked. I spent the majority of my efforts arranging the harness straps going between my legs so I wouldn't get too surprised during opening shock. (Hey, I'm not stupid.)

The desert was starting to fill up the windscreen when we finally decided it was time to leave the aircraft. Ejection was initiated from the rear seat while I sat up front with my hands on the lower ejection handle, ready to pull if the sequence didn't start immediately. Soon I was compressed in the seat and grayed out. I felt like I was tum-

bling backwards when my chute deployed and opening shock woke me up. I don't think I was in the chute for a second before I had my mask off and immediately looked up at my canopy.

What a great feeling it was to see a good canopy overhead. My left arm was entangled in some straps, and I struggled to free it fearing I would land on it. I was getting close to the ground when my arm was finally free. Detecting a back and left drift, I tried to relax and get into a good landing position. Wham! I hit hard, and it knocked me unconscious.

Just as I woke up, my instructor, who had landed about 30 yards away, was walking over to see if I was OK. We were both in shock. After I got out of my gear, we decided that it was time to lie down and relax for a while.

We quickly became the center of attention in the valley. A pickup truck came barreling toward us. A couple who lived nearby got out and ran toward us with a first-aid kit and tended to a deep gouge on my IP's hand. We were still feeling pretty lousy when a civilian helicopter that was working nearby landed near us. The pilot ran over and asked if he could take us somewhere. We declined his offer, choosing instead to wait for the search and rescue (SAR) helicopter.

I looked up and noticed the circling on-scene commander. I pulled out my PRC-90 radio and told him that we were in good shape. In about 10 minutes the SAR helo arrived and flew right by us but didn't see us. The overhead aircraft directed him back around. A few pencil flares (gyrojets) and a day smoke (MK XIII flare) later, he picked us up.

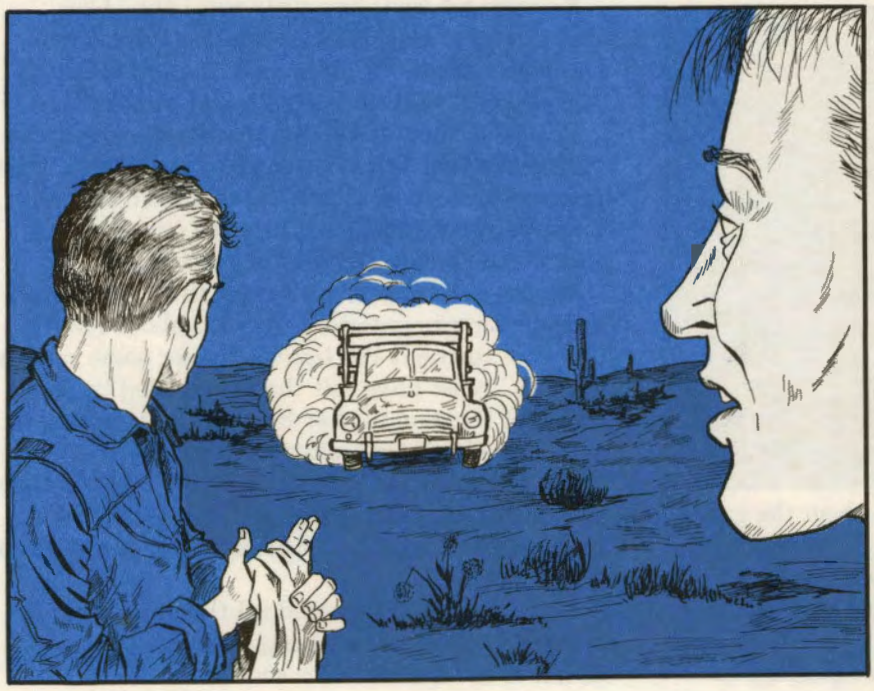
We were both very fortunate. The seats worked as advertised, and I walked away without a scratch. My IP only had a few stitches and a sore neck. I learned a few lessons from my experience that I would like to pass on.

First, for all you new guys (whether in the training command, RTU, LIT, or whatever), don't count on those first few flights to get comfortable.

Second, get rid of your mask. I am an experienced parachutist and had no fear of landing, but I hit so hard it knocked me out for a few minutes. I could have suffocated had my mask been on. (Ed note: Life support training throughout TAC teaches aircrew members to unmask during the descent after checking the condition of the parachute canopy. Lieutenant Hutcheson's testimonial confirms its soundness. His point about suffocating may also apply to our chemical gear.)

Also, for those of you who are not single-seaters, it's important to find your crew as soon as possible to evaluate their injuries. One minute could be the difference between life and death for an injured crewmember if he is bleeding or suffocating in his own oxygen mask.

Finally, don't assume that your rescuer can see you. We were out in the middle of the desert with two parachutes on the ground, a white pickup truck, a white and orange civilian helicopter and a group of six people. Yet our SAR helo flew right by us. Unbelievable! Those signaling devices in your vest are there for a good reason. Have them available and ready so you don't miss the opportunity to signal your rescuers. Some day, you may not get a second chance.



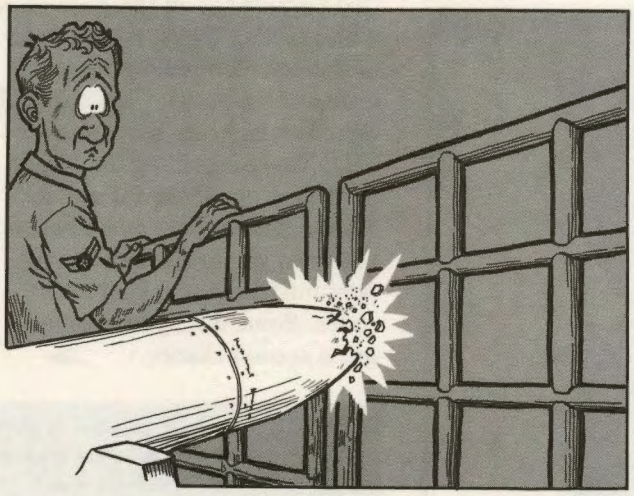
Lt JG Hutcheson graduated in 1981 from the University of Rochester, Rochester, New York, with a BS degree in Mechanical Engineering. He earned his naval aviator wings in June 1983 at NAS Meridian, Mississippi. He is presently serving his first operational tour flying the A-7E Corsair II with Light Attack Squadron 27 on board the USS Carl Vinson.

WEAPONS WORDS

Who's minding the gate

A trio of munitions maintenance specialists was transporting a load of AIM-7E Sparrow missiles from the storage area to the flight line. The tow driver pulled the trailer through the security gate but had to stop just outside the gate because of traffic on the perpendicular access road. The youngest member of the team, with all of two weeks' experience, was sent back to secure the gate.

He walked the right gate forward to the closed position, and then walked back to close the control gate. The unattended right gate didn't wait for him. It continued to swing outward and rammed the missile trailer. Twang! One of the Sparrow radomes took it on the nose—to the tune of $16,000.



Everyone else on the team knew about the gate's tendency to swing past the normal closed position. Everyone else knew that the way to overcome the problem was to close the control gate first. But no one told the new guy.

Supervisors: aren't there some peculiarities on some of the equipment at your location? Don't your new troops need to know about them? Why not brief them before they find out the hard way? And why not fix the peculiarities before a mishap results?

Enough's enuff

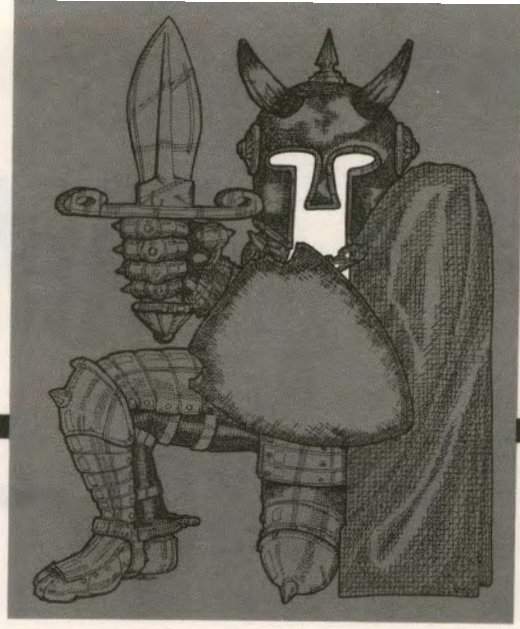
An O-2A was out alone one night trying to light up the sky and mark targets for some A-10 flights. The Duck was hauling two LAU-68 rocket launchers that held 2.75-inch Willy Pete (white phosphorus marking rockets) and two B37K racks that held the flares.

Everything went smoothly until the O-2's ammo supply was down to the last flare. Then, for some reason, the final LUU 1 flare wouldn't release. And that meant a holdup in the action.

The pilot checked all the firing switches in the proper position and tried again. No soap. He tried twice more with similarly disappointing results. Then he repositioned each switch one at a time and hit the pickle button again. Nothing.

We may never know whether the A-10 drivers were getting impatient and noisy about having someone turn out the lights. But for some reason, the FAC must have felt that he needed to fire that last flare no matter how contrary it was. So once more he repositioned each switch and pickled. Ka-thunk! This time he met with a measure of success. Oh, it was still dark, but he had managed to coax the B37K rack to separate from the aircraft.

Then the O-2 pilot safed all the switches and returned to base — wishing he'd safed the switches several minutes sooner.



Right job Wrong jet

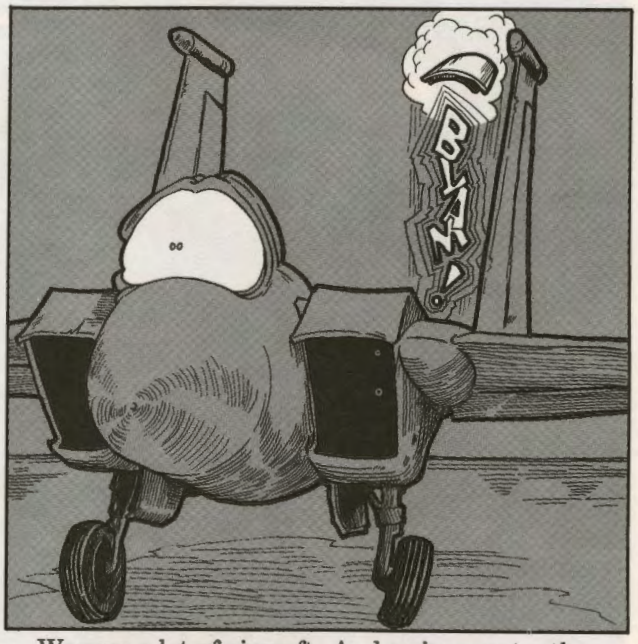
The F-15 Eagle has several handy systems. One is its emergency system for opening the air refueling door. It's an alternate means (pyrotechnic device) for the pilot to open the door if the Utility-A hydraulic system fails over the ocean on a deployment (where landing sites are literally few and far between).

In the middle of a deployment, not being able to refuel in flight is bad news. Depending on where it happens, it could mean flaming out or having to divert and not making it to the destination with the rest of the gaggle. Several F-4 crews I know would have gladly given their TDY money for such a handy system.

But like several other aircraft subsystems, the chances for confusion have increased because it's being modified by a TCTO. Like most routine TCTOs, it hasn't been completed on all the aircraft (some are modified and some are not). TCTO 1F-15-658 calls for replacing the mechanical T-handle initiator in the cockpit with a guarded electrical switch. The system still uses a thermal battery to blow the air refueling door open; it's just initiated differently.

A specialist climbed up on the Eagle to do an electrical continuity check of this system. The aircraft he was working on had not been modified by TCTO 658. But he didn't fully understand the difference (in training, both the modified and original systems were taught, but hands-on training was only done on the modified system). So he didn't follow the clearly marked steps in the job guide, "for pre-TO 1F-15-658 aircraft."

When the continuity checks didn't work out the way he expected, the worker pulled the emergency air refueling system T-handle in the cockpit which fired the thermal battery. Pulling the T-handle wasn't in the job guide for *either* system. Luckily, the thruster had been disconnected, so more damage wasn't done.



We own a lot of aircraft. And we're constantly improving them with modifications. But we can't afford to ground the fleet everytime we get a new modification—the pilot's union would never permit it. Instead, we will probably continue to modify our aircraft in piecemeal fashion. And that leaves the potential for doing the right job on the wrong aircraft. And the only way we can avoid that mistake is by following tech data—to a tee—not to the T-handle.

FAMILIARITY breeds—carelessness

By Col Dennis M. Biggs
ADTAC/IG
Langley AFB, Virginia

When we attempt something for *the first time*, we're *extremely careful* how we handle the machine, animal, or equipment. As we become *more familiar* with the task or operation, those *original fears* and apprehensions take on less and less meaning, until they are virtually *forgotten*. Then—Bang!—it happens; an arm gets torn off in the machinery when at first we were afraid to get within arm's reach; the car rolls over on a curve at a speed we originally wouldn't have driven on a straight road; the house and all your belongings are lost in a fire that started from grease left on a hot stove when originally we were afraid to boil water. The examples are numerous, and they always happen to the other guy, right? Wrong. They can happen to anyone—even me, a fighter pilot, a colonel, a guy who doesn't make mistakes, a man who has survived almost 4,000 hours in fighters (1,400 of them in the F-100 "Widow Maker"), 232 missions in

Vietnam, and 24 years of marriage to the same lady! My recent mistake almost cost me my eyes. It could have been worse, but I'm the luckiest guy alive. The cause? Familiarity. *Familiarity breeds carelessness.*

I know vehicles inside and out. I've torn them apart and put them back together again since I was old enough to pick up a wrench. That knowledge of how vehicles run has helped me to safely bring back several sick aircraft and to get automobiles started in the most austere conditions. My most valued accomplishment was the distributor cap I made from a beer can; it worked all the way from the middle of a huge, dismal swamp until I got my truck home. You would think a man with this much genius would not apply a hot spark to a leaking, corroding, hot, 12-volt battery—well, I did. And the results were spectacular—a loud explosion and bettery parts everywhere. The top part hit the right side of my head so hard it knocked me down and tore the skin away from the corner of my eye. Fortunately, the force of the blow knocked me away from the acid spill, and it missed my eye. Yes, I have a black eye that will eventually go away; my mistake was a noncounter. It did, however, reinforce the statement I've made many times: *familiarity is where you should be more cautious.*

Familiarity does breed carelessness, and it spans the entire spectrum—from combat to everyday operations—from aircraft to housework. It seems in combat we lost more men when they were close to completing their hundred missions than we did on their first few. It's not the first time you ride a motorcycle that you are most likely to get injured, but the 50th or 100th time when you have mastered the beast, or think you have. It's not the first time on the ski slope that you break a leg, but after you start having visions of entering the olympics. Aircraft don't always crash with the trainee at the controls, but far too often with our most qualified IPs. And it's not normally the nonswimmer who drowns, but the guy who knows how to swim.

You don't even have to be actively engaged to be involved. It seems that after a period of time when nothing happens to us or our friends/associates, we get the feeling we're on the sidelines. Until Zap! We're blindsided because we forgot that even while standing on the sidelines, we've got to pay attention. General Patton said it more (or less) eloquently: "A man must be alert at all times or some S.O.B. will walk up behind him and hit him with a sock full of crap." Accidents are just that kind of a guy.

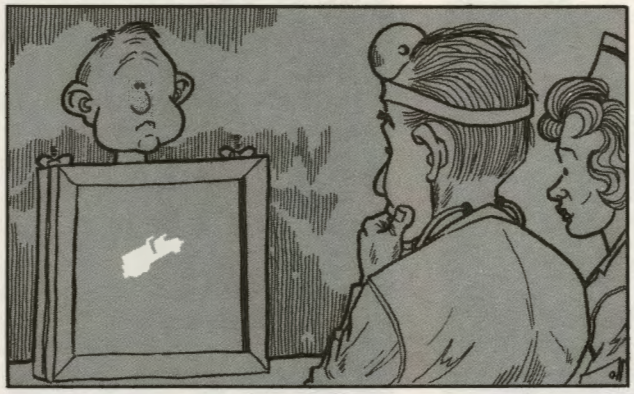
Col Biggs began operational flying in 1962 with a tour in F-100s at Myrtle Beach, SC. Since then, he's also flown the F-4, 0-1E, 0-2A, and the F-15. Col Biggs was an F-4 pilot at Cam Ranh Bay and Phouc Vinh, Vietnam. He's been a test pilot, a FAC, an ALO, an executive officer, and a flying squadron commander. He's attended the Industrial College of the Armed Forces and served at HQ TAC as the director of requirements for armament and electronics. Col Biggs came to his present duty at ADTAC/IG from the 405 TTW at Luke AFB, AZ, where he was director of operations.

DOWN TO EARTH

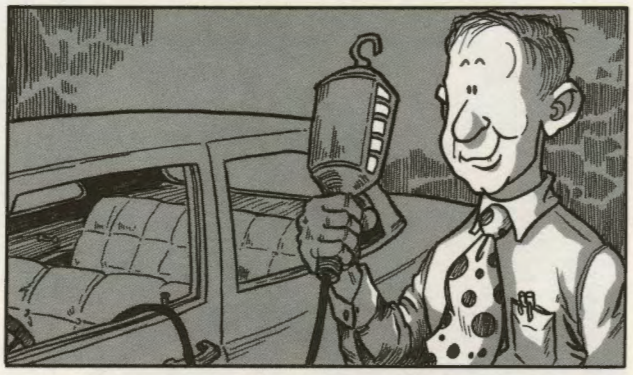
What to buy for Christmas

If you haven't realized it yet, you will: Christmas is just around the corner. And to make short what could be a long introduction to Christmas safety, we'll give you the bottom line up front: think safe and buy safety. Here are some Christmas gift ideas that we think fill the bill.

Toys are probably at the top of everyone's list. We don't have room to discuss specific toys, but there are some general things to keep in mind. First, heed the manufacturers recommended age group label. Toys intended for children eight and under meet tougher federal safety requirements than toys for older children. And by law, toys designed for children under three can't have any parts small enough to be swallowed or to become lodged in a child's windpipe, ears, or nose. If you want to take extra precaution for that toddler who seems to hunt for the small removable pieces on toys, look for "radiopaque"-type plastic on the label. If swallowed, these plastic parts will show up on x-rays—plain plastic ones usually don't. Toys that cause the most accidents are bicycles, skate-boards, roller skates, slides, toboggans, and snow disks.



If you know someone who logs a lot of time behind a steering wheel, consider buying an **inflatable back support** to help alleviate driver's back pain. It fits across the bottom of the seat back and is easy to adjust. It can also be used in an office chair. Some other ideas for cars: A new **lantern** that plugs into the cigarette lighter. It



has a 25-foot cord, and it's magnetic so you can "stick" it onto the car. An **inflatable jack** that's connected to the end of the exhaust pipe and gradually rises with the car's own hot air. It can provide 16″ of lift to a two-ton vehicle. And, of course, the **fire extinguisher**. This one is Halon 1211 and can fit in the glove compartment. It's 6 inches by 3 inches, weighs less than one pound, and can extinguish a small wastebasket-size fire in about two seconds.

Removing snow can be tough on older people. Why not give them a new **snow shover** instead of

a snow shovel. A snow shover has a high handle that can be grasped with both hands while standing upright—no backache. The snow is pushed with an oversized scoop, not lifted, and the scoop has a stick-resistant finish so snow will slide off easily. Off season, the snow shover can be converted into a garden cart.

When the garden has been harvested and the goods are frozen, there's a **device** that let's you know if the **freezer** is on the fritz. It weighs about six ounces and is powered by a 9-Volt alkaline battery. A sensor is placed on the bottom of the freezer and an alarm sounds if the temperature goes above 28 degrees F.

For the would-be carpenter we suggest you buy a **woodworker's** safety kit. It has a push stick, two push blocks for wide ripping or joiner work, a fence straddler for narrow ripping, and a feather board for holding work securely against the fence. The items in the kit are light, strong, very shock resistant, and won't damage the cutting edge of the machine.

If you're looking for gifts that will make someone's home more resistant to fire, the first that probably comes to mind is a **smoke or heat detector**. If someone you're buying for already has one, give a second one: one detector is not adequate. **Fire extinguishers** are next. There are all types, sizes, and prices. Now you can purchase the **home fire hose**. The 40-foot hose fits under the kitchen sink and can be attached to the faucet quickly using a special connector.

For the toddler and the computer nut, there are new **guards** for electrical outlets and plugs. The guards can't be pulled out easily, so toddlers can't put their fingers in the outlet or pull out the plug. Now computer nuts won't lose data from an accidently pulled plug.

Small appliances make nice gifts: for example, **irons**. Some irons now have an automatic shutoff feature. The iron will turn itself off within a designated time if it's tipped over, left in the ironing position and not moved, or left standing in the rest position and not moved.

And the perfect gift for the lucky person that owns a pool, spa, hot tub, or who has enough hair to blow dry: a GFI or **ground fault interrupter**. Some new homes (from 1975) probably have them. You can find them in the breaker box (there will be a test button located on the panel) or on receptables (in the center of the receptacle, there will be an indicator light and a test switch or button) in the bathroom or garage. If they're not there, consider buying one: GFIs prevent electrical shocks. They should be placed where people using electrical appliances may come in contact with an electrical ground: kitchens, laundries, workshops, outdoor electrical receptacles including in garages or car ports (where the concrete pad itself is a ground), and receptacles located near swimming pools, spas, or hot tubs. There are three types of GFIs: portable, which is

DOWN TO EARTH

a box that plugs into a regular three-hole receptacle and can be moved from receptacle to receptacle; breaker-box, which takes the place of an ordinary circuit breaker in the main wiring panel and protects all receptacles; and receptacle, which takes the place of an ordinary wall outlet.

Christmas gifts are often seasonal. And since the weather at Christmastime is cold for most of us, woodstoves and kerosene heaters will be used. For the **kerosene heater** user, buy a **catalytic combustor**. They don't increase efficiency, but they do eliminate the kerosene smell. A nice gift for the person with a **woodstove** is an automatic **fire-extinguishing system** in case of a chimney fire. The extinguisher is dry-chemical and is mounted on the wall behind the stove. A nozzle with a fusible link is inserted into the stovepipe. The link melts at 1350 degrees F (chimney fires produce heat of 1440 degrees F and higher) and triggers discharge of the chemical into a fire.

And for the person who has everything including termites, give the precious gift of **nematodes**—they kill termites. Nematodes are microscopic wormlike parasites that can kill a termite in about 48 hours. They are a great alternative to chemicals and they're harmless to humans, plants, and desirable insects (what's a desirable insect?). Next year, we'll tell how to get rid of the nematodes.

Merry Christmas!

Dear Hunters. The single biggest cause of hunting accidents in North America is "victim mistaken for game," followed closely by "victim out of sight of shooter." Hope you see me soon enough.

Safety Trivia. The first safety belts were offered on Nash cars in 1950. The first speeding ticket was issued in 1902 to T. H. Shevlin of Minneapolis. He was fined $10 for going more than 10 mph.

That Tingling in Your Toes when you met the person of your dreams might deserve a second look. Were you wearing cowboy boots? If the answer is yes, that tingling followed by numbness could be TCBS or tight cowboy boot syndrome. Tight, pointed-toe cowboy boots squeeze the toes together and compress the nerves. And if you were wearing jeans and noticed a burning sensation across your thighs, inability to stretch your legs, and pain across the top of your hips, you could have TJS — tight jean syndrome. Tight jeans can put pressure on the lateral cutaneous nerve of the thigh.

Ski Tip. Find a better-skiing friend or an instructor and ski in his or her tracks. You'll pick up the other skiier's rhythm and retain that rhythm in your turns.

Another Ski Tip. More than 700 ski retailers will take your old ski clothes and equipment and hand you a tax-deductible receipt. The clothes and equipment will be used by youngsters training for the Special Winter Olympics. If you have some old clothes or equipment to donate, you'll need to turn it in by November 31.

A Little Label Learnin'. *Low calorie* means the food doesn't contain more than 40 calories per serving; if it's *reduced calorie,* the food is at least one-third lower in calories than the regular kind. If it says *calories have been cut,* the label has to show a comparison — before and after. And *sugar-free* or *sugarless* doesn't always mean low in calories. If the label doesn't say it's lower in calories, it probably isn't.

TAC Special Achievement in Safety Awards

The 335TH TACTICAL FIGHTER SQUADRON, 4th Tactical Fighter Wing, Seymour Johnson Air Force Base, North Carolina, has been selected to receive the Tactical Air Command Special Achievement in Safety Award.

On 25 Jun 84, the 335 TFS became the first F-4 Phantom unit to exceed 100,000 hours (4 TFW figures) of flying without a major aircraft mishap. This record spans a period of nearly 15 years starting on 1 Oct 69.

Significantly, a substantial portion of this mishap-free period came while the unit conducted combat operations in Southeast Asia during 1972. The 100,000-hour milestone is the result of a sustained display of professionalism and discipline by maintenance personnel and aircrews alike.

The complexity of the tactical mission and the potential dangers involved make 100,000 hours of mishap-free flying a truly outstanding accomplishment for all members of the 335 TFS, past and present.

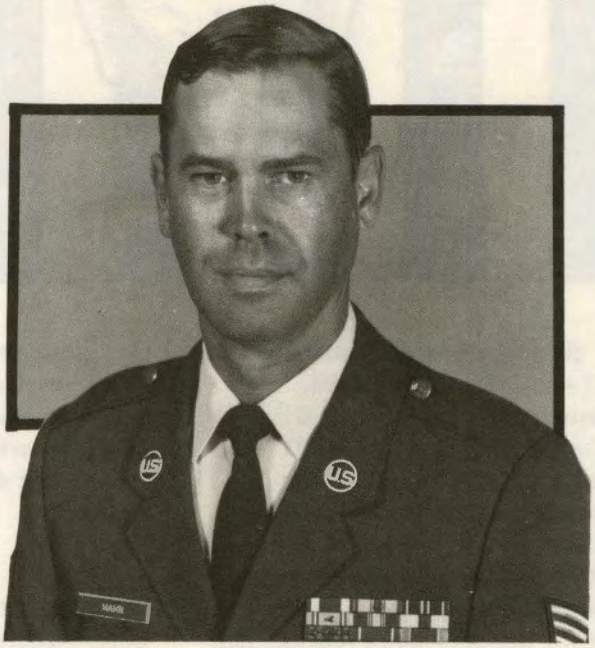
335 TFS, 4 TFW
Seymour Johnson AFB, North Carolina

MSGT. RODNEY L. HAHN will also receive the Tactical Air Command Special Achievement in Safety Award for his involvement in motorcycle safety.

The Florida Department of Highways was required to develop written and riding motorcycle tests. They turned to Sergeant Hahn, a Florida motorcycle safety instructor, to help train some motorcycle examiners and lay out a riding course on which to conduct the tests.

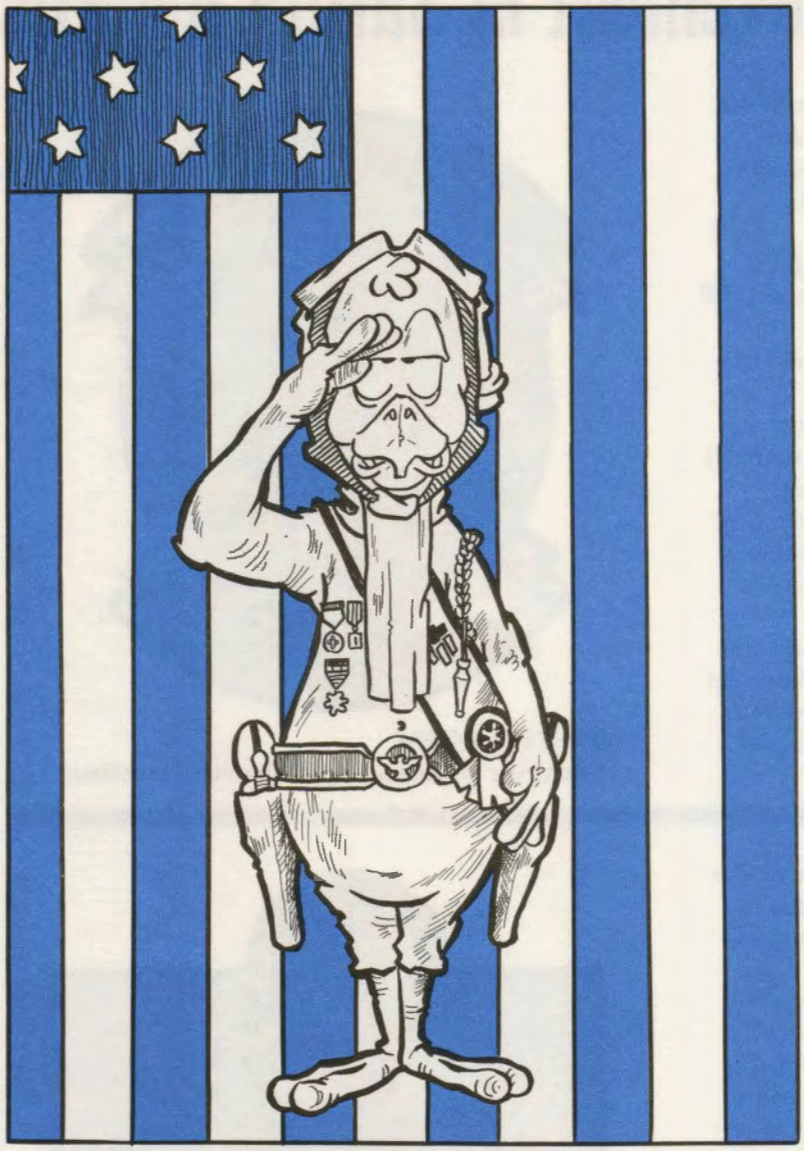
Sergeant Hahn gathered the materials needed to diagram the riding course and painted it on the motorcycle riding area at Avon Park AF Range. He also contacted a local motorcycle riding group and brought the group and examiners together for a motorcycle rodeo. The rodeo gave examiners the practical experience needed to give riding exams and gave motorcyclists practice for the test. Now the motorcycle driving range is used in the "Better Biking Course" to help determine the proficiency of each rider on base.

Sergeant Hahn has helped train 16 Florida State motorcycle examiners. His efforts and personal involvement have made riding motorcycles safer in both the civilian and military communities.



MSgt Rodney L. Hahn
NCOIC Range Operations
56 CSS, 56 TTW
Avon Park AF Range, Florida

FLEAGLE SALUTES



SSgt James A. Winston, 474th Component Repair Squadron, 474th Tactical Fighter Wing, Nellis AFB, Nevada. During a daily walk-around inspection of the jet engine test cell, Sergeant Winston discovered an electrical power line had been blown down the previous evening. The power line was dangerously close to the test cell fuel tank. Sergeant Winston quickly informed everyone in the immediate area of the danger, then shut the power off. His quick reaction to this potentially explosive situation prevented possible injury to personnel and damage to valuable equipment.

Capt Gary L. Bowling, 60th Tactical Fighter Squadron, 33rd Tactical Fighter Wing, Eglin AFB, Florida. Twenty miles west of Eglin while returning from an air combat training mission, Captain Bowling noticed his F-15's radios were suddenly weak. Then the Eagle's nose pitched down about 10 degrees and many caution panel lights lit up. His radio became silent about the time both engines' temperature gauges indicated above 1,000 degrees. He pulled the throttles to idle where the FTIT was back in limits. Then the fuel quantity began decreasing and indicated 2,000 pounds when 6,000 pounds should have been on board. With only idle thrust available without overtemping the engines and with a busy pattern at home, Captain Bowling squawked emergency and turned towards a nearby divert field where he was able to land uneventfully. Captain Bowling professionally handled a confusing multiple emergency.

A1C Mitchell L. Wallace, 35th Equipment Maintenance Squadron, 35th Tactical Fighter Wing, George AFB, California. During a leak check he was performing as the crew chief of a TH-1F helicopter, Airman Wallace discovered the forward left engine mount casing was cracked. He immediately advised the crew who shut down and aborted the aircraft. Later, when the engine was removed to fix the broken casing, Airman Wallace also discovered several damaged inlet guide vanes on the engine's compressor. Airman Wallace's alertness detected a potentially hazardous condition.

DECISIONS

Are you a stop- or go-oriented person? If you're racing down the runway with a full head of steam and notice that one of your engines isn't operating at 100 percent (literally), is your first inclination to abort or to continue? Or if you're a single-engine jock, what's your choice on landing roll with 120 knots and 4,000 feet of wet asphalt remaining?

Naturally, the particular aircraft you're wearing has a lot to do with your answer. Does it have an abundance of power, or do the engines produce more noise than thrust? Does it have a sturdy tailhook, or one that was added to balance the CG? Do we read a lot of messages about your airplane's brakes, or will they stop you on a dime and give change? Some airplanes make the pilot lean towards stopping; the old dollar nineteen (C-119) is said to have had a single-engine climb performance of negative 700 fpm — not a go-oriented airplane. On the other hand, the superlative performance of modern fighters may influence pilots to be spring-loaded to the *go* position. Depending on the circumstances, however, most tactical aircraft are capable of either action and leave the decision up to you, the pilot.

Airfield facilities should influence your decision. Is there enough remaining runway for those brakes to grab on to? Are there any cables left?

And how about the weather conditions? Engine performance on a hot day in Denver isn't the same in January at Duluth. Neither is braking effectiveness.

If your stop or go decision comes up during landing rollout, do you have the fuel, weather, and, in an emergency, the controllability to take it around again? If you decide you do, you'd better do something if you've already deployed the drag chute or tail hook.

The point is simple: if you're a go-oriented person, you need to have a good idea of whether or not there is enough runway for you to accelerate to takeoff speed. Being go-oriented when you lose an engine below single-engine takeoff or minimum go speed may interfere with your plans for a long life.

If you're a stop-oriented person, you need not only a rough guesstimate of stopping distances required and available, but also a reasonable idea of how and when you're going to stop that beast. How often do you practice aerobraking at 150+ knots? Do you think that extra speed might make it a little different?

Perhaps we shouldn't be too committed to either stopping or going until we've had a look at the situation. "But when it happens, I've only got a nanosecond to decide," you say. Not true. First, all performance charts allow for decision making and reaction time. The F-4 min go speed chart counts on the pilot taking a full six potatoes (seconds) to light the good engine's AB. What does your flight manual advertise?

Second, we can make better informed decisions about continuing or aborting a takeoff if we've *previously* considered the critical factors affecting our aircraft's ability to stop or go before we take off, before we shoot touch and goes, and before we make the full stop landing. ➢

LETTERS

Dear Editor

Thanks for your good magazine. This "Sky pilot" enjoys reading it every month. I believe, however, that there's an error on page 20 of your August issue.

The first TAC Tip concludes with "That means the DENSITY altitude may have been as much as 2,000 feet higher than the pressure altitude the pilot was looking at on his altimeter."

Correct me if I'm wrong, but my sources tell me that you are only reading pressure altitude when the altimeter is set at 29.92 which would only be true if at or above 18,000 feet or if the barometric pressure were 29.92 in the operating area. When the aircraft is below 18,000 feet, the altimeter is set to the local barometric pressure and gives "indicated altitude."

Forgive my trying to be a "smart ace."
Lester T. Buckalew, Lt Col, USAF
Installation Staff Chaplain
Moody AFB, Georgia

Dear Chaplain

We wouldn't argue with your Sources. You're correct too; the pilot was looking at indicated *altitude. But the point we were trying to remind pilots about in August wasn't a matter of either QNH or QNE; it was the effect on* density *altitude of raising the temperature. The higher the temperature, the higher the density altitude, the lower the volume of air supplied by the APU to turn over the engine.*
ED

Dear Editor

Your publication is simply superb! Having just recently joined the Tactical Air Command team, I am proud to be associated with all the professional players. Your publication speaks to all within the command, regardless of their jobs.

Being a maintenance man, I am especially interested in Chock Talk. This department serves as a learning tool for us all.

I am equally impressed with the feature on safety awards. Recognition of these outstanding accomplishments is extremely important. The August 1984 issue inadvertently addressed Sgt Mark T. Hunt as Sergeant King, but sufficient recognition was given to Sgt Hunt. I would certainly welcome either of these fine young men into my maintenance branch.

One oversight . . . How can the 84 FITS be credited with 150 Class A mishap-free months in July and August? I'm pleased to see 552 AWAC Division included in this category. I certainly hope we'll be there for many years to come.

Continue with this outstanding publication. I look forward to receiving the next issue.
Paul W. Diggs, SMSgt, USAF
Chief, Avionics Branch, 552 CRS
Tinker AFB, Oklahoma

Dear SMSgt Diggs

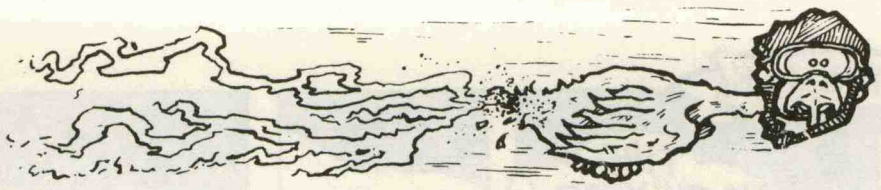
Thanks for the words of encouragement and for pointing out our errors. The August TAC Tally should have recognized 84 FITS for 151 months of flying without a Class A mishap.

You may have noticed by the different type styles in our July and August issues that we were undergoing some changes in the printing contract. Now that they are resolved, we will work hard to catch mistakes like these, because they do detract.

You didn't mention the feature article we printed in August, "Tow to Tow," by SMSgt David MacDonald. Please let us know if you'd like more articles with a maintenance slant.

You and other supervisors could do us a big favor. Please make sure the magazine is passed along to the men and women working in the shops and on the flight line. It's for them, not just about them. Thanks.
ED

TAC TALLY



	TAC		ANG		AFR	
	SEP	THRU SEP	SEP	THRU SEP	SEP	THRU SEP
		1984 / 1983		1984 / 1983		1984 / 1983
CLASS A MISHAPS	1	16 / 21	1	5 / 10	0	1 / 1
AIRCREW FATALITIES	1	13 / 7	0	2 / 9	0	0 / 1
TOTAL EJECTIONS	0	11 / 21	1	4 / 9	0	2 / 0
SUCCESSFUL EJECTIONS	0	9 / 18	1	4 / 4	0	2 / 0

TAC's TOP 5 thru SEP 84

TAC FTR/RECCE	
class A mishap-free months	
37	58 TTW
30	4 TFW
26	405 TTW
24	27 TFW
20	1 TFW

TAC AIR DEFENSE	
class A mishap-free months	
140	57 FIS
93	5 FIS
90	48 FIS
49	318 FIS
40	87 FIS

TAC-GAINED FTR/RECCE		
class A mishap-free months		
149	188 TFG	(ANG)
141	138 TFG	(ANG)
140	917 TFG	(AFR)
118	114 TFG	(ANG)
107	183 TFG	(ANG)

TAC-GAINED AIR DEFENSE	
class A mishap-free months	
123	177 FIG
89	125 FIG
72	119 FIG
56	107 FIG
47	147 FIG

TAC/GAINED Other Units		
class A mishap-free months		
182	182 TASG	(ANG)
166	110 TASG	(ANG)
162	USAFTAWC	
154	84 FITS	
96	552 AWACD	

CLASS A MISHAP COMPARISON RATE

(BASED ON ACCIDENTS PER 100,000 HOURS FLYING TIME)

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TAC	1984	3.4	3.4	2.8	2.0	2.6	3.5	3.0	3.0	2.9			
	1983	6.9	5.3	3.4	3.8	4.0	3.8	4.5	4.1	3.9			
ANG	1984	0.0	2.3	1.5	2.2	2.6	2.1	1.8	2.1	2.3			
	1983	9.1	7.0	4.4	4.3	3.4	4.2	4.8	4.2	4.7			
AFR	1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	2.7			
	1983	0.0	0.0	0.0	0.0	0.0	0.0	3.6	3.1	2.8			

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FLEAGLE
THIS IS TH' YEAR I CONQUER OLD TIGER TOOTH.
AIN'T I SUMPIN'?
OH MY!
HARDISON
AAAIIOP!
NOT OLD TIGER TOOTH AGAIN?
'FRAID SO.
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