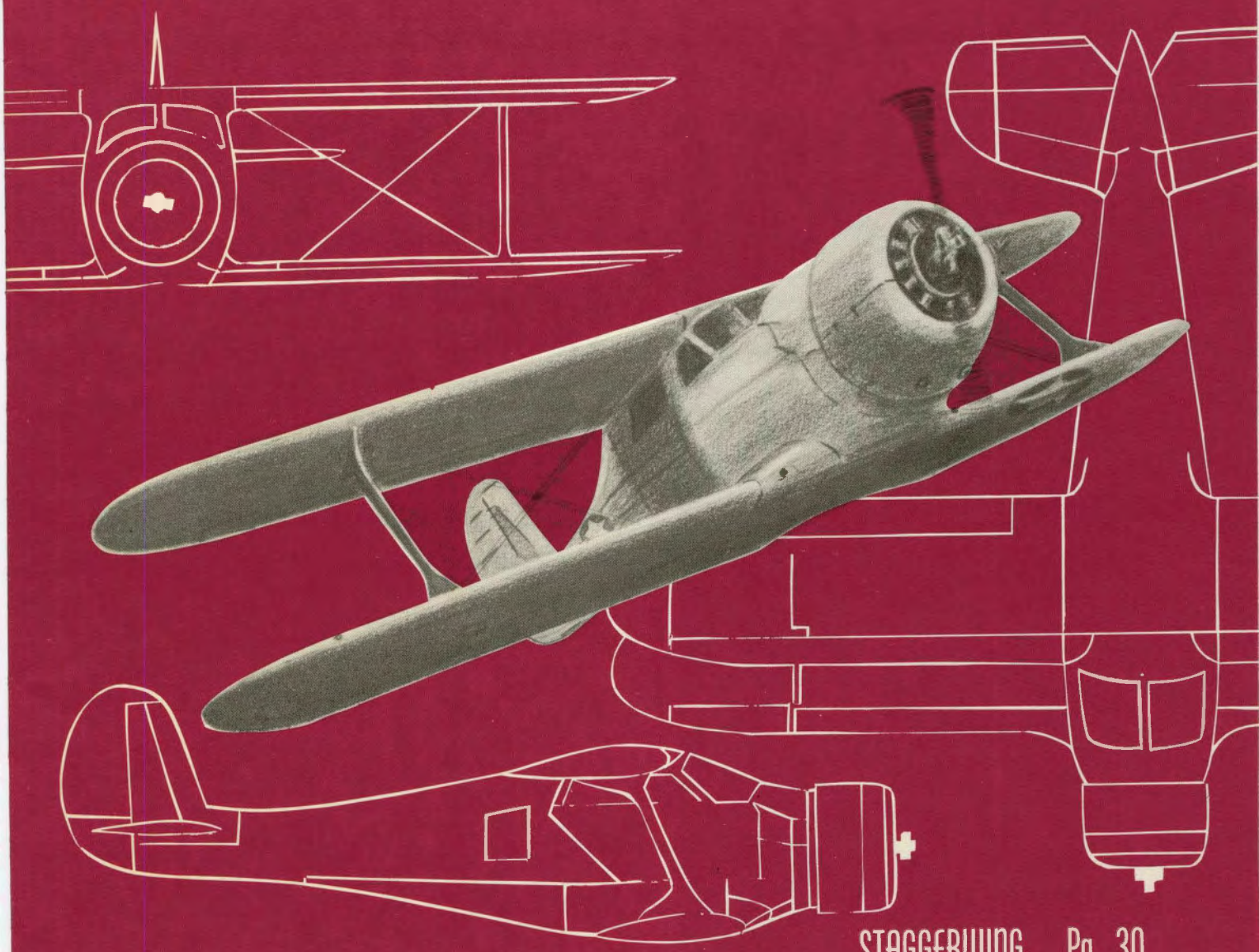
# TAC ATTACK

SEPTEMBER 1971



STAGGERWING Pg 30

for efficient tactical air power

# TAC ATTACK

SEPTEMBER 1971
VOL. 11, NO. 9

Tactical Air Command

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# Angle of ATTACK

# KNOCK ON WOULD

Our major aircraft accident rate is hovering around 3.0, the lowest, at this point in time, in TAC history.

However, it is not a time to walk around on eggshells waiting for the inevitable storm that follows the calm. Rather it is a time to "knock on would." Not a superstitious knock or a timid knock but an aggressive hard look at ourselves.

Would a small amount of extra effort have prevented that engine shutdown?

Would that AF Form 847 that I never did get around to writing have benefited in the emergency situation?

Would that hip pocket write up that I told the crew chief about have saved that aborted mission?

Would that AFTO Form 22 in the desk drawer have corrected the procedure that led to an incident?

Would that Hazard Report that was important at the time but that I never did submit have prevented the same occurrence?

Our low accident rate has been achieved through hard work (yours) and constant introspection in accident prevention. A pat on the back is great but it can sometimes open the door for creeping complacency which can lead to lax procedures resulting finally in an accident.

Our job, then, is to defeat complacency by a knock on would.

The first step is to identify "the woulds."

The second step is to correct them.

The third step is to increase our self-discipline so that a "knock on would" is unnecessary.

GERALD J. BEISNER, Colonel, USAF
Chief of Safety

# THE TEAM

**ARE THERE THOSE OF YOU WHO BELIEVE THAT CREW COORDINATION IS THE ABILITY OF A CREW TO PERFORM A GIVEN FUNCTION WITH SUCH PERFECTION THAT A CHECKLIST IS MERELY A HINDRANCE ? IF SO, THEN THIS IS FOR YOU. IF NOT, READ ON...JUST TO MAKE SURE.**

When my neighbors complain about my son being such a big loudmouth, I tell them, "It's all right. One of these days he's going to be an Air Force pilot, and as a pilot, he's expected to be a loudmouth (That's what I tell them. Actually, if he ever shows up as an Air Force pilot, he'll be loudmouthing for another reason and my size thirteen flying boot will be the proximate cause.)

Anyway, I have loved noises ever since the year A.D. (after the disaster). However, during those B.C. (before the crash) years, I was known as Gentle Jimmie, flying the left seat with Soft Talking Sam and we were called "The Team." Both of us were ten year captains, IPs, flight exasperators, and aircraft commanders, par excellent. Those who observed us in the cockpit witnessed a beautiful ballet of precision maneuverings, minute adjustments and perfect coordination . . . all without a single word being spoken. It was truly magnificent. He read the space between my ears and I read the void between his. We were like two pantomimists, working quietly as a team, unhampered by a lot of yakity-yak and Dash One responses to checklists. We knew exactly what to do and we did it . . . on cue. Talk was superfluous. Using a checklist was criminal.

When I smiled . . . Sam raised the gear, a nod and the power was reduced, a shrug and the flaps came up. No chit-chat . . . like a well oiled machine with everything done beautifully and SILENTLY . . . until that day.

That day involved a routine eight hour flight of four

# THE TEAM

cigars, the customary nods and smiles. "The TEAM" was on stage and the audience was spellbound. Even the snow outside was quiet. Only those noisy engines ruined the astral serenity. When over the initial approach fix at destination, we received the weather . . . one hundred and a half. I smiled and Sam dropped the gear silently. The cockpit was quieter than the chapel on payday. Upon intercepting the glide slope, Sam silently advanced the power and lit a cigar. Then GCA said, "You're passing through minimums." I smiled.

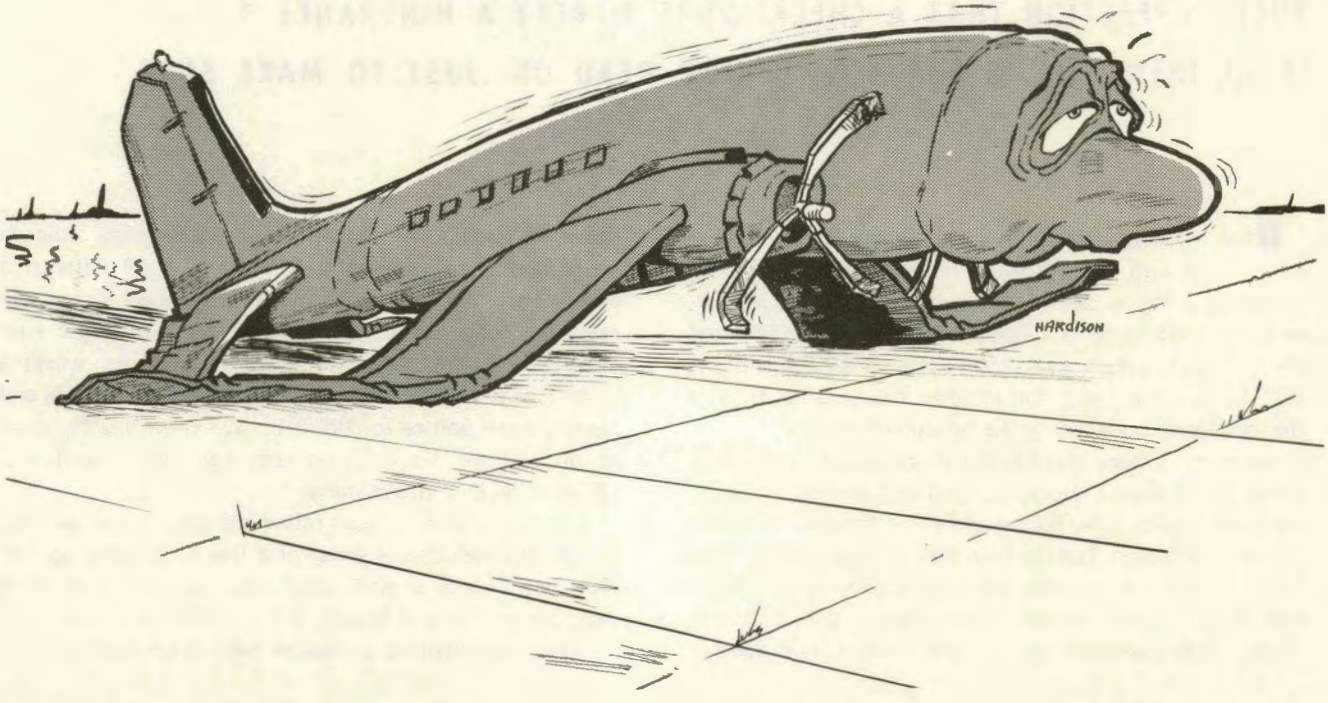
Just as I expected, Sam gently tapped my hand, advanced the power and silently took the yoke, meaning the field was not in sight. Perfect coordination. I nodded and looked up just as the field came in sight, so I gently tapped Sam's hand, cut the power and quietly took the yoke back again, meaning I had it. However before I could level off, Sam gently tapped my hand, advanced the power and silently re-retook the yoke, meaning we were in a fog bank and he was going around. I smiled understandingly, but that instant I saw the runway and as you might expect from such professionals I gently tapped Sam's hand, re-retook the yoke, cut the power and landed.

Now that I look back, this precise interplay of shifting responsibility, taking and retaking the yoke, all without a word being said was marvelous. It was a degree of coordination that even a Notre Dame backfield would be proud of.

Unfortunately, however, Sam raised the gear on the first attempted go-around and the gear was still in that very silent UP position when the props started digging up the runway noisily.

At that point I broke the silence and asked Sam what happened but Sam didn't answer. He was busy filling out the Form One and his application for retirement. Meanwhile the prop noise was music compared to the racket the wing commander was making as he jumped up and down like a maniac on the corrugated wing.

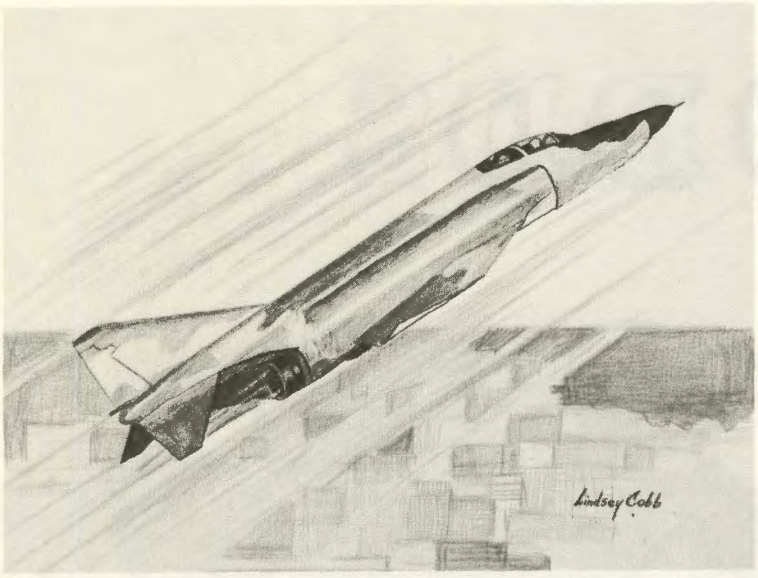
I do feel, now that it is all over, that Sam should have broken his silence at my F.E.B., but he didn't. I also feel that the verdict, "Grounded until death do us part," is legally insufficient and I shall appeal all the way up to the U.N. Meanwhile my son can yell all he wants to and if I ever see him without a checklist in his hand, reading each item one by one, even if he's riding his scooter, I shall kick him all the way from the top of his Exterior Inspection to the bottom of his Before Leaving the Aircraft and he won't be able to sit on his Post Flight for a week. Yell, boy, yell.



## TACTICAL AIR COMMAND

# AIRCREWMAN of DISTINCTION

Maj McCaffrey



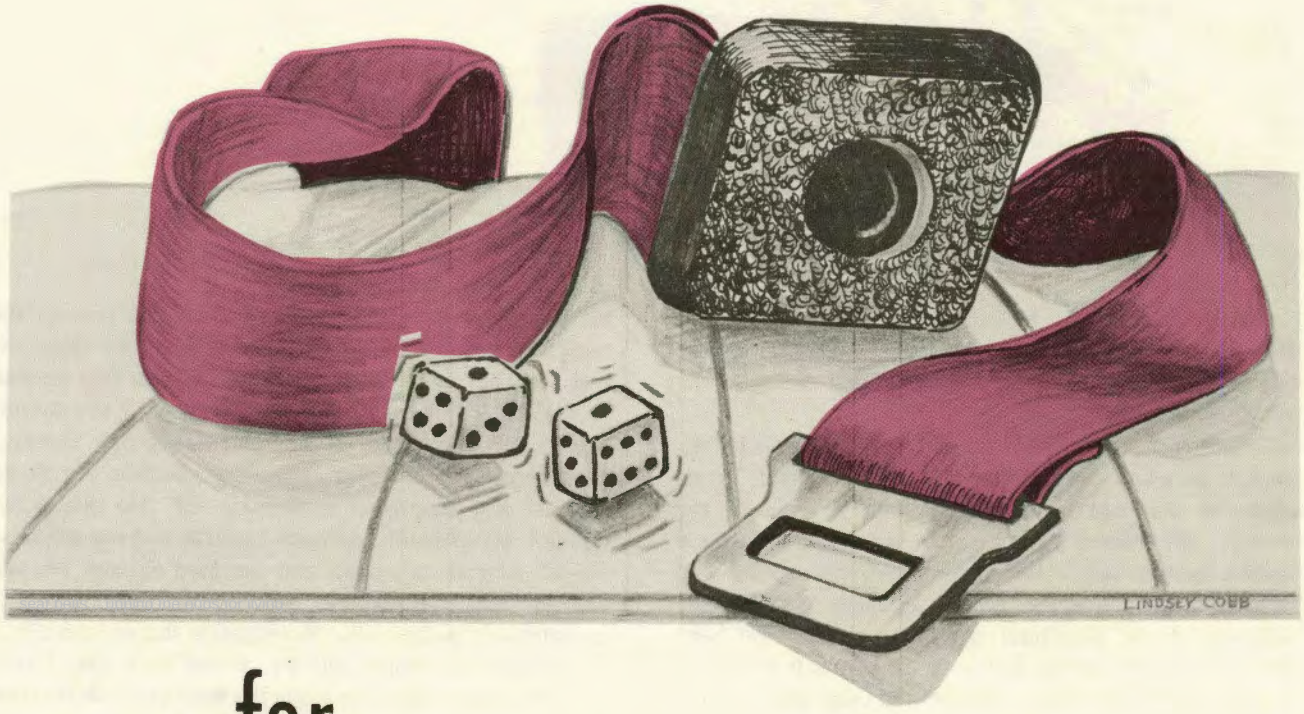

Major Bernard W. McCaffrey of the 9th Tactical Reconnaissance Squadron, Bergstrom AFB, Texas, has been selected as a Tactical Air Command Aircrewman of Distinction.

Major McCaffrey, then Captain, was flying an RF-4C aircraft on a low level flight near Matagorda Island, Texas, when he saw two large birds directly in front of the aircraft. He alerted the navigator and took immediate evasive action but a bird penetrated his canopy and destroyed the integrity of his ejection system. The violence of the parachute deployment and wind blast jerked Major McCaffrey back into his seat with sufficient force to crack his helmet, tear off the visor and housing, leave him dazed and disoriented because his oxygen mask had shifted over his eyes. Although bleeding from cuts on his back, forehead, and mouth area, Maj McCaffrey was aware the aircraft was in an upward trajectory and that he had some control of it. Despite his awkward position in the cockpit he rolled the wings level and evaluated the damage. All but the lower right side of his canopy was missing. He was unable to contact the navigator because of the high noise level, but using the rear view mirror he discovered the navigator had ejected.

Major McCaffrey elected to remain with the aircraft and quickly followed all standard emergency checklist procedures. He declared May Day situation on guard channel and squawked emergency IFF. He established contact with Austin Approach Control and requested an RF-4C aircraft to inspect the damaged aircraft. He was cleared for a straight-in landing at Bergstrom and completed it successfully. Investigation showed the pilot's parachute was missing and the shroud lines were blown into the rear cockpit and along the fuselage, with portions found around the bellows probe on the vertical stabilator. Major McCaffrey was unaware of the parachute malfunction and if he had elected to egress, would have been a certain fatality.

The demonstration of outstanding airmanship in a critical inflight situation readily qualifies Major McCaffrey as a Tactical Air Command Aircrewman of Distinction.

# SEAT BELTS ... UPPING the ODDS




# for LIVING

The debate is over. The facts are in. The experts have spoken. There is no room left for argument.

FACT: ***Seat belts DO save lives and prevent injuries.***

The National Safety Council points out that no other safety concept in the history of the automobile is backed by such careful statistics and scientific investigation. For example: A four-and-a-half-year University of Michigan study of injuries suffered in fatal accidents showed that 40 percent of the victims would have survived if they had been wearing lap belts. A diagonal shoulder belt (now standard on new cars) used with a lap would have saved another 13 percent, according to this study.

Cornell University's Automotive Crash Injury Research (ACIR) studies reveal that injuries and fatalities are 50 percent more likely for unbelted occupants of cars involved in crashes. A survey by the California Highway Patrol showed that serious or fatal injuries are reduced at least one-third by seat belts.

But in spite of the odds, most drivers and passengers resist using seat belts regularly. Surveys indicate that only about one person in three regularly buckles up, and those who do often adjust their belts improperly.

Why? Partly it's sheer laziness. Partly it's ignorance. Partly it's a matter of confusing myth with fact. Mostly it's a blind unwillingness to accept conclusive scientific evidence and documented facts. When asked point-blank why they don't regularly wear seat belts, people offer answers like these: "They wrinkle my clothes." Or, "They might get my dress dirty." Some people with morbid imaginations but little knowledge say, "A belt might trap you in a burning or submerged car." And always there's that oft-repeated gem about the driver who proves the safety odds are "way out of whack." It goes something like, "I know a guy who was in a bad accident, but because he wasn't belted in he was thrown clear and walked away with hardly a scratch."

How do the experts view these "reasons" for not wearing seat belts? First, they point out that a human body also can get very "wrinkled" if it is hurled from a car. As for dirt, regularly used seat belts rarely get soiled. If they do, they're easy to wipe clean, and an inexpensive set of retractors will help keep them that way.

Accidents involving fire and submersion? Statistically they're very rare – only a fraction of one percent. Even so, the pros, including the world's top race drivers, point out that odds for survival in such accidents are better if an occupant remains conscious. An unrestricted occupant stands more chance of being knocked out.

Last, there is that "guy" who always walks away from a wreck after being "thrown clear." He really beats the odds, because ***chances of survival are up to five times greater if one stays inside the protective sheet metal and structure of the car during the accident.***

It is true that, in some accidents, seat belts themselves – particularly when improperly adjusted – have caused bruising, usually minor but occasionally severe injuries, but the odds are that far more injuries would have resulted if the occupants had not been wearing seat belts.

It doesn't take a mental giant to figure out that the best way to avoid injury is to prevent the accident in the first place. But the hard fact is that auto accidents DO happen, and when they do there are two important factors affecting an occupant's chances. The first is ***ejection*** and the other is the ***second collision.***

Ejection is the leading cause of death in automobile accidents. In a detailed study of 48 accident victims killed by ejection, University of Michigan research scientists claimed that 38 of them – about 80 percent – probably would have survived if they had been wearing seats belts.

Which is the second collision? The first collision occurs when a car strikes an obstacle. At that moment, any loose items in the car – including unrestrained occupants – continue to move at the speed of the vehicle just prior to impact. In other words, the car suddenly stops moving but the occupants don't. They stop only when something strong gets

in their way – the dash panel, windshield, or steering column, for instance. This is the second collision.

Occupants properly restrained with seat belts (preferably combination lap/shoulder belts) become, in effect, almost part of the car. When the car stops, they stop. They will lurch forward with great force against the seat belts; they may – particularly if wearing lap belts – even slam their heads into the dash; but, if the accident doesn't occur at too high a speed, they still have a good chance of avoiding serious injury. In fact, as "part of the car," a properly restrained occupant is relieved of much of the shock and energy of his momentum through the crushing of the vehicle in the first collision. Unrestrained, he must absorb the energy of his momentum through the crushing of his own "skin and bones" in the second collision.

Other items included in the safety equipment on new American cars – energy-absorbing steering columns, improved laminated windshield glass, interior padding, and stronger door locks and hinges – also help importantly to reduce deaths and injuries from traffic accidents. But nothing prevents ejection or minimizes the dangers of the second collision within the car as effectively as seat belts.

It's important to remember, too, that many non-fatal injuries – painful, disabling, costly injuries – can also be prevented by the use of seat belts. Dr. Donald F. Huelke of the University of Michigan Highway Safety Research Institute (HSRI) states flatly, "The majority of facial, knee, and leg injuries that we've encountered could easily have been prevented if the person had been wearing a belt." Those odds again.

There are some important do's and don'ts to keep in mind about restraint systems, however. First of all, belts should be worn at all times, not just on freeways, or on trips, or at high speeds. Freeways generally are the safest places to drive; most fatal accidents occur on urban roads within 25 miles of the victim's home. And don't be misled; impact forces at lower speeds can be severe enough to cause death or serious injury. For example, a car hitting a big tree head on at 30 mph can create forces of 25 or more G's, depending on the type of car. Thus a 160-pound occupant can suddenly become a two-ton missile in search of a second collision (weight times G force).

HOW belts are worn can be as important as whether they are worn. Wear the lap belt low and snug across the pelvic area (to help prevent "submarining" which can cause spinal and abdominal injuries). Be certain the webbing is not twisted and never use the same belt for two persons.

A shoulder belt is never worn without a lap belt and should be adjusted so that the wearer can get the width of his hand between the belt and his chest. Persons shorter than 4'7" should wear lap belts only, because a shoulder belt could increase the risk of a throat injury. >

from: American Youth Magazine

# TAC Outstanding Flight Safety Officer

Maj Wallace

Major Donald M. Wallace of the 23d Tactical Fighter Wing, McConnell Air Force Base, Kansas, has been selected as the Tactical Air Command Outstanding Flight Safety Officer for the six-month period ending 30 June 1971. Major Wallace's management of the flight safety program has resulted in a zero accident rate for the past year and an extremely low incident rate. Major Wallace also developed and implemented an effective Wing Flying Safety Plan, rewrote and combined the Pre-Accident Plan with the Base Disaster Preparedness Plan, conducted a self-survey, and established a system for writing and disseminating Safety Briefs. For his contribution to safety Major Wallace will receive a letter of appreciation from the Commander of Tactical Air Command and an engraved plaque.

# TAC TIPS ...interest items, mishaps

## The USAF Hazard Reporting System

**The Air Force has a brand new regulation for reporting hazards (AFR 127-6, 30 July 1971) . . . not just operational hazards (formerly OHR's) but hazards in all functions including: flight, ground, explosive, missile and space, and nuclear safety. In combining all hazard reporting under one regulation (a good move) the following regs have been superseded: AFR 127-6, 20 Aug 68; 127-301, 10 May 65; and para 6-11, AFM 122-1, 11 Jul 69. The old OHR Form (AF Form 457) is being revised to accommodate reporting in all safety functional areas.**

**What does this mean to you? Basically it guarantees that all hazards, including ground safety hazards, will be investigated and action taken, if necessary, and the result reported to the originator (you). It means that your voice can now be heard across the spectrum of safety deficiencies.**

**But . . . it can only be as good as you make it. It all hinges on you . . . you must take the first, all important step to identify the hazard by reporting it.**

**The hazard reporting system can be an effective and streamlined accident prevention tool . . . make it work!**

## Judgment

Unless in the judgment of the pilot a greater emergency exists . . . A C-130 crew on an overwater mission had to shut down number three because of a generator malfunction (no generator disconnect). Ten minutes later number four generator out light came on. All the correct procedures failed to coax the generator back to life so number four engine was shut down. Twenty-five miles out from destination the aircraft commander started up number four engine and made an uneventful three engine landing. Thought the pilot — better three than two.

## A Stern Admonishment Circa WWI

(Stolen from 13AF)

"Hereafter, pilots must refrain from hopping their planes on landing like birds from place to place. They will place their tires firmly on the ground and make them run smoothly, and without taking off again to a landing straight ahead."

# with morals, for the TAC aircrewman

## Rollback ... or not?

An F-111 was struck by lightning as it passed thru 12,000 climbing. The crew had first noticed St Elmo's fire doing its thing around the pitot boom . . . then a bright flash and the right engine rolled back to 68 percent . . . or did it? No appreciable thrust change was felt and the rpm recovery rate was much faster than normal engine acceleration. The thought is that maybe the lightning strike created a momentary electrical disturbance that caused the rpm indications.

## Busted Standard

An OV-10 instructor pilot while demonstrating an alternate engine shutdown procedure (on the ground) was rewarded for his nonstandard efforts by an engine fire. Normal shutdown procedure is to place the engine condition lever in fuel shutoff. The technique used was to pull the fire light handle with the condition lever in normal flight and power lever in ground start. Twenty seconds later the engine flamed out then the condition lever was placed in fuel shutoff and the power lever in full reverse. Fire and smoke began coming from the engine. Seems like when the fire light handle is pulled fuel is shutoff at the firewall and the fuel pump continues to cavitate the main fuel line until pressure is insufficient to sustain normal combustion. Fuel then bleeds into the burner cans and is ignited due to residual heat . . . fire and smoke abound . . . but if you shut it down right you don't get a lite . . . when all else fails . . . try the book.

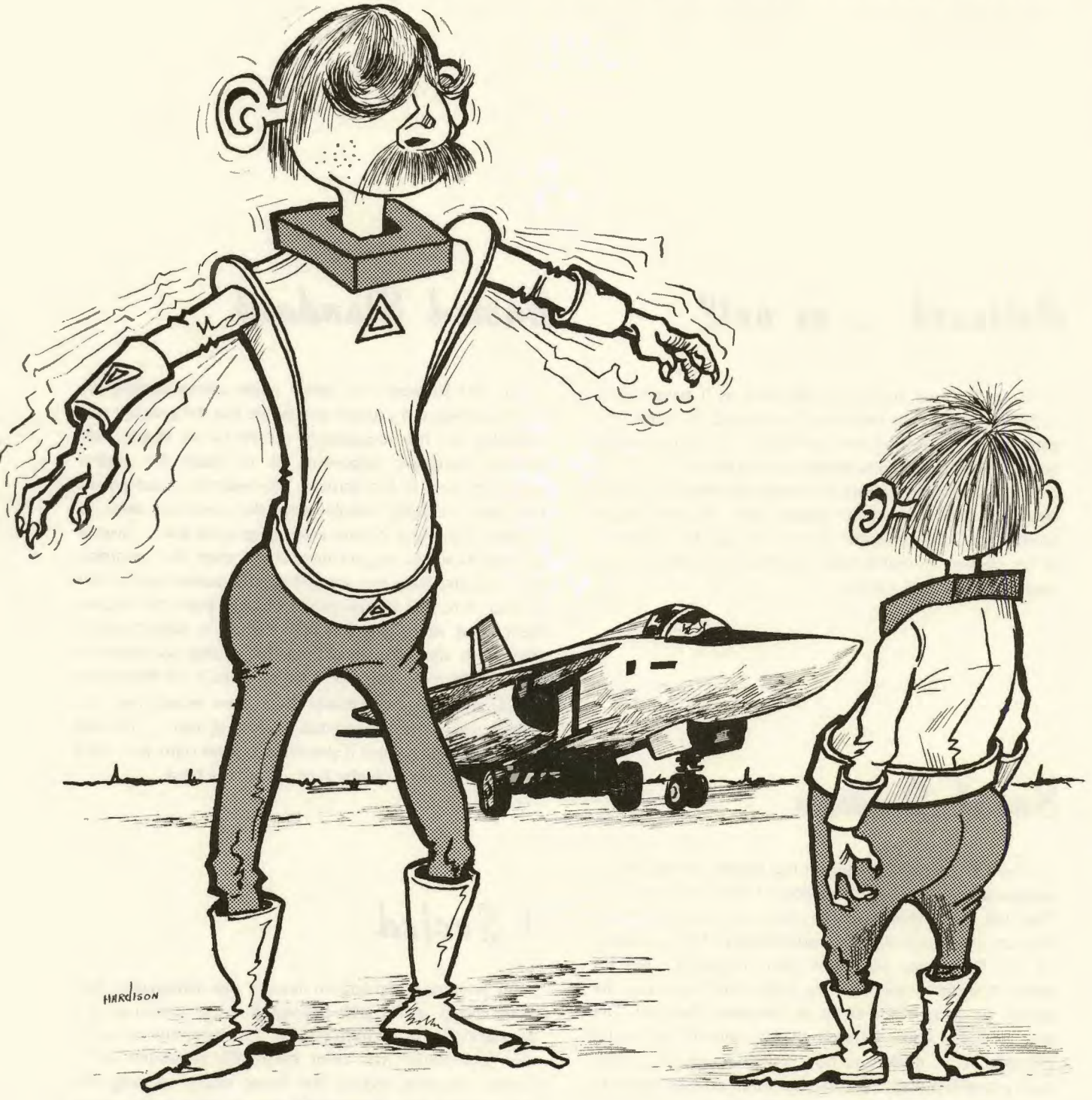
## Sneak Preview

The stifling heat of August has passed (except for an occasional visit) and the balminess of early fall is upon us. The cold fronts that approach now mean something more than an increase in thunderstorm activity. The cool winds of late September announce what is just around the seasonal corner – winter. Now is the time to prepare for winter by doing such things as reviewing the Dash One and thinking back through several winters about the mistakes we've made and how a little preplanning could have prevented them. The winterization process begins by jarring the think bone into active vibrations.

## I Goofed

In another command an aircraft was damaged by hail while flying at FL 310 beneath the top overhang of a thunderstorm (a definite no-no). The corrective action is very interesting: The pilot personally presented an "I goofed" briefing during the flying safety meeting. An embarrassing (but successful?) way to get a point across.

# ZARK and TINK



# LOOK AT THE F-111

Once a month the dimensional orbits of two worlds coincide for a short time during which citizens from that other world can look down upon us and enlighten us with their observations. Two such observers, Zark and his son Tink, are consumed with interest about TAC, its people, its machinery, its mission. TAC ATTACK is the sole repository of these observations and we begrudgingly pass them on to you. We join them now . . .

• • •

"Daddy, what is that?"

"Tink, m'boy, that is an F-111."

"Is that what they call a fighter," said Tink with obvious excitement.

"Well . . . it's a fighter-bomber."

"Humm," said Tink confused, "does that mean it fights bombers."

"No . . . I mean yes it could . . . but fighter-bomber means that it can be used as either a fighter or a bomber."

"Oh, I see," said Tink not seeing, "who decides which one it will be?"

"Good question," Zark replied fatherly, "very good question . . . what's your next question?"

"Where are the wings, Dad, I don't see any wings."

"They're in full sweep, son, you see, it's called a variable geometry wing."

"Oh yeah, I know that; you mean like a moveable hypotenuse."

"Uh . . ." said Zark pausing then standing up and gesturing with his arms, "they move like this . ."

"Oh, I see, you mean up and down like a bird."

"No, no," said Zark gesturing more vigorously, "not like a bird . . . like this."

"I've got it now . . they go around and around like a helicopter," said Tink.

"No, no, no," Zark shouted now flailing his arms about wildly, "like this, like this."

"I see it, I see it now, . . . back and forth . . . like a frog."

"A frog! . . . a frog!" shouted Zark stopping in mid-movement then wearily dropping his hands to his side, "a frog," he murmured.

"Uh . . . Dad," said Tink meekly, "what's that thing the pilot has in his hand?"

"That's called a stick, son," said Zark regaining his breath.

"I've heard of that," said Tink, "it's connected to some things on the wings and tail to make the airplane go up and down and turn."

"Son, that is essentially correct but not technically accurate. The stick is actually hooked to some springs and bungee's and potentiometers and stuff like that."

"Springs?"

"Yes."

"Bungee's?"

"Yes."

"Potentiometers?"

"Yes, son, yes."

"Is a bungee like an elevator?"

"No, Tink, not like an elevator."

"I don't understand, Dad, just what does the stick do?"

"It moves all that stuff I told you about. Then all that mass of mess does something else and the flight controls move," Zark paused for a moment then added, "I hope I'm not being too technical; are you getting any of this, boy?"

"I think I understand," said Tink understandingly, "is that all the stick does . . . just move all those gadgets around?"

"No, of course not; it's also used as a pump handle."

"Pump handle? C'mon Dad you're fooling," said Tink with a big grin.

"No fooling, Tink, a pump handle . . . it's used to pump up the air bags."

"Do the air bags make it stay up in the air?"

"Eh - - what's that . . . no, son, the engines and wings do that. The air bags are used if it doesn't stay up in the air. They keep the crew module afloat . . . among other things."

"Now I understand; now I see how that phrase I've heard of before came about."

"What phrase is that, Tink?"

"Y'know, you've heard it . . . pumping the stick."

Zark's groan was clearly audible as he said, "Tink?"

"Yes, Dad."

"Your mother is calling."

→

DINGO: "DINGBAT TOWER, THIS IS DINGO-1."

TOWER: "DINGO-1, DINGBAT TOWER."

DINGO: "AH-ROGER-AH, WE'RE DOWN OVER THE RIVER HERE AT ABOUT AH--- 040, AH I SAY AGAIN, ON THE 230 AT ELEVEN HERE, AH----WE JUST HAD A CONTACT WITH A LIGHT AIRCRAFT HERE."

TOWER: "UNDERSTAND YOUR POSITION IS 230 AT ELEVEN MILES."

DINGO: "IT WAS ABOUT AH – AH – A FEW MINUTES AGO HERE AND HE SEEMS TO BE FLYING OK, BUT AH – WE CAUGHT HIM ON THE EDGE OF OUR WING TIP AND LOOKS LIKE ON THE EDGE OF HIS WING TIP----- AND HE APPEARS TO BE TURNING BACK TOWARD BASE. WE JUST LOST SIGHT OF HIM HERE, AND HE WAS FLYING OK."

TOWER: "ROGER AH – DINGO, WHAT IS YOUR CONDITION, YOU OK?"

DINGO: "AH, THAT'S AFFIRMATIVE, WE HAVE A SKIN TEAR IN THE INBOARD OF THE LEFT TIP ABOUT TWO AND A HALF FEET, AND THAT'S ALL APPEARS TO BE THE ONLY DAMAGE, WE HAVE FULL CONTROL."

TOWER: "UNDERSTAND YOU HAVE RIPPED SOME SKIN OFF THE AIRCRAFT, ARE YOU DECLARING AN EMERGENCY AT THIS TIME?"

DINGO: "AH, THAT'S AFFIRMATIVE, WE'LL . . . GO AHEAD AND DECLARE AN EMERGENCY."

TOWER: "OK, DECLARING AN EMERGENCY AT THIS TIME. AH LANDING RUNWAY 17 ALTIMETER 29.90, WINDS ARE 270 DEGREES AT 4, REPORT STRAIGHT IN RUNWAY 17 IF POSSIBLE OVER."

# MID
# MIDAI

DINGO: "AH ROGER, WE'RE TRYING TO KEEP AN EYE ON THIS OTHER AIRCRAFT HERE FIRST, AND HE'S TURNED AROUND NOW AND APPEARS TO BE FLYING TOWARDS LEGHORN POINT."

TOWER: "OK, AND HE'S HEADED TOWARDS LEGHORN POINT AT PRESENT TIME, AND WHAT IS YOUR POSITION RIGHT NOW SO RADAR TO MARK IT ON THE SCOPE, OVER."

DINGO: "AH ROGER WE HAVE A DEAD PARROT, BUT WE ARE DIRECTLY OVER AH ABOUT 2½ MILES NORTH OF LEGHORN POINT, AT THE PRESENT TIME."

TOWER: "2½ MILES NORTH OF LEGHORN POINT AT THE PRESENT TIME, THANK YOU."

# DAIR !

# R !

(CONTINUED Pg 18)

# MIDAIR ...

DINGO: "AND WE HAVE ENOUGH FUEL. WE'RE GOING TO STICK WITH HIM A FEW SECONDS AND SEE WHAT HE'S DOING, AND THEN WE'RE GOING UP ON COMMAND POST FREQUENCY."

4567T: ''MAYDAY MAYDAY – EMERGENCY – SOMEBODY ANSWER PLEASE."

TOWER: "AIRCRAFT ON 121.5 DINGBAT TOWER CAN I HELP YOU."

4567T: "YEAH, MAYDAY, AH . . TOWER . . I JUST GOT HIT BY A DAMN FOOL JET . . . HAVIN' A HELL OF A TIME KEEPING THE WINGS LEVEL . . . GONNA HAVE TO PUT HER DOWN."

TOWER: "4567T WHAT IS YOUR POSITION?"

4567T: "GARBLED . . AH . . . SAW THIS AIRPLANE IN A RIGHT TURN AND THEN HE TURNED TO THE LEFT AND CAME RIGHT AT ME . . . "

TOWER: "COPY ALL THAT 67 TANGO, WHAT IS YOUR POSITION . . OVER."

4567T: "AH . . . POSITION . . . COAST . . . CLOSE TO THE WATER . . . . HAVIN' A TOUGH TIME KEEPIN THE RIGHT WING UP . . . DON'T UNDERSTAND IT, I WAS UNDER RADAR CONTACT . . . AH . . ."

DINGO: "DINGBAT TOWER, HOW DO YOU READ DINGO?"

TOWER: "DINGO, LOUD AND CLEAR, HOW ME?"

DINGO: "AH, ROGER, AND THAT GUY TOOK IT OVER AND AH, IS AH, IT LOOKS LIKE HE IS A SEA PLANE AH, I TAKE THAT BACK HE'S AH, AH HE'S DITCHING THAT THING ON THE EDGE DOWN THERE, JUST AT LEGHORN POINT."

TOWER: ''UNDERSTAND HE'S DITCHING THE AIRCRAFT AT LEGHORN POINT ON THE BEACH."

DINGO: "ROGER, HE HAS DITCHED, HE'S ON THE EDGE OF A SAND BAR."

TOWER: "ROGER, ARE YOU HAVING ANY CONTROL PROBLEMS?"

DINGO: ''NO I'M NOT HAVING ANY CONTROL PROBLEMS, NEGATIVE. PERSONNEL ARE GETTING OUT OF THE OTHER AIRCRAFT ON THE SAND BAR NOW."

4567T: "AH . . . TOWER I'M DOWN. HAD TO PUT IN THE BAY OUT HERE ON A SAND BAR, I DIDN'T HURT ANYBODY . . . EVERYBODY'S ALL RIGHT."

TOWER: "ROGER."

4567T: "SEE IF YOU CAN GET SOMEBODY TO HELP US OFF THIS BAR WILL YOU."

TOWER: "A HELICOPTER IS ON ITS WAY, SIR."

TOWER: "DINGO, DO YOU REQUIRE A HELICOPTER?"

DINGO: "AH YOU MAY AS WELL HAVE ONE STANDING BY UNLESS HE'S TIED UP PICKING UP THOSE PEOPLE BUT IT LOOKS LIKE SOMEONE IS GOING OUT TO GET THEM ALREADY WITH A BOAT."

TOWER: "ROGER DINGO, WE HAVE CONTACT WITH THE LIGHT CIVILIAN AIRCRAFT ON THE SAND BAR AND EVERYONE IS OK ON THE AIRCRAFT."

DINGO: "AH, THANK YOU."

TOWER: "THE HELICOPTER IS STANDING BY HERE."

DINGO: "AND TOWER THIS IS DINGO WE HAVE CHECKED THE AIRCRAFT OUT FOR CONTROL ABILITY AND IT CHECKS GOOD THROUGH ALL RANGES THERE SHOULD BE NO PROBLEM... WE'LL MAKE A DESCENDING TURN WITH OUR GEAR AND FLAPS DOWN AND COMING AROUND FOR A STRAIGHT IN."

IT IS BELIEVED THAT THE COLLISION COULD ONLY HAVE BEEN PREVENTED BY PROPER CLEARING BY EITHER OF THE SUBJECT AIRCRAFT AS THEY APPROACHED ON A COLLISION COURSE.

*This accident was caused by a failure of the pilots in both the military aircraft and the civilian aircraft to observe the see and avoid principle. The military pilot did not see the light aircraft until it was too late to do anything about it. The light aircraft pilot saw the military aircraft but took no evasive action.*

*The military aircraft was returning to home base after a simulated ground attack mission. The IFF was dead. Initially the aircraft rolled out on a heading about 15 degrees too far to the right. A shallow bank to the left was established to get on the correct heading. Shortly after, the windscreen became filled with an object. Left aileron and back stick were applied then the collision occurred.*

*The civil aircraft was on a VFR flight at hemispheric altitudes under radio and radar contact with the center for flight following. It is believed that the light aircraft pilot's confidence in radar advisories and a VFR hemispheric altitude for traffic separation discouraged proper clearing and evasive action at a time when it would have prevented the accident.*

Each year the total numbers of aircraft occupying the airspace in which we earn our bread and butter increase . . . and into that horde we plunge.

Some of us are complacent enough to think that because we're on an IFR clearance we're protected. Not true . . . you may have separation from other IFR traffic but no separation is provided from VFR traffic. FAR 91.67 Right-of-way rules states: "When weather conditions permit, regardless of whether an operation is conducted under Instrument Flight Rules or Visual Flight Rules, vigilance shall be maintained by each person operating an aircraft so as to see and avoid other aircraft . . ."

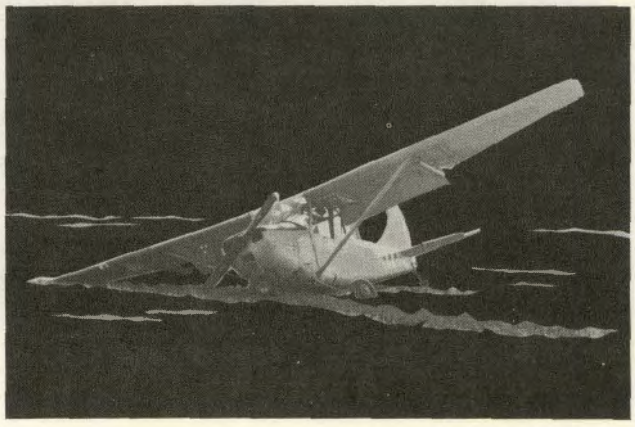
Since the Near Midair Collision Report of 1968 was published some changes have been put into effect to reduce the possibility of midairs. The 250 kt speed limit below 10,000 feet MSL is an example. Another example is the Phase I, II, and III terminal radar service that has been put into effect at many air traffic hubs. (See Flip)

Electronic devices for detection of other aircraft are being developed but a practical all-encompassing application of these devices is still down the road.

What about you and me? What can we do to prevent midairs? The quote from the Near Midair Collision Report of 1968, "A hazardous near midair collision is largely the result of (1) failure to observe good operating practices due to a lack of knowledge of the airspace environment, . . ."

Therein lies part of the answer . . . an adequate knowledge of the airspace environment in which we operate. Know the rules, follow them, and keep one thought continuously on the surface: the present most effective means to avoid a near midair collision is constant vigilance on the part of all pilots at all times under all circumstances.

It still rests squarely on the pilot's shoulders. →



# Fire, Fire..

It was a small thing . . . the field jacket that was hung on a wall hook with the sleeve dangling loosely between the door and the door jamb.

It was a small thing . . . the mechanic was allowed to perform a task (albeit simple) for which he had never been trained.

It was a small thing . . . the mo-gas trailer was not defueled prior to maintenance being performed.

It was a small thing . . . the paint residue and the compressor seal joined forces to hold a cap in place long enough for the mechanic to walk away.

Just a collection of small things, but add them all together and they spell . . .

The fire seemed to come from everywhere at once.

Moments before the mechanic had finished removing a part from one refueling trailer and had reinstalled it on another. He put away his tools and went to get a drink of water. A popping noise behind him caused him to turn around . . . raw fuel was gushing out of the trailer that he had just worked . . . the one he had removed the part from. He ran to get his supervisor who was working on a unit outside the building. Seconds after he and the supervisor entered the building the fire broke out.

But let's go back to the beginning . . .

There were three refueling MS-1 trailers parked inside refueling maintenance building, two had been defueled, one had not. One contained about 4000 gallons of 115/145 AV-gas.

The mechanic reported for work in the early afternoon having spent the morning at a scheduled parade.

After discussion with the acting shop chief the mechanic removed the yoke on the line strainer of one of the MS-1 trailers and put it on another one. (A task he had never done before.) He did not know that the unit from which he had removed the yoke contained fuel. Normally when the yoke is removed there would be nothing to hold the line cap in place and the force of the fuel would pop the cap and fuel would begin to flow immediately. However, in this case the cap was held in place by paint residue and the compressed cap seal.

The job was finished in five to ten minutes and the mechanic walked away. During this time the weight of the fuel acting against the cap freed it from its tenuous hold with a loud pop and fuel started gushing from the trailer in a steady stream. Just as the two airmen ran into the building the fuel vapors were ignited from an unknown source. Both men were engulfed in flames but managed to make their way outside and extinguish their clothing by rolling on the ground.

That unknown ignition source could have been the gas-fired heater in the office of the building. The office was separated from the work area by a door which was closed – but not completely. A field jacket sleeve was wedged between the door and the door jamb and created enough of an opening for the fuel vapors to leak through and come into contact with the gas-fired heater.

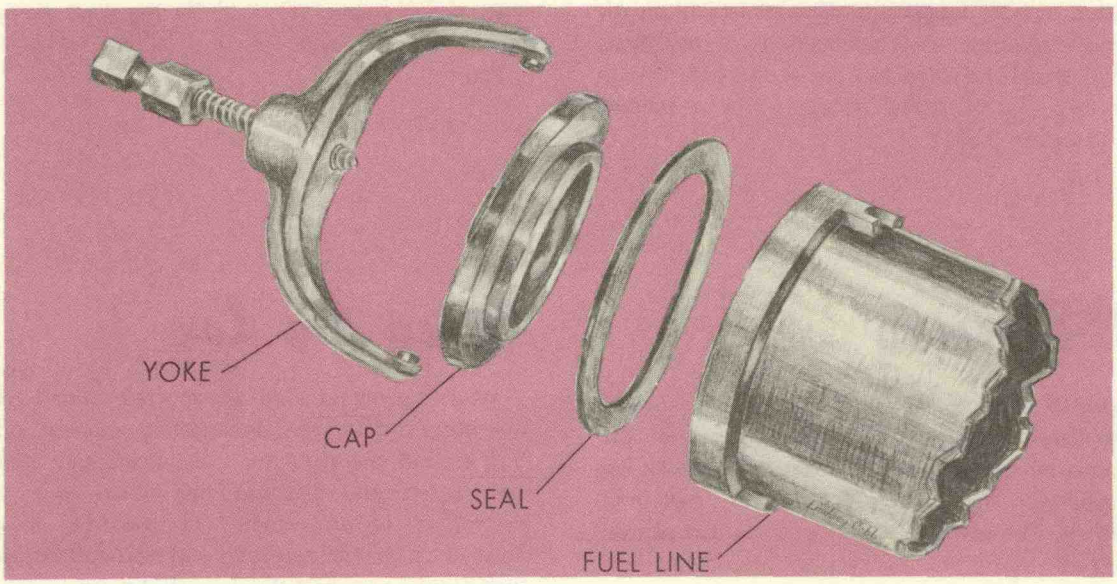
The fire department was on the scene within minutes and extinguished the flames . . . but not before over $40,000 worth of damage had been done and two men were writhing in agony.

The cause factors were:

- Failure to drain and purge the trailer.
- The supervisor erroneously assumed that the trailer had been prepared for maintenance and that the mechanic was qualified to perform the task.
- The mechanic did not understand the hazards involved in removing the yoke even though these same hazards exist on other refueling trailers.

It was just a collection of small things . . .

Have you neglected any of the "small things" in your shop lately?



# CHOCK TALK ...incidents and incidentals

chock talk

## Torque and G

The F-4 departed number three in a four ship for ACM tactics. During the second ACM engagement 7.2 G was registered. After recovery and while straight and level a loud thump was heard. A quick scan of the instruments didn't provide any clues and the machine was handling OK but the pilot decided to write up that unexplained thump. (Good decision!) The maintenance folks found that the engine (didn't say which one) had dropped about two inches into the engine bay. Further investigation brought out that maintenance error led to improper engine installation (suspected). Seems like the torque wrench was either lost, not used, or used improperly resulting in an improper torque value being applied on the skate mount. Add to this the G value of 7.2 and the formula was complete that resulted in this incident.

NOTE: In light of the caution in the Dash One that states, "Since aircraft fatigue life depends largely on the number and magnitude of G applications, accelerations above 6.5 G should be used only as necessary in mission performance" – is it really necessary, in a training situation, to exceed 6.5 G?

## Sightless Window

The copilot lowered the gear handle and seconds later the familiar thunk, thunk, . . . oops . . . the nose gear on the C-130 didn't come down. The crew went through the Dash One emergency procedures to get the nose gear down. A visual check through the nose gear observation window was attempted in order to confirm the gear position . . . no luck . . . the window was so dirty that an observation was impossible. However, a crash axe adjustment on the window eliminated the problem . . . and the window . . . an expensive way to clean the window. This unit has submitted an AFTO Form 22 to make "cleaning the window" a Dash Six preflight item. In the interim, a local work card change will carry this item . . . Sounds like a good procedure . . . How about your unit? - - - - - By the way, the nose gear did come down and the bird landed without further difficulty.

## A-7 Steering

At about 35 knots on landing the A-7 jock engaged nose wheel steering. The nose swung abruptly to the left. A foot dance on the brakes followed along with turning off the generator switch to positively disengage nose wheel steering. The machine was stopped on the runway then towed off. Suspected cause was an internal failure of the nose gear steering amplifier. This unit feels, based upon past experience, that an accelerated study is in order to resolve deficiencies in the system.

## Foxed By Lox

While taxiing in after an aborted takeoff the F-104 jock noticed liquid oxygen squirting up about four inches high around the regulator. He immediately clamped on the binders and attacked the on/off lever with his screwdriver in an attempt to turn off the supply. However, it was frozen solid and wouldn't budge, so the pilot did the next best thing . . . shut down the engine and quickly egressed. Maintenance found the culprit to be a malfunction in the emergency lever of the regulator.

# with a maintenance slant.

## Bent Boom

It was a race that ended in a dead heat. The fuel truck was parked alongside the KC-97. The brakes were set and a chock was placed between the wheels. As the power takeoff was engaged and the unit started pumping it also started moving . . . toward the aircraft. The refueling technician observed the chock squirt out from between the wheels of the truck. He then jumped into the truck and applied the emergency brake (which was already applied). He stepped on the other brake, but alas, his foot slipped off and the engine died wiping out his power steering. The crew chief, sensing that all was not well, grabbed a chock and threw it between the tires. The truck stopped . . . just as it hit the boom. The emergency brakes on the truck had failed, or to be more correct, they were not operating. The vehicle was improperly chocked . . . no clear path for emergency evacuation was provided.

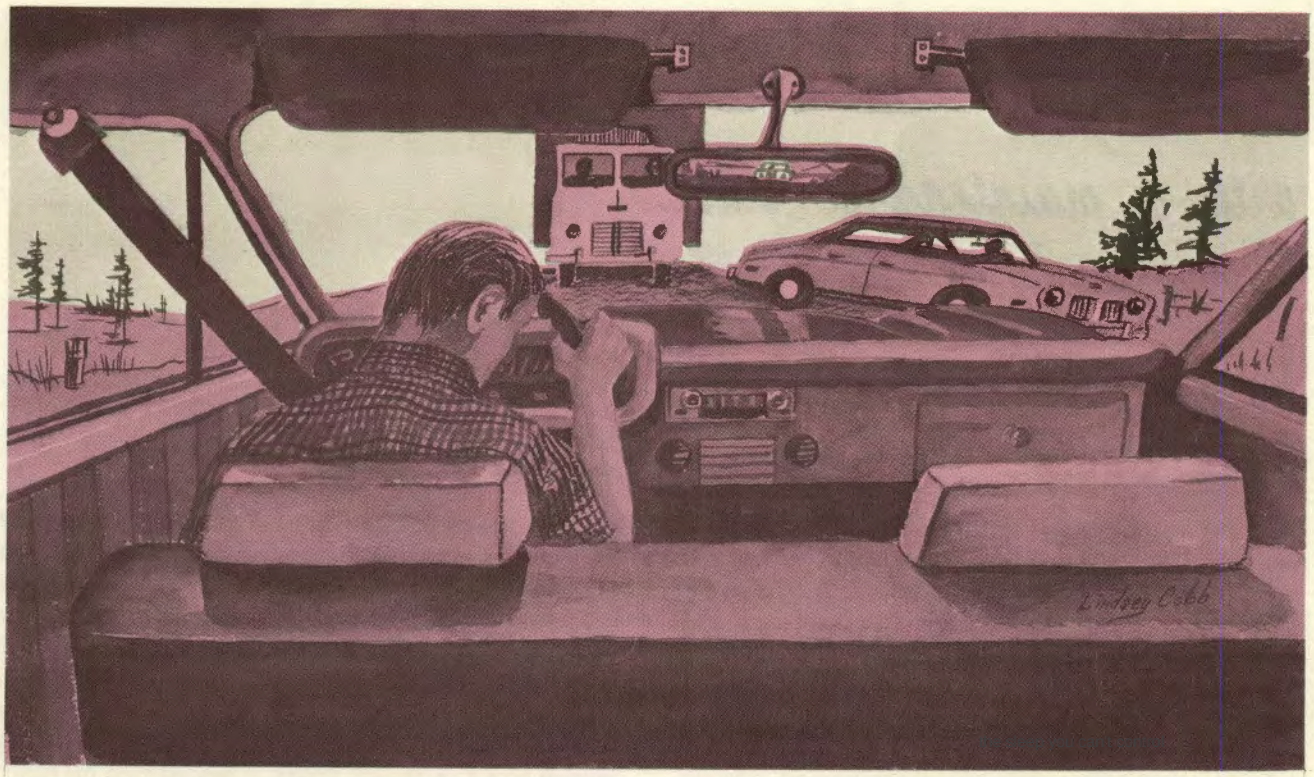
## Looped Goon

While taxiing out for takeoff in a C-47 at normal speed the right brake went into temporary insanity and caused the trusted Goon to veer sharply right. Full left brake and full power on the right engine merely diminished the rate of turn to the right. By this time the airplane had departed the taxi surface and was heading smartly for a vehicular road sign. Rather than hit the sign with a prop or the fuselage the jock applied hard right brake and came in with power on the left engine to ground loop the beast. (Wise decision.) As the Goon looped the tail cone struck the sign and was slightly damaged . . . here's the kicker . . . maintenance found problems in the brakes that related to insufficient and incorrect tech data. How many years has the Goon been around . . . and the tech data is still insufficient? Wonder how many Form 22's were never submitted on this system because of one reason or other??

## Who's Bombed?

The F-4 was loaded with its full complement of practice bombs. However, over the range during the ordance check one of the bombs was discovered missing. The mission was aborted and the aircraft went home. Checks were made to determine if the impulse cartridge had been fired. It had not. The point at which the bomb left the aircraft could not be determined. What could be determined was that the load crew did not load the bomb correctly . . . and it didn't kill anyone . . . this time.

**With regret, the staff of TAC ATTACK bid farewell to TSgt John Miller, the man, who in large part, has been responsible for the layout for TAC ATTACK for the past three years. His wide range of talents (the cover of this issue is just one example) will be missed. The folks at Mountain Home are getting one hell of a troop.**



# NARCOLEPSY

## —the sleep you can't control

SLEEPING SICKNESS is usually thought of as a tropical disease alien to the United States.

Even during the 1933 epidemic of so-called sleeping sickness in St. Louis, there was little alarm. Caused by a virus instead of a parasite, this uncommon outbreak occurred only in the warm months and mostly in the Mid and Far West.

But there's another kind of sleeping sickness abroad in the United States right now, enduring all seasons, and it's not carried by an insect. Sufferers are not confined to their beds; they may be walking beside you, sitting next to you in the theater, or even driving the car you're riding in.

The mystery crash is the enigma of traffic accident prevention — listed in official reports as "ran off roadway with no apparent cause." Many of these motorists had been drinking, many were distracted, many lost control for a variety of undetermined reasons, but a disturbingly large number are now thought to be the

victims of a peculiar kind of sleeping sickness called narcolepsy.

## STALKS THE HIGHWAYS

A strange but fortunately uncommon illness, narcolepsy nevertheless stalks our highways and causes an untold number of deaths and injuries each year. Because physicians are not alert to the condition and the population at large is virtually unaware of its existence, no one knows how many highway accidents have been caused by this sickness.

In a recent year there were 236 deaths reported on the nation's turnpikes. Of these, 36 (15 percent) were blamed on the driver being "drowsy or sleepy." How many of them had narcolepsy is unknown, but any stretch of uninterrupted driving can cause an overwhelming demand for the narcoleptic to shut his eyes.

In a study of 100 narcoleptic drivers by neurologists Robert E. Yoss and David D. Daly, only two claimed that their condition presented no problem in driving. Seventeen had come close to having accidents, 14 had been involved in from one to six accidents and the others acknowledged that their driving was seriously affected by their sleepiness.

Yoss and Daly described the experience of a 33-year-old housewife who said she would fall asleep and awaken to find herself on the wrong side of the road, off on the shoulder, or narrowly missing parked cars. Her children were accustomed to waking her up when the traffic light turned green. She tried taking naps ahead of time, napping alongside the road, singing and slapping herself – all to no avail.

The American Medical Association estimates that from 400,000 to 600,000 Americans have the condition. Although narcolepsy is not uniformly present in all age groups, it can be presumed to affect some 200,000 to 300,000 motorists, since more than half of the population are licensed drivers.

Narcolepsy was first noted by a French doctor named Caffe in 1862. But it wasn't until 18 years later that another French physician, Dr. Gelineau, recognized the same symptoms in one of his patients and named the new disease narcolepsy. He described it as a "little-known neurosis characterized by an imperative need to sleep, of sudden onset and short duration, recurring at more or less close intervals."

These frequent and uncontrollable "cat naps" at any time of the day without being caused by fatigue are the principal symptom of narcolepsy. Most mystifying are sufferers who fall asleep while the dentist is drilling their teeth.

Secondary symptoms occur in some cases:

***Sleep paralysis*** – following a terrifying dream the victim may awake to full consciousness but be unable to move a muscle for 15 to 20 minutes.

***Catalepsy*** – the person can be placed in any position while he is wide awake but will be unable to move.

***Cataplexy*** – following strong emotional stress, usually laughter but sometimes fright or anger, the victim becomes unable to move his extremities. This condition may last from seconds to minutes while he is fully conscious.

***Visual hallucinations*** – these effects may occur just after the victim awakens. The experience is invariably unpleasant and may be terrifying.

The narcolepsy sufferer can come to recognize these symptoms and the conditions inducing them, but there may be an insidious change in his body chemistry that he cannot recognize without medical help. He may develop a condition in which his blood sugar drops after he eats food containing glucose. If this goes undetected he may develop diabetes.

One investigator theorizes that narcolepsy will pose an increasing problem as the sugar consumption of the country continues to rise.

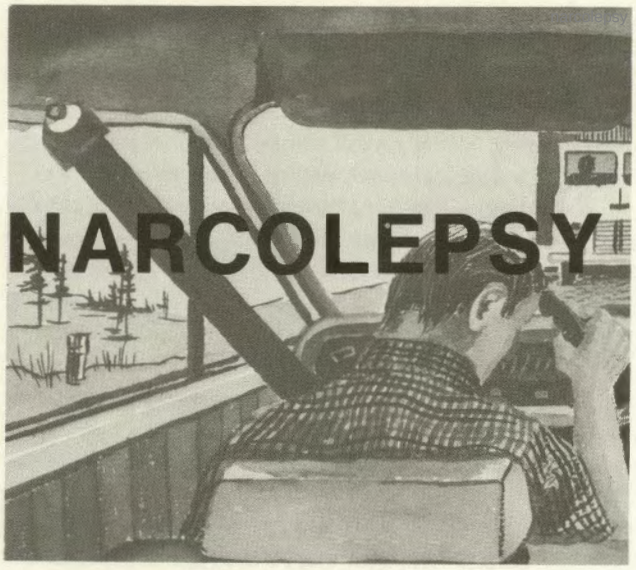
Not everyone who gets sleepy during the day is a narcoleptic. Many overweight people experience a daytime drowsiness called the "Pickwick syndrome," named for the fat boy in the Dickens story. Exhaustion can also induce sleep at any time – for example, sailors have been known to sleep on deck beside booming cannons during long battles.

The onset of narcoleptic sleeping episodes differs markedly from that of normal sleep. A narcoleptic may be awake one moment – then suddenly his eyelids shut tight as if he'd pulled a shade over his eyes. Driving at 60 m p h and knowing the risk of falling asleep, he may make a herculean effort to force his eyelids open. But he is helpless to resist.

He may drive for a few seconds, then suddenly awaken to the terrifying realization that he's been driving completely blind. If the car was traveling 60 m p h and the driver closed his eyes for five seconds, he would have driven 440 feet asleep. A slight twist of the wheel or a turn in the road could swerve the car into the opposite traffic lane, over a precipice, or into a tree.

## BASIC CAUSE UNKNOWN

What causes this mysterious disease? Is there any cure for it? How can we tell if we or those we drive with have it? Medical science is just beginning to learn the answers to some of these questions. The basis cause is still




unknown, although lack of oxygen in the brain may be involved. There also appears to be a hereditary association. The disease is not fatal, it carries no threat of malignancy, and there is no clear-cut proof that it may develop into a more serious nervous disorder. As yet no precipitating event in the victim's life such as a blow to the head or an infectious disease is suspected as a cause.

One bright spot is that once diagnosed, the sleepiness is easily controlled with medication. The drugs are inexpensive and effective. While it seems unlikely that narcolepsy can ever be cured in the true sense of the word, its most dangerous effect, sleepiness, can be prevented.

Since the most obvious symptom of narcolepsy is sleepiness, a condition experienced by everyone in varying degrees, it is often difficult to identify narcolepsy victims. Many narcoleptics unwittingly pass off their after-meal cat naps good humoredly as a penalty of old age, overeating or drinking.

How can the disease be recognized? Be suspicious when an uncontrollable urge to fall asleep occurs when it shouldn't – as in the morning after a good night's sleep. If you must take regular cat naps throughout the day, or if driving makes you sleepier than it does most other people, beware. If in addition, you experience leg cramps in bed or have symptoms of catalepsy or cataplexy, consult your doctor. He can often diagnose your case from the history you give him and prescribe treatment before serious complications occur – diabetes or death to you and others on the highway.

Narcolepsy is so uncommon, however, that physicians are prone to miss it. In a study recently published by a medical journal, not a single case of the 105 studies was at first diagnosed correctly. One physician recently published a warning, unfortunately in an obscure medical journal, that doctors should be on the lookout for narcolepsy victims to help reduce the tragic consequences of the disease. If doctors so easily miss this diagnosis, how much more easily will the layman fail to recognize the condition – even in himself?

Traffic accidents are the greatest danger to which the narcoleptic exposes himself and others, but recognition and treatment can also bring about a major improvement in the sufferer's total life. Unable to stay awake, narcoleptics are known to do poorly in school and many drop out because they can't compete with their alert classmates. Often they find it difficult to hold a job. A young girl who continually fell asleep at her typewriter finally went to her doctor for help. A diagnosis of narcolepsy and prompt treatment enabled her to remain at her job.

Though less frequent, many fires and deaths resulting from cigarette smoking in bed can also be ascribed to narcoleptic blackouts.

No one would be happier to know what causes this sleepiness and how to prevent it than the narcoleptic himself. A case in point is that of the sleepy housewife mentioned earlier in this article. Following an examination at the Mayo Clinic, she was placed on medication and later wrote a letter about her 400-mile trip home:

> "I drove 80 miles on the trip home without getting the least bit sleepy. I only dozed once while my husband was driving and then I awoke alert instead of yearning to go back to sleep. In all of the dozens of other trips we have taken, this trip home was the first time that I have ever looked at a farm scene or cornfield to realize how interesting they are."

The housewife is now a safe, alert driver. The good result has persisted for more than six years and there is every reason to believe that it will continue. >

by Dr. Thomas C. Grubb
courtesy TRAFFIC SAFETY

## TACTICAL AIR COMMAND

# Maintenance Man of the Month

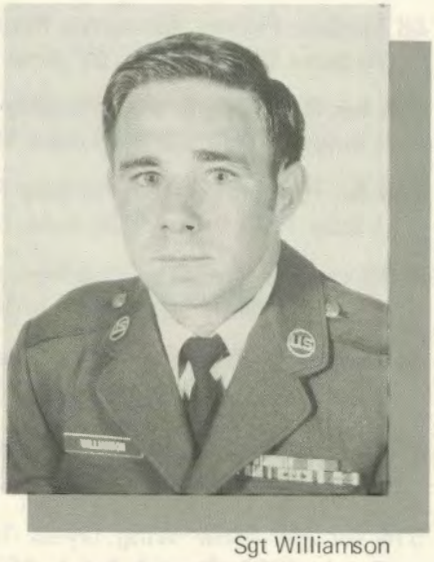
Staff Sergeant Jack V. Rouse, Jr., 317 Special Operations Squadron, Hurlburt Field, Florida, has been selected to receive the TAC Maintenance Man Safety Award. Sergeant Rouse will receive a letter of appreciation from the Commander of Tactical Air Command and an engraved award.

SSgt Rouse

## TACTICAL AIR COMMAND

# Crew Chief of the Month

Sergeant Jimmy W. Williamson, 336 Tactical Fighter Squadron, Seymour Johnson Air Force Base, North Carolina, has been selected to receive the TAC Crew Chief Safety Award. Sergeant Williamson will receive a letter of appreciation from the Commander of Tactical Air Command and an engraved award.



Sgt Williamson

## TACTICAL AIR COMMAND

# Ground Safety Man of the Month

Technical Sergeant Phillip E. Fulmer, 354th Tactical Fighter Wing, Myrtle Beach Air Force Base, South Carolina, has been selected to receive the TAC Ground Safety Man of the Month Award. Sergeant Fulmer will receive a letter of appreciation from the Commander of Tactical Air Command and a Certificate.

TSgt Fulmer

Tactical Air Command

# UNIT ACHIEVEMENT AWARD

**Our congratulations to the following units for completing 12 months of accident free flying:**

549 Tactical Air Support Training Squadron, Hurlburt Field, Florida
27 June 1970 through 26 June 1971

46 Tactical Fighter Squadron, MacDill Air Force Base, Florida
28 June 1970 through 27 June 1971

136 Air Refueling Group, Hensley Field, Dallas, Texas
1 July 1970 through 30 June 1971

136 Air Refueling Wing, Hensley Field, Dallas, Texas
1 July 1970 through 30 June 1971

4530 Tactical Training Squadron, MacDill Air Force Base, Florida
1 July 1970 through 30 June 1971

94 Tactical Fighter Squadron, MacDill Air Force Base, Florida
3 July 1970 through 2 July 1971

36 Tactical Airlift Squadron, Langley Air Force Base, Virginia
5 July 1970 through 4 July 1971

516 Tactical Airlift Wing, Dyess Air Force Base, Texas
5 July 1970 through 4 July 1971

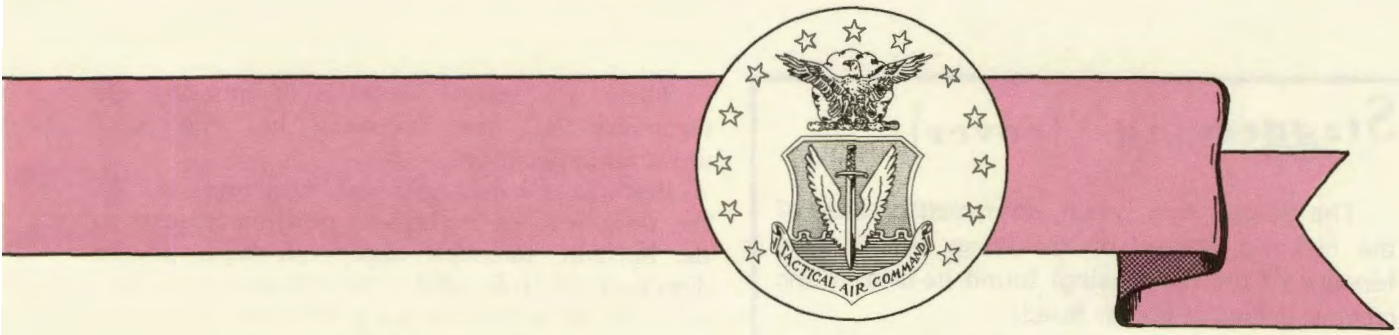
347 Tactical Airlift Squadron, Dyess Air Force Base, Texas
5 July 1970 through 4 July 1971

181 Tactical Fighter Group, Hulman Field, Terre Haute, Indiana
10 July 1970 through 9 July 1971

703 Special Operations Squadron, Shaw Air Force Base, South Carolina
16 July 1970 through 15 July 1971

113 Tactical Fighter Wing, Andrews Air Force Base, Washington, D. C.
22 July 1970 through 21 July 1971

182 Tactical Air Support Group, Greater Peoria Municipal Airport, Illinois
23 July 1970 through 22 July 1971




**132 Tactical Fighter Group, Des Moines Municipal Airport, Iowa**
**25 July 1970 through 24 July 1971**

**68 Tactical Air Support Group, Shaw Air Force Base, South Carolina**
**25 July 1970 through 24 July 1971**

**4442 Combat Crew Training Wing, Little Rock Air Force Base, Arkansas**
**31 July 1970 through 30 July 1971**

**106 Air Refueling Wing, Suffolk County Air Force Base, New York**
**1 August 1970 through 31 July 1971**

**106 Air Refueling Group, Suffolk County Air Force Base, New York**
**1 August 1970 through 31 July 1971**

**160 Air Refueling Group, Clinton County Air Force Base, Ohio**
**1 August 1970 through 31 July 1971**

**183 Tactical Fighter Group, Capital MAP, Illinois**
**1 August 1970 through 31 July 1971**

**187 Tactical Reconnaissance Group, Dannelly Field, Montgomery, Alabama**
**9 August 1970 through 8 August 1971**

**117 Tactical Reconnaissance Wing, Birmingham MAP, Montgomery, Alabama**
**9 August 1970 through 8 August 1971**

**907 Special Operations Group, Clinton County Air Force Base, Wilmington, Ohio**
**10 August 1970 through 9 August 1971**

**7 Tactical Fighter Squadron, Holloman Air Force Base, New Mexico**
**11 August 1970 through 10 August 1971**

**49 Tactical Fighter Wing, Holloman Air Force Base, New Mexico**
**11 August 1970 through 10 August 1971**

**434 Tactical Fighter Squadron, George Air Force Base, California**
**12 August 1970 through 11 August 1971**

## Staggerwing (cover)

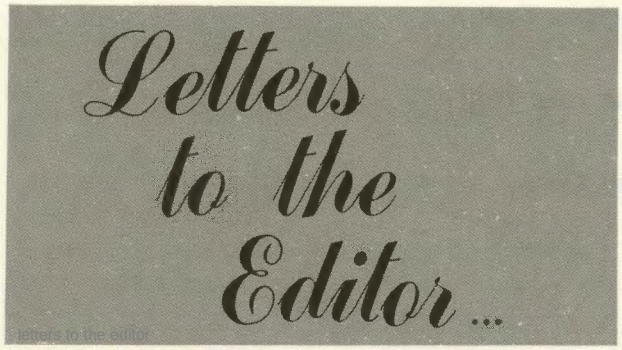
The Staggerwing Beech, so named because of the negative stagger of the wings (lower wing forward of the upper wing) found its birth in the creative genius of Walter Beech.

In this one airplane Walter Beech managed to combine two era's of aviation. The bi-wing design captured the nostalgia of beginning aviation and the enclosed cockpit brought the future into sharp focus with its comfort and functionality.

The aircraft was produced during the thirties and continued until the late forties. During WW II the Staggerwing saw service in the Army as the UC 43 and in the Navy as the GB-1,2.

Many of these great airplanes are still flying today carefully hoarded by their dedicated owners.

*Ed.*




While our unit was undergoing intensive BFM/ACM upgrading some time ago, I devised a new ACM maneuver (on paper only) to lend emphasis to the peculiar handling characteristics of the F-100. Perhaps you might be interested.

THE CONTINUOUS LONGITUDINAL VECTOR REVERSAL

The continuous longitudinal vector reversal is a maximum performance maneuver which may be entered from any high-G, high angle of attack situation. It is primarily a diversion maneuver which, at the same time, creates an impossible tracking solution for your opponent. Although several short-comings are inherent to the maneuver, it has the unique quality of requiring little or no practice to be executed properly.

There are several methods of entering the maneuver but the following has the most universal application:

Perform a hard, nose-high turn reversal. As the nose reaches its highest position relative to the horizon, smoothly apply full rudder in the direction of roll while maintaining maximum elevator deflection to bring the nose below the horizon. To offset the additional rolling moment induced by increased rudder application, simultaneously apply and hold opposite aileron. Airspeed will rapidly diminish and the nose will pitch up and over into a longitudinal vector reversal in the direction of applied rudder, arriving at 50 to 60 degrees below the horizon at the end of one-half turn. Yaw then builds up rapidly, as does rotation rate, and control application by the pilot is no longer required to sustain the maneuver. The longitudinal vector reversal is not continuous.

Although effective, this maneuver is not generally recommended. IT IS MORE COMMONLY KNOWN AS A SPIN. IT WILL RUIN YOUR ENTIRE DAY. See TO 1F-100D(I)-1, Section III and Section VI for complete recovery techniques.

Major Floyd H. Damschen, Jr.
"C" Flight Commander, 152d TFTSq, Ariz ANG

*Editors Note: To get away from cliches, instead of saying, "this maneuver is not generally recommended," let's say, with a great degree of inspiration – AVOID THIS MANEUVER LIKE THE PLAGUE.*

INTO THE FOLD

The 355th Tactical Fighter Wing began flying A-7D's this week (27 Jul 71) and thus actively rejoins the tactical forces. We acknowledge and accept our responsibility to those who by sacrifice, courage, and professionalism, have bequeathed such a proud heritage. We pledge our unremitting best to continue the traditions so arduously established.

From TAC Safety – WELCOME HOME.

# TAC TALLY

## MAJOR ACCIDENT RATE COMPARISON

| | TAC | | ANG | | AFRes | |
|---|---|---|---|---|---|---|
| | 1971 | 1970 | 1971 | 1970 | 1971 | 1970 |
| JAN | 1.6 | 4.8 | 16.7 | 5.9 | 0 | 0 |
| FEB | 1.6 | 3.9 | 11.6 | 2.6 | 0 | 0 |
| MAR | 3.1 | 4.6 | 7.0 | 1.7 | 0 | 0 |
| APR | 2.7 | 4.9 | 4.9 | 2.4 | 0 | 0 |
| MAY | 2.5 | 6.2 | 5.7 | 3.6 | 0 | 0 |
| JUN | 2.6 | 5.5 | 6.9 | 3.6 | 0 | 0 |
| JUL | 2.9 | 5.1 | 7.1 | 6.1 | 0 | 0 |
| AUG | | 5.0 | | 6.9 | | 0 |
| SEP | | 4.7 | | 6.6 | | 0 |
| OCT | | 4.5 | | 6.8 | | 0 |
| NOV | | 4.6 | | 6.7 | | 0 |
| DEC | | .6 | | 6.6 | | 0 |

# AIRCRAFT ACCIDENT RATES

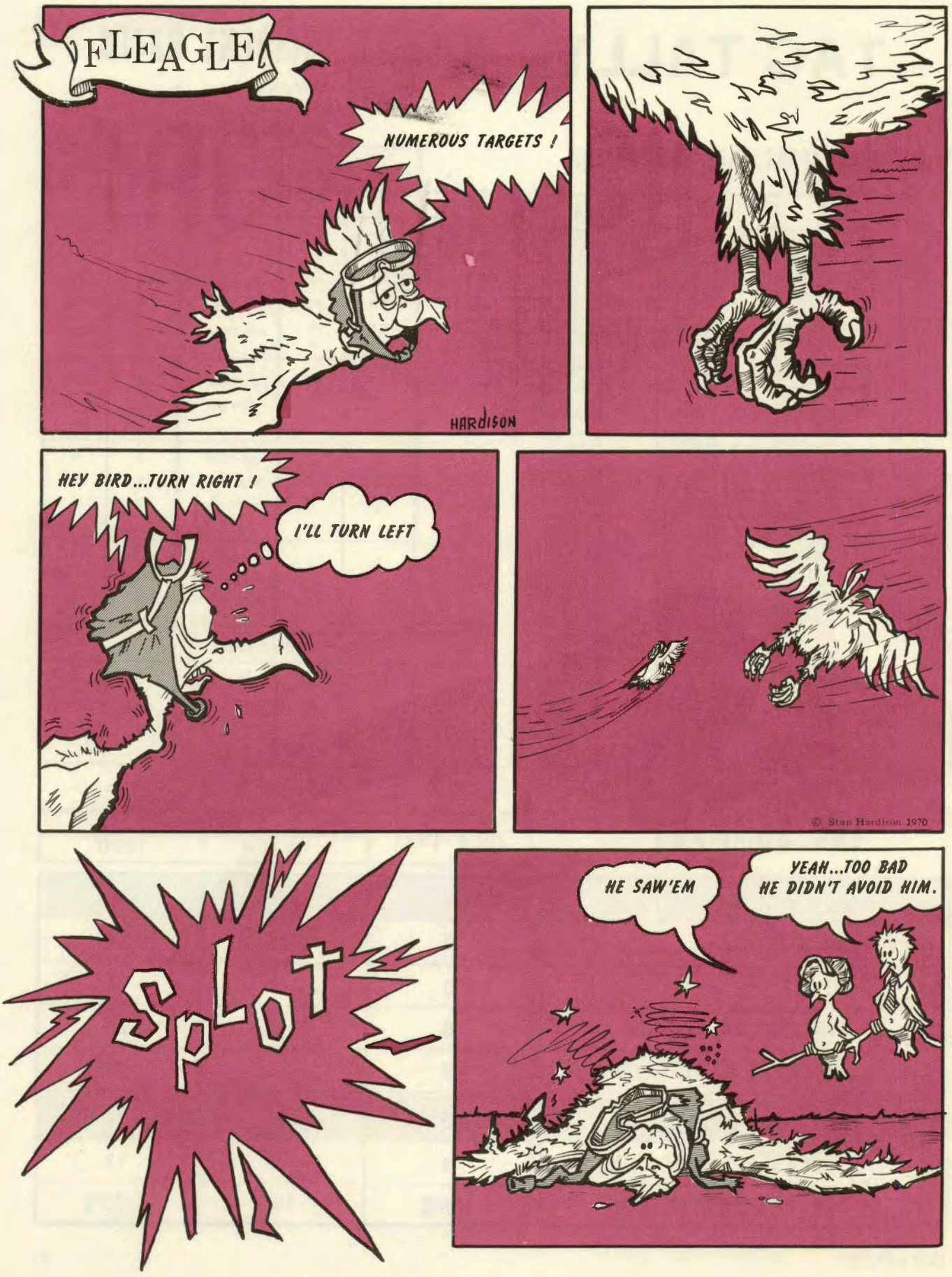
* Estimated

## UNITS

| | THRU JULY | | | THRU JULY | |
|---|---|---|---|---|---|
| | 1971 | 1970 | | 1971 | 1970 |
| 9 AF | 2.6 | 1.9 | 12 AF | 1.8 | 8.0 |
| 4 TFW | 0 | 4.2 | 23 TFW | 0 | 5.9 |
| 1 TFW | 0 | 4.7 | 27 TFW | 0 | 6.8 |
| 33 TFW | 0 | 0 | 49 TFW | 0 | 8.8 |
| 31 TFW | 7.5 | 6.9 | 479 TFW | 0 | 11.8 |
| 354 TFW | 8.6 | 0 | 474 TFW | 0 | 0 |
| 4403 TFW | 20.7 | 0 | | | |
| 363 TRW | 0 | 4.7 | 67 TRW | 0 | 12.4 |
| | | | 75 TRW | 0 | 0 |
| 316 TAW | 0 | 0 | 64 TAW | 0 | 0 |
| 317 TAW | 0 | 0 | 313 TAW | 0 | 0 |
| 464 TAW | 0 | 0 | 516 TAW | 0 | 0 |
| 68 TASG | 0 | 0 | 58 TFTW | 10.0 | 18.0 |
| | | | 4442 CCTW | 0 | 17.2 |
| | | | 4453 CCTW | 5.9 | 5.3 |
| | | | 71 TASG | 0 | 0 |
| TAC SPECIAL UNITS | | | | | |
| 1 SOW | 7.9 | 8.3 | 2 ADG | 0 | 0 |
| 4409 SUP SQ | 0 | 0 | 4500 ABW | 0 | 0 |
| 4410 SOTG | 8.1 | 0 | 57 FWW | 0 | 0 |

# TAC SUMMARY

| | JULY 1971 | THRU JULY | |
|---|---|---|---|
| | | 1971 | 1970 |
| TOTAL ACCIDENTS | 3 | 19 | 26 |
| MAJOR | 3 | 13 | 24 |
| MINOR | 0 | 6 | 2 |
| AIRCREW FATALITIES | 0 | 6 | 26 |
| AIRCRAFT DESTROYED | 2 | 9 | 22 |
| TOTAL EJECTIONS | 3 | 9 | 18 |
| SUCCESSFUL EJECTIONS | 3 | 9 | 13 |
| PERCENT SUCCESSFUL | 100% | 100 | 72% |


FLEAGLE
NUMEROUS TARGETS !
HARDISON
HEY BIRD...TURN RIGHT !
I'LL TURN LEFT
© Stan Hardison 1970
SPLOT
HE SAW'EM
YEAH...TOO BAD
HE DIDN'T AVOID HIM.