

# TAC ATTACK

TAC Attack

March 1980

22

MARCH 1980



DEM'S DA  
BRAKES ...Pg 8

DAVID BARCIA

# MAR

READINESS IS OUR PROFESSION



**TACTICAL AIR COMMAND**  
**GENERAL W. L. CREECH**  
*COMMANDER*

**LT GENERAL PHILIP C. GAST**  
*VICE COMMANDER*

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### TACRP 127-1

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## Angle of Attack

angle of attack

# DROPPED OBJECTS

**W**e are working the Air Force Mishap Prevention Program hard. FOD is a "household" word in maintenance and ops. Everyone is aware of the Occupational Safety and Health Act (OSHA) and AFOSH, its USAF equivalent. There can be no doubt mishap prevention has received a great deal of effort. There is, however, another area which requires increased attention--dropped objects.

There are numerous parts of our aircraft which can be "dropped." All count on the human factor to make sure they are properly attached. Through the years, we have dropped panels, fasteners, seals, weapons, fuel tanks, and suspension

equipment--almost everything possible.

In most instances, the cost of the object is small--a matter of dollars for a pylon access panel and safety pins. In some cases, such as the loss of an Airborne Instrumentation Pod, the cost is prohibitive. But, the loss itself is only one disturbing aspect of the problem.

We don't seem to be making any headway in preventing these mishaps. We need to alter our attitude. We all "own" a part of the responsibility for both the prevention efforts and the mishaps. We need to educate our personnel about this problem. Supervisors, aircrews, crew chiefs, and end-of-runway crews cannot assume "the other guy" will catch the loose fasteners or insure access doors are fully latched. We all need to devote a part of our time to this potentially dangerous problem.

You can prevent dropped objects! ➔

*Richard K. Ely*

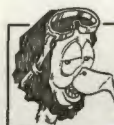
RICHARD K. ELY, Colonel, USAF  
Chief of Safety

# LOW LEVEL FLYING-



By Lt Col Paul Kimminau  
355 TTW/DOV

I am sure if you got this far, that is past the title, you have said to yourself, "Another article on low level flying; wonder what this guy has to say?" You have every right to wonder, because in the last couple of years TAC has had a number of articles written about this subject. You would have to admit that they haven't done a lot of good, if the education of our crew and a decrease in accidents are to be used as a measure of merit. These articles have almost always addressed the formation, ridge crossing technique, navigation, etc, aspects of low level flying. The reader will drop back and ask, "Why do we fly at low level?"



Lt Col Paul Kimminau  
is this month's  
Fleagle T-shirt winner

# WHY?

An answer of, "because it's fun," while true, does not count. Now, if you answered, "to surprise the enemy," "defeat a SAM threat," "counter an air-to-air threat," etc. you have thought the problem through and perceived the real answer. When do we do those things like surprise the enemy, defeat a SAM, or air-to-air threat? Well, unless the base you fly from is in a heck of a lot of trouble, it (low level) will not be necessary right after takeoff. I guess now is as good a time as any to bring in one of the current buzz words (phrase): "Fly like we intend to fight." Well, if we have to look hard to find a base where we need to get to low level right after takeoff, why do the present crop of fighter pilots complain when they can't get to low level right after they get the gear and flaps up? The only reason I can think of is that they haven't thought the problem through. Even if you don't agree with the statement, "We don't need to get into the low level portion of the mission right after takeoff," go along with me for now and accept it. I would agree that, if you are operating out of a base in an area such as the Mideast, you might have to go low level right away, but what is low? 1,000 feet? 500 feet? 100 feet? Now this is where the arguments rage! Some will insist that unless you are at 100 feet you are dead. Others insist that you never need get below 500 feet. Who is right?

(NOTE: Throughout the article I refer to 100 feet as the lowest altitude we can go to. One must remember this is an "artificial" restriction put on for training.)

Well, first off they are both right and wrong. You sure don't need to be at 100-foot AGL trying to navigate to a target 150 miles away while still over friendly territory. By the same reasoning, you sure do need to be below 500 feet if you are on your way from the IP to the target (or pop point) and your RHAW gear tells you there

are SA-4's, and 8's somewhere in the 9-3 o'clock position (or GCI tells you an air-to-air threat has closed to 2-3 miles at 6 o'clock). If you disagree with that logic, then I am talking to deaf ears. I am fairly sure all fighter pilots will agree that there is a time and place to fly 100-foot AGL low level. The argument is when to go to 100 feet. I know, regardless of whatever argument you can offer, flying 100 feet low level while still 100 miles inside friendly territory is not smart. If surprise is what you are looking for, then stay up until the enemy radar paints you and is convinced you are heading for target B; let down to get below their radar (500 feet? 300 feet? 100 feet?), change course once or twice, and go to the IP for target A (your target all the time). What I am saying is--once the element of surprise is gone, the only remaining reason for being at 100 feet is the threat.

The next question to answer is, "Do I stay at 100 feet all the time or do I stay at a comfortable low level altitude until threatened, then defeat the threat by going to 100 feet?" To answer that question for you, I'll use my experience and many bull sessions with "old heads" in the fighter game. This is the comment many an old head has made and I agree with: "If I had spent as much time (percentage-wise) at 100-foot AGL throughout my fighter career as is now proposed, I would never be here, I would be dead." What that really means is that flying at 100-foot AGL in a fighter going 480+ knots is DANGEROUS! As any little kid who has played with matches will tell you, play with fire and you'll get burned.

Now, I am not about to suggest that there is no need to practice flying 100 feet low levels, because the worst thing we could do is expect a fighter pilot to go to 100 feet the first time he must defeat a real SAM. But it does the USAF no good to have the guy train at 100 feet all the time and one day kill himself, destroy an aircraft, and never get to combat. What I am suggesting is that the requirement to fly 15-20 minutes of every mission at 100 feet is stupid (be that requirement real or perceived by the fighter pilot). What we really need to do is fly at an altitude which is reasonable to stay under the enemy radar (GCI type) and which offers us a good chance to look around and to navigate. To those who say they can do that effectively at 100-foot AGL, I say "BS." If you do much flying at 100 feet and looking at 6 o'clock or at a map, you will soon end up hitting the ground.

## LOW LEVEL FLYING



When I started this article I was including all tactical aircraft in the discussion. However, A-10s fly much slower and can probably operate at 100 feet a lot more safely than others. The F-111 when it is on auto TFR can also operate at 100 feet. I, therefore, exclude those aircraft from the majority of what I say but some of it may apply. Two seat aircraft such as F-4s or 105Gs probably feel this does not apply to them because the guy in front flies the airplane while the guy in back does the looking. I submit that it does apply! The reason I feel that way is one word: "Complacency!" The pilot, after flying at 100 feet for many missions and really looking out to avoid hitting the ground, one day gets a call from his back-seater like, "We've got a bandit at 7 o'clock" (or "I got an SA-6 signal at 9 o'clock"). He, now so confident at 100 feet, looks back to see the bandit (or SAM) and flies into the ground. That is probably not the best example I could use, but the point is, if he were at 300 feet he could look back for maybe 3-5 seconds while starting a turn, descent, acceleration, etc (you have options) and get to 100 feet or less to defeat the threat. At this point, I would hear many fighter pilots say, "Heck, if I were at 100 feet rather than the 300 feet you suggest, the threat would never see me." I would sure like to see some data on that point (with all the newer radars, MTI, etc); and I'd also like to know how many of the fighter pilots who would say that to me really believe it themselves.

When you have to go to 100 feet or less to defeat a threat, you quit worrying about navigating, looking at six, etc; you are now worried about survival (i.e., not hitting the ground). As

soon as you survive that threat, you come back to altitude to continue your navigation, reestablish a 6 o'clock lookout, etc. When you hit the IP and begin your run-in, navigation will not be a problem if you have memorized the appropriate landmarks, timing, and pop-up data. The threat should be no problem either because you are going to the target regardless. So, 100 feet is a reasonable altitude at that point. The egress may also require you to be at 100 feet; however, as soon as navigation, 6 o'clock lookout, etc, again become necessary--get back up to altitude. What altitude is that? I would say 300 feet is the minimum. Why 300 feet? Well, again, experience and many old heads' comments about the vast difference in 300 feet and 100 feet low level. A low level at 100 feet requires significantly more attention outside the cockpit than does a 300 foot low level. With 100 feet being one-third of 300 feet, the amount of attention required is inverse; i.e., three times at 100 feet. (That is just a WAG but many old fighter pilots agree.)

To summarize what I have said: We, the fighter jocks, need to look at the amount of training time we think is required at 100 feet and see if we haven't made a mistake. Yes, low level training down to 100 feet is necessary, and on a continuing basis, but maybe we went overboard once we were able to convince people that realistic training was not only good--but necessary. Let's go back and look at those words, "Train as we fight," and see if we would really go to combat as some of our low level training profiles are flown! ➔

### The Author:

Lt Col Paul E. Kimminau (P.K.), Chief of Stan/Eval at the 355 TTW, Davis-Monthan AFB, Arizona, currently flies the A-10. After pilot training at Moore AB and Laredo AB, Texas (1960), he went to F-100 training at Luke and Nellis AFBs. He flew F-100's with the 31st and 20th TFWs. In 1967 and 1968, he served a tour in the SEA conflict flying the A-1E/H as a "Sandy." He returned to COHUS as an instructor at the F-100 FW5 (air-to-air) until it closed in 1969, when he went to Fort Carson, Colorado, as an ALO/FAC. He checked out in the A-7D in early 1971 and helped set up the training at D-M when it moved from the original location at Luke. As the Air-to-Air Instructor, he helped establish the A-7D FWIC and after one year went to Korat RTAFB in 1974. While serving at Korat as Wing Weapons Officer, he participated in evacuation of Saigon, Phnom Penh, and recovery of the USS Mayaguez. On returning he served a tour at the Pentagon followed by his present assignment.

# AIRCREW OF DISTINCTION



306 TFTS/31 TFW  
Homestead AFB, FL

On 6 November 1979, Captain Michael Lichty and Captain William Rehrmann, both instructor pilots, were number two in a four-ship F-4 ground attack continuation training mission at Avon Park Gunnery Range. Approaching the pull-up point on a VLADD at 300 feet AGL and 500 KTAS, a large turkey vulture impacted the aircraft in the top center portion of the front center windscreen. The impact forces shattered the front windscreen, broke the top portion out of the frame, cracked the right front quarter panel, and broke out half of the left front quarter panel. The bird penetrated the center windscreen (the first reported instance of a bird actually penetrating this bulletproof glass in all F-4 operational history), broke off the stand-by magnetic compass, and disconnected Captain Lichty's communications cord.

Captain Lichty suffered several scratches and bruises from flying debris and his visor was entirely covered by bird remains, making forward visibility impossible. Severe high speed windblast and the disconnected communications cord prevented inter-cockpit communications, however, prebriefed birdstrike aircrew coordination procedures resulted in the aircrew's immediately establishing the aircraft in a climb and setting up for emergency landing at Avon Auxiliary Airfield:

Captain Rehrmann was unable to ascertain Captain Lichty's physical condition due to the communications difficulties, but continued flying the aircraft and made several UHF radio transmissions to advise the other flight members and Avon Auxiliary Airfield of their problem and intentions. Captain Lichty, realizing Captain Rehrmann had control of the aircraft, slowly raised his visor to improve his visibility. The windblast was severe, but because Captain Lichty was wearing glasses, he could tolerate the wind and see well enough to fly the aircraft. As the airspeed slowed through 250 KIAS, Captain Lichty lowered the gear, shook the stick, and took control of the aircraft. This was the first positive indication Captain Rehrmann had that Captain Lichty was alright. Windblast did create some problems for Captain Lichty during the turn to

TAC ATTACK



**Capt Michael Lichty**



**Capt William Rehrmann**

final but was again tolerable during the straight-in portion of the final approach. The landing and cable engagement were flawless and the emergency was terminated without further difficulty.

The professional airmanship and crew coordination of both crew members prevented the possible loss of life and a valuable aircraft. Their actions qualify them as the Tactical Air Command Aircrew of Distinction.

# DENIS DA BRAKES

By Captain Mike Shub  
4 TFW/SEF

Ever heard of "Lead Foot?" He's the guy who wears size 14 combat boots and has been accused of attempting to keep Goodyear in busi-



ness building F-4 main gear tires. You've seen him haven't you? He looks like Magilla Gorilla's brother and only knows two positions for the controls--full forward and full aft. Well, now that you have the picture, suppose I tell you that it's not entirely true. Recent evidence has revealed you don't have to be 6 foot 4 inches and weigh in at 250 to blow an aircraft's tire. Even a six year old can do it in the F-4 if he steps on the brakes at the wrong time.

Braking without antiskid has always been a risky proposition at best. The Mark III system currently installed in the F-4 has proven to be good and fairly reliable. But if it's inoperative and you land with your feet on the brakes, tires go boom! But let's say you knew that and you're very careful to make sure the tires are up to speed before you put on the slightest bit of pressure. Then it takes a bunch of pressure to lock the tires; right? Not so GI. The use of the brake system without antiskid has resulted in more than a few blown tires. It has happened twice here at the home drome in the past year. The prerequisites for these mishaps were no antiskid and brake system operative (emergency or normal). Here is some information extracted from a recent incident report:

While attempting an approach-end engagement because of utility failure, the crew pulled the emergency braking handle prior to engaging the cable. As they steered, with rudder, to the center of the runway, both tires blew, and the rims severed the cable, resulting in a missed engagement. The pilot shut down the engines prior to departing the runway at a speed of 80-90 knots. The pilot and WSO were certain the

brakes were not applied at any time. Maintenance examination found nothing wrong with the emergency brake system. Data was obtained from the depot on the braking system and skidding pressures of the F-4 at various speeds. A close look at the data revealed the following about braking without antiskid.

(1) At speeds of 160 knots or more, as little as 300 psi is needed at the brake to lock a wheel on a dry runway. Depending on the pedal rigging of a given aircraft, 300 psi can be delivered by pedal displacements in the range of 2 to 3 degrees (approx .21 to .32 inches). The pressure required to skid the tires increases to about maximum system pressure as speed decreases to 100 knots or less.

(2) With an RCR of 08, skidding brake pressure is 300-500 psi depending on aircraft speed. These pressures are supplied by brake pedal movements of 2 to 4 degrees (.21 to .45 inches).

(3) Skidding pressures with an RCR of 14 are not much higher than with an RCR of 08, especially at high speeds.

Investigators attached a direct reading pressure gauge at the brakes to explore the possibility that skidding pressures could be obtained unintentionally. It was found that, even with heels on the floor, a pilot in the front seat could apply 300 psi at the brakes by merely curling his toes. It is possible, therefore, the normal reaction of tensing up after something goes wrong could be enough to unintentionally apply that much pressure or more. This might be even more likely when the aircrew are wearing bulky winter footgear such as mukluks or vapor barrier boots. The Dash One states very light braking pressure must be used initially on wet/icy runways, but the reader is not told pedal deflections of as little as one-quarter inch may be sufficient to lock the wheels under some conditions.

In the case above, the brakes were available for unintentional as well as intentional use. The wise procedure should be to delay pulling the emergency brake handle until the aircraft is nearly stopped in the barrier when the brakes are needed. This way, if the engagement is missed, and if runway remaining is sufficient, the aircraft commander can further delay activating the brakes until the plane slows to a speed at which a blown tire is less likely. In any situation requiring emergency braking, it would be advisable to pull the handle just prior to

actual brake application. In addition to avoiding unintentional braking, this procedure would minimize any bleed-down which might occur.



The lesson is clear, so I won't belabor it. Just remember the antiskid was designed to prevent this sensitive system from ruining your day, but it is not always available. If possible, slow below 100 knots prior to braking at all (even with antiskid). Then nice and easy does it.

--A side note: The engineering wizards also said the drag bag effectiveness increases with the square of your airspeed up to chute failure. At 230 knots this is drag equal to full AB thrust on one engine. ➤

# chock talk

*...incidents and incidentals  
with a maintenance slant.*

## SWALLOWED STREAMER

An F-16 undergoing testing in another command was being prepared for a mission. Just after engine start, the "Remove Before Flight" red streamer broke off the right main landing gear safety pin. As chance would have it, the gusty winds were blowing the wrong direction. Before the crew chief could do anything, the streamer was ingested into the intake. Minor damage occurred to several fan blades.

Some time previous to the mishap, the rope which held the streamer to the pin became unserviceable. The rope was removed and replaced with .0032 diameter safety wire. This probably seemed like a good idea at the time. But, the

constant bending of the wire from the streamer whipping around in the wind caused the wire to break rather quickly.

Might be a good idea to make an occasional check of your "Remove Before Flight" streamers to see what's really holding things together.

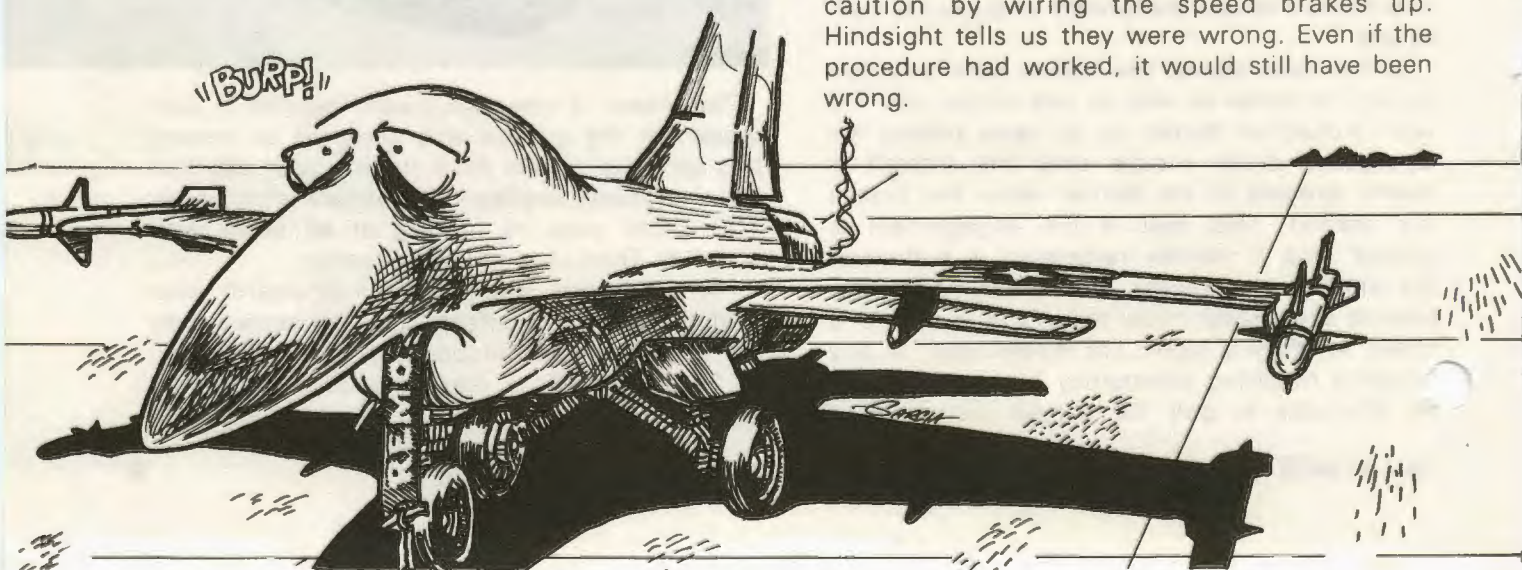
## CRUNCH

The Phantom was in phase, undergoing gear retraction tests at a TAC-gained unit. The aircraft was up on jacks, and the phase dock crew was attempting to extend the speed brake actuator pistons to attach them to the speed brake doors. For an undetermined reason, neither speed brake switch would actuate the pistons. There wasn't an electrician on duty to troubleshoot the system, so the crew decided to tie the speed brake doors up out of the way with safety wire. Once the speed brakes were out of the way, the crew began the retraction tests.

After the seventh or eighth retraction, the speed brake actuators extended, broke the safety wire, and allowed the speed brakes to swing under the raised gear. This went unnoticed by the worker on the ground; and when the gear handle was lowered, the gear extended and the main gear doors struck the speed brakes, damaging both.

No reason could be identified for the speed brake actuators extending. The man in the cockpit stated he didn't actuate the switch, although he was wearing bulky clothing and could have hit it accidentally. The speed brakes operated normally during troubleshooting after the incident.

The tech order states: "Insure the speed brakes are attached to the speed brake actuators prior to gear retraction to prevent aircraft structural damage." The phase dock crew concluded they could comply with the intent of the caution by wiring the speed brakes up. Hindsight tells us they were wrong. Even if the procedure had worked, it would still have been wrong.





## CROSSED UP

The F-111 was in the quick check area prior to takeoff. The ground crew discovered the primary hydraulic reservoir was overserviced. The aircraft returned to the ramp where the reservoir was bled to normal level. Before the aircraft taxied again, the reservoir was checked once more and was overserviced. The mission was aborted.

Under panel 3410, above the upper fuel trap tank, hydraulic lines P/N 12H1322-44 and P/N 1241322-67 were cross-connected. Maintenance had been performed in this area the previous night. Had the aircraft taken off with the lines improperly connected, as a minimum, the aircraft would have had utility hydraulic failure and significantly reduced flight control capability.

The misrouted lines were clearly marked with identification tape stating the type system, part

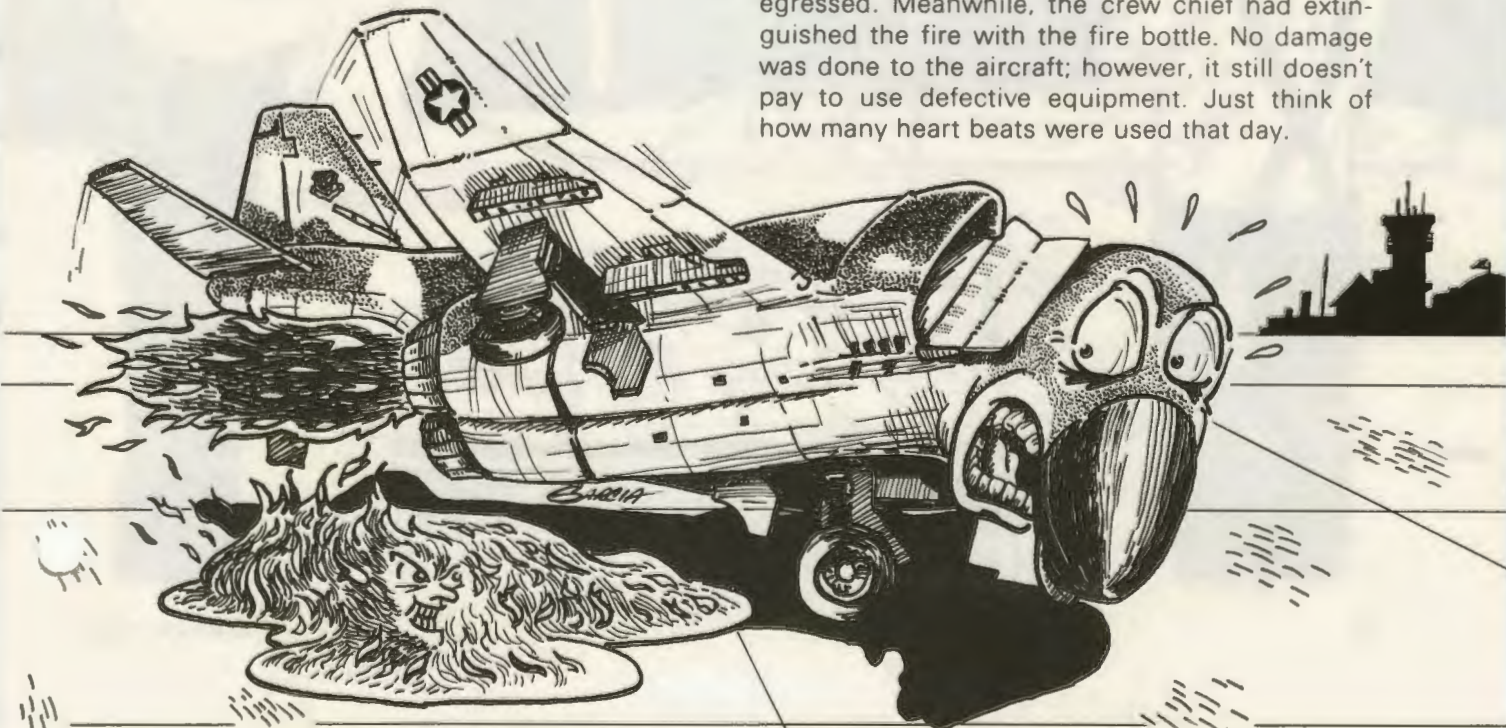
number, and direction of fluid flow. Utility hydraulic line -67 had been bent to accomplish the misinstallation. Bending of hydraulic lines is a direct violation of tech order guidance--and common sense. If the lines and connectors don't line up reasonably close, something might be wrong. Take another look.

When a hydraulic line you must mend,  
Install it right, don't make it bend.

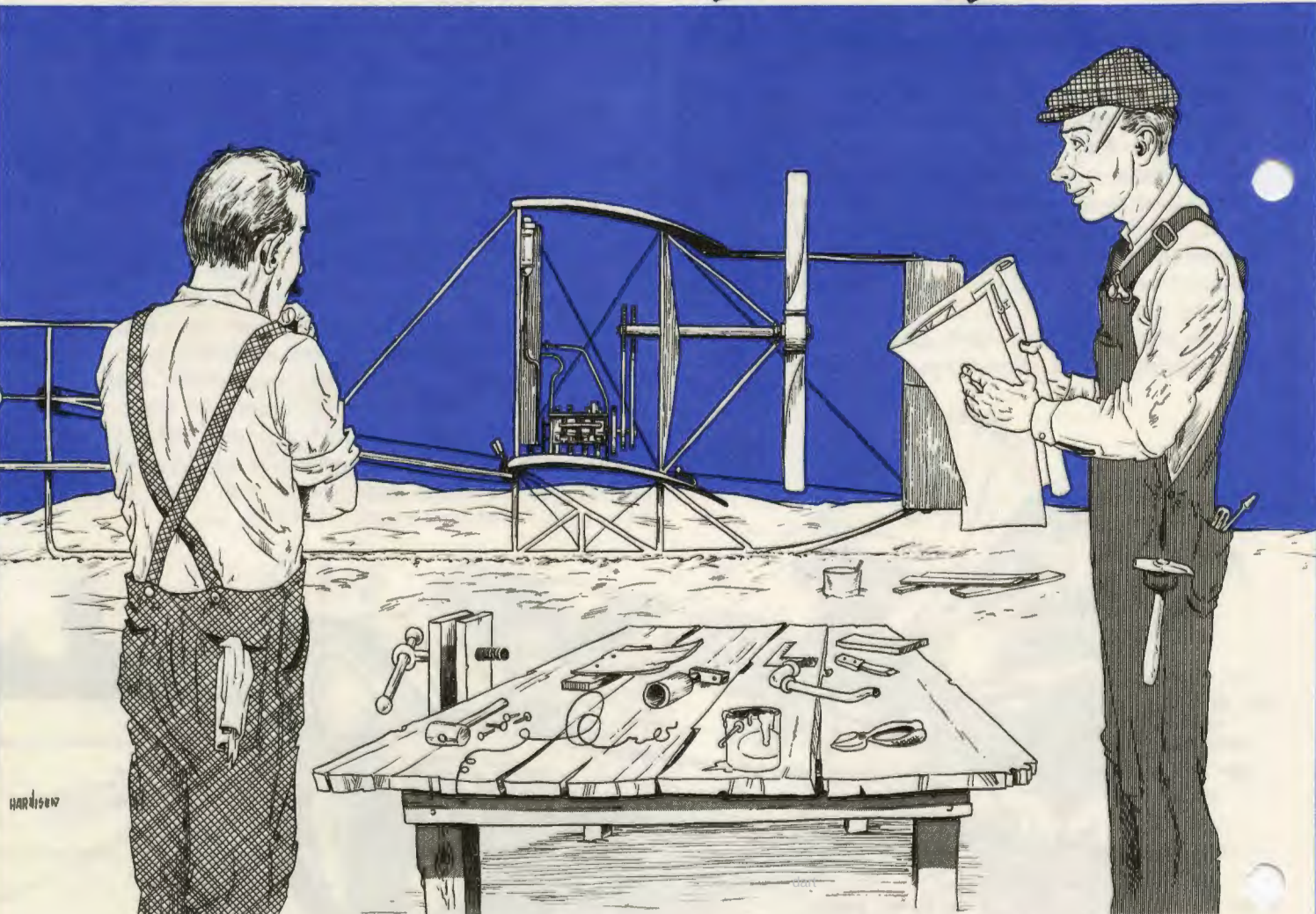
## POOF!

The F-4 was being prepared for flight; and after the walk around was completed, the cockpit checks were begun. Only after power had been applied did the pilot realize the throttles were out of the cutoff position. He cut them off and continued with the interior checks. When time came for engine start, the first attempt was aborted due to low air output. A new start unit was obtained and hooked up. Before the air was applied again, the crew chief noted fuel draining from the right engine and decided to blow it out of the engine. The comm cord had an intermittent short in it, so the aircrew was unaware of the crew chief's intentions.

When the crew chief applied air, the crew thought it was for normal start and advanced the throttle and ignition. Besides the fire in the engine, the puddled fuel on the ground decided to burn also. The crew chief couldn't tell the crew about the fire because of the bad comm cord. When the crew heard a call from the ramp coordinator and saw the flames reflected from the aircraft next to them, they shut down and egressed. Meanwhile, the crew chief had extinguished the fire with the fire bottle. No damage was done to the aircraft; however, it still doesn't pay to use defective equipment. Just think of how many heart beats were used that day.



# DART



In the beginning there was created an airplane, and being created in the form of a bird it had but one heart. And the creators, Orville and Wilbur, did look upon their hard work and did say one to another, "It is good."

And the heart was called an engine, and it did labor mightily to lift and propel the creation through the air. Long it labored, and faithfully, until the heart would burst within the body ... at which time the craft would settle back to earth as would a falling stone. But, the Tribe of Real Jocks came to love the one-hearts, for the hearts of the tribe did beat as one with the hearts of their planes.

And the detractors, being of the tribes of SAC and MAC, did ruefully shake their heads and say in mock wisdom, "It is not good. For lo, if one heart is good--two are better, three are comfortable, four are relaxing, six are becoming fashionable, and ten are desirable."

But the Tribe of Real Jocks did disagree saying, "Man has only one heart, his horse has only one. Let us not build graven images with two or more." But theirs a was small voice crying in the wilderness that went unheeded, and the Tribe of Real Jocks did fall upon hard times.

But, they sayeth all the while, "This adversity shall pass. It is good." Still the Tribe of Real Jocks continued to wither, because failing to prosper, they did also fail to propagate. They thus became few in number and became scattered over the earth. Some went to the large Tribe of TAC where it was believed the one-heart still lived. Others went to the Tribe of the Guard and the Tribe of the Reserve in search of the one-hearted airplane. And they sayeth, one to another, "It is not good, for we are warriors and subsist on battle as ordinary men need food and drink."

And in TAC, they found the one-heart bird called "Hun", and it was good. And they did build another one-heart bird, very large and very fast, and called it "Thud." Then, sallying forth into battle in the Land of Nam, they did prove their courage and that of their new creation, and people did say, "The one-hearts do well. It is good." But this too passed, and the Tribe of Many Hearts prevailed and built birds called "Phantom" and "Eagle" which looked like birds but had two hearts. And the Tribe dwindled once more.



# DART



But many moons ago, the inner Tribe of Real Jocks was inspired to test still another one-heart bird, and it was called "Dart" (named after that elusive weapon of stealth and sting). And lo, the Tribe discovered that their Darts had qualities of twisting, turning, and stinging that approached magic. And so it was that at that time the Tribe of Real Jocks was dispatched with their Darts to the far off land of "ROK" to amaze and confound its enemies. Beaten and confused by a sleek and powerful one-heart that could take 50-league strides without stopping to drink and do dances of magic within its own length, the enemies of

ROK skulked and muttered behind their walls--but dared not come out.

And so the Tribe of Real Jocks prospered, meeting and overcoming all questionings of the one-heart creed. The tribes of two-heart Mud Daubers and two-heart Sea Slugs, being friendly to the Tribe of Real Jocks, asked to pit their machines in mock contests with the Darts. They came away amazed at the agility and sting of Dart; and Mud Daubers and Sea Slugs were to fall from the sky like so many bricks--which indeed they resembled. And the Tribe of Rea Jocks saw that it was good.

By this time, except for small outlying tribes, the main Tribe of Real Jocks resided in the land of ADCOM, tending to their Darts. Occasional hunting forays and raiding parties to the desert lairs of the Mud Daubers and the coastal hiding places of the Sea Slugs always brought honors to the Tribe. The Jocks returned with many feathers.

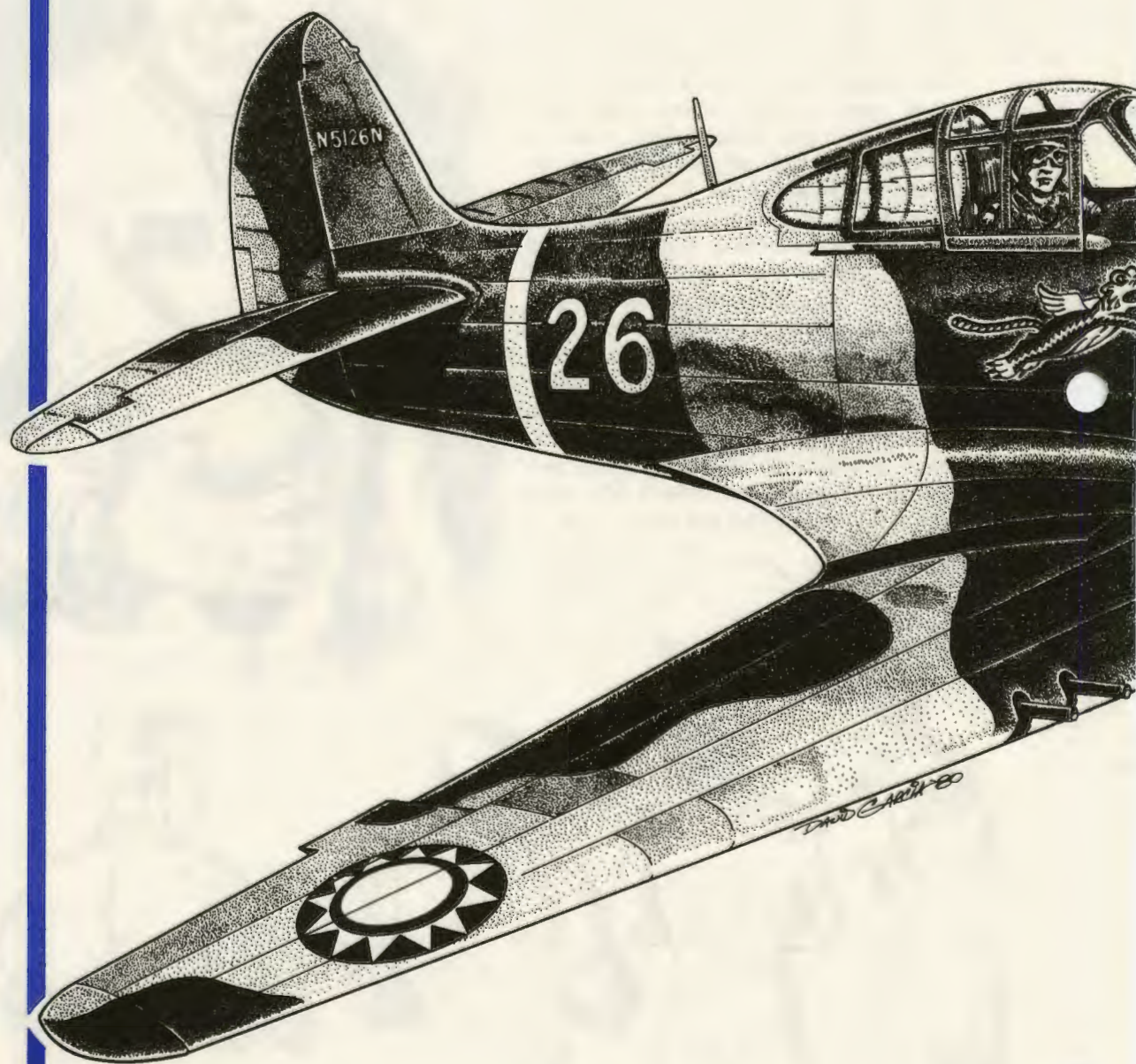
Finally the Tribe of TAC cried, "Enough! The Tribe of Real Jocks truly knows the ways of the air, and ours understands only the ways of the mud. We wish to learn the ways of the air, and we will again create new one-hearts. But we need the Tribe of Real Jocks to show us the way. So the tribe of TAC is ready to embrace the creed, 'In the beginning it was intended there would be one man in one airplane with one engine.' It was left to the Tribe of Real Jocks to validate that intent so that all men shall say of the one-hearted, 'They are good.'"

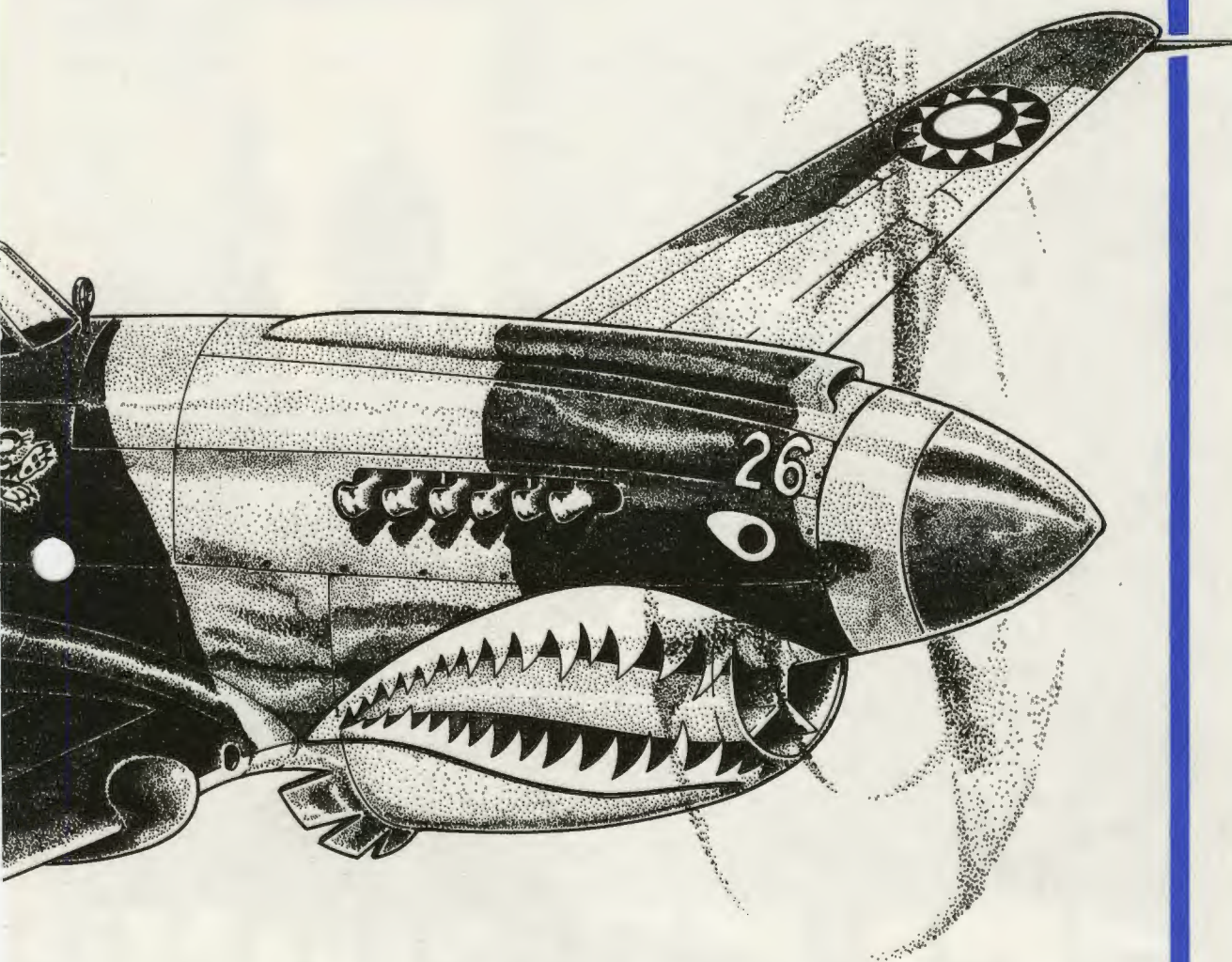
Hearing the pleas of those who were less fortunate, the inner Tribe of Real Jocks retired to their councils to ponder the future of the other tribes. When they emerged, they proclaimeth, "Let wiseness and generosity prevail. We have heard your pleas and grant your wish to enter into our councils and for initiation into the true secrets of the one-heart creed." So hence forth let it be known that the secrets of the true creed are now made available to all tribes which will learn, even unto all hapless two-hearts who have seen the light and desire to be purified. ➔



Anonymous--with apologies to Maj Jim Bustle, the author of the original, "SLUF" (another great one-heart).

# Curtiss P-40







# REFLECTIONS

"One more of the same" Boy, it's dark in here. Wish they wouldn't line all the bottles up in front of the mirror. Makes it hard to check six. Not a bad crowd for a Thursday night.

Well, I'll be darned. Look who just walked in. Joe. Hasn't changed much, same swagger. Can't

believe he's still alive. I wonder if he knew all the guys (including me) who thought he'd be the first one to bust his tail? Not because he's such a bad guy. In fact, everyone sorta liked him--his carefree manner, willingness to try anything once, verbose dislike of dumb regs. Maybe he's changed.

We all used to chuckle at his tales about zinging through the tops of buildups trying to make "steer horns" with the vortices. Guess he was right when he said they wouldn't dare build a mountain under any cloud he decided to fly through.

And those bubble checks. Heh! Heh! By golly, he sure watered some controller's eyes, didn't he? One little tweak or bump from the stab aug would have watered his too.

Hmm...Wonder if he's still married. That Jenny! What a fine toot. Don't understand how she put up with him. I see a ring. Guess he's still married. I ought to go over and say hello. Naw, he'll probably make it this way pretty soon.

...Heck, Joe's the fighter pilot's fighter pilot. Why shouldn't we like him? He sure kept the old man off the rest of us.

No, I don't think he could be called a "professional"--left too much to chance--quick and cursory preflights. "That's what the crew chief gets paid for," he used to say. Remember the time he neglected that 120 knot headwind and had to bust minimums 'cause there wasn't enough reserve to get to the alternate? All the youngsters thought he was hot rocks for that feat.

He did have the golden hands though. Top gun nearly every quarter. Only a few of us knew his technique though. Fifty knots slow, 500 feet low, and 5 G's in one second.

Wonder if he's changed any. "Hey, Joe, how the heck are you? Pull up a stool."

"Greg! How in blue blazes are you? I haven't seen you in years. How long has it been?"

"About five years, I guess. It was in SEA. I was heading back to the states to the RTU job, and you were on your way to school and then to USAFE. I heard you did a good job over there--Ops Officer weren't you?"

"Yep, sure was. I was the senior flight commander soon as I got there, then assistant ops, and up the ladder."

"Have a good time?"

"Sure did, 'til last year..."

"What happened then?"

"Well, you remember Tom, 'The Terror'?"

"Who can forget? You two singlehandedly caused more near heart attacks than any two folks I've ever met."

"Yep, Tom and I had a ball. Tom came in as the Squadron Commander just after I became Ops Officer. We really had a time--and in just a few months had the best squadron on the

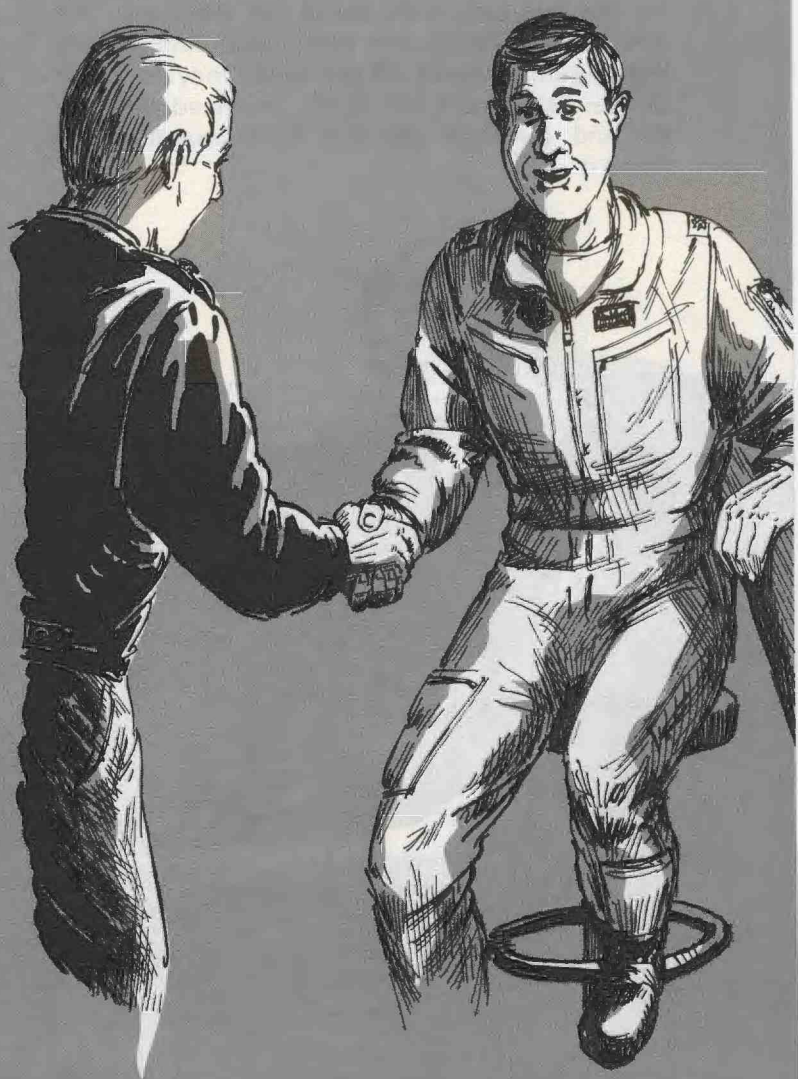
continent. That's what those kids needed was some leadership. We showed 'em how to work hard, play hard, and put the second-class outfits in their places. In six months, there wasn't a squadron over there that hadn't heard of us.

"We were the top squadron in the wing for sure. Whenever we went TDY to the range, everybody qualified across the board, and I don't mean just qualified. We just put everything on top the pylon! And air-to-air, when the aggressors showed up, we ate 'em like grapes. Sent 'em all back to their home base talking to themselves!"

"Sounds almost like a dream come true--what spoiled it?"

"Well, we were in the middle of a surge exercise--flying our kiesters off. We had been going for three days and were fragged for some night intercept sorties. Since we had been pushed pretty hard, Tom and I decided to send a couple of our best pilots out. We wanted to make sure nobody got into trouble."

"Sounds logical."



## REFLECTIONS



"Uh huh. The crews knew what they were doing. They got to the aircraft on time, but number two's was busted. The flight lead launched to meet the fragged time and two got his spare and met him about 30 minutes later. They stayed on station 'til their time was up then RTB'd. Two had a bunch of extra gas, so he stayed in the GCA pattern to shoot a couple of approaches. On the first approach, about five miles out, the aircraft slid below the glide path and stayed there--getting lower all the time. They hit short of the field--'bout two miles, bounced into the air and punched out--the front seater didn't make it.

"How'd it happen?"

"Well, we found out from his WSO that some of the cockpit lights were out--including the ADI. The pilot took the map light and had it fixed so it shined on the ADI, but the WSO figured it wasn't working too well 'cause the pilot kept cursing it. Apparently, the light slipped on GCA final and the pilot reached for it and entered the descent. The WSO was a little slow telling him about the descent and by the time it sunk in, they couldn't avoid hitting the ground. You know the rest..."

"Not too smart. What was he doing flying the airplane at night without good lights?"

"Wish I knew. Tom and I talked that over for a long time. Ya know, we pushed those kids pretty hard. We gave 'em something to work for. There's nothing like the spirit of competition to bring out the best in folks. I guess they were a little like Tom and I--never admit ya can't hack it. 'Bout two weeks ago at a bull session, I was telling the story about how I brought my Hun back to Da Nang one night with a flashlight in my mouth 'cause all the cockpit lights were out. I never thought someone would put himself into a situation like that on purpose. Tom and I realized we created some examples they shouldn't live up to. A surge operation is no reason to let it all hang out. If the balloon goes up--that's another story. The game's for keeps then--I guess in a way this one was too...Bartender, another round if you please. Well Greg, how's the wife and kids?"



# TIPS

It is easier to be wise for others  
than for ourselves.

La Rochefoucauld

## FOILED AGAIN

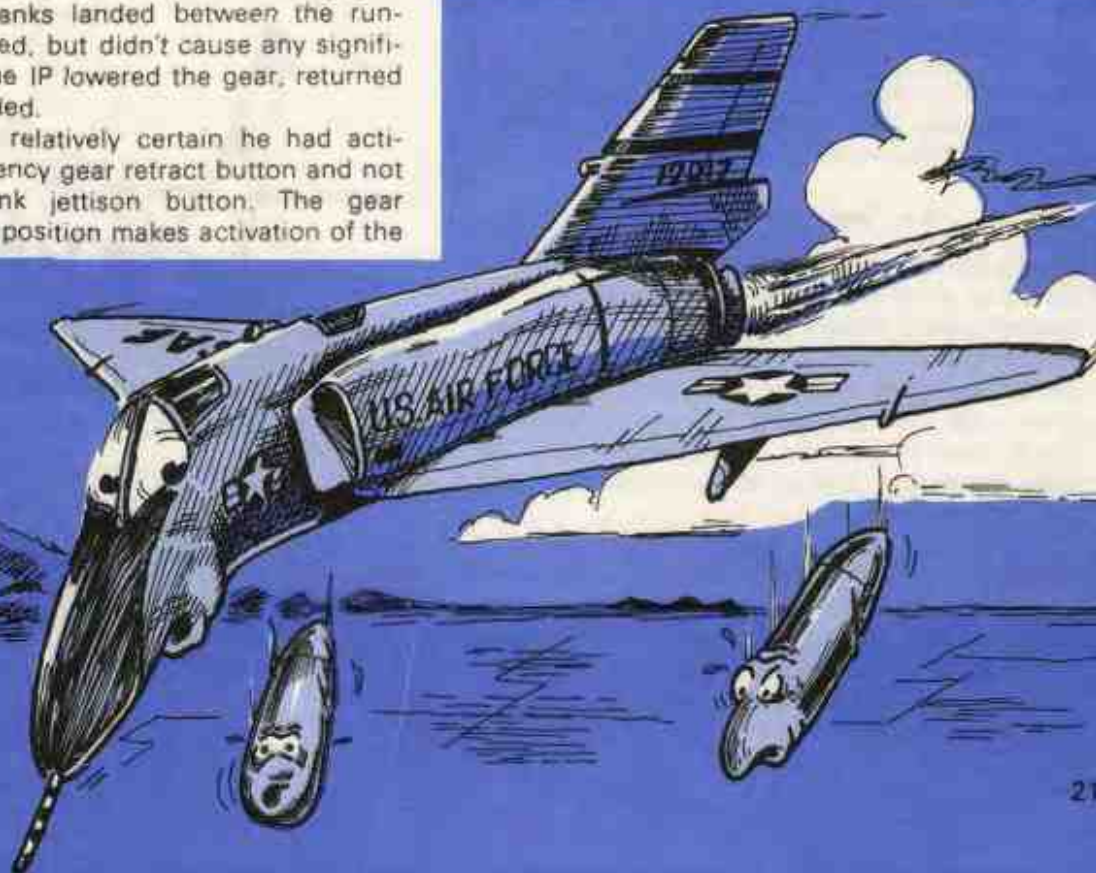
After the initial takeoff for an F-106 student training mission, the IP in the front cockpit raised the gear handle but the landing gear did not retract. IAW checklist procedures, the gear handle was left up and the crew flew by the RSU for a visual check. All gear and gear doors were confirmed down. The IP moved the gear handle down and received an instantaneous three gear safe indication. The handle was again raised, but the gear did not retract. After waiting about 10 more seconds for the gear to come up, the IP pushed the emergency gear retract button. When the button was depressed, both external tanks departed the aircraft and the landing gear retracted. The tanks landed between the runways and ruptured, but didn't cause any significant damage. The IP lowered the gear, returned to base, and landed.

The pilot was relatively certain he had activated the emergency gear retract button and not the external tank jettison button. The gear handle in the up position makes activation of the

...interest items,  
mishaps with  
morals, for the  
TAC aircrewman

external tank jettison button more difficult since the button is directly above and behind the gear handle. But, the jettison button did not have a plastic film installed around the jettison button guard as is normal procedure. Lack of the plastic film was noted in the 781.

At any rate, the only discrepancy maintenance investigators could find was a bad microswitch in the left main gear. Two causes for the jettisoned tanks were postulated. The pilot may have pushed the jettison button and the tanks struck the gear doors, jarred the microswitch and the gear came up; or an intermittent electrical malfunction in the tank jettison/emergency gear retract circuitry could have allowed simultaneous signals to both systems. Neither possibility can be ruled out.



# TAC TIPS

## GET THE HOOK

By Maj Wayne Skora  
HQ TAC/SEF

The weather is bad and all the aircraft have been recalled. You just barely got airborne so you're still at high gross weight. You can't dump fuel because if the field really crumps you won't be able to make the alternate. You're on final now and getting close to minimums and you can't even see the approach lights. Just as you hit minimums, there it is; you can make it. You make a last minute adjustment to line up and land a bit long and fast on the wet runway. No sweat, you figured as much. Down goes the hook. If you stop in time, fine. If you can't slow her down--well that's why they put cables on runways. . . .

★★ ★★ ★★ ★★ ★★

How about another scenario. It's VFR, the mission is over and you're down near minimum gross weight. Fuel isn't really tight, but could be if you have to go around from this pattern. While trying so hard to make a good pattern, you didn't realize that you had a quartering tail wind around the base turn. You roll out on final high and fast--can't correct it before touchdown and you land long, fast and mobile comes up on the radio and tells you you're "no chute." You step on the brakes but don't feel much of any deceleration. What happened to the brakes? The end of the runway is coming up fast. What now?

★★ ★★ ★★ ★★ ★★

Let's review the situation: fast, a streamer or no chute at all and possibly no brakes/antiskid. Probably your brakes and antiskid are working normally, but you're too fast to feel the antiskid cycle. You'll feel it as soon as you slow down a little more. Or, you have lost your brakes and you'll need to use the emergency system. But with emergency brakes at high speed, it's very easy to blow the tires.

Best course of action? Same as number one--get the hook down. When it's wet, rainy, snowy and IFR, everybody thinks about the hook. How come no one thinks of it when its VFR and a million? We've had too many aircraft go off the runway with blown tires because the pilot thought of the hook too late--or not at all.

It's easy enough to bring the hook up if it isn't needed. What's hard to explain is why you went off the runway. Don't be timid about using the hook to stop the aircraft. After all, that's what it's there for. It's cheaper to reset the barrier than it is to pull your aircraft out of the mud--and a lot less embarrassing!

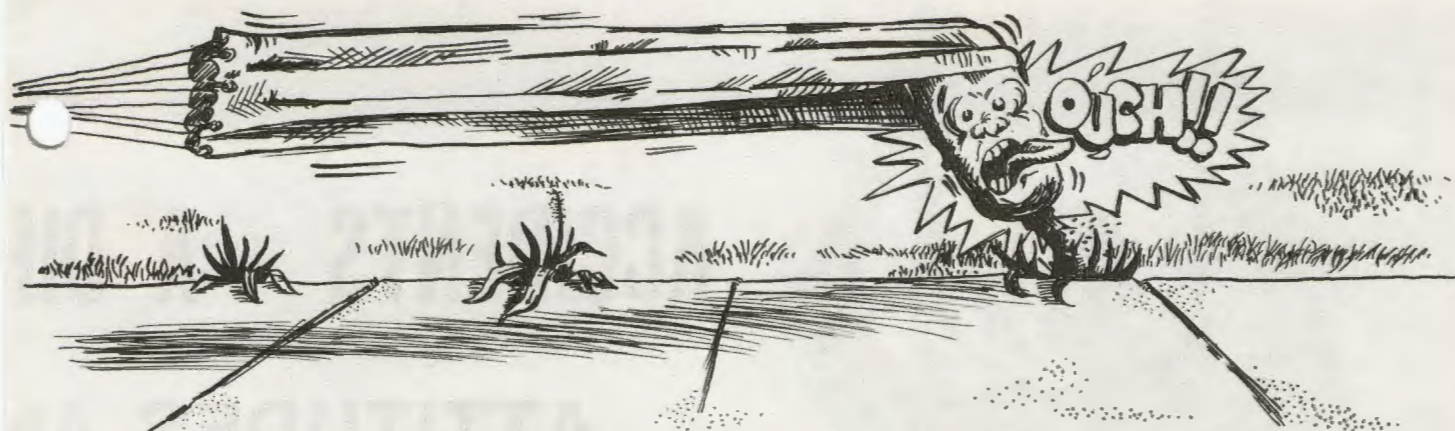
## F-105 WHEEL FAILURES

By Capt Gary Porter  
HQ TAC/SEF

We've had a rash of wheel rim failures in the F-105 lately. The cause has been traced to annealing of the rim due to heat buildup. Repeated hot and cold cycles weaken the area. Failure usually seems to occur during taxi--while turning and thus putting side loads on the wheel structure, although some failures occurred during straight-ahead taxi. The problem is being investigated by the depot and the wheels are being inspected at every tire change.

How can you, the pilot, help out? The general principles used to avoid hot brakes should help. Avoid prolonged braking. Reduce taxi speed to the minimum practical before making large or sharp turns. Any way you can reduce heating of the wheels will help until a fix is available.





## **SCORE: CHUTES-1 LIGHTS-0**

The Phantom was on a cross-country and had landed at one of its stopover bases. Tower controllers asked the crew to retain the drag chute. After they had turned off the runway, the crew had to make a 180-degree turn on the 75-foot wide taxiway due to construction. During the turn, the partially inflated chute became entangled on a taxiway light and broke it.

The fully inflated drag chute extends 45 feet behind the stabilator--that's a pretty good distance. If you must taxi with the chute hanging there, make sure you give yourself room all the way around, not just ahead of you. You never can tell what you're gonna pick up.

## **WRITE IT UP!**

The F-4 had a recent history of problems with the rear canopy. On one flight, after the canopy was down, the stripes were misaligned by one inch, and the canopy unlocked light remained on. Corrective action was to replace the canopy seal pressure regulator. This apparently corrected the stalled canopy condition, and the aircraft was released for flight.

The aircraft flew 15 times the next 3 days without incident. On the 17th sortie, the canopy stalled again with the same indications as before. The canopy was recycled and a good "down and locked" indication was received. No other problems were noted, and the aircrew flew the aircraft but made no entry in the 781 concerning the canopy.

The next day, during continuing surge operations, on the fifth flight of the day, the rear canopy departed the aircraft as afterburners were deselected on takeoff. The WSO does not specifically remember checking the stripes aligned, but both crew members were sure the unlocked light was out.

While the failure of the earlier aircrew to enter their canopy problem in the 781 did not cause this incident, their failure did contribute to the ultimate outcome. Maintenance personnel are not magic. They find it very hard to fix something they don't know is broken.

## **AIN'T THAT SLICK**

**By Capt Paul L. Rogers  
23 AD/SE**

You've been patiently waiting for the winter storm to clear at Cold City Muni so you can leap off from Far Away AFB to return home. Last week you coordinated with the Air Guard Ops at the field to provide you with friendly gas service and send you on your way. Finally, the forecaster tells you what you've been waiting for. For your arrival, weather will be clear with a 12-knot crosswind component, no sweat. All is well until you contact the tower at Cold City.

"Runway 09 in use, winds 360 at 14, RCR is eleven, say intentions," the tower calmly replies to your call.

The National Weather Service (NWS) provides airfield weather at our civil airfields including joint use fields such as City of Colorado Springs Muni, Colorado, and Duluth IAP, Minnesota. The NWS does not transmit RCRs as part of its weather reports to other stations. You or the forecaster at Far Away AFB might assume since no RCR is reported for Cold City Muni (a joint use field) that the runway is dry. The only way to know for sure is to call Base Operations at the field you plan to visit. In the IFR Supplement some fields tell you how to get the RCR, while others don't give you any warning that you may be misled by the lack of an RCR from the forecaster. If there's any chance of an RCR and you're planning to stop at a "P" field, you'll be best advised to call ahead for the current RCR.



# ACCIDENTS - A DIFFERENT ATTITUDES AND PRIORITIES

The word "accident" is defined by the Merriam-Webster dictionary as "an event occurring by chance or unintentionally." Simple and adequate. The key word is "unintentionally" because nobody in his right mind intends to bash his airplane, and most people spend a great amount of time and effort avoiding being party to an accident. But, if statistics indicate anything, it's apparent that a substantial number of pilots get caught short in the avoidance part.

It's important that we recognize that no one has a "no accident" mission. We're trash haulers, dirt disturbers, stratosphere streakers, etc; but a "no accident" condition is a by-product of successful mission accomplishment. And that mission is not really successful if we lose an aircraft and/or crew in the process. We expect combat losses, but training losses are hard to take.

Attitudes and priorities are the important aspects of mission accomplishment which get pushed aside too often. A recent article in "Business and Commercial Aviation" magazine suggests accidents and incidents involving high-time pilots can be attributed to inattention. A "head up and locked" condition wherein the pilot doesn't recognize a precarious position. "Complacency" doesn't fit because it means "self-satisfaction" and being satisfied with one's performance is not the problem nor the cause of a crash. "Inattention" appears to be apropos. But "inattention" doesn't seem to explain the formulation of an accident. Let's examine priorities.

If the mission is a practice low level navigation sortie and the aircraft is flown into the ground, something has gone awry. If the plane was functional when the crash occurred--then the cause

**By Maj Wiley E. Greene  
162 TFTG (ANG)  
Tucson IAP, AZ**

*Yesiree, that's what it was, an accident--pure an' simple. The air machine was OK accordin' to them flyin' fellers and they said he knew what he was doin, but the air went real still and he sorta fell outa the sky. Somethin' about a "downwind turn"...*

*Well, Old Chap, it's really quite simple you know, the aircraft just didn't have enough wind on the wing to maintain flight. Birds can flap their wings you know, but aeroplanes... A shame, really...*

# DIFFERENT APPROACH TO PRIORITIES

is pilot oriented; i.e., the pilot was faced with a situation he could not handle or did not recognize. Getting into a predicament of having the ground climbing faster than the capability of the aircraft is a good example of not being able to handle the situation, BUT IF THE PILOT WAS ABLE TO EJECT AND DIDN'T, WE THEN HAVE A CONDITION OF MISPLACED PRIORITIES.

There is no question any pilot can make a mistake, an error in judgement which causes a crash. But making an error in judgement implies conscious thought--decisions are made and one or more are in error. But once the error is detected SURVIVAL SHOULD BECOME THE FIRST PRIORITY! In an aircraft equipped with an ejection seat, survival is enhanced by the use of the ejection system and is degraded by not using it. If the error is not detected, the probability of a catastrophic crash (the loss of an aircraft and crew) becomes quite high. Why wasn't the error in judgement detected or corrected? Misplaced priorities.

If a pilot concentrates on a bomb delivery to the extent he is unaware of dive angle or air-speed or ground proximity, then the priority of survival has been removed from first place. If a pilot attempts to reach a destination with insufficient fuel, then misplaced priorities have been manifested. If a pilot is flying close to the ground and allows his attention to wander, then the priority of survival has been replaced by something else. The priority of survival may share first place, but should never be relegated to another level of attention.

There are some who will say risk is part of the business and they couldn't get the job done if all they thought about was crashing--and they are right. The idea is not to concentrate on survival,

but to be aware of the need. We do not have enough resources to accommodate one-way trips. Aircrews are expected to return, but it is apparent insufficient priority is given to that task in the name of "mission accomplishment." The NEXT mission is not going to be accomplished if you are not around. "Safety is paramount" is just a hackneyed expression which means this sortie is no more important than the next one and your warm body is important.

Who is responsible? The nut on the controls--because the brain behind the hands knows the task of the moment. The individual must accept responsibility and recognize his survival is never less important. A regulation gives you clearance authority--your good sense gives you longevity. Think about it.

# DOWN TO EARTH

## HOW'S YOUR FIRST AID ?

The following appeared in the November 1979 National Safety Council Aerospace Newsletter...

"A Michigan man bagged a deer on the second day of the hunting season and took it home to dress it. His seven-year-old son stood by and watched as the man hung the deer in the garage and started to work on it. The boy picked up a skinning knife to help, but the blade slipped on the tough hide and slashed deep into the youngster's knee.

"The man put his son in the car and headed for the nearest doctor. The 14 miles seemed to stretch on forever. When he finally arrived, the office was empty; everyone had gone home for the day.

"Frantic now, the father pushed the accelerator to the floor and sped to the nearest hospital, half an hour away. His son was no longer crying, but lay quiet on the seat beside him.

"At last he pulled up at the hospital. A nurse opened the door, and the father carried his son

into the emergency room and laid him on the table. Relieved that help was finally at hand, the exhausted man dropped into a chair in the waiting room. At that moment the doctor appeared in the doorway. He just stood there, shaking his head. The father was paralyzed with fear.

'How is he?' he asked.

'Your son was dead on arrival,' the doctor replied. 'He bled to death along the way.'

"The distraught father probably could have saved his son's life just by applying a pad or gauze or a clean handkerchief to the cut, wrapping the knee firmly with a strip of cloth, and having the boy lie down with his leg propped up.

"But like so many of us, he felt helpless in the face of a medical emergency--ignorant of what to do, or afraid that he would do the wrong thing. So the boy died.

"Many of us have been led to believe that saving lives is a complex task that should be left to the medical profession. But this is not always the case."

There are so many sources of first aid information it seems impossible that a majority of people are helpless when faced with a situation such as this. Scouting organizations, Red Cross, YMCA, and YWCA all have first aid programs. Many police and fire departments offer the same services. In most cases, the investment required is a few hours of your time. The return on that investment can be priceless.





## A TOTAL LACK OF COMMON SENSE

An airman was TDY at a southern base for a joint forces training exercise. While he was there, he was given two M-116A Hand Grenade Simulators by one of the participating US Army Special Forces personnel. After the exercise, the airman brought the simulators home and stored them in the trunk of his car.

A few weeks later, while driving with an NCO friend, the airman decided to ignite both simulators in a wooded area. Their first attempt to set off the simulators by pulling the ignition cords failed. The airman then pulled the fuse out of one of the simulators with a pair of pliers. Unable to determine the condition of the simulator, he threw it on the ground. Upon impact, some photo flash powder was expelled from the simulator.

Using an automobile cigarette lighter and a piece of tissue paper, they attempted to ignite the powder but failed. The NCO then reignited the tissue while the airman poured photoflash powder over the flame. This time, they were successful.

The NCO received first and second degree burns to his face, chest, arms, and hands. The airman received the same burns to his right hand and arm.

I don't think I need to say anymore about handling unfamiliar munitions other than--DON'T!

## HOW NOT TO KILL A BUG

Recently an individual used three automatic aerosol indoor foggers to rid his home of roaches. He activated all foggers in one room and departed the house. A few minutes later there was an explosion followed by fire. The house sustained extensive damage due to the explosion, plus minor fire damage to the kitchen area.

Investigation revealed that the aerosol propellant was a mixture of propane and isobutane, both highly flammable. This type of propellant has been extensively used since the recent ban on fluorocarbons. The user had missed the small print on the container that directed him to "extinguish all flames and pilot lights prior to using."

Close examination of the manufacturer's label listing the ingredients will not always indicate the percentage of propane-isobutane. Many simply state a percentage of inert ingredients. In the explosion described, the three cans contained 20.4 ounces of inert ingredients (propane-isobutane). Many household aerosol products contain 80 to 98 percent propane-isobutane; e.g., shaving cream, hair spray, insect repellent, deodorant.

With the increased use of this highly flammable aerosol propellant each individual should follow the manufacturer's directions and/or warnings. When in doubt as to the contents, the best practice is to treat the aerosol product as though it contains a flammable combustible.



# TACTICAL AIR COMMAND

## GROUND SAFETY AWARD

Technical Sergeant Samuel H. Wimbley, 23d Equipment Maintenance Squadron, 23d Tactical Fighter Wing, England Air Force Base, Louisiana, is the recipient of the Tactical Air Command Ground Safety Award of the Quarter for the fourth quarter of 1979. As Additional Duty Safety NCO, Sergeant Wimbley initiated a vigorous and informative ground safety program which promoted better participation and increased safety awareness throughout the squadron. As a direct result of his conscientious efforts, new ideas were developed during the safety meetings which made many improvements and led to the squadron's excellent ratings in ground safety inspections and Management Effectiveness inspections. Sergeant Wimbley's dedication and personal involvement in mishap prevention reflects credit upon his unit and Tactical Air Command.



TSgt Samuel H. Wimbley

## INDIVIDUAL SAFETY AWARD

Staff Sergeant Paul W. Leib, Jr., 363d Equipment Maintenance Squadron, 363d Tactical Reconnaissance Wing, Shaw Air Force Base, South Carolina, is the recipient of the Tactical Air Command Individual Safety Award for March 1980. Sergeant Leib is assigned as Assistant NCOIC of the Fuel System Repair Section. When the cause of a recent Class A flight mishap was determined to be a leak in a fuel vent line, he identified a new method to conclusively test for fuel leaks in aircraft pressurization and vent manifold lines. This resulted in a change to technical data which will be used for inspections Air Force-wide. Sergeant Leib's strict adherence to safety procedures and his outstanding performance in all aspects of his duties have contributed substantially to the safe accomplishment of the Air Force mission.



SSgt Paul W. Leib, Jr.

# SAFETY AWARDS

## CREW CHIEF SAFETY AWARD

Staff Sergeant Johnnie L. Quarterman, 481st Aircraft Maintenance Unit, 27th Tactical Fighter Wing, Cannon Air Force Base, New Mexico, is the recipient of the Tactical Air Command Crew Chief Safety Award for March 1980. Sergeant Quarterman demonstrated a high level of technical knowledge and troubleshooting ability in undertaking the enormous task of returning an F-111 that had been grounded for 19 months back to fully mission capable status. As a result of his tireless efforts, his aircraft is now among the top five high flyers in his unit. In addition, his sound judgement and decisions contributed significantly to the accident-free record of the 481st Aircraft Maintenance Unit.



SSgt Johnnie L. Quarterman



Dear Editor,

Major Tilden's article in October 1979 TAC ATTACK credited MCAIR pilot Irv Burrows with developing that world-famous "alternate" out-of-control procedure for troubled airplanes. While Irv has used the procedure and vouches for it, the first airman to enumerate the steps was also a McDonnell pilot, Don Stuck, and he developed it for use in the early '60s.

## LETTERS

Mr. Stuck recently "bought the farm"—happily, in the right way—200 acres of mid-Missouri black Angus pastureland that he first spotted some 20 years ago during a Phantom test flight. He retired last August after a long and rewarding Air Force/MCAIR career punctuated by only a few of those infamous moments of stark raving terror. He often attributed his felicitous longevity to an ingrained habit of doing his own thing, while he let the airplane do its. It was from that habit which developed the following procedure for getting the pointy end back down, listed here in its five-step entirety:

1. Put feet on floor and spread knees wide apart.
2. Look at manual cabin temperature control switch and place right hand on same.
3. Look at drag chute handle and place left hand on same.
4. Look outside—if aircraft is flying go immediately to Step 5. If aircraft is still in incipient gyration pull drag chute handle.
5. When aircraft recovers, return right hand to stick.

# LETTERS

I thought Don would be pleased to know that younger generations of jet drivers were still heeding his wise words, and sent him a copy of Major Tilden's discussion. He took time off from his busy retirement schedule ("job jar" is full for the next ten years, according to his wife M.L.) for a few comments that may be of interest to you who are doing today what he had so much fun doing yesterday:

"... Thanks for the article on 'Recovery From Unusual Attitudes.' The story never really changes from one aircraft to another—they're all governed by the same basic laws of physics and aerodynamics, and none are designed to strive for out-of-control conditions. If pilots understand and work with the characteristics (good and bad) of their aircraft, they can easily stay out of trouble or know what to do if they exceed prudent limits.

"The 'tongue-in-cheek' (but effective) out-of-control procedure that Major Tilden recalls works equally well on the F-101, F-4, or for that matter on any aircraft that is 'tender and touchy' in the pre- and post-stall areas, because in most cases the inherent aircraft forcing functions are tending toward recovery control; and chances are that a pilot with 'less than a surgeon's touch' on the end of the stick can drive the aircraft deeper into trouble, where left to its own devices (last trim position and stick-free conditions), the aircraft will almost invariably initiate recovery on its own . . ."

Incidentally, your readers may be happy to learn that, even though MCAIR's F-4 production line finally closed down after some twenty years and 5195 copies, our publication (PRODUCT SUPPORT DIGEST) will continue to complement yours with discussions aimed at Phantom Phlyers. As a matter of fact, we think there should be "Phantoms Phor-ever," and Chief Test Pilot Jack Krings and all our other MCAIR flying authors are currently reviewing their previously published F-4 articles for republication as a hard-bound book bearing that title!

Nade Peters, Editor/PSD  
McDonnell Aircraft Company

Dear Mr. Peters,

Thanks for the feedback. I know many TAC personnel are familiar with the fine work of Don Stuck, Irv Burrows, and Jack Krings, not to mention the Product Support Digest. Our thanks for your superb publication, and I know I speak for many in wishing Don Stuck the best in his future endeavors.

Ed

Dear Editor,

Just a note to you guys at TAC ATTACK in response to your December 1979 issue.

First off, you guys do good work—and us guys really appreciate it. I personally appreciated the "centerfold" tribute to the ole F-100. I know there are a lot of us old Hun Jocks that were stirred by it.

Secondly, I am happy to announce that not only is the F-100 not forgotten, she's not gone. She has a new mission.

F-100D 56-3414 left Davis Monthan AFB for Phoenix-Litchfield Airport, Arizona, September 1979 to undergo modifications to change her into a QF-100 Full Scale Aerial Target. At present Sperry Flight Systems has five F-100's (including one unmodified family model to be used as a trainer). Another five are to be delivered between now and March 1980. The last of the five will be 56-2979, the 181 TFG's (ANG) last D which was delivered to Davis-Monthan in November 1979. The remaining 290 will be modified between 1983-1989.

As TAC's only remaining F-100 pilot, I hated to see the Hun end an operational career. However, she'll be around training our fighter pilots through 1993.

The DT&E/LOT&E of the QF-100 will begin in January 1981 here at Tyndall AFB. Between now and then, don't be surprised if you hear or see an F-100 or two winging around the airspace and the traffic pattern. And a final word to all—CHECK SIX FOR HUNS!

Major Bob Dunham  
ADWC TEO

Dear Major Dunham,

I'm sure some old Hun drivers might not appreciate the new mission of the aircraft. Everyone probably feels that it's just not the same unless there's a man in it. I'll bet you could even find a lot of Hun drivers who might do the drone job for nothing—if they could shoot back.

Ed

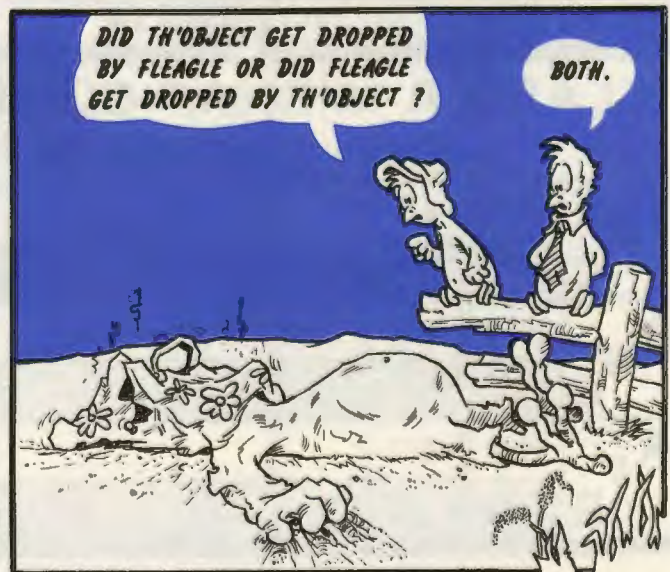
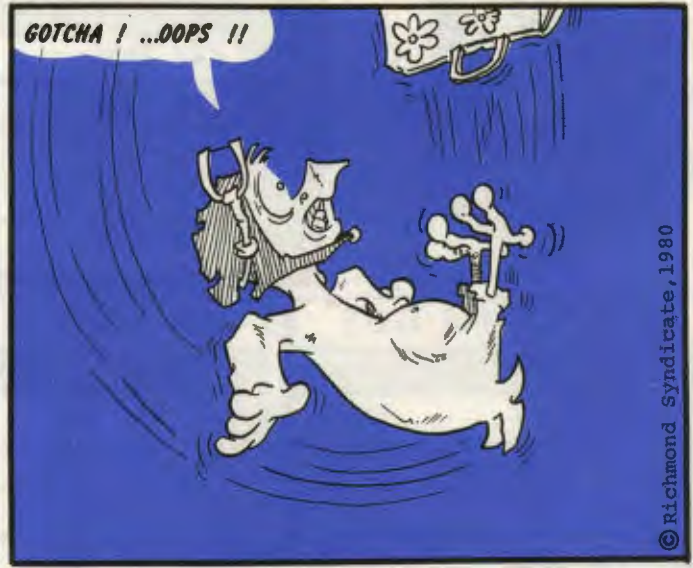
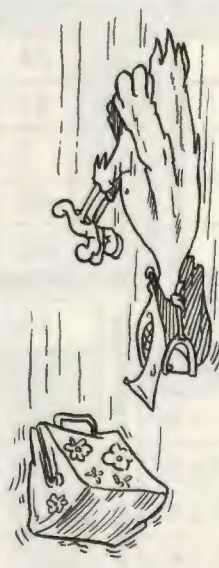
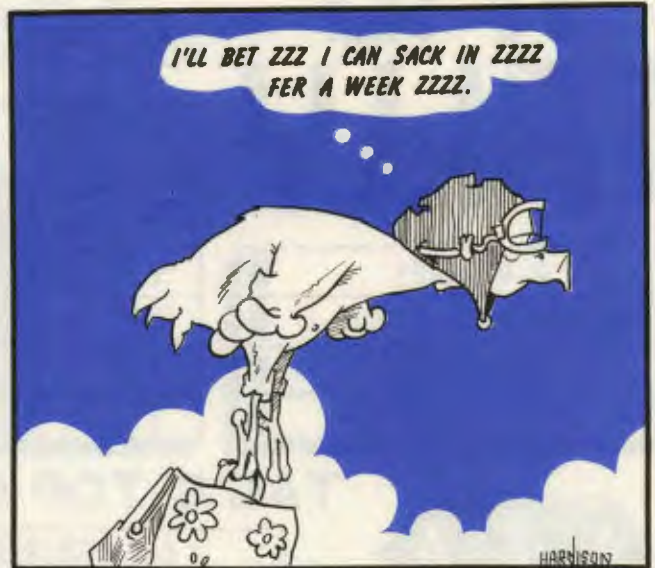
## CROSSWORD PUZZLE FANS

In case you haven't already noticed, the February magazine's crossword puzzle had a few minor errors. Number 66A should be 65A—but I was certain you'd figure that out. Number 14D was omitted—that's a bit tougher. The clue for 14D is "TNT" Contest deadline has been extended to 30 April. For those of you who solved it even though the clue was missing—ATTABOY!

Ed

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**FLEAGLE**



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