

APRIL 1963

TAC ATTACK

TAC attack April 1963 Drop for 22 (Sir)

DAP



DROP for 22

(SIR)

TAC ATTACK



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COVER PHOTO

A 479th Tac Fighter Wing F-104
lifts off at George AFB, Calif.

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The little things mean a lot

angle of attack

During the Korean conflict the MIG 15 and F-86 were quite well matched. Altho the MIG was not quite as fast, it had a higher service ceiling and could out climb and out accelerate an F-86. Similarly, the MIG cannon lacked the rate of fire that our .50s could produce, but fired large enough projectiles to compensate. A direct hit from their cannon could tear quite a hole.

To gain an advantage, we who flew the F-86 used to make certain our aircraft were rigged to perfection, ball centered. We set the engines to maintain max allowable EGT at altitude, as well as on the deck. We puttied all cracks and polished and waxed them from stem to stern, including the power take-off section cover and the inside of the intake duct.

Canopies, windshields and gunsight combining glasses received similar tender loving care. Our armament section reharmonized each aircraft once a week, while we followed thru by cocking our aircraft for a fight early in a mission, checking the radar, turning on gun heat and opening windshield defrost a bit so we wouldn't find ourselves in a fight somewhere between 50,000 feet and the deck with faulty radar, frozen guns or an iced windshield.

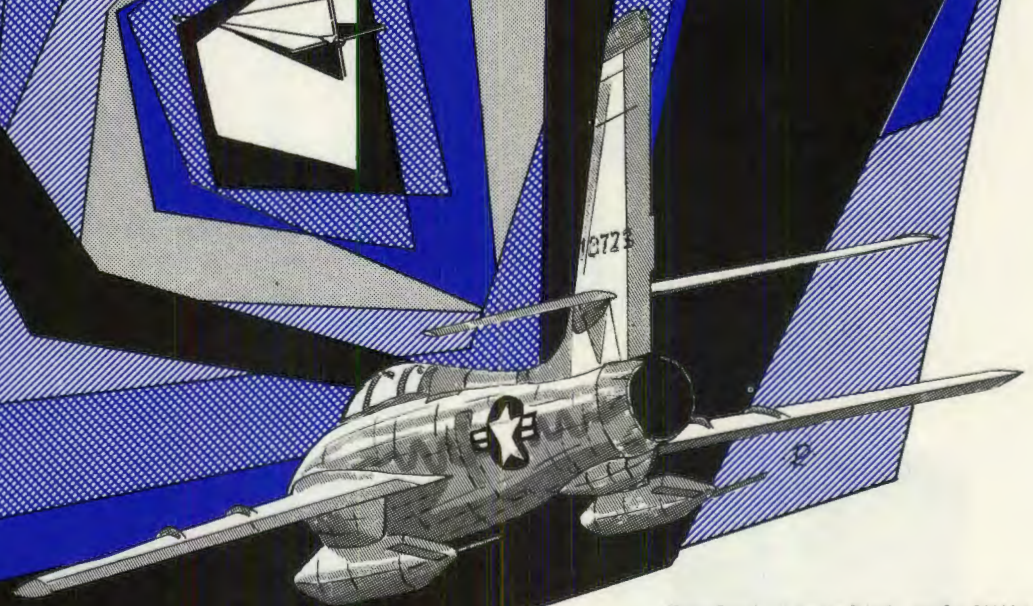
Attention to such details helped make the difference between a good outfit and a superior one . . . the difference between holding the MIGs at bay, and killing them on a 12 to one ratio. The same holds true today.



Colonel James K. Johnson
Chief
Office of Safety

Fascination

fascination



After the accident, this is what the flight leader had to say.

"All four of us had fired at the dart and we were proceeding with the tow aircraft toward the drop area when Black Jack One called and said to drop it in the ocean because the hunt club was riding all over our regular drop area.

"After several attempts, the dart still wouldn't release and we

were told to drag it off in the river near the regular drop area. This is the usual procedure. During our first run, the control tower at the drop area called and said some of the hunt club people might be down by the river.

"Tow took it around and we made a pass down the drop area looking for obstructions. All we found was a boat outside the drag-off area. Number two flew to the left of tow and I took the right. Turning base for the next pass, tow was about 1,000 feet and two was inside and stacked down, flying off

the dart. I was high and a little too far back, trying to catch up.

"About half way thru the turn I saw two's aircraft strike the water and disintegrate.

"I have thought about this accident quite a bit since then. Mainly, because I've chased the target myself on various occasions and once I scared myself badly. I was flying alongside the dart and we were going to drag it off in the water. I noticed the dart hit the water well before I thought it was going to hit. This startled me, because at that point, I was lower than I thought I was.

"I didn't say anything about it because, well, it seemed like I

would be acting like a mother hen . . . ”

Cause of the accident? The pilot became so engrossed with flying formation off the dart he forgot to pay attention to his surroundings . . . he became fascinated. He fell for the same trap that caught the student who was having trouble with his approaches during landing practice. On his last approach, this student concentrated on correcting his troubles and succeeded quite well except that he forgot to extend the gear. He remembered hearing the horn, too, but it didn't break thru the wall.

A more common form of fascination occurs during instrument flight. The slow crosscheck induced by concentrating on one instrument. Heading remains perfect, but airspeed, altitude and procedures all come apart at the seams. This type of fascination can be quite hilarious to a pilot in the front seat when it is being experienced by someone else under the hood in the aft seat. But it can be deadly during weather.

Fascination generally plagues the less experienced pilots because their span of attention is more apt to become overloaded by procedures that are new to them. Older heads have learned to take care of these procedures almost automatically . . . the whole operation remains within their attention span.

The old heads get caught occasionally. Remember the two exceptionally well qualified pilots who flew their F-100F into the ground while watching a formation practice aerobatics?

There was ample evidence to support the board's finding of pilot factor even tho no one wanted to believe the evidence.

One place where fascination

always waits to trap the unwary is on the gunnery range. Usually it catches the inexperienced, like the young second lieutenant who had this to say of his first skip bomb mission in an F-84F.

“We arrived at the range and flew several dry rocket patterns because the range panel was red. On the last run the panel was white and I shot one rocket. We then climbed to 8,000 and tried for high angle bombing. There were too many clouds and the Capt set us up for low angle skip bombing. On my second pass, I was at 2,000 feet on base with about 315 knots, power at 92%. I called ‘Two in white’ and rolled into a turn to final. The next thing I realized, the aircraft was sinking very rapidly and I added power and tried to level it. I felt the aircraft hit various objects which I believed were trees. After recovering I called lead, he came to my aid and we headed for home.”

The lieutenant had less than eight hours in the bird and had logged 36 hours since graduating from flying school . . . small wonder he became so engrossed in trying to get lined up on target that he practically fell out of the sky!

Here's another involving an F-100 pilot with a little more experience . . . a little over 500 hours . . . but much less luck. Let's listen to the range officer. He said, “Number two called rolling in hot and lead asked for a fuel check when he had time. Two replied, ‘4,000 pounds.’ I noticed on base leg he had angled toward the target which put him a little too close in for a normal 45-degree run. He appeared inverted about a fourth the way down final. He did a half roll to get upright at about five or six thousand slant range and held it an instant before he started his

recovery. As the nose started up the left wing started down. The angle of bank increased to about 30 degrees before the aircraft hit.”

Here, our pilot became fascinated with the need to hit the target. This form of target fixation is born of too much determination. Add to it the rolling pull out, which isn't as efficient as a straight recovery, and an accident was assured.

Determination can carry the experts in over their head. Witness the well-experienced captain who followed his rockets into the target during William Tell. The forward air controller described the run:

“He pulled up to enter the rocket pattern in a modified half cuban eight. His dive was very steep, in excess of 70 degrees. He appeared off target and seemed to be aborting the pass, then changed his mind and made a rapid correction to the right and immediately fired his rockets. Until he made this last correction there was adequate time to effect a recovery . . . ”

Trying to salvage a bad run brought him to grief. But it was still target fascination in a sense. He put hitting the target on a higher priority than flying the aircraft.

As a matter of interest, over one third of TAC's fatal accidents in 1962 occurred during gunnery. More than one sixth of the total accidents were on the air-to-ground range. The range is a dangerous place to work. It is no spot for the greenhorn or for the troop who insists on getting a hit at all costs. You, as a pilot, must constantly guard against fascination, particularly on the gunnery range, else it becomes fatal.



IN THEIR CAMPAIGN to make everyone fly more precise and professionally, the troops in STDN/EVAL have forced quite a few people to pay more attention to airspeed and altitude during all phases of flight. This is a good solid program and this tiger has no quarrel with it. However, as a result of this program some pilots have developed a dangerous habit. Instead of gaining the ability to read airspeed, altitude and other instruments with an occasional glance inside the old office, they've taken to gluing their eyeballs on the clocks with an occasional glance outside. This is hardly the way to mind the store and surely isn't the intent of this program.

For a good many years we've enjoyed trying to fly with some semblance of precision . . . even carrying it over into mild acrobatics such as vertical rolls, clover leaves and lazy eights. The eights make a good for instance. We strive for specific airspeeds at top and bottom and tie the eight down further by trying to have 90° bank at the halfway point. To do this properly a fella should fly the eight using a point on the horizon or a straight road for reference and only check airspeed at top and bottom, with possibly one glance halfway between.

Many troops we fly with seem to look at airspeed

all the way around. We deduce this by the way they try to haul the poor bird on around when speed is too high as they approach the top. This is guaranteed to put 'em slow at the bottom and sure 'nuff they'll go straight ahead down hill to try and nail the speed there. This is the backward way of flying an eight . . . and most of these guys could fly more accurate ones if they didn't look in the cockpit at all.

Fighter pilots in particular should keep cockpit scans as brief as possible. It only takes one long look inside during a low-level profile mission to send a fella on the longest trip he'll ever take. With concerted practice, a pilot can get a go-no-go on practically every clock in the office in a fraction of a second. An exception is altimeter readings during climbs and descents. This one just can't be accurately read in a hurry.

Speaking of heads-in flying . . . we just read a near classic from overseas. A tower cleared a flight of four onto the active to hold while two F-105's finished their landing roll.

After the flight got lined up, the leader ran up his engine, checked everything and started his roll. Number two advised that they were not cleared for takeoff. The leader said, "Roge," came out of AB

back to idle and braked to a halt some 200 feet down the active.

Meanwhile, as the story goes, number three observed lead blasting off and dutifully began to count off the seconds. Eight tick tocks later he and faithful four released brakes and went AB! Shortly afterward both observed the first element sitting solid, dead ahead. Three got stopped in time but four couldn't hack the program and had to thread his way between one and two. He was quite accurate and just barely dinged both wing tips.

At the particular base, a pilot can see the full length of the runway, provided he uses his eyes . . . Oh yeah, it was clear and 15, so draw your own conclusions.

IT TOOK an F-105 pilot about 30 seconds to connect his zero lanyard on the new "improved" BA-18 back-pack even tho it was daylight and he was flying alone. He mulled this one over and decided it would create considerable hazard to a pilot trying to fly formation, weather, night, or any combination of the three. He didn't have trouble finding someone to agree. All hands who indorsed his OHR up the ladder did just that, and so do we . . . BUT . . . here in the hallowed halls of higher headquarters we have yet to lay our sticky fingers on the new BA-18, much less get a chance to try out the zero lanyard on it. Action to correct the problem could—and should—have been started by the hard-working, safe-flying people at local level. Each link in the chain should have grabbed the ball and taken it as far as possible before passing it on . . . this gives positive evidence that all hands think the problem is for real, insures a better documented squawk and in general makes it easier for our people here to hammer home the action we all want! Shucks, ain't nuthin' gonna get done if everyone stands around expecting Herman or "Higher Headquarters" to do everything!

INCIDENTALLY, ON THIS zero lanyard bit. If you are ever in an eject-but-quick-or-die situation and suddenly remember that you forgot the lanyard—forget it! Punch out and worry about it later. Whether or not you survive will depend on the time you have available to get your chute open. A connected zero lanyard only buys you one second and it takes faster men than this tiger to hook it, cold sober, on the ground, in less than five seconds.

Trying to hook it in a flap will double that and cost you a fatal ten. Oh yeah, in this sort of situation

you want to try and beat the equipment by reaching for the belt release as soon as possible after blasting out, then kicking or lunging away from the seat and going for the T handle. You'll never beat the auto equipment if it works . . . no one has yet, and one or two have had to go manual or die.

APPROACHING TAKEOFF SPEED, between rotation and liftoff, an F-104 pilot felt his bird tilt slightly left. The bird didn't yaw, it just dropped its left wing a tad. Altho the gear retracted no sweat after liftoff, the pilot decided to have his left tire checked. Sure nuff, when he flew by the tower they confirmed his suspicion - the tire had blown out.

At the pilot's request, the fire department laid a 20 foot wide foam strip, some 6000 feet long just to the right of the centerline. After a couple of practice approaches and with fuel down to 500 pounds, the pilot landed with the left gear in the foam. He used nose gear steering and brake to hold it in the foam and brought the bird to a stop in about 4000 feet, left gear still in the foam. A tip of TAT's old hard hat to 1st Lt Thomas G. McInerney for this exhibition of skill and cunning. And who says you can't feel anything subtle while flying the century birds?



A BUSH PILOT put a tree branch in front of the wheels and propped the engine on his bird into life. It revved up rather fast so he took off for the cockpit but bumped into the pitot tube on the wing strut and knocked himself out. After a bit he came to, staggered to his feet and tried to finish reducing power. He climbed to the step, reached thru the door for the

throttle, slipped off the step and knocked the throttle full open.

The aircraft jumped over the limb, knocked the groggy pilot down with its stabilizer and headed for the woods. Somehow it made a 180 and started back toward him. He scrambled to his feet and beat a hasty retreat to a nearby woodpile where he watched his machine climb airborne and peel off into a wing-over - straight for the woodpile! He wasted no time putting some distance between himself and said woodpile. The bird hit the woodpile dead center and was demolished.

This just goes to prove what we've long known . . . that ya gotta treat aircraft with the same finesse normally reserved for the fair sex. Treat 'em shabby and they'll do their best to get you.



ONE OF TAC's F-105 troops got a surprise the other day. He was flying chase on another F-105 that was ailing. The pilot of the sick bird punched off his 450s before making his ASAP landing. When he did, the right hand tank rolled out from his wing, climbed up hard right and clouted chase squarely on the left wing. It banged up the leading edge flap and knocked chase's left drop tank off.

Chase was flying about a hundred feet to the right and slightly aft when he got clobbered. He landed with no further damage, but the bill was big enough to call it a minor.

The people in the 18th TFW out PACAF way dropped about 10 empty 450s to check the flight characteristics of 'em. And flight characteristics is an appropriate term. They had one tank climb about 1500 feet above the bird that dropped it and then slice out about 2000 feet to the side. When last observed, it was still going up and out.

To date, no one has reported any of these fools flying forward, so it looks like the 105 troops will

have to keep pretty well side by side when they clean up in flight.

THE MESSAGE WE GOT from an overseas command said, "Most probable cause of the accident was that the pilot did not reset elevator trim to zero or turn on booster pumps before making a HIGH SPEED TAXI RUN."

This time it wasn't a century series fighter that hit the dust—tho plenty have during this type operation. Instead, it was a good old Gooney Bird! The old gal leaped off at 58 knots when the pilot turned loose of the wheel. She was trimmed for landing, He added power to sorta tease her back onto the runway, but the left engine didn't want to play (no boost pressure). At that speed she didn't have enough rudder and . . .

Over the years we've heard of several aircraft that were bent or bashed during this type drill. Usually it's because someone gets going too fast to stop or because they don't set the aircraft up properly for the run. To our way of thinking, a takeoff and landing is safer. At least the pilot goes thru all checks pertinent to the operation and can check low-speed taxi characteristics or braking action on his way to the active. It's worth a thought.

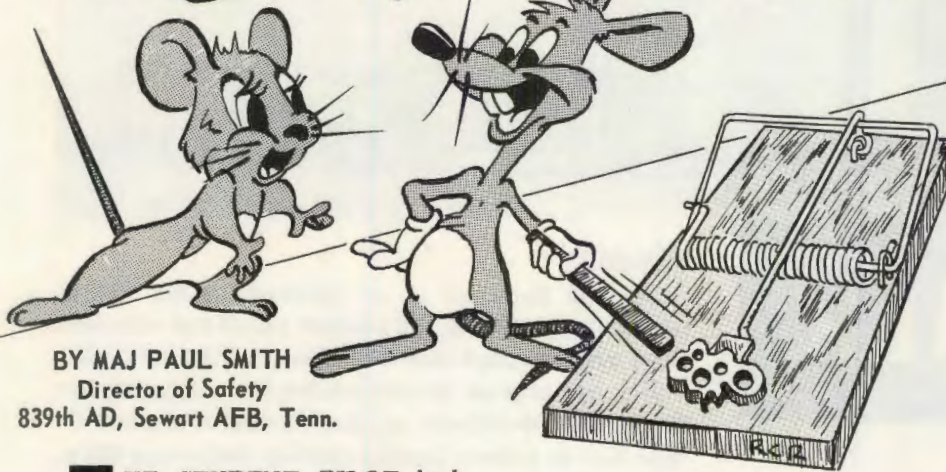
AT LONG LAST those cold fronts have quit pushing out of the north every third day and skies have even turned blue here in Virginia. Grass is green again, birds are chirping courting songs and showing off their bright plumage, their flying skill or otherwise making fools of themselves. Ditto a few of the kids down the street, using roller skates, bikes or the old man's car. Yes sir, 'tis the season when the sap starts running.

Even this ol' tiger feels glad to be alive and thru with winter. Only one thing is bugging us . . . just as sure as we sit here writing this and watching that trim little number breeze her way toward the BX, some good troops will get too enthusiastic with their zest for living and try to demonstrate it in their flying machines. Almost every year one or more of these lads will get carried away, literally.

For the sake of us taxpayers, your wife, kids, girl friend, and the free world -- resist the temptation to do anything on impulse. Who knows, maybe we can get thru the danger season with all of our aircrews and hardware intact and suffering nothing worse than spring fever.

—TAT—

A Better Way



BY MAJ PAUL SMITH
Director of Safety
839th AD, Sewart AFB, Tenn.

THE STUDENT PILOT had been having difficulty with his engine-out work in a twin engine aircraft and the instructor had worked with him for several flights. Just as they broke ground on the last one, the instructor cut the fuel to number two engine. The student - nervous and surprised - feathered number one. Result - two badly injured pilots, a fractured nose for the flight engineer, and another destroyed aircraft.

Another IP - this one flying a single engine trainer with a student - pulled the throttle back turning base because the student was making the pattern too wide. When they attempted to go around, the engine quit. These two walked away from a completely wrecked bird.

A third instance involved a four engine aircraft and a cute IP. On takeoff, he pulled back one throttle just below V-2 speed. The student tried to continue takeoff while the instructor pulled the throttles back. The bird wound up in a ditch off the end of the runway.

Every year we break up equipment and kill aircrew members thru just this type of nonsense. Nonsense? I can see the hackles rising on some standardization

types right now. No, I do not believe emergency procedures are silly. But I do believe that simulating such conditions at low levels is as bad as an actual emergency and creates needless hazards, unless everyone involved knows what is going on.

The human factor is an unknown quantity. If we could be sure of the student's reaction when we create an emergency condition, there would be no problem, but we all know that we can't. I know from sad experience how quiet it can get in a twin engine aircraft. One of my students feathered the right engine in a practice shutdown and very calmly reached up and turned off the left mag. We got one running again after losing about a thousand feet. We had been flying at 8,000 so it was a no sweat recovery. At traffic pattern altitude, it could have been fatal.

What reason is there to practice surprise emergencies? You argue that it happens that way in reality. I beg to differ. Having lost some two dozen engines in the past 20 years of flying, I have yet to have one quit faster than I can pull a condition lever on our present 4-engine birds. The en-

gines have usually wheezed, gasped, banged and generally raised Old Ned before giving up the ghost.

If an engine actually does quit cold at low altitude, you've got a problem, and it seems to me a student would have just as much of a problem if he gets a simulated failure in the same position.

OK, you want to see how an individual reacts to a sudden emergency. Then how about testing his performance in a more appropriate place . . . like the simulator. It will survive all crashes and still fly another day. Another is at altitude. So it isn't as realistic as at traffic pattern altitude, but it sure is a lot safer and that's the purpose of this article.

I don't advocate that we should preclude all engine-out operation at low altitude, but I do think that we should explain to the student what we intend to do. This prepares the entire crew for the simulated emergency, and from that point on an engine-out go-around can be made with a minimum of problems. We can even practice simulated engine loss above minimum control speed on takeoff with reasonable safety.

We don't actually have to simulate a failure either, but can practice this type work by telling the student that he has just lost number one engine, all electrical power, or a generator, and then time his reaction. Proves just as much without putting him or the aircraft in a bind.

All in all, it boils down to this. You can't be certain how your student will react on any given day when you put him in a bad situation. It's your neck if he makes a mistake, so why not save the surprises for the grading sheet.

CHOCK TALK



MIGHTY STRONG DRAG CHUTE

An F-100 pilot was on a formation cross-country when the rest of the flight suddenly ran off and left him. He checked his instruments and found that he had flamed out. He made an airstart using the emergency system but the aircraft still wouldn't accelerate and the pilot noticed then that the drag chute had deployed. He couldn't jettison it or tear off so he landed the aircraft at an enroute base. This pilot was lucky! Had the chute deployed at liftoff, the salvage yard would probably have had an increase in business.

Proper drag chute installation is important and pilots and crew chiefs both should remember this when they preflight.

LANDING GEAR

A T-33 pilot could not lower the left landing gear with either normal or emergency methods. He made a wheels-up landing on a foamed runway and the aircraft was substantially damaged. Investigators found the left landing gear inner door locked closed and the inner door actuating cylinder bolt, nut and cotter pin missing. The actuating cylinder bolt fell out after the nut vibrated off—apparently someone did not install the cotter pin following a periodic which was completed three hours prior to the accident.

PRETTY CRUDE

It really happened! A T-39 lost all the oil from the left engine during an operational flight. When it landed, someone from maintenance said, "We figured this would happen pretty soon, it's been using more and more each flight." This is maintenance?

FAN MAIL

Master Sergeant H. L. Uffelman of the 4505th Air Refueling Wing DM section called our attention to an error on page 13 of the February TAC ATTACK. The alert sergeant pointed out that there is no Section IV in T O 00-35D-54 and that Section II of the T O tells how to submit Quality Control Deficiency UR's. Normally this type UR is submitted only when safety is a matter of concern. We tip our hat to Sergeant Uffelman and in the meantime have requisitioned a new 00-35D-54.

MUNITIONEERS

In TDRs and URs on page 13 of the February TAC ATTACK, we said that T O 00-5-1 tells us to use the AFTO Form 22 to report deficiencies in official copies of publications. This is correct, but TAC DMEMA wants to make sure that you send Form 22s on dash 16 and dash 33 munitions loading publications to TAC Loading Standardization (DMEMAS) so they can review and evaluate them. DMEMAS will then send 'em to the proper AFLC agency.

HOW DO YOU FEEL?

The Directorate of Aerospace Safety sent out a message recently, telling about a T-33 unit at an overseas base that has operated for more than a year without a broken bucket or shroud ring seizure. They make daily checks of shroud ring clearances using a feeler gage in accordance with the dash six. It doesn't take much extra work, because the BPO requires someone to enter the tailpipe to rotate the turbine wheel and the feeler gage check can be made at that time. The unit found and replaced several warped shroud rings and stretched buckets before they progressed into inflight failures. The Director of Aerospace Safety has recommended that OCAMA include the feeler gage check as a required item in the BPO.

BRIGHT SPOT

The 4529th OMS at Nellis AFB wants to leave nothing to chance! They've developed an especially good training program for F-105 crew chiefs where they conduct after duty ground school sessions on taxi and run-up procedures. Those who attend the school are given one hour of training in the F-105 simulator. This helps to give them a better knowledge of cockpit, start and taxi procedures. We think that it is an excellent program and a good example of a professional operation.

A SWITCH IN TIME

Maintenance personnel sometimes leave aircraft cockpit switches in the wrong position after they've performed maintenance or moved the aircraft. This is like setting a booby trap, and can result in serious injury to someone or at least damage an aircraft. It's also a good reason to use a checklist. A case in point is the crew chief, who for some unknown reason, put and left a T-bird gear handle up. The pilot didn't check it down before he started the bird and the nose gear promptly collapsed. Luckily, no one was injured and the bird was only slightly bent.

PLUGGED

Picture several bins filled with the bright yellow, high visibility plastic plugs used to protect disassembled oil, fuel and hydraulic lines from contamination. Each plug is threaded on one end to fit the female section of a B-nut of corresponding size, and has a flat flange on the other end to provide a finger hold and to show that the line is protected.

Simple little devices and everyone thought there was only one way they could be installed. Then, during an engine change, someone used plugs of the wrong size. The outer edge of the flange on the plugs was small enough to fit inside an oil line removed from the oil cooler. The threads were disregarded and one plug was pushed into each end of the oil line, well out of sight.

Whoever hooked up the oil cooler wasn't very sharp either. He neglected to make certain the line was open and clean.

Fortunately, the filter and pressure gage were installed in the return line. When the engine was started, the pressure went to 40 pounds, instead of stopping at 10, and the mechanic in the cockpit shut things down. The offending plugs were removed, after a bit of a search, and everything was "Go."

Nothing was damaged but the reputations of two mechanics.

TAC ATTACK

BLOW BACK

An F-105 test pilot aborted because he could blow back thru the oxygen hose without any resistance. If the crew chief had checked the oxygen flow indicator and emergency control as required by the preflight work cards, he would have discovered the discrepancy and could have corrected it before scheduling the test flight. Just one more reason to use work cards... they're designed to prevent such occurrences.

FOR SAFETY OFFICERS

The Navy has just distributed an audio/visual presentation which shows the cause of most maintenance errors in reciprocating aircraft, and gives recommendations to help control these errors. To show the serious result of some simple errors, they've included examples of maintenance induced accidents. If you are interested, and there is a Naval Air Station close by, you might be able to borrow the presentation for a maintenance type safety meeting.



NO SMALL POINT

"Seems hard to believe," a test pilot at one of TAC's better bases complained, "that all the items I find on my walk around inspections day after day all year long are deep dark secrets that only I know about. Crew chiefs and flight line people seem to have lost interest in a lot of the finer items. If you take care of the little things the big ones tend to take care of themselves."

QUESTION OF THE MONTH

The most common reason for fasteners (nuts and bolts) to fail is:

- | | |
|------------------|--------------------|
| (a) Under torque | (c) No safety wire |
| (b) Corrosion | (d) Over torque |
-
-



SEG NEWS

4450th Standardization Evaluation Gp.

KNOW YOUR STDN EVALUATORS

Lt Col Devol Brett was commissioned in the U.S. Army Air Corps from the United States Military Academy in 1945. He has an extensive background in tactical fighter operations having served in the 79th, 86th and 18th Fighter Groups and in the 20th and 354th Fighter Wings. After a combat tour in Korea he flew F-84s at Luke and then went to the United Kingdom for exchange duty with the RAF. Colonel Brett is a proponent of the policy that standardization is not stagnation and continually seeks out new ideas, procedures and techniques that will provide a better and safer operation.



LT COL DEVOL BRETT
Deputy Commander, 4450th Stdn/Eval Gp

A SYSTEM FOR SUGGESTIONS

The combat-ready line pilot or crew member in TAC operational units throughout the world is the best overall authority on his particular weapon system because he physically works with that system every day. This statement may surprise some people and they'll ask, "What about Stdn/Eval; aren't they supposed to be the experts?"

The answer to that is an unequivocal "YES." Stdn/Eval is the focal point for any questions pertaining to aircraft employment procedures. The Stdn/Eval aircrew member normally has years of experience in his particular weapons system as a combat-ready crew member in a TAC squadron; however, the SEAC at wing or TAC level is the first to realize that he does not have a corner of the

market on grey matter. Many times better ideas come from bright young troops who think up a new approach to an established procedure. Therein lies the reason that Hq Air Force is now interested in TAC's system for suggestions.

This brings us to the 847. What does "847" mean? It might mean that you are 47 minutes late for 0800 work call. It might mean that there are eight Douglas swept-wing racers parked in front of Base Ops. Or, it might mean that Air Force has put out another form. The last assumption is substantially correct, but AF Form 847 is not just another form. It is the aircrew member's key to the inner sanctum where the headquarters types improve flight manuals, operational procedures manuals, grading criteria manuals, or AFM 60-2. And, the best part for the

aircrew member is that it is one form that has to be answered. All AF Form 847s arriving at TAC's 4450th Stdn/Eval Gp must be either approved and forwarded for action or returned to the sender with the reason why SEG does not agree with the 847 recommendation. The suspense times for the AF Form 847 within SEG are:

Critical safety items - within 72 hours, by electronic means.

Flight handbook changes - These changes are consolidated each month and forwarded by the 10th of the following month.

Standardization manuals - If another command is MCOPR, a consolidated list is forwarded each month to the command which is MCOPR.

If TAC SEG is responsible, a consolidated list is forwarded monthly to USAF for publication.

If TAC DO is responsible, SEG forwards the recommendation within 10 days to TAC DO.

In addition to this system of suspense dates, each SEG weapon system project officer (WESPO) reviews all suggested manual changes once every six months and initiates follow-up action if no answer has been received on recommendations that were forwarded.

For an example of how the AF Form 847 works for a tri-command matter concerning aircraft in use within TAC, USAFE and PACAF, let us suppose the 4442 CCTS (C-130B aircraft) at Sewart AFB, Tenn. sent in a recommendation to change TO 1C-130B (CL) 1-1. Their recommendation would go through channels to the major command SEG, (TAC, in this case) using AFM 60-2, Par 6-24, as the guide. The important thing here is that once the aircrew member turns in an AF Form 847, it must be forwarded to the major command SEG for action, whether or not intermediate echelons approve or disapprove the recommendation.

When the recommendation reaches the 4450th Stdn/Eval Gp, the WESPO for the C-130B aircraft can disapprove the recommendation and return it thru channels to the initiator, or he can agree with the recommendation. When it does not require USAFE/PACAF coordination, he adds the change to his consolidated monthly list to be forwarded to ASD or an AMA. If the recommendation must be coordinated with USAFE and PACAF, he forwards it to both commands simultaneously by the 10th of the following month. After answers are received from USAFE and PACAF, the recommendation is forwarded to ASD or the AMA by the 10th of the following

month.

Now you skeptics will say, "OK, so everybody through the SEG WESPO does his job and zooms the recommendations right along through channels, but then what? Why does a normal change to a flight manual or procedures manual take so long?" Well, when ASD or an AMA gets a list of flight manual changes, they must be researched to assure that they conform with the military specifications as outlined by ASD before they send them to the printers. Average time at the printers is approximately four weeks and distribution time back to the operational units is another three weeks. Here is a list of average times the complete cycle has taken at each agency including mailing time:

Crew member to SEG	Three weeks
SEG to USAFE and PACAF	Two weeks
USAFE and PACAF to SEG	Four weeks
SEG to ASD or Prime AMA	One week
ASD or AMA to publisher	Three weeks
Printing time	Four weeks
Distribution back to all crew members	Three weeks
APPROXIMATE TOTAL TIME	FOUR AND ONE-HALF MONTHS

If the recommendations don't go to USAFE and PACAF, the time is usually cut to approximately three months, provided there have been enough changes submitted by the operational units to warrant publishing a consolidated flight manual change. This means that if you don't send in all the changes that you think are worthwhile, then your recommendation may be held at ASD or the prime AMA until the next flight manual revision conference which normally is scheduled once a year. The SEG WESPO is the man that requests a flight manual conference on your aircraft. If you and he think that there are no improvements to be made on your flight manual, then the conference will not be scheduled. SEG has yet to see the perfect flight manual . . . all you Fox Able boys know that the F-100 manuals and KB-50 manuals are still not perfect after all this time. You, as a prime user of the equipment, can help to change this.

Normal Stdn/Eval procedures and grading criteria revisions work substantially the same way as the flight manuals. So the next time several of you are jawin' about how something should be changed, grab an AF Form 847 and put it in writing to YOUR man at wing and YOUR man at TAC Headquarters, the Stdn/Eval aircrew member for your aircraft.

REQUESTS FOR WAIVERS

Some confusion still exists as to just exactly what can be waived on a Stdn/Eval check, and how the waiver should be obtained. The procedure will be amplified in a forthcoming TAC Supplement to AFM 60-2. In the meantime, here is a brief recap of the waiver process. Waivers may be granted for the complete Stdn/Eval check (see par 5-6, AFM 60-2) or for a portion of the check (see par 1-7b). In either case, requests should be submitted through channels to the 4450th SEG. If the request is to waive the time limit of a Stdn/Eval check, SEG will indorse the request to the TAC Deputy for Operations for command approval. SEG is the waiver authority for item/area waivers. In any event, the request for waiver must have been submitted and approved before the due date of the check, or the aircrew member will be delinquent. The moral is to submit your requests for waiver just as soon as you learn that a waiver will be required.

STDN/EVAL INDOCTRINATION COURSE

The word is out, the Standardization/Evaluation Indoctrination Course at Langley has been reduced to three days.

This course is primarily for Stdn/Eval Aircrews, but commanders and operations staff officers are encouraged to attend.

The 4450th Stdn/Eval School Division is preparing an indoctrination course tailored specifically for commanders and supervisory personnel. This course will give them all the information they need to properly supervise the unit Stdn/Eval program. The intent of the supervisors course is to achieve maximum indoctrination with a minimum disruption to the supervisors ever-pressing duties; as a result it will normally be conducted at unit location and will be much shorter than the course conducted at Langley for SEACs.

SOMETHING OLD BUT SOMETHING NEW

SEG'ers were recently exposed to something old but something new. It seems a couple of our illustrious troops went down England AFB way during January to defy the laws of gravity in the mighty F-100. During the course of their local area briefings, an item was mentioned which made the elder of the two gents roll his eyes and long for the good old fighter days. The item was pilot-to-crew chief communication -- not the age-old hand signal exchange, but an

actual verbal exchange via the intercom system built into the aircraft. To continue with the story, these two troops approached their aircraft with some misgivings. It must be readily admitted that any dyed-in-the-wool fighter pilot violently opposes change, particularly when it tends to align him with his brother, the many-motors driver. However, the results spoke for themselves. It was amazing how easy it was to establish and conduct pilot-to-crew chief coordination while going thru the process of getting the aircraft ready to taxi. Another item that must be mentioned is that the intercom made it much easier to use the checklist. Congratulations Colonel Travis; looks like another winner for the fighting 401st. How about the rest of you F-100 troops taking a good look at this subject and giving something old but something new a whirl.

INCOMPLETE STDN/EVAL CHECKS

We in SEG continue to receive AF Form 8Cs indicating that a complete Stdn/Eval check has been accomplished when, in fact, the check is incomplete. The most common error is that all required items listed in the grading criteria are not completed. Some state that a waiver of the item has been requested (but not necessarily approved), some include a statement that the item could not be accomplished for a reason, and sometimes the missing item is just ignored. Regardless of the reason, the check is NOT complete until all required items and areas are accomplished, or until a waiver of the items has been approved. Par 5-55, AFM 60-2, lists requirements for a completed formal Stdn/Eval check, and par 5-6, AFM 60-2, establishes the procedure to be followed when the check has not been completed by the due date. Categorization, retraining or board action is a big price to pay for an incomplete check. Don't let it happen to you!

ATTENTION SEACs

Two of the more common errors being made on the Air Force Form 8C and TAC Form 5C are giving a rock a 3 grade on a 2-0 item and recording grades for items that are not listed in the grading volume.

On 10 March of last year we sent a message, SEG-0 03 1133, which stated that 3 grades could be awarded for items listed as 2-1-0 in the grading

volume. This does not include 2-0 items!

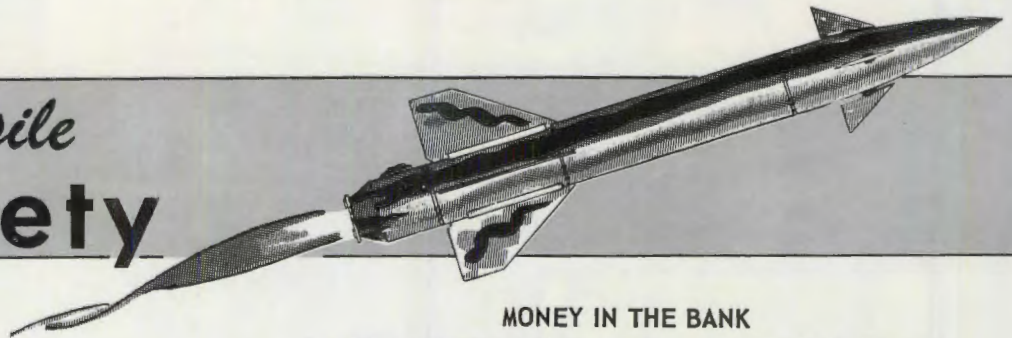
Recording grades on unlisted areas or items makes extra work for the computer and creates confusion and extra work for the computer operator when he transfers data to the computer. Incorrect grade entries on the 8C give false input into the data collected and could cause an incorrect conclusion regarding the training required for future programs.

MASTER QUESTION FILES

Master question files for almost all of our weapon systems have been revised and published. To help control revisions, master copies have been assigned control numbers and distributed to the appropriate

SEFs. The SEFs are responsible for reproducing and distributing copies of the questions to aircrew members. Answers and references are not to be included. The 4th TFW SEF at Seymour-Johnson AFB has come up with a fine idea for reproduction. They reduce the size of the questions photographically using the Ektalith or Xerox process to get them on a 4 x 6 1/2 inch sheet. They bind them with a two-hole paper fastener at the top of the pages, making a real handy study guide. Whether you use this or some other method to reproduce your master question file, we have just one word of caution . . . Don't get trapped into distributing so many study guides that you can't keep them up-to-date.

Nuclear Missile safety



UNMANNED SURVIVAL

Did you ever stop to think of the potential destructive capability of the missiles you are working with and the purpose of their existence? The survival of these unmanned weapons as a peacetime deterrent depend primarily on the personnel handling and operating the weapon systems and their supervisors.

A beforehand accident prevention program must be the rule and never the exception prior to the time the black boxes take control in flight.

P.E.P. has been and will continue to be the key to the preservation of the nation's missile weapon systems, associated support equipment, and the lives of our personnel.

To be a successful missile force you must strive to attain a goal of a zero rate of personnel error. Remember - every operationally ready missile is a protector, and its survival until launch depends on you. Keep yourself and the birds operationally ready.

MONEY IN THE BANK

The missile safety savings account is in the red for February. Twenty-three withdrawals (incidents) were made; fifteen GAM-83s and eight GAR-8s. Of these, our aircrews, assembly and loading crews tapped the bank for seven (30.4%). Compare this with our 1962 personnel error figure of 16%. Seven PEs in one month is totally unacceptable. Worse, in four instances a withdrawal was made to pay for a repeated mistake.

Although bank notices on launch, handling, loading procedures, etc. have been sent out in the past in the form of Safety Alert Letters and Messages, repeated mishaps continue and down goes the account.

Since December, seven repeated personnel error mishaps have occurred involving GAR-8s (approximately \$4,000 per). Add the cost of damage to these missiles, the dollars needed to replace them, the expense of rescheduling sorties, revising loading and maintenance schedules and consider the waste of valuable training time. Pretty grim picture isn't it?

Check your bank notices again, follow your checklists and be a safety conscious depositor!



CAPTAIN ROBERT M. KRONE
354th TFS
George AFB, Calif.

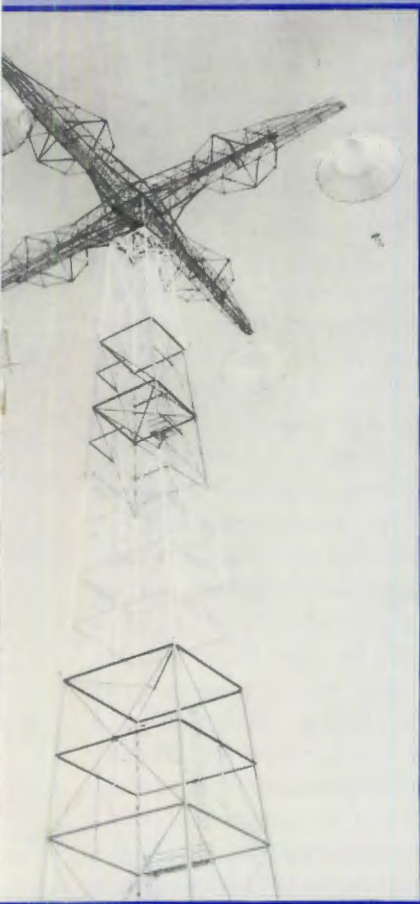
Having recently graduated from the United States Army Infantry School's Airborne Training Course at Fort Benning, Georgia, I believe I might be of assistance to those fighter pilots who are considering applying for jump school. The subject has been popular in fighter pilot bull sessions since the beginning of the program last Spring.

The objective of the program is clear - to provide a pool of jump qualified forward air controllers and supervisory personnel for joint USAF/USA operations and exercises. Most of the pilot discussion seems to revolve around the required physical training and the harassment during training. Before I get into those areas, let me briefly describe the program as it was in December 1962.

DROP

(S

The four-week course is divided into phases; physical conditioning and motivation week,



ground training week, tower training week and jump week. At present, Air Force personnel may be exempt from the first week by passing a PT test the Friday before training starts. The test includes 4 pullups, 26 situps, 22 pushups, 80 deep knee bends in

of walking. This test varies somewhat from class to class. For instance, my class did not have to do the knee bends and the run was a continuous eight minutes rather than the three repetitions. Anyone who can hack TACR 50-3 requirements will have no trouble with this PT test.

Ground training week consists of physical training, proper exit from the aircraft, body position, parachute landing falls and pre-jump procedures in the aircraft. Tower training week consists of applying the techniques of the first week as part of a stick of jumpers making mass exits, more sophisticated parachute landing fall training with a "swing trainer," drops from the 250-foot free tower, ways to manipulate and control the parachute during

descent, emergency procedures, ground control of the parachute, and of course, more physical training. During jump week students make five jumps from C-123 or C-119 aircraft.

Most pilots who haven't attended the course complain, "I wouldn't mind the jumping but I can't see all that PT and harassment that goes along with it."

Being 33 years old, and probably in less than average physical shape for that vintage when I applied, I had similar feelings, particularly when I started huffing and puffing around the base gym before going to Benning. It took me two months of regular workouts to meet the TAC minimums. The reason for the PT is a pretty basic one from the Army viewpoint. They have learned that the

for 22
(R)

two minutes, and three repetitions of running double time four minutes, separated by two minutes

injury rate is inversely proportioned to the jumper's physical condition, and that an injured paratrooper is a liability rather than an asset to an airborne unit. It's a body contact sport - like football - except the body is hitting the ground instead of the opposition's linemen. On this point I side with the present program. I was glad to have that extra conditioning when I started making those actual parachute landing falls (PLF s).

The Army also has a logical objective in their harassment program - although at times you will wonder where the logic went. Most of the harassment takes the form of mental alertness exercises which are designed to instill a sort of "Pavlovian response" from the students. This is a game where the training sergeant gives a command and the students react, immediately, in a prescribed manner. Failure to react or reaction to the wrong command or the wrong reaction to a command results in being dropped for pushups. It is a kind of "Simon says" game and can offer a lot of humorous situations once the few basic rules are learned. A normally alert fighter pilot will probably not get caught more than once or twice a day after the first day of training. The majority of airborne students are eighteen years old, recently out of boot training or second lieutenants, recently commissioned. These men are not as used to reacting and will spend much more time than you doing pushups. The Army has found this mental alertness program to be a rapid way of instilling instinctive reaction to command. This is an important safety feature when moving large numbers of troops rapidly in and out of aircraft.

The personal type of harassment for officers is practically nonexistent, and proper military discipline and courtesy are maintained by the training sergeants. They always say sir, when they drop you for 22 pushups. You will have a personal inspection every morning, but again, this is mainly a formality with the officers. It is not true that the NCOs are "out to get Air Force officers." With a few exceptions, the NCOs are mature, experienced sergeants who know their business and their military courtesy. To sum up my feelings regarding harassment in the program, I would say that the Army has found this to be an effective way to train large numbers of men for the airborne mission in a limited time. You, as an officer will not be subjected to any degrading harassment. What you receive will not hurt you. If you foul up a procedure and get dropped you will probably not make the same mistake again. At least, you will be building some pushup muscle which is the fifth point of contact on the PLF.

I recommend that you go to jump school with an open mind. Try to resist the temptation to nitpic the program until you have completed jump week. The Army has been running this school since 1942; chances are you will not change it in three weeks. Looking back I can see where 90% of the program (including the PT and the harassment) contributes directly to putting the paratrooper safely in the drop zone. Go to Benning in as good physical shape as you can, but don't worry if you cannot meet one phase of the requirement. You will not be washed back if you can only do three pullups or if you cannot hack the longer runs as long as you are giving it the college try. Go to Benning with a

sense of humor. It helps a lot.

The program is tough. For the first week you will be as tired, sore, and as stiff as you have ever been. By the end of the second week you will find yourself in the best condition you have been in for years. You will leave Benning with more respect for the "crunchies," although there will be little desire to trade jobs with them. You will learn confidence and techniques with the parachute that might someday save your life. You will enjoy jumping. From the time you hook up until you hit the ground will be an entirely new and exciting experience. It is a personal challenge for the jumper, just as the single seat fighter is a challenge for the pilot. I'm not saying that you will enjoy it as much as flying, but there is a similar feeling of satisfaction when the mission is accomplished.

You will be very happy to see airborne training end - but, you will also be happy that you were there.



The author, Capt Krone, inspects chute in the PE section.

TAC TIPS

WIND TICKET

The Aerology Departments at NAS Jacksonville and NAS Pensacola have come up with a good idea. After completing their normal flight weather briefing, they give the pilot a mimeographed form showing the upper wind data at four or five of the stations along the proposed route of flight. They prepare two forms, one covering the jet level winds from 20,000 to 50,000 feet and the other the lower altitudes up to 16,000 feet. As more current winds-aloft information is received - about every six hours - they run off new forms.

BOUQUETS

You may have noticed in the recognition section of TAC ATTACK that personnel from only a few bases are featured a majority of the time. We are not playing favorites - it's simply that these are the bases supporting the awards program. We'd like to make these awards a little more competitive, but cannot without your whole-hearted support. Surely each unit in TAC has someone who deserves recognition. Why not let them know that their efforts are appreciated? Read chapter 7, TAC Manual 900-1 and nominate these people for appropriate awards.

WEB OF TROUBLE

Hazards to flight often build up like a spider web, a thread at a time. If we do nothing to report the problems, failures, incidents and situations that weave the web of trouble, they can combine to cause an accident. Report a hazard today - prevent an accident tomorrow. Forms for reporting hazards are available in all operations sections and safety offices, or you can call on the Ameche and give the safety officer the information.

TAC ATTACK

THE WALKING DUCK & THE FLYING HYENA

Once upon a time there was a duck and hyena what ran an airport. Because the duck was bird, he took care of the flying, and of course the hyena ran the tower, GCA and approach control cause he was a natural born laugher. As you well know, it takes a sense of humor to work with flyers. Over the years their operation got bigger and bigger; the duck flew higher and faster and the hyena bought more tele-phones and a D.F. steer (who was off his feed).

The more they became specialized, the less they saw of each other. In fact, they even forgot they belonged to the same air patch. Everytime the duck called for landing instructions, the hyena never seemed to answer right off. Assuming that he was alone in the area, the duck asked for all kinds of things and was known as a real quack on Guard channel.

The hyena and the duck never got together to discuss what "I'm putting your clearance on request" meant. Everybody got burnt up and to help solve the problem resorted to sarcasm. Such sayings as, "The field is closed. What are your intentions?" were answered by, "I plan to cry a lot." One day the duck and hyena thought they knew so much that they changed places. The hyena busted his tail, of course, and the duck strangled to death in the telephone cords.

MORAL: Why not take a duck up in the tower and laugh it up a bit? You might be surprised at the problems they have up there!!!!

SAAMA Flying Safety Newsletter

NO FLAPPER

The Nellis QC comment reported that one of their test pilots landed an F-105 without flaps, after experiencing an ATM failure. The leading edge flaps are inoperative without the ATM, but the trailing edge flaps can be lowered electrically using DC power. F-105 pilots should remember this since they'll have enough problems following an ATM failure without compounding them with a no-flap landing.

IT'S THE LAW

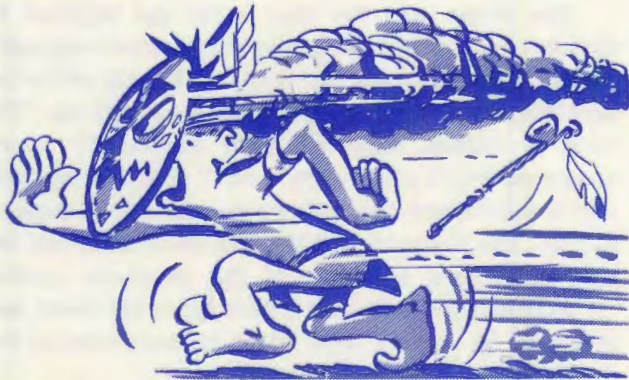
All pilots are supposed to fill out an Air Force Form 1228, Aircraft Hazardous Weather Report, after encountering hail, lightning strikes, electrostatic discharges or severe turbulence when in flight. This is a definite requirement, not an option, and is spelled out in paragraph 29 of AFR 60-16.

Fifty-two encounters with hazardous weather occurred between January and November 1962 that were not reported to Air Weather Service. Apparently pilots and supervisors are not familiar with the requirement, do not understand it, or are lax about reporting.

The weathermen need this information and even though an encounter might have been reported as part of an accident report, it should also be reported on a Form 1228 so that Air Weather Service will receive it. Local flying safety officers should definitely include the form on their investigation checklist.

Although weather forecasting has steadily improved, Stormy still has trouble forecasting some weather phenomena because he can't get enough data on certain atmospheric processes. Pilots can help, since they observe weather conditions firsthand.

These reports will eventually lead to safer flights for all of us, so let's give the rainmakers our full support. It's a must.



THE WEED AND THEE

The pilot of a multi-engine jet was holding VFR in a race track pattern. He had smoked three cigarettes with his oxygen mask hanging beside his face. As he lit a fourth, there was an explosion in his mask and it began to burn. The pilot held the mask away from his face with his right hand and tried to disconnect it with his left. When he couldn't remove it, he took his helmet off and threw it on the floor where mask and helmet continued to burn. The pilot received second and third degree burns on his

hands, forehead and left cheek. The oxygen system checked out alright and investigators couldn't find any reason for the explosion. However, they reasoned that some oily residue may have been deposited on the mask from the pilot's gloves. Best we add this to the lung cancer, cardio-vascular trouble and other ills we blame on smoking.



FEEL TIRED?

Well, you should! Assuming you are average weight and are keeping up with the 5BX program, here are some of the things you do every 24 hours.

- * Your heart beats 103,689 times.
- * Your blood travels 168,000,000 miles.
- * Your feet travel 1/10 of a mile (doing the stationary run).
- * You breathe 23,040 times.
- * You inhale 438 cubic feet of air.
- * You push, pull, bend the physique 80 times (BX 1-4).
- * You eat 3-1/4 pounds of groceries.
- * You drink 2.9 quarts of liquids (3.45 if on a liquid diet).
- * You lose 7/8 of a pound (perspiration not included).
- * You speak 4,800 words, including some gobbledegook.
- * You move 750 muscles.
- * Your nails grow .000046 of an inch.
- * Your hair grows .01714 of an inch.
- * You exercise 7,000,000 brain cells.

And, if you spend two minutes thinking about accident prevention . . . you're average.

Ground Explosive Safety

ground explosive safety

AIRCRAFT TOWING

Since many ground accidents occur while aircraft are being towed, we've listed a few rules to follow that should prevent unnecessary crunches. They are based on common sense, years of experience, are simple and should be easy to remember.

- * Aircraft should always be towed with a vehicle approved for the purpose.
- * The towing vehicle should be driven by a qualified driver.
- * There should be a man at the aircraft controls, ready to apply the brakes. Before the airplane is moved, this man should make certain that the landing gear lever is down, that the hydraulic pressure is adequate for braking, and that the nose or tail wheel is unlocked.
- * A wing walker should be at each wing tip to warn the driver when clearances aren't adequate.
- * The correct tow-bar should always be used, and should include a bridle if the ground is uneven.
- * The aircraft should be started and stopped smoothly to keep the strain on the aircraft to a minimum and to avoid shearing the tow-bar shear pin. The aircraft should be towed slowly, no faster than a man can walk.



- * Reduced traction and visibility increase towing hazards; therefore, extra precautions should be taken when these factors exist.
- * Remember, when tractor braking is effective and aircraft braking is not, the aircraft can jack-knife. This is extremely dangerous at high speeds. So keep it slow.
- * Finally, use good judgment and plan ahead.

TAC ATTACK

BAD EXAMPLE

An airman second tried to unscrew the cap on an F-105's 450-gallon tank using a spanner with a two and a half foot extension. He wasn't successful, so his supervisor gave it a go. Climbing onto the table of an MJ-1 he took the wrench. After a couple of tries he changed position, putting his right foot on the tank and leaving his left on the table.

The cap came loose with vigor, the super lost his balance and fell into the side of the MJ-1 painfully injuring his posterior.

Downloading 450's isn't a smooth job at best, but there must be a better way to go about it than taking a one legged stance on a make-shift maintenance stand.

CAR TIPS

How fast should I drive? This is one question you must answer every mile you travel. Your ability to answer it correctly can affect your safety and the safety of others.

Speed limit signs help give the answer but there are many variables which must be considered. The weather, the condition of the road, the condition of your car, how well you can see, your ability as a driver and how dense traffic is all play an important part.

Generally, let any of these factors be less than perfect and you should decide on a speed somewhere below the published speed limit. For example, dense fog or an icy highway can put the safe speed to a fraction of the legal speed limit.

No smart driver will drive a car with bad shocks, poor brakes or slick tires. It just isn't worth the risk and it eliminates one of the variables effecting speed. A good driver relays on many things to tell him how fast to go. He will slow down anytime he finds:

- * That he is fighting traffic; having to pass too many cars.
- * That his passengers are too quiet and tense. He knows that this is an indication he is scaring them and scared passengers mean poor driving.
- * That he is having trouble maintaining positive control due to slick spots on the highway, a heavy crosswind, or poor visibility.
- * He finds himself having to use heavy braking in order to avoid trouble or a close shave.

There is another side of the coin. A good driver will either speed up, pull off the highway entirely, or select a different route anytime he finds himself leading a string of cars or being passed by too many.

PACKAGED



Wwx

CWO E. W. WIGGINS
2d Weather Group
Langley AFB, Va.

THE 2ND WEATHER Group, staff weather agency for TAC, USCONARC, STRICOM and CONAC, has completed operational suitability tests of a droppable weather station kit. The test took three months to complete and were conducted at Langley AFB, Fort Eustis and Fort Campbell. The kit is officially called the AN/TMQ - 16 Meteorological Station, Manual. But, no matter what you call it, we think it's a James Dandy.

The TMQ - 16 is a light weight, one man, hand held unit containing sensors and indicators to measure wind speed and direction, temperature, relative humidity and atmospheric pressure... vital information for operations at bare strips, drop zones and certain counter-insurgency functions. But check the photos for the complete story.

As a result of these tests, recommendations were made to improve packaging and engineering. The manufacturer is now re-engineering the station to make it even more compact and delivery is expected in FY 64.



Ready to load and leap with the portable Meteorological Station



Meteorological Station, containing basic hand held unit and tripod and spares



Left: Tripod and spares, Right: Basic hand held unit



Semi-fixed installation



Hand held unit

AIRCREW RECORDS

AUTOMATION HAS COME to the training officer's assistance. During the past three months, all units within the Tactical Air Command have mechanized the aircrew status and training report, commonly called the T12. This report identifies and shows the status of every tactical aircrew and aircrew member in the command. Training requirements, accomplishments, qualifications and reliability of combat ready crews are also included.

Here is how the system works. After each mission, the individual aircrew member reports what he does on the flying training accomplishment form. The squadron training officer reviews the forms, fills in the reliability data and delivers them at the end of the working day to wing operations and training. Here, the reports are audited and the data key-punched into EAM cards. The cards are then delivered to the base data systems where they are sorted, sequenced and fed into the machine which prepares the daily reports for wing operations.

Wing operations reviews these reports and sends copies to the

squadron where they are reviewed by the individual aircrew, the weapons officer and the squadron operations officer. A copy is placed in the aircrew training folder so that each aircrew member can tell precisely how much training he has accomplished and what he has yet to do. Semi-monthly and end-of-the-month reports are forwarded through channels to headquarters TAC, to apprise the commander of the training accomplished by the command.

Since the information taken from flying training accomplishment forms determines how accurate, and thus how useful the TR data is, individual aircrew members should be extremely conscientious and careful when filling them out. There is a different form for each weapon

system, but basically they all furnish the information required to complete different machine run status and summary sheets. These are the individual aircrew data sheet, aircrew status summary, training accomplishment summary, reliability summary for unit, reliability summary for aircrews, air-to-air refueling summary, weapons delivery summary, aircraft systems effectiveness summary, training scheduling summary and aircrew deficiency summary. Let's review some of these summary sheets.

The **INDIVIDUAL AIRCREW DATA SHEET** is a permanent record for the aircrew member and provides detailed backup data for studies, briefings and future evaluations as to what should be in the training program. It lists requirements, accomplishments,

qualification dates, flying time, reliability, circular error averages and percentage of hits.

All personnel data and those things affecting aircrew status, such as PCS, movement control and TDY data, are kept up to date on the AIRCREW STATUS SUMMARY. The photo shows what's included.

The TRAINING ACCOMPLISHMENT SUMMARY gives a quick and accurate picture of the training accomplished, by item, by squadron and by wing.

Using the RELIABILITY SUMMARY - UNIT, commanders can pinpoint areas where units under their control require more practice. They can also use this summary to validate the criteria being used.

The overall effectiveness of combat ready aircrews is shown on the RELIABILITY SUMMARY - AIRCREWS. From this summary, operations people can choose the right man for the right job and evaluate and identify those individuals who need further training.

Refueling activities of the squadrons and wing and what happens on each scheduled refueling sortie is shown on the AIR-

TO-AIR REFUELING SUMMARY. From this, planning factors can be developed to improve scheduling.

The WEAPONS DELIVERY SUMMARY, non-nuclear and nuclear, shows for each weapon and delivery mode, the number of bombs dropped or events accomplished and what happened on each. This provides an indicator of the overall qualifications and capability of the unit, and helps commanders select the units and weapons to use on special missions.

Commanders can learn what training events were lost because of aircraft system malfunctions from the AIRCRAFT SYSTEMS EFFECTIVENESS SUMMARY.

Training accomplishments are automatically credited to training requirements on the TRAINING SCHEDULING SUMMARY, and a print-out form helps the training officer schedule required minimum training.

At the end of the quarter, the AIRCREW DEFICIENCY SUMMARY points out the names of the aircrews who did not complete minimum training. It also shows the number of items that were not accomplished and allows the

probation board to take appropriate action.

The T12 provides commanders at all echelons with management information upon which to base decisions pertaining to the training of their combat units.

We in the Air Force have many things to be proud of. We consider ourselves experts in a number of fields. The one area standing out above all others is training. We spend a large part of our time training to insure that we are ready to act instantly as a deterrent to any military aggression. I believe that the T12 report is a superior management tool which will help us get the most from our training. It provides a permanent aircrew record, it aids training scheduling, and allows us to maintain training surveillance. It assures positive aircrew control and measures unit and aircrew capability.

In brief, the T12 provides continuous, systematic command surveillance of every tactical training activity to insure that the whole command maintains an optimum capability, and stays ready to react.

Aircrew Status Summary

CREW P.C.	NAME	C	AFSC	T	DET	AFSC	FSSD	D	O/S	Z/I	DOC	PCS	MOV	S	FAC	J-E	JMP	SORTIE	FLY-QTR	FLY-USE	FLY-PH-S
	MAMMOK STANLEY M	4	A0712022	3	AG2	1115B	C62	M	000	061	061				NO	NO	NO	33	52.00	1341.00	4411.00
	MAPLE Y	4	3670DA	3	212	1115B	F61	R	000	061	061				NO	NO	NO	32	52.00	294.00	5675.46
		3	A03009803	3	AG2	1115B	I60	R	000	061	061				NO	NO	NO	34	98.00	933.00	486.00
		3	9600A	3	212	1115B	I61	R	000	061	061				NO	NO	NO	38	77.00	1107.00	1538.00
		3	A03023566	3	AG2	1115B	J60	R	000	060	060			YES	NO	NO		39	72.00	1328.00	1691.00
		3	57273A	3	AG2	1115B	K60	R	000	061	061				NO	NO	NO	42	68.00	1391.00	1735.00
		3	21533A	3	212	1115B	H62	R	000	061	061				NO	NO	NO	33	56.00	933.00	2983.00
		3	1910A	3	AG2	1115B	D58	M	000	061	061			YES	NO	NO		35	54.00	860.00	1284.00
		3	17A	3	AG2	1115B	R61	M	000	061	061			YES	NO	NO		38	60.00	1092.00	1496.00
		3	0284	3	Y12	1115B	I60	9	000	050	050			YES	NO	NO		42	84.00	1130.00	1720.00
		3	AG2	3	AG2	1115B	L53	R	000	061	061				NO	NO	NO	31	53.00	529.00	810.00

AUTHOR

LT COL EDMUND W. EDMONDS JR.
Director of Management Analysis
Headquarters TAC

lethal lag

lethal lag

*Adapted from an article by
F/L Jacques Soutendam RCAF*

YOU ARE the pilot in the front seat of an F-100F over the VOR at FL 400. You receive clearance to descend and start down the slide. As you pass 26,000 feet the nose drops a notch and you pull the stick back. No response - you pull harder and the nose drops further. You are going straight down! The altimeter is unwinding so fast it's almost a blur. You can't recover and you've got to get out! At what altitude do you eject? Ten thousand? Then you're probably dead!

Let's analyze an actual accident to see how we figure this. Two pilots were airborne in a jet aircraft. Everything was normal when they left 40,000 feet, but something happened to the controls at 26,000 feet and the aircraft nosed over. They couldn't recover and the aft seat pilot reported ejecting at about 17,000 indicated. The front seat pilot didn't eject. The aft seat pilot's chute didn't fully deploy.

From radio calls, investigators deduced that the aircraft crashed about 25 seconds after reporting the trouble at 26,000 feet. This represents a vertical velocity of approximately 600 knots. The barometric altimeter unwinds at a maximum of about 380 knots. Do you see the point?

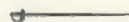
By plotting the 25 seconds against the altitudes transmitted

by the pilot, we can feed in altimeter lag and determine actual altitudes. At 17,000 feet indicated, for example, the actual altitude would be only 9000 feet. Hardly enough for a decision and two successful ejections when you're descending at 600 knots.

In tandem aircraft, an absolute minimum terrain clearance of 10,000 feet is required to insure a safe escape. Theoretically, this clearance takes into consideration all factors - decision, notification of other occupant, reaction time and parachute deployment.

Experience and experiments have shown that our performance is seldom at optimum during escape situations; therefore, 16,000 feet seems like a more realistic terrain clearance minimum. Add altimeter lag to this and we find that our safe ejection altitude in a 600 knot vertical descent is in the neighborhood of 24,000 feet indicated. Unbelievable, but safe! This gives very little time to wrestle with the controls, reduce power and extend speed boards before ejecting.

The barometric altimeter has some serious limitations, but since it will be with us for some time to come, either as a primary or standby instrument, let us beware of its limitations - let's not let it kill us!





OL' SARGE

Ol Sarge

THE OLD SARGE paused to watch an F-100 lift-off into the clear blue sky. "A shame to waste a pretty day like this working inside," he thought. "But the way things pile up, I'd best get back at it. Wonder if the fish are biting . . ." He took one more slow look around the flight line as if to savor the clean spring air, then abruptly turned and walked into the office.

Lt Green turned from the window as the Old Sarge walked in. "They sure come in bunches, don't they?"

"Yes sir," the Old Sarge replied with some feeling, "and the more the merrier."

Lt Green looked puzzled. Somehow this didn't sound like the Old Sarge. "I was talking about the last accident the 13th had. You just came from there didn't you?"

The Old Sarge grinned sheepishly, "Yes sir, I did, but I thought you were talking about this fishing weather." He inclined his head toward the open window.

"Yeah, it is nice out. But what happened over at the 13th?"

"It looks like a minor to me, sir . . . but I'll fill you in. As you already know, the left strut fell off during takeoff. The inner strut broke at the diaphragm or piston plug. It damaged the packing in the outer strut, right at the gland nut, broke free and wrenched off the scissors at the hinge." He fumbled

for his pipe.

"Fatigue?"

"No sir, it looked like it broke all at once." He paused to pack his pipe.

Lt Green noticed the pipe and looked worried, "How about some coffee? It's hot."

"Eh? Oh, sorry, I forgot about your cold." He put the pipe back in his pocket. "Anyway, what happened was they cocked the bird to tow a dart by pumping up the main gear struts to 15 inches. The bird had full internal fuel with two full 275s when they aired up the struts." He poured a little coffee in his cup and rinsed it out, then refilled it. "You know how hard it is to fill a strut on an F-100. Someone has to jump up and down on the wing while the strut moves in a series of big jerks. When the strut is completely extended it's between 15 and a fourth to 15 and three-fourths inches long. Chances are, they sent the bird out with at least the left strut extended all the way . . . and got away with it on the dart mission. On the next mission, they turned the bird around for a short flight home with no dart or fuel in the drops . . . and their turn around crew didn't bleed off the excess air in the struts. Now, the struts were extended all the way for certain! You know how an F-100 walks its way out to the runway . . . a fella doesn't have to use much imagination to visualize what that's going to do to an inner strut that's fully extended. Shucks, there's very little left in the outer strut to hold it."

Green asked, "You say they just aired up the strut to around

15 inches?"

The Old Sarge nodded.

"Well," Green continued, "Don't we bleed all the air out of ours and check the fluid level before we pump 'em up for a dart mission?"

"Yes sir, that's to guard against just this sort of thing. We don't leave 'em up for the next mission, either, unless its another dart tow. Seems like small potatoes and a danged nuisance to some . . . but little things like this have a tendency to pay big dividends in the long run. Reminds me, my cousin in the Navy says they have the same trouble, only worse because the shocks on their birds take such a beating. He thinks most of their shock strut failures are caused by someone adjusting with air instead of first checking fluid level and then servicing with air. When our people start using the F-4, they may have to give its struts more attention than most of 'em do now."


The Old Sarge finished off his coffee and again fished out his pipe. "I think I'll double check with some of our lads to make certain they're still using the right strut servicing procedures. We have a hard head or two that knows more than the people who write the books."

"Besides, you're dying for a smoke," Lt Green added with a laugh.

The Old Sarge just grinned.

Answer to question of the month:

Over torque.



SMOKE OUT THE FACTS

DID YOU KNOW that it is three times as dangerous to smoke cigarettes as to fly in jet airplanes? Dr. Linus Pauling made this interesting observation in the May 1960 issue of the Engineering and Science Magazine. He said, "While considering the effect of automobile accidents on life expectancy, I decided to make a somewhat similar calculation about air travel. In 1959 there were 0.67 deaths per 100,000,000 passenger miles on American commercial planes, and in 1958 there were 0.34. The average of these is 0.50 per 100,000,000 passenger miles. I am not sure how many passenger miles were flown by Americans, but I believe that it was approximately 3×10^{10} . A simple calculation indicates that travel by commercial airlines is associated with a mortality at the present time such as to lead to about one day decrease in life expectancy for Americans. Moreover, calculations show that travel by commercial airlines is about five times as safe as travel by automobile.

"A jet plane travels about 500 miles per hour. The number of deaths in commercial air travel leads at once to the conclusion that the decrease in life expectancy resulting from the decision to make the trip by air is about one hour per hour travelled. On the other hand, smoking one pack of cigarettes per day for 40 years decreases life expectancy by 8 years; each pack then decreases life expectancy by one fifth of a day or 4.8 hours. This amounts to 14.4 minutes per cigarette smoked. It takes about 4.8 minutes to smoke a cigarette, so the process of smoking a cigarette involves a decrease in life expectancy for the smoker which is three times the time required to smoke the cigarette. Smoking cigarettes then is three times as dangerous as travelling in a jet plane. Travelling in a jet plane while smoking a cigarette is four times as dangerous as travelling in a jet plane and not smoking. If you fly in an airplane and don't smoke cigarettes you are three times as safe as if you stay at home and smoke cigarettes, or four times as safe as if you fly in an airplane and also smoke. I think that this is a very interesting comparison which all people - all young people especially - ought to know; for whatever length of time they devote to smoking cigarettes they are losing three times that much time from their life."

TAC TALLY

A COMPARISON OF TACTICAL AIR COMMAND ORGANIZATIONS

MAJOR ACCIDENT RATE 1 JAN - 28 FEB		
TYPE	1963	1962
ALL	11.3	14.9
F-105	88.2	0
F-104	37.0	37.2
F-101	44.2	86.3
F-100	3.7	13.6
F-86	0	79.3
F-84	50.9	19.8
B-66	0	0
B-26	0	0
T-39	0	0
T-33	0	0
T-29	0	87.6
KB-50	0	52.9
C-130	0	0
C-123	0	0
C-47	0	25.8
U-10	0	-

FEB TALLY GUARD AND RESERVE		
UNIT	MAJOR	MINOR

ACCIDENT FREE (MAJOR & MINOR)			
JET			
ACTIVE	MONTHS		ANG
4411 CCTG	13	20	113 TFW
354 TFW	8	18	102 TFW
CONVENTIONAL			
ACTIVE	RESERVE		RESERVE
314 TCW	43	75	434 TCW
463 TCW	21	64	94 TCW

FEB TALLY ACTIVE UNITS		
UNIT	ACDNTS*	INCDTS
4 TFW	4	6
12 TFW	1	3
15 TFW		4
27 TFW		12
31 TFW		15
354 TFW		12
355 TFW		
388 TFW		5
401 TFW		13
474 TFW		4
479 TFW	2	14
363 TRW	1	4
4411 CCTG		2
4510 CCTW	1	21
4520 CCTW	2	15
516 TCW		2
314 TCW		
463 TCW		2
464 TCW		
4505 ARW		1
4442 SSQ		
1 ACG	1	
4500 ABW		2

*MAJOR AND MINOR

The reserves had a perfect score in February but the regulars more than made up for it with eight major accidents and four minors. F-105 units led the list with five majors and a minor. One fatality resulted when an F-105 crashed during a rocket pass. Materiel failure apparently caused the pilot to lose control. Another F-105 caught fire on climb-out, and the pilot ejected. Cause is undetermined at this time. An F-100F was chasing an F-105 on a rail-cut mission. Bombs were fused for 15 seconds delay; however, a direct hit on a rail caused an instantaneous explosion which knocked down both aircraft. All aboard ejected successfully. Most probable cause was supervisory error since the bombs had known deficiencies. Another F-105 pilot heard a loud grinding noise and noted an rpm loss shortly after he opened speed brakes. He ejected when advised that molten metal was coming out of the tail pipe. The left gear on a taxiing F-105 collapsed when the strut collar failed.

On a low go from a GCA, an F-104 pilot felt he was losing power, aimed for the runway, but was unable to flare. The gear collapsed and the aircraft caught fire.

An F-101 made the loss column after its pilot noted a rapid loss of fuel followed by left and right engine flame-outs. He tried several airstarts then ejected without injury. This was a test flight following maintenance on the left engine.

Completing the major tally, an F-84F pilot received major injuries when he ditched his aircraft just after takeoff. The engine lost power but the reason is undetermined.

On the minor side of the ledger, an F-100 lost its left main gear on takeoff for a dart tow. That's number two of this type and indicates a trend. An F-105 pilot jettisoned his tanks and one of them struck and damaged the chase aircraft. An F-104 caught fire on the run-up pad... a case of the right bolts in the wrong holes. And last on the list, a C-47 pilot taxied into a dump truck.

Letters to the Editor

Letters to the editor



Dear TAT

It was with interest that we read in the January ATTACK about "Hot Tires," but it raised the dandruff on some of the hard working troops. There are some pertinent points I believe you failed to consider. The tire obviously wasn't hot as it had been sitting for over four hours. About cages—did you ever see a cage large enough for a C-130 tire that would fit in the area involved and still be practical? One other thing—nothing was said about the bright boys who write the TOs for the working troops to adhere to. On the wheel involved, the TO established the maximum number of changes for wheels manufactured before 1956, but boo-boomed by limiting the wheel changes for wheels manufactured prior to 1957. They did not take into account the possible number of changes the wheel may have had prior to the TO being published in Feb. 1959. This wheel was manufactured in 1955. Why did the depot wait until 1959 to publish a TO limiting wheel service life when they knew way back in 1954 that the wheel had a definite service life? You also mentioned puncturing the tire by pulling or taxiing over a board with spikes in it. You have accident reports on file where C-130s have sustained a minor accident because a tire blew out and the force of the explosion caused damage in the wheel well.

Incidentally, the article in the same issue regarding "Herc Pork Chops" is about the C-130A and D aircraft, while the picture shows a C-130B.

We do appreciate your efforts and use your magazine to the utmost in accident prevention.

CAPTAIN CLYDE G. BALL, FSO
463 TCW, Sewart AFB, Tenn.

Dear Clyde

Thanks for getting the record straight for us. Regarding the cages, altho they may not be practical on a C-130, they are practical on other types . . . and many of our birds suffer from weak wheels.

The spike bit is not supposed to induce an explosion. In fact, tires deflate quite slowly after being given that treatment. Should one blow, the force of the explosion would be toward the spikes and no damage should result.

Incidentally, read "No Doubt" in the March ATTACK for another approach to the failure problem. An approach which we think is more intelligent than establishing a service life based on hours or number

of changes, etc.

If you can furnish a few photos of the A, D, and B, we'll promise to use the appropriate ones with future write-ups! Is it a deal?

TAT

R 191640Z

FMXXATFW

TO TAC LANGLEY AFB VA

BT

UNCLAS OS 0492. FOR TAT. REFERENCE FEB TAC ATTACK, PAGE 11, ARTICLE "SCAVENGE ONE." WHAT REFERENCE SOURCE DO YOU USE AS AUTHORITY TO MAKE LOSS OF ONE WING SCAVENGE PUMP A RED CROSS ITEM.

Dear OS

The red bordered pages in the F-100 dash one. A broken scavenge pump traps up to 600 pounds of fuel at normal power settings and up to 1700 pounds in AB. Start with one out, and who wants to guarantee the other pump won't fail and that the pilot will not use AB with less than 3400 pounds on board?

Oh yeah, what's so pressing that we have to fly aircraft that are even just a little sick?

TAT

MAINTENANCE MAN
OF THE MONTH



Master Sergeant Steven Kropelnicki of the 354th Tactical Fighter Wing, Myrtle Beach Air Force Base, South Carolina, has been selected as the Tactical Air Command *Maintenance Man of the Month* for his outstanding performance as a quality control inspector. Because of his extensive experience and analytical ability, Sergeant Kropelnicki has been used as a troubleshooter and special inspector for aircraft unusual occurrences. The fact that he is qualified as both aircraft and engine mechanic makes him extremely valuable to the maintenance complex.

Sergeant Kropelnicki recently identified a dangerous condition which could have resulted in one or more serious mishaps. When he heard that aero repair could not bend some aluminum tubing, he recalled that in 1961 a quantity of tubing had been condemned because it was too weak and brittle to be formed. Further investigation revealed that some of this defective stock had been re-issued from a hold status. As a result of Sergeant Kropelnicki's alert memory, the prime AMA has now removed all this substandard tubing from stock and has instructed all Air Force units, world-wide, to do the same. Sergeant Kropelnicki has certainly demonstrated those qualities found in a model maintenance man.

recognition

RECOGNITION

PILOT
OF DISTINCTION



Captain Robert G. Moore of the 4520th Aerial Demonstration Squadron, Nellis Air Force Base, Nevada has been selected as the Tactical Air Command Pilot of Distinction.

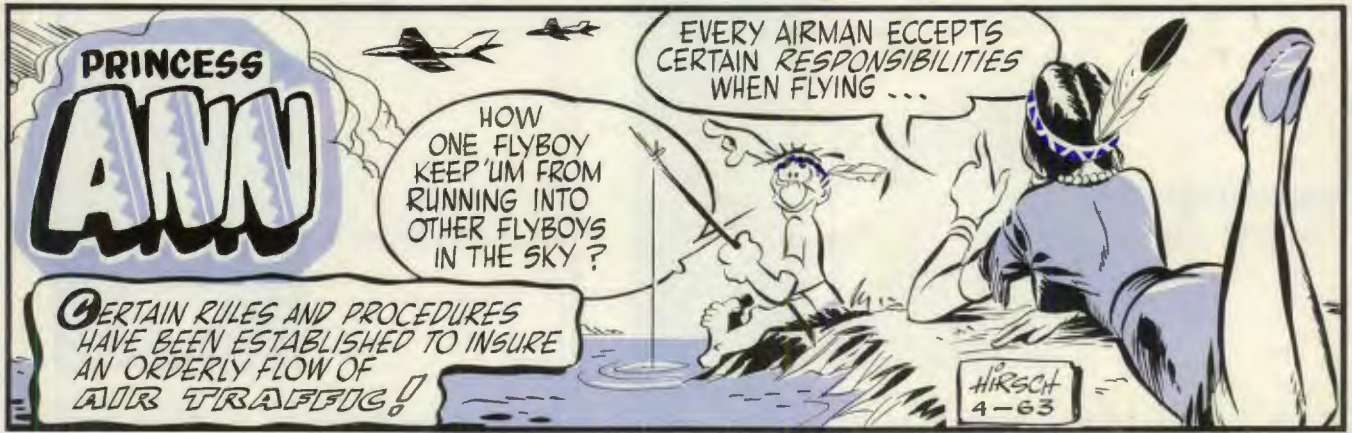
Captain Moore was practicing solo demonstration low altitude acrobatics. As he rolled his F-100C upright after completing a minimum altitude inverted pass, the aircraft nosed down abruptly. By applying extreme back pressure and full nose-up trim, he avoided contact with the ground and initiated a climb. He noticed that hydraulic pressures were normal and that he could move the stick forward. At altitude, Captain Moore experimented to determine flight characteristics of the aircraft and found that by using both hands on the control stick, he could maintain control down to 160 knots. He decided to attempt a landing and set up a long final approach using power to make pitch changes. The aircraft touched down at 165 knots with full aft stick and nose-up trim. Captain Moore deployed the drag chute and stopped the aircraft without further incident. Investigators found a small pulley lodged between a flight control cable and pulley bracket. They could not determine the origin of the pulley, but assumed that it had been secreted within the airframe for some time because the control system had never been repaired at Nellis AFB. The pulley apparently became lodged in the control system during the inverted flight.

CREW CHIEF
OF THE MONTH



Staff Sergeant Charles D. Downs of the 4528th Organizational Maintenance Squadron, Nellis Air Force Base, Nevada has been selected as the Tactical Air Command Crew Chief of the Month. Sergeant Downs has continually demonstrated

keen insight and exceptional technical ability while maintaining his F-100F. He is extremely careful and thorough when performing preflight and postflight inspections and takes immediate action to correct discrepancies. His exacting attention has resulted in his aircraft completing more than 50% of its flights without any discrepancies being noted by pilots. He frequently works overtime to insure that scheduled missions are completed. Because of his unselfish attitude, loyalty and devotion to duty, he is frequently called on to act as a flight chief when one of the regular flight chiefs is away. He has a rare and unusual ability to instruct younger airmen in correct maintenance procedures and special techniques that makes him extremely valuable as an OJT trainer.



PRINCESS ANN

EVERY AIRMAN ECCEPTS CERTAIN RESPONSIBILITIES WHEN FLYING ...

HOW ONE FLYBOY KEEP 'UM FROM RUNNING INTO OTHER FLYBOYS IN THE SKY ?

CERTAIN RULES AND PROCEDURES HAVE BEEN ESTABLISHED TO INSURE AN ORDERLY FLOW OF AIR TRAFFIC!

HIRSCH
4-63



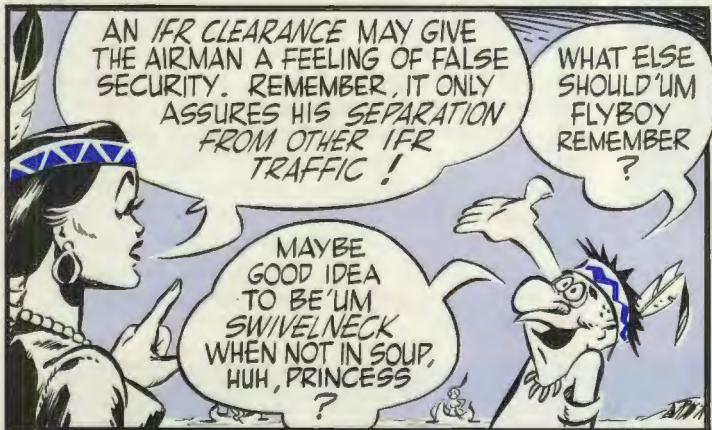
... SUCH AS CONTROLLING HIS AIRCRAFT TO AVOID OTHERS USING THE SAME ROUTE !

THE BASIC RULES ARE COVERED IN FLIP PUBS AND AFR 60-16 !

ME THINK FLYBOY BETTER SAVVY AND FOLLOW RULE BOOK HEAP GOOD !



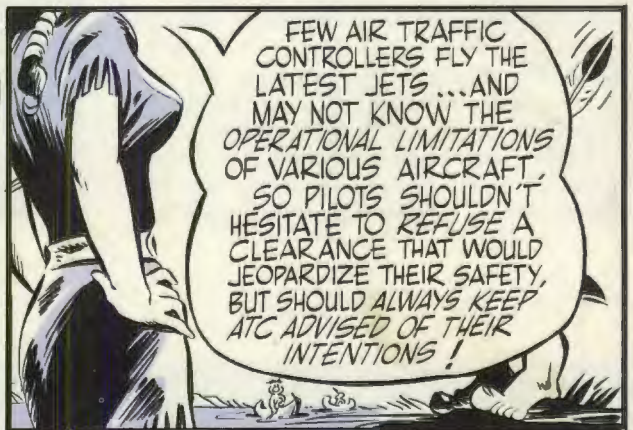
HE MUST OBEY THE *SPEED LIMIT* FOR HIS TYPE AIRCRAFT WHEN IN AN AIRPORT TRAFFIC AREA AND ALWAYS FILE FOR A HARD ALTITUDE BEFORE ENTERING A POSITIVE CONTROL AREA !



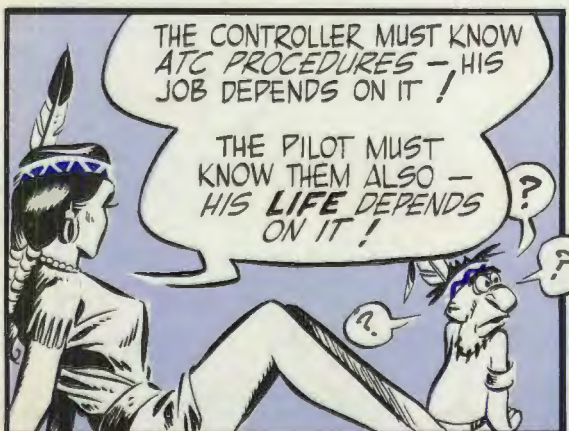
AN IFR CLEARANCE MAY GIVE THE AIRMAN A FEELING OF FALSE SECURITY. REMEMBER, IT ONLY ASSURES HIS SEPARATION FROM OTHER IFR TRAFFIC !

WHAT ELSE SHOULD 'UM FLYBOY REMEMBER ?

MAYBE GOOD IDEA TO BE 'UM SWIVELNECK WHEN NOT IN SOUP, HUH, PRINCESS ?



FEW AIR TRAFFIC CONTROLLERS FLY THE LATEST JETS ... AND MAY NOT KNOW THE OPERATIONAL LIMITATIONS OF VARIOUS AIRCRAFT, SO PILOTS SHOULDN'T HESITATE TO REFUSE A CLEARANCE THAT WOULD JEOPARDIZE THEIR SAFETY, BUT SHOULD ALWAYS KEEP ATC ADVISED OF THEIR INTENTIONS !



THE CONTROLLER MUST KNOW ATC PROCEDURES - HIS JOB DEPENDS ON IT !

THE PILOT MUST KNOW THEM ALSO - HIS LIFE DEPENDS ON IT !



LOOKS LIKE WE NEED 'UM SOME THAT TRAFFIC CONTROL RIGHT HERE, PRINCESS