

MAY 1961

ATTACK



OPERATION BIG SPLASH



TACTICAL AIR COMMAND ATTACK

GENERAL F. F. EVEREST COMMANDER TACTICAL AIR COMMAND
LT GEN J. E. SMART VICE COMMANDER

FOREWORD

To be successful, a supervisor must be able to communicate. This skill permits him to outline plans, policies, and instructions clearly and effectively.

A skillful supervisor recognizes the advantages and the limitations of available forms of communication. He also knows that the effectiveness of each can be seriously compromised by misuse. For example: if one publishes instructions for too many potential situations, it becomes difficult for the workers to keep current. Also, it increases the possibility of something really important being overlooked. Conversely: verbal instructions are easily misunderstood and they cannot be referenced later. Yet either method of communication is effective when used properly. Common sense and careful thought usually indicate the best method to use.

We have heard of accidents that happened because someone did not get the word. But many probably happened because "the word" wasn't understood. Thoughts and ideas are worth nothing unless they be transferred clearly. Many good works on effective communication, including AFM 10-4, are available. Each supervisor should strive for improvement in this area and should require his subordinates to do the same.

Mark D. Meranda
MARK D. MERANDA
Lt. Colonel, USAF
Deputy Information Officer

Editor - Major Karl K. Dittmer

Assistant Editor - Major James G. Swensen

Art and Production - T/Sgt Heinz E. Hirsch

Use of funds for printing this publication has been approved by Hq USAF.

Articles, accident briefs and associated material published in this magazine are non-directive in nature. All suggestions and recommendations are intended as helpful and remain within the scope and intent of existing directives.

Information used in briefing accidents is extracted from USAF Forms 14 and may not be construed as incriminating under Article 13 of the Uniform Code of Military Justice. All names, dates and places used in accident stories are fictitious. Air Force units are authorized and encouraged to republish the material contained herein; however, contents are not for public release. Written permission must be obtained from Hq TAC

before material can be republished by other than Air Force organizations.

Contributions are most welcome as are comments and criticism. We reserve the right to make any editorial changes in manuscripts which we believe will improve the material without altering the intended meaning. Direct correspondence with the Editor is authorized.

COVER PHOTO

Chopper pilots at Luke AFB "taxi" out for take-off in an H-43.

THIS ISSUE

VOICE OF EXPERIENCE	1
OLD TAT	2
HOOKED	5
TAC TIPS	6
NOTAM NONSENSE	7
OPERATION BIG SPLASH	8
CHOCK TALK	10
OLD SARGE	13
SAFETY SEARCH	14
CONGRATULATIONS	16

the VOICE OF EXPERIENCE



"A GOOD SUPERVISOR," the lanky greying Lt Colonel remarked, "constantly looks for danger signals, especially when everything seems to be running smoothly, under control." He looked at his glass on the table, shifting it to make patterns of interlocking rings from the moisture collecting on its bottom. "These signals can be no more than a conversation overheard at the bar, or they can be a sharp formation flown just a little too close, traffic patterns flown just a little too tight. The outfit rocks along, no trouble, not even a dent . . . then Boom! Some guy runs into the ground buzzing. Everyone figures it for an isolated case . . ."

He paused to drink some of the amber liquid, swirled it, and listened to the ice cubes tinkle against the glass. Still studying the glass, he continued. "Everything returns to normal until another pilot bumps his leader's stabilizer with a wingtip. Very little damage done, but the real clue to a serious problem is the failure of this pilot to tell his leader of the incident until after the mission is completed and they are ready to enter traffic for landing."

He paused to drink some more from the glass. "Action is started, but by then too many weed seeds have taken root. It isn't long after this little mishap before another pilot gets into trouble and bends his bird trying to cope with an emergency from the right

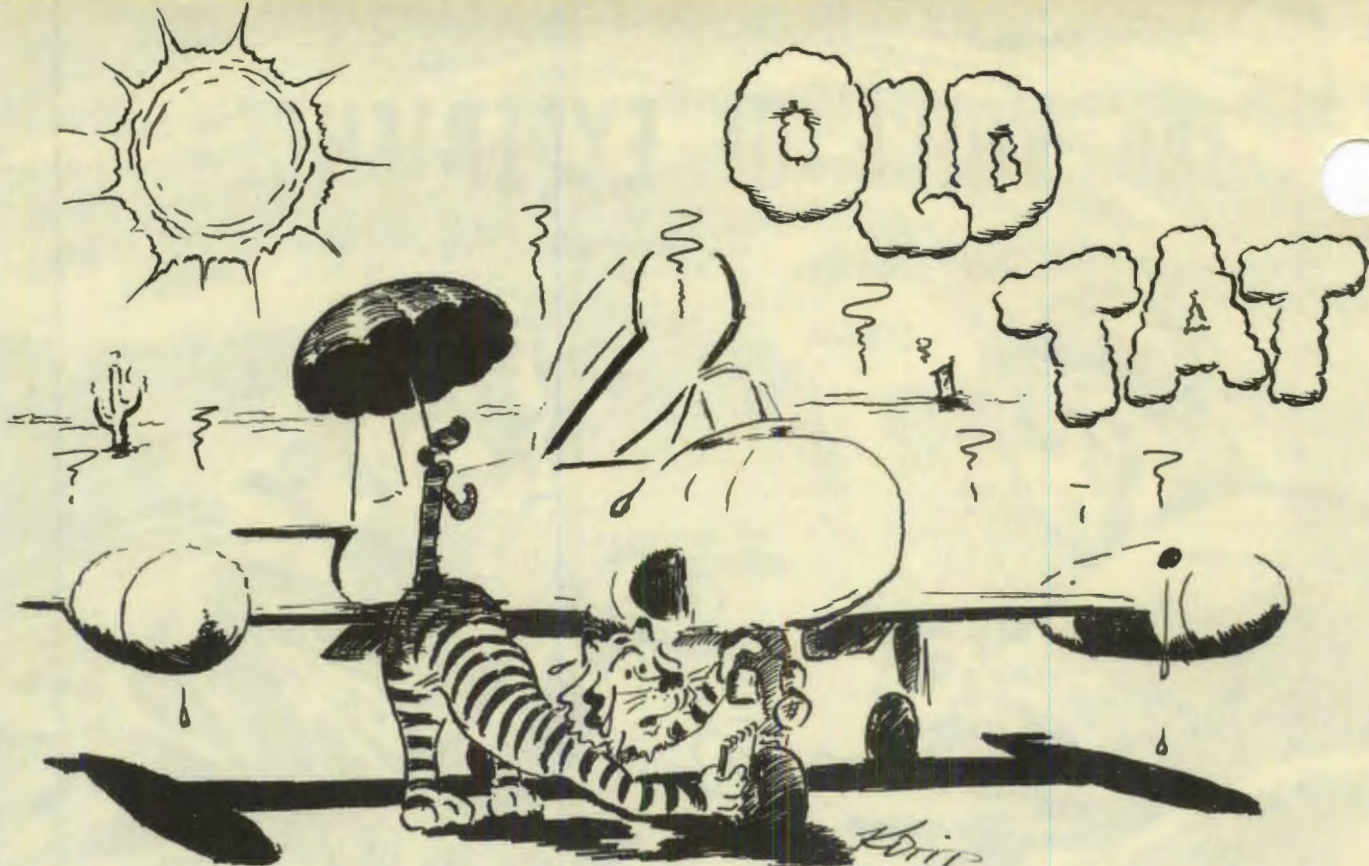
seat. More poor judgment, but this time it can't be traced to supervision . . . except that the accident occurred while making an emergency landing at an airfield that is some distance from his flight planned route. Since other suitable airfields are located all along the flight planned route, it is pretty obvious he was cutting across a corner and not following his flight plan."

He emptied the glass and beckoned to the bar waiter. "Another scotch in the creek, innkeeper . . . thas' right, a double."

Turning back to stare at the table, he continued. "As if that isn't enough, two-three weeks go by then another pilot lands 'way long on a short, slick runway and kills both engines trying to get them into reverse. He goes off the end of the runway with the usual result."

He sighed, making a deep, sad sound, then fumbled in his pocket and produced a quarter, just as the bar waiter arrived with his drink. "Thanks innkeeper, keep the change."

Taking a deep drink from this glass, he paused to peer at it owlishly, then said, "Well, if you don't use the proper technique with this particular bird, the engines will conk out. This is generally known in the outfit, but no one has briefed this fella . . . add this to the other accidents and, well, here I am. Now, how'd you get sent to this pest hole?" ●



SUMMER IS JUST AROUND the corner and once again it's time to remind you featherless flyers of TAT's law. Our law is the hotter the weather, the shorter the shorts, and the shorter the shorts, the longer the takeoff roll.

More important, the coming of the hot season means that it is time to brush up on your skill and cunning for takeoff. The old mill isn't going to be delivering any bonus thrust and if you try to haul some of these dogs off early you're apt to find yourself smack behind the power required curve with no hope of getting more than a few inches airborne. On the other hand, if you stay on the launching pad too long the excess speed will raise need with already overwarm tires. So like Goldilocks, you can't have it too hot or too cold but want it just right--during every takeoff.

Flight leaders and other gallant types can do well to sneak a peek at a few takeoffs to make sure their brood hasn't developed some bad habits over the winter months...might save someone from swimming in a cockpit full of sweat, or worse.

Swimming in sweat reminds us of a summer we spent flying jugs around the deep south and southwest. After sitting on a hot ramp at some place like Albuquerque, their hide would get hot enough to give an unsuspecting soul a nasty burn. The heat build-up inside would cause fuel leaks and other troubles unless caps were left loose enough to dissipate the

pressure. This problem is still with us and as sure as we're sitting here, someone will takeoff with loose caps and have to make a fast trip back. Plot it cagey--make a thorough preflight even if you are being sun-broiled in the process.

AN F-100 DRIVER wrote up the trim switch for being erratic and hard to operate. Later he rechecked the bird and found his squawk had been "ground checked o.k." and cleared. Most pilots would get more than a little suspicious about such corrective action, and this troop was no exception. He rechecked and found that the switch was still bad... he then had the maintenance people recheck it *under his supervision*. They were not familiar with the feel of the system and figured it was OK when they were able to get it to work with heavy pressure. After the recheck, the switch was replaced.

A short time back, TAT had trouble rotating the dial on a slave gyro compass, even tho we have developed a pretty fair grip pinching pennies and bending beer cans.

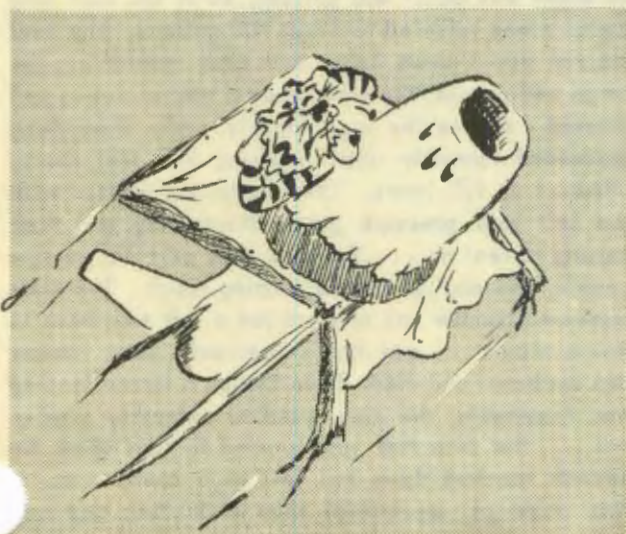
We forgot to squawk it and sure enough, a few days later we found ourself in the same bird struggling with the same balky knob. After writing it up, we mentioned it to the ground crewman. From his expression we rather gathered that he considered it a trivial squawk... so we had him compare it with another compass, then explained how it had to be

used during penetrations and GCA's, and that it required too much time to change, causing a dangerous condition. The whole discussion took less than two minutes . . . and now that this troop understands the reason for our complaint, you can bet he'll not only correct it, but will do it cheerfully. You might adopt the same approach. In doing so, you'll get better results and have fewer squawks to make in the future.

AIRCRAFT CONTINUE to make unscheduled and violent contact with the boon docks under conditions which suggest vertigo. Occasionally some badly shaken birdman returns to tell of a close shave with this killer or with one of the other sensory illusions. Yet most of the articles on this subject have little advice on what to do to combat it, other than tell you to hand the aircraft over to the copilot--which is rather difficult if you're alone in an F-100--or to trust the instruments and ignore the symptoms. At times this is about as effective as trying to convince yourself that you can walk on water.

For some years TAT has used a system for correcting turning sensation vertigo. How well our system works on a severe case we don't know, having never experienced anything but the common garden variety--except for an occasional ground pound case following an unusually wet beer call.

If we have the impression that we are turning hard left and the instruments indicate straight and level (between attempts to turn left), we slowly tilt our head to the left then abruptly straighten it up. This generally cages our mental gyro and we are free to go on about our business. If not, we repeat the performance. Another technique we've heard about is to close your eyeballs for a couple of



seconds. TAT has never used this for vertigo correction, but did use it successfully for other operations. Once to miss a buzzard and again to miss a gunnery target after having pressed in a bit close. We'll give her a try on our next instrument check.



OLD TAT DOESN'T SMOKE . . . mainly because there are more exciting vices . . . so we don't have any qualms about jumping onto one of the many passing bandwagons which are trying to beat the remaining pleasure out of the habit. No, we don't intend to lecture on lung cancer, burned pads and paddlers, singed oxygen masks, or such . . . we just want to report the effect a pack a day has on your night vision. According to the Flight Safety Foundation you'll have 80% of normal night vision up to 4,000 feet while TAT and other non-smokers will retain 100%. At 6,000 you'll be operating at 75% while us non-smoking types will be at 95%. At 10,000 feet your eyeballing is down to 60%, while we're at 80% . . . in short, heavy smoking reduces your night vision about 20%. It also reduces your altitude tolerance. So give up the habit and start chasing whimmen . . . by the way, anyone know what to do after you catch one of the critters?

SAW A RECENT UR on an RF101 which we found interesting because of the cool stick and rudder work involved. The pilot landed the machine with a sick utility system, pulled the emergency brake control handle, and at about 90 knots applied right brake to correct a drift to the left. The aircraft continued left more aggressively so he tapped right brake again . . . with the same result. *He then used left brake* and this had the desired effect. Incidentally, the bird wasn't modified, so nose gear steering wasn't available. The weird braking was caused by emergency brake lines being reversed during compliance with a TO. The TO didn't require

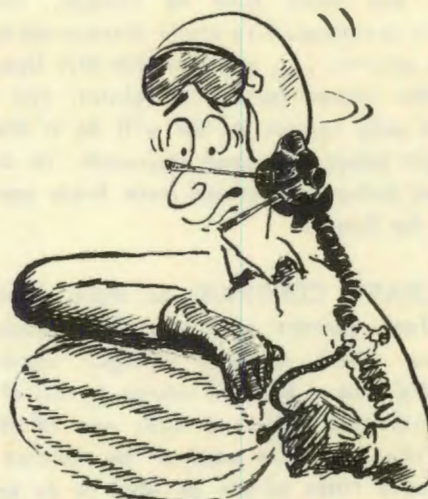
individual testing of brakes, so the goof slipped through.

TAT thought this pilot used superior skill and cunning by analyzing the effect of control application and then taking appropriate counteraction after confirming that things were amiss.

TAT SAW A MESSAGE the other day warning T-bomb drivers to guard against lowering the seat on the oxygen hose. The message told of two eager beavers who were nursing one of these machines along at a hard flight level of 370 when the IP in front observed that the guy in the back was having trouble. Cockpit altitude was 33M, so the IP instructed the aft pilot to put his oxygen regulator on safety. He did, but was still hypoxic. The IP then declared an emergency, made a hurried descent off airways and landed at a nearby air base. That's when they found the oxygen hose crimped under the seat. Safety people reasoned that this interfered with the flow of oxygen, causing the difficulty. We are not about to go on record and say that a crimped oxygen hose isn't dangerous any more than we'd say sex was a dull subject...but we do doubt that this was the cause of this incident else how could the guy have breathed at all. Frankly, a cabin altitude of 33M in itself places a pilot in a very dangerous environment. Both of these troops should have been using the safety position after venturing above 30M cabin altitude. Failing to do this, and we assume they failed, would leave them easy prey to the slightest leak between mask and cheek...and once hypoxic at that altitude they would have to do some fancy breathing to recover...preferably in denser air.

Incidentally, having to use the safety position above 30,000 feet cabin pressure is a right fine idea 'cause it is just uncomfortable enough to discourage prolonged playing at that level and also will help inspire pilots to make loud rude noises about the punk pressurization system to the wrench and mallet set. Who knows, they might fix the blasted thing!

By the way, TSgt Albert M. Knight in the base flight section at George AFB came up with one cause of crimped hoses. He observed that most tactical drivers are used to having the oxygen supply hose routed from the center of the seat. Consequently, when they crawl into a T-bird they run it under their left leg and then up. This routes the hose too close to the left front corner of the seat. The safest thing to do is to route the hose over the left leg which keeps it clear. We agree and tip our old hard hat to you, Sgt Knight, for your good sound reasoning and sharp eyeballing.



SPEAKING OF OXYGEN. This cat was listening to a well-experienced jet jock tell of losing his oxygen regulator in an unbent wing beast that is now extinct. Unable to descend as rapidly as he'd like due to the limiting mach of his machine, this troop pulled the green apple on his bailout bottle and then attempted to conserve the precious gas by pinching off the supply tube. After holding it a few seconds he felt something alongside and glanced down at what first appeared to be a full-grown watermelon. He immediately realized that he was gazing at the old supply tube and uncrimped it before it burst. O.K., O.K., maybe it was the size of a big cucumber...it's his story not ours, and it vividly illustrates the hazards of attempting to invent one's own procedures.

RIGHT DARK AND EARLY one morn an ancient Gooney flopper creaked off its home pasture carrying the usual assortment of cargo and passengers. Fuel on board was about 400 gallons, so at the first stop the bird was refueled to about 700 gallons. The next leg ran about three hours and after reshuffling the cargo and people, the crew made a normal run-up and blasted - to use the word loosely - off. Everything proceeded normally until reaching 200 feet during climbout at 120 knots. The excitement started with the left fuel pressure gauge fluctuating and then coming to rest on...Ye gods, five psi! To confirm trouble, the engine started running rough. The crew feathered number one and started a left turn back to the runway...and that's precisely when number two sputtered and died. Even though a forced landing was inevitable, the crew tried to unfeather number one...the prop had just started to turn when the aircraft touched down tail low on a sandy area. It was more of an arrival than a landing and bot

engines were snapped off by the impact, but no one was hurt too badly.

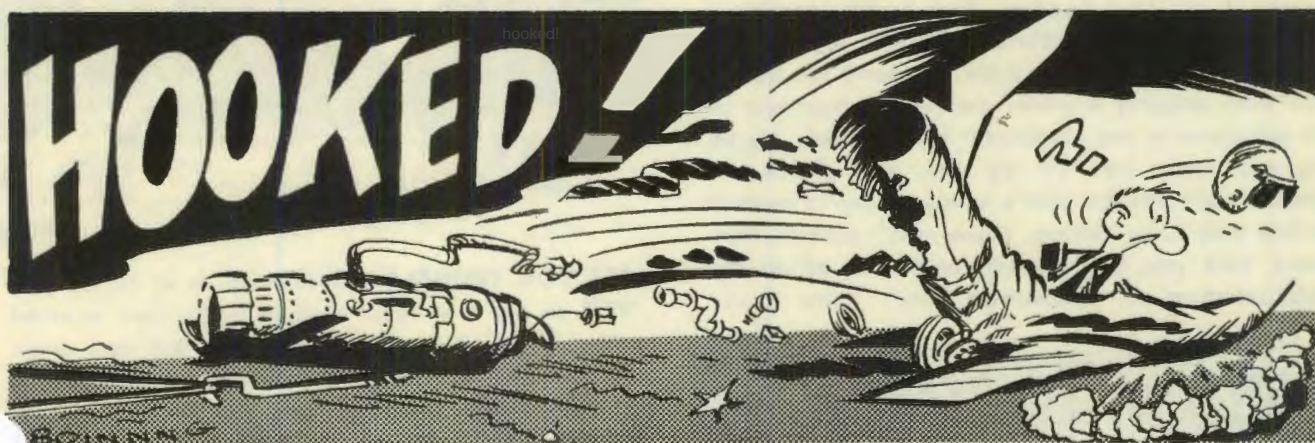
After the dust settled, investigators arrived with a dash one, a dip stick, measuring tape and such. They found 65 gallons in the left main tank, 170 in left auxiliary, 200 in the right main and nothing but air in the right auxiliary. Fuel selectors were set to feed the left engine from left main and - you guessed it - the right engine was sucking air from the right auxiliary.

The "low" fuel pressure was actually the reverse. The left fuel pump had a busted pressure control diaphragm and produced normal pressure until the boost pump was turned on, then pressure of about

39 psi caused the gauge to swing clockwise around to 5 psi.

From the comfort of our swivel chair we are quick to comment on the feathering of number one. With an apparent fuel leak staring them in the face, shut down should have been made with the mixture control or fuel selector valve to reduce the possibility of fire.

It was bum luck to have a tank run dry while busily handling another emergency... but it was just plain poor procedures and failure to use the check list that caused the tank to run dry. Things have a habit of piling up like this, so it pays to play by the rules. With that, we'll scat. TAT. ●



EVERYTHING LOOKED ALL RIGHT on final. Airspeed was on the nose and I was well lined up and in the groove. Crossing the overrun I eased off the power and came back a bit on the stick. Touchdown seemed normal and then all hell broke loose.

"The bird seemed to stop momentarily snapping my head forward and slamming the nose down. At the same time it let out a scream as if in mortal pain. I felt it swerve hard right and automatically rammed in full left rudder and some brake while clawing at my helmet. When I could see again the aircraft was headed to the left, straight for mobile. The mobile control officer dove headlong out the door, rolled once and got up running only to trip and fall on his face. By then I was headed back the other way.

"I still don't know how I stayed on the concrete, but did. I never did deploy the drag chute... just didn't have time, although I did stopcock. After getting stopped, I had to wait for my knees to quit shaking before fumbling my way out of the parachute and sliding to the ground. Both nose gear tires were blown and there was a large hole on the underside of the fuselage. A bunch of firemen were peering up into it. Then it dawned on me what had happened.

Somehow, the tail hook had managed to snag the "water squeezer" cable on the approach end of the runway...no wonder the bird had screamed so pathetically."

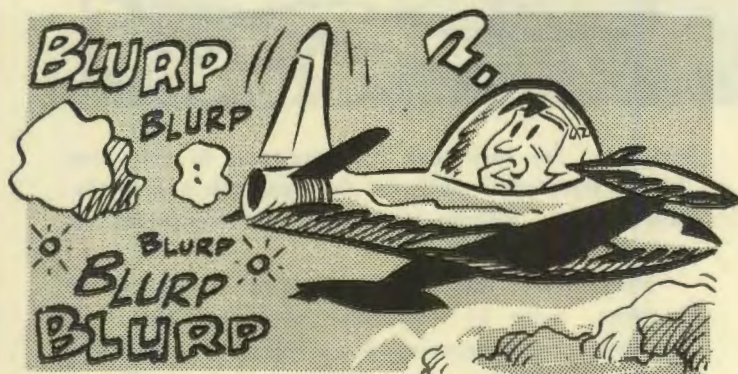
Fortunately the above narrative is fictitious. However, there is a strong possibility that this command could experience an accident along the same lines now that some aircraft are being equipped with tail hooks. Another command lost an aircraft in just such an accident, and has submitted hazard reports on other aircraft. The major accident was caused when a pilot landed on the arresting cable causing it to snap upward against the bottom of the fuselage where it engaged the hook. The hazard reports were submitted because some hooks were found to be inadvertently extending in flight and the pilots were not aware of the condition.

Installation of a warning light indicator may be needed to tell the pilot when his hook is extended. But, since it is possible to engage the cable even tho the hook is properly retracted, it will be advisable to land hook equipped aircraft a little beyond the cable if sufficient runway exists...at least until someone decides to modify either the cable or the hooks. ●

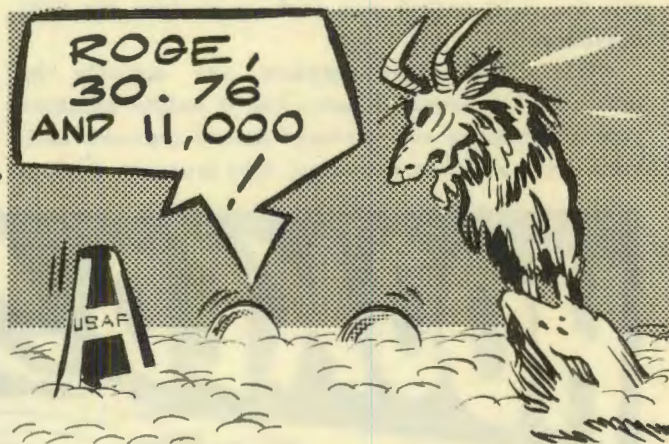
TAC TIPS



T-33 INTERCOM. Recently the safety people at Norton have commented on the fact that T-33 pilots are often unable to hear radio side tone and consequently don't know when who is saying what to whom. This is not a new problem. In fact, it has been with us so long that most pilots have come to expect it and have forgotten that it often creates a serious hazard. The experts at SMAMA say that the existing equipment is adequate and point out that it will work properly provided existing instructions on its maintenance and adjustment are followed. Maybe so, and maybe not. At any rate, this places the problem right into the pilot's hands. If you're content to live with it, do nothing. If you aren't content, then every time you find yourself unable to adjust the radio-intercom to a desirable level, write it up.



T-33 MODIFIED EMERGENCY FUEL SWITCH. The new location of the emergency fuel control switch is not working out too well in the rear cockpit position. A number of rear seat drivers have reached for the UHF radio control switch and inadvertently hit the emergency fuel system switch. This is a hair-raiser, since you usually get a blurp and an RPM fluctuation commensurate with the altitude. For the moment we have this advice - if you are above 23,000 feet, or below 80%, leave it in emergency. In a recent study of flameouts, the Edwards' test people found that although switching from normal to emergency system seldom induces flameout, the return to the normal system is somewhat marginal under these specific conditions. December and January issues of AEROSPACE SAFETY contain detailed information on this condition.



SET FOR TROUBLE. While cruising at 13,500 feet VFR on top of a cloud deck, a flight crew received clearance to descend to 11,000 feet and were given an altimeter setting of 30.76. Although this was a radical change from the previous setting, neither pilot questioned it until the newly assigned altitude was reached . . . both then noticed that the aircraft seemed uncomfortably close to the terrain and a quick recheck was made with the ground station. The altimeter setting should have been 29.79 instead of 30.76 . . . and the aircraft was at 10,000 instead of 11,000 feet! Luckily it was daylight and the clouds had thinned out enough to see ahead. Each .1 inch of altimeter setting is equal to about 100 feet, so be quick to question a large pressure change over a short distance unless the change is accompanied by corresponding weather phenomena. By the way, if you go from a low pressure area to a high pressure area without changing the altimeter setting, will your true altitude be higher or lower?

T-33 GANG-START AIRSTART. AMC has the go-ahead for the single switch airstart modification on the T-33. Kits are programed to reach the field beginning in March, 1961. This will be a most welcome item. Coming on top of current modifications, it means a fast, one-step procedure for all cases---and it is done with the throttle open. Gangloading, switch to emergency, de-icing, metered starting fuel, and battery override selections are automatic and simultaneous with actuation of the new switch.

EARLY ABORT, AVOID THE CRASH

Rollin' down the runway
At a hundred and twenty per
Clamped on those anti-skid binders
But there was no stoppin' her

The smokin', screechin' tires
Quite loudly did bewail
Cried out in mortal agony
Complained, to no avail

Twistin', tearin' metal
Bendin', buckling gears
Crash crews racing madly
While Base Commander fears

Out hops unlucky pilot
Incensed with injured pride
Alas! Alas! he wonders
What will the board decide

The board they play it cagey
Compute with tape and rule
Decide he could have made it
With a thousand pounds less fuel

Now "Hogs" use lots of runway
Of that there is no doubt
Check closely with computer
Leave nary a factor out

Wind and weight and weather
Forget not temperature
Use all available runway
And then you can be sure

With common sense and a handbook
Take the active without fear
Live a long and lively lifetime
WITH FLYING SAFETY YOUR CAREER

Captain L. H. Griffin
153d TRS

notam nonsense?

QLOIK

NOTAM NONSENSE ?

QUQUR

QUMOF

QEKOG

LVS QISUT*

ABSENCE, THEY SAY, makes the heart grow fonder. But in my case it also left me with the idea that I knew all about a base from which I had been transferred two years before. What better way to get in some training than a trip back? For two years I had religiously maintained my flying proficiency and I thoroughly knew the flight planning facilities available at Base Operations. Get a T-bird. Whip off a flight plan (no need to check NOTAMS). Get airborne - no problem.

I was in such a hurry to get to my destination that at my intermediate refuelling stop I again did not check the NOTAMS.

I saw my old home plate from 26,000 feet, canceled IFR and requested landing instructions. The tower gave me runway 29 with a right hand pattern and the altimeter setting. Just before let-down I turned on the defroster, but during the descent the windscreen frosted over and was only partially clear in the traffic pattern. Touchdown was made 2000 feet down the runway to give more space to an aircraft in the pattern behind me. Then, through a small clearing in the windscreen I saw that the runway ahead appeared to be nothing but smooth, compact gravel, so brake pressure was released. My observations were correct, and while I was

rolling across the gravel, I asked the tower if they had informed me of this condition. The tower said they had not because they assumed I had read the current NOTAMS.

When the dust cleared the T-33 had a blown tire and the Base Commander had blown his top. (The pilot concerned has gone into hiding, but if urgently required, he can be found checking NOTAMS.)

Fortunately, this incident did not result in injuries or substantial damage, but it very easily could have. Several accidents have occurred in recent months wherein pilots have ended their flights tangled with construction equipment or with runways that were in various stages of construction and repair. In most of these the pilots were seriously injured and the aircraft were destroyed or severely damaged.

Granted the NOTAM system is not perfect at present, but, it's the best solution for the problem....and the few seconds it takes to check NOTAMS can be well worth the time. Operations officers can do their part too by insuring that NOTAMS are decoded and current, and are filed in a convenient and conspicuous place. ●

RCAF Flight Comment



Two steps down to a soaking good time.

HOW MANY TAC aircrewmembers have stopped to think how much flying is done over water? Believe me, it's considerable, and it is not too infrequent that someone is required to swim or sink. Finding yourself in the water even in the best of conditions is no picnic, but the ordeal can be endured much easier if you know how to use your equipment and can predict your reactions in an emergency.

Take this business of knowing your equipment. Maybe you know how to put on your underarm life preserver and parachute, can struggle into a poop suit and know where your dinghy and bailout bottle are located, but do you know how to get the most out of them in an emergency? Have you ever tried them out under less than ideal conditions? Equally important, do you know what your reactions would be if you suddenly found yourself about to be dunked in a large, rough body of water?

Before you answer, think about this for a minute: From January to June 1960, five of the twelve Air Force pilots who ejected safely over water drowned before they could be picked up. All five had life preservers and dinghies, but failed to use them properly or were unable to collapse the chute canopy after landing in the water. It's one thing to have the equipment and another to know how to use it when the chips are down.

This needless loss reaffirms the urgent requirement for a water survival training course covering the characteristics and short comings of survival and personal equipment. Ideally, every crewmember should attend such a course and perhaps this may eventually happen, but in the interim, all TAC Personal Equipment and Survival officers and selected NCO's will be provided training in deep sea survival. The Personal Equipment and Survival Training Branch at TAC will conduct this survival training and the training will be centered around one

OPERATION

By: Captain Arthur N. Till Jr.

word — REALISM. It is hoped that, through this training, base Personal Equipment experts will gain valuable experience which will enable them to establish a water survival training program for TAC crewmembers. Tentatively two classes are planned at Langley AFB between 15-27 May 1961.

All water work will simulate the worst possible conditions that a downed man must face. In fact, before the six-day course ends, "realism" will probably be considered a nasty word.

The first two days of the course will be devoted to lectures and demonstrations covering personal and survival equipment, a chamber ride, and the firing of nearly every pyrotechnic in the inventory.

The fun begins on the third day when a Navy LCM will take the group to the ditching area in Chesapeake Bay. There the group will don the RI suit (commonly called the Yellow Peril with the built-in leak), jump off the end of the LCM, swim to the end of a rope, and then return to the LCM via the rope. The weather analyst tells us that the average water temperature will be a pleasant 69°. In this cool five minutes, memory cells should quickly recall how trapped air is removed from the RI, that fifty percent of the suits will leak, and that wet clothing makes one miserably cold.

The second exercise of the morning calls for a leap into the water from the fourteen-foot LCM tower,

Swells do little to assist in raft boarding operation.



BIG SPLASH

which will prove that at normal parachute descending speed (free fall - 14-18 feet), a person will go a good distance under before reversing course to surface, and that proper body positioning is important.

The last exercise of the morning will be a 300-yard swim. This bit should prove that the Australian Crawl can't effectively be done in an LPU, and that it's better to float ashore than to leave a raft and swim, regardless of how close the shore looks.

In the afternoon each participant will accomplish two simulated combat helicopter pickups, then jump off the tower of the LCM again. This time each man will be equipped with a parachute harness, dinghy, and LPU. The LCM will be moving at approximately six knots to simulate a chute landing in a high wind. The participant will actuate the canopy quick release and the day will end - that is, after climbing into dinghies and spending the next three hours floating around the Bay. This operation will stress

knowledge of equipment is most important and that the open sea is a lot different than the base swimming pool. Participants will learn the hard way that the cover on the quick release should be closed prior to entering the raft and that patching the dinghy is rough work in the open sea. They will also learn that it takes 64 full breaths to orally inflate the dinghy.

Participant leaves in a hurry at the end of a wet weary day.



Canopy quick release can't be too quick when you are in this position.

Thursday morning will find the LCM back at the ditching site. The participants will again leap off for a simulated combat evasion problem which will end with a chopper basket pickup... if they can attract the attention of the chopper pilot with a mirror.

In the afternoon, participants from each unit will navigate six-man rafts for a minimum of ten miles using the moxie passed out during the lectures. Participants should learn from this experience that the six-man raft handles well in rough seas, and that it takes some mighty waves to flip it if weight is distributed properly. They will probably be amazed at how well it maneuvers even without a keel or center board. They may also question the term "six-man" after being in the raft for an extended period of time.

The deep sea portion of the course will be concluded Friday morning with a twenty-man raft exercise. This will include setting up and operating all accessories and then completing a helicopter ladder climb simulating frozen hands... using elbows only. The participants should note that the raft floats fine while still in the case, and that it's easy to inflate when they know how. Once inflated, it's not very stable; it really tumbles around. They'll learn that provisions for some sort of steering gear would help and that a supply of Compazine would be handy.

Friday afternoon and Saturday morning the aquanauts will participate in a "swimming pool" exercise that will illustrate how they can set up a program at their home base which will simulate conditions encountered on the open sea.

Well, survival cohorts, now you know what's in store for you. If you don't think you'll learn anything or if you can't swim, you better start planning your leave or TDY to other parts, pronto. ●

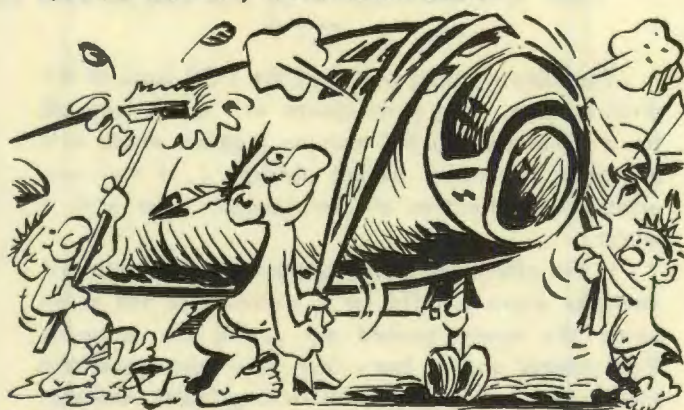
CHOCK TALK

SEALING WIRE SPEC. For those who've asked: Correct safety wire for the F-100 special stores unlock handle is carbon steel, zinc coated, .032 inch diameter, specification QQ-W-461, S/N9505-284-9848. Correct wire for the T-249 option selector switch is soft copper, .016 to .020 inch diameter, spec FS-QQ-341A, S/N 6145-229-9821.

systems response during flight and should permit them to identify the malfunction closely enough to isolate it to a specific component. Maintenance personnel will then verify the diagnosis and make necessary repairs.

KB-50 ENGINE EXHAUST SYSTEM. If an AMC project proves effective, KB-50's will soon be equipped with a fully coated exhaust system. The new system is expected to be more durable and reliable than the old. The new exhausts will be installed during engine overhaul. In addition, AMC is contemplating making the exhaust system a time change item.

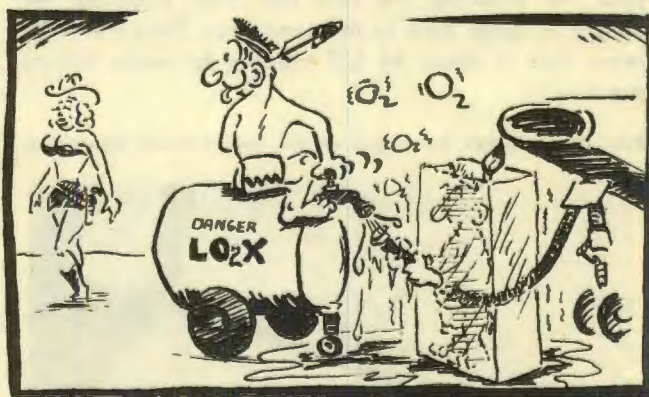
F/RF-101 EXTERNAL FUEL TANKS. As this goes to press, modified F-84 Class I, 450-gallon external fuel tanks should become available for use on F/RF-101 aircraft. These tanks which have been fully flight and surge tested will not have gaging provisions, and according to present information should not be installed in mixed pairs with standard F/RF-101 external fuel tanks. Maintenance personnel are advised to consult the tech orders prior to making any F-84 tank installations.



KB-50 IRAN. TAC is negotiating for IRAN of forty KB-50 aircraft in FY 62. It is anticipated that only four aircraft will be in process at any one time and that the following work will be accomplished during the 30-day flow period: corrosion treatment, QEC wiring, inspection and overhaul of landing gear retraction mechanism, inspection and repair of wing flap system, inspection of bomb bay fuel cells, overhaul of heaters, depot level technical orders, cabin pressurization check, calibration and functional check of aerial refueling system, accomplishment of safety of flight items.

Ed— What, no windshield wash?

F-105 DIAGNOSTIC TEAM. Because the various electronic systems in the F-105 are integrated, there are times when maintenance men have to do some exhaustive testing with authorized AGE before they can isolate a malfunction and correct it. The diagnostic team concept currently being implemented at F-105 bases should improve combat ready capability by cutting down on the time needed for this trouble shooting. Use of these teams should also eliminate needless exchange of good components. The highly trained and qualified technicians on these teams will debrief pilots of aircraft having electronic write-ups. This will furnish them with a thorough account of the



LIQUID OXYGEN HANDLING. At minus 297°F, liquid oxygen is so cold that if you spill very much on you, you'll get a nasty "burn" by having your flesh quick-frozen. In addition, it supports combustion about as violently as when a gas. It must be handled carefully but accidents can be prevented by following a few simple precautions. Keep sleeves and pants legs rolled down, wear fairly heavy gloves and goggles or a face shield. When working with

partner, you must both know what the other is doing at all times. Keep oxygen away from oils and other flammable material and vice versa. Keep tank plumbing and transfer hoses free of dust by installing dust caps, plugs, and covers when the equipment is not in use. Remember, it is possible for your clothing to become contaminated with rich oxygen vapor during transfer operations . . . so don't light up a smoke until you have given the vapors a chance to dissipate.

C-123 LANDING GEAR. For quite sometime C-123 aircrews have been installing down lock pins immediately after the landing gear is down and locked in order to prevent inadvertent gear retraction during ground operation. At present MAAMA is processing a gear selector valve modification which should make these pin precautions unnecessary.



BLESSED IS THE MECHANIC...Who jumpeth not to conclusions. A big turbine engine experienced a nozzle pump malfunction. The pump was replaced, the squawk was written off and the aircraft was returned to flight status. During the next periodic inspection the lube filter was found contaminated with steel and brass shavings. Someone jumped to the conclusion that the NR 2 bearing was failing. The engine was canned and shipped for overhaul. You guessed it! When the engine was disassembled the suspected bearing was found in serviceable condition. In fact, all the rotating parts were in serviceable condition. Which prompted a review of the records and the discovery of the nozzle pump replacement. The original nozzle pump was located. Teardown revealed it to be the source of the metal shavings in the lub filter.

... and Blessed is He Who Flushes the System and Cleans All Filters When a Moving Part is replaced.

—F/S Foundation



INTERNAL DISORDER FATAL. Miss Loosie Afterburner succumbed late yesterday afternoon to a preventable illness at George Air Force Base. Born in Evendale, Ohio, in April 1959, she was moved here in May 1959. She was one of the many daughters of General Electric and a cousin of the P. Whitney family. Because of her pigtails and fast ways, she was most popular among the local fighter pilots. She pursued a lively career until the final day and then consumed a 10-32 screw in her JP-4 cocktail. A violent internal rearrangement resulted and she expired in Building #686 at George Air Force Base. An autopsy was held and the attending specialists announced that she had not followed the prescribed diet. The interment will take place at the Base Salvage Yard next Tuesday. Unfortunately her Uncle Sam did not have insurance, and will have to bear the full expense of the tragedy. Your donations to help defray costs will be appreciated in the form of rocks, bolts, screws, bad maintenance habits, etc. These items may be found on the ramps and taxiways at your local Air Force Base and should be deposited in the containers on the flight line. I.E., Prevent F.O.D.

—Major Fred Welch
479th TFW

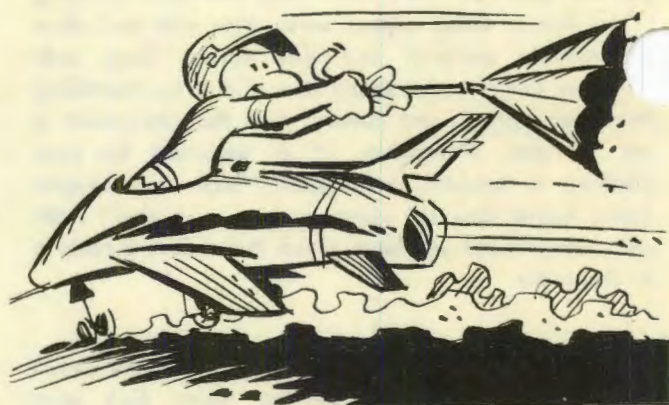


EGRESS SYSTEM MAINTENANCE TEAMS. Recently a 46010 airman was injured while working as a member of an Egress System Maintenance Team. On reviewing causes of the mishap, investigators learned

that this airman was not qualified and was not properly trained to work as an aircraft escape system mechanic. Twelfth Air Force published a letter which outlined the qualifications and training required before mechanics can be awarded AFSC 003XO. This letter should be very closely followed and no personnel assigned to these teams should be below XXX30 skill level. TAC Reg 66-5 is being revised to include this as a minimum requirement.

TCTO RECLASSIFICATION. In accordance with AFR 23-2A, 10 November 1960, Air Materiel Command and using commands will jointly re-evaluate the level at which existing Technical Orders will be accomplished. In the future, technical orders will be accomplished either by the organization or the depot. The category "Wing/Base with Depot Assistance" will no longer be used. If re-evaluation generates a work load beyond command capability, then certification can be made in accordance with TO 00-25-107 that requirements are beyond the practical limitation of available resources.

AIRCRAFT, MISSILE AND DRONE REPORTING. Recently, aircraft and missile reporting has decreased in quality. Planning factors and consumption data involving a substantial portion of the entire federal budget are developed from these reports, and errors can create serious problems. To be of value, it is essential that reports be submitted accurately and on time. Conscientious compliance with the new AFR 65-110, dated 25 Jan 61, will insure quality reporting.



CHUTE THE WORKS. An F-100 drag chute failed to deploy after a normal landing because the vertical cable attaching bolt was missing. The lost bolt caused the telescope unit to disconnect from the lower bell crank. The drag chute was written up on the previous flight for being hard to deploy, and to correct this condition maintenance personnel replaced the horizontal and vertical teleflex cable and aircraft teleflex control box but apparently overlooked the bolt. Drag chute failures have contributed to many accidents; therefore, maintenance of drag chute systems deserves the same careful attention and inspection given other critical systems.

C-130 ENGINE RELIABILITY PROGRAM. Because of the increased number of premature engine changes resulting from turbine damage and the critical support problem that developed, OCAMA established a T-56 engine turbine reliability program. A team composed of members from OCAMA, SAAMA, WRAMA, Lockheed Aircraft Corporation, Allison Division of General Motors Corporation and Major Air Commands visited TAC C-130 activities during April 1961 to conduct seminars on operation and maintenance of the T-56 engine and to discuss current problems and plan corrective action.

F-105 LINKLESS FEED SYSTEM. Several linkless feed systems have been damaged beyond repair because the gun drive torque tubes were not properly attached to the gun drive gear boxes. These parts require careful assembly since it is possible to install the bolt (P/N 79F78056-1), which secures the torque tube to the gear box, *without* the torque tube splines being engaged in the gear box. The torque tube can be inserted in the housing and tightened about two turns without engaging the splines. Despite this, the spline ends make enough contact to rotate and fire the gun. However, on deceleration the torque tube spins off the bolt and on the next firing the gun and transfer unit will remain static.



DO AS I SAY. Quality Control Inspectors are apt to get downright nasty when they run across someone changing an engine or pulling a post flight without using a checklist. This is known as righteous wrath . . . but what is it when one of these same supervisory types makes an inspection of an engine change or other such maintenance operation without using a check list?

Then a jam occurs and major damage results. Armament personnel will have to guard against this until the powers-that-be figure out a better set up.

PEG LEG T-BIRD. Shortly after touchdown on the right side of the runway, a T-33 pilot noticed the aircraft pulling slightly to the left. As the machine slowed, the tendency to go left increased until the pilot thought he had a flat tire and stopcocked the engine. By using right brake he succeeded in keeping the aircraft on the runway until it slowed to approximately 20 knots. When the aircraft came to rest it was 50 feet from the edge of the concrete, 90 degrees to the runway heading and was minus

its main wheel. An outer bearing for a T-33 nose wheel had been installed in place of a main wheel bearing. This caused uneven surface contact at the bearing race, outer bearing failure, and loss of the wheel. The bearing that was erroneously installed has the same inside diameter as the proper bearing; so it fits the axle perfectly. However, the width and outside diameter are smaller and allow the wheel assembly to wobble slightly, regardless of how tightly the retaining nut is torqued. The difference in size of the two types of bearings is readily apparent to the eye and this alone should have caused the people responsible for this fiasco to recheck the part number before making the installation. ●



"LOOK, MAJOR, YOU ASKED me to check over your outfit and I did. I realize you were indirectly fishing for compliments, and that this sets cross-ways . . . for the record, your set-up looks real good except for this one area."

The old Sarge watched the short, dark-haired major frown, stare at his desk, then resume the defensive less vigorously. "O.K., Sarge, but I still don't see how we violate sixty-six one. As far as I'm concerned, we are making proper operational ready spot inspections . . . and plenty of 'em."

"But you're not inspecting in-commission birds," interrupted the old Sarge.

"Technically, they are!" barked the Major. "Granted they've just completed a 50-hour post flight, but they are in-commission."

"I still contend that you are violating the intent of the reg," replied the old Sarge, just a little heatedly. "With your system, about all you're doing is inspecting dock maintenance. How can you evaluate your on-the-line maintenance?" He leaned back in his chair and crossed his long legs waiting for the Major to reply.

The Major toyed with the aircraft model on his desk, rotating it, then speaking more slowly, he said, "We pick that up off the squawk sheets. You know any good inspector can tell pretty well how an aircraft is being maintained just by reviewing the write-ups."

"Not entirely. Checking the write-ups is O.K. but the squawks you really want are the ones that haven't been put on paper."

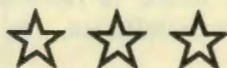
"Operations couldn't hack the mission," said the Major as if thinking out loud. "They couldn't spare the aircraft long enough to do what you suggest . . ."

"Major," the old Sarge fumbled in his shirt pocket, extracting a crumpled piece of paper. "After looking at your set-up, I was curious about that very thing, so I had a visit with Major Bleakworm over at the other wing . . . He's pulling them. He checks the aircraft time, takes a fast look at the flying schedule, makes a selection and then informs Ops that such and such a bird is out for an operational ready inspection. And believe me, these inspections have opened a few eyes." He glanced at the paper. "For instance, the discrepancy average ran between 14 and 15 per bird per quarter for the first three quarters. His reaction to this has started taking effect, and the average dropped to 12 during the last quarter. Of more interest was the number of Red Cross items turned up. Of the 103 birds inspected during the year, 39 were found to have Red Cross defects. That means . . ." he picked up a pencil from the Major's desk and scribbled a few figures, then continued, "That would mean that almost 37 per cent of his aircraft weren't fit for flight. Obviously, the supervision of unscheduled maintenance, and the quality of post-flight and preflight inspections needs some improvement . . . and you can bet they'll get it. How can you honestly say that you aren't in the same shape? My guess is that you are."

Fumbling through his jacket pocket, the old Sarge removed a dark brown package with "Old Barnsmell" lettered across its flank in light green script. Extracting his battered corn cob, he started to pack the bowl.

"Hold up, Sarge," said the Major, a note of alarm in his voice, "I don't have to be smoked into submission; we'll give it a try." ●

SAFETY SEARCH



Captain Hugh P. Ruhsam, of the Survey Team discusses finer points of barrier installation at George AFB with Bill Nastluk.



IF YOU ARE in a TAC organization or in an organization programed to fly TAC missions on button punching day, sometime during the year a compact team from the TAC Safety Section will visit your unit. This team can easily be identified by their worn shoes, battered B-4 bags, savvy, and by the title of TAC Flight Safety Survey team.

In this day of alleged experts, members of this team are unique. They make no claim at being expert in each of the fields they look into. But they do get around the command and they do see a lot of ways

for doing each job. In addition they are in a position where they can take a fresh look at your operation... and an outsider often sees unnecessary hazards overlooked by exceptionally well-qualified people who have gotten used to an environment. In addition the survey team returns to TAC with a first-hand knowledge of your unit and its problems--particularly those problems affecting safety--and then is better able to accurately influence those actions generated by this headquarters which affect your organization.

From this, you can see that the primary purpose of the survey team is to assist your unit to do its assigned tasks better and safer.

A typical survey starts and stops with a briefing for the Senior Commander on the base. In between these two briefings you will find team members visiting safety and standardization offices, talking to the Chief of Maintenance, chatting with operations officers, nosing around the flight line, mobile control, and other places directly involved with the flying operation. In short, the team concentrates its efforts on ops and training, flight safety, facilities, and maintenance fields with a quick look into supply as related to the personal equipment. If you have a problem in some other area, you're out of luck.

Generally speaking, the team has found a few problem areas that are peculiar to all organizations or to certain types of organizations. For example, active duty units are well up on stan board rides and physiological training, but Guard and Reserve out



Major Brian P. Robson, Team Chief conducts a critique.

fits are not.

Most ops sections need a good foolproof system of getting the latest word to their aircrews. A few peg boards or idiot boards which fill this need quite well.

Most maintenance sections have trouble with AF Form 992 entries. The specialist job record entries are not made in enough detail and the forms then cannot be used for their intended purpose. Hit or miss maintenance and repeat discrepancies are generated when "completed" is used to describe the corrective action taken for a hydraulic leak, malfunctioning instrument, or for electrical trouble.

In reviewing AFTO Forms 781B, the team finds that 60 percent of the voucher numbers for parts needed to perform delayed discrepancies are not valid! Each represents a delayed discrepancy that should not exist. This condition results when there is no system to insure that issued parts are used on the aircraft for which they are ordered, or when supervisors are not making periodic checks for validity of listed voucher numbers. Sometimes the problem is traced to Base Supply or Materiel Control. One or both are failing to tell the proper people that a voucher has been canceled. At other times the problem is caused by poor forms maintenance in general.

Another maintenance problem common to most units is fluid contamination. This is usually caused by maintenance people habitually leaving fuel, oil, and hydraulic lines uncapped while they perform maintenance.

The quick disconnects themselves are often coated with dirt and grime. Hydraulic servicing units are being left with the disconnects uncovered and dirty. Aircraft filters are capable of trapping normal impurities but cannot hack continued abuse from improper practices such as these.

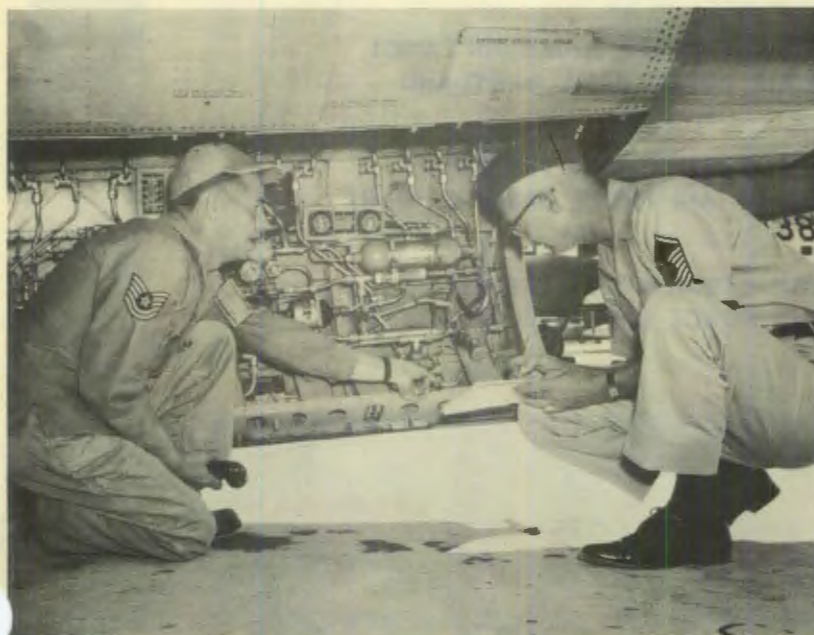
In the Flight Safety area, team members are finding that safety bulletin boards are being neglected . . . or just don't exist, and that many units have no system to get the latest flight supplements and handbook revisions into the hands of aircrew members.

Although most units conduct Flight Safety meetings for aircrews, few conduct them for maintenance and personal equipment people.

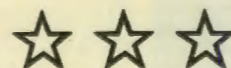
Ops Hazard Report forms are not being made readily available or easy to obtain in either maintenance or operations sections.

Safety officers are not making frequent visits to each squadron, keep no visit schedule and often have no written prevention program . . . board members are not fully participating in accident investigations, are not informed of their duties, and in many cases are not on orders. In addition, in most units accident investigation kits are not established.

These, then, are the things the team is finding that usually need your attention. When they come your way, they'll probably have to search for something else in their never-ending quest for a stronger, safer TAC. ●



TSGT V. Adams 479th TFW Quality Control Inspector shows SMSGT Dwight E. Eales a trouble spot on the hydraulic panel of an F-104.



CONGRATULATIONS !

USAF FLIGHT SAFETY AWARDS

1 JULY - 31 DECEMBER 1960

**839th AIR DIVISION
SEWART AIR FORCE BASE, TENNESSEE**

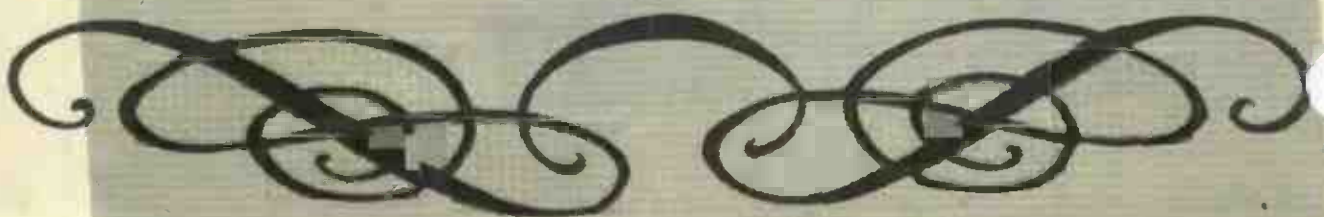
**354th TACTICAL FIGHTER WING
MYRTLE-BEACH AIR FORCE BASE, SOUTH CAROLINA**

**522d TACTICAL FIGHTER SQUADRON
CANNON AIR FORCE BASE, NEW MEXICO**

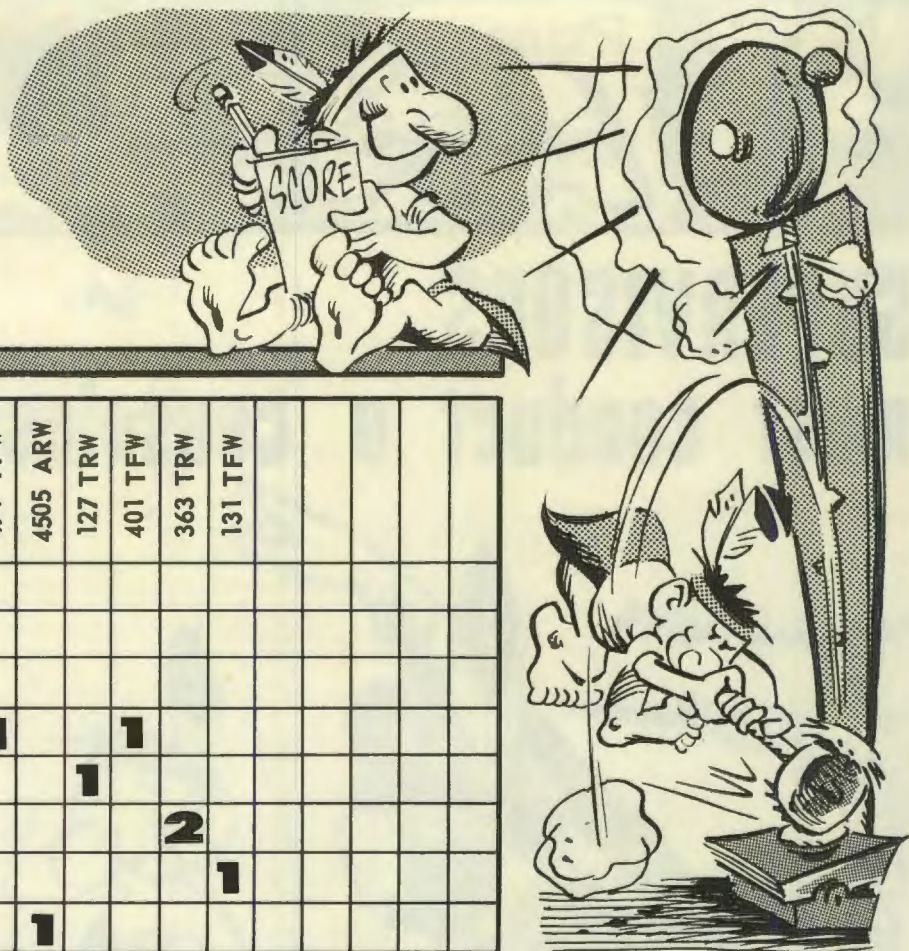
**121st TACTICAL FIGHTER SQUADRON (ANG)
ANDREWS AIR FORCE BASE, MARYLAND**

**442d TROOP CARRIER WING (RESERVE)
RICHARDS-GEBAUR AIR FORCE BASE, MISSOURI**

**452d TROOP CARRIER WING (RESERVE)
MARCH AIR FORCE BASE, CALIFORNIA**



TAC TALLY



MAR MAJ ACDTS.	4510 CCTW	433 TCW	464 TCW	31 TFW	479 TFW	140 TFW	27 TFW	474 TFW	4505 ARW	127 TRW	401 TFW	363 TRW	131 TFW						
F-105																			
F-104					1														
RF-101																			
F-100				2				1			1								
F-84										1									
B-66												2							
T-33													1						
CONV.									1										

MAJOR ACCIDENT RATE 1 JAN. - 31 MAR.

TYPE	1961	1960
F-105	0	48.2
F-104	36.9	82.1
RF-101	0	0
F-100	19.5	24.6
F-84	30.5	0
T-33	0	9.4
B-66	45.0	0
KB-50	20.7	0
C-130	0	0
C-123	13.6	0
ALL	12.1	13.8

Once again the TAC accident rate took a terrific beating in March. Possibly this carnage was an indirect result of the coming of Spring and the turning of too many young men's fancies from the problems at hand . . . but the hard, cold facts do not disclose this. Last year we experienced 11 major accidents and lost three people. This year we clobbered ten aircraft including two from the National Guard, and lost twelve people. Nine died in a KB-50 which crashed while turning final at night. At this writing, the most probable cause appears to have been a tired crew misreading the altimeter. As a result you can expect some changes in TAC directives on maximum crew time, with possibly different requirements for fighter and tanker operations. Four F-100's and an RF-84F were completely destroyed while a T-33, an F-104, and three B-66's were substantially damaged. Two of the B-66's ran together during ground run-up and are listed as one accident. Preliminary information indicates that most of these accidents resulted after some form of materiel failure or malfunction occurred. In such cases there is always a strong possibility that maintenance errors or poor maintenance practices contributed to or induced the malfunction. Commanders and supervisors cannot afford to gamble, but must do everything in their power to insure that tight efficient supervision is maintained over all maintenance activities. In at least two of the accidents, the emergency appears to have been poorly handled by the pilots involved. Once again, this calls for increased emphasis on emergency procedure training. Simulators are recommended as the most efficient device for the conduct of such training. Are your people utilizing them fully and properly?



Princess
ANN

says:



SUPERVISORS
must conduct a ceaseless campaign of
EDUCATION...



...in a constant effort to
eliminate **AIRCRAFT ACCIDENTS!**