

JANUARY 1963

TAC ATTACK

TAC Attack January 1963 Handle with Care



HANDLE WITH CARE

TAC ATTACK



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COVER PHOTO

TAC KB-50's ready for rendezvous over Atlantic.

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USAF Recurring Publication 62-12

Wisely, and slow; they stumble that run fast.

- Wm Shakespeare

angle of attack



Colonel James K. Johnson
Chief
Office of Safety

Instead of releasing a Mark 106 practice bomb, an F-100 pilot dropped his MNIA on the special weapons target. As could be expected, the dispenser and the mission were both a complete loss.

Faulty equipment, stray voltage or pilot error? The investigators assessed pilot error, explaining among other things, that the special weapons unlock handle was in and locked but not safetied, that the pilot had been diverted during his preflight and had neglected to check the type VII pylon to see if it was properly cocked and locked, and that he was late taxiing and could not positively state that the special store unlock light was out.

He had rotated the special store unlock handle 90 degrees to free his G-suit pocket when the pocket caught on it as he adjusted the rudder pedals. He did not require the handle to be safetied . . .

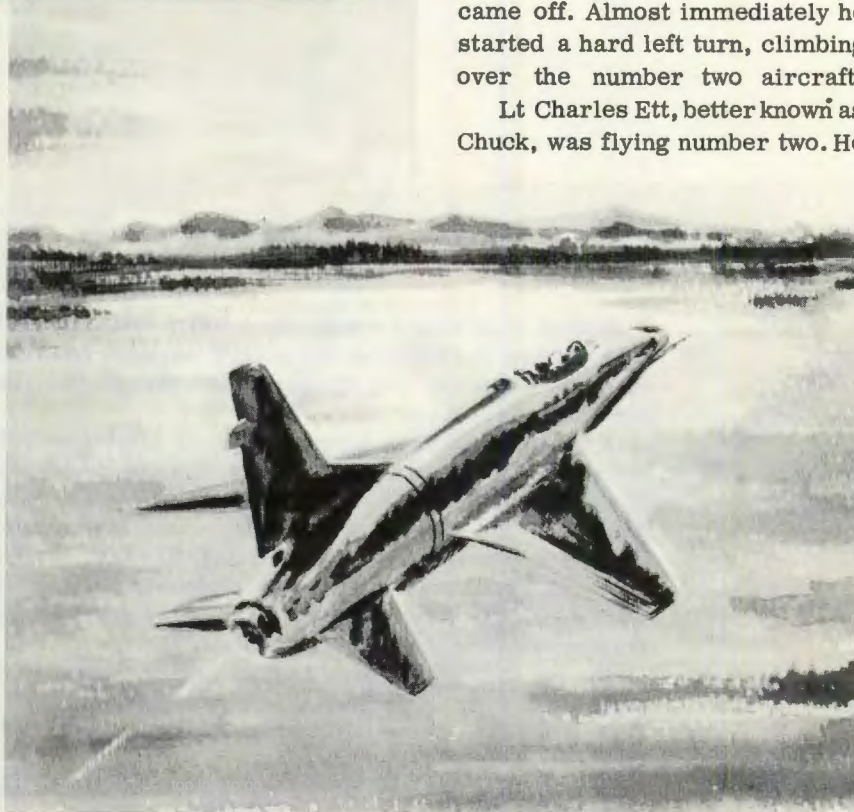
One can't help but get the impression of haste after reading this report.

It is a familiar picture. Someone didn't allow enough time for briefing or something unexpected came up and all members of the flight were doing their best to make good their scheduled takeoff time.

A typical case of improper emphasis. It is important that we make good our takeoff times . . . BUT NEVER TO THE EXTENT THAT WE MUST CUT CORNERS AND COMPROMISE PROCEDURES INTENDED TO INSURE THAT THE MISSION WILL BE ACCOMPLISHED.

Basically, this is the true function of safety as we know it in the Air Force today. Everything in our safety program is designed, one way or another, to help insure that each mission is accomplished and the aircraft and crew conserved for the next mission.

too low
to go



THE MISSION WAS practice bombing on a coastal range for a flight of four F-100D aircraft, each configured with two 275's, a B37K-1 bomb rack and five assorted pylons. The flight leader was a first lieutenant with almost a thousand hours flying time, 630 of it in the F-100. He would be airborne exactly eight minutes on this flight, but would never log it.

The mission proceeded normally enough. Briefing, preflight, and formation takeoff were all accomplished without incident. The flight switched to channel 18, checked in, and made contact with

Hardlife, their radar controller. They climbed thru a scattered cloud deck at 1500 feet and an overcast at 2500, breaking out on top at 3500. Just short of the coast the clouds disappeared. About two miles from shore at about 5000 feet, the leader's canopy suddenly came off. Almost immediately he started a hard left turn, climbing over the number two aircraft.

Lt Charles Ett, better known as Chuck, was flying number two. He

saw the canopy come off and he automatically fed in stick and rudder to follow after his leader.

"What's gotten into him" he thought, "something must have gone . . ." The leader's voice interrupted over the radio, "Yellow Lead here. I have a fire warning light and a DC generator failure!"

Number Three answered, "Roger Lead, go guard channel." Chuck throttled back slightly to keep from overrunning and made the necessary channel change. He waited for the radio to channelize.

On the ground, the controller listened for additional information

and watched the blip moving back toward homeplate. The flight leader radioed, "I ah, I've lost my canopy and am headed for land. I see a fire warning light and ah, compressor stalls, I've switched to emergency fuel. The DC generator light is on."

"Strange," the controller thought, "I believe he's still on 18!"

"Yellow Lead, Three here, Come up on guard!" Number Three's voice coming thru on guard channel.

Some seconds later the leader called on channel 18. "Yellow Leader on guard. Squawking emergency. I've lost my canopy and have a fire warning light. I, ah, I don't seem to have any other indications in the cockpit. The compressor stalls have stopped but I'm heading for homeplate anyway."

The emergency blip was about a half mile from the coast. The controller didn't know it, but the aircraft was now at 2000 feet. Once again he heard Number Three transmit on guard requesting Yellow Lead to come up on guard, while the leader was calling that he was on guard. The controller keyed his mike and transmitted on channel 18, "Yellow Lead this is Hardlife Control. You are broadcasting on 287.0 and your wingman is calling you on guard."

Almost immediately Yellow Lead called again on channel 18, "I'm losing altitude!" He sounded more worried. Four seconds later, "I just punched my cans."

Chuck saw the external tanks go. He was slightly above his leader, about 600 feet above the ground. Speed was down to about 160 knots. Number Three called the leader telling him to eject. He didn't respond.

The leader called again

channel 18, "Look me over Chuck, eek!" Only Hardlife Control heard the call.

Chuck saw the leader's afterburner light up . . . and his bird momentarily stopped losing altitude, then resumed its descent. The number four man broke silence and radioed, "Yellow Lead, you'd better eject!" Chuck glanced at his altimeter. It read between four and five hundred feet. "He only has another 150 feet!" He thought. Pressing the mike button he called the leader. "Get out of the thing! Eject!"

In Hardlife Control, a tense group around the radar scope listened to the tragedy over both guard and channel 18 speakers. The leader called again on 18, "I ah, my EGT is up to 900 . . . I'm getting out!"

Someone said, "My God, it's about time!"

The leader seemed to be trying to gain altitude, the nose of his aircraft came up, dipped, came up again and repeated the cycle. Finally the right wing dropped and the bird hit.

Chuck leveled at 400 feet with his heavily loaded machine and now found himself at minimum control speed. He was almost in trouble. Selecting AB, he payed off some altitude and nursed his machine out of coffin corner. "Whew!" he muttered, "I almost went with him!"

The flight leader's aircraft flew about as long as anyone could expect under the circumstances. All tenth stage compressor blades were stripped out of the number two compressor and damage extended back thru the 16th stage. The number one compressor was in good shape, this indicated that a fatigue failure of a tenth stage blade caused all the damage.

It is doubtful if the flight leader

could have taken any action that would have coaxed more out of this ailing engine.

The decision to stay with a crippled aircraft is sound only up to a point. The excitement associated with an emergency can keep a pilot from recognizing that point - unless he has preplanned for the possibility and has drilled himself on the decision beforehand.

With an aircraft under control, but suffering power problems, a good sound decision point would be approximately 2000 feet. You should not descend closer than this to the terrain, unless a runway is dead ahead, you can maintain airspeed, and have a rate of sink that will let you keep the nose on the approach end of the runway, or prepared overrun. (The surfaced area.)

Don't misunderstand this. Normally shoot for a point a third of the way down the runway. Right now, we're talking about an aircraft that can't make the ideal!

If a future development degrades performance to the extent that you can no longer keep the aircraft nose pointed at the surfaced area without slowing below flameout approach speed, you have reached a second decision point and your actions must be predicated on your altitude at this point.

If above a predecided altitude you eject, IF below it, you **MAINTAIN FLAMEOUT APPROACH SPEED** and plan to land short. This altitude depends on your ejection system . . . by necessity it must be above the minimum possible altitude for your equipment because you are descending with no hope of stopping that descent long enough to eject. This writer would add 200 feet to the minimum possible ejection alti-

tude as a go-no-go point.

Obviously, you'd never hack a landing short of the runway if the overrun area was water, rough or timbered . . . and you'd be foolish indeed to elect to continue an approach if you saw you would just barely make the runway while descending thru 2,000 feet. Gambling on the complete unknown.

These decisions are yours to make. No one can make them for you . . . but you should make them on the ground when in complete control of all your senses. Repeatedly review these decisions and drill yourself on them. Finally, promise yourself not to fudge on them should you find yourself in an ailing aircraft rapidly approaching a fly-or-die situation.

One last comment before we quit editorializing on this accident. The radio calls requesting this pilot to go guard did little to help him cope with this emergency. This writer once turned off the radio during an emergency to shut off the noise so he could think! We have never been in favor of switching to guard channel during a serious emergency when radio contact is already established with wingmen or controlling agencies.

Nothing can be gained from the switch and there is always the risk of losing contact. This accident clearly illustrates this.

An emergency takes precedence over all other traffic - radio included - and the pilot experiencing that emergency is free to use whatever channel serves him best. If he needs help from another agency and has a wingman, let the wingman switch to guard and get that agency to come up on the frequency being used.



Accident free in '63... you are the key! Tat

NINETEEN SIXTY-TWO has finally been officially relegated to history, leaving us with our usual mixed up memories and a hearty few with miniature versions of the anvil chorus playing the William Tell Overture on the inside of their skull as the cavalry gallops to the rescue across the arid waste coating their tongues . . . but not this tiger!

Looking back over the year, we note several disappointments . . . once again, the great pumpkin failed to show . . . our oak leaves turned a deeper shade of green . . . Santa tracked soot all over the living room and put a copy of the 5BX in our stocking instead of the usual candy and fruit . . . all of us failed to keep it to a few in '62 and we killed more aircrew members than in many a year.

On the credit side, we bent less hardware (a hollow victory when we consider the people we lost) and you managed to react to the Cuba threat with truly professional adeptness.

So much for the past. How about the present and the future? Can we stay accident free in '63? All of us won't be able to . . . but this tiger personally intends to. How about you?

Reminds us . . . back in our younger days we once believed that if a pilot flew fighters long enough he'd eventually clobber in one . . . that our survival

depended on fate or luck.

We don't cotton to that idea anymore. It took a few years and a couple of bashes to outgrow it. Now, we firmly believe that each pilot has considerable control over his own destiny. That he can circumnavigate most serious trouble by obeying easily recognized danger signals and usually can extract himself from the trouble he can't avoid . . . you know, things like sudden mechanical failures.

There are no hard and fast rules for each and every situation . . . but if you know your aircraft, know how its systems work, and understand the dash one procedures along with the reasons behind those procedures, and if you have accurate knowledge of just what you can do with the aircraft and what you can't do — you can stay ahead of almost all emergencies. We say 'almost' because occasionally we read of an accident where a knowledgeable pilot was apparently placed in a fly-or-die situation. Even then, we suspect that more often than not they were not 'placed' in this sort of situation but ended up in it because they overestimated their skill or gambled with fate . . . like electing to press on for home with an aircraft that isn't quite right when a perfectly useable air patch is close by. If you've studied accidents and read the safety magazines you'll

able to think of other examples. If you haven't, regroup — you may be trusting to fate and you might not be as lucky as this tiger.

WHILE ON THIS subject of staying alive by avoiding fly-or-die situations . . . we just remembered a Well Done nomination that came thru. It makes a perfect example and we relate it to point out some of the pro's and con's in this business of handling an emergency.

A well qualified F-86 pilot noticed that he had an alternate flight control warning light during an air to ground gunnery mission. For you troops who have never had the pleasure of flying an 86, this indicates a normal flight control system failure and that aileron and elevator are now on the alternate system, which has separate plumbing and an electric pump. Pulling out of the pattern he checked pressures. The normal system was jumping between 1500 and 2300 pounds. The alternate was at 4000. Normal for both systems is 3000 pounds. The captain wisely headed for the nearest field, a 6200 foot strip, and sent his foreign students home. This is a perfect reaction . . . the captain was wasting no time getting to the nearest useable airfield . . . and at the same time, tending his charges.

Enroute, the aft fire warning light came on. He pulled power to minimum practical, but the light stayed on until the wiring burned thru. He knew it burned thru because the test switch failed to relight the warning indicator once the light went out. At this time he was near high key. A small town was ahead . . .

Let's recap the situation. He is at high key with a main system hydraulic malfunction and a known aft section fire, intense enough to burn through the warning circuit. He has excess pressure in the alternate system, and a town is ahead so if he abandoned his bird, it might fall on it. Last, and possibly least, his aircraft has been obsolete for over five years. If he continues the pattern, he will soon be in a fly-or-die situation. What action would you take?

TAT would have made a hard turn away from the town and reached for the good bye handles. We'd base our decision on the assumption that the fire was fed by hydraulic fluid, or at the very least, was associated with the hydraulic failures. The fact that the bird has limited future potential as a combat aircraft would have clinched it. To our dying day we may have wondered if we should have saved it . . . but would rationalize that if the controls had locked during our

attempt, we would have had little choice over where the bird would hit, be it open country, town, or some farmer's privy.

The captain chose to continue. After passing high key, about two or three miles from the town, the alternate system failed. He negotiated the turn onto final by using rudder and the residual pressure in the normal flight control system . . . at this critically low altitude on final the system failed completely. (He reported the trim also failed. Of course it failed! All the trim does is move a spring bungee on the stick, and without hydraulic pressure, the stick locks.)

Fortunately, the elevator locked at the right spot and the captain made an uneventful touchdown, etc. Superb flying, and a darn fine performance . . . but TAT still would have ejected even after we learned that we'd guessed wrong on the fire. It was electrical not hydraulic.



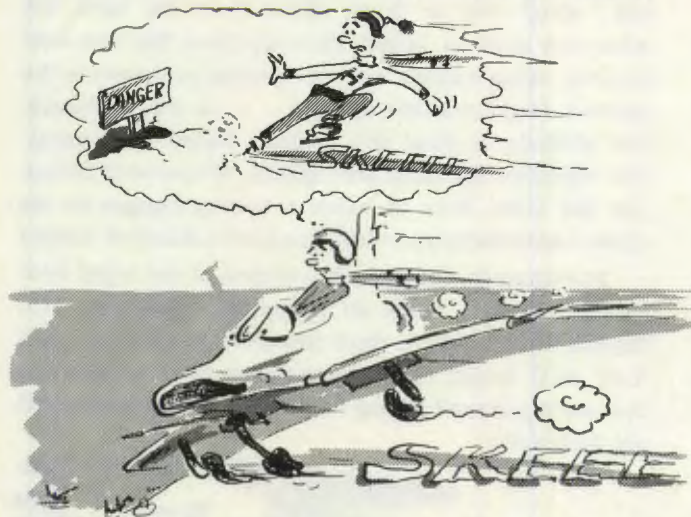
TO HIM, FIVE LETTER WORDS ARE BIG!

AS A BIRD WATCHER, second class, TAT does a heap of reading. Messages, magazines, scoop sheets, latrine-o-grams, you name it, we read it.

One thing that annoys us about many of these words of wisdom is that their daddy's seem more intent on impressing us with their ability to use big words in long drawn out sentences than they do in getting info across clearly and distinctly. Look at it this way . . . over-fancy writing is hard to understand. Us troops with the more resonant sounding headbones have trouble figuring out what we're supposed to do to when and where. This causes us to goof and waste time.

If the originator spent a half hour cleaning up and simplifying his effort so each reader could wade thru it half a minute quicker, the half hour rewrite was time well spent. Just consider the number of people who have to read these things and you'll understand what we mean.

By the way, poor writing induces some rather obvious hazards, which is the primary reason we think every supervisor should study Air Force Manual 10-4...and then practice what it teaches.



THE RUNWAY WAS all wet and apparently so was the pilot's thinking . . . he accelerated to 150 knots to taxi check maintenance performed on the brake and antiskid system! When Speedy started stoppin' things began to hoppin'. The antiskid continued cycling. He turned it off and used normal braking. As he neared the end of the runway the machine was still rolling briskly. He decided to risk a turn off and avoid an embarrassing entanglement with the barrier. Instead, he got an embarrassing and expensive, broad slide into the mud alongside the taxiway.

Yup, wiped out the gear. Now, all over the Air Force a new bunch of paper is directing close control of taxi checks. If you are like this old tiger, you resent having to read reams of paper cautioning not to do things you'd never considered doing - things like blasting up to 150 knots on a wet runway to check out a brake system . . . reckon the whole lot of us had best make certain we don't pull such blunders if we're to keep on top the paper and retain our eyesight.

A DOLLAR NINETEEN CREW flying formation, found they could only rotate the steering wheel about 20 degrees to the right every other time they tried the thing. Well now, that wasn't right, so they brought ol' fatso back to the barn.

A wooden plug had slid part way out of the balance tube in the aileron and was jamming on the hinge bracket. A fix was sent out requiring field maintenance to check these plugs and put screws in 'em . . . meanwhile all of you buck nineteen troops can

be extra careful when you check controls to see that they are free and easy.

THE PHOTO WAS SHARP and clear, but the C-119 still looked ridiculous . . . after all, it ain't easy to maintain one's poise and dignity when your snoot is on the ground and your tail is in the air—particularly when you are as fat as a dollar nineteen.

One look at the photo and your old TAT had to read the details . . . the bird came down from a flight on the 11th with the hydraulic system cycling excessively on the ground. The crew chief installed all three gear pins and secured them.

Next day, shortly after lunch, a hydraulic specialist arrived on the scene. He replaced the pressure regulator, but found a leak in the system when he pressure checked it. An aircraft mechanic was sent out to run up the engines and check the leak. He made sure the pins were in and then made the run up.

On the 14th, the mechanic was trouble shooting the same discrepancy, using a hydraulic test stand. Finding a leaking reducer valve, he replaced it and then pressure checked the system . . . that's when the nose gear retracted.



You can't dump that much aluminum on the ramp without attracting attention, so it wasn't long before the maintenance boss arrived. Right off, he checked for a nose gear pin—but couldn't find one . . . and found that the mechanic had been working on the landing gear selector valve and had the return line disconnected and plugged.

Oh boy! And the T.O. says to replace all lines on the selector valve before pressure checking the system. At this point TAT was beginning to worry about possible long working hours, jumping f

aircraft to aircraft to patch 'em up, fatigue and stuff that.

Not this time. The mechanic had spent the 13th on pass and no one worked on the bird. On the 14th he checked the main gear pins before starting to work but did not check the nose gear pin. No one knows who walked off with said pin . . . and there wasn't anyone standing in line to volunteer the information.

What causes an accident like this? Just plain carelessness, stupidity (as one of the endorsing officers indicated) or corner cutting?

We'd guess that it was caused by a combination of things . . . some obvious, others more subtle. To begin with, the mechanic took it for granted that the nose gear pin was in because he had checked two days before and because the two main gear pins were still in. True, no one should have removed the pin . . . but they did. So we have our first cause. An unexpected action coupled with FAILURE TO MAKE CERTAIN THAT ALL WAS CORRECT.

Next we have a VIOLATION OF AN ESTABLISHED PROCEDURE . . . not reconnecting the selector valve before making the pressure check.

On the surface this appears completely inexcusable. But, let's claw beneath the surface just a bit. Answer us honestly . . . do you know of any maintenance directives, present or past, deliberately ignored because they were unrealistic and unreasonable??

Ever tow a bird into a hanger while 1-1-309 was in effect? Did you follow the T.O.?

If you didn't, or if you have ever said, "Well, if we follow this directive it will break our back" then elected to skate around it . . . you helped dump this C-119 up on its nose!

You get our point? There is no clear cut line when you try charting a course around directives. All you can do, is point out the unreasonable ones, do your level best to comply and let the decreased performance be your ammunition for getting them made more realistic. Perhaps we are an idealist, but the roughest road quite often beats the long winding smooth one . . . particularly when the curves are greased.

WE JUST FINISHED reading about this bird that bashed in the Old Country . . . simulated dive bomb run on troops in a wooded area . . . pattern closer to the target than normal . . . airspeed obviously slow 'til the way around . . . hard turn to get aligned on get . . . a steep dive angle . . .

Sound familiar? Almost a carbon copy of some of TAC's recent accidents isn't it? There are variations. This was the pilot's third pass on a target that was very difficult to spot. Terrain was rough and the sky overcast. The board thought the grey day and sloped terrain may have thrown off this pilot's references . . . or that he may have been late spotting the target and tried pressing on when he should have been taking a wave off.



This old tiger almost plastered a Mustang into a hill one day back in 1951, and we can appreciate how easy it is to get carried away to the point where you get carried away. So basically we agree with the board. It rather looked to us like this young lad made the fatal mistake of putting too much attention on the target without giving enough attention to his aircraft. We've known pilots to spin in on downwind at night doing exactly the same thing . . . only they substituted the runway for the target. Cure is simple and should be a well developed habit by now. Just make an occasional cross check of airspeed, altimeter and attitude indicator! That's right, you use 'em for your traffic pattern at night, don't you? Then use 'em the same way when setting up for a gunnery pass or bomb run. Just a quick check or two . . . not a staff study of the critters . . . they'll help tame grey skies and difficult terrain as well as give you more accurate passes. Oh yeah. If things ain't going right, you abort the pass and try again. Yes, TAT has made second passes on well defended targets. We prefer to deliver our ordnance on target first try, but would rather risk getting shot at than deliver ordnance, aircraft and TAT on target . . . or waste our ordnance by indiscriminately pickling and having to go back mañana.

—TAT—

EASTERN UNION TELEGRAM

ALFRED E. JELINSKI
PRESIDENT

The filing time shown on the date line on Domestic Telegrams is LOCAL TIME at Origin.

TO: TAT
LANGLEY AFB VA

ARRIVED OAKLAND TONIGHT STOP WILL PICK AIRCRAFT
UP AND DEPART FOR HILL TOMORROW STOP HAD REALLY
FINE TRIP OUT IN 707 STOP ELWOOD



Hill AFB, Utah
Thursday
1 Nov 62

Dear TAT:

Today, I checked in with the AF Plant Representative and as you suggested looked my bird over thoroughly before signing the dotted line. Unlike some of the aircraft that have left here, mine is in good shape. No parts that will not work because someone didn't connect the wires, and no 4,000 foot altimeter errors. In fact, it's as good as new. The IRAN facility completely reworked it, and the forms even indicated zero time for everything. I was a little disappointed though... it only has a bird dog and an eight channel VHF.

Filed IFR because the delivery group requires it and the field was reporting two miles. Asked for a hard altitude, under FL 240, because the Frisco area is now a positive control airspace requiring IFF/SIF, discrete frequencies and all that jazz between FL 240 and FL 350. Hoping for the best, I put in the remarks section of the 175 that I had VHF/ADF only.

They cleared me as filed, but when I got to the end of the runway ground control told me to contact departure on 370.2. I reminded them that I didn't have UHF, so they

Southern Route

said to come up 124.1. I didn't have that either. A several more tries we decided on 126.2, the military frequency. They cleared me to turn to 320 degrees after take-off, contacting departure for radar. No sweat.

Remembering your advice, I checked everything quite close and found the clocks in the green. I switched to 126.2, turned to 320 degrees and called departure. No response. I tried again - still no response. Then they called me. I could hear them loud and clear. I answered, but they didn't hear me. They tried and I tried. I went back to ground control and told them to have departure give me instructions on 126.2, but all I got was "Laura 6, over." "Laura 6, over." "Laura 6, over." I switched back to ground control and repeated my call, then again switched to 126.2. I was heading west and I wanted to go east. Departure control finally said, "Laura 6, if you read me turn right to 290 degrees and maintain 6,000 feet until two two." I was already at 9,000 feet. Luckily it was VFR, so I dropped down to six and grumbled all the way around the 330 degrees of turn. Eventually they had me turn to 090 degrees and I was on my way.

To make a long story short, I went to Hill, VFR, since I couldn't contact any station or military airbase enroute.

During my letdown the transmitter came back in and I got the tower loud and clear on Baker channel. That was the most silent two hours I've spent.

I wrote up the radio and hope they get it fixed before Sunday.

I'll spend the weekend here.

Regards

Elwood

PRIORITY 01 1805Z
LT E. SOCKROLLER
BASE OPERATIONS OFFICER
AFB UTAH

REQUEST YOU EXPEDITE DEPARTURE, PROVIDED RADIO, AIRCRAFT AND YOU ARE ALL OPERATIONAL. SUGGEST RETURN BY SOUTHERN ROUTE TO INSURE VFR WEATHER.

TAT

Kelly AFB, Texas
Sunday
4 Nov 62

Dear TAT:

The bird performed like a watch today, but my problems with the radio continued. Hill tower and I went through the I-don't-have-the-frequency routine again, and finally agreed on 137.65, military approach control frequency. After receiving clearance, I was instructed to use the same frequency for a radar departure.

Everything went fine until I reached 9,000 feet, climbing to the west (again), then my transmitter went haywire. I switched back to Baker channel, cancelled my IFR flight plan and turned on course for Kelly, VFR. I thought I'd be able to contact Kirtland or some other ground station enroute, but was in complete silence all the way. I monitored the weather on the bird dog, and noticed that some stations now have a continuous weather broadcast. They sound like a broken record after a bit. Baker channel started working during the letdown and I was able to contact Kelly tower. I cruised at FL 380 because of wind and distance, and the altitude may have had something to do with my radio trouble.

By the way, it's getting to be quite a problem to navigate by bird dog in the States... stations are not so plentiful any more. I had to alter my route to get radio aids less than 300 miles apart. The ones that are still on the air are in good shape, so didn't have tuning trouble; however, there weren't any thunderstorms.

Best get eight hours of uninterrupted. Got your telegram... thanks for the encouragement. I'll keep you posted.

Regardlessly

Elwood

Mexico City
Monday
5 Nov 62

Buenos Noches, Senor TAT:

Sorry. I forgot to tell you before I left that I traded trips with ole Loathsome George, and am committed to another delivery. South America, that is.

Mexico City is a fascinating place. Just two hours from San Antonio by T-33. We had an uneventful flight after a good briefing by Mr. R. L. Hooper, the Foreign Clearance Officer at Kelly. He showed us slides of all fields along the route and briefed us on what to expect. He also handed us a little booklet giving pertinent

TAC ATTACK

information about all the major cities in Central America. Left Kelly as a flight of two with me leading. The same old radio troubles plagued me consequently made only one position report between Kelly and here.

We had no trouble contacting Central Tower here at Mexico City, but they ran us thru three channels before they finally gave us landing instructions. While waiting, we made a circuit of the city - it's pretty big, over seven million people, and it took us 10-15 minutes to fly around it.

The runway is over 7,000 feet above the big puddle, but plenty long so we had no trouble landing. It is surfaced with some sort of volcanic material that looked a little abrasive so we were careful how we used our brakes. Wanted our tires to last the trip.

Jim Brandon and Joe Bonetti, American Airlines Representatives, met us and took care of our needs very well. Truly Duncan and Heinz efficiency. We stayed around the airport to supervise the servicing. After they filled the wing and leading edge tanks on Bob Coate's bird, they put the caps on, then overfilled the fuselage tank and put the cap on it. Almost immediately fuel started pouring in a steady stream from the sabre drain. We all thought it would stop in a few seconds after the fuselage tank fuel dropped a little. It kept pouring until we opened the fuselage cap. It was siphoning fuel from the left tip tank thru the fuselage tank. How about that?

Lt Col Gene Benoit from the U. S. Embassy had rooms for us at the Francis Hotel across from the Embassy. Believe the hotel got its name from Francis, the movie's mule. At least that seemed to be their trade mark. Was anything but a barn. In fact, real nice. After sight-seeing, we had supper at the top of the Latin America Tower. From 41 stories, we had an excellent view of the city... an impressively busy place, with people on the go day and night.

The 58X at this altitude is rough. I was hardly able to get off the floor to write this.

Regards

Elwood

P.S. Did I tell you these T-birds are equipped with two 50 calibres? Oh yeah, if you need me I'll be at Guatemala City day after tomorrow and Palanquero, Columbia by the 9th.

E.S.

Eastern Union Telegram form with fields for TO: LT ELWOOD SOCKROLLER, c/o U.S. EMBASSY, MEXICO CITY, MEXICO, C.A. and a message: BOSS REQUESTS YOU RETURN IMMEDIATELY STOP MEXICO CITY IS CARRYING SOUTHERN ROUTE TOO FAR STOP TAT

Guatemala City
Wednesday
7 Nov 62

Dear TAT:

Got your message, but can't come home yet. This is a trip in a life time - must finish it. Besides can't get a replacement at this late date. Am sure the boss will understand.



German-Olano viewed from Magdalena River

Our friends from American Airlines were on hand to see us off this morning. Jim Brandon cautioned us again to compute our take-off data. He said there was plenty of runway but we should have an idea how far we'd roll so we wouldn't get excited. At 7,000 feet with the temperature in the eighties, he's right. We figured 7,300 feet and I thought we'd never break ground. There are no runway distance markers and I sure missed them.

The leg to Guatemala City was over beautiful country and the weather couldn't have been better. Before we left, the weather forecaster at Mexico City told us it was VFR all the way. We asked him what Guatemala City was reporting and he said, "700 broken." It was forecast to be good when we got there, though, and the forecast held.



Puntoy Coma where we had the Sancocho feast

We noticed several good emergency airfields along the way and wondered at the many small villages atop mountain peaks. Roads and trails connected some of them and they must have been right hard to build.

Guatemala City is 5,000 feet above sea level and is bordered by several volcanoes that still spew out moderate amounts of smoke and lava. The volcanoes are often mirrored in beautiful lakes, just like the postcards.

The approach to runway 01 is spooky because of a sheer drop right at the end of the overrun. I set up my pattern to land a little long - the runway is over 10,000 feet, more than enough to get stopped without burning the binders.

People from the USAF Mission and the Air Attaches Office met us at La Aurora Airport, accompanied by a crowd of curious who wanted to see this "different" type aircraft. No propellers!

People from the mission took over and serviced the birds for us. They had our reservations at a nice hotel, so we did a little sightseeing.

Guatemala City is beautiful and we really enjoyed our short stay. The temperature was very pleasant - little wonder that many people retire here.

Tomorrow, Colombia. Hope to be back home in five or six days. If you need me for anything, contact the U.S. Mission in Bogota, Colombia.

Sincerely,

Elwood

EASTERN UNION TELEGRAM

ALFRED E. JELINSKI
PRESIDENT

The filing time shown on the date line on Domestic Telegrams is LOCAL TIME of Origin.

TO: LT. E. SOCKROLLER
c/o U.S. EMBASSY
GUATEMALA CITY, GUATEMALA, C.A.

REGARDING YOUR LEISURELY TRIP AND FUTURE
STOP AM DOING MY BEST TO COVER FOR YOU STOP HAVE
HAD LITTLE SUCCESS AFTER THAT DOUBLE CROSS WITH
GEORGE STOP SUGGEST YOU RETURN ASAP TO EXPLAIN TO
THE BOSS STOP TAT

Howard AFB, C.Z.
Wednesday
9 Nov 62

Dear TAT:

We just landed at Howard AFB in the Canal Zone and are waiting to be serviced and cleared for our final leg to Palanquero, Colombia.

They didn't have any oxygen for us at Guatemala City - luckily we had 250-300 psi left from our trip from Mexico City. This was more than our fuel aboard so we pressed on. Still had 175 psi when we landed here. Our flight from Guatemala City was routine although the take-off was rather weird. I gave the flight leader about 15 seconds spacing. Just as I started to roll he dropped completely out of sight. I knew the runway had a dip in it, but didn't realize it was so deep. Acceleration after take-off was slow - I guess the ground sloped upward more than we realized. We had to maneuver around a miniature replica of the Eiffel Tower a short distance from the end of the runway.

I'd forgotten how hot the Canal Zone is - I'm about melt. Think I'll go get a dish of ice cream while finish servicing us.

As Ever

Elwood

P.S. The NCOIC of the transient alert crew is a sharp troop. Another vote for Duncan-Heinz. Oh yes, on your attempt to phone me... I don't have time to return your call. Stay loose, the boss will get over it.

E.S.



Officer's quarters at Germán-Olano

El Base Germán-Olano
Wednesday
9 Nov 62

Dear TAT:

We flew over some of the roughest country I've ever seen on our final leg. It makes the Rockies look like rolling foot hills and it is covered with dense jungle to boot. I wondered if I could ever find my way out if forced to eject. I also wondered what chances I'd have with the head hunters and bandits that supposedly frequent this wild country.

Although we stayed VFR all the way, we had to skirt some good sized thunder bumpers. They were loaded with lightning and we heard later that they drop hail, 3-6 inches deep at frequent intervals. Some of the pilots here said they aren't nearly as turbulent as our midwestern thunderstorms, but I wasn't curious enough to make a comparison.

Landing at Palanquero, the real name is Germán-Olano, we asked if it was a right or left break and they said to take our choice. Later they modified this to a right break. On the downwind they cautioned us about a two inch lip on the end of the runway. However, they didn't tell us about the 20 or 30 cows in the overrun. No... we had chicken for supper.

Almost everyone on the base including Lt Col Bob Iverson and Major Louis Bechtold from the USAF Mission at Bogota were out to meet us and they gave us a royal welcome. The people here are very hospitable and have shown us a fine time. They arranged a big feast called "Sancocho" at the Puntoy Coma, a small village eatery. The table was covered with banana tree leaves and spread,

I mean spread, with potatoes, yucca, plantains, rice, avocado salad and chicken. We all stood around the table and ate with our hands. It was delicious. To heck with the 5BX!

Germán-Olano, the jet base for the Fuerza Aerea Colombiana, is located on the beautiful Magdalena River. It is an excellent base, and the people are right proud of it. Most of the officers are graduates of USAF Flying and Technical Schools. One young 2d Lt had returned from Maintenance School at Chanute the day before we got here.

At Germán-Olano, they have three Sabre Sixes, several F-80's and several T-33's. They are scheduled to get F-86F's and T-33's under a MAP project. The FAC has five or six other bases scattered around the country and each one specializes in training, transport, etc., similar to our TAC setup.

Tomorrow we are going to visit the headquarters for the Colombian Air Ministry in Bogota. It is located in a building that has gained a rather peculiar nickname, the "Mañanagon." The name explains the reason.

We will start home tomorrow afternoon. Hope everything is alright there.. also, am wondering why you haven't tried to call again.

Sincerely

Elwood

EASTERN UNION TELEGRAM

ALFRED E. JELINSKI
PRESIDENT

The listing time shown on the date line on Domestic Telegrams is LOCAL TIME at Origin.

TO: LT E. SOCKROLLER
c/o U.S. EMBASSY
BOGOTA, COLUMBIA, S.A.

AM FORWARDING YOUR ORDERS AIRMAIL STOP YOU ARE
TO PICK THEM UP AT HOWARD BEFORE PROCEEDING TO
SOUTH VIETNAM STOP YOU OWE ME TEN BUCKS FOR
TELEGRAMS STOP TAT

Hawaii
Thursday
15 Nov 62

Dear TAT:

Well, on my way for the one year jungle warfare sabbatical. What a reward for twenty years of faithful service. Oh well, enjoying the surf at Waikiki - wish you were here to give some pointers.

By the way, I spent the ten on a muu muu. You'll have to wait awhile for it.

Disgustedly

Elwood

Chock Talk

chock talk



HOT TIRES

A couple of maintenance troops were removing a tire from a C-130 . . . they weren't quite sure why . . . they thought it was because the brakes had been dragging. One of them kicked the wheel and removed the retaining nut . . . then tried to remove the wheel. As luck would have it, the wheel jammed on the axle. Exerting a little American ingenuity they used some force and WHAMO . . . the tire exploded and propelled the wheel away from the aircraft. On the way it killed one airman and injured six. Investigators found that the rim had cracked completely around the circumference where it was nearly impossible to see.

Many procedures and devices have been developed to prevent this kind of accident. First and easiest is to deflate tires before attempting to remove them from either aircraft or wheels. Some installations have fabricated cages to place over the tire and wheel assembly while removing it from the aircraft. Most installations have cages of this type in the tire shop to use when they take the tire from the wheel. Here again, deflation is a key step.

Excessive braking may cause tires to become extremely hot and thus create an explosion hazard

from over pressure. McDonnell Aircraft Corporation has improvised some good hot tire techniques. If the tire appears only moderately hot, maintenance personnel immediately put a cage over the tire and wheel. They then measure the temperature and if it is more than 375°F, they tow the aircraft so effected wheel will roll over a steel plank which spikes imbedded in it. If the temperature is less, they cool the tires with a stream of shop air. When the tire appears too hot to use this technique, maintenance personnel direct the pilot to taxi over these spiked planks. The tires don't immediately deflate and the pilot usually has time to taxi to an uncongested area on the ramp where the tires can be changed without interfering with traffic. For those who would like to read more about this hot tire technique, check the August 1961, Aerospace Accident and Maintenance Review.

T-BIRD A2 AMPLIFIER COVER

The present procedure for removing the top plates from the A-2 amplifier on T-33 aircraft is to completely remove the bolts from the mounting mechanism. To expedite this procedure, cut slots in the rear section of the covers, then you can remove and replace the covers without completely removing the mounting bolts.

This time saving idea was submitted by James F. Moore, 831st Operational Squadron and approved by TAC and SMAMA.

THE RIGHT WAY

SAAMA Newsletter for November listed the 48th Interceptor Squadron of ADC as having gone consecutive months without having one of the J-75's in their F-106's damaged by FOD. That's over two years . . . and is one of many reasons why the 48th won the Colombian trophy for 1961 . . . and why they've managed to fly almost five accident free years!

F-101B POPPED CIRCUIT BREAKERS

On the climb, the pilot of an F-101B noticed that his heading indicator was not functioning, then the left generator out light began flashing and both engines flamed-out. He restarted the engines after descending below 25,000 feet and landed without incident. Investigators found nine circuit breakers popped inside door 207R. Since maintenance had recently been performed requiring these circuit breakers to be pulled, it is suspected that they weren't reset. The unit involved now requires that door 207R be left open for aircrew preflight of circuit breakers and fuses, and that an entry be made in the Form 781A when circuit breakers are pulled.



HERC PORK CHOPS

Inspectors discovered a cracked pork chop fitting during a routine inspection of a C-130A. The unit submitted a critical safety hazard UR and WRAMA established MIP WR 62-1045 to investigate and correct the deficiency. Pending completion of the investigation, Air Force imposed rigid taxiing and braking restrictions on C-130A and D aircraft. Lockheed Aircraft Corporation submitted SECP-LH C-130-1031 and after Mod Review Board action, WRAMA contracted for a field team to fasten a 1/2 inch steel doubler plate to the forward face of the

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bulkhead fitting. The plate extends inboard along the fitting and thru the enlarged slot in the chine cap and the chine. The team used existing fastening holes wherever possible but had to use new fasteners at the BL54 bulkhead. They replaced the bulkhead and chine clasp with a new drag fitting. All aircraft with the exception of three in IRAN and one in crash damage status were modified by 10 November 1962. The three in IRAN will be modified by 1 January 1963 and the other will be modified during repair.

TIRE TIPS

Commanders, pilots and maintenance officers frequently ask crew chiefs to replace serviceable aircraft tires. Here are some of the reasons they give for wanting to change tires:

Got to have new tires for cross-country flights and deployments.

Can't have more than 10 points on the tires of aircraft that are going on alert.

That cut doesn't look good. Better change the tire.

I wanna get two flights on that airplane tomorrow so you'd better change that worn tire tonight.

Had a little shimmy on landing so you'd better change the nose tires.

I don't like the look of that skid spot. How about getting me a new tire?

We're due for an ORI and I don't want a bunch of tire changes slowing us down when it comes.

With all that fabric showing, let's be safe and change that tire.

Crew chiefs seldom question these reasons. They'll make the replacement even when the tires in question don't meet the tire change criteria specified in T.O. 4T-1-3. How much better it would be if we followed the criteria in T.O. 4T-1-3 to determine when a tire should be changed. A few more landings per tire would add up to a bundle of cash at the end of the year.

QUESTION OF THE MONTH

In mechanics, "torque" is the product of:

- (a) Arm times distance. (c) Force (weight) times distance.
(b) Weight plus movement. (d) Area times weight.
-

Handle with Care

BY - SMSGT PIETRO L. BONERIGO
SHOP MANAGER

Measuring methods have come a long way since the time when distances were based on the circumference of a chariot wheel or the arm span of a king. Today, industrial manufacturers precisely measure temperature, voltages, frequencies, and velocities along with dimensions when they produce parts for automobiles, aircraft, adding machines or even ash trays.

Altho we in the Air Force do very little manufacturing, we use numerous precision gages and instruments to adjust our highly complex equipment to within a decimal point. To do this accurately, we have to make certain that the measuring devices themselves are accurate.

Some years back, we more or less took the accuracy of our measuring equipment for granted. At that time, tolerances were somewhat wider and the measuring equipment less refined and less apt to get out of adjustment. Today, with uncomfortably close tolerances, measuring devices are quite accurate but so delicate

they require regular attention and adjustment. This fact is just beginning to be appreciated around the Air Force so proper facilities to repair and calibrate precision measuring equipment are still in their infancy.

Nellis was one of the first bases in TAC to get ahead of this program. We established a Precision Measuring Equipment Laboratory in spite of marginal facilities, and the fact that experienced personnel were sca



Mr. Joseph Moss checks frequency of a Klystron Oscillator in the Microwave Calibration area.



Work benches and nearby calibration standards.



SSgt Riley calibrates a USM-44 in the Electronic Calibration area, using test equipment mounted on roll-away carts.

and the required standards often not available.

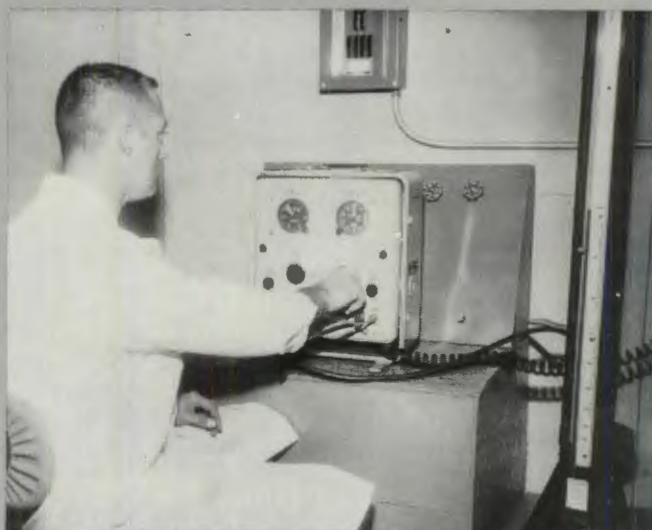
In the 4521st Armament and Electronics Maintenance Squadron we met the personnel problem



Bench stock room, as seen from Materiel Control representative's desk.



Receiving area is under Maintenance Control. TSgt Ashe receives a USM-44 for calibration from SSgt Burrell.



Dimensional Calibration is done in a separate room. Here, TSgt Melhorn calibrates a Burton Tester.



Technical Order file, centrally located to the work area.

PARTICULARLY PROUD OF A SHOP ON YOUR BASE? SEND PHOTOS AND A SHORT WRITE UP TO THE EDITOR OF THE ATTACK . . . WE'RE ALWAYS EAGER TO PUBLICIZE POSITIVE APPROACHES TO THE PROFESSION.



Smock-locker, located between the dust lock and work area.

head-on by initiating a training program to produce a cadre of capable people. We made this a continuing program to insure having enough technicians in spite of transfers and separations.

Next, we went after the supplies and equipment to support our operation. Much of it was rare and expensive. While supplies were on order we secured an operational site and isolated it from the outside environment. Nellis is located in the desert and frequent dust storms can penetrate even the most tightly

sealed areas. We constructed a dust lock outside the lab entrance and did everything possible to make the building we selected the lab, dust-free.

After installing test benches, we wired each one with ten electrical outlets . . . six for 115 volt 60 cycle, two 400 cycle single and three phase AC and two 28 volt DC. We also installed a permanent microwave bench.

With the number of standards limited, we put wheels on everything that couldn't be easily carried. Thus, we can take the standards to the benches rather than operate on the station maintenance concept which requires complete standards at each station.

We arranged work areas to place standards within a few feet of all technicians and centrally located tech order files to provide easy reference. Comfort and convenience are an overall theme.

With the operation under way we have a full time scheduler from the maintenance control workload section to see that the flow of work is maintained and take care of shipping and receiving.

A full time supply expeditor is assigned to research orders and expedite getting parts needed to repair the equipment being processed. He also maintains our permanent bench stock of over 1000 items.

Obviously, this program required the cooperation of everyone from the civil engineers who built and modified the building, to the specialists from supply and workload control who augment the operation. The Commander and Chief of Maintenance backed the program, and cooperation was easily obtained.



Flippin' the Flight Manual

... or, "Twisting The Tiger's Tail"

By - MAJOR CHUCK FRANCIS
4450 SEG

Old TAT is one of our favorite authors and generally makes a lot of common sense out of problems which are magnified to the point where a GS-99 can understand them. However in the September issue of ATTACK, we were somewhat startled to learn that the word has not yet reached the last 10 percent of SEG's program to reduce "BOLD FACE" items to a reasonable level. If Old TAT will consult the CURRENT F-100F Aircrew Checklist, 31 August 1962, he will find that he has been pummeling a very dead horse. (i.e., bold face procedures have been reduced.)

Just so he will not feel lonesome in his struggles, here is the story on the project from start to finish!

'Long about the latter part of 1961, mucho pressure was generated at top level to improve aircrew knowledge of aircraft and procedures. Thus, the flight manual was thumbed through and discussed a bit more by all concerned.

Well justified comments on wording, accuracy, and methods of presentation began piling up at intermediate and major air commands. Major General Avelin P. Tacon, chairman of the 12AF Safety Committee, directed the 4452 Stdn/Eval Squadron and 12AF Flying Safety personnel to rework bold face procedures for aircraft being utilized throughout 12AF. The basic rules were to reduce to a minimum, to eliminate compound emergency procedures, and to standardize terms. This was ac-

complished and forwarded to TAC 4450th SEG on 16 March 1962. Major Joe Eatherly, at that time Chief of Special Projects, began the endless problem of selling this concept to the powers-that-be at Wright-Patterson and each of the Air Materiel Areas which publish aircraft flight manuals. The initial action was a conference on the subject at Sacramento Air Materiel Area in April 1962, and the fight was on.

Despite general acceptance of our proposals, a tremendous amount of coordination had to be effected among using agencies. The greater the number of users, the more diversified the argument. Funding had to be secured and numerous other procedural steps effected. Unfortunately, there is no easy solution. No amount of generalized (*!;*) and complaining will do the trick. The only answer is a well documented and firm position, constant pressure to effect the change, and application of this formula to each separate weapon system.

Since March 1962, we have achieved reduction of bold face items in the F/RF-84, F-100, F-104, F-105, and C-119. The T-33, F-86, and C-130 are pending.

We, in SEG, do not claim total success; some battles were won and some were lost, but we have had more improvement in less time than ever before and expect to improve in the future.

The essential ingredients of all our actions have been and must continue to be provided by the aircrew members. No recommendation is lightly taken—it is considered and discussed thoroughly before approval or returned without action.

We feel that much progress has been made during the past year and on the basis of this accomplishment we propose a contract with Ol' TAT... "We absolutely will not write any TAT articles if he will not write any flight manuals."

Twist? You tried to tie a knot in our tattered tail! Since the handbook revision sneaked in after we went to press, there isn't much we can say except, "Congratulations" to you hard working Stan Eval troops for some degree of success in a difficult and worthwhile effort. The new handbook is better... but as you've noted, the procedures are still not optimum, they are still excessive. We wish you every success in your efforts to get them cut to the bone... meanwhile, perhaps this last swift kick will shake loose enough documentation to get a not yet dead hoss hauled off to the glue factory.

No dice on proposed contract - we're continually trying to publish info from people in the know and at the same time think everyone should take an active interest in the handbook of each bird they fly. They may not be able to write the thing, but they can help to get it right.

-TAT

a Rub and a Scrub

A SMALL RAIN shower moving toward the field prompted the Lt to bring his RF-84F into the pattern from a local transition mission. On downwind he lowered the gear and checked the lights only to find the right main indicated unsafe. Breaking traffic, he advised the tower and checked over the cockpit. The utility pressure was at 500 pounds, with an occasional jump to 700 or 800. He tried extending speed brakes and flaps, but could get no reaction from either.

He put the gear handle to emergency down... the right main still indicated unsafe. He tried yawing, negative G and rocking the wings all were ineffective. The warn-

ing horn and M-A shifter light confirmed the malfunction, still, he made a pass by mobile control.

The squadron commander and squadron maintenance officer, who by then were out at mobile, reported the right gear fully retracted. The Lt decided to go ahead and land. His squadron commander read him the handbook procedure and after manually jettisoning the canopy, the Lt brought the RF around onto a close base... just ahead of the rain shower. He held 170 knots on final to compensate for not having flaps and aimed for the left side of the runway. He stopcocked just short of the runway, turned the fuel selector off, and deployed the

drag chute as he started losing directional control.

The aircraft skidded about 1600 feet on the runway before going off the right hand edge. It skidded an additional 1100 feet after going off. The photos tell the story... the Lt wasn't hurt, and can be seen scampering away from the machine in the last picture.

The gear failed to extend because the right main gear tire had worn thru a hydraulic line leading to the right inner door uplock release. The line is common to both normal and emergency systems. Note photo. A new ice grip tire had been installed two days before the accident. The aircraft flew one flight without incident following the tire installation.

The ice grip tires are a little over an eighth of an inch larger in diameter than the standard and the steel inserts containing them are quite abrasive. Other aircraft in the unit were carefully checked. Five had tire rub marks in the main gear wells.

This is one accident that clearly illustrates that it doesn't do much good to make an inspection if you don't know what to look for. Had the crew chief or pilot specifically looked for chafing or tire rub marks on plumbing and wire bundles, this accident would have been prevented at post-flight or preflight.

Chafing can also occur along the strut. Just recently, another F84F pilot had to use emergency gear extension when a wire on the right main gear strut chafed thru and shorted the gear position control circuit.



Letters to the Editor

Letters to the Editor

DEAR TAT

The note on IFF/SIF procedures on page 12 of the November issue has me confused. Section II, page 9 of the FLIP flight planning document says the emergency squawk is Mode 3, Code 77. Is the reference to Code 75 something new or a misprint?

JOHN L. WAGNER
4510 CCTW
Luke AFB, Arizona

Dear John L.

I agree that the FLIP says you squawk 3, 77 for emergency...we pulled a code and mode out of the air for the TAC TIP bit, because no emergency existed. Should have used one less apt to lead to confusion - sorry.

TAT



Dear TAT

One of the more remarkable coincidences in the publishing game is the frequency two or more periodicals will, without prior intent, attack the same subject...often from entirely different directions. "On the Rocks" in the November ATTACK and "Sudden Stop" in the November COMBAT CREW are an example.

I don't know how much help my two cents' worth might be, but there is one procedure that I have been promoting in VMA-242, MAG-14 here in the 2d Marine Air Wing which may supply a partial answer to this business of keeping aircrews from driving flying machinery into the topography.

We use the profile mode of the APG-53A radar in our Skyhawks, not only for low-level contour flying for which it was designed, but also for letdowns. It works out that if you cross the terrain return with the reference line (the reference line is a line 1000 feet below the aircraft) at a distance of six miles on the short range scale, you will start reducing the rate of descent at around 10,000 feet and will level off at 1000 feet. During this level off your descent will be at a rate which will



continually give two minutes flying time between the bird and the ground. In other words, passing 10,000 feet the rate of descent is 5,000 ft/min. Passing 8,000 it is 4,000 feet, 6,000 feet it is 3,000 ft/min, etc.

I realize that not all your birds have radar...however, those that are mission-configured should be able to use the installed radar in some similar manner. What I'm driving at is this: Just because the mission legs have been completed is no reason to take off the pack and shut off the radar. On any approach I use both profile and search modes. Profile to keep from running into rocks and search to cross-check feeder control and GCA. This do make it busy in a single pilot machine...but since the gear is there I owe it to my dependents to use it.

Incidentally, with this set up you can make a safe approach without altimeter, airspeed or rate of climb. (For airspeed, use angle of attack) which gives excellent back-up in case of static icing. It also makes the 10,000 foot altimeter mistake impossible--so long as the radar is working.

MAJ. JOHN VERDI
VMA-242, MAG-14 2d MAF
MCAS, Cherry Point, NC

Dear John V.

Good hearing from you again - thanx for the tip on use of radar during approaches. Altho our T-bird ain't equipped, we're with you all the way - being one of those lads who likes to have every radio tuned to a fix during an approach. It sure smooths things out particularly when someone tries to surprise you by terminating a low level radar vectored cross country with the transmission, "You are now five miles south of the airfield. Radar service being terminated. Take over and complete your own damn approach."

TAT

Dear TAT

st a short comment on the article "TWO BARS AND A JN." Unless some of the past laws of aerodynamics have been repealed recently, I would like to point out that the gross weight has no effect on the gliding distance of an aircraft.

The only noticeable effect is to alter the stalling speed. In some cases external stores do cause considerable parasite drag in which case, the reduction in drag is the factor contributing to increased glide rather than the lower gross weight.

EX ENGINEER TURNED PILOT

Dear Turned

Just in case, we've sent the daddy of that LEMON bit to USC to bone up on engineering. He reports the

bird watching excellent.

Meanwhile, back at the ranch, we agree that less weight will not significantly increase the gliding distance provided airspeed is adjusted to maintain max L over D. However, the handbook flameout glide speed is too slow for a heavy bird and it's safe to assume that our perfectionist Lt held that speed.

Thus, and we're sure you agree, he would note a significant change in the before and after rates of sink.

To be completely honest... the greatest advantage gained is the decreased drag, as you've indicated. Regardless, he gained more time aloft... and thanx for helping us stay on the straight and narrow.

TAT



THE OLD SARGE sat on one edge of the table and fumbled for his pipe. About half the airmen in the group he was addressing groaned. "Relax," he said, "I don't intend to smoke you full of knowledge... but I do want to review some jet engine basics with you."

No one groaned, but a general shifting of position and shuffling of feet made it apparent that everyone was preparing to be bored. The Old Sarge snorted, "Don't tune me off too quick, I doubt that any of us understands everything there is to know about a jet engine... or the aircraft either. I know George doesn't. You should'a seen where he went when I told him to wipe off the aspirator."

Suddenly getting serious, the Old Sarge stabbed his pipe stem



toward the group. "I'll be practical and I'll get to the point. A good friend of mine was killed last week in an F-100 because its engine let go when he needed it. He was on final approach in spitting distance of the runway, too low to eject and with no place to go but down when it let loose."

"It's been pretty well established that the engine didn't just fail all of a sudden, it was sick for quite some time before it let go. Had some people in the engine shop known a little more about the reasons for some basic checks

they make, they'd a caught this one. It told 'em it was having trouble, not in big bold words, but in subtle ways which they failed to observe. Let me give you its past history.

"The first major write-up on it was a cracked turbine nozzle 120 hours after overhaul. It was replaced. At 213 hours another cracked nozzle was replaced. The engine was pulled a third time at 416 hours for excessive maintenance, and the one, two and three nozzles were replaced. It was pulled out again 24 hours later for

TAC ATTACK

high EGT, 15 degrees over the limits. A thermocouple was replaced. At that time the number 1 nozzle was again replaced... and the temperature spread checked. It was unsatisfactory. Number one probe was 633, number two, 658, three was 673 and four, 620. To correct this, they replaced the afterburner and EGT harness — but didn't look at the hot section!

"Instead, they put it on the trim pad and once more it exceeded EGT and spread check limits. Number three probe got up to 655 this time. Once again they ran it thru periodic but didn't run a fuel manifold pressure check. This time it apparently checked out. At least the records indicate it did. However, four months and forty hours later, the engine was back on the trim pad with a new fuel flow transmitter.



"It hit 640 degrees, but trimmed to 625 before being operated two minutes... so it wasn't given a visual inspection. A temperature spread check was not made, even tho the necessary Jet Cal equipment was attached. Less than a week later all first stage turbine buckets failed. The pilot discovered it when he added power to maintain a proper final ap-

proach speed." The Old Sarge paused, "Frank, I see you frowning, what's eating you?"

"Ah, I was wondering why your pilot didn't catch this one on his runup before he took off."

"So did the investigators. He was on a test hop for a fuel system problem and they recovered his notes. According to them, the cockpit gages were all in the green. The turbine didn't really fail until later in that flight... but I'm getting ahead of myself. First off, would one of you like to guess at what was wrong with this engine?"

"I thought not. Frank, I'll volunteer you."

Frank studied his shoes a moment, "You would," he muttered, "I can't tell for sure... but when that engine shop got a burn temp spread after replacing the EGT harness it should have proved to 'em that the instrument system was OK and that something else was wrong. Off hand, I'd bet on uneven fuel distribution. A fuel manifold pressure check would have caught that..."

The Old Sarge nodded approval, "Right, and I imagine you'd be doubly curious because of the repeated history of cracked nozzles.

"The AMA ran a check on the fuel manifolds after making certain they weren't damaged in the crash. They had excessive flow between primary and secondary fuel tubes.

"Leakage exceeded the measuring capacity of the test gear. Instead of being three cubic centimeters each five minutes, it was about three to five gallons per minute. During deceleration, this

would cause over-temp at each nozzle cluster with bad seal wouldn't necessarily show the EGT gage.

"Someone at the depot had overtorqued the spray nozzles when the engine was overhauled. Some of the seals were crushed enough to start 'em leaking. But that's not all they found. Number seven and eight burner cans were all distorted and the spray nozzles from those clusters had very bad patterns and flow. This caused localized high temperature and is what ultimately burned up the turbine.

"Both the crushed seals and the bad spray pattern should have been noticed when they were trouble shooting for the EGT problem. I'm surprised the turbine held up as long as it did. When it failed, it went some time during that last flight. Investigators didn't think the pilot noticed the impending failure at altitude, his airspeed would create enough ram air to maintain compressor rpm. Then he entered the pattern and added power for his final approach, at slow airspeeds the turbine had to go to work. It couldn't, since most of its blades were long gone.

"One more point. This bunch was a little careless about over-temps. These engines are pretty well made and they stand quite a bit of abuse. It's easy to stretch the rules on overtemping... but we owe it to our pilots to guard against it. Overtemping is the surest way to shorten an engine's life. The damage isn't always apparent, but it's there just the same."

Answer to question of the month: Force (weight) times distance.

A pilot can never hope to be effective unless he has a certain amount of self-confidence. But self-confidence is like food, sleep or religion... good and necessary, but not so good in excess.



Excess confidence is the difference between being capable and cocky, having a can-do attitude and the familiar 'no sweat' attitude. It is quite difficult to separate one from the other and often all a person has to go on is an impression. We received such an impression when we reviewed a recent accident from another command. One of the principals involved also received the impression. We cheerfully admit to having included our impression into the following narrative of that accident—If this is unfair, no matter . . . there have been numerous other accidents fostered by cockyness and 'tis a condition all of us should guard against—continually.

—The Editor

No Sweat!

No Sweat!

RR

NO SWEAT LEAD, I have you in sight." The captain sounded just a little too cocky to the major. In fact, this "no sweat" business had always been a red flag to him. Yeah, "no sweat," they were the ones to sweat. He was even more uneasy than usual about this guy. Perhaps it was his attitude during the briefing. Ray, who was up front in the F they were flying, had given a pretty good briefing and had emphasized the difference between their F-100F and the F-101 the captain was flying.

When Ray briefed on the lost wingman procedure the captain had shrugged his shoulders and said, "I don't anticipate any trouble from the weather."

Too confident. They'd be punching thru several layers and no one is sharp enough to keep locked on in weather all of the time . . . some clouds are just too dense. Right then he'd regretted his decision to let the captain tag along. The difference in birds was

bad enough . . . but according to the reg, the captain couldn't fly the trip solo since it was over water. So here they were, with an F-100 on one wing and the captain in his F-101 on the other.

As he had anticipated, the captain had botched his join-up. Overshot, overcorrected and had to ease in from behind. At the time they had been right on briefed speed, the major had double checked. He had attributed the bad join-up to the difference in aircraft and had tried to ignore the feeling of impending trouble by going under the hood and concentrating on the instruments.

From the changes in light coming thru the hood, he was aware of having topped a particularly dense cloud when the captain called to say, "No sweat Lead. I have you in sight."

This decided him to check on the captain and he pulled back the hood just in time to see the underside of the F-101 descending on them. It was so close he could see

rivet heads and the texture of the radome.

The major had no time to react. There was a tremendous jolt and flash of fire, then tumbling twisting violence. He instinctively, desperately grabbed for the ejection handles and the canopy came off. He made two or three passes at the trigger before a jolt and change in sensations told him he was successful. Still tumbling he looked back to check his chute only to find it a streamer, tangled in the seat. Before he could decide what to do, the chute blossomed and the seat slammed into his left side.

Up front, Ray was unable to find the arm rest due to the severe forces. Apparently he managed to release the seat belt because he was suddenly thrown clear of the aircraft. He pulled the D ring and looked around in time to see both aircraft smash into the ground.

The captain never made it. No sweat now, for certain.

don't forget to **SMILE**

Don't forget to smile!



BY MAJOR FREDERICK B. WELLER

Even tho we have no L-23F aircraft in TAC, this article from Army Aviation Digest contains some excellent lessons on basic airmanship, from which all of us can profit.

IHAD THE dubious honor of making a belly landing. For what it is worth to the man who comes after me, here is what happened and the action I took.

After a maintenance test flight I dropped the gear handle into the down position. The left main gear indicator showed intransit with the other two down and locked. (Yes, the light in the gear handle was also on.) Knowing secretly that this was a simple malfunction of the microswitch in the wheel well, I casually dropped by the control tower for them to confirm that all three wheels appeared to be down and locked. I received my first

coronary of the day when they casually informed me that the left gear was only partially out of the well. I cycled the gear up electrically and engaging the hand pump (yes, I pulled the circuit breaker and put the gear handle into the down position), I cranked the gear until the nose and right main indicators showed down. The left main still showed intransit, and another pass over the control tower confirmed the fact that it was still only halfway out of the well.

For the benefit of the mechanically curious reader, the reason the left gear hung is that the torque tube leading out to the actuator separated from the universal joint in the wing root. It became separated because the clevis pin holding the two together dropped out. The clevis pin dropped out because the cotter key holding it in position dropped out. The reason the cotter key dropped

out is something for the Board to figure out. In any case, the cotter pin fell out while the gear was coming down and let the unattached inboard torque tube spin merrily around to the tune of the landing gear motor.

I informed our tower that I was proceeding to a base where they had an 8,000 foot runway, much crash equipment, doctors, plasma, APC pills and clergy of all denominations. When the operations officer at this base was told of my predicament, he asked if I wanted foam laid out on the runway. I told him I would like that very much. So they foamed the runway. That is, a 2,000 foot section of it. This little caper took about an hour. Meanwhile, I cruised around the place, dangling my left gear at the thousands of onlookers who were thronging into the area.

I did put this hour to profitable use though. First I porpoised the airplane in faint hope that something would give and the wheel would fall magically down and lock. It didn't.

Then I practiced traffic patterns. I was fortunate in having good weather for my act - no wind, smooth air, and good visibility. I guess it would have been nice to have a little headwind, but no wind was better than having one across the runway - or gusty. Also, while I made these practice approaches, I reviewed the procedure I was going to follow.

I was going to make a long, wide downwind leg at 1,000 feet. Just before I hit the base leg turn, I was going to feather the outboard engine. In the turn to base, I would descend to 500 feet and check the dead prop to make certain I had one blade straight up by moving it around with the start button.

Turning onto the approach, I checked my airspeed for 110 and hold 500 feet of altitude. I reached the point where I had decided that I would feather the other engine. At this point, I would have my right hand crossed over in front of me and on the left fuel tank selector handle. I would quickly turn the handle off, thinking that would be one more cleanup step out of the way with no sudden letup in engine performance - a development which could rattle the pilot - me.

Then smiling coolly, I would reach back across in front of me, cut the mixture to that engine, throttle it back and quickly feather it. I would then cut off everything else that I could lay my hands on and let the aircraft glide downwards at 110 knots - along with a grim smile - until I was very low over the first third of the runway. At that point I would smile hysterically and level the aircraft.

From then on, I flat didn't know what was going to happen. I only hoped that it would not be something which would cause me to think ruefully about not carrying flight pay insurance.

The foam trucks finally cleared the runway and the people in the tower gave me the nod to give it the old college try. So I did just like I said I was going to do. On the downwind leg I feathered the outboard engine and turned onto base leg into the good engine. Then I punched the start button - and nothing happened! Immediate flap in cockpit - sudden brainstorm - turn start selector switch to dead engine so that start button works - action - start button then pushed and prop centered so that bottom two blades are angled away from bottom center - end of flap in cockpit.

On the base leg I judiciously

manipulated the throttle to hold 110 knots and lose 500 feet. I turned onto the approach 2 miles out and held altitude and airspeed. At about a quarter mile from the end of the runway I feathered the good engine and waited apprehensively for a fast sink rate which would put me down short of the runway.

It didn't happen.

The nose dropped to what looked like a normal 500 fpm descent attitude. With me still holding 110 knots, the airplane glided gently - and noiselessly - towards the runway. I passed over the end of it at about 300 feet, and, as I neared the foamed area a thousand feet down the road, I shallowed the glide out a bit in anticipation of a level touchdown in the foam.

Well, I glided. I glided over the beginning of the foamed area, past the center, and was still gliding when I passed low over the other end of it. By then I was in an almost level attitude about 15 feet above the ground - and still gliding. I felt the hung gear touch and a second later give way. I leveled the aircraft and glided some more. The wheels touched the runway and I rolled silently along for about a thousand feet. I had not yet touched the brakes but I moved my feet up on the pedals so that I could toe them quickly if I had to.

I was still holding the aircraft level, but I could feel it start to bob a little. This may have been due to the unevenness of the runway or my subconscious testing of brakes as some ominous white lines ahead of me on the runway entered my upper periphery of vision. As the aircraft bobbed slightly forward, I heard what I assumed to be the bottom prop blades ticking the runway. (I was

right. They were.)

I was now seriously applying brakes. As they took effect and the airplane lost speed, the nose came up and I heard the underside of the fuselage contact the runway. It scraped for about a hundred yards before the airplane stopped. I had another scant hundred yards of runway left in front of me. Use it all, I always say. Start from the other end, though.

I exited the aircraft to the deafening cheers of the millions of people who were running towards me. (Twenty-five personnel, including a group of firemen who were obviously thinking dark and uncharitable thoughts about the one hour of labor and 8,000 gallons of foam lying unused on the runway.) The bird was only slightly damaged.

And now, what I consider my big error.

I was totally unprepared for the terrific glide ratio with flaps and wheels up and engines feathered. I mean - and man, I really mean this - that airplane goes a long way at 110 knots and no outside drag.

When the second engine was feathered, the glide angle was much shallower than expected and it was a very pleasant surprise to me, even if I did miss the foam. Incidentally, foam on the runway is not a real requirement where the airplane is going to land level on its wheels, even if those wheels are only 6 inches out of their wells. Also, foam will hurt braking action if it is needed. And besides, if you land and miss the foam, you will be terribly embarrassed.

Don't forget to smile at the crowd as you exit the airplane, and later when you face the accident investigation board, be brave.

TAC TIPS

T-33 COCKTAILS

All stateside bases are now dispensing JP-4A... jet fuel with anti-icing additive. A TOC is in the mill to remove the alcohol system from all T-33's... however, at this writing it looks like it will be late '63 before all are removed. At present, we are attempting to find out if any problems will be created by not using the system or by leaving it dry... anyway, until you get the word, feed your T-bird its martinis twice an hour and give it a double before heading down the road home.

PITOT ICING

Did you know that pitot tubes will ice up in clear weather? Well they will! A commercial jetliner aborted take-off because of an erroneous airspeed indication. Investigators found the pitot tube iced up. A preceding aircraft in the taxi pattern raised enough moisture to cause the icing. Keep this in mind when you come to "Pitot Heat - as required" on your take-off checklist.

HOLE STORY

A hunter climbed over a fence with his gun cocked. He is survived by his widow, three children and a rabbit.

THINKING CAP

The real cause of most unintentional wheels up landings, according to the CROSSFEED, is an interruption to the pilot's habit pattern. Since interruptions can't be avoided, continuous emphasis should be placed on the fact that unexpected changes disrupt the normal thought pattern and in turn lead to incomplete preparation for the intended maneuvers. The pilot must say to himself, "This is not what I expected, I'd better recheck my procedure."

NAVAIDS CHECK

The FAA now has the responsibility to flight check the Air Force's world-wide system of air navigation aids. The flight inspection program, previously performed by the Air Force Communication Service, is gradually being assumed by the FAA and is already being performed in the United States and Alaska. It will be extended to Europe, the Middle East, and the Far East by 1 June 1963.

Approximately 1600 AF nav aids, ranging from en route facilities to terminal facilities such as ILS, are involved.

The FAA already checks civil nav aids as well as those operated by the Army and Navy.

RESCUE BEACONS

Two new rescue beacons have been developed that should help rescuers locate downed aircraft and personnel much more rapidly. The AM/URT-21, personnel locator beacon, designed for aircrew members, has a greater range and is more reliable than previous beacons. It will be available to all commands through normal supply channels during FYs 1964-65. A "Tumbling Air Foil" developed by the Canadians for attachment to the outside of aircraft will eject under high G or deceleration forces and drop slowly like a falling leaf. It lands upright floats on water, turns itself on automatically and transmits a beam that can be picked up by standard homing equipment. If tests prove satisfactory, it will be installed in some USAF aircraft, most likely the types used for overwater flights.

CLIPPED

Out at Nellis they've marked F-100 oxygen and G suit hoses with tape to indicate where the personal leads clip (T.O. IF-100-789) should go to eliminate any interference with the flight control system. Test pilots check the location of the clip on every flight.

NOTAMS

Notices to Airmen are now transmitted in two parts, I and II. Part I is further subdivided into parts A and B.

Part A lists NOTAMS on general areas, such as Gulf Coast, Atlantic Coast, or Pacific Coast (Temporary General NOTAMS). Part B lists NOTAMS on temporary hazards and conditions that exist at individual Air Force Bases. These are listed alphabetically by base (Temporary Base NOTAMS).

Part II lists NOTAMS on hazardous conditions that are expected to exist for 30 days or longer. These conditions are also published in the appropriate FLIP (FLIP CHANGES).

Many pilots read the Temporary Base NOTAMS, and completely ignore the Flip Changes. NOTAMS are directive and pilots may have a violation filed against them if they clear into a base with posted restrictions.

HAZARD PAY

To paraphrase a favorite slogan, flying is not inherently dangerous, but we aren't getting flight pay without good reason. Your best insurance is a thorough understanding of the aircraft, including airframe engine and systems - and knowing how to fly best accomplish your mission.

BAD BRAKES

"The aircraft didn't stop until we had crossed the strip boundary, a road bordering the strip, and about 10-15 yards of mostly flat ground covered with tall grass and occasional small bushes. Just ahead of us was the remains of an old tree and a little beyond that a drop off into a stream."

Thus ended an aborted take-off. The reason the take-off was aborted - the aircraft was not accelerating properly. The reason the aircraft was not accelerating properly - the parking brakes were on. The reason the parking brakes were on - the pilot in the left seat forgot about them . . .!

It's right hard to say why anyone forgets something he doesn't want to forget. Especially brakes on take-off. A lot of people forget to put parking brakes on, but seldom does anyone forget to release them, mainly because the bird normally won't move until brakes are released. We can see that there had to be more than just a loss of memory involved. There was. The parking brakes had a history of bleeding off pressure. In this case enough bled off to let the craft move with the brakes still on.

TAC ATTACK

DEFENSIVE FLYING

The other day a report came in that really made us wonder. An F-100 pilot was on a final run-in for a LABS delivery when he heard someone call out that a transport type aircraft was approaching the range. The pilot was really barrelling along with his attention on the target and instruments. He looked up just before starting the pull up and saw a C-54 lumbering lazily along directly over the target (it must make a nice check point). It's difficult to imagine how a "piloted" aircraft can wander so far off the beaten path, thru a large restricted area (prominently displayed on all maps) and right over a conspicuous bombing target without so much as a how-de-do . . . all under a brilliant blue, cloudless sky. We could continue on about this questionable accomplishment, but will sum it up by saying that it's still considered good practice to keep the eyes open . . . except when asleep.

TACAN RESEARCH

To improve TACAN performance characteristics, FAA has contracted with the Maxson Electronics Corporation to develop an experimental TACAN transmitter incorporating feedback techniques. We hope this will eliminate having to watch the needle imitate a small propellor while holding rather close to stations.

AIRIED

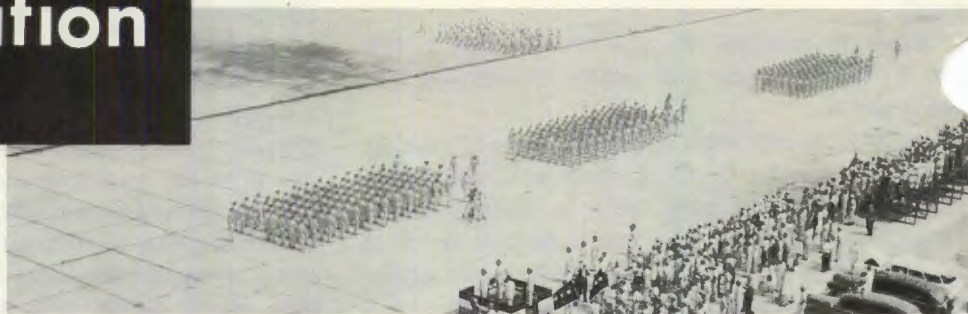
Hear about the T-39 that flamed out on the ramp while the pilot was taxiing in from a flight? Seems there was only 800 pounds of fuel remaining on board and when the pilot taxied up an incline, one booster pump was exposed long enough for it to draw air into the fuel controls. Investigators found that it takes up to 15 minutes of running at idle power for induced air to work its way thru the J-60 fuel control. Something for all T-39 drivers to think about!

TROUBLE BY VOLUME

An airliner had nose gear trouble on arrival at destination, but managed to land without mishap. Inspectors found a maintenance manual in the nose wheel well. Someone probably found it on the ground and placed it in the well to protect it from the wind and rain, and then forgot it! Add an abridged rainy preflight, and this flight almost became one for the book.

recognition

recognition



PILOT OF DISTINCTION



First Lieutenant James E. Chinn of the 777th Troop Carrier Squadron, Pope Air Force Base, North Carolina has been selected as the Tactical Air Command Pilot of Distinction. Shortly after touchdown, during an assault landing on a very short strip, the left throttle on Lt Chinn's C-123

suddenly and spontaneously advanced to 45 inches of manifold pressure. Lt Chinn could neither retard or advance the throttle. He didn't have enough power available to go around and he couldn't possibly stop the aircraft with the excess power on the left engine. Recognizing his precarious position, Lt Chinn quickly shut the engine down with the mixture control and stopped the aircraft on the airstrip. His rapid analysis and reaction to this emergency prevented loss of a valuable aircraft and possible loss of life. Investigators found a small stone lodged between the throttle cable and cable pulley guide.

MAINTENANCE MAN OF THE MONTH



For his outstanding performance as a photographic repairman, Staff Sergeant James W. Jessen of the 4521st Armament and Electronics Maintenance Squadron, Nellis Air Force Base, Nevada has been selected as the Tactical Air Command Maintenance Man of the Month. Sergeant

Jessen's modification of the A-2 Boresight Kit was so successful that technicians can now install cameras in F-105 aircraft and boresight them to sight heads in one third the previous time required. Overall savings to the Air Force have thus far amounted to \$13,000.00. Sergeant Jessen and his crew also adapted O-15 recording cameras so that radar operators in T-39B aircraft can photograph scope presentations and permanently record them for target training purposes. In his constant endeavor for self-improvement, Sergeant Jessen completed several ECI courses, including Photographic Fundamentals, Photographic Repairmen and Management.

CREW CHIEF OF THE MONTH



Staff Sergeant Garland E. Massey of the 4528th Organization Maintenance Squadron, Nellis Air Force Base, Nevada has been selected as the Tactical Air Command Crew Chief of the Month for his outstanding performance as an F-100D crew chief. Sergeant Massey willingly spends many overtime hours to insure that his

aircraft is operationally ready. As a result of his devotion to duty and extra effort, his aircraft scored 1000 out of a possible 1000 points during September. The same month, his aircraft flew all 21 scheduled sorties plus one test flight. A feat made even more remarkable in view of the fact that he had extra duty as acting flight during the period that he maintained his ai in this exemplary manner.

TAC TALLY

A COMPARISON OF TACTICAL AIR COMMAND ORGANIZATIONS

MAJOR ACCIDENT RATE 1 JAN - 30 NOV

TYPE	1962	1961
ALL	13.1	15.1
F-105	37.5	25.8
F-104	36.8	76.2
F-101	21.8	6.0
F-100	18.6	20.2
F-86	66.2	37.5
F-84	16.8	37.6
B-66	0	24.3
R-26	43.1	
9	0	
T-33	3.2	5.8
T-29	16.1	0
KB-50	8.4	6.0
C-130	1.5	7.1
C-124	0	0
C-123	12.7	5.8
C-47	4.9	0
U-10	60.6	

NOV TALLY GUARD AND RESERVE

UNIT	MAJOR	MINOR
108 TFW	1	
140 TFW	1	

ACCIDENT FREE (MAJOR & MINOR)

JET			
ACTIVE	MONTHS		ANG
4411 CCTG	10	16	122 TFW
354 TFW	5	16	113 TFW
CONVENTIONAL			
ACTIVE			RESERVE
314 TCW	40	72	434 TCW
463 TCW	18	61	94 TCW

NOV TALLY ACTIVE UNITS

UNIT	ACDNTS*	INCDTS
4 TFW	2	1
12 TFW		2
15 TFW		3
27 TFW		3
31 TFW		7
354 TFW		5
355 TFW		
388 TFW		2
401 TFW		12
474 TFW	1	1
479 TFW		6
363 TRW	1	
4411 CCTG		
4510 CCTW		22
4520 CCTW	1	15
64 TCW		
314 TCW		
463 TCW		
464 TCW		2
4505 ARW		2
4442 SSQ	1	1
1 ACG		2

*MAJOR & MINOR

Considering the number of mishaps, November was one of our quieter months. However, two of the accidents were fatal, causing us to lose six people. In all, there were three majors and two minors for the regular forces and two majors for the reserve forces. The worst accident involved a C-130 which apparently lost two engines shortly after takeoff. The pilot appeared to lose control turning back to the field and all five crew members were killed in the crash. An ANG F-84F pilot was the other fatality. He crashed in a river while observing a dart drop. He had elected to stack down and was on the inside of the turn to the drop area when the accident occurred.

Two pilots ejected successfully during the month. An F-105 pilot punched out of his machine following an engine failure, while an ANG pilot abandoned his F-100 after the rudder spontaneously went full throw and caused it to flip inverted at low altitude.

An RF-101A was substantially damaged in a landing accident following an inflight engine failure. The drag chute streamed and the pilot blew a tire attempting to brake the aircraft to a halt. The aircraft was damaged when it went off the runway.

Both the minor accidents involved T-33's. One was damaged when a student attempted to force his machine onto the runway during landing, causing it to porpoise. The other had a fuel leak in the plenum section which caught fire during a maintenance run-up.

