

JULY 1963

TAC ATTACK

TAC Attack July 1963 Clock Work Capability



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Thunderbirds practice for precision

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Angle of Attack

*Prudence must not be expected from
a man who is seldom sober.*

—Cicero



Colonel James K. Johnson
Chief, Office of Safety

In the safety business, we're often accused of being Monday morning quarterbacks. In some cases, I like to think that they are rare, this accusation may possibly be justified. In others... well... it's hardly Monday morning quarterbacking when you criticize a ball player for trying to steal second when the bases are loaded.

It's hardly MM quarterbacking to criticize a commander for giving an airman little more than a slap on the wrist after he has had his fourth motor vehicle accident in two years time... particularly when the airman was drunk when he had two of the accidents.

Altho those of us in the safety business do not normally favor punitive action following accidents, there are exceptions. Gross lack of discipline or other behavior that is known to cause accidents has only one cure and no safety officer worth his salt would consider it unfair for a commander to take that action. Conversely, he'd wonder why the commander didn't take the action before the third or fourth accident.

It has been my experience that those individuals who are periodically involved in accidents or picked up for being drunk and disorderly are seldom able to pull their fair share of the workload on the line or in the orderly room. Too frequently they merely fill a space. The mission and equipment of the present-day Air Force is far too critical to be jeopardized by substandard, undisciplined, space fillers.

Out in the great Southwest the weather will occasionally pull a quick doublecross on even the best forecaster. Almost every year this will happen at an awkward time, subjecting controlling agencies and one or more aircrews to an exacting and exciting few minutes. This is the narrative of one of those awkward moments. We've changed the names, but have tried to retain the salient facts as seen by some of the participants. First we'll interview a captain who was leading a flight of F-100s in the area.

Radio reception was poor and I couldn't read the controller . . . there was considerable confusion. Since 15,000 was my last assigned altitude, I maintained it and tried to get a TACAN approach but couldn't read approach control. Meanwhile, approach control was concentrating on getting me in radar con-

one, two, three, four . . .



As Trunk One, I was leading this flight of four F-100s into Rodeo AFB. Altho the weather was supposed to be pretty good, I checked it twice, getting my second report thru Wildwest center some 300 miles out . . . the weather appeared to be holding VFR.

Fine idea, wrong channel. For weather info, get clearance to go 13 and talk to the regular crew chief!

About 60 miles out, center gave us a vector and I told 'em this would take us into a thunderstorm. Approach control said they had no weather on their scope, but I asked for a VFR climb on top to stay in the clear. After we leveled at 32,500, they gave us another heading with a descent to 15,000. Penetrating the clouds, we encountered severe turbulence. Trunk Four lost Three, and Three and Two both lost me. I called approach and advised them the flight had split up and needed separate clearances.

...BOXED!

tact and directed me several times to change IFF mode and code. I gave them my exact location from Wildwest TACAN several times.

As each member of the flight reached 2000 pounds, he declared an emergency and went to guard channel.

The departure controller did a masterful job. He was able to pick up each of the three wingmen and vector them in close enough to find the field and land. His timing was perfect and he got all three in before the weather deteriorated too much.



After some delay, radar picked me up over the station vectored me around for a GCA to runway nine. The controller didn't tell me what type approach he was giving me and didn't answer when I asked for Rodeo visibility.

He overshot my turn to final and gave me two or three more turns to get me on track. About two miles out he asked if I had the field in sight. Hell, I couldn't see the ground much less the field so I told him negative. He said to take over and land visually. I asked to be talked down, but he didn't answer. I continued my descent until I broke out over the buildings about 500 feet to the left of the runway.

I saw a clear area to the south and spotted runway 35. I advised that I'd make a low vis approach. At the same time I saw a T-bird on his missed approach. I made a right turn to the clear area, told approach I had 400 pounds and would land on 35. They cleared me, raised the barrier and turned on the strobe lights.

Approach was calling weather as 1300 overcast, with 6 miles. It was actually closer to 1/16 of a mile. The runway lights were not turned on during any of the approaches. They sure would have helped find the runway. Also, it was obvious that approach control had no idea what the actual weather was like.

on't go away, the real excitement is yet to come . . . and we only heard one side of this story. For another, we'll let you listen to a crew who arrived in the Rodeo area with their T-bird just after Trunk flight started down the slide. The captain in the front cockpit tells the story.

We asked Wildwest center for the Rodeo weather. It was forecast to be 4900 scattered, 10,000 broken and 15 miles . . . about like the weather on our clearance, except visibility had dropped from 60 to 15 miles.

Here we go again, bothering center for second-hand forecasts!

We lost contact with the center after making a frequency change but finally raised Wildwest approach control and received clearance to Rockville at

20,000 for a VOR/ILS to Rodeo.

As we approached, the controller got quite busy working Shrunk One, some F-100 pilot who was apparently lost. Three minutes out I asked for clearance to penetrate but approach control told us to hold with an expected approach clearance at ten minutes after the hour. We arrived at Rockville on our ETA at four minutes after with 140 gallons on the totalizer.

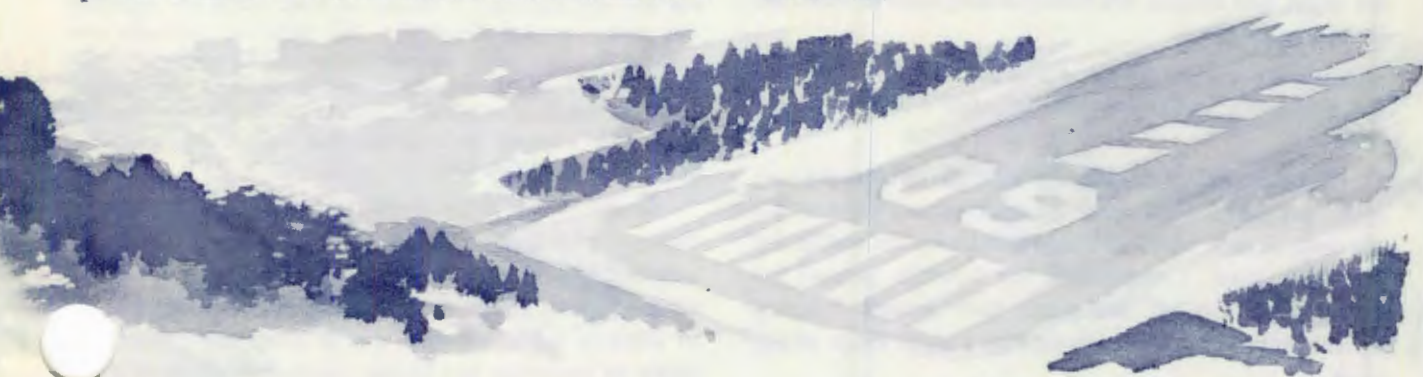
The controller was still quite busy . . . there were now four F-100s and all were at minimum fuel so we didn't bother him for the latest Rodeo weather. Besides, the two checks we'd already made confirmed the original forecast.

At ten after, the controller was still working the F-100s and extended our expected approach time to 2320. I advised we'd be minimum fuel at 15. He didn't make any comment. Altho we were in weather, I was positive we could hack a minimum fuel penetration with 100 gallons and waited until the fuel reached that level before declaring minimum fuel. Three or four minutes later, approach control cleared us for a VOR/ILS to Rodeo. This was at 2320 Zebra and we had 80 gallons on the totalizer with 95 on the fuselage gage.

We didn't get any weather info during descent and the controller cleared us for a circling approach to runway nine. Crossing the outer marker, inbound, we were still in weather and visibility was quite bad. We realized the weather was worse than reported.

Continuing down the ILS glide slope we still didn't see the ground or the field. At 5500 feet things were looking real bad and the approach controller offered to give us a GCA to runway nine. With 70 gallons left, the GCA sounded like a good deal.

This is misleading. He misunderstood the controller. The controller actually said, "Turn left to 320 for radar vectors to the final approach course to runway zero nine." Instead of promising a GCA, the controller was only contracting to furnish azimuth and range information. This type approach assumes that the pilot will be able to see the runway from a reasonable distance out.



They gave us a vector to base leg and told us to climb to 6000. In-flight vis was still zero and I re-advised the controller that we were minimum fuel and needed a short final. He said he'd give us a four-mile final behind an F-100 three miles out.

We rolled out on final at 6000, followed heading instructions and were descended to 5500. The controller gave very sporadic heading instructions and no glide path information. At no time did he advise that we were not making a precision approach.

Finally, he said we were one and a half miles from touchdown and should have the field in sight! We were still at 5500 feet and Rodeo is 4350 feet! I added 200 feet onto 4350, came up with 4550, took over from the lieutenant in the rear seat and started an immediate, steep descent.

See what we mean about excitement? It's rather interesting that both Shrunk One, excuse us, Trunk One and the T-bird crew had a similar reaction to the situation. This is truly "blind flying" . . . what more can we say?

The controller stopped giving heading information, so I asked him to continue. Instead, he advised that we were over the end of the runway and to turn right to 170 degrees. I didn't understand, but complied. During the turn we saw a group of parked aircraft and a rotating radar antenna. I realized we were over the field and frantically looked for a runway. I spotted one off to my left, banked onto a base leg and declared an emergency. I had no idea what runway it was.

I held 115K on final and just prior to roundout the tower advised there would be an F-100 landing on 35. All I could see was the runway I was landing on. I reduced power to idle, rounded out and touched down.

Immediately after touchdown I saw an F-100 about 200 feet to my left on a collision course. Instinctively I pulled back on the stick and added throttle. We ballooned over him high enough to miss, then stalled in. We hit the runway very hard, right wing low and the right tire failed. We both pulled power to idle and hit the left brake.

Witnesses said that the T-bird went directly over the F-100's canopy, clearing it by about ten feet. How's that for excitement?

The aircraft straightened out. I tried to brake to a stop, but the brakes were ineffective and we went off the end, thru a fence and into a ditch which collapsed the nose gear. I stopcocked the throttle, opened the canopy, turned off the main fuel switch, battery switch and some more switches. I don't know which ones.

The failed tire cut the flex line to the right brake . . . there was no barrier on the runway. With two sides of the pit stay with us and check a third, the controller's side.

I was working arrival radar in the Wildwest RAPCON tower. At 2303 the center handed off Drunk One, a flight of four F-100s. I got them four miles south of Rockville.

As I established radio contact, Drunk One, the flight leader, advised me his flight had broken up and that he was heading 340 at 15,000. I asked him to reply mode 3, 14. I was unable to pick up his reply on a heading of 340, and asked him at intervals to reply 04 and ident. No beacon replies were received.

The aircraft read me intermittently and I couldn't make contact with the other three aircraft in the flight. They were being worked on guard by the departure controller. Meanwhile I had a T-bird and another aircraft holding on Rockville at 20 and 21,000.

I gave Drunk One several headings and altho he acknowledged some, he'd later report on a different heading. I'm fairly certain he must have been taking headings directed at other members of Drunk flight on guard channel. I asked him to turn off guard override.



Drunk, oops, Trunk One never turned off guard override. Altho it's good policy to monitor guard, there are exceptions and this just happened to be one of them. While the controller was trying to work Trunk One, the departure controller was working the other three aircraft on guard. As a result, Trunk One was listening to two conversations at once. On one occasion he followed instructions for one of his wingmen that had him headed straight for a nearby mountain. Fortunately, the controller caught it in time.

At 2318 the T-33 declared minimum fuel and I cleared him for a VOR/ILS to runway 35. When he reached six miles, the controller told me to vector him to follow Drunk One who was on a six-mile final to runway nine. He told me to keep his pattern close as possible due to fuel. I descended him to 6000.

and turned him onto a four-mile final behind the 9. Between three and four miles out, precision equipment showed him on glide slope. He reported seeing the field at about a half mile, but started a right turn. I asked if he was in a right turn and he said, "Rog, give me a heading."

There are some differences between these reports which we were unable to completely reconcile.

Since the F-100 had turned left I told him to turn right to 170. He declared an emergency with a runway in sight and said he was going to land. I advised him of the F-100 on runway 35.

Now that we've listened to the T-33 pilot, Trunk One, and the controller, let's insist on a square report and listen to a fourth side . . . that of the accident investigator who was charged with unraveling this mess.

Inbound to Wildwest, Trunk One advised ARTCC that he had TACAN only and they cleared him to the 29-mile DME fix on the Rodeo 210° radial. Trunk One acknowledged this clearance.

After the flight split in weather, all three wingmen went to guard channel and were quickly identified by the Wildwest departure controller. He gave each an approach. However, during the next 17 minutes Trunk One flew in the vicinity of the Rodeo VORTAC while approach controller tried to establish contact. Ten times he gave his position with reference to the Rodeo VORTAC without specifying the fix. He just said, "station." The controller was expecting him to use the Wildwest TACAN. This, coupled with a sick parrot helps explain the identification problem.

Gone are the days we can say "over the station" and have everyone know where we are. Some fields have three or four fixes many, many miles apart. The station Trunk One was referring to is about 10 miles from the one the controller expected him to be using.

At 2318 another controller took control of Trunk One and picked him up, skin paint only . . . this was after Trunk One gave his eighth position report—the only one where he specified the fix he was using.

It was also about the same time the last of his wingmen touched down and guard channel went quiet!

Trunk One failed to turn off guard while working the controller and this made it necessary to repeat instructions which, in general, created confusion.

After he was identified, Trunk One held about 270 knots during his PAR final. This made control difficult and explains why the controller overshot his turn to final.

Unfortunately, this is a very common error. Speed has its use but in a situation such as this excess speed robs both pilot and controller of precious time.

The controller made some goofs, too. Two minutes after he started to make contact with Trunk One, it was obvious that Trunk One had no IFF. Altho he did have a working TACAN, the controller concentrated on using headings to establish radar contact, rather than the TACAN.

The incomplete PAR approaches and such were induced by the emergency and the fact that the approach control facility did not have the current weather. By the time it dawned on them that the pilot couldn't see the field from three or four miles out, it was too late to make corrections.



The tower did advise that weather was deteriorating, but this info didn't get thru in time, and the tower reported the weather quite a bit better than the pilots saw it.

Sometimes we think it would help to have a few windows in weather stations and control centers. True, this imposes some problems with radar scopes—so perhaps a closed circuit TV would be the answer. This still wouldn't completely compensate for the difference between ground level visibility and visibility from the cockpit.

This incident really woke some people up around this particular center... but... we had to lose an aircraft about a year before due to similar problems at another air base before that particular center set up procedures. Looking back over the years, it rather appears that we have to crash an aircraft at each base due to a rapid—weather—change hassle before control agencies take measures to cope with them. This is hardly before-the-fact planning.

There is another problem that needs to be solved before a mid-air forces a solution. That's the problem faced by the other three pilots in the F-100 flight. Dumped without clearance or ceremony at an untenable altitude and no hope for a quick clearance they had to play it by ear. Two arbitrarily took altitudes of 16,000 and 17,000 feet. The third climbed all the way on top while trying to contact someone for clearance and vectoring.

By the way, in case you wondered, the T-bird pilot shut down with 20 gallons on board, while Trunk One had 350 pounds.



BACK DURING the Korean rumble TAT had the doubtful distinction of being in one of the last operational Mustang outfits in the Air Force. Our '51s were old, patched, weary and a bit of a thrill to fly. Most were on a diagonal for minor things . . . like cracked wing spars. Since it wasn't unusual to pull seven G's or more to keep from clobbering a hill after pressing in a little too close trying to get off bombs or rockets, we all longed for brand new jets to replace our battered fleet.

Then, along came Joe . . . brash, noisy and fresh out of the Training Command. Joe had been trained primarily on jet equipment and spent many an hour at the club telling one and all how he'd been grossly malassigned when sent to our sad outfit. First off, he was jet qualified, and everyone knew how difficult jets were to fly. Old fashioned prop jobs were like wasting his training and talent, etc, etc.

We're not sure if the people checking him out actually believed his line on jet skill and cunning, or if Joe was too busy looking down his nose at the Mustang to listen. But, by anyone's standards the checkout was a bust. After checking the mags, Joe taxied onto the runway, slammed in full throttle and shoved forward on the stick to get the tail up.

The startled 'Stang leaped about a hundred feet down the runway, whipped 90 degrees to the left and plowed thru a chain link fence into the base motor pool.

History has a way of repeating itself, and now that TAC is again getting high-powered, single fan equipment, someone just might follow in old Joe's footsteps.

TAT's thinking of the AD-5 with its huge power

plant and conventional gear and the fact that many line pilots have never flown anything closer to it than a T-28.

The T-28 has torque, but torque that can be readily controlled. The AD combines much greater torque, with the less stable, conventional gear. A check with the Naval Aviation Safety Center confirmed that this problem is real.

They found that students trained in the old had less trouble than those trained in the T-28. Partly because the T-6 trainees received about 20 more hours training and partly because the T-6 is much more difficult to control than the T-28.

They even had one student do a cartwheel on takeoff with an AD-5 because he tried to correct for torque with aileron alone! Poor throttle control did little to help.

We're not trying to scare anyone, or impress anyone with how much skill and cunning it takes to fly the older equipment. Each takes skill and attention . . . it's just that the requirements are different. So respect this "new" bird, treat it firm but smoothly and you should have no trouble. We stress the smoothness. The Navy found that most students - regardless of background - seemed to have but one cure for a bad bounce, a bad swerve, settling, propwash and such . . . full throttle and a go-around, right now! They seemed to think it a panacea for all landing ills, and follow it blindly. The Navy claims that this is one of the most difficult habits to break during training stage. It is also one of the most dangerous, because no one can possibly control all that torque when it's dumped on a! once at slow speed.

AS PART of an IP check, the pilot in the aft seat terrible T-bird was shooting a simulated flame-approach at an airpatch which sported a steep embankment for its approach overrun. He'd undershot a wee might and it was going to be touch and go as to whether he'd clear the embankment.

At about 200 feet, the IP up front wisely decided he'd better complete the landing since he knew he could see better, and besides boring down toward a sheer cliff is rather nerve shattering, so he said, "I've got it."

The troop in the rear said, "Its OK," meaning it was OK for him to take control. The bird continued down final, clearing the lip of the embankment by a foot or so.

About this time it dawned on both parties that the aircraft was being flared late and both got on the controls at the same microsecond and pulled. The bird responded with more enthusiasm than grace and stood suspended some 20 feet above the runway all ready to fall. Fortunately, the J-33 responded with vigah and the two IPs proceeded to go thru that old comedy routine. You know, the I-thought-you-had-it bit. This routine comes off much better on the burlesque stage.

Since this happened some years' back, it's safe this tiger to admit that the initials of the red-d clown in the aft seat are TAT and that the near mess was our fault. We should not have released control without demanding a confirmation stick shake from the guy in the front office. We relate this because a Navy near miss and an accident in another command indicate that this routine is once again making the rounds.

ABOUT TWENTY minutes after takeoff a throttle bender got a tingling feeling and glanced at his oxygen regulator panel. The flow indicator stared back at him with unblinking unconcern. Our hero went 100% oxygen and stayed that-a-way for the rest of the hour 40 minute flight. That's one report. Here's another. A T-birdman, feeling fuzzy, noticed he still had 400 psi on board and decided to terminate the mission. So he climbed to flight level 200 to make a penetration; felt worse, and let right down to 10,000.

It's a safe bet neither of these lads would have set there picking their nose had their engines suddenly started to run rough . . . a hazard which is of near equal seriousness. Big trouble is the sense well-being that goes with the former. This oxygen business is deep serious . . . and it will do well to

remember that for the most part you only hear of oxygen incidents. The oxygen accidents invariably end up cause unknown.

QUOTE FROM an incident report from another command . . . "The landing was going so well the pilot started the after-landing checklist while still rolling on the runway . . ."

The skid marks started about a thousand feet from the end and continued thru about 45 degrees of turn and right off the taxiway into the mud, which to our way of thinking is a most appropriate ending. If you detect a faint note of bitterness, you're right. We



...A SMOOTH ONE, TOM SAID FIRMLY

have yet to have a landing so smooth or a rollout so uneventful we've been tempted to take care of latter phase chores like doing the post-landing check, putting in pins or filling out the Form 781.

A CROP DUSTER who was old enough and experienced enough to know better . . . 40 years and over 10,000 hours . . . killed himself because he let his temper get out of control.

He made telephone arrangements to spray a field and then had trouble finding it. After hunting about 25 minutes, he finally found the danged place and horsed his machine around to start a very low dusting run. He caught a wing tip and bought it right there.

Altho most of us weren't exactly hired to dust crops, we do get close to the ground when we deliver some brands of ordnance, so getting mad and pressing too close or taking our temper out on the aircraft can have the same effect . . . 'cept our machinery will make a much bigger splash.



BACK IN 1953 the headshrinkers tried to predict pilot accident proneness by comparing the arithmetic reasoning, two hand coordination, finger dexterity, dial and table reading ability, identification speed and discrimination reaction time of several pilots against their accident history. The tests proved inconclusive. More recently another study made by the Danish Air Force did correlate accident proneness to Electroencephalograms (EEG). Pilots with marked EEG abnormalities had three times as many accidents as those with normal or slightly abnormal EEG's. Hoo boy! How is your EEG?

WEATHER WAS strictly field grade and the runway lacked two city blocks being two country miles long. There was just enough crosswind to keep the dust blown off it and this here 86H pilot corrected with rudder. As the bird slowed it tried to pull left and went thump, thump, thump! Flat tire.

Being an '86, he had no trouble keeping it on the runway and there was no damage from hurled chunks of rubber.

OK, the guy had a flat, so what? Well, the safety officer thumped him back in the cockpit and did some checking. He had the rudder pedals set midway and being a husky six-foot four, his number 13 brogans wouldn't let him hammer in rudder without applying opposite brake. Altho this is an old error, for cowardly reasons of our own, we'll make no caustic comments. However, if you should happen to be extra big, or extra small or even middling average, make sure you choose a seat and rudder pedal position which lets you apply full rudder and full brake without going thru contortions to keep from applying any unwanted brake. If unable . . . or if able to make the required adjustments, and then find you can't see out, give us a holler and we'll trade jobs with you.

THIS TIGER READ an FAA report on a recent fatal Viscount accident. While letting down at knots (according to the flight recorder), the aircraft ran into a flight of whistling swans. The swans weigh between 11 and 18 pounds and are solid enough to cause considerable damage. One bounced off the right horizontal stabilizer while another hit the left stabilizer squarely. It punched a hole clear thru the leading edge and then slammed into the spar hard enough to fracture the spar web and dent the leading edge of the elevator itself. Impact was about four feet from the fuselage and the elevator was damaged badly enough to fail. The increased load from the sudden pitch-down and the aircrew using back stick to correct, caused the right stabilizer to fail and the aircraft tumbled out of control.

The investigators pointed out that aside from the Electra crash at Boston where a flock of starlings triggered an unusual chain of events, this particular accident is the first fatal accident attributed directly to bird-strike damage.

They went on to explain why this type accident hasn't plagued us in the past . . . today's higher speeds, and that the stabilizers on most older aircraft are protected by the propeller disc or wing. The Viscount has its stabilizer set on vertical stabilizer above the area protected by the props.

The FAA people pointed out that the stabilizers of most jet aircraft are similarly unprotected due to their location and the lack of propeller disc coverage.

Possibly so, but more by happy accident than thru design, the engineers started on their sweepback kick about the time they really got to making jet aircraft in earnest . . . and this tiger will bet that the birds will bounce off the sweptback surfaces even when they hit 'em square.

No one really likes to admit that designers achieve anything by accident . . . but the truth of the matter is they do luck out from time to time. Similarly, us pilots have been known to breeze thru some rather ticklish situations because fortune was in a smiling mood. We recall that it was one such lucky break that led an early birdman to discover a way to get out of the, at the time, deadly spin. He knew he was a goner, pushed forward on the stick so he wouldn't have to wait so long to die and the darn crate came out.

Fortunately, man is an animal that can communicate and reason. The reason has permitted pilots and designer to realize the potential hazard of most breaks and the potential benefit of most lucky ones.

With the ability to communicate, we've been able to pass this knowledge along to others. Hence, the handbooks, TOs and regs.

The UR, OHR, incident and accident reporting system all exist because we realize that we're still learning. These are pretty good things to have around, and they've saved us from many a duplicate accident—even tho few pilots or mechanics make full use of them. We can't help but wonder how much more info we'd get, and how few accidents we'd have if everyone used 'em to the limit.

Oh yeah, despite our comments on luck, we don't trust that fickle female and will do everything we can to plan things so we don't have to rely on her.

A COUPLE OF TROOPS were up on a night instrument training mission when the rear cockpit blacked out. Hauling out his flashlight, the aft lad checked things over and found a circuit breaker popped. He reset it, but it popped out again. Stubborn, he kept repeating this "corrective" action until he caused an electrical fire. His companion had to turn off the battery and generator switches in order to stop the fire!



Holy creepin' crawdads! Our unmechanical minded wife knows enough not to keep resetting the circuit breaker on her washer if it pops out more'n once! Wonder what this guy was thinking about . . . perhaps he figured if he was going to have to operate without lights everyone on board should have to do the same. That's the way it turned out anyway. Bet this episode drew choice comment from the maintenance types.

The problem was induced by a short in the wiring of the instrument panel lights.

TAC ATTACK



A PILOT from another command aborted just after getting his F-100 off the runway because he couldn't get enough back-stick. The bird touched down with a short 2,500 feet of runway to go. He used max braking but forgot to reduce power, didn't deploy the drag rag, left the hook stowed and the full 330 gallon drop tank on the pylon. The abort could hardly be classified as a success, except the pilot crawled out with minor injuries.

It's rather obvious that this troop didn't have the BOLD FACE part of his checklist well enough memorized to retain very much of it under stress. Ironically, his checklist is what induced the whole mess in the first place. It fell from under his right thigh, where he had it stowed, and wedged itself behind the control stick.

DIGGER DEPARTS

One of the ATTACK's harder working editors got a promotion and change of assignment. Major, now Light Colonel, Jim Swensen who kept the safety awards program running smoothly while hunting out and writing much of the input to TAC Tips, Chock Talk and other sections, has put down his pen and reading glasses to become Director of Safety of the 831st Air Division at George AFB. Wish you luck Jimbo, sir, we'll miss you as we go on emergency overtime while waiting a replacement. Readers will miss you too, remembering your Dear John from Digger letters, Southern Route and similar epics.

—TAT—



BY CAPT RONALD L. HUTCHISON
4510 CCTW, Luke AFB, Ariz

Smart Money



Training aids play an important role in the Instrument Program at Luke, and each instructor has his own classroom. Here, the author explains the finer points of a letdown.



Capt Helinski gives last minute pointers to one of his students before starting an instrument flight in an F-100F.

green cards?

Let's say we have two operationally-ready pilots in a squadron—the first is the greatest bomber that ever lived, and the second is the greatest on the gages. Who do you think is the biggest threat to a target? If it comes down to a bet, I'd say the smart money was on the proficient instrument pilot, simply because no one is going to knock out a target if he can't find it!

How does one become proficient on Instruments? How can you regain your instrument proficiency of years back? There are many answers and suggestions along this line. But let's take a look at the instrument training program that the student pilots at Luke AFB receive prior to being assigned to tactical squadrons around the world. The stud (short for student pilot) logs 22 hours under the hood during his 15

IN A TACTICAL squadron, there are two types of heroes fighting today's cold war. The best bomb slingers and the best bull slingers. How about the best instrument pilot? Hardly. Of course, if you belong to an out-

fit in USAFE, for instance, you either hack those low ceilings day after day or end up cuttin' and pastin' maps for the rest of your tour. Do all the troops launch on those days—or, does the ops officer start looking around for the

hour training program in the 00. This includes 3 ADF basic instrument rides, 7 TACAN flights, and 2 sets of navigation missions to strange fields. At the end of the instrument phase, he is as sharp at precision instrument flying as possible. He only lacks the confidence that comes with weather and actual experience.

In December 1962, the 4511th Combat Crew Training Squadron at Luke AFB, Arizona, commanded by Major Robert E. Grandon, had 20 instructors who had logged 23,179 hours in the F-100 aircraft! This squadron total is hard to beat. The instructors are all former bomb commanders from tactical outfits. When they arrived at Luke they were all highly qualified to teach instrument training; but, since pilot training, had not received any type of formal instrument instruction, either as an instructor or as a student. For one reason, they each had to go through an instrument program similar to the student setup and be able to instruct to the satisfaction of all the squadron IP's. The best way to impress someone is not by talk, but by actions. How can you learn to hold your altitude in a steep turn for instance? Next, how can you teach a stud to do the same?

All techniques are used to determine the best possible one. Give that best technique the old college try over and over until you prove to yourself that it works. Once you're convinced, it will be easy to teach it to a student. Remember, one necessary requirement for a good salesman is to believe that he is selling a good product.

Naturally, a stud must put a lot of effort into every mission he flies, as he is graded on every phase of flight. This insures that

he gets much more out of the mission. How many times have you launched off in the big hurn (F-100) and just bored holes for two hours or more? Your instrument proficiency probably suffered, as you were teaching yourself to be lazy.

A typical 90-minute mission at Luke in the F-100F includes an instrument cockpit check, standard instrument departure (TACAN or ADF), holding pattern—TACAN letdown and low approach—IFR climb-out to altitude—steep turns and unusual attitudes, ADF penetration and circling approach, and GCA with missed approach. Quite a workout for an hour-and-a-half flight. The stud probably studied every aspect of that mission before briefing time in order to get a good grade. That good grade is an indication that he learned quite a bit.

How long did you study before your last instrument flight? How well did you nail the glide path on your GCA? How many times did you kick yourself on your last instrument flight check? Are you familiar with the items in the Flight Planning Document? When was the last time you looked at 60-16? Ask yourself a lot of questions—see how many it takes before you're pleased with an answer.

The studs coming through Luke have varied backgrounds. Some flew the T-38, others the T-33. A few are Air Force Academy graduates. Some are older heads from Air Training Command and the Air National Guard. Even pilots that had instructed in the Air Training Command have a hard time, because it's been a long while since they've pushed themselves.

The 4511th conducts many briefings to cover every aspect of instrument flying. Each instructor

has an individual briefing room with a blackboard, instrument panel mock-up, local area map, dash 1s, and mission briefing guides. The atmosphere of these briefing rooms helps the stud to get more from the preflight planning. A well-organized simulator program is interwoven between the earlier missions. Each maneuver, such as a missed approach, is well defined in respect to techniques and procedures in the student's syllabus of instruction. All sections of the Flight Planning Document are thoroughly explained.

After their last instrument mission, the stud completes a critique form. He voices his ideas on the program and the instructors. Many of the procedures used today were suggestions from a stud at Luke. Each student is given an instrument flight check while at Luke on his last ride. The scores are usually pretty high.

When the next new head arrives in your squadron, or your flight, take a look at his training folder from Luke. You will probably recognize most of the IP's names. See what he accomplished while at Luke. Especially look at his instrument mission slips. Try not to give him the standard idiot treatment. Before you make any judgment on his ability, try this test: Schedule yourself to fly an instrument mission with him one day, and one of your older heads the next. Then, make a bet with yourself—except for the actual experience that the new pilot lacks, who will give you the better instrument ride? Also, try to remember how good you were when you arrived in your first squadron. Who will you bet on? I say the smart money is on the new head from Luke.



chock talk

F-100 LANDING GEAR

Fatigue tests completed a year ago last April made it pretty clear that the F-100 landing gear isn't going to stand up long enough to match the programmed life of the aircraft. Based on these tests, new, stronger struts were ordered. The new struts are becoming available and will be installed during IRAN as per T.O. 1F-100-896.

The tests also indicated that our current inspection procedures are good enough to find faulty struts before they completely fail, so no safety hazard exists as long as you follow the current inspection procedures.

The new struts require different wheel bearings (number FSN 3110-100-0664 on the outboard race 3110-100-3568 on the inboard race) with a larger inner race than the bearing for the old struts. You mechanics will have to be careful not to use the new bearings on the old axles. Bearings for the old axles absolutely will not fit on the new ones, so there is little danger of an error in that direction.

ROCKET SEAT MURPHY

At long last we are getting rocket seats for the F-84F . . . and because we've waited so long for this improvement we hate to find fault with it. On the other hand, the new installation leaves you maintenance experts wide open to make one of those simple little goofs that can be so rough on a pilot.

Here's the problem. The initiator hose for the rocket catapult goes alongside the hose to the seatman separator. This may have looked real neat to the designer, but the trusting guy used identical fittings on the hoses and it's going to be easy to get them mixed up. If someone does install them wrong and then the pilot has to eject, he's going to have a rough time. Instead of the seat ejecting, the seat separator will fire and throw him into the lap belt. It can toss a

400-pound weight 15 feet. Should he survive this squeeze play, he will have to crawl over the side in order to get out of the bird because there is no way for him to fire the seat with it goofed-up like this.

Early in the mod program, the people at MacDill spotted this violation of Murphy's law and hollered to the AMA. The AMA agreed that it was a problem, but due to the cost and time delay, decided that the easiest way out would be to color-code the fittings. Altho this will help, we don't think this fix is enough. Not that we're worried about someone being color-blind—we are—but we're also worried about someone having to install this rig out on a cold, soapy ramp using a flashlight, hurrying so he can get a cup of coffee and stagger his tired body home to a warm bed.

We'll get the thing made error-proof if we can—meanwhile you troops are going to have to live and work with this color-coded rascal. Be right careful when you do.

RUNAWAY

Refueling an aircraft is not what you'd call a particularly complex chore. However, there are some things that must be done to the bird before it can be refueled safely . . . and believe it or not, the sequence of operation can sometimes be quite critical. This is why TAC requires all refueling crews to use a checklist. If refueling aircraft is one of your duties and you've been tempted to skip that checklist, perhaps you'll shed a tear for the crew chief who finished servicing his F-100 at a refueling hydrant at an overseas airbase. He pulled the right hand chocks before he hooked the bird to a tug. No one was in the cockpit and the hundred started to roll backward. He tried to replace the chocks but it promptly jumped 'em and waddled backward until it hit a stationary object . . . another F-100.

SPARK PLUG CHECKLIST

An experienced mechanic can learn as much about an engine by looking at the spark plugs as a doctor can about a patient by looking in his eyes. For instance, if a spark plug goes dead during the first few hours in service he'll suspect rough handling during installation. This will usually be confirmed by a distorted plug shell, cracked core insulation or other damage.

Carbon fouling indicates improper fuel-air mixture or excess oil consumption. A closer look at the carburetor and cylinders would determine the cause.

Orange-yellow and glazed deposits on the insulator tip and exposed metal parts indicate higher than normal temperatures due, possibly, to detonation.

An ash-grey or chalk white deposit indicates very high combustion chamber temperature thru severe detonation or pre-ignition. In this case, the free end of the side electrodes on fine wire plugs will be bluish-grey and free of any deposits. Massive electrode plugs will show some evidence of copper run-out.

The mechanic running into this should be alerted serious trouble... at the very least he should inspect the affected cylinders with a boroscope or even replace them, particularly if the pilot reported backfiring.

Severe detonation or pre-ignition can fail piston rings and, eventually the piston. Once the result is cured, the mechanic still must find out what induced the detonation or pre-ignition.

OOPS

An incident from another command indicates how important it is for pilots and armament men to know and use proper hand signals during armament checks.

An F-105 pilot had taxied into the arming area prior to a conventional gunnery mission. The armament men signaled for a stray voltage check of the 2.75 rocket circuit and the pilot misinterpreted his signal as a jettison circuit check of the outboard pylons... He pushed the outboard pylon jettison buttons instead of the left and right outboard station selector buttons. The short, swift trip to the ramp damaged the pylons, rocket tubes and adapters beyond repair.

Leaving pylon arming caps off until after the stray voltage check would help keep this goof from resulting in an incident... also, better coordination could be had using the ground crew-to-pilot intercom. 'Course

no number of safeguards will be 100% effective if people don't use their heads before they use their hands.

BLIND SPOT

The alert crewman parked his truck about 30 feet in front of the aircraft and moved to one side to take signals. After the engines were started, he pulled chocks, put them in his truck and prepared to drive away. He glanced back and saw the aircraft bearing down on him, bailed out and scrambled clear just before the left prop struck the truck.

Investigators found that the alert crewman had parked his truck in a cockpit blind-spot... yet, the aircrew were held responsible because they had not maintained proper vigilance. On the surface, this seems contradictory, until you consider the fact that they should have seen this man drive up, and later, go forward with the chocks.



MAINTAIN STANDS

After a jet engine was damaged by FOD, maintenance specialists of a TAC unit looked for the source of the foreign objects. The photo shows what they found. The debris on the card was wedged behind the side cushioning and hand rail sockets of the maintenance stand. A minute or two spent cleaning and inspecting your maintenance stands can save an engine and a time-consuming engine change.

QUESTION OF THE MONTH

Fifty pounds applied at the end of a 10-inch wrench gives a torque of:

- | | |
|---------------------|---------------------|
| (a) 5 foot pounds | (c) 100 inch pounds |
| (b) 500 inch pounds | (d) 50 foot pounds |
-



Essential equipment must go, too.



Getting the what, when, and where at the general briefing.



Supervisor checks on 20MM loading

*Photos By A/2c John A. Rosenow,
31st TFW Homestead AFB, Fla.*

WE WERE DISCUSSING our time in grade when the boss walked in. The slight bitterness in our voices must have been contagious. He rasped, "Captain, get out of here and get a story on

an ORI. Play it from the safety angle. Make it good or you'll soon be the oldest new lieutenant in the Air Force."

In my eagerness to please I forgot about chain of command, staff coordination and other incidents. Bounding into the inspection team chief's office I shouted, "Sir, I've got to go on an ORI. When is the next one and

where?" The room filled with silent, sarcastic smiles and I realized I'd asked a stupid question. Those people don't talk. Not even the wives' clubs know where they're going to inspect next. I tried to ease the situation and said, "Sir, I'm not really a contortionist . . . I was born with my foot in my mouth."

At 1200 hours the next day

CLOCK WORK CAPABILITY

OH RATS! INSPECTION

was with the TAC ORI team in the passenger lounge of a Douglas Racer heading for an unknown destination.

The boss' last order was: "Think safety." That's exactly what I was doing as the old gooney pickle started rumbling down runway 25. At the intersection, the plane swerved left; then right. The engine reduced power then reappeared and we finally lifted off. We fighter pilots held a quick eyeball conference, shook our heads and decided the C types move in mysterious ways, their mission to perform. Later, the pilot told us that the tail wheel didn't lock and a crosswind brought on the gyrations.

We RON'd at Buck Rogers AFB and planned on a pre-dawn leap the next day, but moisture in the ignition caused us to delay our takeoff. During the confusion I sneaked a peek at the DD 175 and saw that our destination was MacDill AFB. Aha, the boys in the 12th and 15th Wings would get the working over. But, shortly after takeoff the team chief took me into his confidence . . . we were going to make a no-notice arrival at Homestead to watch the 9AF IG inspect the troops of the 31st TFW a little workout. Ain't that sneaky?



Support for the support troops.



. . . Being loaded for bear.



P. E. Check

We knew we'd miss the initial surprise 'cause our delay had let 9AF get there about thirty minutes ahead of us. Anyway, you can't do much to surprise the 31st troops . . . they've been around a bit.

On downwind the team started getting out copies of their orders. It was then I realized my predicament—a no-flight-plan arrival, without orders, and me with a camera! Couldn't be in worse shape wearing a fatigue cap, field jacket, a shaggy black beard and smoking a cigar. As it turned out I didn't get thrown in jail but, ooh, so close. Maximum security was the watchword.

Probably the most surprised troops were those of Alpha Squadron. They had just returned from a no-notice deployment called by STRICOM. Like one of them said—"Gen Sherman's comment on war no doubt was true, but I wonder what he would have said if he had gone through two ORIs in succession?"

The general briefing went like clockwork, and then the director of safety escorted me to the flight line. That's where the most activity seemed to be. Teams were busy

placing predetermined supplies and equipment at specific locations and loading the Reserve C-119s that had airlift responsibility. Talk about supervision—every activity had an overseer. There was an air of urgency yet it was obvious that no one was taking any chances as the big jigsaw puzzle began to take shape.

Further out on the line I saw the faithful old F-100s being loaded for bear. Each crew had a supervisor who checked off the steps on a checklist. I turned to my escort and asked, "Did someone tip the troops that we're watching?"

"Could be," he said, "but that's not the main consideration." He continued, "You see, it takes all of the wing's resources to pass an ORI. We figure every sortie must count. Hard experience has convinced us that one misstep or even a bashed finger can mean the difference between

we plan to give you more on that in a later issue of the ATTA."

The inspection covered phases of operations . . . night air-to-air refueling, low level navigation, conventional and nuclear weapons deliveries . . . all were conducted methodically and professionally. Although there were a few discrepancies, they scored a satisfactory. It was a tough test. The IG troops set their sights pretty high and a 100% score would mean super perfect in my book. It was indeed a vast improvement over those past years when TAC was first trying on its mobility boots.

Although the commander and personnel of the 31 TFW were very hospitable and helpful and my visit was most enjoyable, it was time to go. The boss had told me when I left to turn my hat around so it would look like I was returning instead of leaving . . . the pressure of press time you know.



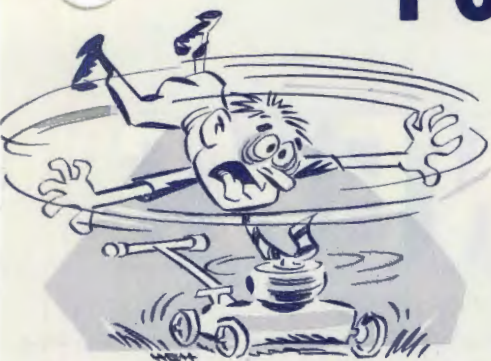
Delivering the goodies.

an S or U."

"Spoken like a true combat capability officer," I chided. "You've been reading the book." The next day, his score on the tough proficiency exam verified the fact.

We visited several of the wing support activities. One of the most impressive was their consolidated personal equipment section—

One thing I learned while on the trip—if you're a single engine fighter type, don't try hitch-hiking in this man's Air Force; there's just no room for you. Besides, after a few years in your own cozy cockpit you'll find you make a miserable passenger . . . the last leg on a bus, yet. The shame of it all.



POWER TO KILL

With the grass growing season well under way, Pop, Mom and Junior push (or follow) more than 12 million power mowers in this country . . . and the number of mower accidents is becoming a problem. Almost everyone who has used one of these machines has had at least one minor accident, and some that weren't so minor. For instance, one season this writer mowed over a small stone which was promptly hurled about 100 feet into a neighbor's window. We replaced the window, the screen and the mulching attachment (which covered the open throat of this 'icular mower). Three weeks later another neighbor came running up the drive carrying our four-year-old, blood pouring from a nasty gash under her knee. He'd mowed over a small juice can lid which sailed about 70 feet before it hit. It took 17 stitches to patch the damage. After that one, I made it a practice to very carefully police the yard before starting to mow . . . I also instructed my children to stay well away from an operating mower, to play on the opposite side of the house if at all possible.

At my present duty station, I don't have such a formidable yard, so I've replaced the whirling dervish with a hand mower. The exercise is good for the kids. My brood is still under orders to stay well clear of the neighbors' power mowers . . . if you don't share my respect for these machines read thru this list of recent accidents:

- * A little girl's jugular vein was severed by a piece of metal hurled by a mower.

- * Another child was struck in the heart by a shingle nail thrown by a rotary mower.

- * Another victim was seated on her doorstep when struck by a 3-inch piece from the blade of a rotary lawn mower being operated across the street.

- * A young child wandered into the path of a mower. The child's mother became frightened and unable to halt the machine. The child was pinned

underneath and lost an arm and a foot.

- * A woman was killed by a blade that sailed 50 feet and through a window pane before striking her.

- * A man was killed while sitting in his living room watching TV. His neighbor was mowing with a rotary mower when the blades struck a rock and both blades broke off.

- * The caretaker in a Wherry Housing Area was operating a rotary mower when part of the blade came off and sailed 200 feet across the yard, struck a two-year-old girl in the neck. It killed her instantly.

When about to purchase a new power mower, make sure the blade is properly guarded. Ask yourself these questions—Should a blade break or tear loose can it escape? Is there an opening that is unguarded? Don't sacrifice safety for a bargain!

Here are some safety measures:

- * Regard your mower as a piece of power equipment and teach others to respect it.

- * Before starting your mower, be sure the clutch is disengaged.

- * Disconnect the sparkplug wire whenever you want to work on the underside of a mower.

- * Do not overspeed the engine by tampering with the governor.

- * Don't leave your mower unattended while its motor is running.

- * Keep fuel stored in an approved area.

- * Remove stones, sticks, wire and debris from the area before you start to mow.

- * Keep children and pets well away from operating mowers.

- * Mow only during daylight or by good artificial light.

- * Do not use an electric power mower when the grass is wet, or when it is raining.

- * Do not operate gasoline-driven power mowers in wet grass that clogs the mower and increases the danger of your slipping and falling.

- * Avoid pulling the mower backwards toward you, particularly on a slope.

- * When mowing on rough ground or in high grass or weeds, set the blade at the highest cutting point to reduce the chance of cutting hidden debris.

- * Protect your legs. Wear heavy shoes. Do not mow barefoot or in open sandals.

- * Keep pace with the mower. Adjust the throttle to a speed set for your normal walking pace.

- * Riding-type mowers are like small tractors and it is possible for them to topple over.



SEG NEWS

4450th Standardization Evaluation Gp.

Know your Stdn Evaluators



Lt Colonels C. C. "Buck" Pattillo and C. A. "Bill" Pattillo are natives of Atlanta, Georgia. They entered the service together in 1942 and graduated from flying school in March 1944. After RTU training in the P-40 they served a combat tour in WWII with the 352nd Fighter Group flying F-51's on escort and ground support missions. Buck ended the war with 3 destroyed on the ground; Bill had one destroyed in the air and 5 on the ground. They left the service in 1946 and attended Georgia Tech for 2½ years, studying Mechanical Engineering; at the same time both were active in the Georgia Air National Guard, flying F-47 aircraft. Both were recalled to active duty in 1948 and served with the 31st Fighter Group at Turner AFB, Georgia, where they flew the F-51 and F-84B. In 1949 they joined the 36th Group in Germany flying the F-80. They helped originate, and were the original wingmen on the "Skyblazer" aerobatic team in Europe until 1952. After a short tour as F-80 gunnery instructors at Pinecastle AFB, Florida, they went to Luke AFB where they helped form the original "Thunderbirds" team. They flew left and right wing positions on this team until 1954. After another two years at Luke as squadron commanders, they were transferred to England AFB, Louisiana, where Buck was a squadron commander in the 366th Wing while Bill had a squadron in the 401st Wing, flying the F-100. After three years at England AFB, both attended the University of Colorado under the AFIT program where they obtained their degrees in mathematics. They came to the 4450th Stdn/Eval Group in 1962. Buck is Chief of the Jet Evaluation Division and Flight Examiner in the F-100; Bill is Chief of the Operations Plans and Policies Division and is a Flight Examiner in the F-84F.

BIG THREE TO THE 314TH

Just recently, some of our evaluators had the great pleasure to award the 314th Troop Carrier Wing from Sewart AFB, Tennessee, a big three points, or maximum magnificent, for obviously outstanding professionalism during the assault landing phase of COULEE CREST. To quote from the TAC stdn/eval orientation film, "To improve on magnificence is difficult, but that is the ultimate goal of our stdn/eval program."

A case in point. How do we know this—or why were the orange suits observing this exercise? In answer, let me take a second to review the bidding... in effect the SEG Charter states that stdn/eval is in business to increase the command's overall effectiveness by establishing standard operating procedures, techniques and tactics for all assigned aircraft weapon systems. Stdn/eval will also evaluate these procedures and techniques to determine their effectiveness, the degree of professional competence possessed by assigned and attached aircrew members, and the capability of the command to execute its EWO and corollary mission.

Especially in the many motors field, we can best observe overall operating procedures and techniques during an actual operational mission—a maneuver—exercise. Then, too, it is more realistic to go into the field when you want to assess a unit's stdn/eval program, check how professional and competent its aircrew members are, or determine whether a unit can professionally execute its mission. So this is why a mud-splattered orange suiter may be looking over your shoulder when you plop that many-motored beast down on a rutted strip in the wilds of Washington State or the jungles of Panama. In addition to looking at your unit, we're seeing how well you are supported—the facilities and obstacles you're forced to contend with.

But let's get back to COULEE CREST. The 314th spectacular (Cecil B. couldn't have done better) was the C-130 assault landings on a little dirt strip cut from the sagebrush out there in the wilderness. Twelve aircraft landed sixty loads of Army equipment on the strip in one day. This may not sound like too much of a record in itself but when you consider that the average on-load time was twenty minutes and the average off-load time was only four minutes, then this becomes a very impressive maneuver. I hope there were no WACs assigned to the BLUE forces because they (BLUE forces) sure got assaulted.

To get this show rolling, it was necessary to air up a combat control team. Who do you think was a

member of this jump team? None other than the wing commander of these C-130's. In fact, we saw a great number of paratroop wings on these Herc herders. You might say that this wing really jumps.

From the time of the first assault landing (exactly on time), until the last landing, the entire mission went smooth as clockwork. When necessary changes were made in the schedule, or even when the schedule was thrown away and everything was conducted on an ASAP basis, aircrews, traffic control, CALSU, support personnel, and the Army made a heartening and most professional response. Minor expected discrepancies were noted; as they occurred they were immediately corrected.

CALSU planning, coordination and control at the on-load base, Larson AFB, was also exceptional. Loads were properly rigged, marked and identified as ready at the airfield check point. As each aircraft taxied by this check point on the way to the parking area, the load for that aircraft was convoyed across the ramp and positioned for loading just as the last engine was cut. Average loading and tie-down time was 20 minutes. Off-loading at the landing zone averaged 4 minutes. This was possible through excellent crew coordination and by adding a scanner to each aircrew. The scanners helped the loadmasters untie cargo and position the ramp toes and grasshopper arms. Future SOPs will specify this addition on assault cargo operations.

Standardization of the new assault procedures really got a shot in the arm. Orange suiters were aboard one aircraft during each lift and were able to get firsthand info on the assault work. Using the data obtained from CLOSE LOOK and COULEE CREST, we can publish realistic procedures for assault landings and take-offs.

This was the first actual C-130 assault mission. The crews who made it a success were from the 62nd Troop Carrier Squadron commanded by Lt Col Robert M. Marks. This squadron is a part of the 314th Troop Carrier Wing, commanded by Col William G. Moore, Jr. His Director of Operations, Col Gordon Bradburn, served as mission commander. The Combat Airlift Support Unit (CALSU) was commanded by Maj Thomas (Fig) Newton. Their outstanding leadership and active participation helped insure the overall success of this mission. Yes, they are all jump qualified too!

GOOD SHOW GENTLEMEN! In the oft-quoted words of ol' "Whisperin' Jack," everyone in the 314th should: "LOOK PROUD, YOU'RE IN TROOP CARRIER."

STIMULATORS

Here are a few ideas to help stimulate interest in stdn/eval exam questions. You can use them at daily briefing, coffee call, or any other place where aircrewmen gather. Let the loser buy the coffee, sweep the room, or pay some other pittance.

* "Wheel of Fortune"—Individuals or flights are called on to answer the questions of the day by spinning the selector needle. (Squadron carpenter or wood butcher can build.)

* "Spelling Bee"—Questions get more difficult until only the winner remains. Outstanding for intra-squadron and intra-wing competition. (Squadron AFIT graduate can implement.)

* "Quickie Quiz"—An electrically operated device which flashes RED for the wrong answer, GREEN for the right. May be modified to handle more than one question. (Squadron hi-fi expert would be happy to design and build.)

* "Hoof In Mouth Disease"—Questions are asked by unit commander. This is one of the most effective methods!

If you do not have a system, try these. If you have your own, let us know—we will advertise it in TAC ATTACK.

SOME QUESTIONS ANSWERED

Q: Is an aircrew on supervised status if he cannot get range period for a tactical check and goes overdue?

A: Phase III regression to Phase II: If all items/areas have been accomplished except for weapons employment, the pilot is not on supervised status but does lose his C/R status unless waived by SEG. It is a good policy to complete as many of the required ground/flight check items as possible before submitting the waiver.

Q: Is another written exam required if the man is overdue, as in the previous question?

A: A non-waivered aircrew will regress to Phase II and must meet the requirements for a tactical check outlined in AFM 60-2, paragraph 5-19b in order to upgrade. This includes the written. On the other hand, a waived aircrew does not need to re-take the exam if it was administered during the 120-day period preceding the normal due date.

Q: If a pilot is dual qualified and flunks a check, what happens to the other aircraft; can he fly it?

A: This is up to the SEF, commander and the reviewing officer. They must determine whether the

failure, due to safety reasons, applies to one aircraft or to all.

Q: Paragraph 4-19, AFM 60-1, states that there will be no precision approaches in single place aircraft; how do we accomplish these for a formal check?

A: The conflicts between AFM 60-1, AFM 55-100, AFR 60-16, and TACR 60-4, dated 19 December 1962, are being reviewed by SEG Operations. A TAC Supplement to AFR 60-16 is being printed stating conditions to follow when going below 2,000 feet in a single seat aircraft. They are:

- * Helmet hood or blinder that permits instant transition to VFR conditions.

- * Descent must be VFR.

- * The descent will not be below the published minimums for the facility being used.

This supplement and TACR 60-4 are adequate for hooded approach procedures and may be followed until receipt of the changes to AFM's 60-1 and 55-100.



SEAC Notes

NOTES

The SEG Indoctrination Course curriculum is being reworked. New courses will be the Flight Examiners Course at Langley, a four-day course for evaluators only, and the Commanders' Orientation Course of about six hours presenting the big picture. Finite details reserved for the evaluators . . . of 207 flight checks and 356 written exams administered by SEG in April, thirty-eight flight checks and 93 written exams were graded unqualified . . . SEG processed one hundred fifty-seven AF Forms 847 in April . . . Help! We're getting too much information. Simply stated, the problem is this: some of you are sending in more than a single copy of the 8b or 8c for each check. Sometimes these copies of the same check aren't even in the same envelope! The things this does to our data analysis can only be described as chaotic.

Solution: Send only one copy of each check to SEG. Don't make extras; they're not needed. Save all that needless wear and tear on your typewriter . . . a ditto for our computer.

Hypo-, WHO?



THE FLIGHT SURGEON looked at the well-nourished male perched on the cot and shook his head. "I'm afraid you're suffering from hypoglycemia, or."

"No! No!" the chubby one replied, "Anything but that! How long have I got Doc?" The voice had a definite quaver.

Doc pried the pudgy one's hands off his stethoscope, rubbed first one ear then the other and looked puzzled. "What do you mean, 'how long have I got?'" he even imitated the quaver. "And please don't ever again yell in this thing when I have it plugged in my ears!" he waved the stethoscope under the major's nose.

"This hypoglycemia, Doc. What kind of insidious disease is it? Can you cure it?"

Doc sighed. "In the first place hypoglycemia isn't a disease. It's a condition . . . it means low blood sugar, and you get it when your body uses sugar from the blood faster than you replace it with food."

"You've just described the classic symptoms, sweating, feel

weak, have hunger pains, heart feels all fluttery, face feels flushed. All of this is uncomfortable and alarming. If you don't get around to correcting this with a little food you'll get a headache, start to feel dizzy, have trouble seeing and could even go into convulsions and coma."

"Cure it with a little food?" the chubby one suddenly looked eager, and even licked his ample chops.

Doc nodded. "Yes, diet has a lot to do with it. For instance if you eat a meal that's heavy on carbohydrates, your body will waste no time converting this meal to sugar which will cause a marked increase in your blood sugar level.

"The pancreas will note this and will start putting out insulin to lower the sugar level. The effect of the insulin lasts longer than the carbohydrates will produce sugar . . . so about two or three hours after eating, your blood sugar is low and you have hypoglycemia.

"The low blood sugar, incidentally, causes the body to produce adrenalin. This will raise the

blood sugar, but at the same time it gives you the early symptoms of hypoglycemia . . . the butterflies and stuff."

"Then about all I need to do is eat a candy bar about three hours after each meal . . ." a crafty smile creased the major's face.

Doc shook his head. "That's only a temporary fix . . . and I'm afraid you've used it, ahem, a little too often in the past." He glanced significantly at the bulging waistline. "Far better is to eat balanced meals containing proteins, fats and carbohydrates. The carbohydrates are converted to usable energy in about an hour. The proteins in from two to four hours and the fats a bit longer. This way you furnish your body with a continuous supply of energy over a long period of time."

"Gosh Doc, isn't that like those pills on TV that have one half dissolve immediately, with the other a . . ." The pained expression on Doc's face caused the major's voice to trail off.

"Major, it just so happens I have a diet that should be ideally suited to you. A diet that will help you sluff off some of those useless pounds without exposing you to the risk of hypoglycemia. You needn't look so pained. It will require some will power, but should prove far safer than the fad diet you're trying to follow right now. And Major, if you can insist that those young bucks in your squadron follow balanced diets, you'll have a safer, more efficient outfit. I've watched enough of 'em head for the coffee and donut bar each morning to know that they couldn't be eating proper breakfasts. It may sound like the old hi-school football training routine . . . and in a way it is, only the losers sometimes lose for keeps."

Cmdr R. M. Bollenbacher, head of the records and statistics section at the Naval Aviation Center, Norfolk, was kind enough to send this list of problems and tips to ease our transition into this potent weapons system.



Skyraider scan

Skyraider Scan

FROM MY VANTAGE point with the Naval Aviation Safety Center I have these thoughts to offer on the A-1E, F and G . . . or as we used to call it, the AD-5.

* Your pilots will enjoy some anxious moments at first, due to

torque. If they forget to lock the tail wheel on take-off or landing . . . many thrills!

* Warn your people to adhere to the proper engine shut down and starting procedures. The engine will talk back on initial take-off unless spark plugs are kept in good condition, not fouled, etc.

* Make certain the throttle friction is TIGHT during start. The manifold pressure regulator will snap the throttle FULL OPEN unless you happen to catch it first. This can cause a short spectacular trip across the ramp . . . one aircraft even broke loose from tie down ropes, etc, when this happened during a maintenance check.

* Stalls and spins have always been a problem in the AD series. The aircraft now has a large vertical fin area that helps . . . but we still get them. Jamming the throttle rapidly forward when flying close to stalling speed will produce a torque induced stall. This, of course, occurs during wave-offs and can be prevented by leading with right rudder and adding power smoothly.

* Some birds have a stick shaker (stall warning device). No particular problem, except it requires added maintenance. It may help during initial checkout and training.

* Your aircraft may have windshield wipers installed. If they don't, rain . . . even light rain . . . will severely restrict forward visibility. We've had several landing accidents attributed to this.

* Don't believe all the stories about the 3350 being unreliable. It can get awfully sick and still bring you home. Good maintenance and proper operator technique make for an unbeatable combination when it comes to engine performance. A torque meter on the engine is a tremendous help to both pilots and maintenance personnel. Get it incorporated if you can.

* Directional control on landing, particularly during cross-wind operation, can produce a few thrills. Once again, proper indoctrination by experienced tail-wheel types will ease the strain.

* Asymmetrically loaded stores must be kept within design limits. Uneven loading on the port side can combine with torque to produce an uncontrollable roll!

Everything considered, it's a fine bird—most of us who fly it enjoy it.





OL' SARGE

Answer to question of the month: 500 inch pounds.

THE LIEUTENANT was still filling out the forms when Tommy and the Old Sarge drove up in a yellow maintenance truck. "Well, at least he made it,"

Tommy remarked, "I wonder what he'll say when you tell him he's been flying on a red cross."

The Old Sarge studied the 'sh young man climbing out of cockpit, "A coffee he says, 'hunh!'"

"You're on."

After the lieutenant returned their salute, the Old Sarge asked, "Have a good flight from Ronville, sir?"

"Yes, I did, Sarge."

"Bird work all right, sir?"

"Yes, thanks. All I'll need is JP-4 and oxygen."

"And a half dozen new turbine buckets, Lieutenant."

"Hunh?"

"That's right sir, Ronville phoned in shortly after you got airborne and said that somehow you'd gotten off with your bird on a red cross with six damaged blades."

"Hunh, your kidding!"

"No sir."

"But I checked the form!" He climbed back into the cockpit, reviewed the form 781 and thumbed open to the second page. It was

blank. He turned to the first page. The last entry was a firm red cross. He had signed off the preceding square which was a red dash. The square before that was another red cross. "Oh my gosh. I ah, I guess I thought it was this other red cross that was already cleared . . ."

"Yes sir. We, we'll get a crew on it and you should be on your way before the end of the weekend."

Later, Tommy and the Old Sarge were sipping coffee in the BX snack bar. "How'd you know he'd say, 'hunh?'"

"Anyone unconscious enough to fly an airplane without taking time to check the forms is bound to answer that way."

"Yeah, but he is on a cross country, and probably just assumed that the bird was still OK after having flown it the day before."

"That's what I mean," the Old Sarge grinned. "Actually, the system may be partly responsible. I mean over using the red cross. You'll notice his bird was put on a red cross for drag chute repack and pylon arming after each flight."

"Wonder why?"

"Offhand, Tommy, I'd say they wanted a seven level to inspect the drag chute and the pylons, and were using a red cross to insure the inspection. This is understandable, after all a loused up drag chute or unarmed pylons can

effect safety of flight. Only trouble, some pilots are now so accustomed to seeing a red cross on the forms, the symbol no longer means danger."

"Well," Tommy suggested, "I guess we could start filling the whole square red when we have a red cross item that is really important..." The pained look on the Old Sarge's face caused his voice to trail off.

"Sort of a super colossal stupendous discrepancy, eh," the sarcasm was not very well hidden. "Why not use the present system like it was intended and forget about inflating it?"



TAC TIPS

SURVIVAL SUN COMPASS

In case you missed the newspaper story about the 17-year-old who developed a shadow-tip compass, we repeat his system . . . it could come in handy.

Drive a three foot stake in the ground and mark the tip of its shadow. Wait ten minutes or so, and mark the shadow tip again. A line drawn between the two marks will always run east and west with the second mark on the east.

NO OVERTIME PAY

According to a recent study, the average tactical aircrewman averages about 5 hours in the air each week. However, he puts in an average of 86.2 hours on duty each week. This includes time spent standing alert, on exercise, and ground training . . . More proof that TAC personnel are dedicated to their professions.



T-33 CONTROL PROBLEM

After the aileron stiffened, both pilots in a T-33 got on the stick to keep the bird from rolling to the right. After touchdown the ailerons remained frozen until engine shutdown, then they broke loose.

This is not a new problem. It's caused by a malfunction in the aileron spring cartridge. Quickest in-flight cure is to turn off aileron boost . . . AFTER you have made certain that you don't have a split flap condition.

BEE HIVE

While grinding along at flight level 260 a C-130D crew had to depressurize their machine because a door warning light came on. And then the fun began. The crew chief didn't have an oxygen mask.

The scanner and loadmaster both put on their masks while the engineer sucked on the oxygen hose at an aft station. The aircraft commander asked if everyone in the rear was on oxygen and the scanner said they were.

Shortly, the loadmaster noticed that the crew chief appeared hypoxic and let him use his mask while he used the hose. They were approaching 10,000 feet by then, so it may have been hyperventilation. This hardly looks like a professional performance, does it?

Less high flying types can also stand to have their oxygen system handy. A C-123 crew found this out after strong fuel fumes developed after they lowered the gear for landing. They did everything they could to ventilate the machine without effect. With no masks and zero oxygen in the system, the only thing they could do was proceed. Everyone on the flight deck noted some dizziness, respiratory burning and nausea.

FAC VEHICLE

Capt Ray E Bell, with the Army at Fort Knox, sent us a well-thought-out plan for converting an ambulance into a vehicle for the tactical air control party.

As visualized by Capt Bell, this rig would contain everything a well equipped forward air controller needs. Advantages are many . . . one is that there is easy access to the rear from the front seat—making it easy to get into operation—another is that ambulances are readily available, are equipped with a winch and other goodies that make them useable in undeveloped terrain.

At present, this proposal is being studied and is eventually become reality.

ROUTE POOP

anning a low level? Are you certain that all of maps and charts are up-to-date . . . thoroughly up-to-date? Be super safe and check CHUM. No, we aren't getting overly friendly. CHUM is for Chart Updating Manual, a monthly bulletin published by ACIC. CHUM contains a cumulative listing of all uncharted obstructions that are over 200 feet high. It also tells which charts need to be revised.

So get with CHUM, chum, and you won't get the surprise of your young life if someone suddenly erects a new TV antenna on the centerline of your low-level route.

DIP STICK CHECK

A loose oil dip stick can take much of the fun out of flying the T-33. Believe it or not, there are quite a few T-birdmen who have been making this check for years, but making it incorrectly. The correct way to make the check is to look at the cap to see that the alignment marks are together, then grasp it and attempt to pull it straight off without twisting. More than one pilot has unlocked a correctly installed cap by twisting.

TOO QUICK TO PLEASE

A conventional crew found themselves in a ditch the end of a muddy overrun after they expedited their landing roll at an overseas airbase. Winds were almost calm, a light rain was falling, and the runway was wet.

The tower asked them to expedite their landing roll because they had another aircraft ready for take-off. The pilot added power to comply, before he checked braking action. He found it much worse than anticipated when he started braking some 2500 feet from the end. By then, it was too late.



THE HARD WAY

Two experienced pilots had to get out of a T-33 in a hurry after it caught fire on the ground. The battery went dead after they got the canopy a few

TAC ATTACK

inches open. Trapped by the canopy, the pilot in the rear seat attacked it with a canopy breaking tool and hacked himself an exit. The front seat pilot didn't use a canopy knife, but enlarged the hole his companion had made and followed him out. Both pilots were under the impression that the T-bird canopy couldn't be jettisoned unless it was down and locked, and did not even try to use the T-handle.

THUNDERSTORMS

Here's the best advice we've seen on thunderstorm flying. If you can't

go over . . .

go around . . .

go under . . .

go home!



SMOKE, SMOKE, SMOKE

Evidence shows that a number of crippling and fatal diseases are associated with tobacco smoking. In light of this, it is best that we never start to smoke. If we already have the habit, we should quit. A poor alternative is to switch to the less toxic pipe or cigar and not inhale.

For those who can't forsake their beloved coffin nails, there are several things they can do to decrease the risk. Namely:

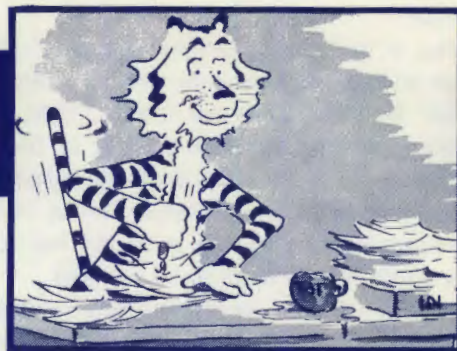
- * Never smoke more than the first half of the cigarette. The last half contains much more tar and nicotine than the first.

- * Smoke filter tips. The ads that say, "better when filtered thru natural tobacco" just ain't telling the truth.

- * Decrease the number and depth of inhalations. This will obviously help since most of the danger is from inhaled smoke.

- * Cut down on the number of times you light up each day.

Letters to the Editor



Letters to the Editor

Dear TAT:

I thoroughly enjoyed reading Capt Krone's "Drop for 22 (Sir)" in the April TAC ATTACK.

Having been in the Airborne during 1942 - 1951 and a pilot, I agree with you. But more of our officers and enlisted personnel need to be enlightened on this subject. I find many feel that the Paratroopers are just muscle men and not thinkers. Your statement "you will leave Benning with more respect for the crunchies, although there will be little desire to trade jobs with them," proves that you and I realize in order to KEEP THE PEACE, this job must be done. It's too bad Air Force or service personnel feel that we'll leave the job for 'George to do.' This is mostly what's wrong with the service today.

LYLE G. HENDRICK
Presently a Sky Diver
Colombia, South Carolina

Dear Lyle

We agree with you all the way, and would add that leaving unpleasant tasks to George isn't exactly unique to the military or to our time. Fortunately what's unpleasant to some is a challenge to others. Also, as history shows, there have always been those with the courage and conscience to get necessary jobs done. The question is, are there still enough?

TAT

Dear TAT:

The article "Fascination" in the April 1963 issue of TAC ATTACK was especially interesting to me in that the description of the young second lieutenant's incident in the F-84F of scoring a "skip and over," literally, on his first skip bomb mission is almost identical to an experience I had while attending Fighter Gunnery School at Luke AFB, Arizona in the Fall of 1956.

Could this be me, or is there another pilot with the title "luckiest man alive."

CAPT WILLIAM S. HUGHES
401TFW, England AFB, La.

Dear Lucky:

The lieutenant we quoted in "Fascination" is indeed another member of the club. He was one of a select group being given gunnery training last Fall on an accelerated basis. Offhand we'd say he proved two things. First, that it pays to learn to crawl before you learn to walk . . . to walk before you run. And, second, that accident sequences do repeat themselves.

Thanx for letting us hear from you.

1

Dear TAT

Just finished reading Ol' Sarge in the May ATTACK, and the statement about opening a can with not-so-clean screwdriver brought back many memories of just such techniques during my short flying career. In the first place, I don't believe a screwdriver was made to open cans. I've seen more spilled fluid, etc., plus a number of skinned knuckles from using this procedure. I realize proper opening devices are hard to hold on to. Maybe the beer companies have come up with an idea that could be used to stop opening cans with unclean tools. Namely, the pull open type can. Just a thought; however, let us not have the pull-open tab become separated from the can or we will probably have more of problem than we started with.

Capt JAMES E. SMITH JR.
31st TFW. Homestead AFB, Fla.

Dear Jim,

Sounds like a number one idea for both oil and hydraulic fluid . . . unless that gal from the TV commercial was to get loose on the flight line. Hoo boy! By the way, we've started the wheels rolling to see if someone will adopt it . . . your idea, not the gal

-T.



CREW CHIEF OF THE MONTH



Staff Sergeant Clarence O. Crews of the 4500th Operations Squadron, Langley Air Force Base, Virginia, has been selected as the Tactical Air Command Crew Chief of the Month for his exceptional performance as a VC-47D crew chief. From 13 March to 12 April 1963, Sergeant Crews' aircraft flew 142 hours. During this period it was out of commission only one day and that was for a 75-hour postflight inspection. He willingly worked many overtime hours to maintain his aircraft in such excellent condition that only very minor discrepancies were noted.

MAINTENANCE MAN OF THE MONTH



For outstanding maintenance accomplishments while maintaining the APN-131 Doppler System, Technical Sergeant James K. Colbert of the 4520th Combat Crew Training Wing, Nellis Air Force Base, Nevada, is selected as the Tactical Air Command Maintenance Man of the Month. During September 1962 Sergeant Colbert supervised six work centers on a 24-hour, seven-day work week to meet the requirements of projects Look Alike and William Tell. These centers were commended for outstanding maintenance data reporting during the period. In addition to establishing charts to identify problem areas and supervising a rigid quality control system, he has also conducted an outstanding OJT program.

The unselfish way Sergeant Colbert devoted time and effort to accomplish mission requirements reflects the best qualities of a professional airman.

RECOGNITION

Pilot of Distinction



Captain Richard W. Sanborn of the 1st Air Commando Group, Eglin AFB Auxiliary #9, Florida, has been selected as the Tactical Air Command Pilot of Distinction.

Captain Sanborn was flying a mission in a C-46 to test a new fuel dump system. A T-34 chase aircraft was being used to take pictures of the dumping operation. In an attempt to cross under, the T-34 struck the right wing of Captain Sanborn's aircraft, flipped upside down on top of

it, and then slid off.

The C-46 went into a diving right turn but, by using full left aileron, trim, and maximum power on the right engine, Captain Sanborn was able to bring the aircraft under control. By cautiously experimenting, he found that he had fair control at 115 miles per hour but would lose control as he changed airspeed.

A survey of the damage revealed four feet of the right wing tip bent upward perpendicular to the wing and two large tears in the wing skin. The right wing flaps and aileron were damaged extensively.

After declaring an emergency, Captain Sanborn had the crew chief and two technicians bail out. He then established a straight-in approach and made a no-flap landing, using throttle for directional control.

Captain Sanborn's superior airmanship, coupled with his excellent evaluation of the emergency, permitted him to save a valuable aircraft.

WELL DONE

well done Aircrew Achievement Award

AIRCREW ACHIEVEMENT AWARD

A C-119 crew from the 64th Troop Carrier Squadron, O'Hare International Airport, Illinois, has been selected for the Tactical Air Command Aircrew Achievement Award for the period ending 30 April 1963.

Over solid clouds, approximately four and one-half hours after take-off, the right engine backfired, belched flame and lost torque. Rich

mixture and boost pump failed to solve the problem.

After shutting down the number two engine, the crew found it impossible to maintain their assigned 7000-foot level. What would have been a simple single engine operation was complicated by weather, mountainous terrain and turbulence. They immediately declared an emergency, advised ATC and requested local airfield weather conditions. The center cleared them at 6000, which they could barely maintain because of heavy weight, and advised that a civilian field about seventy miles ahead was reporting scattered clouds.

Moderate to severe turbulence caused persistent trim problems and at times caused them to lose as much as 500 feet. Surface winds in the area were gusting to twenty-five knots. The civilian tower gave them a choice of a short runway aligned with the wind or a 5,400-foot strip with 90 degrees crosswind. The crew chose the longer runway and used single reverse thrust immediately after touchdown.

Thru excellent use of trim, power, FAA facilities, good judgment and crew coordination, this crew terminated an emergency with a safe landing. Captain A. Hirsch, Captain R. Wojick, Lieutenant D. Lucas and SSgt E. Ostrowski are to be congratulated for this professional performance.

BEST MAINTENANCE RECORDS

The Commander, Tactical Air Command, is awarding monthly certificates of achievement to airmen who maintain outstanding aerospace vehicle records.



GOOD SHOW

Last May, a minor accident halted the best safety record ever set by an Air Guard Organization, and perhaps one of the best records ever set by any fighter organization.

The 184th Tactical Fighter Group at McConnell AFB, Wichita, Kansas flew from 21 Feb, 1958 to 14 May 1963 without an accident. During this period they flew F-80s, F-86Ls, F-100Cs and Fs, with T-33s, C-45s and C-47s as support aircraft. Total time was over 25,000 hours!

Hard work, attention to detail, and superb maintenance all played a part in establishing this record.



MARCH SELECTEES

TSGT ROBERT E. HALL
474 TFW, Cannon AFB, New Mexico

TSGT BOBBY R. STAMPER
516 TCW, Dyess AFB, Texas

SSGT LARRY T. WILSON
4504 MTW, Orlando AFB, Florida

APRIL SELECTEES

TSGT GEORGE B. ALLEN, JR.
15 TFW, MacDill AFB, Florida

TSGT JACK ERTEL
12 TFW, MacDill AFB, Florida

A1C C. B. ASHCRAFT
4442 School Squadron, Sewart AFB, Tenn.

TAC TALLY

A COMPARISON OF TACTICAL AIR COMMAND ORGANIZATIONS

MAJOR ACCIDENT RATE 1 JAN - 31 MAY

TYPE	1963	1962
ALL	14.8	12.3
F-105	54.7	29.1
F-104	54.9	14.5
F-101	34.1	32.5
F-100	15.4	13.0
F-86	0	102.9
F-84	42.2	17.8
B-66	0	0
B-26	0	0
J-79	0	0
J-33	0	3.5
T-29	0	35.8
KB-50	0	22.1
C-130	0	0
C-123	4.3	13.2
C-47	0	10.1
U-10	0	
T-28	35.0	

MAY TALLY GUARD AND RESERVE

UNIT	MAJOR	MINOR
107 TFW	1	
140 TFW	1	

ACCIDENT FREE (MAJOR & MINOR)

JET			
ACTIVE	MONTHS		ANG
27 TFW	8	23	113 TFW
388 TFW	7	21	102 TFW
CONVENTIONAL			
ACTIVE			RESERVE
314 TCW	46	78	434 TCW
463 TCW	24	41	442 TCW

MAY TALLY ACTIVE UNITS

UNIT	ACDNTS*	INCDTS
4 TFW	1	8
12 TFW	1	1
15 TFW		2
27 TFW		10
31 TFW		10
354 TFW		7
355 TFW		5
388 TFW		2
401 TFW		11
474 TFW		13
479 TFW	1	16
TARC		13
4510 CCTW	5	32
4520 CCTW	2	14
516 TCW		
314 TCW		
463 TCW		1
464 TCW		1
4505 ARW		2
4442 CCTS		1
1 ACG		1
4500 ABW		2
4453 CCTS		3
831 CSG		
SAWC	6	2
4435 ATS		1

*MAJOR AND MINOR

May was another tough month. The regulars had twelve major accidents, four minors and suffered seven fatalities.

An air refueling hose separated from a KC-135 boom, stayed on an F-105 probe and lashed around violently. Final result was a flameout. Ejection was successful. On the go from an SFO, an F-105 pilot established a very nose high attitude. He selected AB but apparently . . . too little, too late, too low. An M-61 cannon fed double on a strafing pass. The twin explosion tore the armament door from the F-104 and fed tossed metal to the J-79. The pilot ejected OK. Two F-100s ran together on join-up. Both landed safely; one with major damage. Approaching initial for normal landing, an F-100F crashed—no known reason. Both crew members were killed. Another F-100 crashed on landing. This was poor pilot technique. An IP and student in an F-100F crashed short of the runway during SFO practice. Both were fatally injured. The accident cause was undetermined. Only one main gear on an F-84 would extend so the pilot had to eject. During a tactical formation turn, a drop tank fell from the leader's F-84 and struck number two. The pilot ejected without success. An O-1E tallied when the engine lost power in a practice forced landing. One T-28 crash-landed after fuel starvation . . . maintenance error. Another ran off the end of the runway and hit an abutment.

The props took top honors in the minors with three of four: the left gear on a U-10B collapsed during landing; enroute to the runway, a B-26 nose gear defaulted; a T-28 lost an engine cowl on letdown; an F-100F porpoised on landing, lost one nose gear, veered off the runway and sheared the nose gear. The trend was UP with a definite rise in fatalities.



PRINCESS ANN

Hinah

THE SKY IS BUSY,
KEEP LOOKING!

THE MAJORITY OF MID-AIR COLLISIONS
OCCUR DURING DAYLIGHT HOURS
WHEN VISIBILITY IS GOOD!



4!!!
UNDER PERFECT CONDITIONS YOU CAN SEE A
JET FIGHTER APPROXIMATELY 7 MILES AWAY
AND A LARGE BOMBER OR TRANSPORT ABOUT
16 MILES, BUT FACTORS SUCH AS SMOKE AND
HAZE GREATLY REDUCE THIS DISTANCE

OTHER THAN MANEUVERING IN FORMATION,
THE DANGER OF A COLLISION IS GREATEST
AROUND CONGESTED AIRFIELDS.



ONE PREDOMINANT CAUSE OF MID-AIR COL-
LISION BETWEEN JETS IS THAT PILOTS CANNOT
JUDGE DISTANCE AND RATE-OF-CLOSURE QUICK-
LY AND ACCURATELY.



THAT SPOT ON YOUR
WINDSHIELD COULD BE AN
APPROACHING AIRCRAFT!

WHEN YOU ARE ON A COLLISION COURSE WITH
ANOTHER AIRCRAFT, ITS IMAGE WILL HAVE NO
RELATIVE MOVEMENT AND WILL STAY FIXED
ON YOUR CANOPY OR WINDSCREEN.



IN ADDITION TO LOOKING AROUND YOU MUST
ALSO MOVE YOUR HEAD IN THE COCKPIT TO SEE
BEHIND AREAS BLOCKED BY THE CANOPY BOW
OR OTHER STRUCTURE.

AIR TRAFFIC CONTROL AND ANTI-COLLISION DEVICES
HELP-- BUT IT IS STILL UP TO THE PILOT TO LOOK FOR
AND AVOID OTHER AIRCRAFT. **KEEP LOOKING!**

