

# TAC ATTACK

TAC Attack December 1964



DECEMBER 1964



# TAC ATTACK

GENERAL WALTER C. SWEENEY, JR., COMMANDER  
LT GEN CHARLES B. WESTOVER, VICE COMMANDER  
COLONEL EUGENE S. WILLIAMS, CHIEF OF SAFETY

## EDITOR

Maj Karl K. Dittmar

## ASSISTANT EDITOR

Capt Walter I. Bostwick

## ART DIRECTOR

MSGT Heinz E. Hirsch

## ART AND PRODUCTION

SSGT Richard C. Roder

## ADMINISTRATION & DISTRIBUTION

SSGT Richard D. Reid

## PRINTING

Hq TAC Langley AFB Field Printing Plant

VOL. 4 NR. 12

DECEMBER 1964

## Contents

|                               |    |
|-------------------------------|----|
| OIL CAPER .....               | 2  |
| OLD TAT .....                 | 4  |
| JUST ABOUT DUE .....          | 8  |
| SEG NEWS .....                | 10 |
| CHOCK TALK .....              | 12 |
| MAPPING THE WAY .....         | 14 |
| TAC TIPS .....                | 16 |
| LETTERS .....                 | 19 |
| SEASON TO BE JOLLY .....      | 20 |
| MAKE YOUR DECISION .....      | 22 |
| DOES THIS STILL HAPPEN? ..... | 24 |
| HERITAGE .....                | 26 |
| WELL DONE .....               | 27 |
| RECOGNITION .....             | 28 |



COVER PHOTO:

F-5As for the Military Assistance Program  
at Williams AFB, Arizona

Articles, accident briefs and associated material published in this magazine are non-directive in nature. All suggestions and recommendations are intended as helpful and remain within the scope of existing directives. Information used to brief accidents is extracted from USAF Form 711 and may not be construed as incriminating under article 31 of the Uniform Code of Military Justice. All names, dates and places used in accident stories are fictitious. Air Force units are encouraged to republish the material contained herein, however, contents are not for public release. Written permission must be obtained from Hq TAC before material can be republished other than Department of Defense organizations. Contributions are most welcome as are comments and criticism. We reserve the right to make any editorial changes in manuscripts which we believe will improve the material without altering the intended meaning. Direct correspondence with the Editor is authorized.

# Angle of Attack

As the end of the year approaches, I would like for you to look back with me and reflect upon our performance during 1964. On the debit side, we must face the fact that our overall accident rate did not decrease significantly. In fact, pilot error accidents actually increased. This concerns me, because it shows a weakness in an area where we dare not be weak. As with most accidents involving personnel error, each accident itself indicates not only a failure on the part of the individual, but a failure of those who train, monitor and lead him.

I feel certain that we can do much to eliminate this source of our accidents since for the most part, they occurred during routine day-to-day operations.

Just recently, I reviewed the final report on exercise Goldfire I, which, as you know, was one of our major exercises that closely simulated a combat environment. I believe it most significant that we completed this exercise without a single aircraft accident despite the obvious hazards involved. This illustrates the efficiency and safety that is possible when an operation is professionally planned, supported and executed. We must strive to maintain this same degree of professionalism throughout our operation during the coming years.



Colonel Eugene S. Williams  
Chief of Safety

case of the oily clouds  
or . . .

# the OIL CAPER

By 1st Lt David P. Wagtskjold  
Chief of Fabrication Branch  
23d Field Maintenance Squadron  
McConnell Air Force Base, Kansas



Crew chief takes an oil sample during shut down procedure

**A**TOMIC ABSORPTION Spectrophotometry -- that's fancy terminology for a valuable safety and maintenance tool being used by McConnell's 835th Air Division. The atomic absorption principle is utilized at McConnell to analyze J-75 engine oil after every flight of the division's F-105s.

The spectrometric method of analyzing engine oil for its metallic content has proven a reliable aid to effective maintenance. The amount and type of metals present

in the oil indicate the degree that oil-wetted engine parts are wearing even before any external indications of failure become apparent. A definite correlation between the amount of metals in an oil sample and the engine condition has been established.

In the current Air Force oil sampling program, samples are taken after every ten flying hours and are then shipped to laboratories at Pensacola NAS or Mac Dill AFB. Altho this program has been fairly successful, some

notable failures have occurred before an analysis could be processed and the engine grounded. The trial program at McConnell was established in May of 1964 to determine the feasibility of establishing an oil sampling program entirely at base level which would eliminate this dangerous delay.

After five months operation, McConnell's base-level program has proven highly successful. It provides the same high-quality oil sample analyses as the centralized programs, but with the additional advantage that samples are taken from each aircraft after every flight, and with no lost time due to sending samples by mail, the results are obtained before the next flight!

Threshold limits in parts per million have been established by Mac Dill, Pensacola, and McConnell for each of the various metals found in the J-75 oil system. Because of different laboratory equipment and conditions these limits differ at each base but can be converted to approximately the same scale for comparison.

over an extended period of time, a trend analysis has been established for each of the metals in the oil and a departure from the norm can be immediately detected. This is accurate enough that the lab is actually able to direct the engine shop to the specific section of the engine that is in trouble.

At McConnell, each crew chief draws an oil sample during his engine shut down procedure at the end of every mission. With the sample in hand, he and the pilot proceed to a central pick-up point for debriefing. The oil sample is then sent to the lab where it is analyzed and the results checked within four to six hours. On rapid turn-arounds, samples are processed while the aircraft is refueled and preflighted so samples can be analyzed before the bird flies again.

Routine samples are also drawn from all engines going through the test cell prior to the

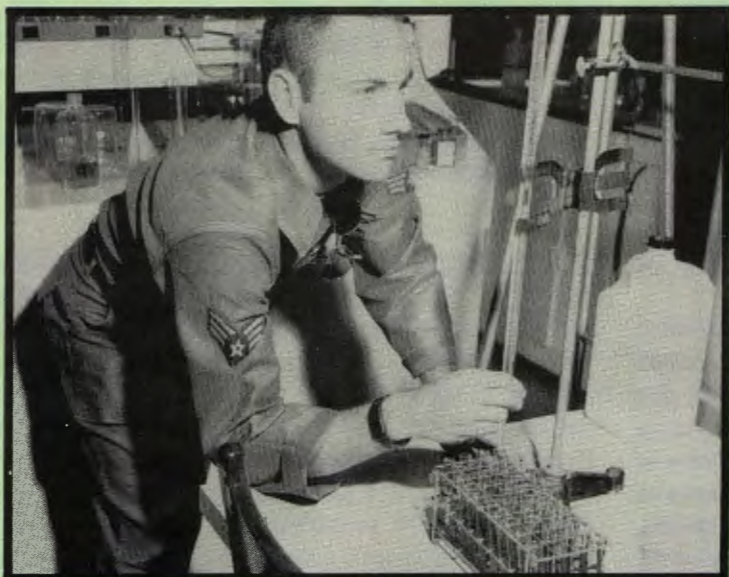
At the start of the program, the analysis was made at a local civilian laboratory. At present, however, specially trained military technicians accomplish the complete laboratory analysis on base using a rented Perkins-

ating jet engine condition prior to deployments. With on-base capability, samples can be drawn and analyzed right up to the last flight prior to launch.

In addition to being a valuable safety and maintenance tool, oil



Technician takes the absorption reading of an oil sample



Sample is accurately diluted in the laboratory

run, during the run and after the run is completed. Lab personnel pick up these samples periodically throughout the day.

Elmer Model 303 Atomic Absorption Spectrophotometer.

The base analysis capability is especially valuable for evalu-

analysis can also be utilized in accident investigations. Samples of oil taken from the main bearing areas, gear, or pump areas will give an indication of the condition of gears and bearings prior to the accident, or crash.

One of the most promising features of the equipment being used at McConnell is its cost. The complete atomic absorption unit and associated laboratory equipment costs less than \$10,000. Comparable facilities using emission spectrometry would cost between \$80,000 to \$100,000 per facility, greatly reducing the number of laboratories that could be established at field level.

Regardless of initial cost, the entire oil sampling program is proving itself a valuable asset, particularly when applied and administered at the base level.

# TAT



JUDGING FROM that nip in the air, and a more pronounced ringing in the old ears, 'tis again time to dash off that annual letter. Must admit, my confidence is somewhat eroded. This year hasn't exactly been vintage. I again missed capturing the ground hog and scared him so bad winter stayed for summer . . . then there was that unfortunate incident last Easter . . . I thought it was just another rabbit. Oh well, perhaps Mr. Hefner can locate a replacement for next year. The entire Officers' Wives' Club is still unhappy about the May Pole, even tho it did work out rather well on my sailboat. The ground safety troops get all stiff necked every time someone is reminded of the fourth . . . it sure was a spectacular blast.

Sigh--I should have expected that farmer to be narrow minded about his pumpkin patch. You'd think he could have waited until after the Great Pumpkin showed. I might add that it was the buckshot that kept me from outrunning the turkey and explains why we had to settle for sauerkraut and wieners.

But I have much company. You hard working troops have had your share of problems . . . a rash of gear-up landings that would have made an Air Corps flying school commander flinch . . . a series of inflight fires and explosions that plagued one of our bigger and better birds and made my fireworks mishap seem rather dud-like . . . mid-air collisions, adverse yaw and misjudged weapons delivery runs all took their toll. TAC lost some good heads and some good airplanes . . . we've done worse, but we can do better.

So if you'll bear with me I'll start my list by asking the jolly old elf to remember all my friends out on the flight line - to the ones with the skinned knuck-

les and greasy hands, I'll ask him to bring a year filled with accurate diagnoses . . . of fittings that always go together smoothly and easily on the first try and TOs that open to the right page . . . a year of pleasant working conditions, correct torque, of fluid systems, proper procedures and high commission rates.

To those who wear the baggy suits with all those zippers, I'm asking for a year filled with perfect flights . . . of flight plans and schedules that never go astray, a CEA that reads like my bank book, a full moon on every night refueling, and drag chutes that never fail.

THANKS TO SEG and BOLD FACE print, most of us have the more important emergency procedures for our birds fairly well in mind . . . at least we get them well in mind twice each year. However, I'm afraid some of us are inclined to put off worrying about the details of lesser emergencies, figuring we can easily hack them if ever faced with 'em. Electrical failure is a good example . . . we realize that fuel may be a problem once the battery goes and boost and transfer pumps quit turning, but we tend to sum up our reaction to the failure by saying we'd turn off all unnecessary electrical equipment. Hoo Boy - it isn't so easy, just ask one of our hundred herders.

The generator failure light came on shortly after lift off. He climbed to 10,000 feet to check over the

craft and went thru the dash one procedures, such as cleaning off the external stores. The generator failure soon degenerated to a completed electrical failure, and altho this troop had a wingman, he could only communicate with hand signals.

On downwind of a large closed pattern, he put the gear handle down and gave his wingman the visual signal for gear down. His wingman agreed that it was time to lower gear and nodded an affirmative...

The gear up landing caused minor damage.

I hardly need to remind you that most of our hardware uses electricity to either control or actuate all lighting gear, flaps and speed brakes and that you should automatically pull the lanyard, or use whatever emergency lowering system is correct for your craft, anytime it presents you with a complete electrical failure.

I say I shouldn't have to remind you, mainly because the gear indicators are electrically powered too, and seeing three dead lights or three barber poles should be sufficient reminder.

The next time you thumb thru your dash one I strongly suggest you read thru the list of items powered by electricity... you'll find that an electrical failure takes away most of your playthings, leaving you more than stick, rudder and throttle.

"TAT, OLD CAT, here's one you'll enjoy reading!" The F-100 safety SPO tossed a yellow bordered paper on top of this tattered one's cluttered desk, where it promptly disappeared.

"By the way, this troop did a real fine job... should be worth some comment."

"What'd he do?"

"He was on a strafing pass just ready to fire when the engine started unwinding and the bird decelerated."

"Sounds terse."

"No, he just flipped her over to the emergency fuel system and abandoned his pass. The engine caught real smooth, so he proceeded straight to the airpatch and landed."

"I see what you mean. This is one of those incidents that never really became an emergency because the pilot was on top of it and refused to let things get out of control. It would have been a lot different if someone was just a little behind or had never really considered what he'd do if an engine unwound at low altitude."

We tip the old hard hat to Lt Col Mohawk of the 4th Tactical Fighter Squadron at Myrtle Beach... it takes a cool head to stay out of hot water.

SHORTLY AFTER an F-101 pilot from another command turned out of traffic, he started having trouble with his heading indicator. While he was trying to correct the malfunction, the master caution light came on to tell him that the right engine oil pressure had dropped to zero. He shut down the engine and made an uneventful landing using flaps and left engine AB on final. As always, it is rather difficult to argue with success. However, this lad was a little hasty with flaps. The good book for the F-101 says to put them down after landing is assured. He would know why it says this if the AB had failed to light when he asked for it.



THE MISSION WAS close support training and the lieutenant took it literally... he got close enough to chop off the tree tops, causing minor damage to wings, drop tanks and stabilator. Yes, he lucked out. The report came from another command and did not give any of the official reasons for this near mess. However, I need no crystal ball to make an accurate guess. As I see it, he either goofed a simulated run or was deliberately low and misjudged his pass.

Most of us have goofed up runs without hitting the trees - the diff between hitting and not hitting is often a matter of pride versus judgment. The ones who let pride win the contest usually lose...

Strangely enough, the average troop on the ground can't tell the difference between an aborted pass and a sensible run, while knowledgeable observers have more respect for the pilot who recognizes a bad pass early and abandons it in ample time, than they do for the tenacious clod who refuses to admit an error until things get scary.

In this vein, absolutely no one respects the rock who deliberately tosses aside good judgment to shine his afterburner on the tree tops... particularly those who might catch some of the debris should he compound his bad judgment by misjudging his height.

AS A TAC F-100 troop pulled up from a dive bomb pass, another pilot told him his bird was streaming fluid. Near as I can tell without having listened to the actual radio transmission, this lad said, "Thank you, kind sir. Gallant leader I would appreciate it if you would very closely scrutinize my ailing flying machine to determine, if possible, the source of this fluid that bleedeth from it. Meanwhile I'm doing like the boll weevil!"

Yes sir, he cranked that bird around and headed for home. The leader closed and reported that fluid of some sort was coming from the belly panel.

For awhile nothing showed amiss on the cockpit clocks . . . then oil pressure dropped to fluctuate between ten and 20 psi, finally stabilizing on ten. The field was ten miles away . . . "Homeplate tower, this is eight nine oh four, clear the field of traffic, I can hardly fly no more. I have no time for patterns, my engine's failing fast. The gage is reading zero, the oil, it did not last."

"This is Homeplate tower to the hundred in distress, our field is clear of traffic, you are welcome to the nest . . . 'tho the wind is from the east you can land it to the west. We have you now on final coming on the fly. In case you have some trouble, the crash crew's standing by."

Tho I took poetic (if you'd call it that) license with the directions, he landed downwind, shut the mill down after touchdown and brought the machine to a safe and sane halt. A darn fine job by all hands, tarnished only by the maintenance goof that caused the oil leak.

The main oil filter seal was damaged during installation and the unit found it necessary to brief all maintenance troops to insure that the pin protrudes thru the baffle before they install the filter.

THE AIRSCOOP printed a pilot's statement which very effectively underlines why the ATTACK staff keeps nudging you to follow thru on low altitude ejections by trying to beat the automatic system. We quote, "I mentally went thru the emergency ejection sequence and looked at my zero lanyard to see if it was attached to the D-ring. It was. I put my head against the headrest, feet in stirrups, and pulled up the right seat grip. Nothing happened, since the canopy was already gone. I squeezed the right seat trigger almost simultaneously with the arm rest reaching full up. I had no difficulty locating the trigger. The rocket seat gave me a nice steady acceleration. I waited for the pilot-seat separator to separate me from the seat. However, once I realized I was waiting for this, I

further realized that it wasn't going to work & would already be free of it. I released my grip on armrests and kicked at the seat. It fell away from me and the tumbling ceased. I was falling head down, feet up in the air. I counted one-thousand one, one-thousand two and started to wonder why the chute



didn't open. I looked over my shoulder and saw the water and the beach. Seeing the beach and how close it was and how fast it came rushing at me, scared me and I grasped the D-ring with both hands, my left steadying the D-ring and my right index finger in the loop of the manual operating lanyard. I noted at this time that the red zero lanyard was still hooked to D-ring. I yanked real hard and remember seeing D-ring, followed by a long cable, fly out into space. The chute opened immediately. Opening shock was mild..."

I have three comments... First, this troop apparently was concerned about his zero lanyard being connected. The zero delay lanyard only saves one second in the ejection sequence... it takes three or four seconds, at best, to connect it. Fooling with it after reaching an ejection decision at low altitude is foolish and dangerous. Two, altho this lad seemed to be doing things in slow motion, being deliberate and looking for the lap belt and D-ring is good practice. It saves fumbling and helps prevent panic. Finally, if the system malfunctions and you do beat the system, you must follow thru and open your chute manually. Don't do as this young man, and wait for the chute to open. It will be a long wait...if you open the belt, the chute won't open until you pull the D-ring. So when you follow-thru, follow-thru all the way.

AFTER FLYING ABOUT an hour, an F-100 pilot noticed engine vibrations between 80 and 85 percent. Altho all instruments indicated normal, he took bird home and recovered using a precautionary

ing pattern. Good head, no sense taking chances. At first it looked like he'd brought back a healthy engine. The oil filters didn't show any contamination and the engine vibration was in limits when they ran it up in the test cell. However, since breather pressure was above limits, maintenance disassembled the hot section and found liner part number 317103 was hand tight instead of torqued to 2000 inch pounds. Loose seals and spacers had deteriorated and worked into the number four-and-half bearing causing it to fail.

TAT was particularly impressed with the maintenance effort that kept this one from being passed to other pilots with less discriminating feel for vibrations, as is often the case. Incidentally, if the unit had access to an oil spectroanalysis lab, troubleshooting could have been more positive and the failure pinpointed without actually tearing down the engine. However, the unit was operating overseas and these facilities were not available.

THIS TIGER SQUIRMS every time someone comes up with a procedure that uses a circuit breaker as a switch. I've always figured that if they want to make break the circuit every flight, then they ought to in a proper switch. I still feel that way. Not long ago some kindred soul tried to shoot down a circuit breaker pulling procedure on the basis that this practice ruins the circuit breaker. Sorry troops, engineers claim that the critters are designed to withstand over 15,000 cycles without being hurt or degraded.

So if you want to shoot down one of these procedures, try the safety angle... head in the cockpit, danger of pulling the wrong breaker, or some other valid complaint.

SOME YEARS BACK I was riding the right seat of a Baker two bits when fuel pressure on the right engine flickered and went to zero. The troop in the left seat, an old multi-engine man, immediately started shutting down the engine.

"Hey! what you doing to MY engine?"

"Shutting it down, TAT, the fuel pressure went to zero. Don't sweat it, MY engine will get us to the nearest field."

"So it went to zero...the engine was still running. You were just jealous 'cause I had it going so smooth..."

He muttered something about fighter pilots and referred me to the dash one. Sure 'nuff that's what the book said to do. I found out later they wrote this

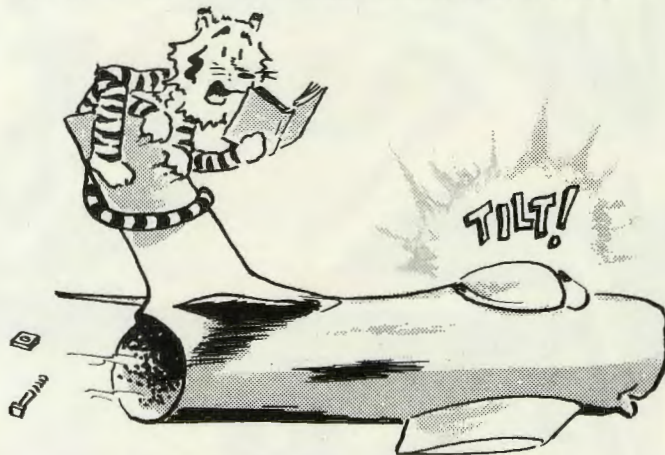
into the books from bitter experience. That too often zero pressure indicated a nice fat fuel leak that could easily burn off a wing. Yeah, and it would have been MY wing.

We have a similar situation with F-4 generator failures...any time a generator goes off the line and refuses to come back on, the situation is more serious than appears on the surface. The constant speed drive case may break, causing all oil to drain from the engine. The dash one says to watch oil pressure and shut down the engine if oil pressure flickers.

Recently, one of our F-4 test pilots had a generator fail and refuse to reset. He turned off the generator and within minutes smelled smoke... the smell disappeared after he shut down the engine. Smart diagnosis ... the CSD was starting to leak oil into the compressor section.

By the way, with tandem cockpits and side-by-side engines which engine belongs to which pilot?

DURING THE LAST three passes the IP felt the rudder pedal kick back. On the final pass it went full deflection. Trim was not effective altho the yaw damper was still on, so the IP turned off the yaw damper. This was without effect so he recycled gear and speed brakes and the rudder returned to neutral.



This old cat appreciates the diff between reading about malfunctions and sitting with 'em in a cockpit. What reads frightening may have been tame indeed and vice versa. Please consider this when I ask... "Why press on with the mission with a known malfunction - even a piddling nibbling rudder?" You can't go wrong if you decide on the safe side and take any bird that isn't operating normal back home to get it fixed. Shucks, the damn target ain't going anyplace, and will be there tomorrow unless someone falls on it.

# ...Just about due



**T**HE BIRD was about due for periodic and the forms looked it. The stand-by compass was written up for swinging from side to side about 30 degrees, the slave gyro for sticking on 270 degrees. Neither had been cleared. The course selector bar had been written up, cleared, and

squawked again for sticking on full scale deflections. The UHF was intermittantly very weak, but ground checked OK...big deal.

I considered the implications while preflighting. Weather was sorry. It had been raining all day and was supposed to get worse after dark; in fact, it would be right

at minimums...200 and a fly regularly and can usually pretty good approaches but all the squawks on the bird made me uneasy. When I checked the tires, the uneasy feeling became even more pronounced. Both were worn smooth. No cuts and no cord showing, but smooth. On a wet runway they'd skate like Sonja Henie.

I started to walk back to ops and wrangle another bird. Aw, what the hell...the weatherman's a pessimist and it'll probably be a thousand and five. I shrugged and returned to my checklist.

Enroute, the UHF worked like it does for the radio repairman and the course selector bar showed no tendency to stick. My uneasy feeling began to melt. Well above the weather, I listened to the steady rumble of the old torch and studied the stars, crisp and clean in the moonless sky, or some like that. I even began to pity earthbound mortals living beneath the layers of smoke, smog and clouds who never get to see good clean sky.

But what goes up must come down. Reluctantly, I broke out the letdown plate, turned up the right console light and did a little studying between scan of instruments and horizon. About a hundred miles out I requested clearance to go channel 13 and checked weather...200 scattered, 800 broken, 1200 overcast and two miles.

As I congratulated myself on this good fortune, the man said something about heavy rain approaching from the west...I should beat it in.

Back on center frequency I asked for an enroute penetration with a GCA pickup and was cleared to descend. I reported departing my flight level, tuned the TAC frequency and checked the aural

l, then tuned in the ILS. They gave me a single frequency approach and GCA came in loud and clear shortly after I leveled at 1500 feet. Rain splattered the windscreen and the bird pitched and yawed in mild turbulence. I concentrated on holding heading and altitude and listened to the calm voice, "... Zero seven five is bringing you over nicely, be prepared to start descent in ten... ah Friskey one niner I've lost you on my scope, execute a missed approach."

The heavy rain shower. I should break out before reaching low station. "Negative GCA, I'll proceed with an ILS approach."

"Roger Risky... I mean Friskey."

The course bar was on full right deflection. I turned further right about five degrees to speed up and dropped the boards, stabilizing high on the glide slope. The bar was still full right. The bird swung back and forth as it bulled its way thru the gusty air. St Elmo's fire flickered over the windscreen. I tried to hold it on 80 degrees but it bounced between 75 and 85. I glanced at the course indicator... still above glide slope. I pulled off about three percent just as the course bar slammed from full scale right to full scale left! Damn! I kicked the bird around to the left and checked the TACAN needle. It was pointing to about 65 degrees. I rolled out on 60 and rechecked the glide slope... on it, but speed was about 15 knots high. I rolled in a little trim to cut the rate of descent to 500 per... and glanced back at the course indicator just as the bar swung to full scale right. Back around to 80 degrees and a quick scan of the other instruments. Speed was still ten knots high. I was a little above glide path...

back another three percent and a shot of trim to hold 500 feet per minute descent. I glanced at the course indicator. It was already full scale left. To heck with it. I turned left until the TACAN needle was lined up. The course indicator bar was out. Marker beacon... low station... just a little high. GCA called, "Risky, I have you on my scope now coming up on GCA minimums. You are to the right of the runway."

"Roger." I glanced out and saw the strobe lights glowing thru the muck and continued descending, kicking a little left rudder to align the bird with the strobes, once I could see enough of them to get accurate direction information... finally, the glow from the runway lights. "Roger GCA, runway in sight."

Yeah, runway in sight. Was it really in sight? I pulled off power and held the bird between the glow, brighter now. I unconsciously started flaring and felt the wheels

effective, then slowed the bird using longer, more delicate applications. After the bird slowed, less rain pelted the windscreen and I could see much better and had no trouble locating the taxiway.

A thoroughly soaked staff sergeant directed me to a parking spot. I shut the mill down and filled out the forms before joining him in the rain. In seconds I was soaked. Five minutes later the rain slacked to a drizzle and I started thinking. Of all the stupid stunts. This one just about topped 'em. I should have taken the wave-off and gone back for another GCA... I'd have had a much easier approach and wouldn't have had to stretch the regs... after all, when is the runway legally in sight? Is visual contact with two or three pair of runway lights sufficient? If so, I want no more night weather on-minimum approaches. They leave too much for chance. Backing up, I made my first real mis-



touch before actually seeing the concrete itself. I held the nose off until it fell thru, then tested the brakes. Slick as glass, and my bird was built without anti-skid. Well, there's always the poor man's anti-skid. I hit brakes hard and immediately released them, repeated this until they became

take when I accepted that bird. The guys from the TAC ATTACK keep telling us that we get paid to fly healthy machines. Now I know why. Let someone else fly the sick ones. Let someone else compromise their personal standards... mine just went up.



# SEG NEWS

4450<sup>th</sup> Standardization Evaluation Gp.

## *Know your Stdn Evaluators*



**MAJOR JACKIE D. HILL**  
**C-130 FLIGHT EXAMINER**

Major Jackie D. Hill enlisted in the Air Force in 1948 and graduated from navigation school in 1951. During 1951 and 1952 he served a combat tour with the 452d Bomb Wing in Korea as navigator and bombardier in B-26s. From 1952 on, he has been with the Tactical Air Command. During this period he flew C-119s and C-130s in troop carrier wings at Sewart AFB, Tenn, Miami International, Charleston AFB, SC, and Misawa, Japan. While at Sewart AFB, Major Hill was one of the navigators in the C-130 ski aircraft which pioneered the Greenland Ice Cap operation. In 1962 he was assigned to the 4452d Stdn Eval Sq at Shaw AFB, SC, and in the summer of that year was reassigned to the 4450th Stdn Eval Gp, Langley AFB, Va. Since joining the 4450th SEG he has served as a C-119 and a C-130 Flight Examiner. Major Hill is a native of Michigan, is married to the former Betty Capus of Walterboro, SC, and has two children.

## **SUNDAY SUIT**

Years ago, the Sunday suit was a most important clothing item which customarily denoted professional character and influential appearance. It was taken out of the closet on Sundays, and other noteworthy formal occasions, worn for a few hours, then neatly placed away to await the next impressive occasion.

Undoubtedly, additional use of the suit would have improved the professional image and a much higher degree of social prestige would have been achieved. However, when the suit was regrettably discarded, with its sharp creases and wide lapels, rueful memories of limited use and of failure to get the most

from it prevailed.

It may be hard to believe, but the same practice of portraying a false image is prevalent to this day with regard to the use of current flight manuals, checklists, master questions files and other pertinent publications. SEG unit visits indicate this practice is common. Aircrews study handbook and manuals, putting on their Sunday suits, if you like, for the occasion only, creating the impression that they do it all the time.

Today, we have an almost unlimited supply Sunday suits... flight manuals, checklists and like. These are available for daily use to improve

s professional competence and social standing. You may not find them in the desired color, but the size is guaranteed to fit all. Detailed aircrew checklists have been tailored for each individual weapons system and the associated flight manual describes in detail the operating procedures for the entire weapons system. Since these "suits" are available in abundance and in varying sizes, it's difficult to understand why so many crewmembers fly improperly attired. Surely you wouldn't consider going to a formal dance or party improperly dressed. Yet, flying personnel still wander on the flight line totally unprepared.

Like a Sunday suit, you don't get much out of your books if you put them away neat and clean, and use them only on special occasions. . . when flight check time rolls around, for instance. Not only is the practice outmoded and old fashioned, but you may find the books outdated before you have eked the maximum from between the covers. The book must be used daily! Let them wear out. . . we'll buy you new ones! What you wear on Sunday, you should be proud to wear during the week. In other words, let's dress up and stay dressed up all the time. You'll be known, not only for what you appear to be on occasion, but as the professional that you are.

### WINTER AND THE U-3

Each winter we read of accidents and incidents that happen because aircrews fail to respect the elements, do not understand proper cold weather procedures, do not plan their flights properly or are too complacent.

The less complex the aircraft, the greater the accident potential seems to be. The U-3 is an excellent example. It is an excellent aircraft and easy to fly. It is, however, considerably more limited than most military aircraft. To operate the aircraft safely, these limitations have to be recognized and respected, especially during cold weather.

Icing conditions and extreme temperatures must be treated with respect and you should plan your flights to avoid these hazards. The aircraft should be kept hangared or covered whenever precipitation is forecast during cold weather. If this is not possible see that all frost, snow, sleet or frozen rain is removed from the aircraft before attempting a takeoff. The aircraft must be aerodynamically clean if it is to fly properly.

Be sure the oil system is serviced properly. When away from home, do not allow transient maintenance crews to service it with detergent oil. Be sure to dilute oil whenever the temperature is expected to go

below 30 degrees. This is very important and must be done in accordance with the schedule in section IX of the flight manual.

Aircraft without wing and horizontal stabilizer de-icing and propeller anti-icing systems must not be flown into known or forecast icing conditions. Even with these systems, the aircraft is only capable of flight in light icing conditions and then only for short periods.

Icing conditions should not be considered as routine. If you encounter them unexpectedly, follow flight manual procedures and take action to get out of the conditions. Usually, you should climb to get out of freezing rain. If this is not practical, you may be able to descend into above freezing temperatures.

On winter starts, use external preheat if it is available. When it isn't available, use full carburetor heat or induction air for your engine warm up. Remember, the aircraft is not ready for takeoff until oil pressure remains normal and steady, and the engine accelerates smoothly. Be careful to warm up all instruments and check for sluggish operation during taxi. If propellers are unusually sluggish or erratic during warm up, feather them a couple of times to 600 rpm. This will insure proper propeller governor operation during flight.

Some other things you should remember for cold weather operation . . .

- \* Use carburetor heat or induction air.
- \* Exercise the props at half hour intervals to flush oil from the prop system.
- \* Keep the generators charging throughout the flight.
- \* Keep sufficient fuel in the aux tanks for emergency operations in case of main tank malfunctions.

When flying the U-3 in sub-zero temps, engine oil may congeal. If so, lower gear and flaps, set rpm at 2450 and add power to maintain 110 mph. This reduces air flow through the coolers; however, should the oil temp and pressure stay below normal, land ASAP.

Cold weather landings call for a normal power-on approach with the power left on until touchdown. After landing on snow or ice, leave the flaps down and use brakes sparingly.

Maintain a healthy respect for the hazards of cold weather operation and keep yourself in peak condition for a combination that will take you safely thru the winter months. During this season, cold weather operation should be a special interest item on all flight checks. It's a comfortable feeling to know the capabilities of your aircraft. . . don't be satisfied with less.



# CHOCK TALK

## *old story*

Lately, many aircraft incident reports have listed wrenches, nuts, bolts and miscellaneous garbage as the cause of flight control malfunctions. This is nothing new, but it can be just as fatal today as it was years ago. The larger items that find their way into an aircraft usually get there thru forgetfulness and because a mechanic fails to run a tool count at the end of every job. The little bits and pieces are usually evidence of sloppy workmanship . . . the dropped nuts and bolts that a careless mechanic doesn't bother to look for and then fish out. Can you prevent these kind of problems? Sure . . . be the best damn mechanic you know.

## *pretty pins*

A Navy unit has been experimenting with brightly colored cotter pins as an inspection aid. Yellowish green ones were found best in both normal and adverse light. Only hitch; the dye they used wore off. If the pin manufacturers could impregnate this important little product with a chemical coating of some sort that would brighten it up, they certainly would help inspectors when they check installations in the more complex arrangements of push-rods, bell cranks and other gear. As is, the nuts, bolts and pins all blend together and it is necessary to look, see and actually feel the pin itself.

Since we have occasional accidents actually traced to missing cotter pins, this is no small item.

## *bright idea*

I wonder how many crew chiefs find time to take a clean cloth dampened with hydraulic fluid and wipe the polished area on the gear struts? This is required before the first flight of the day on many aircraft, and is one of those little items that saves time in the long run. After all, who likes to replace the strut seals?

## *amateur hour*

When a C-130 crew set their aircraft altimeters before taking off on a NIGHT LOW LEVEL mission, they found all three had a 500 foot error. They didn't go. A check revealed that the instrument shop had used the field barometric pressure rather than the altimeter setting when they calibrated the instruments. A 500 foot error on a 500 foot low level could smart a bit.

## *grease fitting failures*

The Mechanic's Bulletin tells of a problem one airline has been having with grease fittings . . . The steel ball checkvalve failed on a grease fitting installed on the journal of a main landing gear trunion. The ball escaped and ended up between the journal and the bearing. Another grease fitting, on a flap jackscrew, failed the same way. This time the ball jammed the jackscrew. High pressure grease guns wear the inside diameter of the spring that holds the check valve in position. When it wears too far, the ball slips thru and trouble is the name of the game.

It isn't enough to just grease a fitting and then go on . . . instead you should make certain the ball in the grease fitting is properly positioned both before and after you grease each fitting.

### *rapid fuel loss*

While making a practice instrument approach, an F-105 hero noticed it took about 5000 pounds of fuel for just the penetration alone. Needless to say, he made an immediate precautionary landing. The ram air valve, part number 13-357-1, had malfunctioned causing fuel to be pumped overboard. Five other birds in the unit were found with inoperative ram air valves.



### *third time's a charm*

The engine, a J-57, had no history of excessive oil consumption until the day of the accident. It used four pints on the first flight that morning and three pints were added after the second flight. The third flight was cut short by a number two bearing failure caused by oil starvation. Someone had left out the rear compressor front hub packing during overhaul and the remaining packing blew on the final flight. It had started to fail two flights earlier. An alert crew chief could have prevented this one by questioning the sudden increase in oil consumption and grounding the aircraft.

### *preflight to ponder*

On the go from a night practice landing, the engine went, *kafloom!* *kafloom!* and flamed out . . . the pilot got his bird stopped on the runway without further problem. The engine compressor showed foreign object damage and the air scoop and underside of the fuselage were all dented up. Then someone noticed that the grounding wire was still attached to the nose wheel.

Pieces of the alligator clamp on the free end were scattered thruout the engine. Altho this occurred to a non TAC bird, the hazard applies.

### *happy holiday*

With the coming of the holidays we can expect to see and hear statistics on how many Americans will die in automobiles. Surprisingly, TAC's ground accident rate doesn't increase much over Christmas . . . we can all be proud of this. However, each year a few people get caught in fatal traps that a little common sense would eliminate.

Here are some simple dos and don'ts . . . some rules you can live by or die without . . . take your choice.

- \* DO plan your driving . . . a reasonable distance at a reasonable time of day.

- \* DO check the weather along your route . . . look for freezing temperatures and expect ice. The highway patrol knows the road conditions.

- \* DO have your car checked and prepared for the trip . . . include flares, a flashlight and some blankets in case you have a breakdown.

- \* DON'T drink and drive . . . you can't hold it any better than the hundreds before you that have died finding out.

- \* DO beware of bridges and overpasses, they are apt to be slippery.

- \* DON'T exceed speed limits. The time you think you're saving may be spent in a judge's office, a hospital or morgue.

- \* DO stop every once in a while and ask yourself if you are using your own good sense.

- \* DO fasten your seat belts. Even if you are doing your job, some clod may run into you.

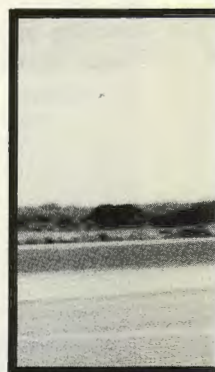
### *jammed aileron*

Breaking off from an air tactics mission, an overseas pilot had trouble landing his F-100. The ailerons were frozen. Trim response and elevator control were normal and the pilot was able to make a successful landing from a straight-in approach. The wing tunnel hydraulic line support spring clip which is supposed to keep the aileron actuator lines from interfering with the aileron push rod had come loose and was binding the aileron cables.

### *workshop safety*

Here's a tip for you home workshop types. Don't use fluorescent lighting in your shop. The stroboscopic effect of fluorescent lighting can make circular saws and band saws appear motionless even tho they are operating. Since it isn't unusual to have more than one machine operating at once, the hazard is obvious.

# MA



# Pping the way



**I**F YOU SHOULD happen thru Williams AFB and notice what appears to be a T-38 with TAC insignia on its trim tail, look again. The bird is probably an F-5 from the 4441st Combat Crew Training School. The 4441st has the enviable task of providing tactical training to selected students from those allied nations who are receiving the F-5 as their

on system under the military assistance program.

All of the students speak

English; however, before they arrive at Williams, they attend the Air Force language school at Lackland AFB, Texas, where they receive comprehensive training in fundamental English and aviation English.

The Combat Crew Training School is split into two major areas...pilot training and specialized technical training. Although responsibility for the program falls under TAC, the Air Training Command 3525th Pilot Training Wing handles field level maintenance

on the aircraft, and the 757th Mobile Training Detachment provides technical training for the pilots and foreign maintenance technicians.

Foreign fighter pilots graduate after about 100 hours of academic training, 50 hours of briefing and critiques and 40 hours of airwork. This 40 hours is split about half and half between the F-5A and F-5B, and covers transition, formation, instruments, air-to-air gunnery, air-to-ground gunnery, AIM-9B missiles, air combat maneuvers and applied tactics.

Technical training covers such specialties as maintenance officer, radio maintenance, electronics, aerospace ground equipment repair, instrument repair, jet engine maintenance, munitions supervision and weapons maintenance. Courses vary from around 85 hours to 250 hours. These courses combine classroom academic work and demonstrations, with on-the-job training out on the flight line.

Shortly after the students complete training and return to their native countries, a mobile training detachment and a small field training team are dispatched to join them. The MTD supervises the in-country training of other students while the field training team has the operational responsibility to help the country establish an in-country combat training squadron similar to the 4441st.

Students graduating from the 4441st will provide the nucleus of instructor pilots and instructor maintenance technicians for these squadrons.

The entire program has been carefully designed to gain the highest proficiency possible by relying on the talent and skill of the people from each country involved.

# TAC TIPS

## ON AGAIN OFF AGAIN

A One-Oh-Wonder pilot released brakes and moved the throttle outboard. The left AB didn't light so he tried it twice again. Witnesses saw the left AB light about 1000 feet down the runway, then both ABs went out and then re-lit. Both ABs went out again as the pilot decided to abort. Stopping was no problem, altho airspeed had reached 155 knots on the takeoff attempt . . . he even had to add power to clear the runway. Suspecting engine trouble, the pilot ran 'em up to check them out, then added power to taxi. The aircraft didn't move . . . the right tire was afire.

Playing "to go or not to go" with afterburners is a pretty good way to get a direct clearance to the salvage yard. And, it doesn't take a slip stick to find that it requires a jillion or so footpounds of energy to bring a 40,000 pound aircraft from 155 knots to a full stop. Absorbed energy is heat and when you add on the energy it takes to hold the bird during the run-up . . . well.

When an AB problem develops on takeoff, it's best to decide right then to either abort or press on without the burner. Re-lights are a losing bet. Another losing bet is this business of running up engines and doing other trouble shooting following an apparent malfunction. If the malfunction is for real and something blows, you buy the accident . . . a pretty high price to pay for a fancier form 781 write-up.

## CABLE CAPER

Coming home after a dart tow mission, an F-100 pilot found that the dart would not jettison. He drug it off, but a considerable quantity of cable stayed with the bird. On a steeper than normal approach, the pilot felt a sharp tug on the cable . . . the cable had hit a civilian car three quarters of a mile from the runway.

Dart cable malfunctions are not as rare as we would like, and fighter bases should set up procedures to clear perimeter roads, and where possible, civil highways within a mile of the end of the runway whenever a bird must land with a cable attached.

## FUEL GAGE BOOBY TRAP

The fuel pressure warning light came on as a T-39 crew was flying GCA final. The gage indicated 950 pounds. About 15 seconds later, the engine flamed out. The crew made a single-engine landing, and after checking, found that each fuel gage was reading 700 pounds above actual. The error was induced by the panel lights.

This is quite a bit more than the 200 pound error specified by the dash one, so T-39 pilots should cross-check fuel flow and consumption against quantity indicated and make an occasional check of the gage with panel lights turned off.

## TANKS A BUNCH

An F-105 pilot was making a weapons run around 500 feet and 560 knots when an explosion shook the aircraft, causing it to yaw hard left and vibrate like crazy. He immediately pulled up and asked the range officer to check his bird.

About this time, he noticed that the nose of the left 450 gallon tank had caved in. He jettisoned the tank and, breathing much easier, recovered without further difficulty. A pressure vent valve failure induced the tank problem.

## SOMETHING NEW

Air University Review carried a photograph of a vertical instrument presentation designed to keep the pilot from having to look from one end of the instrument board to the other. The term "board" should serve as a clue that this is not a development of the sixties. In fact, the photo and caption originally appeared in 1924. Some quotes from the original caption: "Instruments are also grouped properly, all the engine instruments being together, so that if the pilot's ears warn him that his engine is not functioning properly, he may learn his trouble at a glance. They are set, as far as possible, flush with the board. . .

The caption told about the turn needle, ball, a angle of climb indicator then explained, "When avia-

was in its infancy it was thought a pilot could depend upon his sense of balance for such information. Now it is known that the senses of sight and balance work in conjunction and that the nerve centers along the Eustachian tubes respond to a false vertical when acted upon by forces other than gravity. In a loop or spin the sense of equilibrium is deceived and gives a false illusion of balance. Therefore, without the flight indicator (needle and ball), the pilot going unconsciously into a loop or spin might crash before finding the direction to pull out, should the clouds be low and show him the direction of earth too late."

Things haven't changed a bit, have they?

#### F-4 FLAP

A few moments after liftoff, at FL 370 a Navy F-4 pilot felt and heard an explosion. Utility hydraulic pressure went to zero so he headed back for a GCA. He dropped the rollers using the emergency extension system, and all three indicated down and locked. The pilot landed long and a little hot, intending to engage the midfield barrier. At touchdown, the bird swerved hard left and went off the runway. The explosion was the left tire exploding in the gear well. It tore up utility hydraulic plumbing and helped induce the uncontrolled swerve into the boondocks.



#### LOMCEVAK

Most TAC fighter pilots may believe they have tried about everything possible with an airplane. They are in for a surprise. Civilian acrobatic pilots have a few tricks that aren't in our book. The latest maneuver to be developed is the Lomcevak and it's described like this . . . it begins as an outside climbing snap roll but becomes a tail-over-nose tumble of one and a half revolutions. Originated by the Czechs and translated as "berserk headache," the Lomcevak isn't recommended for beginners. The instruction book says the usual recovery is a vertical climb but it doesn't say whether this is for the whole airplane or just the pieces.

#### TAC ATTACK

#### F-4 COMPUTATIONS

The Navy Crossfeed states that the F-4 handbook takeoff and landing distance charts are in error. The error is greatest for heavier gross weights. The next regular handbook, hopefully, will have more accurate info.

#### OUT OUT OUT!

A 105 pilot smelled an electrical fire just as he brought his bird to a stop at the end of his landing roll. A glance forward and a radio call from a friend told the story... battery fire. He shut down the engine and abandoned the bird by climbing over the windscreen and down the nose and then dropping from the pitot tube.

Leaving a lot of our birds without using a ladder presents quite a hazard. The view from the canopy rail of a 101 is terrifying to anyone with even a mild touch of altiphobia and descent from the rear seat of an F-4 is certainly worthy of jump status.

Throwing a rope over the side of a three million dollar aircraft seems ludicrous and with my luck the other end wouldn't be tied down anyway. Hanging down from the edge of the canopy and then dropping helps a little, but this still leaves some of our more "bird legged" types a considerable distance from the hard, hard ground.

It might pay dividends to give a little thought to the best way out of your bird, and if you come up with an idea, send it in.

Altho this lad used the "unofficial approved" exit for the F-105 - it would be a difficult route on a rainy day.

#### EASY DOES IT

F-105 pilots should take it easy when they run thru control checks. Too much stick stirring causes air to get into the fluid which does bad things when it gets to the pumps. The end result is pump outlet pintle bearing failure and eventual pump housing failure.

#### SAY IT IN WRITING

Next time you fly an aircraft that is in tip top shape, make a complimentary write-up in the form 781. In addition to encouraging the hard working crew chief to keep up the good work by letting him know his efforts are appreciated, it also lets the line chief, maintenance officer and other supervisors know when their men are doing good. This also gives them something tangible to write about and think about when it comes time to consider their people for promotion.

## BIRD STRIKE

On a low level mission an F-101 pilot saw a flock of birds ahead, and only had time to duck . . . one hit just forward of the center windscreen. His wingman looked him over for damage, saw none, so they pressed on with the mission. After landing, maintenance personnel found a 14 by 8 inch hole forward of the windscreen, a 18 by 24 inch hole near the left engine intake and considerable damage to three formers and ribs.

Birds and bird strikes are going to be with us for a long time. A small hole made by a bird can develop into real trouble if you press on and run around at low level and high speed. A better procedure after a bird strike is to break off the mission, head home at a moderate altitude and airspeed and land when you get the fuel burned down.



## SENSE OF BALANCE

A C-130 may have plenty of room for fuel but it still helps to know how much you've really got in the tanks. You may not be afraid of running out of fuel, but you can create a serious problem if you don't maintain proper balance between tanks.

If an outboard gage is inoperative, fill the outboard tanks completely and put what you want in the rest.

If an inboard gage is kaput, fill up both the inboards and outboards.

If an external or auxiliary gage won't function, either fill the tank with the faulty gage and its brother on the other side, or leave them both empty.

The secret to safe operation is starting out equal. By filling them you'll do that. Then to maintain balance and know exactly what's in each tank, just feed the same number of engines from the tank with the bad gage as from the opposing tank, keep fuel flow balanced, and make your computations from the good gage.

## BAD BOAT

Back when Christopher Columbus made his famous deployment to the new world, crewmen of the era had to take great pains to lash the ship's longboat to the deck securely enough that it wouldn't be carried away

during heavy seas. Similarly, ever since we started packing rubber boats in external compartments on aircraft we've had to take pains to keep them from getting carried away. The problem is still with us. About every other month someone loses a raft on a C-130 or KB-50. The last one occurred on an arctic haul and announced itself by causing the C-130 to nose down and lose airspeed. The pilot added power to hold position and asked the formation leader to look him over. It took max continuous power to hold 160 knots.

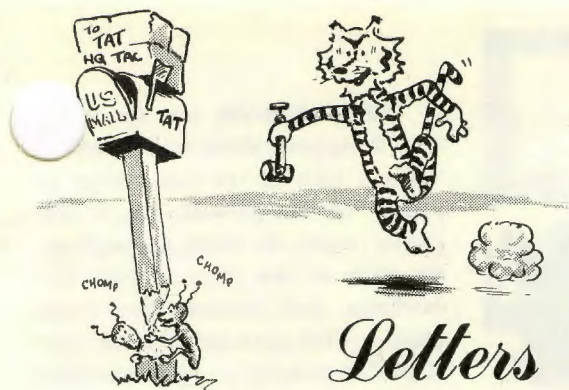
The leader reported that the right inboard life raft door was open about a foot and a half... held open by the partially inflated raft. After shaking along for about five minutes, the raft split and some minutes later fell from the aircraft. Fortunately it didn't hit the stabilizer.

Investigators believe the manifold vent malfunctioned. The raft was inspected and replaced about a week before, and had survived two flights. Since it never fully inflated, they don't think the CO<sub>2</sub> bottle discharged. The unit employs rigid quality control and inspection techniques but are re-emphasizing them.

## THANK A LOT, LEAD

On a formation takeoff, the Lead 105 had a sl AB light and Two went out ahead. Lead asked for per cent and Two gave it to him. About that time Lead's AB lit and he jumped back in front. Feeling sorry for the wingman he was leaving behind, lead pulled off some power and accidentally came out of afterburner. He immediately went outboard with the throttle but there wasn't time for the system to recycle. By this time there was only 3000 feet of runway left and airspeed was 150 knots. After he pickled off the tanks and an MNIA, the leader managed to stop his bird on the runway.

This isn't the first time a well meaning leader has gotten either his wingman or himself in trouble by jockeying throttle on a formation takeoff. It can be even worse in a twin engine afterburner equipped aircraft like the 101 or F-4. Prevention here falls back to basic technique . . . Lead sets his power, giving his wingman a couple of per cent to play with, and then leaves it alone. The lead pilot can check his gages and be sure his engine is working as advertised. If two drops 'way back, he probably has something wrong and ought to abort, and except for a momentary jump because of a quick AB light, number two shouldn't have any trouble staying in formation. Remember, a wingman expects the leader to maintain constant power, a little less than max, so don't kill him with kindness.



Dear TAT

In the October 64 issue under Chock Talk, there was an item titled, "Bits and Pieces" concerning TSGT Coker's idea to prevent safety wire clippings from floating around in the innards of our aircraft.

This is a very good idea for preventing a continuous problem. The Navy recognized this as a solution approximately five years ago and have been issuing dikes like this in their tool kits. The reason I know this is because I saw a pair fall out of a transient Navy bird during landing roll here at Nellis about six months ago and picked them up on the runway.

Could be that there is a Federal Stock Number this item and everyone could get them.

(Now that we have the loose safety wire problem beat, what do we do about loose tools?)

Capt Rondel E. Minter  
Flight Safety Officer  
4520CCTW, Nellis AFB, Nev.

Dear Bud,

*Haven't located a stock number on those pliers. Guess it's strictly a do-it-yourself project... like keeping tools out of the flying machinery.*

TAT

Dear TAT

Having done considerable work with actual flight test stopping distance, I wish to respectfully take exception to a statement in your October 1964, TAC ATTACK under "Early Abort," Page 21. You state that "the slip stick artists proved long ago that stopping distance is independent of weight."

In the first place "slip stick artists" as you call them don't prove anything, they theorize... actual flight test is the proof.

TAC ATTACK

In the second place, very few slip stick artists have practical knowledge concerning actual aircraft operation. Therefore, it is easy for them to come up with theoretical conditions of aircraft operation which are impossible to demonstrate. The statement in question is an example of this since it involves fixing all of the variables of braking, assumes a perfect efficiency factor of the pilot/brake system combination, and assumes no torque limiting or fade. Don't kid yourself or your readers that it doesn't take any more air yard to stop a fully loaded aircraft than it does to stop one of normal landing weight.

There seems to be an increasing tendency of pilots and supervisory personnel alike to be dazzled by some tidbit of theoretical information allowing its influence on the overall operation to be inflated out of proportion.

Remember the "slip stick artist" can use an eraser on his mistakes. Your pilot readers have to live, or die, with theirs.

Don Stuck  
Experimental Test Pilot  
McDonnell Aircraft Corp.

Dear Don

*As they say in the headquarters, "This organization wholeheartedly concurs..." In fact, we should have used quotes around the word 'proved,' since it was intended as tongue-in-cheek. Thanks for helping clear up possible misunderstandings.*

TAT

Dear TAT

I am a USAF officer from TAC's 476th Tac Fighter Squadron on exchange duty with VF-111 deployed to Naval Air Force Pacific. I sincerely miss the good information presented in TAC ATTACK and know the "SUNDOWNERS" would enjoy much of the timely safety news and informative articles that have characterized TAC ATTACK past and present.

Please include us on your distribution list.

Capt George L. Schulstad  
Ftr Sqdn 111

Dear George

*We read you loud and clear, the 111th is on for five; have a good tour.*

TAT

# Season to be Jolly ?



**E**llrod . . . Clyde . . . I want to compliment you on the fine way you handled the squadron safety program for the last couple of months."

"Well Major Hardnose, just come to old Fearless Flight when you want the job done."

"There is one place," Major Hardnose said as he picked up a large stack of papers, "where I think you goofed. TAC just returned this . . . you just can't file an Ops Hazard Report on the Officer of the Day."

"Oh? You should have seen the unsafe way that huge second lieutenant escorted Clyde and me out of the club! It was really a hazard to an operator."

"I heard the full story on that, Ellrod. And, since you are so familiar with the club, you can take care of setting up the squadron Christmas party . . . mess dress and the works . . . and it had better be good or you'll make lieutenant above the zone. Now go quietly!"

As they walked back toward the

pilots' lounge Lieutenant Clyde Youngfellow turned to his flight leader. "Well, you managed to snatch defeat from the jaws of victory that time. Now we have to do all the dirty work for the party."

"I noticed you said, 'we,' Clyde. I think it's time to review your education. Bright young first smokes don't use 'we' when discussing work with a full captain!"

"Yes sir. Well, I'll give the club a call and have them set up a bunch of those little sandwiches and some dip and . . ."

"Hold on a minute, Clyde. We have to get organized."

"We, sir?"

"Just this one time. Now, planning a party is just like planning a flight. You have to figure out all the things that can affect it. It's getting on towards winter so you have to think about weather for one thing."

"Sure. I always like a White Christmas . . . goes with the song and everything. But the thing I like best is that short, cold weather takeoff roll."

"Short takeoffs are about only thing good about cold weather. Take a look at the bad. Snow is pretty on the ground, but it can really mess up depth perception. Be sure to use GCA or VASI for landings. And, another thing about snow---I've got a question for you. If you're making a night approach in a snow shower should you use landing lights?"

Clyde thought for a moment. "I don't really know, Ellrod. Never have seen anything in the dash one about that and I never have made a night approach in snow."

"I never had given it any thought either until I reached down and flipped the lights on one snowy night. Believe me Clyde, it is un-good! The whole world turns white. Ever since, I've left them off."

"I can see how it would get terse. How does snow on a runway affect you?"

"Packed snow is really great . . . good braking action, good directional control. But when you have snow and changing temperatures you've got problems. It'll melt for a while and then freeze and you get a sheet of ice. When it warms up again you have slush. The books cover takeoff on slush covered runways . . . leave the gear down for awhile and such, but a problem we have is formation flying. If there is much slush on the runway when you make a formation landing, the wingman isn't going to be able to see anything."

"Makes it pretty tough I'd imagine. At least it doesn't snow all the time. Those clear cold nights in the winter are really nice."

"They sure are Clyde, but they are dangerous too. Those clear nights are perfect for fog. It can sneak up on you just at sunrise. The weather troops will usually

up you clued in, but they can't at a thousand, so always check the dewpoint - temperature spread. If it is close and the wind is less than ten knots, fogsville. A breeze will usually cause it to lift a hundred feet or so. On the coast; however, a breeze can bring in sea fog."

"Even with all the bad things winter brings, Ellrod, I still like all that extra thrust."

"Sure, but remember you don't get it for nothing. That extra thrust costs you extra fuel. And when you're taxiing on a slippery ramp, the extra thrust the engine puts out at idle raises your taxi speed . . . the combination can make you end up with muddy wheels or worse."

"Listening to you is enough to make me anti-Santa, Ellrod."

"You're right. And, these are just the obvious problems winter brings along. Here's a real sneaky one. When about 15 knots of wind is blowing across a 30 degree ramp

it gets pretty hard for the maintenance troops to enjoy their job . . . It's just plain miserable. This means that they are going to hurry and they may make a lot of little mistakes. Those little mistakes added on to the ones we make if we hurry through a preflight bring trouble. Unfortunately there isn't any easy way to make the conditions better, so to keep from letting these hurry-up errors kill us we've got to make an effort to be extra careful at the time when we're tempted to rush. We can get a fringe benefit . . . if we set a good example, it helps the knucklebusters put up with their hardships."

"The working troops on the line have a tough row to hoe, there's no doubt about that."

"You can bet on it. This is the time of year we ought to spend a little time away from the nice warm ops shack and get out on the line. A little grease on a flight suit never hurt a pilot."

"I get the point, Ellrod, but

what does all this have to do with our party?"

"I'm beginning to worry about your imagination Clyde. I'll cover it all one more time. We might have snow, so get the civil engineer to have his equipment standing by to clear the club parking lot. There's a chance of fog, so we ask the APs to have some troops ready to direct traffic. The roads and walkways might be slippery so we ought to tell all the troops to be aware of generating too much extra thrust."

"Sounds good Ellrod . . . And I'll do my best to work with any of the, ah, troops that are being ignored . . . you know, socialize a little."

"Thanks, but don't bother with that little problem. I have a special little chore for you."

"What's that?"

"Check to be sure that 240 pound second lieutenant isn't pulling OD on the night of the party."

## Have a Belt



Police in one New England state claim that many people don't use seat belts even tho they have them installed. That's right, about half of 'em don't bother to buckle in. Which brings us to another report. Did

you know that two-thirds of all fatal automobile accidents are within 25 miles of the driver's home?

Reason enough to get in the habit of strapping in whenever and wherever you go!

# Make Your Decision



BY: Col E. Ledoux  
Air Force Senior Advisor  
434th Troop Carrier Wing  
Bakalar AFB, Indiana

**O**UR OPERATIONS at some Army fields can readily set the stage for an aircraft accident. I know, having served as board president for an investigation of a C-119 accident that occurred on an Army support mission. The accident, typically, was a result of compounding factors and errors. However the stage was set by the conditions that exist during these operations.

Briefly, a crew departed their home base in a C-119C to participate in troop drops at an Army field, with a passenger stop en-route. Prior to takeoff from home, and again at the passenger stop, the pilot had to use a burnout procedure to correct a 150 RPM mag drop on the left mag of the left engine.

On the post flight ignition and power check at the Army field, the left mag again dropped 150 RPM. This condition was entered in the Form 781A and the crew departed for the night. Next morning the

aircraft mechanic changed four plugs in row six. The left mag still failed to check out and by using the magneto bank selector switch, the crew decided the magneto was defective. The flight mechanic discovered broken breaker points and replaced the points using some from a spare mag he had in his flyaway kit. The engine checked out on runup and the mission commander directed the crew to fly their assigned mission.

On takeoff, with 40 jumpers and three jumpmasters aboard, the engines developed over 215 PSI at 2700 RPM and 61.5 inches. The co-pilot raised the gear at about 150 feet and almost immediately the left engine torque fluctuated and dropped about 30 PSI. As the gear came up, the engine started to backfire. Airspeed was 120 knots, which was below safe single engine speed and single engine best climb speed.

The crash landing occurred shortly afterwards, killing two of the paratroopers and injuring sev-

eral others.

Reconstructing the causes of the accident, we found the mechanic failed to insure that the magneto rotor was properly installed after replacement of the breaker points. He left out a small flat washer and this permitted the rotor to disengage from the magneto quill shaft, allowing the rotor to rotate freely, causing the engine to backfire. The crew feathered the prop before attaining single engine best climb speed even though the engine was still developing some power. They also failed to close or trail cowl flaps on the dead engine. Certainly, the maintenance error was a strong and serious contributing factor to this accident. In fact, if it had been a single engine aircraft, the maintenance error in all probability would have been the primary cause. As it was, because the aircrew was not thoroughly proficient on single engine procedures and did not use available power to maintain minimal conditions before feathering, the primary cause was

rator error.

When you fly on one of these operations with extremely limited maintenance facilities, you are divorced from normal supply channels and the aircraft mechanic, with his box of spare parts, is your entire at-hand maintenance capability. It is imperative that both you and your flight mechanic know and follow TO 00-20A-1 and other applicable directives. Makeshift maintenance and improper or non-standard practices can only lead to trouble, and possibly an aircraft accident.

Pressure to accomplish the mission can have similar effect if you yield and take ill-advised short cuts.

Weather cancellations and aborts occur, but Army commitments remain the same, and it isn't unusual to have someone request you to fly extra sorties or to have you rush your aircraft back in commission.

You must consider these and any number of things from a mature viewpoint, balancing them



against published procedures before blindly agreeing. I do not mean to downgrade mission accomplishments; however, the phrase, "flying safety is paramount," expresses the bedrock philosophy on which all peacetime operations are based.

I remind you that the dash one, AFR 60-16, TAC 55 series manuals and other directives basic to your operation were published to provide SAFE operation. These publications were distilled from flight experience over many, many

years and provide the only pure sources for methods and procedures. When you deviate from these directives, you compromise safety.

However, no publication or system of directives can cover all eventualities and you will continue to encounter situations for which there is no specific guidance. You must exercise your own original judgment in these instances, and when you do, ALWAYS MAKE YOUR DECISION ON THE SAFE SIDE.



Operational achievement awards

## *Operational Achievement Awards*

**OUTSTANDING TACTICAL FIGHTER SQUADRON**  
522TFS, 27TFW, Cannon AFB, NM

**OUTSTANDING TACTICAL FIGHTER AIRCREW**  
1st Lt James W. Anderson  
481TFS, 27TFW, Cannon AFB, NM

**OUTSTANDING SPECIAL AIR WARFARE AIRCREW**  
Capt Robie Hackworth  
319TCS, 1ACW, Hurlburt Field, Florida

**OUTSTANDING TACTICAL RECONNAISSANCE SQUADRON**  
29TRS, 363TRW, Shaw AFB, S. C.

**OUTSTANDING TACTICAL RECONNAISSANCE AIRCREW**  
Crew #F-001, 9TRS, 363TRW, Shaw AFB, S. C.  
Pilot - Captain W. W. Graham  
Navigator - 1st Lt. J. M. Rup, Jr.  
Gunner - SSGT R. B. Field  
EWO - Capt W. M. Jones  
EWO - 1st Lt D. W. Ginger  
EWO - 1st Lt W. M. Marland  
EWO - 1st Lt J. N. Shaw

# DOES THIS STILL HAPPEN?



does this still happen?

BY MR. ROBERT. SMITH

Robert T. Smith is a well known aviation writer (Classic Biplanes, Air Traffic Control, etc.) who learned to fly Sunday afternoons at the local airport, then made his way into the USAF where he graduated from single engine jet school. He then ended up in B-29s, KC-97s, and B-47s. Off active duty he worked for Lockheed before going the free lance writing route. An active reservist, Author Smith is also quite active in civil aviation. His article here was based on personal experience and the firm knowledge that only times and places change, that people usually stay the same.

**T**HIS TALE BEGINS in the dark forest of a major air command some years back. Most of the four characters in this tale are still on active duty, although it happened long enough ago for the statute of limitations to have expired. So, if you recognize the shoe and desire to try it on your foot, feel free to do so. It might be that several dozen of you out there in audience-land can wear it.

Our first and most active character is the Wing Wiener, his real-life title was Wing Director of Operations. He had been sent to the West coast to attend a staff school and he forthwith did so, but with no enthusiasm. He was afraid the wing would fall apart during his week's absence. As he

neared the end of the school, he called his ops office on the telephone to direct that a Great Big Bird (with which the wing was more than adequately equipped) be equipped with a crew and flown out to pick him up and return him to the wing's east coast base. An airline ticket would have cost the wing about one-fiftieth of the flight pick up cost, but price was no object in those days. So, a three-man crew was assembled.

First was the IP. Sober and of long experience, but a low field grade man where rank was concerned. Second was N, for navigator. Company grade and junior, but very good at his trade. Third was the CP, the copilot. Skinny and equipped with a loud mouth and

big ears...yours truly with the eagle eye of a great birdman! Thursday afternoon of the appointed week, this crew clambered aboard the Great Big Bird, and set sail westbound to pick up the WDO on Friday. Arriving at the west coast base too late to partake of a social evening, we hit the sack, and sprang to life the next a.m. around ten. Times are local for the east coast base to avoid confusion.

Within five hours the Wing Wiener appeared breathlessly on the scene, stuffed his baggage aboard the Great Big Bird, nodded curtly to the obviously inferior crew sent to pick him up, and motioned that we aviate. Seeing his motion (for he was a full

we scrambled to follow him and the Great Big Bird while he seated himself as pilot. Taking the right seat, yours truly rattled off the before starting checklist as it can only be rattled off by a man with three years' experience at it. Engine start progressed normally until we tried starting the last engine. It would light, but no amount of coaxing would get the throttle into idle without exceeding the EGT limit. Several starter re-engagements were tried with no success. Three times we exceeded the EGT limits of the engine.

Checking the dash one, yours truly found that one time was enough to require engine removal. We shut down and de-planed to, as it developed, argue and quibble. Transient alert dug up a couple of seven level maintenance men who quickly declared the engine a red cross item, and said they'd be y to remove it that night, and t even get it re-installed (after proper and thorough inspection and turbine replacement) by Monday morning. The Wing Wiener stood upon his head and walked gallantly on the ceiling! He would have none of that red cross business, so he quibbled us into accepting the fact that the EGT didn't really hit the redline and that a few additional starter re-engagements was okay to get the engine into idle.

All of this took a lot of time and we were rapidly approaching the limit of crew duty time. Finally the CP (me) and the IP gave in to the WDO, and agreed to let him re-engage the starter (prohibited by the dash one) several times to get the engine to idle. At the time we finally gave in, we had been on the airpatch parking ramp some hours, and were in no mood to t. We should have told the WDO what he could do with the airplane,

and hit the sack, but being of lower rank, we elected to follow the path of least resistance. We got started and airborne fourteen hours after our ten a.m. breakfast.

We made a routine (almost) flight to the east coast. I flew CP position while the IP thankfully (as it turned out later) slept. Several times I fell asleep, waking with a start each time. Held on course by autopilot the Great Big Bird flew into a brilliant dawn over the east coast base where we all lived. True to the responsibilities and demands of his job the WDO called the command post and asked how the wing was doing on flying time for the quarter. We were behind. So he announces we will fly another two hours orbiting the base to get some flying time for the wing. Bloodshot and bleary eyes looked at the fuel gages and silently calculated consumption. There wasn't enough to orbit more than thirty minutes, which fact the sleepy CP told to the just as sleepy WDO. The WDO scoffed, but his scoffing waked the IP.

The IP, slightly rested (how must rest can you get sleeping on lumpy kit bags?) studied the situation and announced he would take my seat and that we would land immediately. There was a huffy snort from the pilot's seat answered by a terse statement from the IP, which I clearly remember verbatim though nearly a decade has passed, "Colonel, we're landing this bird just as quickly as we safely can." And he proceeded to do just that.

A staff car met the Great Big Bird with none less than the Wing Commander aboard. His cold, grey eyes examined the WDO, and he said, "Pushed the crew duty right to the limit, didn't you?"

A forced tired smile from the WDO, "Yes sir, but we made it

okay with no problems."

"I see. Stow your baggage and I'll give you a ride into ops. Seems to me you're more tired than you realize."

We were. All of us. Also, we had spanned the continent with a red cross airplane due to the excessive EGT during start and the re-engagement business. We had not exceeded the allowable crew duty time according to directives then in existence. But, crew duty times are MAXIMUMS - NOT MINIMUMS! A crew duty time is the maximum time a fully rested crew should be expected to safely fly an airplane.

There are times when crew duty times specified in regulations and manuals are excessive. The regs and manuals are guides for supervisors - not ironclad rules to be blindly followed right up to and through a fatal accident. Often, they are the outer limit of normally safe human endurance. Many outside factors can serve to reduce the safe limit of duty for a given crew member. Too many hours on the ramp, a tossing, tumbling sleep the night before, difficult problems at home, or a heavy flying day yesterday. All these can serve to reduce today's crew duty time. What, then, is the yardstick for measuring individual crew duty time?

The individual crew member is best able to judge his own state of mental alertness in most cases. If he is tired short of the normal crew duty time, it is his responsibility to inform his supervisor or operations officer and it is the further responsibility of that operations officer or supervisor to HONOR THE MAN'S REQUEST TO BE RELIEVED OF DUTY. Too many cases are in the files where failure to do so has resulted

*Continued next page . . .*

in the man's death. In such cases, the supervisory personnel are contributing to suicide. It's suicide because the individual crew member should be positive in his request to the point that he refuses to fly, and supervisors are contributing to it because they chide him for wanting to "goof off when

everybody else is going."

The west to east flight described in this article set up a situation that could easily have been fatal, and it involved a violation of regulations (the engine start) by a fairly high member of the wing's supervisory staff. The Air Force prides itself on being

able to profit from experience and by not repeating the same mistakes twice. I wonder how many units in the Air Force today are paying close attention to such minor items as crew duty and engine limits when the supervisory personnel want a mission to go.

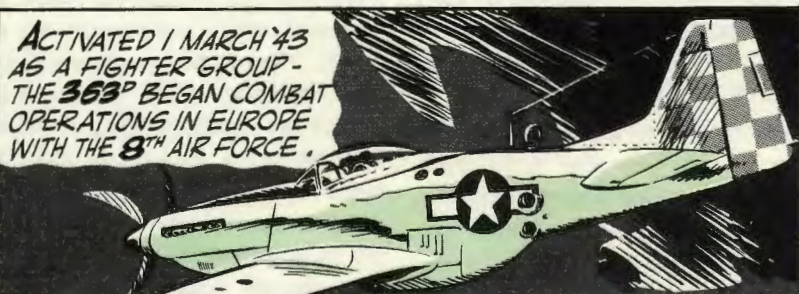


**363<sup>D</sup>**  
TACTICAL  
RECONNAISSANCE  
WING  
SHAW AFB, S.C.

THE ONLY  
TACTICAL  
RECCE WING  
IN THE UNITED  
STATES!

ACTIVATED 1 MARCH '43  
AS A FIGHTER GROUP -  
THE 363<sup>D</sup> BEGAN COMBAT  
OPERATIONS IN EUROPE  
WITH THE 8<sup>TH</sup> AIR FORCE.

IN SEPT. '44 THE UNIT'S MISSION WAS CHANGED TO TACTICAL  
RECONNAISSANCE. THE 363<sup>D</sup> BECAME THE FIRST OPERATIONAL  
READY ARMY AIR FORCE UNIT TO OCCUPY GERMAN SOIL DURING WWII.

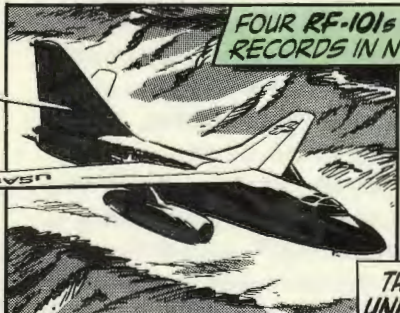


DURING THE KOREAN CONFLICT, THE  
WING'S PRIMARY MISSION WAS COM-  
BAT CREW REPLACEMENT TRAINING,  
USING RF-80 AND RB-26 AIRCRAFT.



THE FIRST RB-66 "DESTROYER" WAS RECEIVED JAN. '56,  
AND THE RF-101A "VOODOO" ARRIVED ON 8 MAY '57.

FOUR RF-101s SET TRANSCONTINENTAL SPEED  
RECORDS IN NOV. '57 DURING OPERATION SUN RUN.



THE 363<sup>D</sup> RECEIVED THE OUTSTANDING  
UNIT AWARD FOR RECONNAISSANCE MIS-  
SIONS IN THE FALL OF '62, WHICH UNCOVERED  
THE EXTENSIVE MISSILE BUILDUP IN CUBA!



AT PRESENT,  
THE 363<sup>D</sup> WING IS  
COMMANDED BY

**Col. ARTHUR D.  
THOMAS**

... AND WILL HAVE A GREATLY IMPROVED  
RECCE CAPABILITY WITH THE PHASING IN  
OF THE NEW RF-4C "PHANTOM II".



# WELL DONE

## *Pilot of Distinction*



Captain Edward J. Hughes of the 366th Tactical Fighter Wing, Holloman Air Force Base, New Mexico, has been selected as the Tactical Air Command Pilot of Distinction.

Captain Hughes was flying an F-84F in the fighting wing position for another pilot who was firing on a dart target. As the lead aircraft fired, a bolt of lightning from an overhead cloud made a direct hit

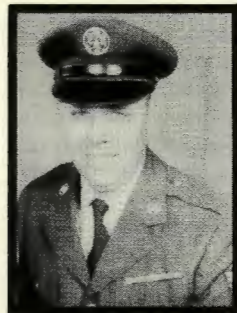
on the towed target. The tow pilot received a jolt which knocked his hands from the controls for an instant, but he was otherwise unaffected. However, because of his close proximity to the target and the bridging action of the .50 caliber ammunition, the pilot in the firing aircraft received a more severe jolt. He was momentarily blinded, his hands were knocked from the control stick and throttle, and his left hand and arm were numbed. His aircraft rolled to the right and entered a descending spiral from 14,000 feet toward the mountains below. Captain Hughes witnessed the incident and immediately joined in close formation with the spiraling aircraft and began giving recovery instructions. He maintained a constant line of instructions in an attempt to arouse and reorient the stunned pilot. Finally at 3000 feet above the terrain, as Captain Hughes was about to give ejection instructions, the pilot responded, rolled wings level and pulled the nose of his aircraft above the horizon. Captain Hughes then followed the other aircraft back to home base 30 miles away and monitored his actions through the landing pattern.

Captain Hughes' quick thinking and determination prevented the loss of a tactical aircraft and saved the life of his fellow pilot.

### THE FOLLOWING TAC PERSONNEL WERE AWARDED THE AIR MEDAL FOR MERITORIOUS ACHIEVEMENT WHILE PARTICIPATING IN AERIAL FLIGHTS:

COLONEL FRANK J. COLLINS  
LT COLONEL ALFRED N. KING  
CAPTAIN RUSSELL S. SCHULTZ  
CAPTAIN JOHN W. VARNUM  
CAPTAIN RICHARD A. MASON  
CAPTAIN JAMES E. FIELD  
CAPTAIN GLEN M. CHENEY  
CAPTAIN BILLY J. VINSON  
CAPTAIN RICHARD SUHAY  
CAPTAIN EARL H. RICHMOND

CAPTAIN DONALD O. RISSE  
CAPTAIN JOHN R. GILCHRIST  
CAPTAIN JOHN T. BUCK  
CAPTAIN CARL E. YOUNG  
CAPTAIN JAMES H. POTEET  
CAPTAIN CHRISTOPHER H. DAVIDSON  
CAPTAIN GERALD W. GORRIE  
CAPTAIN PAUL DA SAN MARTINO, JR.  
CAPTAIN DALE V. SHAFFER  
1ST LT GARY G. GULBRANSEN



**CREW CHIEF  
OF THE MONTH**

Technical Sergeant James A. Hull of the 4520th Combat Crew Training Wing, Nellis Air Force Base, Nevada, has been selected as the Tactical Air Command Crew Chief of the Month.

Assigned as Crew Chief of an F-105, Sergeant Hull completed the acceptance inspection on the aircraft ahead of schedule, and has consistently maintained it in an outstanding manner ever since. During a recent month his aircraft flew every scheduled sortie with the exception of weather and sympathetic aborts. The exceptionally clean condition of Sergeant Hull's aircraft reflects his professionalism and pride of accomplishment.

Sergeant Hull has demonstrated initiative, attitude and dedication that distinguishes him as outstanding among his contemporaries and qualifies him as TAC's Crew Chief of the Month.

## Recognition

**MAINTENANCE MAN  
OF THE MONTH**

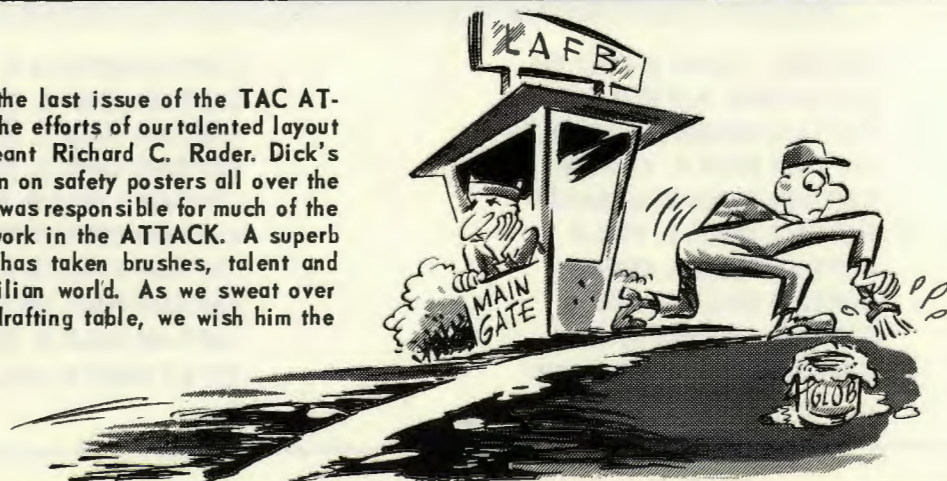


Technical Sergeant Grant E. Thompson of the 4510 Combat Crew Training Wing, Luke Air Force Base, Arizona, has been selected as the Tactical Air Command Maintenance Man of the Month.

Working in the Precision Measuring Equipment Laboratory, Sergeant Thompson has continually displayed outstanding motivation, initiative and technical skill. His efforts have reduced PMEL backlog manhours to a minimum and, in support of the F-104G program, he has trained and qualified civilian maintenance personnel to calibrate their equipment. Sergeant Thompson's technical skill has been invaluable to the 612th Radar Squadron (SAGE) which the 4510th CCTW supports.

Sergeant Thompson's exceptional technical knowledge and his demonstrated leadership ability qualify him as TAC's Maintenance Man of the Month.

This will be the last issue of the TAC ATTACK to reflect the efforts of our talented layout artist Staff Sergeant Richard C. Rader. Dick's signature has been on safety posters all over the Air Force and he was responsible for much of the layout and title work in the ATTACK. A superb sign painter, he has taken brushes, talent and paint into the civilian world. As we sweat over the glue pot and drafting table, we wish him the best of luck.



# TAC TALLY

A COMPARISON OF TACTICAL AIR COMMAND ORGANIZATIONS

## OCT TALLY

| UNIT     | MAJOR | MINOR |
|----------|-------|-------|
| 4TFW     | 1     |       |
| 127TRW   | 1     |       |
| 366TFW   | 1     |       |
| 479TFW   | 1     |       |
| 4510CCTW | 1     |       |
| 1ACW     |       | 1     |
| 113TFW   |       | 1     |
| 121 TFW  |       | 1     |
|          |       |       |
|          |       |       |

## ACCIDENT FREE

MAJOR & MINOR

JET

| ACTIVE | MONTHS |    | ANG     |
|--------|--------|----|---------|
| 12TFW  | 17     | 18 | 121 TFW |
| 363TRW | 5      | 18 | 140 TFW |

CONVENTIONAL

| ACTIVE   |    |    | RESERVE |
|----------|----|----|---------|
| 4500 ABW | 40 | 95 | 434 TCW |
| 464TCW   | 18 | 56 | 435TCW  |

## MAJOR ACDNT RATE

| TYPE  | 1964* | 1963 |
|-------|-------|------|
| ALL   | 10.1  | 10.3 |
| F-4   | 6.5   | 0    |
| F-105 | 26.9  | 23.5 |
| F-104 | 14.7  | 33.2 |
| F-101 | 23.7  | 13.9 |
| F-100 | 16.6  | 12.8 |
| F-86  | 0     | 0    |
| F-84  | 23.5  | 22.9 |
| B-66  | 0     | 0    |
| B-26  | 66.7  | 8.6  |
| T-39  | 0     | 0    |
| T-33  | 0     | 1.6  |
| T-29  | 0     | 0    |
| KB-50 | 12.9  | 4.1  |
| C-130 | 1.4   | 1.0  |
| C-123 | 5.1   | 4.6  |
| C-47  | 0     | 0    |
| U-10  | 32.5  | 11.6 |
| T-28  | 0     | 37.2 |

The October tally ended with five majors and three minors for a slight improvement over September. However, this was marred by three fatalities.

An RF-84F pilot was killed when his aircraft crashed on a low level . . . a rudder malfunction may have been the cause . . . and an F-100 pilot died when he lost control on the final turn for a strafing pass. A flight of four F-84Fs orbited in loose echelon awaiting clearance onto a gunnery range . . . as lead started in on his run, the number four aircraft crashed, killing the pilot.

Compressor stalls, torching from the tail pipe and a rapid loss of airspeed at low altitude brought on a successful ejection from an F-104. The pilot was not injured. Two pilots of an F-105F ejected safely following an inflight fire . . . also at low altitude.

A U-10A's left main gear collapsed on landing . . . minor damage. After experiencing complete electrical failure and jettisoning tanks, an F-100 pilot entered the pattern for landing. He put the gear handle down, but without electrical power the gear stayed up. The landing caused minor damage.

On pullout from an air-to-ground pass an F-86H pilot overstressed his aircraft enough to break approximately three feet off the left and right stabilizers.

\*1 JAN - 31 OCT 1964

