

DECEMBER 1963

# TAC ATTACK

TAC Attack December 1963 Big Business



BIG BUSINESS

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### COVER PHOTO

Winter scene for this month's cover was photographed by SMSgt Howard W. Belles, 140th TFW, Buckley ANG Base, Colorado.

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# Angle of Attack

*Either do not attempt at all,  
or go through with it*

*- Ovid*



Colonel Eugene S. Williams  
Chief, Office of Safety

My first opportunity to speak to you as the new Chief of Safety comes at an opportune time since it gives me a chance to wish each and everyone of you a most pleasant holiday season.

I won't spoil this occasion by immediately cautioning you to "keep the holidays safe" even tho a few of you may let the "spirits" of the season or your desire to get home overcome your better judgment.

Like my predecessor, Colonel Johnson, and other people here in the TAC Safety Section, I dislike the "be safe" concept. To be safe, absolutely safe, we would have to avoid all hazards. Which means we would have to quit driving automobiles, stop flying, turn off the electricity, put out the fire and even quit taking a bath. Look how many people are injured each year because they slip and fall in the tub or fall out of bed.

So much for the negative approach. If you want to keep your children from drowning, teach them to swim. If you want to keep them from getting involved in an automobile accident, teach them to drive capably, intelligently, and defensively. Teach them to pre-plan emergencies so they know in advance what action to take when faced with a problem. Point out the many problems induced by high speed so they will be less tempted to drive fast. Discuss the reason for traffic laws and insist that they follow them ... that by being standardized, other drivers will know what to expect from them. Last, faithfully follow your own advice.

Apply the same approach to flying, working and living and you have my concept for safety. It is no simple, magic formula and there are no short cuts, but it works. To use the old cliché - a job performed properly is inherently safe - and we can all be proud ...

*Colonel Eugene S. Williams was commissioned in the Infantry and graduated from the Infantry School at Fort Benning. He transferred to the Air Corps in December 1942 and was soon flying P-38s on recce missions in the ETO.*

*By 1946 he was flying P-80s. He worked his way up thru the usual squadron jobs, such as supply officer and operations officer to command an F-80 and F-84 squadron in Korea. He has experience in operations staff work at number air force, served as a group officer and acted as detachment commander of several jet training units. He received his background in Safety by attending several safety schools, including the course at Southern California, and by working as wing and division safety officer and director of safety. At present, Colonel Williams is Director of Safety for TAC.*



# 0800..GO?



**A**T SIX THIRTY, it was light enough to tell that the day would be a loser. Cloudy, damp, cold, with a strong wind whipping across the ramp causing the T-39 to dance around on its chocks like an overeager fighter waiting to enter the ring.

Major Brooks stepped outside the aircraft after stowing his gear

and affectionately slapped the side of its nose. "Be patient, we'll get you to Seattle well before dark. Right now I better run a clearance."

In base ops he found Digger slaving over the fuel figures on the form 21A and asked about the weather.

"Haven't looked at it, boss,

other than to pick up the w/ Here, finish putting in the for each leg on this and we'll run it under the crystal ball." Digger handed Brooks a nearly completed form 175.

The weather was clear and 15 at McConnell, their first stop, and would hold that way the rest of the week. As usual, L.A. was down to one and a half in smog. Seattle was reasonable with about 1500 and 5, but would deteriorate as the day wore on. The captain behind the weather counter silently cursed composite clearances as he laboriously completed all the weather section. Then writing smaller and smaller, he completely filled the remarks section, too. He asked without looking up, "Do these composite clearances actually save you much time?"

"They sure do," Digger answered. "We can cut our turn around time by a good half hour. Mainly because we won't have to wait for McConnell or L.A. to get our clearance in to flight service. We'll call it in direct."

It was seven thirty when the captain finished briefing them on the weather and precisely ten seconds later when they tossed the clearance to the operations clerk and headed for the door.

At eight, Digger finished reading off the pre-start check and pressed the starter for number two. "I'll take care of this one," he chuckled. "You can play with the other."

"That's the joy of putting two fighter pilots in one machine... Hey! what's with your generator?"

The overheat light was on. Digger turned off the right generator but the light stayed on. "It's probably the light. They had the same write up yesterday, cleared it by replacing the generator."



Brooks grunted. "Probably didn't run it up." He motioned for the crew chief.

Over at the base ops snack bar Brooks, Digger and their four passengers sipped coffee, told war stories and tried not to be impatient. After a bit Brooks glanced at his watch and then out at the unattended aircraft. "Almost nine. I thought they said they could fix it in a half hour. Think I'll stir up some activity."

"Luck," someone murmured as he went thru the door.

Brooks could feel warm air flow out the window of the pick up as the grey haired tech sergeant explained that they would have to research supply for a new thermocouple bulb even tho he knew supply didn't have one.

"How long will this take?" Brooks asked trying to keep from sounding too disappointed.

"Sir, I don't know. I'll level with you. They had trouble finding the right part number and I just called it over to supply."

"Can't they get the generator off and get it ready while they're waiting on supply?"

"Oh, it'll only take a few minutes to do that once we find one."

Brooks mumbled his thanks and walked back toward base ops. He mentally kicked himself for taking the flight. Being gone for a day and a half wouldn't whittle down the stack of work piled on his desk...but he had a brother who worked for Boeing, and it had looked like a chance to look him up and con a free meal from him. Now, he'd be lucky if they got there in time to catch him, if weather held above minimums.

An hour and a half later there still hadn't been any activity around the aircraft, so once more he cornered the tech sergeant and

talked him into prodding supply over the truck's radio. After four or five calls an irritated voice replied, "We're working on it. Quit buggin' me."

"They ain't gonna find it," the tech sergeant growled. "My men are all set to pull one off triple four, but my hands are tied. We can't until the chief of maintenance gives us the go-ahead... and he won't act without a nod from supply."

Frustrated, and just a little angry, Brooks stalked back to the snack bar.

"I never saw such a system. It's like a wisp of smoke. You can't hang on to anything. No one in particular seems to be shirking his job, yet the damn airplane sits out there for two and a half hours and no one does anything to it." Brooks shook his head as if to clear it.

Digger looked at his watch. "Three hours you mean." He glanced out the window. "Hey, here comes our boy now."

Sure enough, a young airman walked jauntily across the ramp toward the waiting T-39. "My cow," Brooks muttered, "if that don't beat all. There's a tech and an airman first riding around in that truck and two more old heads driving around the line in those other trucks. A bunch of good heads over in maintenance control playing with radios and fancy peg boards and the only one working on the actual problem at hand is this guy who's hardly old enough to shave. I don't get it. I fail to see why anyone considers this system efficient."

Half an hour later, Digger and Brooks were again seated in the T-39 with their clearance on request, weather extended for the second time and the whole world definitely looking better, even tho

they'd just be able to make Seattle before their crew rest expired. If the weather didn't deteriorate too much, they could salvage a little of the trip. Brooks signaled for the APU and Digger started to read off the abbreviated checklist. Right then the crew chief stormed up the steps and shouted, "the left engine is motoring over and smokes' pouring out of the starter generator. Are you trying to start it, sir?"

Brooks looked at the engine master switch. It was off. Meanwhile Digger turned off the battery and electrical master switches.

"It's still smoking!"

"Yank out the APU!"

After the excitement subsided, the crew chief reasoned that the starter relay must have stuck closed. Digger and Brooks agreed. Brooks looked at the crew chief, "Do they have any in supply?"

"I doubt it, sir. I'll have to get the part number." He looked down at his hands and popped a knuckle. "Frankly, sir, I'm afraid we'll have to replace the starter generator. It was smoking awful bad."

Brooks nodded, "Well, OK, chief. Thanks." He looked at Digger who somehow managed to sum up his disappointment in one word. After the crew chief backed out of the doorway, Brooks turned to the passengers and asked, "Can I give anyone a ride to commercial transportation?"

"You know," Digger mused, "it would be very easy to bad mouth the whole maintenance system after going thru a fire drill like this. However, I'd bet even money that the whole trouble can be traced to one or two men who are falling down on their job. It's too bad they aren't the ones who are inconvenienced or have to listen to those of us who are. Anyway, it sure points out the fact that it takes teamwork to get the job done."





LAST YEAR THIS TIGER fell asleep before that fat little man made his annual visit and once again I didn't get a chance to explain in detail just how I wanted him to fill the pair of stockings I hung by the chimney mit such care. Sigh.

Rationalizing, this is one time it's just as well someone failed to get the word, considering such factors as Mrs TAT. Wonder why he filled 'em with pecans... could there be some significance?

So much for lost causes. Time to get back to work. A check thru the stack of papers hiding the in basket uncovers this interesting little story about a TAC lieutenant who had trouble right after getting a drink on an overwater haul. Thanks to some fine cooperation the story has a happy ending. Perfect for Christmas.

The fun started when he tried to retract the flaps on his F-100 from the intermediate position. They refused to budge. He did as most red blooded types would do... pulled and reset the circuit breaker, jiggled the handle, used normal emergency procedures and said a few words. By and by he ended up with full flaps. Nearest dry land was about 700 miles away so things were terse.

At near full military the bird would hold 12,000 feet and 190 knots, so he started for land with another F-100 as escort. They were soon joined by two tankers who had serviced the flight some minutes earlier. After checking fuel flow against that available, they decided there wouldn't be enough to hack the trip unless they could get another tanker on the scene or ruin the J-57 by taking on some aviation gasoline.

They contacted Major Wallace L. Rerick, the tanker detachment commander at the airfield toward which they were headed. Rerick alerted maintenance, rounded up a crew and managed to scramble just 23 minutes after receiving the call for help.

Meanwhile back over the drink, the lieutenant made a hook-up off each tanker and drained them of JP-4. He was just fixing to take on gasoline from 'em when Rerick and crew arrived on the scene.

A right fine performance and a tip of TAT's hard hat to Major Rerick and crew for their fast accurate response and to the lieutenant for making successive hook-ups under make-it-or-swim conditions.

About ten years ago TAT was headed into Tinker on a night flight in an F-86. Enroute I noticed the bird was flying in a slight skid. I tried to trim it but could only get the blasted rudder to trim in the wrong direction. Remembering this flight, I have a hard time criticizing the lieutenant for getting himself into his full flap flap. Yeah, I ended up with full trim on that rudder and paid for it with a king size charlie horse. Served me right for not knowing when to leave well enough alone.

Of interest, the NAA people claim intermediate flaps will reduce an F-100's range about 20%. This is rough and dirty... so if you should find yourself with a stubborn flap flap, keep it to minimum sweat and don't select any down flaps. Figure on 20% less range and confirm this with a computer and fuel flow readings. If your mission doesn't slice close to 60-16 fuel reserves, chances are you can press on with safety.



THIS YOUNG century dog pilot was practicing intercepts with two captive GAR-8s on a type 9 pylon hanging on the left inboard station. A couple of 335 gallon tanks were slung on the intermediate stations and a type 7 pylon at the centerline.

After practicing intercepts for about an hour he headed back toward the barn. Enroute he made radio contact with the squadron ops officer, and after a little chit chat, the ops officer proceeded to come in on our boy from the rear. Our boy reacted with a left turn. Broke left you might say, if you consider a 45 degree banked turn to be a break.

During the turn his airspeed went from about 295 knots down to around 265. Then the nose dropped. Turn rate increased and the bird rolled inverted. The young lad released back pressure but the aircraft continued on around into a left spin.

He retarded the throttle, got a compressor stall, and jettisoned the garbage. Confused, he applied corrections for a right spin. No soap.

Going thru 17,000, with the ops officer prompting him, he released the controls and then tried a proper recovery. The bird was still spinning at 10,000 so the pilot finished the ride sans aircraft.

Letsee ... that type 9 gave our boy an asymmetrical configuration, and being on the inboard station, could louse up overall aircraft stability. The dash one points out, in so many words, that you gotta be careful to keep things coordinated and to stay away from high angles of attack and the stall region with asymmetrical loads.

The book also cautions that in a stall, the yaw caused by an asymmetrical load "may tend to induce a spin."

If this tiger had written that paragraph I wouldn't have 'tended' to be so mealy-mouthed about it. However, that's neither here nor there. The whole point is this: The inboard pylon reduces lateral stability . . . meaning that you must use more rudder for any given maneuver. The asymmetrical load causes the aircraft to yaw. To correct it you need to trim the aileron and center the ball with rudder. Now, let's put this mess into a 45° level turn. G-forces are going to effect the heavy wing more than the other. This adds to the yaw and the requirement for corrective aileron and rudder. But, remember, the rudder isn't as effective as normal. Also, the corrective aileron creates drag tending to yaw the aircraft and adding a requirement for still more rudder. As the speed slows, the angle of attack increases and more and more of the rudder and vertical stabilizer are blanked out by turbulent air from the wing. Once

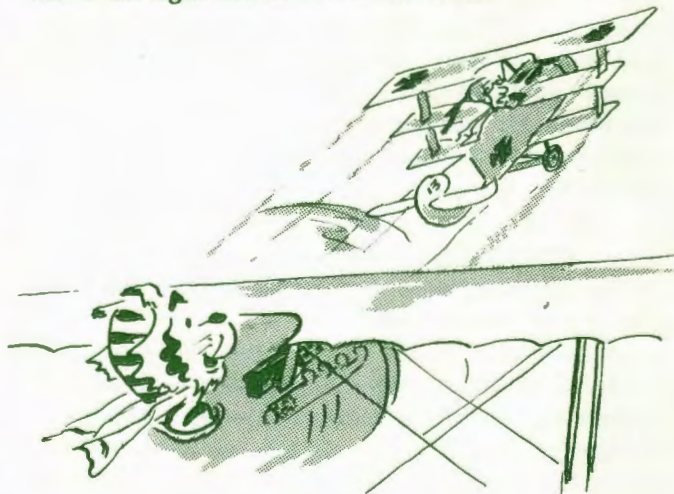
a critical point is reached the bird takes over . . . in spades.

The dash one makes a big issue out of keeping these lousy loaded birds coordinated . . . it's pretty obvious that the constantly changing requirements I've just described would strain the coordination of Spencer Tracy himself.

You can also see how easy it is to sneak into trouble without getting near a stall or near the limit load factor.

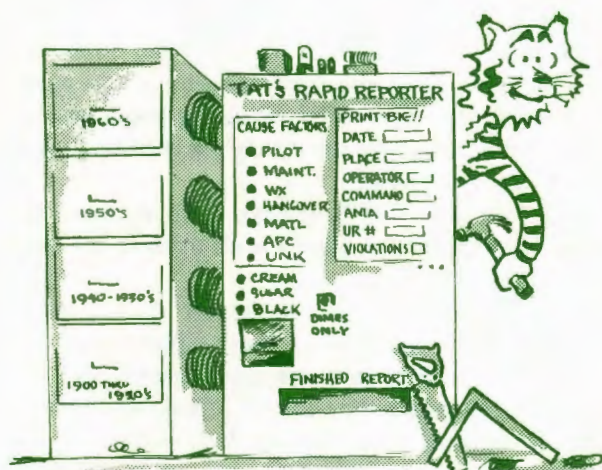
Back during the big rumble the first thing us fighter types did when we spotted bandits was to grab a handful of throttle and prop pitch control and ram them as far forward as we could. Next, we switched tanks and cleaned off the stupid drop tanks.

In Korea we didn't do quite as much. If somebody hollered MIGs, we just shoved the throttle forward, locked it and then punched off the tanks. In either era, if a tank failed to fall, we did our best to quietly sneak out of the fight and hi-tail it for home.



Now I haven't tail chased with any of the later type aircraft owned by our less sweet-tempered world neighbors. But, unless the carefree guys designing the bad boys' birds have suddenly lost faith in their ability to produce reasonably reliable single systems for things like gear and flaps and so on, you troops are going to have to get rid of every pound you can before starting a life and death hassle. As I see it, air combat tactics sessions are to teach you how to conduct one of these hassles . . . why practice with a configuration which you can't use? It's like practicing combat in one bird and flying it in another. Obviously, you can't hassle with the GAR 8 . . . meaning you have no defensive capability. It is strictly for hit and run, or shoot, miss, shuck it and fight tactics.





SOMETIMES US MORE EFFICIENT - that's a nice term for lazy - safe flying types seriously consider mimeographing off certain accidents, leaving blank spaces for the date and names of people and places. From experience we know another will crop up just like it and it's nice to have the report all filled out. I picked up one of these just the other day and automatically checked the date to make certain it wasn't an oldie that had gotten lost on my desk. It wasn't.

Care to try it on for size? OK. The mission was a high-low-high profile against a hydro electric plant. The aircraft - reasonably modern and fast. The pilot - experienced.

Experienced lined up with the river about 12 miles downstream from his assigned target and steamed up the river until he spotted a dam which he thought was it. He made his run about 600 feet above the level of the dam, felt a thump and glanced to the right in time to see a tower well off to his right, higher than the aircraft.

He checked his bird as being reasonably intact while enroute home. Ol' experienced was lucky. The bird chopped down enough wire to buy a new compact car and only did 63 hours damage to itself.

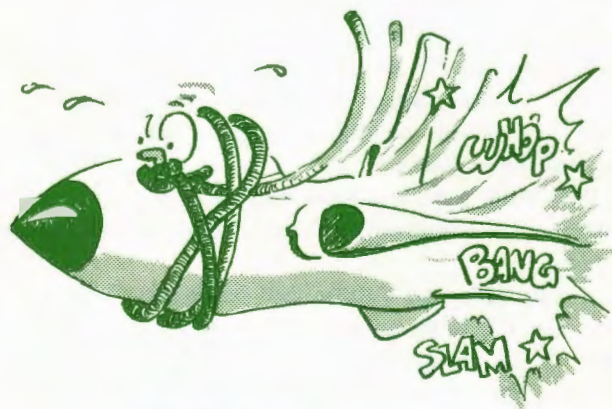
You're right. He made his run on the wrong target and no one had preflighted the route. There are several approaches to this problem. One is to romp and stomp about not looking around enough when flying low levels and to chew long and hard about navigation errors. BUT, people make mistakes and the man has yet to be made who can spot towers and other tell-tale signs of power lines while blasting along at the usual speed reserved for delivering low level ordnance or taking low level photos. Wouldn't a better cure be to run a check on all similar targets

in a given area and then briefly brief the troops the characteristics of those potential wrong targets which have dangerous approaches? Or am I naive?

WHILE CRUISING flight level 350 at .9 mach this lucky type advanced power from 90 to 100 percent. The right engine compressor stalled and RPM dropped to 70 percent. He brought the throttle to idle, but the engine flamed out.

Ole Lucky dropped down to FL 300, got an airstart and again advanced power to 100%... EGT continued past the normal range and remained between 800 and 850. The nozzle indicated zero percent open. He pulled throttle back and tried it again with similar results, 'cept the EGT rose more rapidly... he decided things weren't right and headed home. The engine overspeed setting rod end had come loose from the control arm.

So much for careless maintenance, TAT brings this one up because it illustrates a common pilot reaction to a malfunction. Now I ain't afraid to live dangerously... BUT why take a chance on ruining an engine just to satisfy your curiosity?



AN F-105 PILOT made a smooth hookup on a KC-135 probe and drogue the first time he ever tried the combination. While stabilized in the refueling position the curl in the hose slowly rotated until it got behind the drogue wing assembly and also wedged between the probe and the aircraft. Shades of Buzz Sawyer.

The pilot held position, but so did the hose. Finally he tried to ease slowly back... pulling on the hose. Whop! The probe assembly broke down and left. As it whipped away, it broke the drogue trunnion assembly and fell off the hose then bounced into the right inboard side of the left external wing tank and the left horizontal stabilator. It hit hard enough to



d the stabilator spar and cause the inside trailing edge of the left stabilator to jam into the fuselage faring. Three bolts on the crossover tube were also sheared and the front edge of the right stabilator dented the right fuselage. This is about as close as you can get to losing the whole shooting match without doing it.

Some plain garden variety figuring will show you that the hose is most apt to swivel if you keep directly behind the tip of the boom. Move off to one side and it ain't going to rotate. If your bird has its probe on the right, stay to the left and vice versa so it will be less apt to knock your head off should you get a disconnect.

SHORTLY AFTER LIFTOFF on an ORI, an F-100 pilot noticed a funny vibration . . . you know, something like the nose wheel spinning only further back, like right under his seat. The engine instruments were in the green, so he leveled briefly at 10,000 feet, cycled the gear, checked flaps up, and recycled the speed brakes. Nothing seemed to be wrong and being it was an ORI, he put her in AB and pressed on.

Shortly . . . boom! The engine compressor stalled. pulled the throttle inboard and started back toward ne. FTOOM! An explosion shook the bird and the cockpit filled with white smoke. He couldn't get a reading on anything so he increased the defrost to help clear things up as he selected 100% oxygen and retarded the throttle to idle.

Lights were on all over the panel and the engine was flamed out. He dumped the canopy, tried an unsuccessful airstart on the emergency fuel system - which pegged the EGT - and, with no place to go, ejected.

After the chute opened he looked up and saw the seat dangling from the chute canopy. A gaping hole decorated the opposite side. He tried to climb the risers to free the seat, but spilled too much air. He tried to shake it loose, but failed . . . somewhere in the process he noticed his helmet was dangling below, hanging from the oxygen hose. He unplugged it and let it fall. Fortunately he and the seat landed separately.

The excitement was caused by the number two compressor which decided to shuck its blades for an unknown reason.

TAT can sympathize, having once ignored an unusual vibration that spelled doom for a J-47 and 86. For some months afterward I was rather sensitive to strange thumps and vibrations. Once you really start listening to these aircraft, it is



amazing how much talking they do. By and large most of it is idle chatter that doesn't mean a thing.

If someone could figure out a way to simulate the noise and feel of serious malfunctions so pilots could recognize an impending failure, we might save an occasional bird. To date about all a fellow can do is follow this lad's example and try to isolate the source by checking instruments and recycling stuff that can hang out in the breeze.

All in all there isn't much a hindsighter could do to improve on this troop's performance. Considering the smoke and loud thumps that accompanied flameout, I wouldn't have tried the airstart. The try did no harm, but it would surprise you how many die-hards have ruined their chance for ejecting safely because they wasted too much time trying to start a completely broken engine.

I'd like to think that I would have had presence of mind to put on my hard hat instead of pitching it - particularly with a 70 pound seat making with the sword of Damocles bit . . . however, a fella doesn't always think things out as clear as he should when excited.

"HEY TAT," the safety office many-motors type waved a huge photo, "one guess as to how come this guy went plowing corn."

I put down a gnawed stub of pencil and squinted. The photo showed a slightly mangled C-119 with its nose in the corn. One fan bent and battered, the other feathered. Then I saw what he was driving at. The cowl flaps on both engines were wide open. A small item, but when the bird has little reserve power, a small item can be the big difference between success and failure.

—TAT—



# Decisions, Decisions



**C**APTAIN LEONARD MC-ELROY finished briefing B flight and paused to look out the window at the silver grey brute darkening the sky to the southwest. "It doesn't seem to be moving,"

he reasoned, "so it'll probably stay there the rest of the day. We might as well saddle up." He checked his watch. Fifteen after, they should be able to make their 1400 takeoff time without sweat.

He turned in a single 1080 for the complete flight, altho Captain Bill Halton would be taking Lt Richards with him on low level number six while he and Capt Detrick flew low-level number four. They'd meet at Gunsight range, get off their bombs, and come back as a flight of four.

Lt Richards was not very 1 on experience. He had just gone thru Luke and this was his fourth mission with B flight. Briefly, Bill considered taking Richards and letting Halton take Detrick. Detrick didn't have much 'hundred time, but he had enough in other fighters to make up for it. "Better not," he decided. "We're already briefed and Halton should have enough sense to keep Richards well clear of these storms."

The duty officer in the command post was uneasy about the weather. He picked up the phone. "Mobile, this is Capt Waxman at the command post. How about that thunderstorm south of the field?"

"Hi, Wax. Gosh, I don't have anything south. Why don't they cut some windows in that place?"

"Oh hello, Lee. You out there again? Make sure on that thunder storm. Weather has been bugg me on it. How bad is it?"

"Not bad, looks like a little



and it's quite a ways off. You've got a granddaddy building up to the west . . . looks like it might be headed our way."

"Keep me posted."

"Will do, boy."

Ten minutes later, after calls from both mobile and weather, the wing ops officer entered the command post. "Wax, better send out a recall. That thunderstorm is headed our way. Weather says it'll hit the field in about 45 minutes. Who all we have out?"

"About 19, Maj Swain. Sir, you want to recall the GAM flight or divert them. They won't get back with enough fuel to go anywhere else?"

"Ahh . . . better divert them."

Low-level number four was about five minutes shorter than six so McElroy checked in with Gunsight control while Bill Halton was still inbound to the range. Gunsight told them to call the command post.

When he called, Maj Swain took the mike and advised him to get home and land as soon as possible, that weather was starting to move in.

Turning to Capt Waxman,

Maj Swain nodded agreement just as Blue Test reported in 70 miles east. "What the hell's he doing so far out in the local area?" Swain muttered, grabbing the mike.

Capt McElroy threaded his flight between a couple of rain showers, spotted the base and was cleared to land on runway three. The tower advised that winds were 20 knots from about 300 degrees. He turned left for a straight in, directing Detrick to take spacing. On final, his bird pitched and yawed from turbulence, so he keyed the mike and advised, "Play it cool, Red 32, it's a little turbulent. If your bird weathervanes on the runway, be sure to get rid of your chute."

"Roger."

Major Thompson, McElroy's squadron commander, watched their landings from the mobile control unit. Detrick touched down hard, his aircraft bounced onto the nose gear, then stabilized on all three. Thompson looked at Lee. "That was a shaky one, hand me the mike." Lee did as directed. "Tower," Thompson radioed, "I recommend you permit no further

Thompson paused a moment, then replied, "I don't think you can make a safe landing on zero three; however if you have to land, you should be able to hack it OK on three zero."

The tower operator advised, "Blue Test, you're cleared on downwind for three zero."

"Roger, on downwind present time."

Capt Halton started a climb to 10,000 feet and gave Gunsight control a call. No answer. He tried again, then made a pass by the range tower. No activity, except for a truck leaving the range. "Closed," he decided, and promptly tuned in the command post frequency to confirm.

His call brought some raised eyebrows from the command post. "They must have split into elements, sir," Waxman explained.

Maj Swain made a hurried check on the storm's progress, then keyed the mike, "Red 33, return to base and land."

Capt Halton signaled for a join up and then called approach control to see if the base was socked in. Approach control told him it was VFR.



Swain asked, "Is that all of 'em?"

"Not quite, sir. The sarge is still trying to contact Blue Test. I'll tell the range officer to close shop."

aircraft to land."

"Roger, understand."

"Ah, this is Blue Test, I'm on final at present time. Do these instructions apply to me?"

The two F-100s ducked between a couple of storms and broke out just east of the field. The tower said the field was VFR and reported that mobile advised using



runway three zero, that a rain shower was rapidly moving in from the west and the wind was 300 to 330 degrees, 20 knots, gusting to 35.

Halton made a short initial, using a right hand pattern to avoid the storm. As he touched down, the thunderstorm crossed the runway about three or four thousand feet down.

Lt Richards followed Halton around the pattern ending up on a flat final. He leveled about 15 feet above the overrun and kept his altitude, crossing the barrier at the same height. Lt Lee, in mobile, didn't like the approach. Richards would be touching down long on a wet runway. Almost by reflex he told him to take it around.

Richards obediently shoved the throttle forward and flew into a nearly solid wall of water. His slowly accelerating aircraft settled into the mud alongside the runway, but eventually managed to lift clear.

Airman Third Class Raymond E. Thornton was driving around the

One of his passengers exclaimed, "Yeah? Well here comes one now!" They watched as the big F-100 passed in front of their car, no more than five feet off the ground. It disappeared in the rain.

"See any more?" someone asked.

Thornton opened the car door and peered out. "You think he made it?"

"I don't know, but I sure wouldn't want to be up there with him." They waited for the light to turn green, but kept glancing off beyond the runway. In about two minutes the rain squall moved on East and they could see the smoke and flame from the crash.

Driving to work, Major Harry Hirsch was more thoughtful than usual. The board he was on had just about wrapped up the accident investigation. The first finding read, 'Primary cause, pilot factor because the pilot used faulty judgment during his approach to land and was unable to cope with the hazardous situation he encountered afterward.'

fact that he was placed in situation almost guaranteed an accident. A lot of people helped put him in over his head."

The car in front slowed to a stop. Ahead, Hirsch could see a policeman directing traffic. The car in front pulled out with a lurch and by the time Hirsch arrived at the intersection he had fallen some six car lengths behind. The policeman waved him to hurry . . . instead, Hirsch signaled for a stop. A couple of dogs were chasing a rabbit alongside the road, and the rabbit suddenly turned. Rabbit and dogs would be crossing about two cars in front. With the car ahead tailgating, Hirsch could see the accident coming.

He pulled around the disabled cars leaving a sheepish looking policeman. "If I'd followed your directions," Hirsch thought, "I'd be number three in that pile up. Not much different than Richards' accident, actually."

Everyone had been acting in good faith, but with incomplete information. The people in the command post knew weather would be moving in, but didn't know how long it would last. They assumed it would last for quite a while. They also assumed the flight commanders would have little fuel to go to an alternate or wait out the storm.

Richards had interpreted the command post advisory to be a directive. Lee in Mobile assumed he was dealing with a reasonably well qualified pilot who could hack a go-around into IFR weather . . . All in all it was one of those unfortunate mixups. Hindsight indicated that Halton had been in the best position to prevent the accident, but even then . . .

Hirsch started thinking about how to word a minority report.



perimeter track toward the AC&W Squadron. Three other airmen were in the car. Thornton was driving slow. Because of the heavy rain he was tempted to ignore the red stop light off the end of the runway. "Chee," he thought out loud, "what they got that thing on for? No one's going to be flying in this rain."

Hirsch was uneasy . . . "Darn it," he thought, "a young inexperienced lieutenant can't be blamed too much for following orders to the letter. True, he botched the approach. But, again, under the circumstances, could he be blamed? He had limited experience and the F-100 isn't noted for its visibility in rain. No, the





# SEG NEWS

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

## *Know your Stdn Evaluators*



**MAJOR DAVID R. LUMLEY**  
CHIEF, CONVENTIONAL SUPPORT BRANCH

Major David R. Lumley was born and raised in Des Moines, Iowa. He entered the service in 1942 and graduated from flight training in January 1944. As Aircraft Commander in B-24s, he completed 35 combat missions over Germany. In 1945 - 1946 he was assigned to the Air Transport Command performing duties as Aircraft Commander in the C-54. After a four year break in service, he was recalled in February 1951. Assigned to MATS from 1951 to 1960, he performed duties as an Aircraft Commander and Chief Pilot in C-54s and C-118s. After completing Air Command and Staff College in 1961, he was assigned to TAC. Major Lumley is presently serving as Chief of the Conventional Support Branch. During his military career, he has accumulated approximately 13,000 hours flying time, primarily in transport type aircraft.

### THX KXY PXOPLX

Xvxn though our typxwritxr is an old modxl, it works quitx wxll xxcpt for onx of thx kxys. It is trux that thxrx arx forty thrxx kxys that function wxll xnough, but just onx kxy not working makxs thx diffxrxncx.

Somxtimxs it sxxms to mx that our Stdn/Xval program is somxwhat likx this typxwritxr - NOT ALL THX KXY PXOPLX ARX WORKING PROPRRLY.

You may say to yoursxlf, "Wxll, I am only onx

pxrson, I won't makx or brxak a program." But it doxs makx a diffxrxncx bxcusx a Stan/Xval program to bx xffctivx rxquirxs thx participation of vxvry pxrson.

So thx nxxt timx you think you arx only onx pxrson and that your xfforts arx not nxxdxd, rx-mxmbxr our typxwritxr and say to yoursxlf, "I am a KXY PXRSON in our Stdn/Xval PROGRAM and I am NXXDXD VXRY MUCH."



## THE BIRDS AND THE BEES

Man has often marvelled at the flight of a bumble bee who reputedly is scientifically incapable of flight. Conversely, a C-119 on one engine is a bird scientifically capable of sustained flight, but occasionally there is one that won't make the grade. There appears to be a problem about the birds and the bees that should be re-evaluated, as it is confusing man.



Load a bee down with honey, make him fly with his feet outstretched (on a hot day to boot), and he has his work cut out for him--but he makes it. The big tin bird on one engine, heavily loaded, plus something less than a clean configuration has an equally challenging task - especially since the crew cannot flap the wings more profusely in a "tight spot" or maneuver with the precision that one employs when he feels each current of air affecting his flight. Confusing, isn't it, that nature gives the bee the benefit over man, but the scientific man gives the airplane the edge? Obviously the capability of the airplane to sustain flight is qualified, since not all get home to roost.

The airplane is controlled by man, and man is smarter than bee. Only the best operating procedures are devised, practiced and employed during successful emergencies. He who departs from the established procedures during an emergency is chalking up a point in favor of the bee. Extend the gear or flaps (or excessive cowl flap opening) and you won't drag them through the wild blue like the bee. If a bee overflies the first flower, another may be near --

Try overflying a good airpatch and you may end

up in a corn patch.

Don't panic now, friend, for not all the cards are held by the bee. He simply makes his honey from flying and has learned to become professional -- for some men have said that he is not a flyer and he recognizes therefore he must work harder at the game. With much less than bee effort, we can become professional and stop bending our birds -- just learn the rules and follow them; after all, the rules are in our favor.

## STANDARDIZATION

Standardization is a word that most of us have heard bandied about with great abandon throughout our military careers. This word, which means many different things to as many different people, governs our very lives; the way we dress, eat our meals, write our letters, greet each other, march together, and do the million and one other things which our society must do uniformly and in unison to prevent mass confusion and chaos. Look what would happen if everyone drove a car to suit himself! In many aspects of our society, standardization has become an end in itself, rather than a means to an end. Thus, sometimes find ourselves performing a particular procedure in blind, unthinking obedience; not discerning the purpose or desired end result of the procedure, but rather making a ritual out of what should be a meaningful action.

When we in the flying business start making rituals out of procedures, we're in trouble. We bend airplanes. We miss targets or drop zones. We lose sight of the purpose of our existence as aircrews and become robots.

SEG is in a continuous program of analyzing, evaluating and revising procedures and techniques in an attempt to keep our aircrews informed of the most effective, reliable and up-to-date methods for employing weapons. These procedures, based on the best information and experience available, are designed to provide a reliable means to safe, effective mission accomplishment. They are dynamic procedures meant for intelligent application. We have not and will not purposely endorse procedures designed for blind, unthinking accomplishment. Even when performing the so called "instinctive reaction" procedures, one must realize what he is doing, and why he is doing it. Since we are still some years away from the completely automatic or robot operated aircraft, it would behoove us mortals to apply ourselves to this business of operating aircraft as



elligently as we can. In the final analysis, it is  
e manner and extent to which we:

Know our aircraft.

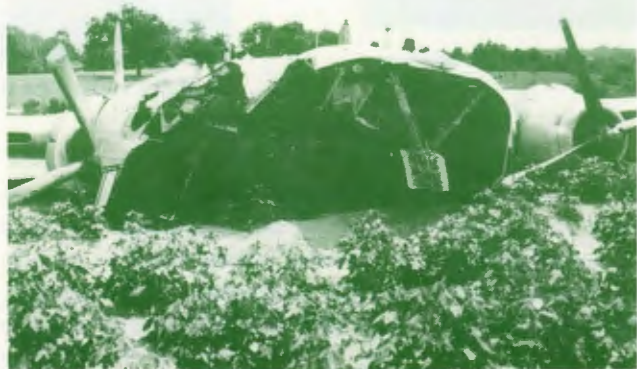
Understand our mission.

Know and apply procedures and techniques that  
determine our effectiveness and reliability . . . and  
incidentally, help us make our three score and ten.

### OVERLOOKED

It occurred to us so called TAC ATTACK article  
writers that everybody gets mention in our stories  
except one crew member, heretofore practically  
unheard of. While investigating this matter, we find  
we have a crew member who is as deserving of  
praise and recognition as any of the rest. We, the  
story writers, will take our share of lumps on this  
account and hope proper atones can be made. If you  
haven't already guessed, we're speaking of the load-  
master.

This oversight probably occurred to us as a  
result of reviewing two recent C-119 accident re-  
ports. During Swift Strike III, a formation airdrop  
was about to take place when one of the planes lost  
engine. It soon became apparent they weren't  
going to make a suitable field so the A/C ordered the  
load jettisoned. The loadmaster took care of this  
with dispatch. The load had no sooner cleared the  
tail when they plowed into a corn field. This doesn't  
sound like much until you consider a crash landing  
with a load of cargo sitting on roller conveyors.



adoubtedly the quick action of the LM saved crew  
lives. They all walked away with only their nerves  
slightly shattered.

Well, the keeper of the law of averages completely  
ignored the lightning-never-strikes-twice bit and  
placed the same loadmaster on another airdrop  
mission just 35 days later. You guessed it - just  
after lift-off, the number 2 engine defeated the odds  
and quit. This time there wasn't a second to spare.  
The A/C called "jettison the load." The loadmaster,  
thinking it wasn't his day, got rid of the load, grabbed  
a seat and buckled in just as the C-119 made a mess  
of a bean field. Once again everyone walked away.  
Once again consider that load sitting on roller con-  
veyors. You've got to admit these are hair-raising  
experiences and our two-time hero is wondering if  
anybody cares.



In another Swift Strike accident, a YC-123  
collapsed a nose wheel on landing, breaking the  
fuselage in half and sliding to an abrupt stop. The  
cargo load in this bird never budged thanks to a LM  
who knew his business. The crew walked away none  
the worse for the experience. However, inadequate  
tie-down procedures could have easily changed the  
outcome on this one. A 10,000 pound load of cargo on  
the back of your neck really smarts.

We've just related a couple of stories and perhaps  
you know many more. Why is it we so seldom hear of  
the loadmaster? In a way, it's because he's doing his  
job. Consider the noise that would have been generated  
had either loadmaster failed. There are a lot of  
"loadmasters" in TAC . . . people who are doing  
their job and doing it well. How about giving more  
of them proper recognition?



big business



Cold section repair area. Note shadow-type tool storage boards.



OJT is vital to every shop. Airman receives instruction on engine build-up



Carefully mating the N-1 and

**E**NGINE MAINTENANCE in the 355th Propulsion Branch is big business. Over a million dollars worth of engines are restored to a serviceable condition each month. With a quarter million dollar price tag on each engine, a 2.4 million dollar price tag on the complete F-105D, and a 3.5 million dollar one on the

complete F-106, the engine mechanic has graduated from the pliers and screwdriver set. The old ear and eyeball methods have been replaced with precision measuring devices.

The J-75 is a big engine. It delivers 24,500 pounds of thrust in military, and 28,000 pounds wet. At Mach II, this is equivalent to

100,000 thrust horsepower. Power output of this magnitude demands precision. Each disassembly brings the calipers, micrometers, and dial run out indicators into play to determine if wear limits have been exceeded. Engine specialists of the 355th use caliper inside and outside micrometers, depth micrometers, dial indica-

# B

## BUSI

CWO LEON YOST, 355T





# NESS

FW, George AFB, Calif.



N-2 compressor on a J-75-19W.



Loaded and ready to go on a moment's notice, mobility equipment gets regular inspections.



Replacing turbine wheel buckets.

tors, vibration meters, PT-7 trim gages, thermometers and correlation charts to insure that each engine will hack the mission. The dozen special tools formerly used has been increased to 2938 items. Bench stock to support build-up, JFM, periodic and unscheduled maintenance, now totals 1167 line items.

The 355th Propulsion Branch of the 355th Field Maintenance Squadron supports the J-75-19W engines installed in the 355th Tactical Fighter Wing's F-105Ds and the J-75-17 engines installed in F-106 aircraft assigned to the 329th Fighter Interceptor Squadron (ADC). This includes build-ups, JEFM and tests on the -17

and complete maintenance support of the -19W. This shop has performed an average of two complete overhauls each month for the last 10 months.

An operation of this type and magnitude requires qualified personnel, an adequate facility, tools, test and measuring equipment, handling equipment, and necessary spare parts. The 355th Propulsion Branch was fortunate in the first two categories. The branch has a hard core nucleus of seasoned noncommissioned officers with previous experience on the J-75-19W engines. These men came from the 36th and 49th F-105D equipped tactical fighter wings and laid the ground work for the present operation. Our present facility was obtained in November 62 and is considered one of the best. Tool and equipment receipts have been slow, but the critical shortage list has dropped to six line items. Bench stock fill has been marginal. MSGT Coburn suggested shadow boards for tools, pullers, fixtures, jigs and other items not subject to pilferage. Boards were fabricated in the shop for 239 items and met all specifications. This type of storage is considered superior to bins for precision fixtures since it allows no metal-to-metal contact when the tools are not in use, provides almost instant inventory and keeps them available to the work area. Test equipment calibration status charts were suggested and put into use to constantly remind of calibration due dates. Platforms for 3000E engine trailers, to make it easier to haul mobility equipment, were built from salvaged 2 X 4s and afford excellent protection for precision equipment. They also reduce the weight and cube of items hauled, thus, reducing total airlift requirements.

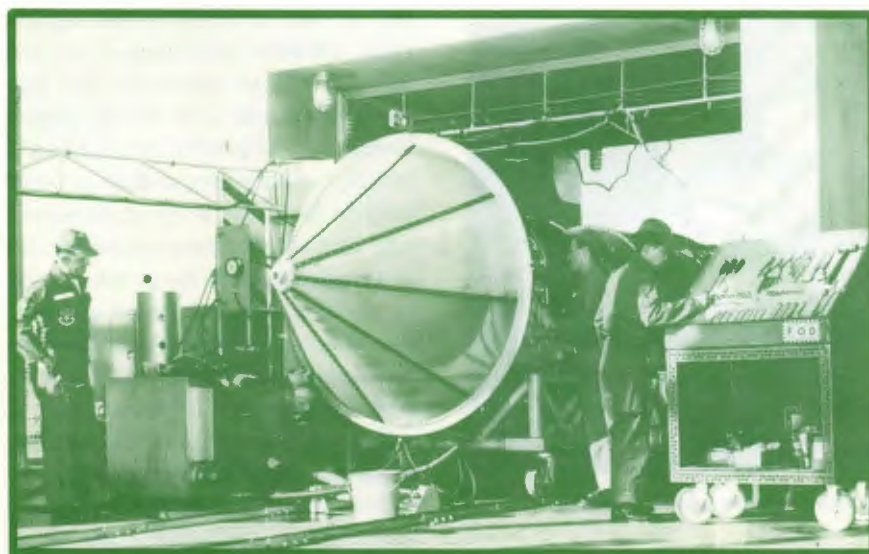




Specialist dispatch for unscheduled maintenance helps keep wing aircraft operationally ready.



Proper training is the backbone of a successful shop. Class being held in engine shop classroom.



Setting up to test a J-75.

The J-75-17 engine, ADC, generated a JEFM workload that is much higher than forecast due mostly to worn gears in the OPAH, leaking diffuser cases and N2 coupling spline wear. TSGT Fulkerson detected the N2 coupling spline wear problem during a double compressor change and

submitted EURs that resulted in a requirement to inspect the N2 coupling spline at 600 hours. Sgt Fulkerson's vigilance with the micrometer and positive action with EURs was recognized, not only by the 355th TFW, but also, by ADC and TAC. He has been recommended for the USAF Well

Done Award for his contribution to flying safety.

One of our crews recently established a new record for an F-105D engine change. They beat the old record of 4 hours and 12 minutes by 25 minutes. Members of the crew were: SSGT Wray Koker, Crew Chief, SSGT Be Willis, A2C John D. Moon, A Thomas R. Currin.

Although there are only nine seven level and an equal number of nine level NCOs currently assigned, they represent 146 years of maintenance experience and are the managers and supervisors. The five levels represent the work force. Our five level specialists are true journeymen. Their quality and proficiency is a barometer of quality production. We treat them as individuals and give them jobs that tax their ability. This generates personal interest, initiative and above all, a feeling of self-satisfaction . . . a feeling of being needed. We believe that individual recognition is the key that unlocks true potential.

What makes the operation tick? Initiative and resourcefulness! Ideas, stemming from positive thinking personnel with a desire to make the best even better.



# Grnd / Explo SAFETY

## CAR LOWERS THE BOOM

A local driver opened the hood on his car after it developed motor trouble. Unaware that the accelerator had stuck, he jumped the starter . . . the car was in gear and took off with the driver under the hood. He extracted himself just before it slammed into a utility pole, shearing the pole in half. As the driver lay stunned, the utility pole fell on top of him. Part of the impact was absorbed by the car so he is expected to recover.

## ROAD SENSE

WING TIPS, of the First Marine Air Wing, published these rules for motor cyclists. Reading them, think they apply equally well to other drivers . . . just substitute car or truck for bike or cycle and then APPLY THEM.

\* SHOW A HEALTHY RESPECT FOR TRAFFIC LAWS. They are the result of long and often deadly experience. Their one big purpose is to protect you and everybody else. Study traffic laws carefully and then conscientiously obey them.

\* DRIVE ONLY WHEN FIT TO DO SO. If you are tired, ill, angry, depressed or too distracted, you cannot concentrate on the exacting job of controlling a motorcycle. Some feel they have the right to drive

any way they like. Far from it! An obligation accompanies every right.

\* USE GOOD JUDGMENT ABOUT SPEED. Avoid driving so fast that you endanger others, or at such a snail's pace that you jeopardize and annoy them in another way.

\* CHECK YOUR BIKE AT REGULAR INTERVALS. Make certain that your brakes are in good working order.

\* BE SELF-COMPOSED. When in heavy traffic, remain calm and patient. You will make it easier for others in the same predicament and save wear and tear on yourself.

\* STAY WHERE YOU BELONG. Remain in your own lane until it is safe to pass. Weaving in and out of traffic is unfair to everyone.

\* SIGNAL PROPERLY. Give other motorists a clear and correct signal in ample time before stopping or changing directions.

\* RESPECT PEDESTRIANS. Give them the benefit of any doubt, especially if they are children or older people.

\* ALLOW OTHERS TO HAVE THEIR RIGHTS. For example, don't speed ahead just as another bike or car is about to over-take you.

\* REDUCE YOUR SPEED AT NIGHT. The average driver cannot see clearly over 200 feet at night.

## WELL DONE

S/Sgt Samuel E. Sutton of the 838th Air Division at Pope AFB, North Carolina, recently made a perfect score on the final exam of the two week Ground Safety Course conducted for the Directorate of Aerospace Safety by the California Institute of Technology. Well done, Sgt. Sutton.

## Super Vision

The eye's a better pupil and more willing than the ear  
Fine counsel is confusing but example's always dear  
And the best of all preachers are the men who live their creed  
For to see the good in action is what everybody needs  
I can soon learn how to do it if you'll let me see it done  
I can watch your hands in action but your tongue too fast may run  
And the lectures you deliver may be very wise and true  
But I'd rather get my lesson by observing what you do  
For I may misunderstand you and the high advice you give  
But there's no misunderstanding how you act and how you live







## TO LICK LEAKS

Oil leaks can be frustrating. A mechanic's first impulse is to grab a wrench—a big wrench—and tighten the offending fitting. Fortunately most experienced mechanics don't follow impulses or we'd have more broken and overtorqued fittings than we do. If a universal type fluid fitting which goes into an accessory develops a leak, check it for proper installation. The jam nut should be backed off well up on the upper threads. The O-ring should be snug against the upper thread and then the upper nut brought down to where it just touches the O-ring. The fitting should then be turned into the casting until the O-ring just contacts the fitting. If the position of the fitting isn't correct, back it out to position it. But, don't back it out more than a full turn. Torque the nut down to the proper value and that should end the leak.

Straight fittings usually consist of the basic fitting and an O-ring. With the O-ring in place, the fitting is screwed into the accessory and tightened to the prescribed torque. The opposite ends of these fittings usually rely on a metal-to-metal seal. The mating surfaces are carefully machined to provide a good seal. As long as you use the correct torque value and make certain the mating surfaces are not nicked, dented or scratched, these fittings should give no trouble.

When connecting rigid tubing, leave components and clamps loose until after you've made all con-

nections. This also applies to clamps on flexible tubes. This makes it unnecessary to force things into position and reduces the chance of damaging them or setting up stresses.

When installing accessories on mounting pads, make sure mating surfaces are clean and free of nicks, dents or scratches which could cause leaks. Use new gaskets of the right type and take care to use the correct nuts, bolts and washers. Do all of these things on the original installation and you'll never have to wonder where all the fluid is coming from.

## C-130 DUAL RAIL DELIVERY

Handling the old skate wheel conveyer aerial delivery system was never critical. Not so the new AF/A32 H-1 and AF/A32H-4 aerial unloading kits designed for the C-130. The AF/A32H-1 and -4 AUKs are highly sophisticated. The locks on the locking, unlocking, relocking and sequencing systems are precision equipment and must be handled with extreme care. Even dirt and moisture can louse up the system.

All of this means that you will have to handle these kits carefully when you install them, remove 'em and store them. In storage, they will have to be protected from the elements.

These aerial unloading kits have yet to be used for a full-scale Army/CASF operation and we expect some deficiencies to appear. To help resolve them, we have arranged with AFLC to let us report them as URs on AFTO Forms 29.



All units have been given a list of mandatory forms to be filled out on each AFTO Form 29 used to cover an incident involving this equipment. We also want good photo coverage of each incident.

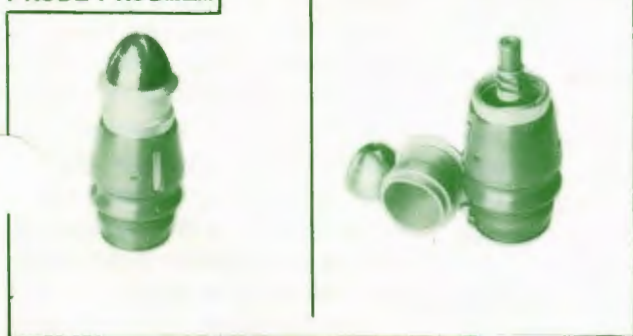
TAC's mission requires us to use these aerial unloading kits for aerial deliveries, extractions and logistic operations.

We are going to have to make a special effort to protect this equipment by treating it carefully and at the same time use the UR system intelligently to get system weaknesses corrected.

### BETTER ANGLE

The F-4C will have an improved angle of attack transmitter. It uses a cone shaped probe that isn't as apt to be bent by hail or rain. The conical shape also helps get rid of any moisture that accumulates inside the probe. Better ventilation and a hotter heater will insure that the case stays dry.

### PROBE PROBLEM



On the left we show a refueling nozzle taken from an F-105 that was on-the-line, ready for flight. On the right is the same nozzle disassembled. Note that the inner stem is all that was holding on the nozzle head. The very next refueling attempt would have ended with the nozzle head in the engine, compressor blades all over the area and an ejection. It happened twice before. As a result, Parker type MA-2 nozzles and Schultz valves, part number 11-257-1, have both been removed from the inventory. A new maintenance inspection procedure is also on the way.

### CLIP LOCKING TURNBUCKLES

After running extensive tests, the armed services adopted clip locking turnbuckles as standard. These are MS 21251 thru MS 21256 and MS 21260. They supersede AN 155, AN 161, AN 165, AN 170 and AN 169.

The MS turnbuckles are about 10% lighter than the AN turnbuckle they replace. The locking clip is so

strong the terminal shanks will twist off before the safety feature loses its integrity while the old style locking wires break under light torsional load.

The MS assembly can be adjusted and safetied in a matter of seconds instead of tedious minutes... particularly in hard to get at places. It takes a skilled mechanic to install an AN turnbuckle, while even an inexperienced airman could install an MS turnbuckle with its locking clips. Further, you can tell at a glance whether an MS clip is locked. A locking wire has to be inspected closely to see if it is correct.

The MS locking clips won't let the body of the turnbuckle rotate in relation to the terminals while even the best safety wired AN turnbuckle permits a full 180° of rotation.

All the newer birds will have the MS turnbuckle and the older ones will get 'em. Check MS 33736 which supersedes AN 10482 to see how they should be installed.

### WHEEL WOE

While reviewing a safety survey I noticed where one TAC unit was sending wheels to the tire shop with the tires still fully inflated. This is about like giving a couple of ten year olds a golf ball and two sticks of dynamite. It's just a matter of time before there is going to be a loud bang and a corpse.

The TO tells you to let the air out of aircraft tires before you remove the wheel from the aircraft. It says this for a very good reason. The retaining nut actually helps hold the wheel together. Damaged wheels have been known to explode with surprising force as they were being removed from aircraft. Most damage doesn't show until after the tire is taken off... so play it safe and follow the TO.

Incidentally, some units are using impact wrenches to build-up and tear down wheels. This violates TO 4W-1-61.

An impact wrench hits a bolt with a series of blows instead of an even steady torque. This can damage wheel tie bolts or the nuts, literally turning the wheel into a time bomb with an indefinite fuse.

### QUESTION OF THE MONTH

Parking of unattended vehicles within \_\_\_\_\_ feet of buildings containing explosives is prohibited.

- |            |             |
|------------|-------------|
| a. 10 feet | c. 75 feet  |
| b. 50 feet | d. 100 feet |





**M**AJOR LEWIS came thru the door with an icy blast of wind that knifed its way around the room exciting the paperwork on the Old Sarge's desk and chilling Capt Green's ankles. Lewis went directly to the heater to warm his cold reddened hands.

"Started to snow yet?" Green asked.

"Just a few flakes. It'll have to do better than that if we're going to have a white Christmas." He glanced around the room, then saw the tree. It was decorated with a few lengths of toilet paper draped around sparse, scrawny branches. Lewis grinned, "I like your tree." He was actually sincere, the overall effect was somehow artistic, with a forlorn, haunting beauty.

"The Sarge's work." Green explained, "He figured Santa wouldn't stop if he didn't put up a tree."

The Old Sarge grinned, "You want to catch fish, you have to bait the hook, right sir?"

Lewis nodded agreement. "What you expecting?"

"Oh, I was kinda hoping he'd bring a good-sized sack of smarts . . ."

"Smarts?"

"Yes sir, you know a refill."

The Old Sarge tapped his temple with his forefinger.

"Oh yeah, smarts. I could use some myself. That bunch in the

13th could use some, too," he added ruefully.

"Oh?"

"Yeah. You heard about the bird they messed up trying to make a fuel tank repair? I wish the supervisors over there had some of your smarts and had made sure to put someone on the job who knew what he was doing. What a waste."

The Old Sarge pulled out his pipe and started filling it. "Sir, don't blame it all on the supervisors. They get mouse trapped just like everyone else."

Lewis looked interested, but kept silent waiting for the Old Sarge to finish packing his pipe.

"For instance, you can hand a job to a man thinking he knows enough to do it. He may have helped do the same job in the past, or had training on the particular system. The way time gets away from us older people, it's easy to forget that the last time he helped do the job was two years ago or that he went thru MTD on the system three years ago. If he accepts the job and then blunders ahead without yelling for help, we are headed for trouble." The Old Sarge played a match over his pipe until satisfied that it was burning properly, then tossed Major Lewis the pouch of Old Barnsmell. Lewis caught it and started filling his own pipe.

"We place so much emphasis on knowing things that a lot of younger people are afraid to admit when they don't know. The Old Sarge continued, "They seem to think the supervisor will think less of 'em if they ask questions or admit that they don't know. So it's a two way street. If a fella won't tell you that he needs advice or help, you may never realize he's having trouble."

Lewis tossed the pouch back to the Old Sarge and struck a wooden safety match. "Quite true. Sometimes it's easy to forget a supervisor can't be looking over the shoulder of everyone he has working for him." Lewis winced as the unattended flame reached his fingers. He put both fingers in his mouth, then inspected them. "I could watch things a little closer myself," he muttered. "One thing that is up to the supervisor . . . something you take care of naturally and are probably never aware of . . . is this business of keeping the road open to encourage your men to be honest."

The Old Sarge looked puzzled, so Lewis explained, "I mean some supervisors give a man hell if he admits he doesn't know how to do something."

"I guess so," the Old Sarge admitted, "but really, how can they expect everyone to know everything about one of these complex machines . . . even about the system they've specialized in? Some supers may frown and say, 'look it up in the TOI,' but that's bad. They should help 'em look it up."

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*Answer to Question of the Month*

*100 feet*

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# Careless Hands



Back when aviators measured airspeed by the way their scarf flapped in the breeze or by the sound of the wind in the wires, aircraft had very distinct personalities but technically they didn't have a heart. When designers started stuffing all the wire inside and enclosing cockpits to restrain the scarves, the birds continued to retain their personalities and eventually evolved to the point where some actually have a heart. Take the Thunderchief with its central air data computer system . . . CADC for short. The CADC is a complex electro-mechanical device that samples airspeed, altitude and angle of attack information and passes it on to almost every other avionics system in the Chief. For example it transmits output signals to the all attitude reference system, doppler, missile launch computer, autopilot and toss bomb computer. A truly integrated system.

In recent years the big insurance companies have

attempted to protect their investment in humanity by stressing ways each individual can protect and care for his heart to prolong his useful life. Essentially that is the purpose of this article. To get you maintenance people to take better care of the Thunderchief's heart so it can lead a long and useful life instead of dying on the ramp.

Look at the photos accompanying this article. First we show the interior of one component of the chief's heart to give you an idea of just how complex it is. Next we show how the CADC cases are commonly damaged. Finally an example of an airspeed sensor module that was carelessly over-pressurized during maintenance. These photos are TYPICAL of damaged CADCs .

All components of the Chief's heart are complex and very, very sensitive. So whatever you do, don't let it fall into careless hands.



# TAC TIPS

## T-39 GEAR DOORS

The T-39 gear doors hang open when the gear is down, clearing the runway a scant 5 inches. Cross a BAK-9 at high speed and the cable often bounces into the lower edge of the doors. The open doors also mean that snow and slush will collect in the wheel wells during the nasty season. An engineering change proposal is in the mill which will provide for cycling the doors closed after the gear extends . . . however, it may be a good many moons before we see the result. Meanwhile, stay out of slush if you can, and make sure you land on the right side of the BAK-9.

## PHANTOM PHUN

A utility hydraulic system failure can create an interesting emergency with the F-4, the bellmouth and auxiliary air doors fail, the bellmouth may open or it may stay in position while the auxiliary air doors will stay closed or be blown closed by the airstream. On the ground, with the bellmouth open and auxiliary air doors closed, engine compartment secondary airflow will recirculate to the engine inlet. This relatively hot air will be detected by the CIT sensor. Engine idle speed will increase to as much as 100% as the sensor tries to increase airflow to the engine. In fact, this can occur in flight at low airspeed if the throttle is at idle.

So if you have to land following a utility system failure, watch your RPM and be ready to shut the engine down. The maintenance section should correct the hydraulic problem and make an engine run before worrying about RPM troubles under these conditions.

## HOW HIGH

An F-4 pilot wrote-up the altimeter of his machine as reading 2000 feet when the aircraft was at 1000. Error was crosschecked by the radar altimeter and

by turning off the SPC. The error was traced to erroneous angle of attack input to the SPC module of the CADC. Until this system is made mo' better, F-4 pilots will do well to believe the lowest reading from either the altimeter or radar altimeter and to turn off the CADC and check to see if the uncorrected indication is in the ballpark as per the chart in the handbook supplement.

## DEGREES OF DANGER

If the U. S. Weather Bureau gives you a forecast on icing, this is what you can expect:

\*Light - an ice accumulation you can clear by operating de-icing equipment and which presents no serious hazard.

\*Moderate - de-icing provides marginal protection. The ice continues to accumulate but not fast enough to affect the safety of your flight unless it continues over an extended period of time.

\*Heavy - ice continues to form despite de-icing procedures. It is sufficiently serious to cause your bird to slow down and lose altitude. It seriously affects the safety of flight.

When an Air Force forecaster gives you a turbulence forecast, or vice versa, here's what the terms mean:

\*Light - Occupants may be required to use seat belts. Objects in the aircraft will remain at rest and airspeed may fluctuate five to fifteen knots.

\*Moderate - Occupants will occasionally be thrown against their seat belt. Unsecured objects in the aircraft will move about and airspeed will fluctuate fifteen to twenty-five knots.

\*Severe - The aircraft may momentarily be out of control. Occupants will be thrown violently against their seat belts and back into the seat. Unsecured objects will be tossed about and airspeed will fluctuate more than twenty-five knots.



Different aircraft will induce differences in these conditions for turbulence as far as the Air Force and the Weather Bureau are concerned, but the warnings are the same.

Should either agency forecast extreme icing or turbulence, the name of the game is Steer Clear.

### ON ALERT

The Division Safety Officer, George AFB, maintains an officer on alert status. This officer responds to all emergencies. To keep from chaining him to his desk, the division has equipped him with a portable two-way radio which monitors crash net frequencies. This gives the alert officer immediate contact with the control tower, EOD, Fire Chief, APs and unit control. We can't authorize this, but if your base has the need, you should be able to find a way.

### TO UNSTICK THE PHANTOM

McDonnell test pilot Don Stuck says there are a lot of ways to get the Phantom into the air. The right way being to use half flaps. With full flaps, the BLC bleeds off too much engine power and stabilizer effectiveness is compromised at nose lift off speed going to the takeoff roll. Ground speed can exceed nose wheel limits, too.

If you must err, Don says to err on the no-flap side. You have a tad more thrust than with the correct half-flap setting but will leave the runway 10 to 20 knots faster unless you rotate an extra two degrees.



During normal takeoff, be sure and get the stick FULL back as the bird reaches 120 knots, then hold 10 to 12 degree pitch attitude. Each inch you are off of the aft stop will cause the bird to go 10 knots faster before it will rotate.

### TAC ATTACK

### HEAD UP

A USAFE pilot submitted a UR on the F-100F instrument panel shroud because it kept him from seeing an aft overhear light. The aft pilot saw the light first. Inspecting other Fs confirmed that the shroud gets in the way if you fly with the seat full up. You can't see either load meter, the master caution light, fire warning light, part of the aft overhear light or the top of the hydraulic pressure gage.

### STILL HAPPENS

A pilot from another command found the altimeter of his aircraft to be 10,000 feet in error. It takes a lot of cranking to miss-set one this way, but ever so often someone manages. Crew chiefs should check altimeter settings during pre-flight, too, same as pilots.



### LANDING LOOK

Capt Rondel E. Minter, flying safety officer with the 4520CCTW out at Nellis, sent us this photo of a gun camera set up by the 4526CCTS to record F-105 transition landings from mobile. This let the transition students see how they looked coming across the fence and would have served as documentation had there been an accident. Anyone interested in building a camera stock such as this can holler and we'll send instructions. Incidentally, we recently watched some experimental tape recordings of landings and takeoffs shot with a special TV camera. They were as clear as movies. Further, the TV picture was clear enough at night to make a reasonable gear check and you could even read the tail numbers as the bird crossed by mobile. The tape has one big advantage over movie film . . . it can be reused about a hundred times before it starts to degrade the picture.



# LETTERS To TAT

Dear TAT:

In the September 1963 issue of TAC ATTACK Lt Col John J. Nolan stated that my article "Short Slides" appeared to conflict with enroute radar letdowns as explained in the May INTERCEPTOR. This supposition is partly correct. However, I disagree 100% with the rule-of-thumb given for computing the supersonic aircraft letdowns. The rule is valid for aircraft penetrating at 240 KIAS + 20 knots at 4000 - 6000 fpm, but does not solve the problem for other aircraft. For example, the F-100 penetrates at 300 KIAS at 3500 - 4500 fpm. Since the penetration airspeed has increased to 300 KIAS and the rate of descent is less than the average for other aircraft, this situation requires at least 44 NM for a straight-in approach from 20,000 feet to sea level. This distance decreases as the landing aerodrome elevation increases. At a field elevation of 5000 feet, the required initial approach fix distance decreases to 35 NM. Applying the supersonic rule-of-thumb formula, from the May INTERCEPTOR, we take the first two digits of the flight level and add plus 15. This makes our distance 35 NM for a 20,000 foot penetration and 30 NM for a 15,000 foot penetration. Both of these distances fall 5-9 miles short of that required for the F-100.

Lt Col. Nolan defends the TACAN letdown for Bunker Hill AFB as being completely satisfactory. I agree. The initial approach fix for this particular letdown begins at an amazing distance of 51 NM from the aerodrome. My statement concerning unsatisfactory TACAN letdowns did not include Bunker Hill AFB, but Hill AFB, Utah. Since September 1963, however, Hill AFB has extended the initial approach distance from 28 NM to 35 NM, which makes it compatible even for the F-100. There are still many TACAN letdowns which fall in the too short category. To mention a few, try Buckley ANGB, Malmstrom AFB, Olathe NAS, and Whidbey Island NAS.

CAPT OSCAR J. LOVRAK  
4520 CCTW  
Nellis AFB, Nev.

Dear Oscar

Thanks for your comments on this problem.

TAT

Dear TAT

The item "Phantom Phun," page 24 of the September ATTACK stated that asymmetrical burner lights can cause the F-4 to head toward the boondocks... The result of both McDonnell and Navy flight tests does not support this statement.

Here at McDonnell we use the flight manual procedure, which is to align the aircraft on the runway, engage nose gear steering, commence takeoff roll with military power and immediately light the burners.

There have been delayed lights experienced; how when this technique has been followed, positive direct control has been maintained throughout the roll. I have personally observed the aircraft on the roll ahead of me experience an asymmetrical light without the slightest indication of directional difficulties. Perhaps your impression of the expected difficulties stems from an incident early in the F-4 training program when a young gent experienced an asymmetrical light-off and punched in nose gear steering at approximately 30 KTS after full rudder had been applied. Needless to say, the resulting ride off the runway was rather unsettling.

While on the subject of nose gear steering, I would like to pass on a few comments concerning a rapid response system such as we have in the F-4. Shipboard spotting requirements dictate 70 degrees left and right travel with almost immediate reaction to a full travel signal. This is mandatory for the ship but far in excess of normal shore base handling requirements or for use on the runway. Navy experience with the F-4, and similar rapid response nose gear steering systems, has indicated judicious use of these systems during the takeoff and landing phase. If steering is to be used for takeoff it should be engaged prior to the commencement of roll or not at all.

In landing, steering should not be utilized until the speed is reduced to turn-off or taxi speed. The logic of this is evident when you consider that a pilot's usual reaction, when correcting for a swerve, is to feed in some rudder. When the situation further develops and the pilot realizes he is "in extremis" he has probably already applied full rudder. At this point it would require considerable mental effort to neutralize the rudders prior to engaging steering, and usually the steep button is punched with full rudder in, sending a 70 degree signal to the gear. The resulting maneuver has been generally described as spectacular.

Presently the contractor is expending a great deal of energy in an effort to provide the operators with a completely fail-safe system; however, I do not believe we will ever have a completely pilot-safe system to prevent an occurrence such as I have described. I strongly recommend that your F-4 types consider these things when using the nose gear steering system.

We Navy types here at McDonnell thoroughly enjoy the many fine articles in your magazine. If there is anything that I can personally do to assist you and the Air Force F-4 operators in the performance of your mission, please feel free to contact me directly.

CAPT R. G. FREEMAN III  
Bureau of Naval Weapons Representative  
McDonnell Aircraft Corp.

Dear Sir:

Oops, borrowing bits and pieces from other safety pubs finally caught up with us! Next time we'll check 'em out before we pass 'em on. Would help if TAT could get a few flights in this up-and-coming machine. (Boss, please note!)

Thanks a heap for getting us back on our

TAT



**I**T'S BIG, long, sleek and struts across the ramp like a proud peacock, but, what is it?" I asked Mr. Carl Ardery, the demonstration test pilot for Republic Aviation.

"Well, in reality it's an F-105D designated as an F because it has tandem cockpits and dual controls." He continued, "What could possibly be added to the D but another cockpit?"

"Touché," I replied, "Pray, continue."

"Primarily, this is a complete combat weapon system with or without a pilot in the rear cockpit.

"Secondarily, it can be used for systems and instrument training as well as stdn/eval checks. Now, I suppose you'd like to know what modifications we made to bring about this beautiful beast?"

"Rave on, I'm all ears," I said, trying to act as nonchalant as a cash customer in a liquor store although I was itching to fly the bird.

"Well, we moved the front cockpit forward and added a 31" section of fuselage to hold the rear cockpit. We increased the vertical fin 14% to compensate for nose length and weight. At the same time we beefed up the tail with thicker skin to take care of the added airloads.

"We managed to keep the same fuel capacity but the mods added about 2000 pounds, so we expect a slight degradation in range. On the other hand the added length changed the fineness ratio and we came out with the same V max, designed dive speed and g limitations as the D . . . Actually, the F exceeded the design specs by about the same figures."

"That's great," I said, "but at did all that monkeying around with length and weight do to the good ole cee of gee?"



"Oh, it moved about 10% forward."

Right then I figured I had the super salesman in the orange flight suit checkmated. You see I learned 'way back in preflight school that Mama didn't have anything to do with the reason Papa's kite wouldn't fly. Papa just didn't know where to put the ceegee. So, with a little less desire to solo immediately, I said, "Best you speak about takeoff and landing characteristics and this machine's stability before we start counting out the cash."

"No problem in those areas," he said confidently. "You can't eyeball any difference in takeoff roll at the same gross weight as the D. The pitch mechanical advantage shifter schedule is designed to give the same pitch sensitivity. Yaw due to roll is less because of the larger vertical fin and wind tunnel tests indicate no change in spin characteristics.

"Actually, the F is so much like the D that pilots will have no problem stepping from one to the other. Cockpit layout is almost identical; however, there is no visual weapon capability from the rear cockpit. Landing technique is the same except, with the same

fuel load, the angle of attack indicator will give about five knots higher indicated airspeed, due to the added gross weight. After landing, the nose will fall through about 10 to 15 knots sooner but for all practical purposes, stopping distance will be the same.

He paused to catch his breath and then added, "Although the pilots will notice little change except for the hot breath of the rear occupant on interphone, maintenance folk will jump for joy when they find the ole ball room has been removed and the equipment placed so it's accessible."

"Splendid," I cried, "and I'll buy as soon as I can find a finance company that'll -"

"No sweat," he interrupted, "as a member of TAC in good standing you stand to get delivery in early '64."

"Thank you, Mr. Carl Ardery, for a very interesting interview."





## TIME TO THINK

**R**EMEMBER ALL the blarney you used to hear about pilots having to be some sort of super creature with extremely quick reflexes? At times it made you wonder what poor, pathetically normal you were doing in the program.

As the years rolled by, and your hours in the air accumulated, you discovered that quick reflexes quite often led to quick trouble... that damn few things happened in an aircraft that required a fast response. Then along came the jet age and another couple of layers of goo about jet pilots having to be super human. This time you paid less attention to the racket and were pleased to find that the jet was just another aircraft - and if anything, less demanding in almost all areas. Fewer knobs and handles and better fuel systems more than compensated for its slow accelerating engines, limited endurance and higher cruise speeds.

Yes, the jet age has confirmed your belief that a pilot does not need - or particularly want, fast reflexes in order to survive. Now, more than ever, you can see that proper planning will avoid most trouble... and that you need to verify warnings before taking action.

Back in the old days your first indication of trouble was usually a needle flickering on a gage. If you failed to notice, or if no gage was around to warn of the malfunction, the engine would be your next clue. It'd start to run rough, belch huge quantities of smoke, oil or coolant or cut out entirely. After recovering from the initial surprise, you headed for the nearest field at reduced power, switched tanks, manually opened the coolant doors, feathered the fool thing or took whatever other action was most appropriate to cure the visual symptoms, as verified by various temperature and pressure gages.

The important thing was to be deliberate and not get in a rush. Quite often you found that you'd induced the activity all by your lonesome... like the time the engine quit as you went to high pitch on a BT-13... that was easy to correct, you just pushed the knob back forward and then looked at it to make sure you were playing with the mixture instead of the prop pitch.

This is when you learned not to move things in the cockpit without first looking to see what you

had your meat hook on. You learned it years later when your T-bird cockpit altitude suddenly went from 24,000 to 40,000 feet as you attempted to give the bird a shot of alcohol. Small wonder test pilot Bob White considers this one of the more important precautions during flight.

Then there was the time you had both engines buck and snort on a B-26 during takeoff. Too late to abort, you looked at the power control pedestal as you reduced power slightly. Props were full forward, mixtures weren't, and it didn't take long to get 'em there. Remember what you said about pre-planning to prevent trouble?

Running a fuel tank dry and changing tanks after the engine started to surge was SOP in the old days... until you started carrying passengers. Then you got in the habit of watching the pressure when the gage said tank was nearly dry and were able to switch tanks without shaking everyone up... and still completely empty the tank.

Things run much the same today... except a warning light quite often comes on before trouble really develops. You are not content to trust the light... you've learned that few troubles, including an inflight fire, are going to develop so fast that you can't confirm, and decide before taking action.

Like the time the engine blew up on your F-86... it took a few seconds just to get over the surprise, another second or so to confirm that the RPM was indeed zero and that the EGT was pegged before you stopcocked. Yet, the wreckage indicated little or no overheat damage... just a compressor that was completely t up. You had plenty of time to decide that it wouldn't be safe to



for a flameout landing due to control system and limited battery life, and you had plenty of time to set-up for an ejection that went off reasonably well.

Plenty of pilots have failed to take the time to analyze trouble signs and have had extra sweat. Like the young lieutenant who stopcocked a perfectly good engine because he suddenly noticed the RPM was zero. He tried an air-start, got no indication of RPM and again shut the unit down. He made an excellent flameout landing which made it easy to locate his trouble . . . a broken tachometer!

How about the old head who ejected from a perfectly good F-84 after sunlight (apparently) reflected off the fire warning light?

He had listened to too many stories about birds blowing up a second after this light came on. Stories no better confirmed than the light!

Along this line, you also learned that it doesn't always pay to head back for an immediate landing from many emergencies . . . that a heavy fuel load will just compound your difficulties, as long as your problem isn't a fire or something which will compromise engine performance. Yes, flying is a business much like the story about the old bull and the young bull . . . and more often than not, it pays to walk down to the gate instead of jumping the fence and running across the pasture.

But tell me, if flying emerg-

encies seldom require a fast response, how come you spend so much time reading and re-reading section three of the handbook? Also, why do you spend all that effort going thru the motions of a panic ejection or aborted takeoff emergency while waiting for an ATC clearance or otherwise killing time in the cockpit? Is it because some emergencies do require a prompt and proper reaction - after a prompt and accurate evaluation - and that the only way to insure that reaction (from a normal mortal with normally slow reflexes) is thru constant drill and simulated practice?

Good talking to you, and see you around . . . for a long time.

# EVOLUTION

THE "SUPER SABRE" CAN BE PROUD OF ITS HERITAGE DATING BACK TO WWII WITH THE P-51 WHICH EVOLVED INTO THE MOST SUCCESSFUL FIGHTER OF THAT WAR.

THE '51 AND THE F-82 SAW ACTION DURING THE KOREAN WAR - BUT THIS WAS NOW THE JET AGE ...

NORTH AMERICAN  
**F-100D**  
"SUPER SABRE"

... AND THE F-86 TOOK OVER TO EARN ITS FAME IN BATTLE - A WORTHY ANCESTOR FOR TAC's WORKHORSE, THE SUPER SABRE!



P-51A (A-36)



P-51D "MUSTANG"



F-82 "TWIN MUSTANG"



F-86F "SABRE"



## CREW CHIEF OF THE MONTH



Airman First Class Ernest Y. Akiyama, 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.

Recently, Airman Akiyama's outstanding ability and technical knowledge enabled his F-100D to fly 32 of 35 scheduled sorties plus ten add-on sorties for a grand total of 42 in one month. Through his extraordinary efforts, his aircraft scored better than 900 out of a possible 1000 points in the local rating system.

During this period, Airman Akiyama completed a 50 hour postflight on his aircraft. Later, when Quality Control inspectors performed an in-commission spot inspection, they discovered only four minor discrepancies. There were 17 discrepancies noted by pilots during the 42 sorties, but none of them were aircraft general.

With a positive attitude and many hours of overtime, Airman Akiyama has contributed greatly to his organization's capability.

## MAINTENANCE MAN OF THE MONTH



Airman Second Class Larry M. Carlson, of the 363d Tactical Reconnaissance Wing, Shaw Air Force Base, South Carolina, has been selected as the Tactical Air Command Maintenance Man of the Month.

During the Cuban crisis, Airman Carlson was deployed to MacDill AFB, Florida, where he performed the dual maintenance function of repairing cameras in the shop and assisting the down-loading crews when mission aircraft returned.

In the Swift Strike III exercise, this airman was assigned to assist a team of factory technicians apply new techniques for using color film. He received a letter of commendation for his positive contribution to the film test program.

Due to his expert knowledge of camera equipment, Airman Carlson was requested to develop a device for checking photoflash bridges that failed to fire in the air. Within 10 days he built a test set that fully satisfied the requirement.

Airman Carlson's outstanding performance has proven to be a valuable asset to his organization.

# RECOGNITION

## Pilot of Distinction



Captain Harris W. Kirk of the 479th Tactical Fighter Wing, George Air Force Base, California, has been selected as the Tactical Air Command Pilot of Distinction.

Captain Kirk was number five in a flight of six F-104s redeploying from Moron Air Base, Spain, to the states. After an eight hour flight, which included five air to air refuelings, he arrived over Myrtle Beach AFB, South Carolina,

and started a letdown to traffic altitude. At 15,000 feet, rpm 85%, his engine burbled once rather heavily. Seconds later, as he turned toward the base, the compressor stalled, EGT rose to 700 degrees and rpm dropped to 70%. He then stopcocked to clear the stall and made an air-start. The engine was very rough during windup but eventually stabilized at 100% rpm. Captain Kirk climbed from 10,000 to 12,000 feet, and entered high key for a precautionary landing. He reduced power to 87% rpm but the engine ran rough. Halfway around the turn to low key the engine stalled again and once more he stopcocked and restarted it. Twice during the turn onto final approach the engine burbled heavily, EGT rose to 720 degrees but a stall did not completely develop. Touchdown was accomplished 500 feet down the runway and the aircraft brought to a safe stop.

The cool judgment and perseverance displayed by Captain Kirk during this touch-and-go emergency are indicative of a professional fighter pilot.



# TAC TALLY

A COMPARISON OF TACTICAL AIR COMMAND ORGANIZATIONS

MAJOR ACCIDENT RATE 1 JAN - 31 OCT		
TYPE	1963*	1962
ALL	10.8	13.5
F-105	29.8	36.3
F-104	26.7	40.0
F-101	16.8	15.9
F-100	12.6	19.4
F-86	0	72.0
F-84	24.2	17.6
B-46	0	0
F-26	9.8	24.8
F-39	0	0
T-33	0	3.6
T-29	0	17.7
KB-50	4.6	9.7
C-130	1.3	0
C-123	5.1	14.2
C-47	0	5.3
U-10	13.3	69.9
T-28	30.9	0

\* PROJECTED

OCT TALLY GUARD AND RESERVE		
UNIT	MAJOR	MINOR

ACCIDENT FREE (MAJOR & MINOR)			
JET			
ACTIVE	MONTHS		ANG
355 TFW	13	9	108 TFW
388 TFW	11	8	121 TFW
CONVENTIONAL			
ACTIVE			RESERVE
516 TCW	20	82	434 TCW
463 TCW	28	33	435 TCW

OCT TALLY ACTIVE UNITS		
UNIT	ACDNTS*	INCDTS
4 TFW		9
12 TFW		1
15 TFW	1	9
27 TFW	1	25
31 TFW		16
354 TFW		26
355 TFW		6
388 TFW		2
401 TFW		5
474 TFW		3
479 TFW	1	11
4440 ADG	1	2
4510 CCTW		52
4520 CCTW	1	17
516 TCW		1
4500 ABW		3
4443 CCTS	1	
464 TCW		4
4411 CCTG		2
4453 CCTS		9
SAWC	1	3
363 TRW		2
839 AD		
831 AD		
366 TFW		31
836 AD		3

\* MAJOR AND MINOR

October was a perfect month for the reserve forces but the regulars kept the books open with four major accidents and three minors.

One F-84F pilot started a go-around for better pattern spacing. At 800 feet the engine flamed out due to material failure. The pilot suffered minor injuries during the crash landing.

The engine in an F-100F flamed out on the approach to a KB-50 hook-up. Airstart attempts were unsuccessful, so both the pilots made successful departures at 8000 feet. Cause of the flameout - undetermined.

As a KB-50J climbed thru 6000 the J-1 engine disintegrated and the left wing caught fire. Six of the crew bailed out safely but the pilot and crew chief were lost when the aircraft exploded before they could leave.

A MAP pilot in an F-104G completed a loop, pulled the aircraft up to near vertical and followed with a wingover and steep dive. The chase pilot received no indication of trouble until the other pilot ejected in the dive. The pilot survived with major injuries. Investigation is under way.

The first minor for the month was scored when the pilot of an O-1E did not correct for left yaw on takeoff. The aircraft ground looped, the right gear failed and the left wing and prop were damaged. The second occurred when an F-105 pilot experienced difficulty disconnecting from a KC-135. The probe failed and damaged an external tank, pylon and stabilator. And, as an F-104 pilot started a loop, the left gear door came off and damaged the front flap, fuselage and horizontal stabilizer.

All in all, October was not such a bad month, but we still have no reason to relax our vigilance.





# Seasons Greetings

