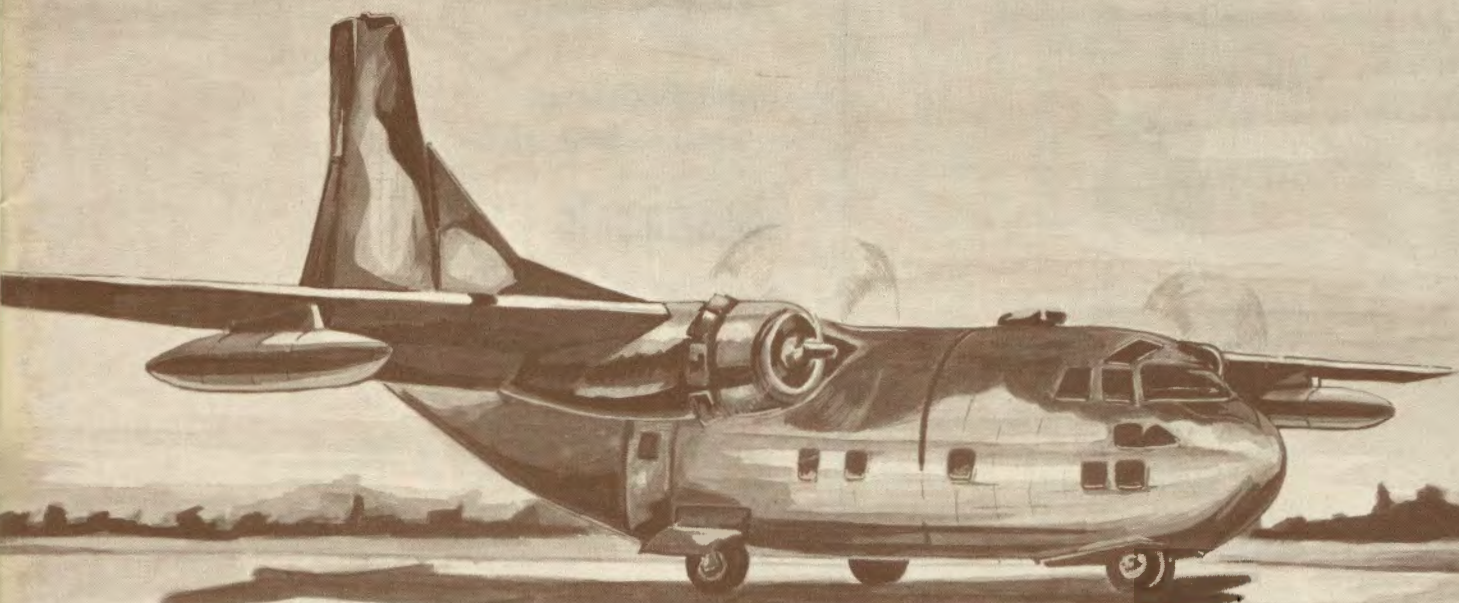


# TAC ATTACK

JULY 1967



right turn !!  
...page 16

HARDISON

for efficient tactical air power

# TAC ATTACK

JULY 1967  
VOL. 7 NO. 7

TACTICAL AIR COMMAND

COMMANDER  
GENERAL GABRIEL P. DISOSWAY

VICE COMMANDER  
LT GEN ALBERT P. CLARK

Published by the Chief of Safety  
COLONEL H. B. SMITH



CHIEF SAFETY PUBLICATIONS  
LT COL CARL E. PEARSON

**editor**

Maj John D. Shacklock

**art editor**

Stan Hardison

**layout & production**

SSGT James E. Fields

**editorial assistant**

SSGT Richard D. Reid

**printing**

Hq TAC Field Printing Plant

## current interest

WOULD YOU BELIEVE . . . - a gear-up approach-ender	Pg 4
ENGINE ANALYZER - new look in engine care	Pg 6
USING ANGLE OF ATTACK - in the Thunderchief	Pg 10
RIGHT TURN! - fast, cool thinking in a tight	Pg 16
WE'LL BE THERE, SAM . . . - what the 'choppers can do for <u>you</u>	Pg 19
EXPERIENCE FOR SALE - cheap!	Pg 22
AIN'T NO SUCH ANIMAL - about those wild, wild cars	Pg 26

## departments

Angle of ATTACK	3
A 2nd Look	8
Chock Talk	14
Surveys of Places	20
Pilot of Distinction	24
TAC Tips	28
Letters	30

TACRP 127-1

Articles, accident briefs, and associated material in this magazine are non-directive in nature. All suggestions and recommendations are intended to remain within the scope of existing directives. Information used to brief accidents and incidents does not identify the persons, places, or units involved and may not be construed as incriminating under Article 31 of the Uniform Code of Military Justice. Names, dates, and places used in conjunction with accident stories are fictitious. Air Force units are encouraged to republish the material contained herein; however, contents are not for public release. Written permission must be obtained from HQ TAC before material may be republished by other than Department of Defense organizations.

Contributions of articles, photos, and items of interest from personnel in the field are encouraged, as are comments and criticism. We reserve the right to edit all manuscripts for clarity and readability. Direct communication is authorized with: The Editor, TAC ATTACK, HQ TAC (OSP), Langley AFB, Va. 23365.

Distribution F, Controlled by OSP - TAC Publications Bulletin No. 22, dated 3 June 1966

Angle of ATTACK



## EXPERIENCE

All of us who have dive-bombed or strafed in the air-to-ground business know the experience we gained the first few times we pressed too far . . . and recovered in one piece. Those of us who have instructed students in formation flying have experienced the same cold flash after a student almost got himself, and his instructor, into serious trouble . . . and recovered.

The close calls come early, when we don't fully understand the safe limits. But as we accumulate experience it rapidly tempers our enthusiasm. And in the process we become better fighter pilots or instructors.

You can draw a parallel between this learning-by-experience and our recent accidents in TAC. Over the past year and one half, TAC's mission has changed to one of training in the skills of tactical air operations. The majority of our accidents rapidly reflected that change. They were training accidents . . . short landings, gear-up landings, mid-air collisions, and loss of control. In the maintenance area they reflected low skill-level workmanship and inadequate inspections.

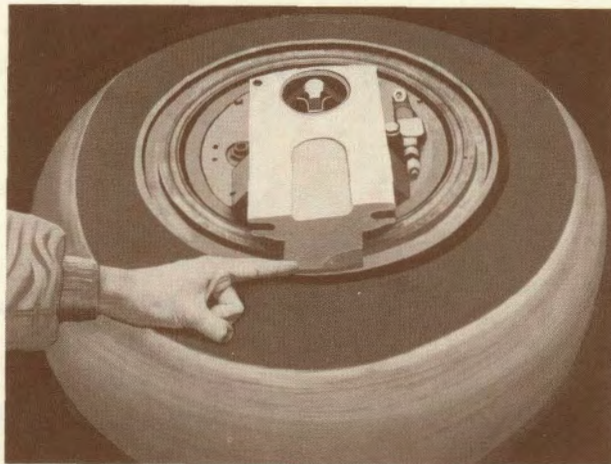
As we in TAC gain experience in this training environment, we must tailor our thinking with the lessons we've learned. The pace of our training must consider each student's background. Wherever possible, we must start slowly and intensify the training after the student has the fundamentals firmly under his belt.

By giving him maximum time and attention during the early phases of training, we can give him a background that allows him to gain experience without the close calls . . . and sometimes disasters . . . that invariably come with accelerated training.

H. B. SMITH, Colonel, USAF

Chief of Safety

# WOULD YOU BELIEVE THIS . . .



**M**ost of you are going to say, "Impossible . . ." "It can't happen . . ." or "I don't believe it . . ."

Nevertheless, it's true. The lower strut assembly sheared off the main gear of a Phantom during a touch and go landing. The crew didn't feel it go, but some alert folks in the RSU and tower saw it.

Now, for you Phantom plyers who are not familiar with the term "lower strut assembly." That's the piece of iron to which the wheel is attached. Materiel failure was the cause of this incident. And we'll not deliberate on that. We'll go directly into the area of . . . now we have a problem. What are we going to do about it?

If you dig into your Dash One, you won't find a whole lot about gear-up approach-end barrier engagements (AEBE). Should you be flying and have this unhappy thing happen to you . . . and you look for help in your check list . . . you won't find a whole bunch there either. All you're left with in this situation is your own native skill and cunning.

I don't intend to give you a panacea for gear-up AEBEs. Neither do I expect to relieve your obvious apprehensions about the subject. I'm just going to relate to you my experience, and outline the few procedures I followed . . . just in case you should touch and go yourself into a similar situation.

First, I'll argue with the Dash One's statement about "a great injury hazard is present whenever emergency landings are made with the landing gear retracted." It's not necessarily correct . . . when you have two 370s to slide on, a tail hook barrier to stop you, and the time to get everything set up.

In my case, the Phantom was configured with:

- 2 - 370 gallon external tanks.
- 1 - Inboard SUU-21/A dispenser.
- 1 - Inboard LAU-17/A and TER.

You can tell right off that the inboard SUU and LAU are luxury items . . . all you really need is the two 370s.

Now, barring other unforeseen

by Capt Robert A. Remey  
4453CCTW  
Davis-Monthan AFB, Ariz.

## COULD LEAD TO THIS . . .



inflight emergencies, and assuming you have some gas to burn, say 1800 pounds or more . . . here's what we're going to do:

- Request foam on 500 feet of the overrun and the next 1000 feet of runway.

- Dump or burn excess fuel down to 1800 pounds.

- Arresting hook - extend.

- External tanks - retain.

- Make precautionary trial approach.

- use half flaps
- fly wide pattern
- plan three mile final.

The 180-knot base-to-final airspeed is very comfortable, as is the 150-knot final approach airspeed with 1700 to 1800 pounds of fuel. Remember, your gear is up, so you don't have indexer lights . . . it's airspeed all the way!

The second time around you should have about 1100 to 1200 pounds of fuel left. Extend the IFR door to depressurize the tanks, and correct the little errors you made on the first pattern.

Now, with blood in your eye

and finesse in your fist, you tackle that three-mile final. With the fuel load we're talking about, 145 knots is excellent. The reason for the large pattern is to allow the airspeed to dissipate. With your gear up and only half flaps, airspeed doesn't bleed off as rapidly as you might think. You'll have your 145 knots about one-half to three-quarters of a mile from your planned touchdown point. Control effectiveness and response is very good. And a flat approach is a must.

As you come over the end of the overrun, providing your approach is flat, you will feel something dragging. You'll probably hear it as well!

Fear not, faint heart! (And it will be faint!) It's not the stabilator tips. It's only the tailhook . . . and we couldn't be in better shape! Smoothly retard the power to idle and ask your friend in the back seat to pull the drag chute handle.

The next sequence of events is rather anti-climactic. The aircraft will settle smoothly on the

trailing end of the external fuel tanks. You'll notice relatively little nose slap, as the Dash One folks call it. You will, however, notice the grinding of the external tanks. It seems to get louder and louder and . . .

You and the aircraft, with the aid of the barrier, will come to a very smooth stop. Go ahead and check your six o'clock position for fire. If no fire, and the possibility of that occurring seems to be remote, you may egress normally.

A word of caution: Once you're over the side and standing on terror firmer, be careful about walking with great haste. When the sole of your boot comes in contact with that foam on the runway, a definite ground safety hazard exists. Let me suggest that you, like . . . tip-toe-toward-the-toolies. At least until you're clear of the foamed area.

One last item . . . the gear-up AEBE that I had only cost Maintenance \$83.46 and 32 man-hours.

It's worth it!

# JET ENGI

One of the newest projects to increase flight safety, reduce maintenance and logistics costs, and improve the reliability of jet engines, is the development and use of jet engine analyzers. Several types of analyzers have been tested and made available for fleet application.

Some analyzers are simple, lightweight, and reliable systems which measure only one engine parameter. Others are elaborate airborne and land-based computer systems which measure several engine parameters and out-of-limit conditions. These also accomplish fault diagnosis. More elaborate engine analyzers are being installed in aircraft which have an on-board computer capable of monitoring in-flight performance and providing timely maintenance and operation data. These airborne computers scan selected parameters and print out abnormal conditions. This enables the flight crew to assess the aircraft's capability for future missions and determines corrective action required.

Two analyzers have been tested in TAC aircraft. The Garrett-AiResearch Airborne Jet Engine Analyzer (Project EASY), and the Howell Instrument Company Airborne Jet Engine Analyzer.

TAC ATTACK reported on Project EASY in May 1965 and March 1966. This analyzer has been service tested on F-105 and F-4C aircraft at Nellis and Davis-Monthan Air Force Bases. Trend analysis and prediction work is now being performed at Wright-Patterson AFB, evaluating the results and findings of this test.

The Garrett-AiResearch analyzer picks up information from transducers which sense spool speed, fuel flow, engine temperature ratio, EGT, oil pressure, throttle movement, oil consumption, hot section factor count, and other engine parameters. This information goes to a computer display located in the aircraft where maintenance personnel can easily read it. It is then stored on a magnetic tape after processing through a digital recorder.

Adapted from material by

Squadron Leader Ronald G. Slaunwhite  
HQ TAC (DMEMMC)

# ENGINE ANALYZERS

The data collected by this system is also used for trend analysis and in predicting engine time to failure. This is done by analyzing measurement trends before they exceed limits.

The Howell AERO-JETCAL analyzer has been installed in the PACAF F-105 fleet and is being installed in ADC's F-102s and F-106s.

This analyzer monitors, in flight, the rate at which the useful life of a jet engine deteriorates. It continuously indicates average exhaust gas temperature, records cumulative hot section deterioration, and indicates temperature spread.

It is made up of the following components:

- The Hot Section Recorder System, which logs the number of hot section factor units accumulated on the engine.

- The Temperature Spread Computer, which checks temperature at all points in the EGT system, selects the highest and lowest reading of all thermocouples, and supplies this temperature differential to the EGT Indicator.

- The AutoTemp Indicator-Programmer, which generates signals to actuate an over-temperature warning light, to start the hot section factor counter, and to actuate lights or flags when temperature spread becomes excessive.

Hot section factor (HSF) units reflect hot section deterioration. Beginning at 580 degrees C, HSF units accumulate at the rate of two per minute. The rate doubles with each 18 degree increase in temperature. A predetermined HSF count can be used as a basis to perform engine inspections as it automatically totals the effects of all operations above 575 degrees.

This system then, is not truly an analyzer. It is used to measure the effects of temperature and time on a jet engine. For example on the F-105 aircraft... it will not differentiate between Mil and

Max power, ground and flight operations, or wet and dry takeoff. The indicator programmer will display all engine operating temperatures from zero to 1200 degrees C. An amber warning light in the indicator programmer illuminates above 660 degrees to warn the pilot if overtemperature is experienced during takeoff.

The HSF clock records a time range from 850 hours at 635 degrees continuous operation to 8300 hours at 580 degrees. The first hot section temperature recorder clock records time in seconds above the 636 degree limit up to 166 minutes. The second clock records time in seconds above the 661 degree limit up to the same 166 minute capacity. There are also three overtemperature warning flags which actuate at 700, 725, and 800 degrees. The hot section factor recorder clock records all operation above 575 degrees in HSF units.

EGT is measured on J-75 engines by six dual-element thermocouples around the circumference of the turbine exhaust case. One set of the dual elements provides average EGT indications during engine operation. The other set is used during ground test to obtain individual temperatures at the six locations in the exhaust gas path.

The thermocouples also measure EGT spread by comparing the highest and lowest readings. The maximum allowable spread is 139 degrees. Engines operating at the upper limits of 139 degrees spread and 635 degrees average EGT will develop hot section damage at twice the rate of engines at 120 degrees spread or six times the rate of 80 degrees spread and 635 degrees average EGT.

The importance of maintaining EGT spread as low as possible is obvious. Engine analyzers which can alert maintenance personnel to trouble before substantial hot section deterioration occurs are proving valuable in extending engine life and preventing airborne engine failures.

a 2nd look at...

## MID-AIR COLLISIONS

It was a shocker! We had heard of it happening in the dark of night combat overseas. But when it happened in broad daylight, here in the States during training...

A strike fighter collided with the forward air controller who was controlling him. The fragile FAC airplane spun crazily toward the ground. The student FAC didn't have a chance to get out; he died in the wreckage of his airplane.

Collision between aircraft in flight is probably the most feared and most terrible accident that can happen to a pilot. Our airplanes are not built to withstand the forces of a collision. Once it has occurred, we seldom have much control over what remains of our machine. We're through flying. And the thought alone is terrifying.

From the first of January 1966 to the time of this writing, Tactical Air Command aircraft have been involved in eight collisions. TAC-gained aircraft have been involved in an additional three. With one exception, these regrettable collisions have been between aircraft in flight. That exception was even more regrettable. It was between an aircraft landing and one on the runway ready to take off.

With few exceptions, the pilots of the twenty-three aircraft involved in these collisions have been inexperienced in tactical fighter flying. That is not surprising. They were in a student status. The majority of the TAC flying population during those months was inexperienced.

But that isn't the whole story. The rest of the collision-involved pilots... were they just out of the student category? Were they still new guys? Unfortunately, they were not. Those that were not students were among our best, high-time, combat-experienced pilots. Many of them were instructors.

None of these collisions were caused by materiel or maintenance failure. Without exception, the collisions were attributed to pilot factor. They all occurred in day VFR. In each case the investigating

board found that one or both pilots failed to look where he was going... in time.

Six of the eleven collisions were between aircraft in the same flight. None of these were involved in complex tactical maneuvering which preoccupied the pilots to the point where they could not look outside. In one, they were practicing air combat tactics. In others, they were practicing commonplace join-ups, cross-unders, or were reforming the formation.

The five other collisions occurred when:

- An experienced instructor decided he could do without VFR radar advisory service. His ANG unit had recently decided to use it on every visual approach to the field. The controller who would have handled him was working the bird he eventually collided with.

- A TAC-gained pilot, cruising on a hard-altitude IFR clearance, found himself face-to-face with a single-engine civilian light plane... at Flight Level 210! There is only 500-foot separation between IFR and VFR traffic at any altitude below 24,000 feet. And altimeter error corrections become more important with each foot of altitude.

- A very low-experience wingman pressed his simulated attack after his flight lead had called off the target. He didn't see the second element of intruders. And the second element of his own flight... which had gone high to play top cover... didn't call out the additional bogeys in time.

- An experienced fighter pilot took the runway in a hurry. His takeoff had been delayed by a last-minute aircraft substitution. He was still on the runway checking engine instruments when a low-experience student landed on top of him. It's sometimes difficult, on a hazy day, to see a camouflaged airplane on a rubber-marked runway.

- A flight of four fighters on an air-to-ground range didn't know that there were two FACs flying around below them on the range. Lead saw an O-1, well clear of the pattern, as he rolled in for his pass.





He didn't see the other one because it was flying into his path from below him.

But let's don't satisfy ourselves that these were all just head-in-the-cockpit accidents. When we take a second look, we see that there were other factors present. The accident investigators call them contributing causes. These often tell you more about what really caused the accident.

Report after report reminds us that we are training people who have never been in a tactical aircraft before. Or people who haven't been in one for many, many years. We in TAC may not be accustomed to this kind of training atmosphere. Perhaps we expect too much.

There are only so many lessons and the students must learn so much in those lessons. We place them in realistic situations because they will soon face the realism of combat. They have to learn! And fast!

But have we overlooked their backgrounds? Some

have spent their entire flying career in a mission that demanded the utmost of instrument precision. Head in the cockpit...eyes on the gages. Altitude, airspeed, and heading were more important than anything else. We know that isn't the name of the game in a fluid four, or in a tactical spread formation turn...but did the students know that? Did they really understand?

Each student requires a new and different orientation to tactical fighter flying. It must be based on his background, his abilities, and his understanding of the mission at hand. It must make him the wingman who is constantly aware of the position of every member of the flight. And every member of the opposing flight, when he's in a fight.

With this kind of training, we will produce a force of tactical pilots who don't relax when they're off the tanker at last...and run into each other.



**N**ot long ago, a student F-105 pilot found himself high on final approach. He put his nose down to intercept the proper glide path and pulled off power to keep his airspeed from building. As he approached touchdown, Mobile told him to add power. His rate of descent was too great.

He was too late with the power. When he attempted to check his rate of descent with back stick, he increased angle of attack but his rate of descent increased. This was because he was deep into the area of reverse command (rate of descent increases with back stick). The result... a very hard landing and a minor accident for the record books.

Century-series fighters are not capable of safe maneuvering, power-off traffic patterns (except Flameout Patterns). Their wing loading requires a careful, powered, non-maneuvering, controlled rate of descent on final.

Although it was not the cause of the accident above, many pilots still yearn for the good old days of the F-51 and F-86. In those days it was supposed to be a demonstration of superior skill to fly a very tight traffic pattern. The accident rate was unbelievable by today's standards.

With ever-increasing new blood in the F-105 program, landing accidents are on the upswing. Many of these new pilots have never used an angle of attack indicator. Because of this basic unfamiliarity, they either hesitate to use it, or completely ignore it. The angle of attack tape should be your primary instrument during landing approach.

For any given airplane, there is a particular angle of attack at which certain aerodynamic functions occur. For example, the conditions of stall, landing ap-

# using angle of attack in the

## THUNDERCHIEF

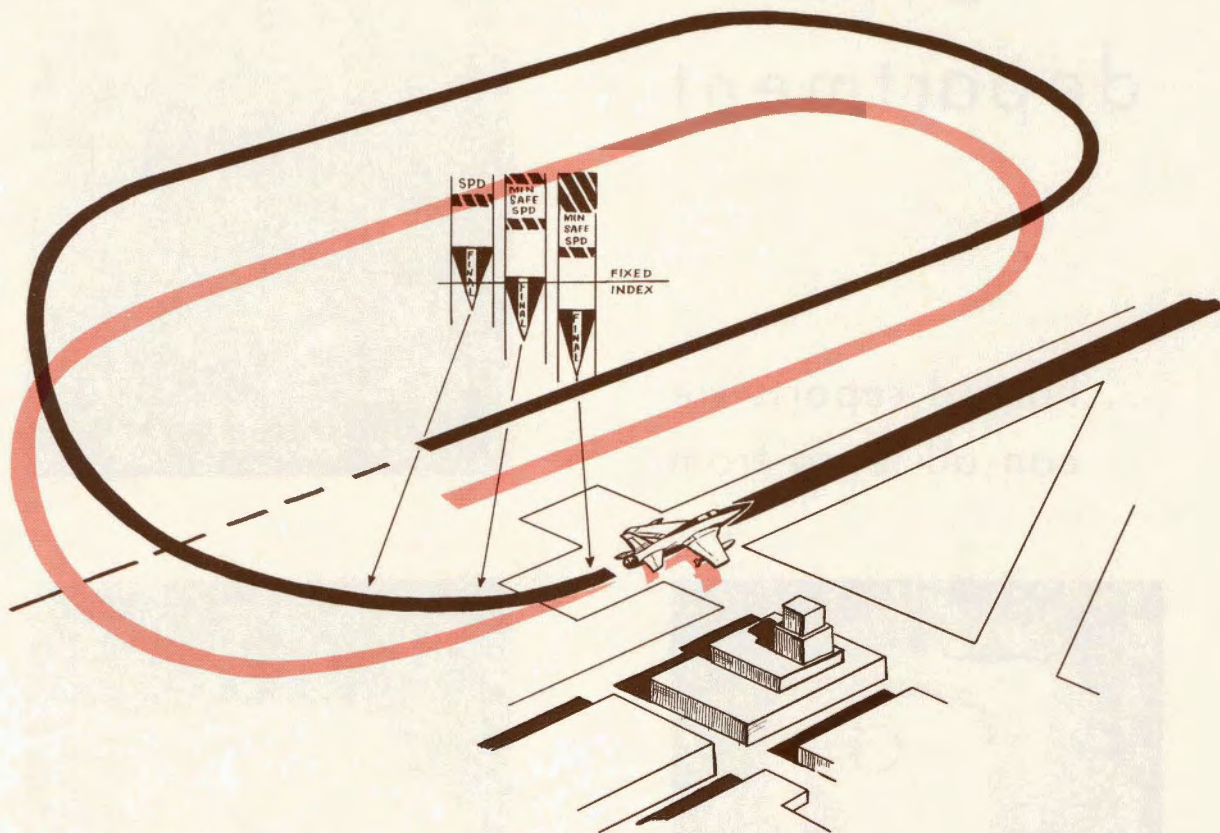
by Maj John M. Lowery  
HQ TAC (OSF)

proach, takeoff, and maximum endurance each occur at a specific angle of attack or coefficient of lift. In high-performance airplanes, angle of attack indications can be more accurate than airspeed indications. This is because at high angles of attack large position errors may make it difficult to obtain accurate airspeed readings. Therefore angle of attack indications become most useful during flight at high angles of attack such as the landing approach. The landing approach is the area where the F-105 angle of attack tape was designed to be used.

The angle of attack indicator is not directly affected by gross

weight, bank angle, load factor, speed, or density altitude. This is because in subsonic flight each angle of attack produces a given value of lift. When you reach the angle of attack which produces maximum lift, any further increase in angle of attack produces a rapid decrease in lift, in other words . . . stall. Under these conditions, stall airspeed will vary depending on gross weight, load factor, etc. But stall will always occur at the same angle of attack!

Flying the F-105 at the proper angle of attack on base leg and final approach automatically gives you the proper airspeed for your gross weight, angle of bank, or flap position (flaps up or down).



This insures that you will touch down at the correct airspeed. And correct landing speed gives you a tech-order-length landing roll.

The F-105 Dash One states, "the key to a good landing is precise airspeed control." I would like to go one step further and say . . . the key to precise airspeed control is correct angle of attack!

The angle of attack tape is subject to malfunction, same as the airspeed. Don't for a minute rely completely on one instrument during the critical landing phase. Cross check continuously!

A good rule of thumb for cross checking your airspeed indicators is to check your standby airspeed

at 200 knots when you are in landing configuration. The tape airspeed (AMI) should read 206 knots. If there is a difference, the tape may read as low as 194 knots or as high as 215 knots. This is admittedly a wide variation, however, the normal difference is plus 5 or 6 knots on the AMI tape.

To check out your standby airspeed, assuming you have a large variation from the AMI tape, note which airspeed indicator is closest to your precomputed final speed when you are at the proper angle of attack. This should tell you which airspeed is correct.

It is very rare to have both airspeed indicators malfunction simultaneously, however, it does

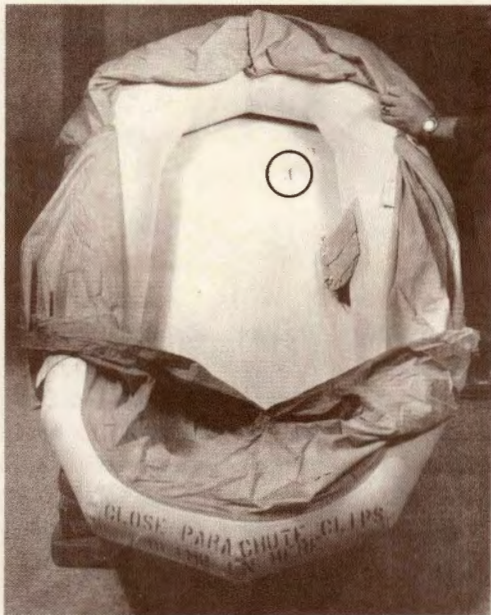
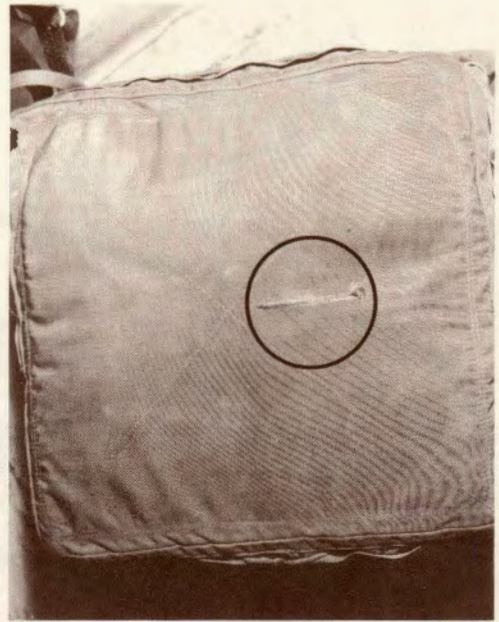
happen. An air leak in the pitot line is a common cause. When this occurs, it is very confusing. Best bet in this case is a chase plane. If that's not possible, use angle of attack as your reference on final . . . and Mobile Control as your advisor.

So learn to use your angle of attack tape. It will tell you when you've forgotten your flaps on base or final. It'll tell you whether you are too fast or too slow. It will tell you when your pattern is too tight, or your turn to final too steep. It will warn you of a stall when your bank angle is excessive. In short, it will guarantee a safe landing at the proper airspeed.



# OHR department

...hazard reports we  
can all learn from



When the Life Support people removed this MD-1 survival kit from an F-100F, they discovered the damage you see here. The bottom of the kit had a two-inch slice through two layers of the outer container. Whatever caused the damage continued into the kit and punctured the raft!

The damage was most likely caused at some time that the kit was removed from the aircraft for a solo flight.

# Recognition

## CREW CHIEF OF THE MONTH

Staff Sergeant William G. Qualls of the 436th Tactical Fighter Squadron, George Air Force Base, California, has been selected to receive the TAC Crew Chief Safety Award. Sergeant Qualls will receive a letter of appreciation from the Commander of Tactical Air Command and an engraved award.



SSgt William G. Qualls



A1C James E. Grindle

## MAINTENANCE MAN OF THE MONTH

Airman First Class James E. Grindle of the 479th Field Maintenance Squadron, George Air Force Base, California, has been selected to receive the TAC Maintenance Man Safety Award. Airman Grindle will receive a letter of appreciation from the Commander of Tactical Air Command and an engraved award.

# CHOCK TALK

... incidents and

## long bolts

The F-105 pilot was descending at 400 knots when he felt a slight bump and then lost his UHF communications. As he taxied in after landing, flight line troops saw that the fiberglass skin on the ventral fin had torn off. And the UHF antenna was missing.

They took a closer look and found that the eight bolts holding the ventral fin fairing to the fuselage were loose. The reason they were loose was that they were too long. They were not the bolts the tech order calls for. Since no spacer washers had been installed to take up the slack, the ventral fin fairing had vibrated in flight. The forward screws had backed out of their nut plates and the slipstream had torn the fiberglass away.

## short screws

The F-105 pilot had just completed a simulated weapons delivery when he felt a slight bump and then lost his UHF communications. When he taxied in after landing, flight line troops saw that the ventral fin had separated in flight. And the UHF antenna was missing.

They took a closer look and found that five screws in the right side of the fin leading edge had been too short. They could tell because only the last three threads of the nut plates were stripped... all five nut plates!

A modification which adds a doubler to the leading edge of the ventral fin should help prevent this in the future. But the unit concerned is going to inspect mounting screws for proper length.

by Capt F. V. Hall  
NYANG

## drop it

The maintenance crew was lowering an F-100, taking care to bring the three jacks down together

and keep the aircraft level. When the aircraft appeared to stop settling, the jack under the right wing continued to drop. It stopped about three inches below the wing. That looked like plenty of clearance, so the crew started to pull the jack out from under the wing.

That was when the right gear strut decided to compress a few inches more. The right wing settled rapidly. They didn't get the jack out in time. It left a two-by-four inch crescent-shaped puncture in the leading-edge skin.

Happily, no one had his fingers or hands between jack and wing. But serious injury could have resulted.

Best bet is to lower the jack all the way before you do anything else.

## bottle bomb

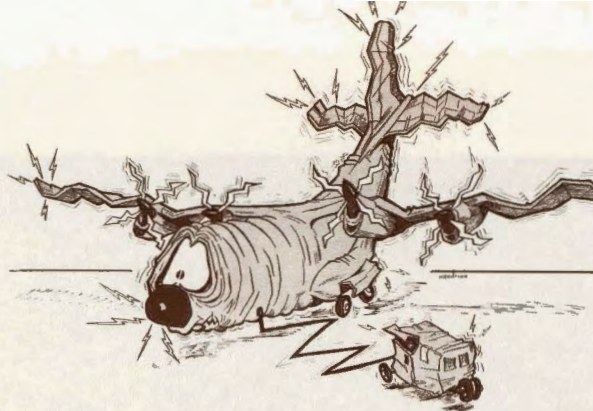
The installation crew checked the ATO bottles on the C-130 for security. They shook the bottles vigorously after they completed their check list. The eight bottles stayed on the Herky through inspection, ignition, takeoff, and landing. On the next takeoff, the empty right-hand number three bottle decided to leave. Fortunately, it fell on the runway...

The loading crew suspected two culprits. First they checked the spring-loaded latch and totally engaged it eight times. Like the proverbial nine-lived cat, it didn't work the ninth time. The ATO bottle pulled out of the latch... perhaps due to camouflage paint on the entire surface.

The second possibility was that ATO release T-handles had not been firmly set. They figured the unseated T-handle put tension on the release cable and held the latch partially open.

The unit decided to safety wire release handles in position after they install the bottles. On an AF Form 847 they're recommending that other units adopt the procedure to keep the ATO bottles aboard.

incidentals with a maintenance slant.



### little red button

The overseas RF-101 pilot was taxiing out of the parking area when his right main gear slowly retracted. The Voodoo came to rest on the right external fuel tank. The tank ruptured, and the right flap and wing tip were damaged.

When investigators looked into it, they found the right main side brace actuator unlocked. But the gear handle was down and the pilot said the gear indicators had showed down and locked before he started to taxi.

Checking further, the investigators learned that the landing gear control circuit breaker had failed with a burnt contact. And the utility hydraulic return filter was clogged. It had been bypassing. In this condition, sufficient pressure entered the gear up hydraulic line to unlock the side brace actuator every time the stabilator was actuated.

But they didn't chalk this one up to plain and simple materiel failure. You see, there's a little red indicator button that extends when the filter is bypassing. It had extended. And no one had noticed it.

The little red button is an item on the crew chief's basic postflight inspection!

### mower missile

The grass edging operation on the flight line was going smoothly when the young feller driving the power edger hit a hidden concrete lip. The spinning blade separated from his edger and flew through the air. It hit the wing of a T-39, penetrated the skin, started a fuel leak... and traveled another 45 feet.

The Base Civil Engineer decided to quit edging until they had inspected all edger blades for excessive wear or cracks. They're also going to look for hidden concrete deformities or other obstructions that could cause blade separation. He cautioned all edger operators to avoid lining up the plane of that high speed blade with parked aircraft... and parked people!

### cable capers

The Herky was standing on the PSP ramp in three inches of water. The crew had shut down the auxiliary power unit, so an MD-3 provided electrical power for engine start. The C-130 was grounded with one-eighth inch wire from the single-point refueling station to a static ground on the PSP ramp. The ground power unit's cable snaked thru the water to the aircraft ground power receptacle.

Engine start complete, the crew chief unplugged the power cable. As soon as he disconnected the cable, sparks danced along the grounding wire towards the single-point refueling door. Almost immediately, the ground wire melted and fell to the ramp, charred and twisted. The crew chief hurriedly cut the generators on the MD-3.

The investigators found a three inch slit in one of the power unit's cables. It was well hidden. You couldn't see it without flexing the cable. They're inspecting their cables at frequent intervals and reminding all ground crewmen to follow tech order instructions... turn off the generators before you unplug the cable.

### check the hooks

The overseas Phantom crew taxied into the arming area before takeoff. When the arming crew pulled a safety pin on the right inboard triple ejector rack, an M117 bomb fell to the ramp. It came from the number two station on the TER. And the man who pulled the pin said that it had been kinda hard to pull.

Armament people checked the TER and found nothing wrong with it. They had no trouble when they loaded another bomb. The hooks locked securely. But in talking to the loading crew, the investigators learned that the loaders had some difficulty inserting the safety pin when they first loaded the bomb.

That should have been sufficient warning to make the load crew check the bomb holding hooks... they had not been securely locked. ➤

# RIGHT TURN!





On 7 February 1967, Captain Alfred A. Brashear was flying as instructor pilot with two student pilots and a flight mechanic in a C-123 at Hurlburt Field, Florida. As they turned final for a simulated single-engine landing, the student at the controls found that the rudder pedals were jammed. The rudder had gone full right!

Captain Brashear immediately took control of the airplane. He found it was very close to being out of control. And they were at very low altitude! By carefully evaluating various control and power combinations, he found that he could control the aircraft . . . somewhat!!

While preparing his crew for a crash landing, Captain Brashear doggedly held on to every shred of control he could command. Although he never regained full control of his airplane, he made a successful . . . and surprising . . . landing.

Here is his story:

**T**akeoff was delayed while we waited for Maintenance to complete some work on the elevator and rudder gust lock system. However, we completed all our pre-flight checks normally, started, taxied, and went through the run-up without any problems. We checked the gust locks twice.

After takeoff, we went right into closed traffic for touch and go landings. On the ninth pattern we had to make a 360 for spacing. During the turn I reduced power on the number one engine and the student executed the Engine Failure in Flight emergency procedure. We were set for a simulated single-engine approach when we rolled out on downwind.

After we turned base and lowered the gear, we notified Tower and were cleared to land. The student turned final and started to set up his 115 knots. I was talking him through because he had very little multi-engine time. At 500 feet, I told him to start the flaps down. He had just selected takeoff flaps when we heard a loud bang!

The student immediately told me that he couldn't move the rudder pedals. I tried them, realized that we had serious trouble, and took control of the airplane. My first instinct was to go around. I applied full power to both engines and I told the student to actuate the emergency gust lock release.

The airplane had started to yaw to the right when we first noticed that the rudders were jammed. When I applied power, the nose swung sharply to the right and the left wing dropped. The bird shuddered, airspeed dropped to 90 knots, and we started to descend. Both the student and the flight mechanic were telling me that they had pulled the emergency gust lock release.

No matter how much aileron or elevator I used, I was unable to change the airplane's attitude or flight path. Rudder trim had no effect. We were heading 040 and our track across the ground was about 020. It appeared that we would make contact with the ground northeast of the lake, east of the main runway. I called a Mayday to

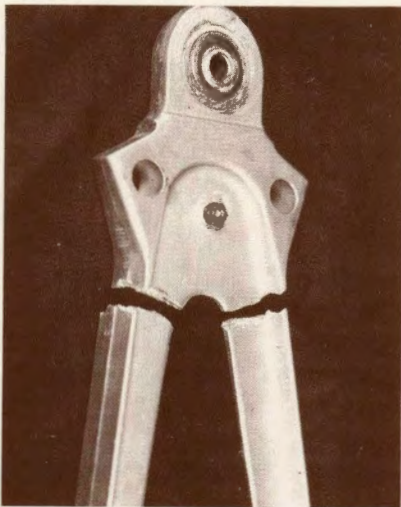
the tower and told the flight mechanic and second student to prepare for a crash landing.

When we were about 100 feet above the ground, I reduced power on both engines . . . preparing for the crash landing. We were still yawing. Gear and flaps were still down.

As I reduced power, I felt I was regaining partial control. But when I got the throttles almost all the way back, the yaw to the right returned! I immediately reapplied partial power. As I did, I could feel some pressure and response to the elevator and aileron. Then I gradually added power . . . against the yaw . . . to the number two engine. We came out of the yaw, but continued to turn to the right. The aircraft leveled off and started to gain airspeed. At 105 knots I raised the gear and flaps. Airspeed increased to 110 knots.

When I tried to increase power on the number one engine, the aircraft immediately went into a severe right yaw again. The left wing dropped. We were descending and losing airspeed!

## right turn !



Center rudder hinge failed, leading to bowed and jammed rudder.

This was no place to be experimenting! Ninety-five knots and 75 feet above the terrain! I placed the number one throttle at 28 inches and the airplane straightened out enough to gain airspeed. We started climbing again at 110 knots in an uncontrollable, flat right turn.

No matter what I did, the aircraft was going to turn right! Why not use some aileron to bring that turn around so I could land on runway 35?

I tried to tighten the turn a little. We immediately started losing altitude again and slipping to the inside of the turn. We were down to 100 feet before I brought the aircraft under semi-control.

I let it climb back to 300 feet and tried to increase airspeed over 110 knots. I found that any movement of the elevator reduced airspeed. I also found that up to five degrees left aileron would slow the right turn. Anything over that, and we lost airspeed. I could

use about five degrees of right aileron to increase the turn to the right. When I went beyond that, we lost altitude.

When I tried to adjust power, I learned that any prop setting below 2600 rpm on either engine would aggravate the yaw to the right. I had to keep manifold pressure between 28 and 30 inches on the left, 45 and 50 inches on the right engine to avoid the violent right yaw and loss of both airspeed and altitude.

I suddenly realized how little control I really had over the airplane. I could not control turn. And I could not reduce power below the settings I had discovered. I began to think our only out was to let the airplane gain enough altitude by itself so we could bail out.

By this time we were about four miles northeast of Hurlburt at 300 feet. I could see that the gradual arc we were flying would take us close to Runway 12 at Eglin Main.

Could we come close enough?

Would the little control I had over the turn allow me to fly it onto the runway ... then reduce power?

I told Hurlburt to tell Eglin we were coming their way.

The student pilot switched to Eglin Tower frequency and described our problem to them.

The arc came out almost perfect! I increased the turn in the last half mile. At a quarter of a mile, I lowered the gear, checked the indicators and hydraulic pressure, and started descending with no flaps.

Airspeed increased to 125 knots. I reduced power to the minimums I had established.

About five feet above the runway, I couldn't resist pulling off the rest of the power.

The airplane immediately yawed 20 degrees to the right and touched down hard on the left main. I gave it full right throttle and it straightened out ... somewhat.

When all three gear were on the runway, and our speed was down to 117 knots, I reduced power on the right engine. The aircraft veered to the right. I applied left brake ... to no avail.

I was using full left brake and 40 inches on the right engine but we were still headed for the right side of the runway. I yelled at the student to use nose wheel steering, and we finally straightened out on the runway.

I gradually reduced power on the right engine while we slowed, using full left brake all the way. When we were down to about 50 knots, I started using both brakes. At 30 knots I told the student to take over and taxi clear of the runway.

We stopped and shut down.

When we got out and looked at the rudder, we found that the center hinge had broken. The rudder had failed in the middle at the trim tab. It had bowed to the left, locking the trim in a right trim condition. The rudder was jammed two inches beyond full right rudder position. The middle of the rudder was sticking out beyond the left side of the vertical stabilizer.

We filled out the aircraft forms, entering three discrepancies:

Rudder broken.

Hard landing on left main gear.

Pilot's shoulder harness will not lock. ➤

thnx to 15ARRS  
Luke AFB, Arizona

# we'll be there

# Sam...



If you, the World's Greatest Fighter Pilot, find yourself temporarily without an airplane, but the proud owner of the World's Greatest Parachute, take a tip from the chopper section; do it close by the ol' air patch.

Tell you why: You know those balmy summer days that cause fighter jocks to occasionally wish for another coupla' thou feet of concrete? Likewise for us chopper guys. They give us some cause for concern.

Only thing is, our takeoff roll has to stay the same... namely like zero. So in order to perform the mission of putting out fires with the Fire Suppression Kit which weighs 1000-plus pounds, rescuing people, and all like that, the only thing we can do is reduce weight.

The co-pilot gets out first when the weather gets pretty warm. Then we off-load the medic and non-essential rescue gear. When the hinges on ye old hangar doors start to glow... like it's hot out... we have to reduce the fuel load

on our alert helicopter. The hotter it gets, the greater the reduction.

On a standard day, the alert HH-43B would be fully fueled and you could expect us to go out 70 or 75 miles. It could pick up a pilot and be back in less than two hours and 30 minutes. But as ramp temperatures climb past 100 degrees Fahrenheit, reduced fuel loads on alert may cut our radius of action down to as little as 20 or 25 miles. In some cases... say at Kirtland AFB... the radius might be down to 12 or 15 miles.

So you ask, "What's this got to do with me?"

And while I'm thinking of something intelligent to say, one of your rusty wheels turns ever so slightly. You scratch your head, squint a bloodshot eye and ask, "You mean if runway temp is over 100 degrees and I eject 50 miles out, I got a long walk back? You guys are all heart!!"

Really, it's not quite that bad. The alert chopper is configured for its primary mission, fire suppression. We reduce fuel load dur-

ing periods of high temperature so we can carry the 1000-pound Fire Suppression Kit. Incidentally, that FSK is only considered effective within about 15 miles of the base.

If you punch out 50 miles from home plate, we'd have no requirement for the FSK. Our crew chief would frantically hail a passing fuel truck, top off the tanks, and grab a Flight Surgeon. Then we'd "make it." All this would take 10 to 20 minutes. Add one minute for every mile of distance and you'll have an idea how long you have to wait.

Leave your chute fully opened so we can spot you. Make smoke. Use your mirror, emergency radio, and URT-21. Break out your heavy-duty, handy-dandy martini flask. And relax!

We'll be there, Sam... we'll be there!

Like I was sayin', if you gotta punch out, do it close by the ole pea-patch.

Now, when we get our new Bat-copters...





# SURVEYS OF PLACES

**A** new wrinkle has been added to TAC's recent safety surveys. The team chief (yours truly), with crutches and leg cast, greets the local commander with his usual offer: "I've come to help you." It has had dramatic impact!

I gained the attention-getting accessories after a mishap while slapping a black ball around four walls. The docs call it a severed Achilles tendon. Lesson learned ... warm-up is a must before strenuous exercise! If you fail to remember this, you're set up for a long period of convalescence.

Hobbling around on all three, I noticed an airman servicing an F-4 from a fuel truck. He was more interested in the starting routine of a nearby airplane than in his own job ... too interested to notice that his faulty rig was spewing JP all over the ramp. And it was dangerously close to the bird that was starting engines! We brought the matter to his attention before a disaster could result. At-

tention to the job at hand CAN help avoid an accident.

Visiting another base, we found problems at the aero club that occur all too frequently when these groups are mismanaged. Sloppy housekeeping, poor maintenance practices, and lack of attention to detail only add to the commander's headaches.

The Low Altitude Enroute Chart in this club's flight planning room was dated 1964! Guess what ...? Misguided club members were using it to plan their cross country flights. When we brought this one to the commander's attention, he initiated dynamic action to solve the club's problems.

Let's not treat aero clubs as stepchildren. That kind of attitude could be a real source of embarrassment.

At one base's explosives storage area, we found problems ... and novel solutions! The problem: Napalm was being stored outdoors

and in violation of the quantity-distance rules. Adequate storage didn't appear to be available. All the igloos were filled ... mostly with non-explosive equipment.

The people there had a simple solution. They were processing a request for a waiver of the safety directives. Our survey team recommended they remove the non-explosive items from the igloos and use the storage area for its intended purpose. They quickly accepted the idea.

In this day and age, it's hard to imagine that we have Air Force drivers, with flight line operators' permits, who don't know the restrictions against crossing a runway without clearance. We found two such drivers on one base.

An alert control tower operator saw an Air Force vehicle crossing the active runway. He asked the Wing Safety vehicle, which was waiting clearance to cross, to intercept the wrongdoer. When the Safety Officer

quizzed the driver, he said he didn't know he needed tower clearance!

Just then another vehicle crossed the runway... also without clearance! With this kind of control, an accident is inevitable. The wandering drivers in this case received some personal attention and instructions from their commander.

Wonder how many other Air

Force drivers think they can cross a runway without clearance?

Bouquets this month go to the 75th Tac Recon Wing at Bergstrom Air Force Base. Their Airman Control Unit program establishes traffic safety cells which promise to promote safe driving habits in our young drivers. Complimenting this program, the 75th established a High Risk Driver Identification Program. This effort as-

esses points for each violation, identifying the problem driver to the cell leader. We're betting that this program will be one of the best in the command.

See you next month...

LT COL BEN B. BENIGNO  
Chief, TAC Safety Survey  
Team

---

## COLOMBIAN TROPHY

The 431st Tactical Fighter Squadron, George Air Force Base, California, has been selected to receive the Colombian Trophy for 1966. Presentation ceremonies are scheduled for 14 July 1967 at George AFB. The trophy, established by the Republic of Colombia in 1935, is the highest annual award given to a tactical unit for meritorious achievement in military aviation safety.



by Captain Jack H. Smith  
64TAW, Sewart AFB, Tenn

# EXPERIENCE FOR SALE

( cheap )

It would be extremely difficult to place a value on experience. It is a very good thing to have. A lesson taught by experience is usually very thoroughly learned. Simulating, practicing, and drilling just don't seem to emphasize a point the way experience does.

A technique, procedure, caution, or warning, studied but not experienced has less impact on the learner than one that is experienced. The trouble is, experience can be very, very expensive. It can be so expensive that the learner is no longer in a position to use what he has learned.

This little article offers you a real bargain. Here are four experiences that are yours for the reading. You've already read the manuals and regulations that apply. Now here is the experience. Someone else has already paid for it. In some cases, the price he paid was extremely high ...

**EXPERIENCE #1: THUNDERSTORMS.** A C-130 of a foreign nation recently started a descent from 22,000 feet. At 17,000 feet he reported in a thunderstorm. The next report came from groundwitnesses who watched the burning aircraft disintegrate in the air.

**EXPERIENCE #2: OVERWEIGHT TAKEOFFS.** A C-130 pilot in SEA pulled his aircraft off the runway 20 feet from the end. About 500 feet beyond the runway, the landing gear struck and killed a soldier sitting on a bunker. The cargo manifests did not reflect the true weight of the load.

**EXPERIENCE #3: GUARD THE THROTTLES.** A C-47 lost power on both engines just after takeoff. The IP barely managed to land the airplane safely on the remaining runway. The cause of the power loss was that the crew allowed the throttles to slip back from takeoff power.

**EXPERIENCE #4: STATIC LINES.** A loadmaster was using a tiedown strap to retrieve static lines. He hadn't removed the metal tiedown device from the end. The strap slipped out of his hand and flew out the door. The tiedown device did considerable damage to the airplane.

**UNHAPPINESS IS:** Paying the high price of experience for a lesson you could get for free. ➤



## AIRCREW



Major Ruston-Pilot



Captain Atwood-Co-Pilot



Major O'shea-Nav

## ACHIEVEMENT

## AWARD



SSgt Hegy-Flt Mech



SSgt Douglas-Flt Mech



AIC Chambers-Loadmaster

Major Michael J. Ruston and his C-119 crew from the 64th Troop Carrier Squadron, O'Hare International Airport, Illinois, have been selected to receive the TAC Aircrew Achievement Award for the six-month period ending 31 March 1967.

Major Ruston and his crew were cruising at 8000 feet from Kindley AFB, Bermuda, to Charleston AFB, South Carolina, when their right engine backfired several times and lost 28 pounds of torque pressure. It was dumping a large quantity of oil overboard. When oil quantity decreased to 15 gallons, the crew feathered the engine.

They were five minutes short of the mid-point between Bermuda and Charleston, and faced a headwind if they continued. Major Ruston reversed course to return to Kindley.

Unable to maintain altitude, Major Ruston decided to jettison as much weight as possible. A large box at the rear of the aircraft prevented jettison from the paratrooper doors, so the crew opened the paratrainer doors. With these doors open, the aircraft lost additional airspeed and altitude. At 100 knots they were losing 400 to 500 feet of alti-

tude per minute while they jettisoned part of their cargo.

The pilots found they still had to maintain METO power on the remaining engine to hold altitude and airspeed. After an hour in this condition, Major Ruston ordered the crew to jettison everything possible. They were able to jettison 4680 pounds of their 7383 pounds of cargo. In addition, they discarded extra parachutes, unnecessary aircraft equipment, arctic survival equipment, jacks and chains, and some personal effects. When the aircraft had descended to 3000 feet, they closed the doors and climbed to 3500 feet. As their fuel load decreased, they were able to hold 120 to 130 knots at 3500 feet.

After three hours over open water on a single engine, Major Ruston and his crew landed safely at Kindley AFB.

The cool and competent coordination that Major Ruston's crew displayed, and the professional manner in which they reacted to this serious emergency, merit their selection for the TAC Aircrew Achievement Award.

TACTICAL AIR COMMAND

PILOT  
OF  
DISTINCTION



Lieutenant David B. Almy



First Lieutenant David B. Almy of the 4531st Tactical Fighter Wing, Homestead Air Force Base, Florida, has been selected as a Tactical Air Command Pilot of Distinction.

Lieutenant Almy was instructor pilot in an H-21B helicopter on a local night training flight. He had been airborne for an hour and a half, and was on downwind leg for landing, when the helicopter engine began to backfire. As he lost power with continued backfiring, he realized he would be unable to land on the airfield. At this time, the chip detector light

illuminated and the engine failed completely. Handicapped by the darkness of a solid overcast, Lieutenant Almy relied on his knowledge of the terrain surrounding the base. He set up autorotation and landed successfully in an open field, avoiding a swampy area bordered by a high coral mound.

Lieutenant Almy's thorough knowledge of autorotation procedures and his demonstrated preparedness for this emergency readily qualify him as a Tactical Air Command Pilot of Distinction.



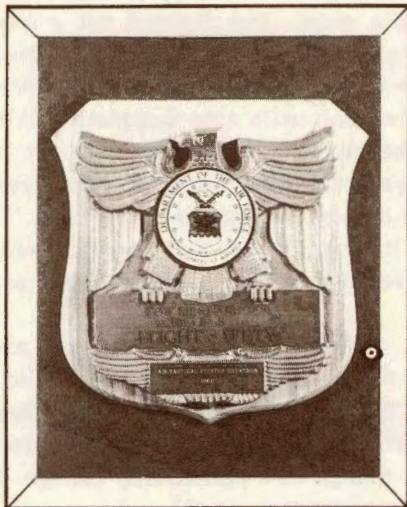
## TACTICAL AIR COMMAND UNIT ACHIEVEMENT AWARD



12 Months Accident-Free Flying

- 134th Air Refueling Group, McGhee Tyson Apt, Knoxville, Tenn
- 135th Air Commando Group, Baltimore, Maryland
- 140th Tactical Fighter Group, Buckley ANG Base, Colorado
- 189th Tactical Recon Group, Little Rock ANG Base, Arkansas
- 190th Tactical Recon Group, Hutchinson ANG Base, Kansas
- 316th Tactical Airlift Wing, Langley AFB, Va
- 907th Troop Carrier Group, Clinton County AFB, Ohio
- 4409th Support Squadron, MacDill AFB, Florida

## USAF 1966 ANNUAL SAFETY AWARDS



### FLYING SAFETY

- 431 Tactical Fighter Sq , George AFB
- 64 Troop Carrier Wg , Sewart AFB
- 4442 Combat Crew Training Wg, Sewart AFB

### MISSILE SAFETY

- Tactical Fighter Weapons Center , Nellis AFB

# THERE AIN'T NO SUCH ANIMAL

by Lt Col Carl E. Pearson  
HQ TAC (OSP)

...one name for  
all cars??



“**H**ey, Old Tactimer! Whoops... sorry, Super Sarge. That slipped. I’m a little excited about an idea I just had... wanted to catch you before you got into your office.”

“I’ve got a lot of work to do, Jones, but when a bright and shiny Airman Deuce hatches an idea, I can’t afford to pass it up. So go ahead... educate me.”

“Well, Sarge, you reached me on that driving pitch you made last week. You know the one... Commander’s Call... when you talked about drivers’ attitudes, speed, beer, fatigue, and all that jazz.”

“Glad I reached you, Jones. I was hoping to convince you and your buddies to ease up... quit playing tiger in traffic.”

“That’s what I mean, Sarge. That’s what my brainstorm’s about. I’ve figured out a way to pull their claws, clip their wings, slow’em down. All we have to do is use a little psychology... it’s simple. It’s what the book calls auto-suggestion. All we do is reverse the personality change that car manufacturers make in drivers. You know, the aggressive car names and high-performance advertising.”

“Slow it down, Jones. You’re way ahead of me. I know you’re a brain, but I don’t get your psychology pitch.”

“Okay, it’s like this, Sarge. Drivers are identifying with the wild, high-powered names of the cars they buy. They change character when they get behind the wheel. Like the car ads say, owning that sports job brings on a personality change. Have you noticed the names they use?”

"Do they pick out the good guys in the animal kingdom... the house pets? No! It's wild, man-eatin', on fire, blowing up a storm... or will blast you into space. If it has teeth, they're big enough to take your leg off... in or out of water. If one of these little jewels moved in with you, you'd move out... like fast!"

"So, what do you suggest? A sign in the parking lot saying Keep Your Cats Caged, or Wild Winds Can't Whistle? What's your answer, Jones?"

"Make them change their car names, Sarge. It'll curb their wild animal impulse... stop that personality change when they climb in their cars... bring drivers out of the jungle and back to civilization."

"Give me a for-instance."

"Okay, let's pick out a few cars in the parking lot. Here's a snarling, prowling, long-clawed member of the cat family. We can pull its fangs by renaming it Purring Pussycat or Kontented Kitten. That'd take the snarl out of the driver and we'd get rid of some fender scratching matches. In time Sarge, you'd convert the drivers to milk drinkers and they'd quit prowling late at night... probably spend all week-end curled up in front of the dayroom TV."

"You'll have to do better than that!"

"Okay Sarge. Here's a bunch of cars with names that read like severe weather warnings. With these names we should run up hurricane flags, tie down airplanes, head for storm cellars, or hit high ground. Let's calm these boys down by changing their car names to Balmy Breeze or Wafting Wind. That'll take the storminess and bluster out of drivers... cut down their ground speed by getting rid of that built-in tailwind."

"Jones, I'm afraid of that balmy business. Have you...?"

"Wait Sarge, here's a couple of gas hogs named after wild horses. We'll slow down the drivers by calling them Contented Cayuses or Happy Hayburners. That'll stop the bronco-busters from horsing around and stomping each other in their road rodeos."

"Look, Jones, I've got a lot..."

"Aw Sarge, just one more. Here's a few named after some pretty mean birds of prey... great small-

game killers. We could pull their talons and avoid busting their beaks by renaming them Passenger Pigeons. Or better yet, we can put out their pin feather fires and ground them with Kool Kiwi. That'd slow down their low flying and get rid of their aggressive tendencies... turn'em into lovebirds."

"Jones, it's time..."

"But, Sarge. I haven't gotten around to man-eating fish, poisonous snakes, or cars that launch you into space... in your own capsule clouds."

"I know, I know, Jones. I hate to discourage you and I appreciate your trying to help... need all the new ideas we can get finding answers to why we're killing as many people as we do. But I'm afraid you're going to need some post-grad work on this one. Your car-name-personality-change theory was rolled up into a metal ball late last night. We lost two young airmen and disabled three others... on a curve at high speed. They were in one of the few cars with a friendly name. I think it roughly translates into Companion!"

"Ouch! I'm sorry, Sarge... and I didn't mean to keep you from your work. I was trying to find a gimmick that would stop accidents overnight. Guess I have a lot to learn about what makes people tick."

"You're not alone, Jones. We all do... I think you put your finger on part of the problem. Some of our young troops get carried away with powerful car names and high performance advertising... and chalk up most of our accidents. I wish car manufacturers would go back to their economy pitch of a few years ago, quit the horsepower race."

"And by the way, Jones. I've tried your car-name game with a different twist. I looked for the name of a beast of burden that could be man's greatest friend if he'd let it. Instead he uses it to kill upward of 50 thousand people a year. And injures ten times that number. If I could find the animal, I was going to suggest naming all cars after it. Figured the name would be a warning. Every time a driver slipped behind the wheel of a car he'd remember he's handling a possible cold-blooded crowd killer."

"How'd you come out. Sarge?"

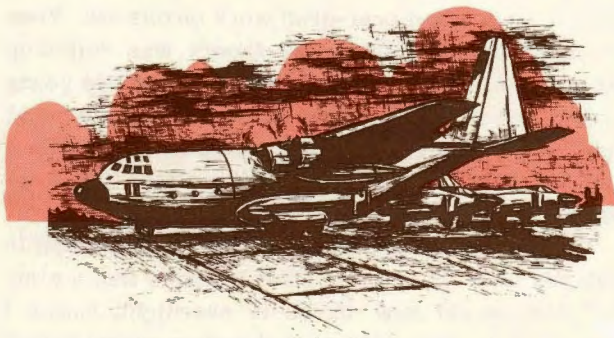
"Jones, there ain't no such animal!"

# TAC TIPS

tac tips



## PIED PIPER



The right side of the runway was closed for repairs, so the AT-33 pilot lined up with the left. He would have preferred the right side for his no flap touch-and-go. There was an eight-knot right cross wind. But all went well until touchdown. That's when the severe turbulence and violent cross wind hit him. With the IP helping on the controls from the back seat, he was able to keep it on the runway long enough to get back in the air.

On the go around, they asked Tower about the C-130 they had seen. It had been parked with its tail toward the runway, by the trim pad... which happened to be just abeam the touchdown point.

Tower calmly answered that the Herk was performing a runup!

The C-130 pilot was taxiing out for a night takeoff, trailing a follow-me vehicle along the rampside taxiway. Visibility was down to one mile in fog. Hangar lights blinded him as he eased by the shadowy F-4s on his right. These were really Phantoms!

As he nosed the big bird about four feet left of the taxi stripe, he was wishing he had wing walkers. The follow-me driver was charging ahead as if he saw no clearance problems. But the pilot felt uneasy.

Suddenly, both he and his co-pilot saw a flashlight and a single taxi wand near their right wing tip. Grateful for their new-found wing walkers, they moved ahead... until they felt that sickening jolt!

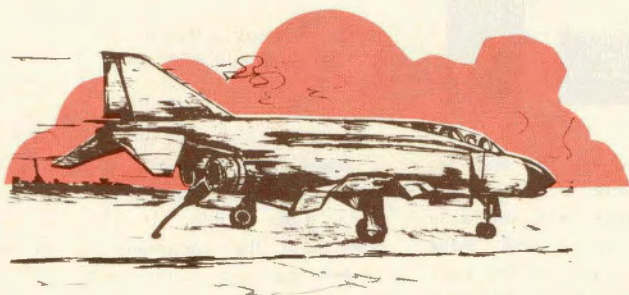
The two maintenance troops from the F-4 outfit had been trying to help. But they had been shining the lights on the tail of an improperly parked F-4!

## THOUGHTLESS



... interest items, mishaps with morals,  
for the TAC aircrewman.

## LOST ANTI-SKID



Everything had gone smoothly from briefing through taxi-out and lineup on the runway. Both Lead and the student wingman had their flaps at one half. When the student reached about 120 knots on takeoff roll, he pulled the stick all the way back and waited for the big Phantom to fly off the ground. Lead's nose wheel came off the ground and the bird flew off at their computed 152-knot takeoff speed, but Wingman's airplane wouldn't rotate.

At 170 knots, Wingman aborted. He pulled both throttles to idle, deployed the drag chute, got on the brakes, and lowered his hook. He was still moving pretty fast when only 2000 feet of runway remained. He stop-cocked the throttles.

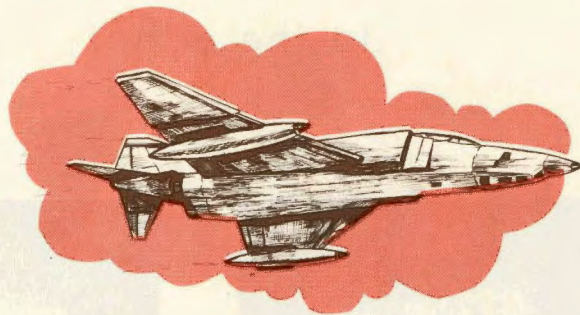
Both tires blew fifty feet from the barrier!

The BAK-9 did a good job of stopping him. And the airplane incurred only minor damage. But he could have avoided the blown tires and the very serious directional control problems that might have developed. When he shut down the engines, the AC generators dropped off the line and he lost anti-skid brakes. That isn't so serious... if you are prepared.

Just get those big feet off the brakes when you know you're turning off anti-skid!

TAC ATTACK

## WATCH IT!



The RF-4 crew, on a night low-level flare mission, arrived in the target area just as their external tanks went dry. The aircraft commander turned off his external tanks selector switch. Fuel quantity read 6500 over 10,500 pounds. They had made two runs across the range when the AC noticed the fuselage fuel was lower than normal... about 4000 pounds over 7900 pounds on the gage. He recycled the tank selector switch and carefully placed it in the center position.

As they left the range they had to climb to make radio contact with the control agency. Then both pilots became engrossed in reporting off-range time, armament expended, and reestablishing themselves on the low-level route home.

It was eight minutes since their last fuel check before they studied the fuel quantity again. The sector was showing 2200 pounds fuselage fuel over 5900 total on the counter. At this point the AC commented that their wing tanks were feeding "very slowly," and that only about 1000 pounds had transferred. They decided to climb. Passing 7000 feet, the AC realized his mistake... total fuel had remained 3700 to 4000 pounds higher than fuselage fuel. The wing tanks were not transferring at all!

A quick TACAN check told them they now were closer to home than to the airfield near the range. They declared an emergency and climbed to Flight Level 350.

When they leveled 80 miles from home, the sector tape showed 800 pounds. Thirty-five miles from the runway they started an idle descent with 300 pounds of useable fuel.

They landed with 200 pounds and flamed out in the chocks.

# LETTERS

...to the editor



Today I received the May 1967 issue of AEROSPACE SAFETY and a copy of May TAC ATTACK. Both magazines have pictures of a big bird with a wing bent against a building. There is one difference, however. On the AEROSPACE publication, the bird's left wing is bent, while the one in TAC ATTACK has the right wing bent. I hope these pictures are reversed in reproduction. If not, this base's Safety Officer must be put to shame for allowing aircraft to taxi in close proximity to this building and having two mishaps occur.

Of course I am joking, but wondered how both publications used the same picture, and how they were reversed without reversing the printing?

Lt Col Dale W. Smiley  
Indiana ANG

*Congratulations! You spotted it. We have you tabbed as a full-fledged SESCO (Sharp-Eyed Safety-Conscious Reader).*

*To put your mind at ease... yes, we did reverse the photo. The maintenance shack wasn't struck twice by the same type of airplane... to our knowledge.*

*About the printing on that sign, we're still wondering. Last time we asked the Art Department, they refused to divulge what they call trade secrets...*

- Ed.

While looking through the May issue on page 30 with a picture of an aircraft wing stuck into the side of a building, I noticed that there was an identical picture on the back cover of the AEROSPACE SAFETY Magazine. In your picture, the right wing is hitting the building and in the ASM the left wing is shown hitting the building. Evidently one of the pictures has been reversed and the sign retouched. According to the article in your magazine the picture you show is correct. But by looking at the other picture, it looks retouched. So if you would, please settle an argument between me and a fellow airman who says your picture is the original.

A1C Garry Moore  
MacDill AFB, Fla.

*You, too, may wear the badge of a SESCO! To settle your argument, we did the dirty deed... reversed the photo to make it match an old story we had kicking around in the old story locker.*

- Ed.

Whom are you putting on? We have just read the article "An Act of Faith" page 30 of May 1967 TAC ATTACK. We

don't know why the poor co-pilot is getting the eye exam when it was actually the left wing tip which struck the building.

The original, unretouched photo which appeared in AEROSPACE SAFETY, May 1967 (back cover) with the caption "No Comment" shows the left wing tip in contact with the building, and the painted sign shows rivets and building structure underneath the paint.

Simply reversing the negative to make the print shown in TAC ATTACK would have made the sign read backwards, so someone pasted a new sign over the reversed print and rephotographed the "paste up" for your article.

In the interest of accuracy: By the way, the Selfridge Transport Types are betting this letter doesn't see print.

Lt Col Edward C. Buhner  
63TCS, Selfridge AFB, Mich

Major John Lowery's article, Fighter Pilots and Parachutes in the May issue is a fine article. It will be used throughout the squadrons as an item of briefing, and coupled with 12AF requirements for ejection seat and harness training, will prove to be beneficial. However, would like to have you bring to Mr. Hardison's attention, his illustration of the pilot being separated from his seat. If you will note the parachute is deploying; however, his zero lanyard and arming knob are still attached to the parachute and the D-ring is still installed. Several pilots have asked me what new deployment system is TAC using to get that chute out of the bag.

Major David L. Elliott  
Flying Safety Officer  
Nellis AFB, Nev.

*Caught again! No, there's no new deployment system that we know of. Actually, we tried for a photo on that cover. But we couldn't get permission to stage an ejection so we could drop our Art Director (with camera) beside it in a parachute.*

*We're not blaming Hardison. We're looking at the rest of us here who should have known better... and missed it!*

- Ed.

by Maj John M. Lowery  
HQ TAC (OSF)

## Attention F-105 drivers

Informal reports from the field indicate that some F-105 pilots still pull the rudder control circuit breaker in an effort to make the airplane more maneuverable. Pulling the circuit breaker disables the eight-degree rudder stops and gives you full 32-degree rudder travel at all speeds.

You can easily overstress the bird in the panic of a hard break in combat or during a tense moment of air combat training, if you don't have the stops functioning. The yaw, and subsequent roll from excessive rudder deflection, can induce structural failure or complete loss of control before you recognize what's happening.

The rudder stops were designed to prevent airframe and vertical fin overstress from excessive yaw at high airspeeds. Disabling the stops is extremely dangerous. And the insidious thing about it is that the pilot who pulls the CB is not the only one exposed to the danger. Damage incurred while the rudder stops are not functioning can endanger a pilot many months later... even though he doesn't disable the rudder stops.

After you expose the structure of the airplane to undue stress, the metal may snap back... but not all the way. Repeated severe overstress after a period of time causes fatigue cracking. These cracks may then result in sudden and catastrophic failure such



Overstress at rudder hinge caused skin buckling.

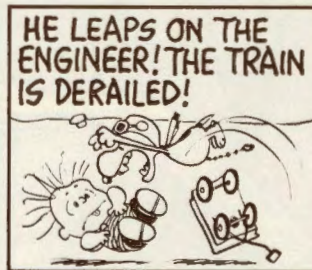
as we experienced in the F-86 wing and elevators a few years ago.

In addition, when you couple excessive yaw with high angle of attack, you increase the chances of wiping a pylon tank off the retreating wing due to spanwise flow. Should the tank impact on a critical point of the stabilator, you stand a good chance of losing the aircraft.

The F-105... and all the rest of our aircraft... are designed and stressed to fly within specific airspeed and G limitations. Stick to these limits and you'll live to enjoy your work. ➤

## PEANUTS

Courtesy of Daily Press, Newport News, Va.  
© United Feature Syndicate, Inc. 1966



a belt's  
no good  
until it's  
**BUCKLED...**

