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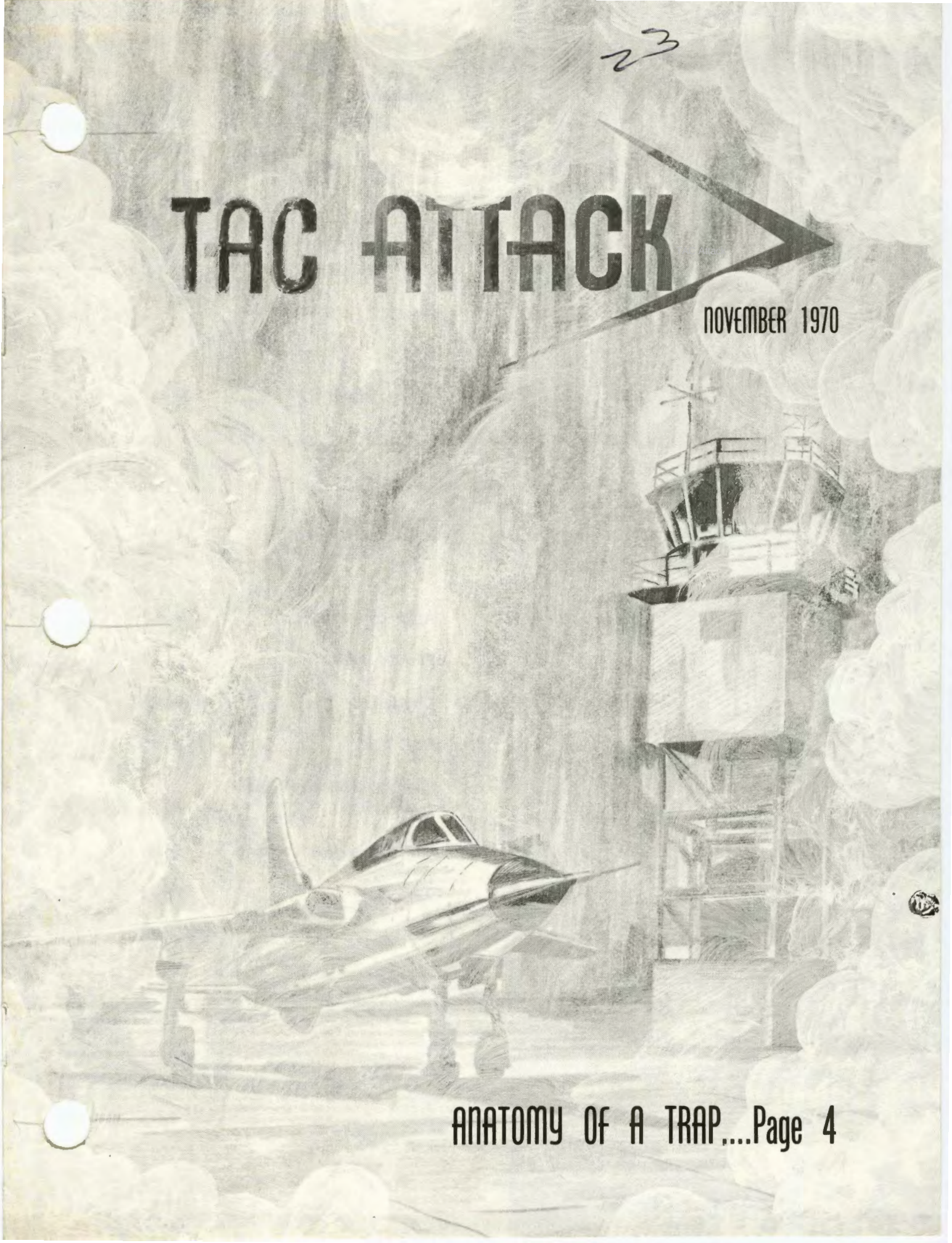
TAC ATTACK

NOVEMBER 1970



ANATOMY OF A TRAP....Page 4

for efficient tactical air power

TAC ATTACK

NOVEMBER 1970
VOL 10, NO. 11

TACTICAL AIR COMMAND

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Jamie sez:

You cannot command respect . . . you must earn it.

current interest

departments

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Angle of ATTACK

GETTING OUT THE WORD

Recently I was privileged to attend two very important conferences hosted by TAC Headquarters. First was the TAC Commanders Conference and second was a TAC Ground Safety Conference. During my presentations I made a strong plea for inputs to our publication division and for more efficient distribution of their material. On visits to the field, down at the very important working levels, we find instances where little of our safety material can be found. Material we find missing includes our Safety Alert Letters, posters, Safety Management, TAC ATTACK and sometimes, even TAC's safety programs. In this magazine we have attempted to give you some idea of how the TAC ATTACK is distributed. In most cases, a personal check with your unit/staff agency publication distribution representative will straighten up any distribution problem you may have.

Additionally, I would like to repeat my verbal request that I gave at these two meetings. "I solicit your help in forwarding, to this office, items for TAC ATTACK." I spent many years assigned to tactical wings and know there are many interesting stories to be told, stories that can prevent accidents. This is your magazine, so as one of the TV programs says, "Keep those cards and letters coming."

We hear a lot about gaps these days . . . generation gaps, communications gaps . . . you name it. In safety we just cannot afford one; we are dealing with lives and expensive equipment. If you have a problem it stands to reason another unit or individual can end up in the same situation. Unless they are warned, there is a strong possibility the situation will repeat itself. After the fact safety programs only involve data collecting. Programs based on education and exchange of information can operate before the fact---and are the ones that really pay off.

Virgil K. Meroney

VIRGIL K. MERONEY, Colonel, USAF
Chief of Safety

a second look

at....

ANATOMY OF A TRAP

CIVILIAN FIELD WEATHER		AFB WEATHER	
2155	CLR 10	2200	CLR 6H
2255	CLR 10	2300	CLR 5H
2354	CLR 10	2325	CLR 4H
0032*	CLR 8	0000	CLR 4H
0038	CLR 3GF	0100	50 ⓪ 4HGF
0055	CLR 3GF	0113	50 ⓪ 3HGF
0136*	M 5 ⓪ 3F	0137	-X1½ GFH
0152	W5X1½F	0142	W2X5/8F
0200*	W3X3/4F	0149	W1X¼F
0212	W2X¼F	0200	W1X¼
0232	W1X¼F	0204	W1X3/8F

*These observations not transmitted.

Earlier this year an F-4 crew jumped out of a perfectly good airplane. It had been running fine, but now it was out of gas. A few months ago this act was repeated by a crew in another command. Both cases involved their inability to recover in marginal weather conditions, and the lack of fuel to get to a suitable alternate after the first missed approach. They had been trapped — and very neatly.

In the other command's accident, the crew showed up at the IAF and found that the weather had deteriorated below minimums for the active runway determined by the wind. Since there was an ILS approach to the other end, the pilot elected to give it a go. He missed the approach and found himself without enough fuel to get to an alternate. After the second missed approach, he had 500 pounds and was vectored to the bail-out area where they terminated their flight.

The circumstances involved in our accident were different, as well as the reason for the unsuccessful approaches. We're going to present portions of it to illustrate just how easy it is to get trapped when 'ole man weather decides to lower the boom. During this discussion of course, we'll be laying a little "hindsight" on you, this is unavoidable. Since "Hindsight" and "Foresight" don't come from the same bucket we can't hope to be objective — but we'll try. It's difficult to imagine yourself in the cockpit of the fighter that's running out of gas, when you are in a comfortable office reading about what happened. And, of course, we know things the pilot didn't find out about until after he was picked up and returned to his home patch. So with that qualification, let's press on.

To give you some background, the accident aircraft was number two in a flight of three on a night air-to-ground mission. Their weather briefing at 2145 was clear and six in haze. The forecast from 0045 to 0245 was three thousand scattered, eight thousand scattered

in haze. Another "no sweat" night flight. The flight ned just before a wall of fog formed and drove the d from VFR to minimums or below in just a few minutes. It's significant that the weather observer reported five thousand scattered and three miles at 0113; followed by the next sequence of a partial obscuration and a mile and a half at 0137, twenty-four minutes later. Isn't it odd that there are no intervening observations? Although it may be hard to take, it's not odd at all that a fog bank could form or drift in unannounced, on such short notice. As a matter of fact, at the time of the 0137 sequence, the weather was already lower – there is no such thing as an instantaneous weather report, they all take a few minutes since the weather must be observed, recorded, and disseminated.

At any rate the flight returned as all of this was going on. Lead and Three landed. Number Two made two approaches than headed for a civilian field about twenty-five miles away for what he thought would be an easy recovery. Unknown to him, the civilian field started down shortly thereafter.

To separate the wheat from the chaff, we went through the report and extracted the events in the order in which they occurred. The chronological listing follows:

0056 Weather observation showed ground fog in vicinity of the base. The observer was instructed by the duty forecaster to monitor this weather. The command post controller and the weather forecaster agreed that the presence of ground fog was not significant at this time.

0100 The flight of three departed the range with fuel to go to any of six alternates. (5500 pounds)

0113 Weather observer reported a reduction in visibility from four to three miles.

0115 Forecaster informed the command post duty controller of his intention to issue an advisory of partially obscured and visibility one mile. No forecast time was given and the forecaster predicted that the visibility would not go below one mile.

0120 The Supervisor of Flying was notified. He instructed the command post to check fuel of Fog flight and to recall them to the local area. At this time the flight was under Center control, the command post did not consider it practical to attempt to expedite recovery of Fog flight when this fact was discovered. (Fuel 3500 pounds)

0128 Forecaster issued an amended terminal forecast, to be effective till 0900, of five hundred scattered with three miles in ground fog, intermittently five hundred scattered and one in ground fog.

0136 Civilian airport weather observed as five hundred scattered, three miles in ground fog. Observation not transmitted.

0137 AFB weather went below VFR for the first time.

0138 Fog 22, GCA contact. Advised that "fog appears to be moving in pretty heavy and the strobe lights are on." He was not aware that the civilian airport weather was going down. He could see the AFB from GCA downwind.

0139 After slowing to approach speed, Fog 22 was given AFB weather as a partial obscuration with a mile-and-a-half in ground fog.

0141 At three miles on final the weather observation was indefinite ceiling, two hundred obscured and five-eighths in fog. Not given to Fog 22.

0142 At a mile-and-a-half, Fog 22 began to drift right. At minimums he could only see the strobes to his left so he went around. Fog 23 was in GCA contact, Fog 21 landed just prior.

0144 Fog 22 declared minimum fuel.

0146 Fog 23 landed and said he didn't have the runway till minimums. Weather was given to Fog 22 as indefinite two hundred obscured and five-eighths in fog.

0149 Fog 22 four miles on final. Weather observation, indefinite one hundred obscured and a quarter-mile in fog. Not transmitted to Fog 22.

0150 Fog 22 went around with 1200 pounds.

0152 Fog 22 declares emergency with GCA and requests vector to civilian airport for a GCA to first available runway.

...A TRAP

0152:25 Approach control begins vectors to ILS final at civilian airport.

0152:45 Fog 22 declares four minutes of fuel remaining to approach control.

0153 Civilian field weather passed to Fog 22 as five hundred scattered and a mile-and-a-half. Fog 22 advises approach of no ILS capability.

0153:30 Fog 22 is twelve miles out, visibility reported as one-and-a-half miles.

0155 Fog 22 requests civilian airport TACAN channel.

0155:30 Visibility reported to Fog 22 as three-quarters of a mile at four miles out.

0157 Fog 22 passes over civilian field. Can see the field from above only.

0158 Fog 22 requests vector for ejection with 300 pounds.

0200:20 Crew of Fog 22 abandons aircraft.

There were a lot of people involved in the goings-on that night. Using our hindsight, we could probably fault them all. But we have another point. What was missing from the chronological listing of events? Why did the pilot of Fog 22 get trapped into a last ditch try at the civilian field? That's right – nobody was giving him the information he needed to make an intelligent decision on his own! His ace-in-the hole was the civilian field and unknown to him, it had gone down. His minimums at the civilian field were five hundred and one. The only precision approach available was ILS and of course, F-4s don't have that black box. (That's a planning factor all F-4 outfits ought to be using.) At any rate, BEFORE THE PILOT DEPARTED THE AFB, HIS "ROSEY" ALTERNATE WAS BELOW MINIMUMS! On their way over he remarked to his back seater, "This will be a piece of cake." That will give you an idea of how neatly he was trapped.

The mark of a successful trap is, of course, whether the victim can be lulled into following a predetermined path or sequence of events until the instant the jaws snap s This one was laid by a professional, right down to timing and fuel aboard the fighters. We only lost one aircraft . . . but the trap was set for all three of them. The fact that 21 and 23 landed doesn't really reflect on Fog 22, for there is no way to predict visibility at a particular time and place in dense fog.

Let's analyze this trap and see what it was composed of. First there is the timing – had the flight arrived just a little earlier they would have recovered in VFR conditions. Just a little later and they would have gone or been sent to an alternate with F-4 facilities. This trip required about 1500 pounds of fuel and was taken by 31 flight who arrived in the vicinity of the AFB as Fog 22 was on downwind for his second approach. This occurred just ten minutes after the 0137 observation of a partial obscuration and a mile and a half, visibility had dropped to quarter mile. Fog 22, of course, already had the schnitzel – he only had enough fuel to complete his second approach and press on to the civilian field.

Some of you may think that warning bells should have gone off all over the place when the weather first dropped – why? The forecast was for no lower than a mile . . . no clairvoyance allowed now. The whole flight could see the field while in the pattern, and why should Fog 22 press on to an alternate – didn't 21 and 23 land OK? And w the civilian field, just twenty-five miles away, VFR?

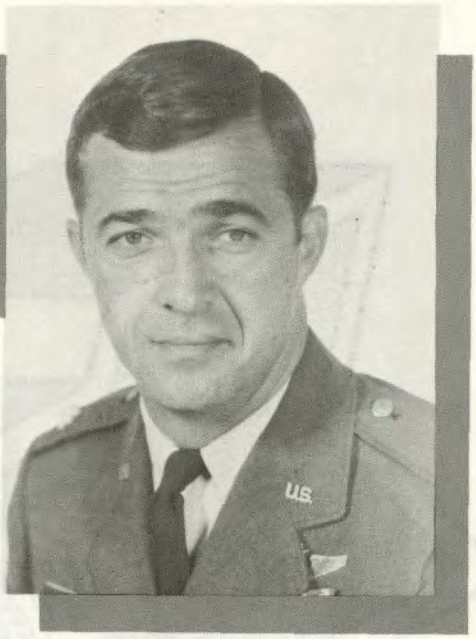
As a pilot, there is only one way you can be sure avoiding an insidious trap such as this – BE NOSEY. Don't fall into that old routine of blindly depending upon people on the ground. Our system for recovering and monitoring airborne aircraft is dependent upon the interaction of many people. A breakdown in communication among them or a misunderstanding, no matter how innocent, could put you in a parachute . . . or as has happened, into a pile of rocks.

The gist of this message is . . . they can only advise! When the gear comes up, you are in command and in fact, are responsible for your aircraft and the people in it! You should accept that responsibility fully or get out of the flying business. Be cognizant of what's going on around you at all times. It's as simple as, "Ask and ye shall receive." And if ye asketh and don't receive, be prepared to go it alone – but whatever you do, don't just sit there.

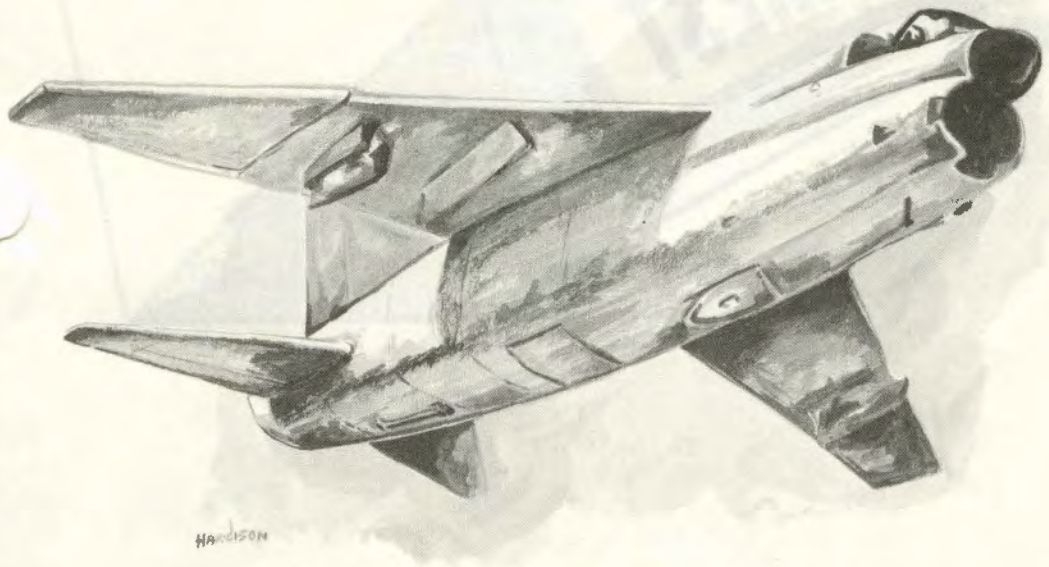
We didn't delve into all aspects of this accident, nor do we wish to discuss the findings. You can read about what happened and correlate the weather observations of the AFB and neighboring civilian airport. Is your unit set up for a trap such as this one? If it is, plug the holes and press on with your mission. And keep this in mind, a man can only be trapped if HE allows it to happen. Others can share the blame, but only the pilot can have responsibility.

TACTICAL AIR COMMAND

Pilot of Distinction



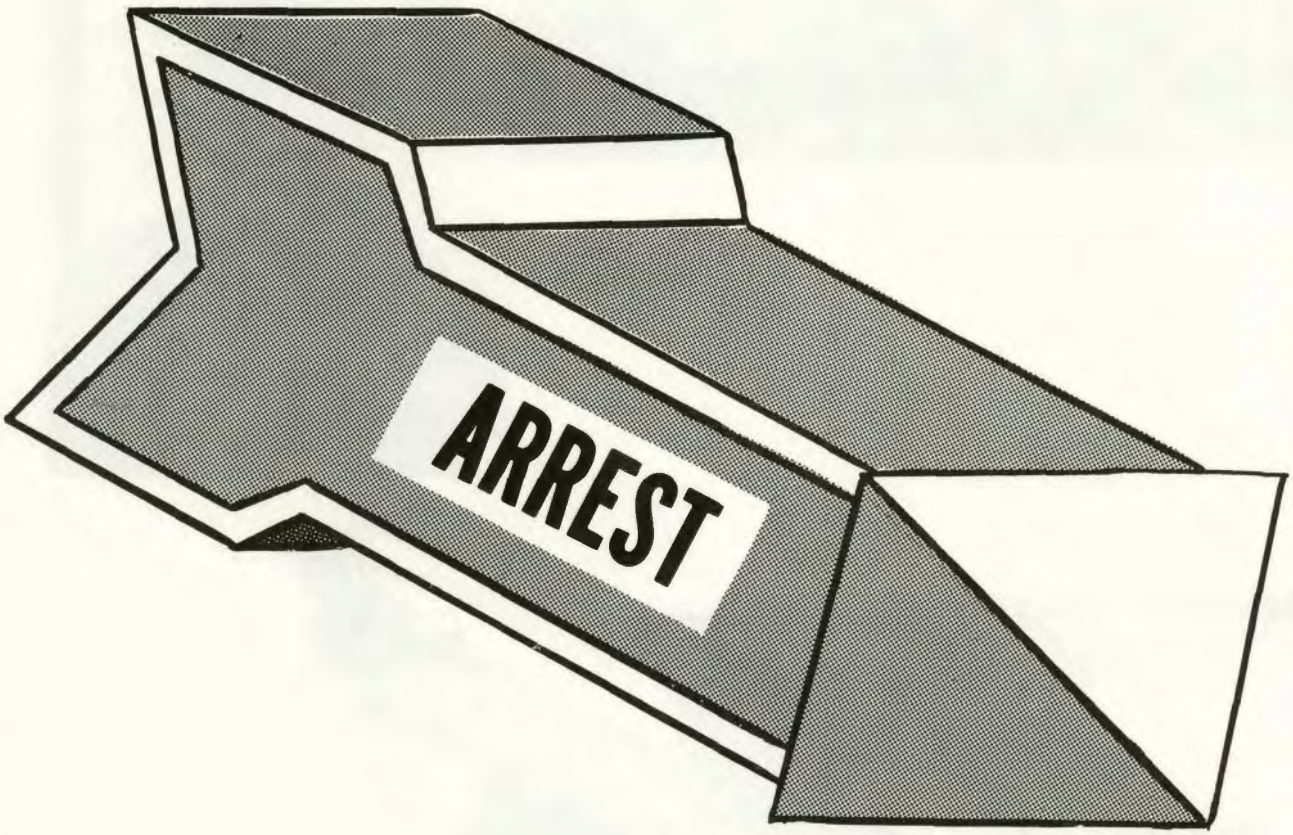
Maj Thompson



Major Thomas B. Thompson of the 310 Tactical Fighter Training Squadron, Luke Air Force Base, Arizona, has been selected as a Tactical Air Command Pilot of Distinction.

Major Thompson was making a GCA approach in an A-7D when the left main landing gear failed to fully extend. He immediately used the emergency system, without success. Major Thompson declared an emergency and while the runway was being foamed he performed several maneuvers in an attempt to extend the gear. He accelerated the aircraft to 160 KIAS over maximum gear speed but this failed to pull the partially extended gear [illegible]. Next he made a touch-and-go landing in an effort [illegible]ounce the gear to the extended position, which also failed. Because of a fuel shortage Major Thompson elected to make an approach end arrestment on the foamed runway. The aircraft was flown onto the runway with good tailhook contact prior to the barrier; however, the hook skipped over the barrier, necessitating an immediate go-around. Now below minimum fuel, Major Thompson made his second approach which resulted in a successful barrier engagement. The aircraft veered to the left, turned 180 degrees, and came to a stop at the edge of the runway. Major Thompson evacuated the aircraft without further incident.

This demonstration of outstanding airmanship in a critical situation readily qualifies Major Thompson as a Tactical Air Command Pilot of Distinction.



A few months ago, the question of Navy A-gear was raised in a discussion. The end result was a unanimous decision by the participants that we really didn't understand much about what the Navy used, or their concept of operation. It followed then, that maybe the rest of the Air Force jocks knew about as much as our little group. So we asked around this headquarters and queried pilots on trips to the field, it didn't take long to find out what we wanted to know. There is a general lack of knowledge, and interest, in the equipment the United States Navy uses to arrest aircraft.

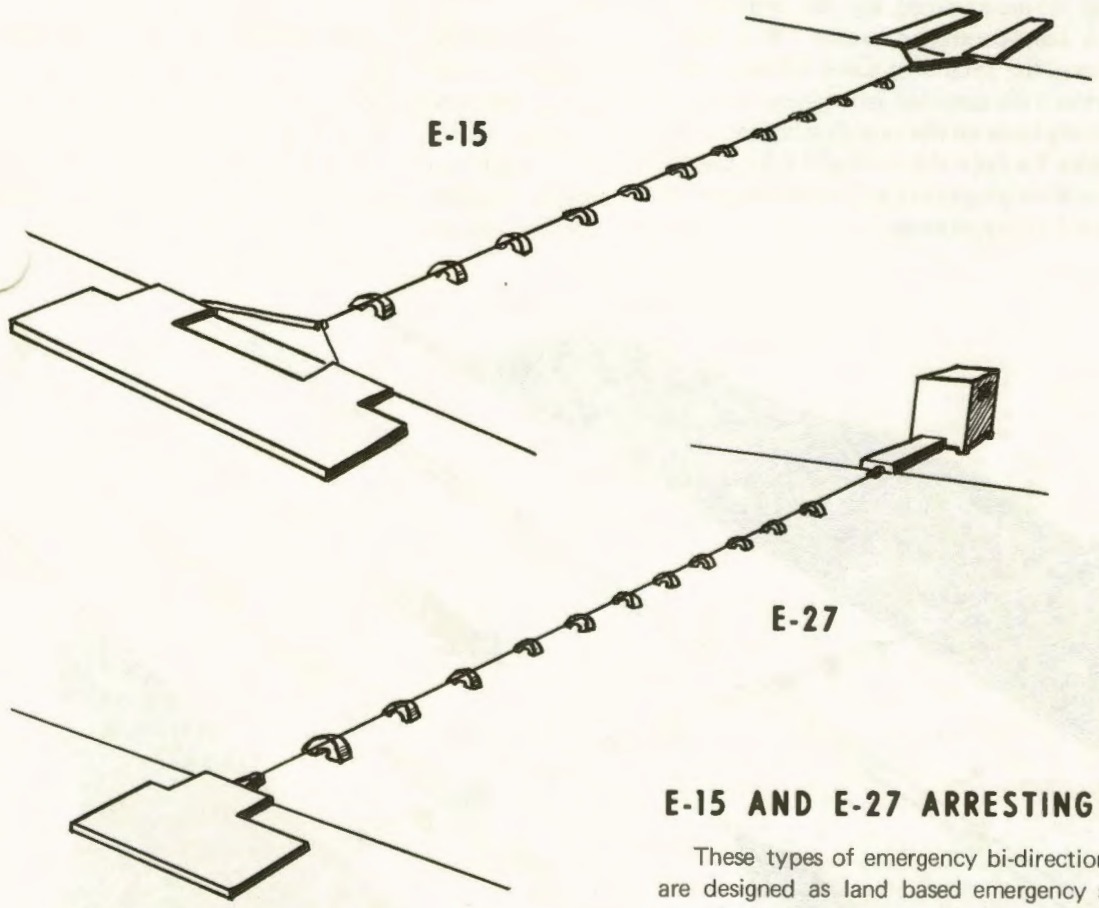
Since we're in that time of the year when slippery or icy runways may force us to divert at any time, we thought the subject of Navy A-gear would be especially appropriate. A trip to Oceana Naval Air Station got us a look at the equipment they use, and wiped away some of the mystery connected with Navy arresting systems. Although they number them differently, they're basically the same as ours! Following our visit to Oceana we visited the Naval Safety Center and talked to their A-gear SPO and our counterparts who publish the US Navy APPROACH. Our thanks to the US Navy, and especially the APPROACH magazine, most of this material is adapted from their May 1969 issue.

NAVY A-GEAR

CONUS Arresting Gear

A/G Type	Approx. No. Systems Presently Installed
E-15/E-27	74*
E-28	88**
E-5/E-5-1	250*
E-14-1	4*
E-5/MA-1A	12*

* Indicates number of systems installed is decreasing.
** Indicates number of systems installed is increasing.



E-15 AND E-27 ARRESTING GEAR

These types of emergency bi-directional arresting gear are designed as land based emergency standby gear for arresting tailhook equipped aircraft. They are similar to our BAK-9 and BAK-12 Air Force equipment. The E-27 installation has a single arresting engine, the E-15 will have two. The arresting engine is a rotary friction type energy absorber and is designed to dissipate the energy of a landing aircraft. All types of E-15 and E-27 arresting gear

NAVY A-GEAR

use essentially the same engine for arrestment, although engine components may be changed as necessary to suit individual installation requirements.

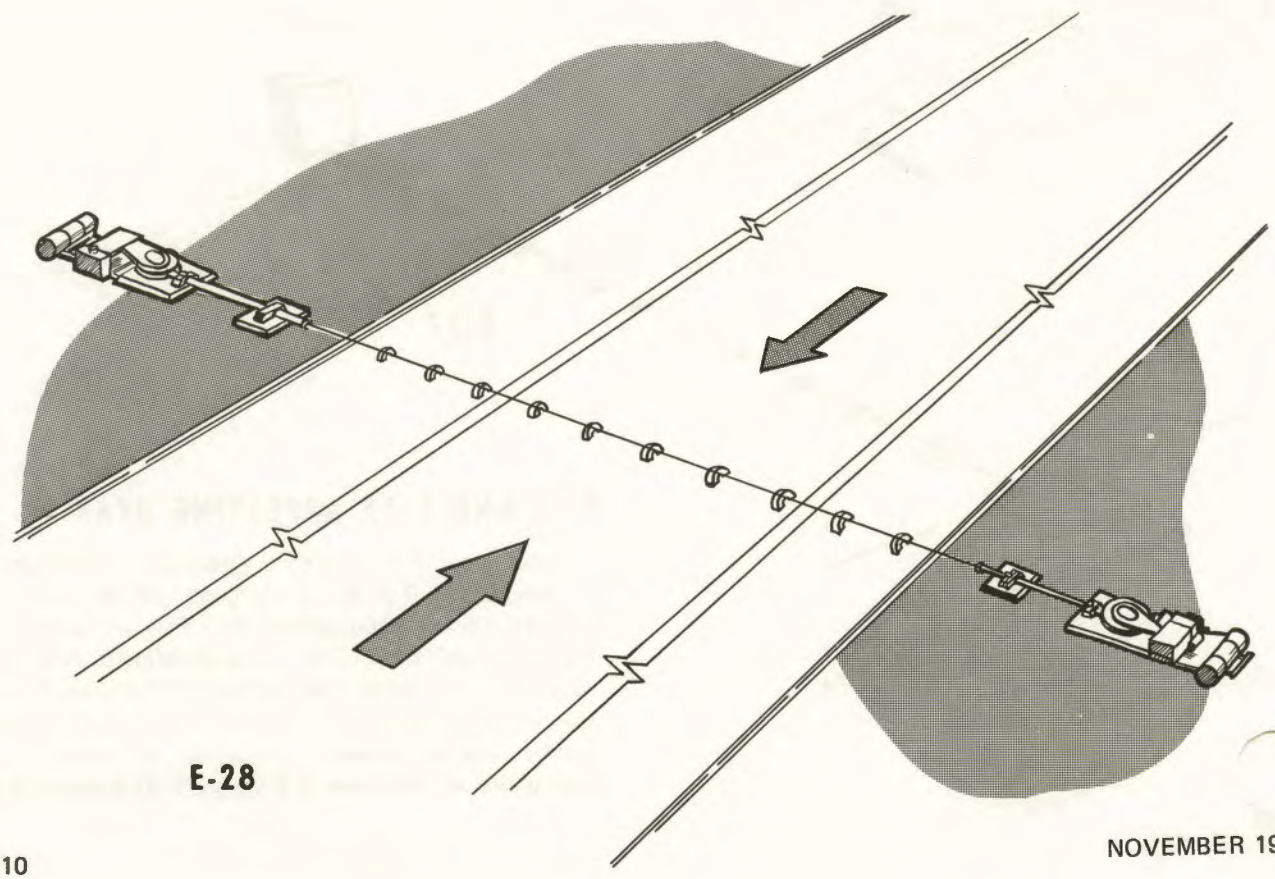
Aircraft arrestment is accomplished by the engagement of the aircraft arresting hook with a deck pendant which spans the runway. During runout the kinetic energy of the arrested aircraft is absorbed by the rotary friction arresting engine. The arrestment is entirely automatic. The arresting gear engine is activated when the aircraft arresting hook engages the deck pendant, thereby pulling out the attached purchase tapes. As the tapes unwind the reels rotate, turning sprockets which simultaneously drive a hydraulic pump and rotate a valve cam. The pump supplies pressure to the friction brakes and the amount of pressure supplied is programmed by the amount of restriction in a cam-controlled valve. The brake application decreases the rotational speed of the wheels thereby slowing down the purchase tape payout which in turn applies a braking force on the aircraft tailhook.

Arresting engines for both the E-15 and E-27 may be installed above or below ground in a pit, much the same as our BAK-9 and BAK-12 installations.

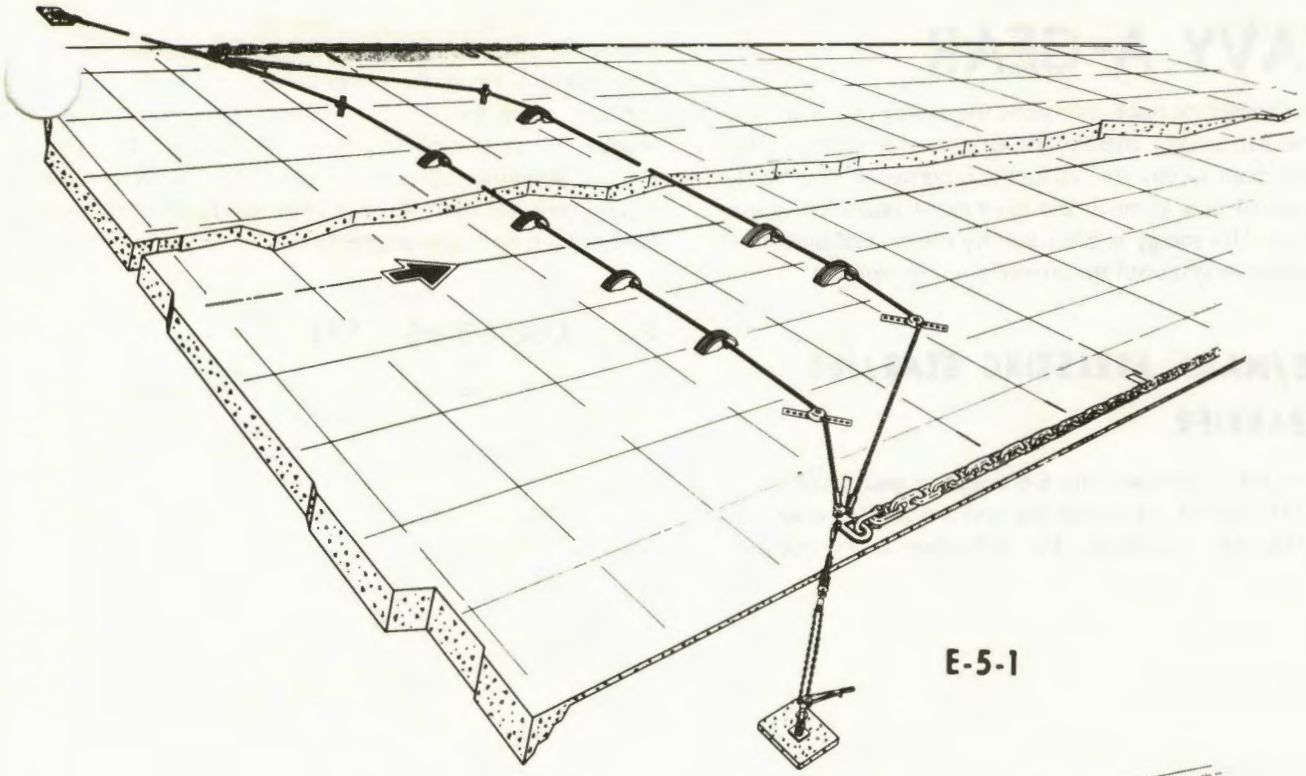
E-28 ARRESTING GEAR

The E-28 is a bidirectional emergency recovery system capable of arresting aircraft ranging up to 78,000 pounds at speeds up to 160 knots. It is the newest USN arresting system available and compares with our USAF BAK-13. The E-28 is configured with twin energy absorbers, one on each side of the runway. Each absorber includes a fully wound drum of nylon purchase tape connected to a wire rope pendant stretched across the runway.

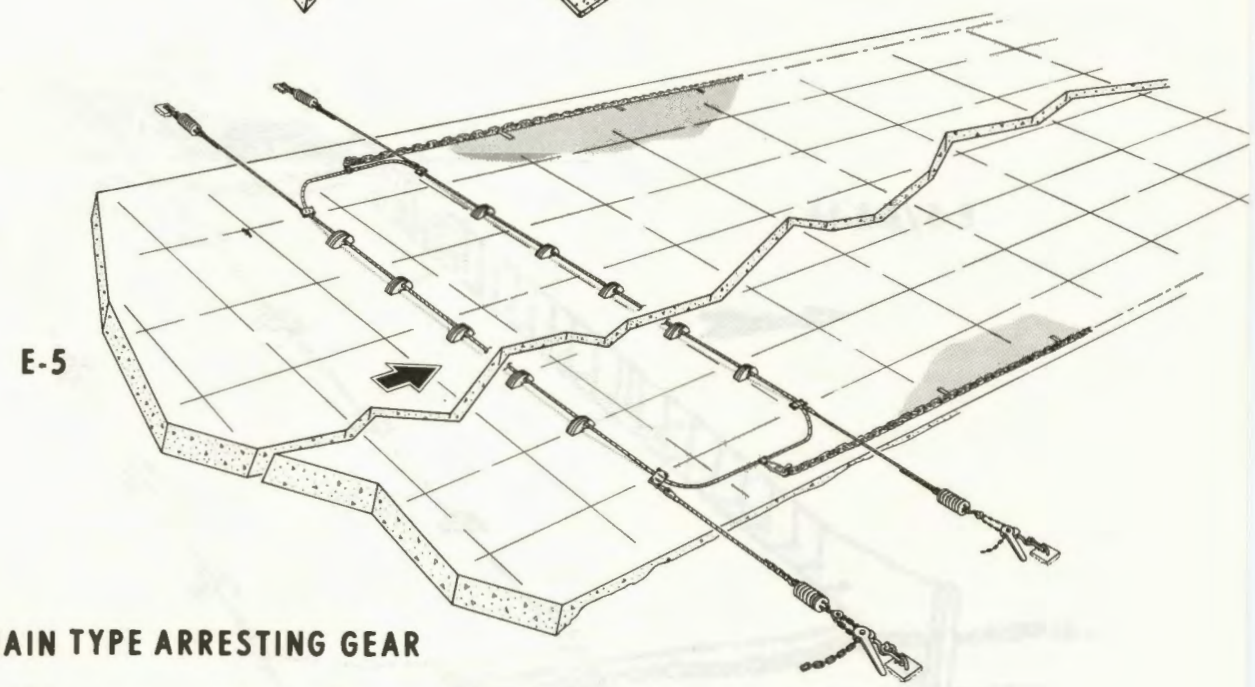
During arrestment the pendant is engaged by the tailhook of the aircraft. Forward motion of the aircraft causes the tape to unwind as the energy absorber provides the braking action required for arrestment. Each absorber has a rotor and stator arrangement in a container of hydraulic fluid (water/glycol solution). The rotor converts the rotary motion of the tape drum to fluid motion and then to heat, thereby dissipating the kinetic engergy of the aircraft. The heat generated by the arrestment is dissipated through the fluid with the aid of a cooling system. Once the aircraft is stopped and disengaged from the pendant, a gasoline engine powered retrieve system rewinds the tapes, returning the E-28 to battery position.



E-28



E-5-1



E-5

E-5/E-5-1 CHAIN TYPE ARRESTING GEAR

The E-5 and E-5-1 emergency chain arresting gear equipment consists of dual arresting cable installations which can be rigged for either single or bidirectional arrestments of aircraft. Bidirectional chain arresting gear are so designed that arresting cables may be attached to either end of the chains. The chain weights are arranged so that the heaviest chain is in the middle. Normally only pair of cables may be rigged at a time, depending on desired direction of arrestment. The E-5 and E-5-1 emergency chain gear usually has dual arresting cables. The difference between the two installations is that the E-5 has a dual straight pendant while the E-5-1 has a dual shaped pendant. There is no USAF equivalent for this gear. The principle of operation for both the E-5 and E-5-1 is that the arresting cable, when engaged by the

NAVY A-GEAR

aircraft arresting hook, transmits the energy of the aircraft to the two anchor chains. The arrangement of the chains allows them to pay out gradually, progressively increasing the weight pickup much the same as the operation of our MA-1A. The energy is dissipated by the gradual pickup of the chain weight until the arrestment is completed.

E-5/MA-1A ARRESTING GEAR/JET BARRIER

In this installation the E-5 arresting gear is combined with the MA-1A jet barrier and operates much the same as our MA-1A (modified). The difference is the point at which the chain is hooked to the pendant cables. In the Navy version, the chain is positioned to be even with the pendant cable so a hook equipped aircraft will begin dragging chain as soon as it hooks the pendant. The cable on the webbing will remain unloaded during a hook engagement. On our MA-1A, a hook equipped aircraft will always get a main gear engagement.

E-14 ARRESTING GEAR

The E-14 arresting gear is designed as an emergency standby gear for arresting tailhook equipped aircraft and is equivalent to our BAK-6. It is designed to arrest aircraft up to 50,000 pounds up to 160 knots. Runout will be within 1000 feet, engagements may be safely made at up to 50 feet either side of centerline.

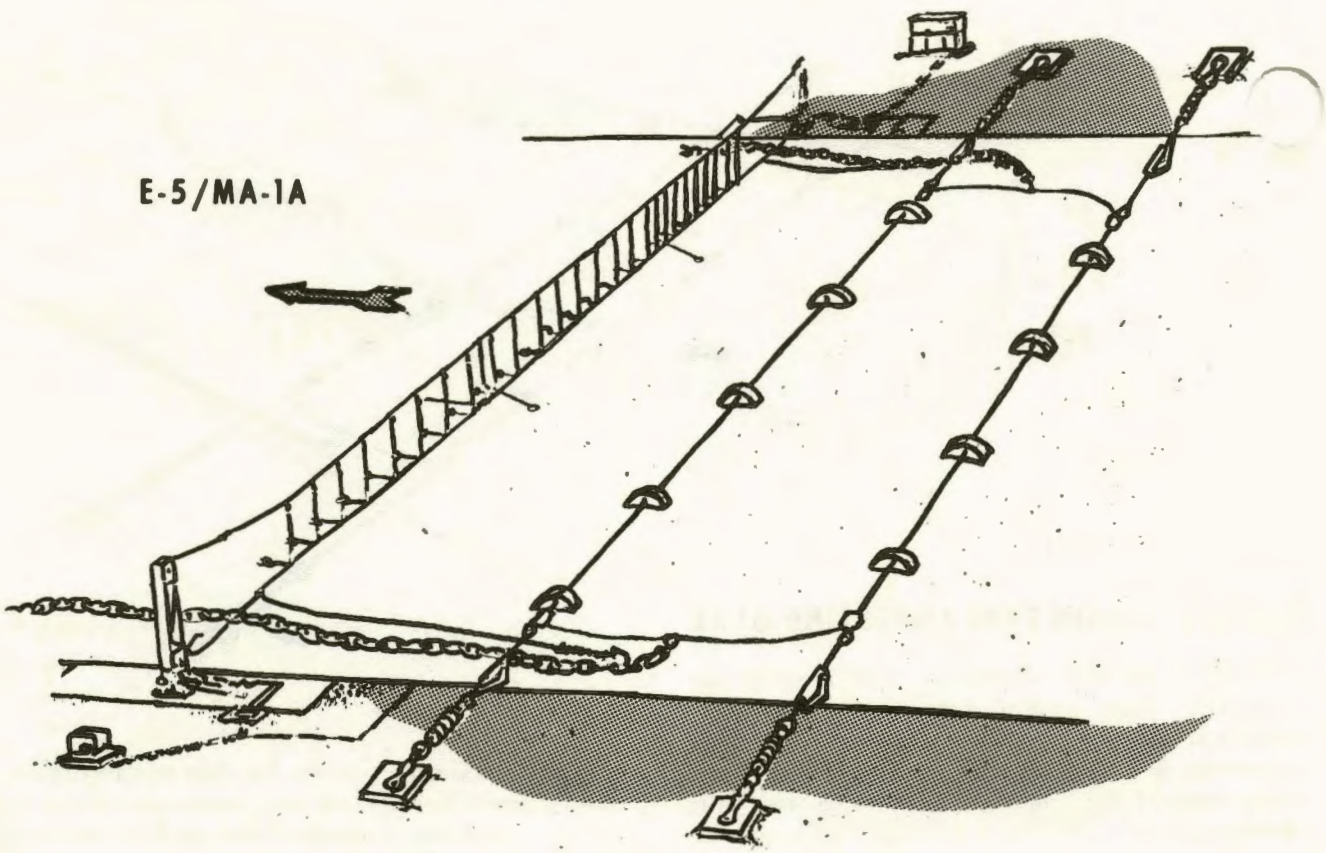


Chart of U.S. Navy Arresting Gear, showing Air Force designations of equivalent gear

USN Designation	USAF Designation	Remarks
E-5/MA-1A	MA-1A (modified)	Unidirectional, nylon barrier between stanchions combined with pendant type cable and attached to chain type arresting gear.
E-5/E-5-1	—	Chain type. May be rigged bidirectional.
E-14-1	BAK-6	Water-squeeze type, bidirectional.
E-15	—	Two E-27 A-gears, bidirectional.
E-27	BAK-9	Rotary friction brake, bidirectional.
E-28	BAK-13	Rotary hydraulic, bidirectional.

Summary

Emergency field arresting gear has proven to be a valuable aid in the prevention of Navy aircraft accidents. It can work for us too if pilots will familiarize themselves with the type of gear they may encounter, especially the type A-gear available at your favorite Navy base or neighboring divert field. In this connection, the current IFR Enroute Supplement and applicable approach plates should be consulted in order to determine the type and location of emergency field arresting gear available on a given base. The chart below was extracted from the enroute supplement and includes only the most widely used Navy arresting gear. While Navy and Air Force gear may be identical, this chart should be taken to indicate only that they are roughly equivalent.

CHOCK TALK ...incidents and incidentals

T.W.F.T.

The F-100 touched down about four thousand feet behind the leader in the center of the runway. The pilot got a chute, then discovered he had no braking with or without anti-skid, the utility pressure indicated zero. The pilot used rudder to move to the right side of the runway to clear the aircraft ahead of him – and got too slow to realign himself with the runway. The aircraft departed the hard surface at 800 feet to go, veering right, crossed a parallel runway, continued till the right wing contacted a wooden maintenance shack, and finally came to rest when the left wing struck an F-104 aft section on a dolly.

The cause of this wild ride was fatigue failure of a left brake line which allowed all utility hydraulic fluid to be pumped overboard. The unit is briefing maintenance personnel using large photos of the failed line and fitting to illustrate what to look for when checking for cracks in F-100 high pressure hydraulic lines. They have also instituted a new procedure whereby any high pressure line which leaks after proper torquing will be replaced without attempting to reconnect and retorque the line. They're hoping these procedures will keep their F-100s from becoming one of 'The World's Fastest Tricycles' again.

BLC

At liftoff the F-4 had a strong tendency to roll left. About this time the pilot noticed the TE flap indicator was showing unsafe and he raised the gear and placed the flap switch UP. The leading edge flaps came up and indicated same, the trailing edge indicators remained unsafe. The left rolling tendency was reduced but the flashing wheels light continued after the gear locked up. The aircraft was slowed to 230 knots and, as this was taking place, the TE flap indicator showed UP.

They leveled at 8000 feet and 230 knots, then selected full flaps. The TE indicator showed unsafe and the aircraft wanted to roll left again. This time the roll tendency was more severe and required full right aileron to hold the wings level. The flaps were raised to one-half and fuel was dumped prior to a BAK-13 approach end arrestment.

The problem was caused by material failure of the actuator rod. It broke, causing the BLC valve to fail open. The left aileron, left flap actuator and left trailing edge flap received burn damage and were replaced along with some associated wiring. We lucked out on this one.

WHY SEW??

I am sure that by the time you read this issue of TAC ATTACK, all Safety personnel and many not in Safety are aware that SE is the new office symbol for Safety, and SEW has replaced the familiar OSMEN designator. We thought hard and long about a descriptive office symbol and decided SEW, for Weapons Safety, to be most appropriate. The old symbol, MEN – Missile, Explosives, Nuclear served us well for a number of years but in this age of changing technology and advances in the state of the art of weaponeering, the old shoe started to pinch. We had a difficult time applying MEN to chemical and biological weapons, and it hardly described Laser, Electrical-Optical, or Infrared weapon systems and devices. To our way of thinking, Weapons Safety is a more descriptive name for all our activities and it can be readily applied to systems that missile, explosives, or nuclear may not describe.

with a maintenance slant.

SAFETY PIN???

The A-37's takeoff roll was normal up to rotation speed . . . about then the pilot heard a rhythmic tapping coming from the nose section. As the gear was retracting an explosion occurred in the right engine and a fireball was visible in that intake. The right throttle was mediately retarded to idle, tiptank fuel was dumped an emergency landing was made – posthaste.

The cause of this mishap was ingestion of a gun safeing streamer which was not removed from the right gun bay door by the arming crew. The rhythmic tapping heard by the pilot was the streamer flapping against the fuselage just before it was torn off and eaten by the right J-85.

WATCH THOSE DUCTS

After level off the F-4 became extremely sensitive in pitch. The problem increased until no pitch aug was available so the mission was aborted. Just prior to shutdown, a loud hissing was heard coming from the left wing root area. They found that the left trailing edge BLC duct failed. The cause was undetermined. Damage consisted of scorched wire bundles for the Aero 7A and autopilot, an Aero 7A damaged beyond repair, inner skin on door 83L was warped, and the left aft launcher phenolic chafe strip and aft fairing were destroyed. All fire and overheat systems were checked and found within TO tolerances. We lucked out again.

ENGINE LINKAGE

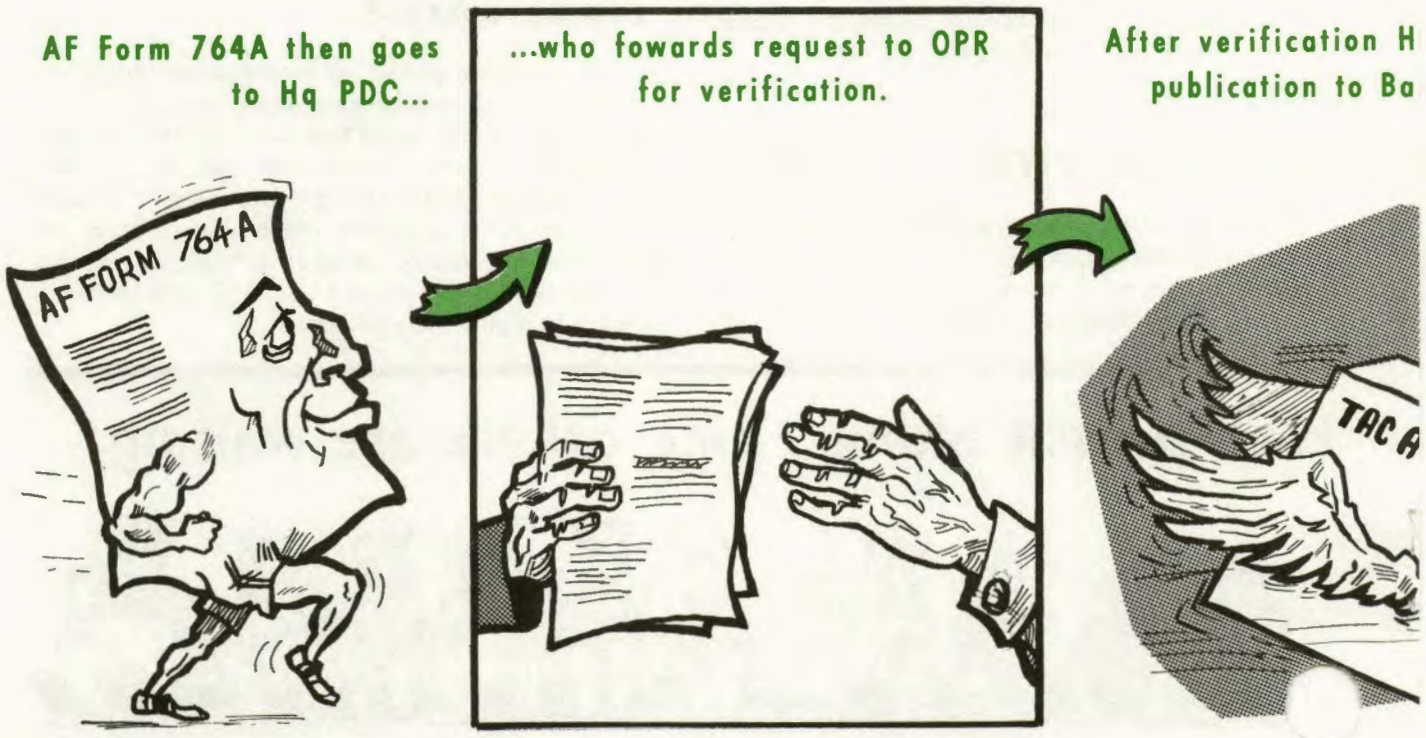
The A-37 pilot pitched out in an overhead pattern and rolled out to find that number one engine was shut down. He restarted it and turned final, when the throttles were retarded in the turn, it shut down again. They found a bent throttle control rod end, it could have been damaged during removal or installation of the engine. The bent rod end caused the throttle linkage to be misaligned when the throttle was rapidly retarded to idle. This misalignment caused the engine to be shut down.

Hey! pass it along... nine others are waiting.

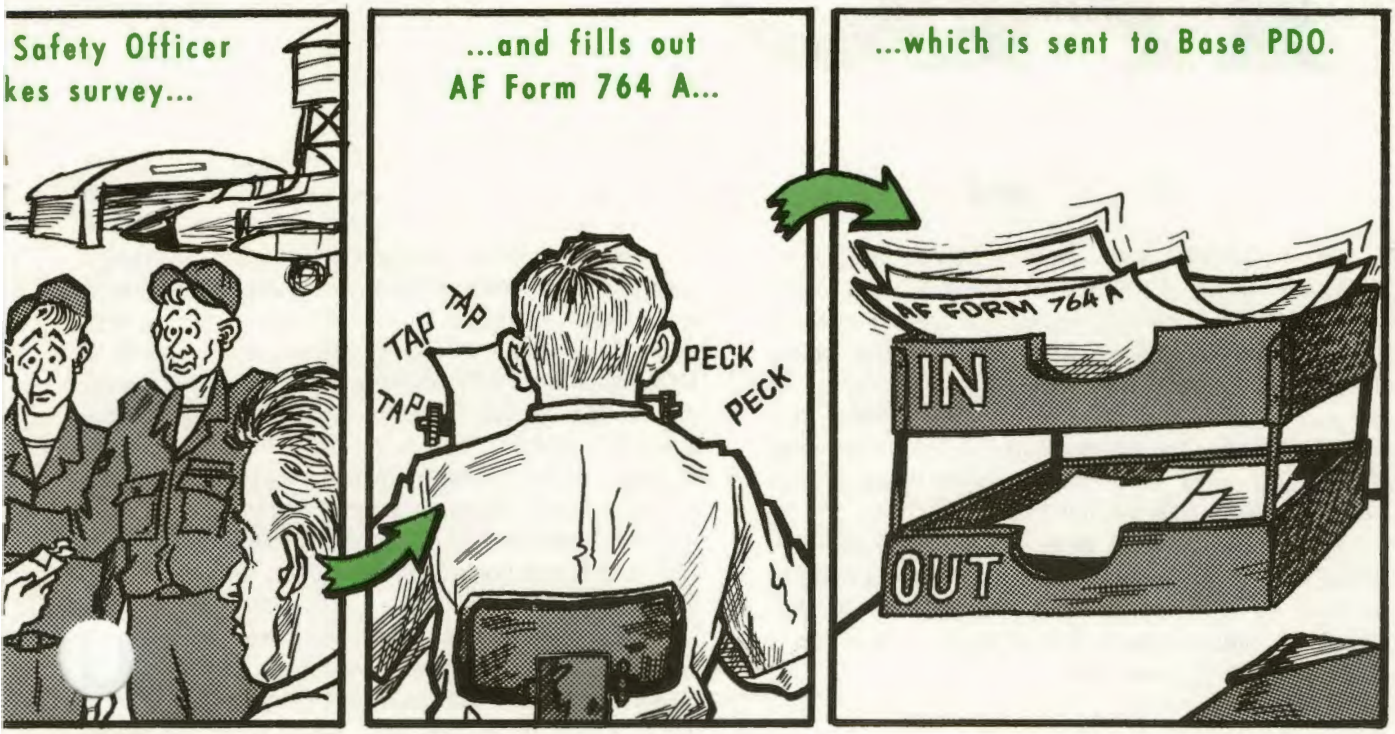
The sweetest words our Editor can hear are: "Hey, we read your mag and agree with that article on . . . " Or, "That barrier story was just what we needed to know." Or, "That Fleagle back cover was great. One of our pilots landed with his gear up the day we got the mag and we put it on the bulletin board just for him!" Or, "Our maintenance troops have changed some of their procedures after reading of better ways to do it in your "Chock Talks." By these kind words we know our pub is being circulated, read, and most important, HEEDED!

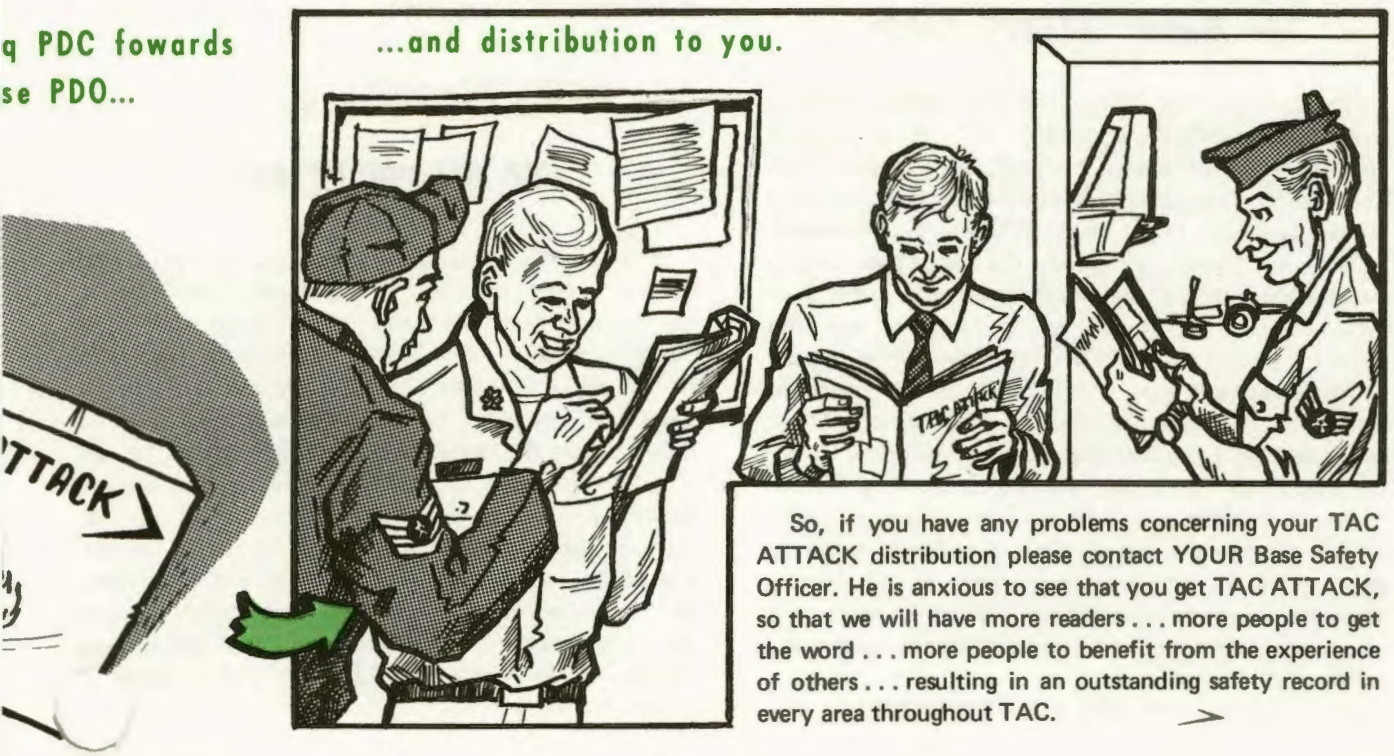
The most disheartening words our Editor can hear are: "TAC ATTACK never gets to us here on the flight line." Or, "I read a copy of your mag in Base Ops at another base. How can we get copies for our unit here?" "We are in another command, but our flight problems are the same as yours. We would appreciate getting your TAC ATTACK on a regular basis." Or this sad letter from a new TAC Base Safety Officer, "In checking our publication requirements, I find we are receiving your mag on a 1-for-25 man basis. How can I get enough copies for a 1-to-10 ratio?"

To this new Base Safety Officer . . . and to the many others who have requested more copies of TAC ATTACK, or to be added to our distribution list . . . the distribution of the mag begins with your friendly Base Safety Officer . . . .



LL ABOUT IT !!!





So, if you have any problems concerning your TAC ATTACK distribution please contact YOUR Base Safety Officer. He is anxious to see that you get TAC ATTACK, so that we will have more readers . . . more people to get the word . . . more people to benefit from the experience of others . . . resulting in an outstanding safety record in every area throughout TAC.

TAC TIPS ...interest items, mishaps

AN "S" MAN

The bird dog pilot and crew chief pushed the O-1 out of a revetment about 100 feet for engine start and runup. The pilot cranked the engine while the crew chief stood fire guard. He left after the start to help service waiting airplanes. After runup the pilot pulled ahead about 20 feet and asked for takeoff clearance. When he received it he released brakes and rolled about five feet. That's when his prop tips curled contemptuously while slicing through a metal runway marker labeled "frangible."

You know how bird dogs sit nose high on their old-fashioned conventional gear. Well, he was in a hurry to get back to the work at hand and neglected to clear himself forward by wiggling his bird dog's tail from side to side. He's a real "S" man now.

TOO MANY "EXCEPT FORS"

The O-1 has two earlier 781 gigs, "engine running rough during cruise." So, number four jug was changed after the repeat writeup and a test hop scheduled. Engine runup was normal, except for higher-than-normal drops of 95 rpm on left and right mags (100 rpm max allowable). Takeoff was normal, except for the engine rpm hanging up at 2200 rpm with full throttle, instead of the usual 2300-2400 rpm. After level off at 4500 feet the pilot noted his findings on the FCF check sheet and pressed on.

He discovered that the mixture control stuck at half-travel. The engine ran rougher than normal at cruise power settings and extremely rough at 1700 rpm. During the emergency fuel check the engine ran rougher than normal at all rpms, and 2150 was max power obtainable. At full throttle the leanest mixture gave him minimum engine vibration. Normally this happens at half throttle. When he returned to normal fuel feeding the engine still ran rough. That's when he decided the bird wasn't ready and headed for home.

He had a little over eight miles to go and didn't make it. Engine rpm decayed to 1700 and it ran rougher than ever. He set up a glide and tried various throttle and mixture combinations. Emergency fuel source didn't help either. He tried switching tanks and pushed both throttle and mixture control full forward. An answering brief power surge was followed by engine rpm dropping to 1000. When it hit 700 rpm he cut the mixture and pushed the throttle against the stop, selecting emergency fuel again. Still no help. Out of ideas and options at 1000 feet, he squawked Mayday and searched for a soft spot. He put it down with full flaps in a near-full stall in a marshy field. After 200 feet, the bird dog ground looped. He shut down and hitch-hiked home in a helicopter. Damage held to incident level.

Maintenance troops found an overly rich mix "drowned" the plugs. They're checking out the gen carburetor. They also suggest that FCF pilots recognize an accumulation of "except fors" before they take serious exception to continued flight.

USE ALL YOU'VE GOT

A B-57 pilot in another command discovered, during let-down, that his left brake pedal had become disconnected from the brake linkage. Since the B-57 is entirely dependent on differential braking for directional control below 60 knots, the following precautions were taken to complete the landing: fuel was burned down to 1500 pounds, the landing was planned to take advantage of a left crosswind so that the aircraft would tend to weathervane into the inoperative brake, a minimum run approach was made, the aircraft was landed on the left side of the runway, and as he touched down, the pilot shut down the left engine. Using aerodynamic braking and careful application of right brake, the aircraft was stopped on the runway in less than 7000 feet. A good show around.

with morals, for the TAC aircrewman

HAZARDOUS CARGO

The T-39 departed an overseas base with four passengers. During the climb, the pilot noticed ammonia fumes in the cabin and polled the passengers to see what they were carrying. One of them indicated that he brought two bottles of ammonia on board and stowed them under the galley counter. When the boxes were checked one was found to be wet. It was lying on its side and the cap was loose! The crew and passengers went on oxygen and the bird turned around and went home.

The passenger had brought the Ammonia Hydroxide (FSN 6810-243-4436) on board with him for delivery to the graphics shop at the destination airport. The bottles packaged in cardboard boxes with no outside ings except for 'DELIVER TO GRAPHICS SHOP, XXXX AB.'

AFM 71-4, PACKAGING AND HANDLING OF DANGEROUS MATERIALS FOR TRANSPORTATION BY MILITARY AIRCRAFT, requires ammonia hydroxide to be carried in a sealed metal container with inside glass bottles cushioned on all sides with two inches of absorbent cushioning materials. Each container will then be marked with the name of the contents and the warning, "MILDLY CORROSIVE."

Frightening, isn't it?

BLADE BOMB

On takeoff roll the C-123 crew heard a loud bang and then the bird vibrated as if it had a blown tire. Chopping throttles and on the binders, the pilot aborted the takeoff. Then the engineer reported pieces of number two's prop had punctured the right side of the bird. After shutdown they discovered that 12 inches of number three blade was missing. Quick power reduction by the pilot probably kept the rest of the prop and the nose section on the ne. The unit checked all their prop blades and found ther with in-limit cracks.

TELL SOMEBODY !!

During recovery from a confidence maneuver, the F-4's right engine stalled and flamed out, it was restarted immediately. The aircraft was at 30 degrees of pitch and 92 percent while passing 26,000 feet at about 160 knots. The stall and flameout occurred as the throttles were advanced to military thrust, angle of attack was about 7 units. The rest of the flight was uneventful.

Cause of the engine problem was material failure of a 14th stage compressor stator vane. The incident report was not submitted for 22 days! It was late because the pilot didn't notify anyone of the incident . . . he felt that the stall and flameout he experienced was just one of those things the F-4 will do during this type of maneuver.

Operations and Safety personnel learned of the incident when the maintenance troops submitted an unsatisfactory report on the engine. An inflight flameout or required engine shutdown which occurs for any reason to a single or twin engine aircraft is a required incident report . . . even if you restart it.

A TEMPORARY CONDITION

A recent modification to the C-130E was an attempt to give additional aid in landing the aircraft. TO 1C-130-708 angle of attack/stall warning system gave us this feature and also, two unwanted items. It turned out the warning horn has the same audio pitch as the gear warning horn and the probe anti-ice circuitry makes the remote compass read incorrectly.

The fix on both deficiencies has been completed and accepted by ASD. Action is being taken to develop a procurement package to provide a TCTO supplement and kits. They should be available during late FY 71.

During the interim, continue to use the system as prescribed by your wing directives. The similarity of the two warning horns is considered a lesser safety of flight factor than disconnecting the stall warning horn.

spo's corner

With this issue, we inaugurate a new feature in TAC ATTACK. The SPO's Corner will serve as a direct line to you, the jocks. We hope this feature will serve two purposes — first, to introduce you to the man who represents your interests, by aircraft; and second, we hope it will become a sounding board for open discussion triggered by you in the field.

An AUTOVON call to 432-7641, will connect you with one of our efficient secretaries who will immediately connect you with the SPO who handles your aircraft. For more technical or lengthy discussions, drop us a line at this address:

Hq TAC (SEF)
Langley AFB, Va. 23365

We solicit your inputs . . . be they questions or answers. We do not intend to grind axes or discuss command policies, problems in those areas can be handled through present channels. However, the knowledge that could prevent our next accident may be shared by just you and a few of your buddies — why not share it with all of us?

FOD

Foreign **O**bject **D**amage to jet engines has taken an unfavorable and alarming upward turn during the past couple of months. While the majority of incidents are caused by our maintenance types — aircrews are contributing their share to the increasing FOD rate.

In an attempt to reduce FOD from every possible source — aircrews should be fully aware of the role they play in the FOD prevention program. Some of the areas where aircrews can assist are:

- Reporting any unsatisfactory or unsafe condit

'sting on runways, taxiways, parking ramps, run-up ...s, etc. A simple call to the tower reporting rocks or other debris could prevent an accident or a damaged engine.

- Conduct careful and thorough engine intake duct inspections during preflights, especially at night. And do not place checklists, gloves, maps, etc., in the intake area during preflight.
- Perform complete cockpit FOD checks prior to opening canopies.
- Minimize ricochets by insuring that air-ground gunnery strafing limits are not exceeded.
- Don't taxi too closely behind other aircraft.

CAPT R.W. ROE
ANALYSIS

F-4 NOTES

Blown tires at touchdown have been a major nuisance and accident possibility since the F-4 entered the inventory. It doesn't seem logical that total corrective actions haven't been taken before now. A probable explanation for this lack of action is that many people are convinced that aircrew error accounts for most of the blown tires. This, in effect, de-emphasizes material improvements and puts that little old monkey right on the driver's back.

The materiel improvements proposed were an anti-skid improvement which adds a time delay to allow wheel spin-up, and a change to the brake pedal angle. The wheel spin-up improvement is presently under consideration at TAC but requires careful review as this improvement complicates the system and could result in additional brake failures. Final action will be taken as soon as the review is completed.

The other improvement, brake pedal repositioning, was recently evaluated on 69 flights at the Fighter Weapons Center. Three-degree and five-degree brake pedal angle changes were tested. Eighteen pilots participated. Eight pilots had no preference, four preferred the five-degree mod, and six preferred the standard configuration. The ...esults recommended retention of the standard brake ... position as the new pedal positions did not significantly increase pilot comfort or effectively prevent inadvertent brake application on landing.

That little old monkey is still on our back. The only way we can remove it is by near perfect performance on the binders. It might be appropriate to evaluate your approach to braking. A key point is assurance that the brake system is up to speed before you fly. Dragging brakes, slow releasing brakes, etc., should not be accepted. Then, touchdown must be made without depressing the brake pedal. In addition to having your feet on the floor, it may require a conscious effort to keep your toes off the pedal. Two-tenths of an inch of pedal movement (minimum of eight pounds of pressure) can lock up a wheel to cause a blown tire at touchdown. Finally – don't be in a hurry to get on the binders. Let it slow down to where braking becomes effective before clamping down on them. Let's get rid of the monkey.

MAJ D.E. WALLENTINE
F-4

NOTE: The brake system interconnect cables and linkage can bind or fail to release completely due to corrosion, etc. Actuating the brakes in the air (checking or stretching) could result in a brake control valve remaining open and a locked wheel at touchdown. Staying off the brake pedals in flight could prevent embarrassment.

TREES!!!

Two issues ago, an article on "Pressing" was presented in TAC ATTACK. Since that time, two other aircraft have hit trees during combat missions. For those of you on the way to SEA or presently engaged in combat operations, maybe the circumstances surrounding these mishaps will provide you with the knowledge to keep you and your trusty fighter out of the foliage or out of a crater, unscorable at twelve o'clock.

The first incident was one of those mishaps that said this is what happened, but you couldn't believe what you were reading. During engine run-up for takeoff, the pilot experienced fumes in the cockpit, switched to 100 percent oxygen, took off and proceeded to the target. After level-off, oxygen was switched back to normal and cockpit fumes were detected, this time of sufficient

SPO's CORNER

intensity to cause the pilot's eyes to water for several minutes. However, the fumes abated and the pilot felt he could continue the mission.

During ordnance delivery, he had difficulty tracking the target and his bombs weren't very accurate. He continued to experience this difficulty while strafing. On his fourth strafing pass, the left wing tip struck a tree. Even though he was aware of the tree strike, the pilot stated he was not concerned about it and flew one additional strafe pass.

The full impact of what had happened occurred during the return to base after the pilot was on 100 percent oxygen for about five minutes. The pilot, upon landing, appeared to be in a mild state of shock or suffering from HYPOXIA. WOW!!

The second incident involved one of the "classic" factors – low airspeed. Ordnance delivery, high drags and napalm, was completed and the flight held high while the FAC assessed target damage. It was determined 20 mm would be required. The flight continued to orbit to allo the smoke from the bombs and napalm to dissipate s would not hinder visual acquisition of the target dur.. strafe. (Smoke obscuration during strafe, high drag and napalm deliveries have contributed to tree strikes before.)

After the smoke had cleared, three strafe passes were accomplished. On the last one, the pilot allowed the airspeed to get 50 knots low and as he pulled off, he felt a thump. After landing they found the aircraft had struck a tree.

The unit experiencing this mishap conducted an analysis of tree strikes and concluded the following:

Tree strikes can occur during strafe against lucrative targets. Pilots concentrate and make more aggressive attempts to destroy lucrative targets resulting in pressing to minimums.

Tree strikes can occur as a result of pilots bleeding off airspeed during tight attack patterns.

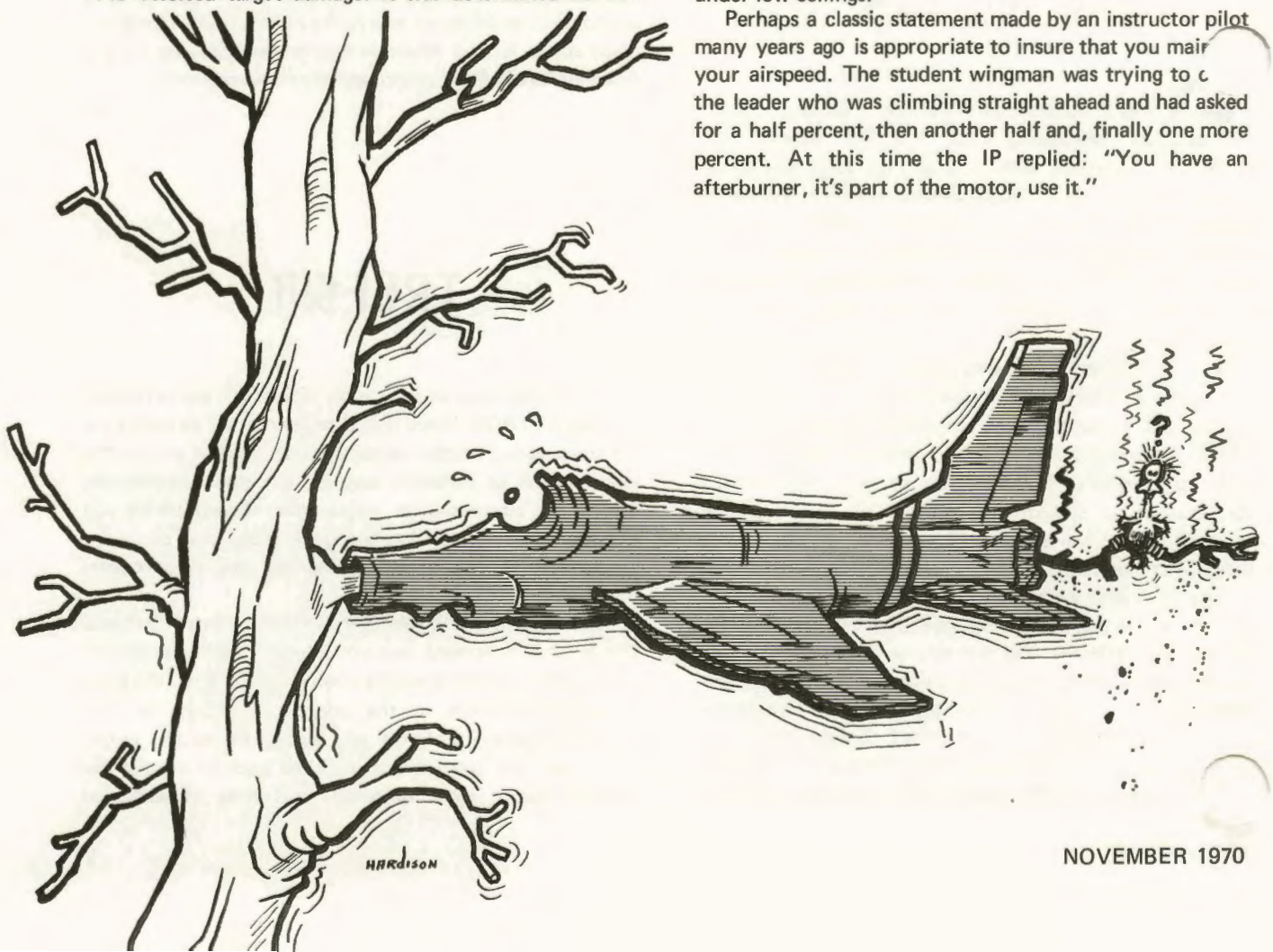
Maybe three additional factors can be added which you should consider:

Smoke obscured targets as previously mentioned.

Delivery and recovery at heavier than normal gross weight.

Delivering ordnance against "immediate" targets under low ceilings.

Perhaps a classic statement made by an instructor pilot many years ago is appropriate to insure that you mair your airspeed. The student wingman was trying to c the leader who was climbing straight ahead and had asked for a half percent, then another half and, finally one more percent. At this time the IP replied: "You have an afterburner, it's part of the motor, use it."



Tactical Air Command
Crew Chief of the Month

TSgt Hardy

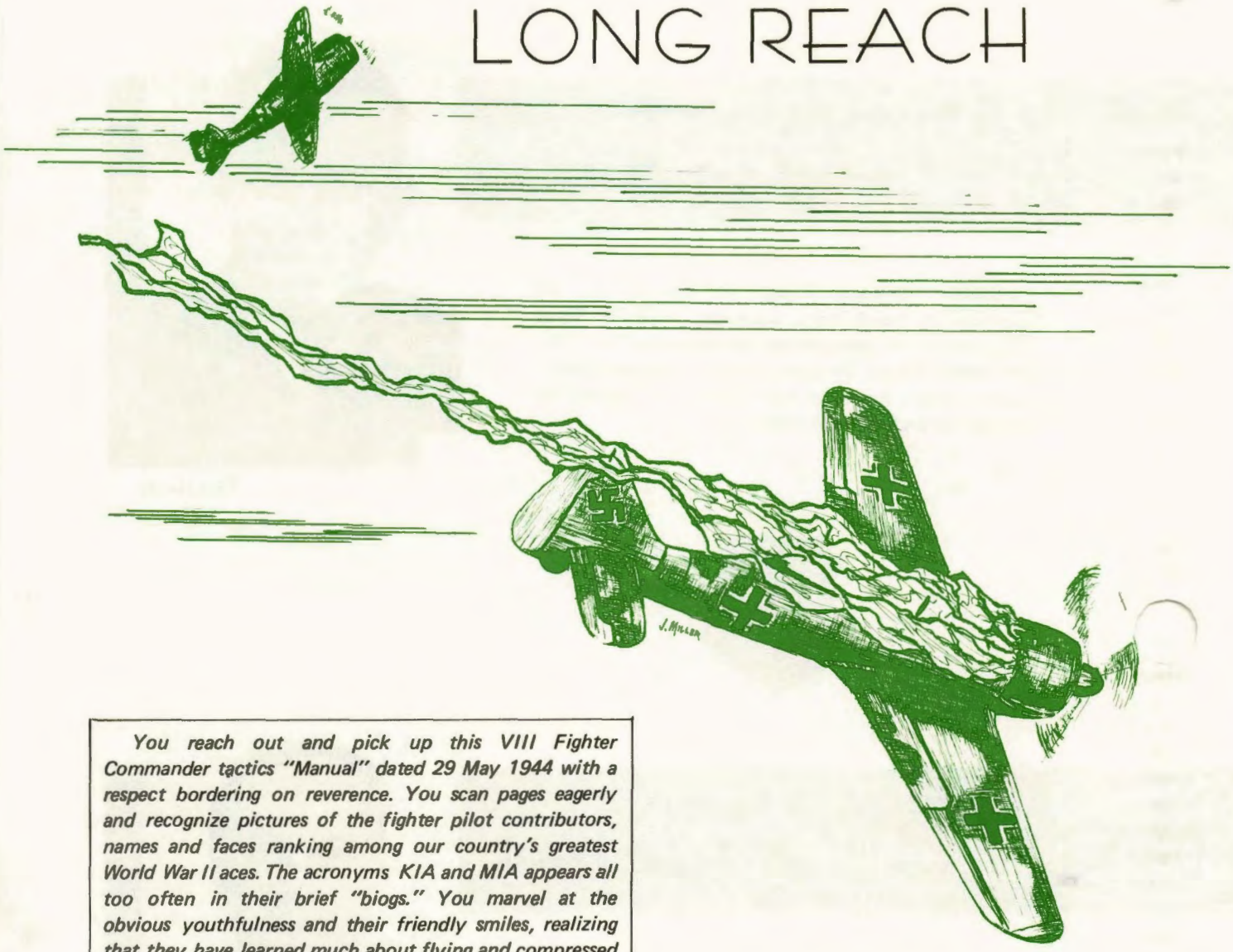
Technical Sergeant Edwin G. Hardy, Jr., 58 Organizational Maintenance Squadron, Luke Air Force Base, Arizona, has been selected to receive the TAC Crew Chief Safety Award. Sergeant Hardy will receive a letter of appreciation from the Commander of Tactical Air Command and an engraved award.

Tactical Air Command
Maintenance Man of the Month

Sgt Kelly

Sergeant John W. Kelly, 4407 Combat Crew Training Squadron, Hurlburt Field, Florida, has been selected to receive the TAC Maintenance Man Safety Award. Sergeant Kelly will receive a letter of appreciation from the Commander of Tactical Air Command and an engraved award.

THE LONG REACH



You reach out and pick up this VIII Fighter Commander tactics "Manual" dated 29 May 1944 with a respect bordering on reverence. You scan pages eagerly and recognize pictures of the fighter pilot contributors, names and faces ranking among our country's greatest World War II aces. The acronyms KIA and MIA appears all too often in their brief "biogs." You marvel at the obvious youthfulness and their friendly smiles, realizing that they have learned much about flying and compressed a lifetime of air battles into a time period of months, not years. They are trying to "reach," to teach, to impress those follow-on generations of fighter pilots who must follow them, and are as yet untrained in aerial combat maneuvering. They recount experiences, tactics, and pilot techniques proven in aerial battles beginning as mass formations in crowded skies and ending in single-ship or element versus element hassels. Not all of their tactics and techniques still apply, some are now impractical. However, they do present and show surprising agreement on some fighter pilot fundamentals. We think you will learn much in reading their personal accounts about flying "into the wild blue yonder," and respect the contribution they have made to a proud profession: the fighter pilot!

By Colonel Hubert Zemke
56th Fighter Group
P-47

A fighter pilot must possess an inner urge to do combat. The will at all times to be offensive will develop into his own tactics.

If the enemy is above, never let your speed drop below 200 mph indicated; and don't climb because you lose too much speed. Turn into him at a point when you can present a head-on target. This means the proper timing for an enemy who is making a long dive on you.

If you're attacked on the same level, remembe.

Fighting is Developing Your Own Breaks

can outclimb the enemy at altitude. Do your climbing in a circle, not a straight line, so as always to present him a deflection shot until you can put him at a disadvantage.

To turn the tables when attacked, put everything forward, twist and turn until you can get into a circle. Never reverse your turn. Sometimes as a last resort when you have plenty of altitude, you can make a diving turn to give you plenty of distance, recover going straight up to orient yourself, then pull straight up to go into a turning circle.

The sun can be used to get out of a defensive situation by pulling straight up into it and blinding your opponent. The sun seldom helps when first appearing over the horizon or just setting. Always try to launch an attack from out of the sun.

Beware of high thin cirrus clouds. The enemy can look down through them, but you can't look up thru them. If ı home short of gasoline and not in a position to do at either fly just a foot above the cloud level or else ten thousand feet above it. An airplane is picked up just over a cloud layer very easily and you either want to be in a position to nip in very fast, or trust that you won't be picked up at all. Don't go weaving down thru valleys of cumulus, either with a squadron or by yourself. The enemy can come dashing round a corner and be on your tail before you know it. When popping down out of a cloud or up out of a cloud, always do a turn and look back. You may have jumped out directly in front of a gun barrel. Try never to pull contrails; they can be seen for miles.

When attacked by large numbers of enemy aircraft, immediately turn into them and meet them head on. In most cases half of them will break up and go down. Handle those remaining in an all-out fight until you're down to one; then take him on.

When caught on the deck the only thing to do is twist and kick the rudder and stay low as possible. If the clouds are low (1000 feet or less) do a turning climb, wide open, up into them.

I try to attack always from the rear and slightly below with plenty closing speed. This means that I probably started from superior altitude, and out of the sun. Of late, the enemy has always been diving on bombers from . I can usually see him roll over and I generally roll and down to draw in back of him. The enemy has, for the last four months primarily, tried to get away by outdiving us, although he can't touch the dive of the P-47. Just hold on and you will catch him. They are most prone to level out and slow down before entering clouds. This is a wonderful time to make them change their minds.

As often as not they will try to evade by going straight down in an aileron roll. Stay pretty well back and to the outside of the enemy and get him as soon as he recovers.

Sometimes the enemy will spin down. Remember, they must always recover. Keep superior altitude and always have your kite under control.

The greater the number of the enemy the harder one has to hit them to break them up. For instance, suppose you saw three FW's below some 2000 or 3000 feet. This is the ideal occasion when you could drift down at a good clip devoting most of your attention to one and polishing him off. Now, if there were twenty down below, you'd probably come screaming down with full force to pick out the most logical enemy aircraft at the point of firing, then pull up immediately to a good altitude and develop another attack on one of those remaining who has been shaken out of his helmet by your sudden onslaught.

When by yourself and seeing two or more enemy aircraft above, move away to get superior position and then attack. When you have your outfit with you and the enemy has so much altitude that you'd never get to him, just stay below and in the rear of him. He'll be down.

I have never yet cut my throttle just to hang on the tail of an enemy aircraft. I always move past him, going just about straight up. You'll always win a battle as long as you can stay above. Take him on the next try. The idea of cutting the throttle, as so often heard, to allow the enemy to pass has never appealed to me. They're too good at gunnery.

I stay with an enemy until: he's destroyed, I'm out of ammunition, he evades into the clouds, I'm driven off, or I'm too low on gasoline to continue the combat.

In attacking, I like my wingman about 500 to 1000 feet above and to the side. At low altitudes more. On a coordinated attack into a formation he should be off to the side 500 feet and just a bit back.

Never fire at anything more than 30 degrees off the line of flight unless you just want to scare him. As yet I haven't hit an enemy aircraft moving straight down or while in a slow or half-roll. Always hold your fire until the

the LONG REACH

enemy has filled the 300 yard sight bar. The point stressed here is to fight for a kill position and then fire.

Always break off the attack upward and into the sun; look back and up immediately because you might have another fight on your hands. Recover in a circular climb.

Our formations are maintained in two different ways. For the purpose of climb to the enemy coast, the entire group flies in very close, that is each squadron. Each flight of four aircraft flies in a close four airplane vee. The number two man has the option of taking whatever side he desires; then the three and four men take the other side. The next flight should be within fifty yards or less, depending on the comfort to the particular flight leader and whether or not there is good or bad visibility. By flying close in this way, a great deal of formation jockeying is avoided.

Just before enemy territory is reached, the order "Battle Formation" is given, and this same four aircraft vee formation is extended on a front of approximately 200 to 300 yards. The second flight is then on either the left or right flank (The sun has a bearing on this, of course.) and above some 500 feet. This same formation is employed on escort after rendezvous.

This front type formation is superior to string formation in that it prevents any enemy attack without its being seen. Remember few pilots are shot down by enemies they see. It is also a search formation.

Upon contacting a bomber force, I give my squadrons disposition. On penetration I usually place myself so that I can roam with one squadron several miles in front while the other two squadrons are stationed one on either flank. If the bomber force is more than two combat wings, then the squadrons are split from the group and each is assigned a combat wing. There they remain. Withdrawal support is not different other than the fact that the squadron which I normally put out in front is placed in back, or to wander at random, assisting straggling bombers or wherever the help is most needed.

A squadron of sixteen fighters is self-sustaining, the four flights of four aircraft each making up the four basic units of the squadron. When escorting, two flights, or eight aircraft, patrol below looking for action while the remaining two flights stay a thousand feet above to make sure the lower eight are not molested. If a twelve airplane squadron is used, then only one flight gives this top cover.

By assigning the squadrons definite positions and requiring them to remain on their assignments, I as well as the other members of the group, pretty well know where the others are. Of course, this may mean that squadrons are sometimes five or ten miles apart and not in visual contact but it permits us to sweep a very large area. Flights within the squadron never move more than a mile apart and are always within very good visual reference.

In the above situation, if one squadron is engaged in a heavy flight, the other two squadrons rush over to give top cover and pick off the disorganized enemy.

Each squadron will range from the bombers sometimes two or three miles as they orbit along the bomber course, but seldom so far that a fighter in the vicinity of the bombers cannot be immediately identified. Never drop your speed below 200 mph indicated, so you can bounce fast.

Flights must be dependent upon the main flight of the squadron commander unless the fighting is extremely heavy. Any flight may bounce but it must first call enemy in and allow the squadron commander to see can't pick up the target. If he can't see it, then he immediately says, "Go get them", and gives the junior flight top cover.

As to limitations on bounce, this must be remembered – the ones and threes of the flights are the only outright firing men. The twos and fours are cover men, who look to see their leaders are not being attacked as they concentrate on the enemy. Under only one circumstance will number twos and number fours break away to make an attack and that is when the flight leader can't find the target. He should immediately say: "Go get them," and take a number two position himself, as well as its job of coverage. This same holds true as to squadron commanders calling in enemy to a group commander. (I speak here only of the offensive. On the defensive, fire whenever you can.)

Flights generally fly from 200 to 300 yards apart at all times after the battle formation order is given. The battle will spread them wide open soon enough.

Reforming at altitude is always a problem but two general practices have worked quite successfully. After an engagement the squadron commander will call his outfit to form up in the same position on the bombers they had before, and then everyone heads for that point. The squadron commander will do slow rolls, wag his wing form his flight in a diamond to show the others

'on. Another method is to pick a town or landmark and have everyone circle up, reforming over this point. The order will be given for all to circle in a right turn, for instance, to prevent confusion. All turning to other direction are enemy.

I have tried the 24-aircraft group on deep penetration and find this to be the most self-sustaining fighting force yet – organized in three eight-aircraft squadrons – not two 12's. By ranging over a wider area we can find the enemy more easily than when in a small compact area.

Never dispatch the entire outfit to engage an inferior number of attacking aircraft. Everyone will become disorganized in the break and the following melee if all are used. If one squadron is overcome, then dispatch another squadron. The flight will be below you and you shouldn't have much difficulty. Don't be drawn away from your outfit but hover as top cover.

It must be realized that a group flying properly together presents a front which prevents all parts from being attacked at the same time. Someone can always offer cover.

Learn to break at the proper time to make a head-on attack. The enemy doesn't like it. Don't run. That's just what he wants you to do. He can't help from getting right behind you if you are moving away. When caught by the ny in large force the best policy is to fight like hell you can decide what to do next.

he size of the enemy force must be extremely large and you with only a flight to do anything other than break and break and break. Take an occasional squirt to scare them or try and hit them as they pass.

Whenever the enemy is within your or his own striking distance, drop your belly tank. Only one exception to the rule presents itself to me and that is to drop your tanks if he is in large numbers well above, even though out of striking range.

Often-times the enemy pilots peel down past you just to suck you down, so that others still above can get down on you. Waiting for the last men to come down is generally the correct thing to do. Don't pass up the tail-end of a formation to get the leader.

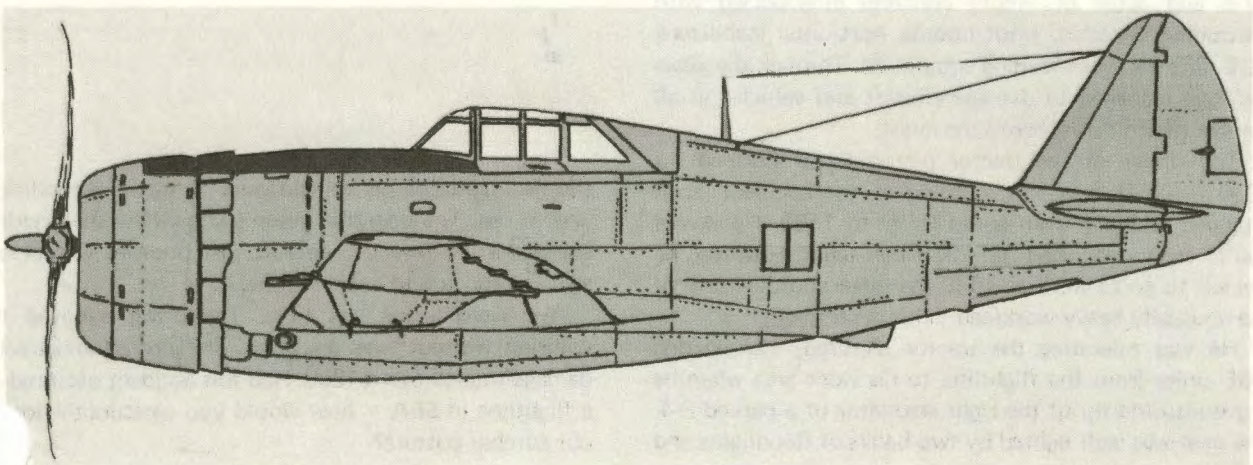
As group and squadron leader, I always take a bounce first, unless there are so many of the enemy that help is needed. In that case I say, "You take such and such and I will take this one."

I always take down four to one against four enemy aircraft. There are only two offensive firers in each flight. This always keeps a flight together and provides a ratio of two firers for us against one of them. If they are superior in numbers, then the order is just, "Everybody follow me." I never lead down the entire group on such an occasion, only a squadron. Once an attack is launched, you should not give up until the enemy is destroyed.

Meet the enemy at any and all angles, preferably head on, and in nine cases out of ten he won't get a chance to fire at the bombers. Your next pass at the same fellow, or perhaps that one, will bring him down. Always launch the attack; don't wait around. Hesitant pilots seldom bring home the bacon. Once you make a decision or give an order, follow through; otherwise you will only confuse others.

Flight and element leaders have all the liberty a leader can allow to initiate a bounce. However, it must be realized that a squadron or group leader cannot allow his organization to peel off at random for bounces. Leaders would find themselves without much control. Therefore, it is a policy to identify both yourself and the bogey or bandit. The squadron or group leader tries to find the enemy, and if he doesn't succeed, will give the order for the flight or element leader to attack and will give cover himself.

Forever impress on your juniors the enemy they lost. A record is never established by the ones that got away. Everyone is most prone to let the tougher ones get away, yet it is found that one reaps only the benefit of his own aggressiveness. Fighting is developing your own breaks.



A flightline at night is a hazardous area at best. It's acres and acres of empty concrete interspersed with protruding wingtips, pitot booms, horizontal stabilizers, AGE, and weapons loading equipment. Through the years we have managed to damage aircraft and vehicles in all manner of accidents, here's the latest.

The driver of the tractor pictured had finished his 2330 – 0630 shift the morning of the accident, then attended training from about 0730 to 1130. He wasn't due to start work again till 2330 that night. However, he elected to go to work at 1830 that afternoon because of the unusually heavy workload in his department.

He was operating the tractor pictured, transporting AGE units from the flightline to his work area when he drove into the tip of the right stabilator of a parked F-4. The area was well lighted by two banks of floodlights and the headlights of his vehicle were in working condition, and in use. The operator doesn't know how the accident happened, he saw the aircraft just prior to impact but swerved too late to avoid striking it.

We were lucky this time. The driver survived the collision without even a scratch. The aircraft and tractor damage totaled over $1200. Had this accident occurred on a flightline in SEA – how would you measure the lo[ss] our combat posture?

Would you believe $1200?

The driver was extremely lucky . . .

we may not fare as well in the future.

Tactical Air Command

Unit Achievement Award

Our congratulations to the following units for completing 12 months of accident free flying:

175 Tactical Fighter Group, Baltimore, Maryland
1 January 1969 through 31 December 1969

4500 Air Base Wing, Langley Air Force Base, Virginia
24 January 1969 through 23 January 1970

45 Tactical Fighter Squadron, MacDill Air Force Base, Florida
12 April 1969 through 11 April 1970

105 Tactical Air Support Group, Westchester County Airport, New York
18 June 1969 through 17 June 1970

4455 Combat Crew Training Squadron, Davis-Monthan Air Force Base, Arizona
16 September 1969 through 15 September 1970

36 Tactical Airlift Squadron, Langley Air Force Base, Virginia
5 July 1969 through 4 July 1970

39 Tactical Electronic Warfare Training Squadron, Shaw Air Force Base, South Carolina
25 June 1969 through 24 June 1970

548 Special Operations Training Squadron, England Air Force Base, Louisiana
19 March 1969 through 18 March 1970

549 Tactical Air Support Training Squadron, Hurlburt Field, Florida
27 June 1969 through 26 June 1970

TAC TALLY

AIRCRAFT ACCIDENT RATES

* Estimated

MAJOR ACCIDENT RATE COMPARISON

	TAC		ANG		AFRes	
	1969	1970	1969	1970	1969	1970
JAN	6.8	4.8	28.9	5.9	0	0
FEB	6.2	3.9	12.8	2.6	0	0
MAR	6.8	4.6	12.6	1.7	0	0
APR	7.4	4.9	15.1	2.4	0	0
MAY	7.5	6.2	12.9	3.6	0	0
JUN	7.2	5.5	12.6	3.6	0	0
JUL	7.4	5.1	11.3	6.1	0	0
AUG	7.3	5.0	11.5	6.9	0	0
	6.9	4.7	10.5	6.6*	0	0
	7.1		9.9		0	
NOV	6.6		9.4		0	
DEC	6.8		9.5		0	

UNITS

	THRU SEP			THRU SEP	
	1969	1970		1969	1970
9 AF	2.9	1.5	12 AF	9.5	7.7
4 TFW	5.0	0	23 TFW	11.4	5.3
1 TFW	2.6	3.5	27 TFW	4.2	9.2
33 TFW	15.6	0	49 TFW	6.4	13.5
31 TFW	4.2	5.5	479 TFW	11.0	12.4
354 TFW	0	0	474 TFW	17.4	0
4403 TFW	—	0			
363 TRW	7.7	3.6	67 TRW	0	9.8
			75 TRW	5.0	4.3
316 TAW	0	0	64 TAW	0	0
317 TAW	0	0	313 TAW	0	0
464 TAW	0	0	516 TAW	5.0	0
			71 TASG	—	0
68 TASG	—	0	58 TFTW	14.0	14.4
			4442 CCTW	0	8.0
			4453 CCTW	8.6	4.2
TAC SPECIAL UNITS					
1 SOW	4.6	6.5	2 ADG	0	0
4409 SUP SQ	0	0	4500 ABW	5.1	0
4410 CCTG	10.8	0	57 FWW	16.8	0

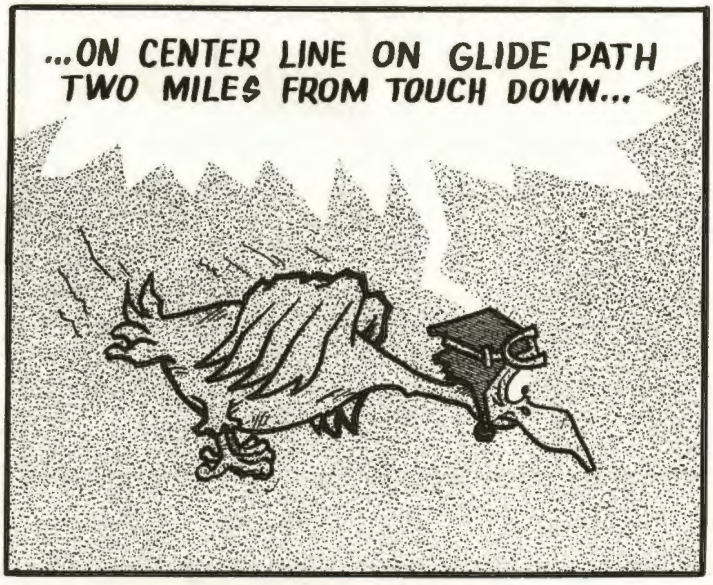
TAC SUMMARY

	SEP 1970	THRU SEP 1969	THRU SEP 1970
TOTAL ACCIDENTS	3	54	33
MAJOR	1	46	28
MINOR	2	8	5
AIRCREW FATALITIES	0	31	26
AIRCRAFT DESTROYED	0	36	22
TOTAL EJECTIONS	0	30	22
SUCCESSFUL EJECTIONS	—	22	16
PERCENT SUCCESSFUL	—	73	73

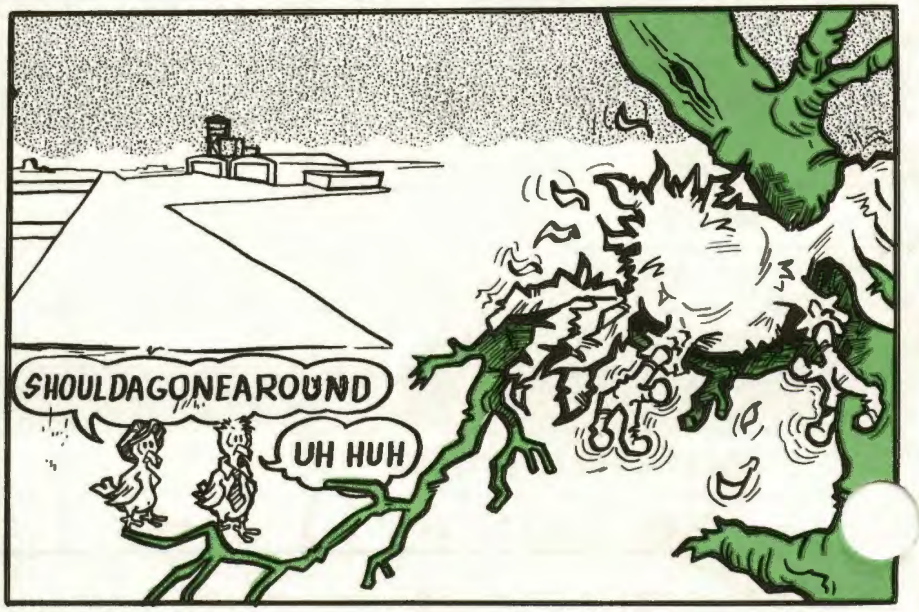
FLEAGLE


... THIS IS GCA, YOUR POSITION THREE MILES SOUTH, RADAR CONTACT.


...WEATHER REPORT... 200 AND A HALF... COMPLETE PRELANDING CHECK, REPORT GEAR DOWN.
HARRISON
© Stan Hardison 1970


...ON CENTER LINE ON GLIDE PATH TWO MILES FROM TOUCH DOWN...


... WHOOPS!! FIELD JUST REPORTED BELOW MINIMUMS. WHAT ARE YOUR INTENTIONS ?


SHOULDAGONEAROUND
UH HUH