

Combat February 2005 *Edge*



The Combat Edge February 2005



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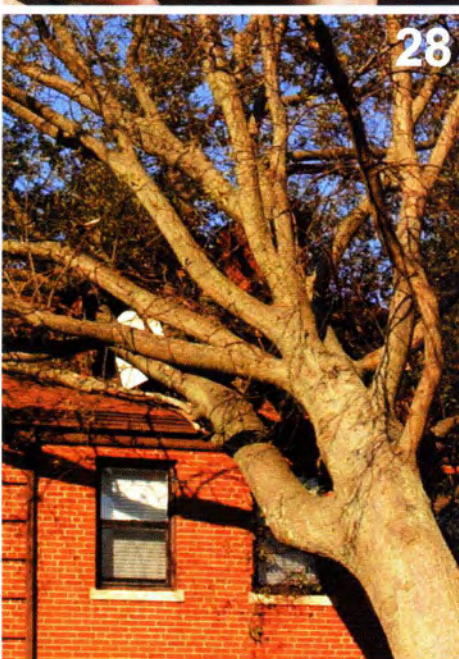
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The Combat Edge

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HOW DO YOU VIEW SAFETY?

In honor of Black History Month, this issue highlights the contributions made by The Tuskegee Airmen, and the impact they have made on the Air Force. Under tremendous pressure to succeed, their commanders understood that success lays in the details and eliminating mistakes by striving for excellence in everything they did. The Tuskegee Airmen shattered stereotypes that helped end segregation while setting impressive unit records of excellence — their mark of over 200 bomber escort missions without losing a single bomber is only the “tip of the iceberg.” The Tuskegee Airmen took personal pride in their work, and emphasized strict air discipline during all phases of flight to eliminate mistakes and compile an impressive combat record by stressing operations safety, from the crew chiefs to the pilots and operations officers — all before safety became the formal program it is today. The Tuskegee Airmen are “Trailblazers” in every sense of the word and for that, we salute them.

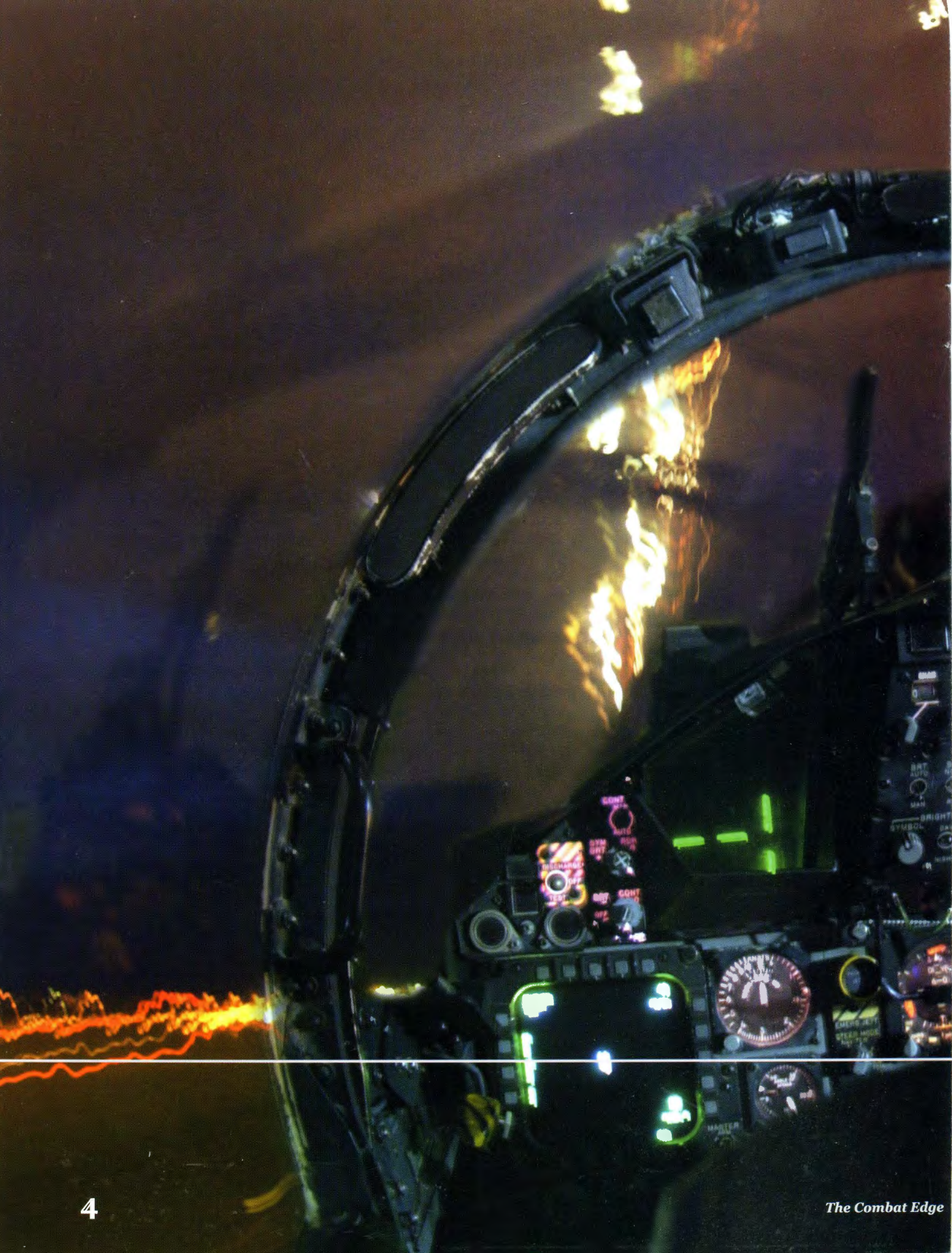
Another story in this issue connecting WWII to present is “Pineapple Juggling” which points out the hidden dangers posed by old war souvenirs hidden away in many forgotten closets and attics. No matter what condition they are in, treat all munitions as live, from the artillery shell at the local flea market, to the “found” munitions discovered during construction. Like our predecessors, there’s always the temptation to collect mementos of our travels and experiences — consider the dangers; don’t bring the war home with you. Know the rules when it comes to “war trophies.”

Risk mitigation is a large part of the safety effort, and is featured in both of the safety posters in this issue. The first focuses on the “Fast and Furious” consequences of illegal street racing; a dangerous, negative trend affecting everyone. The second features the Motorcycle Mentorship program, which is being implemented to reduce two-wheel mishaps by allowing experienced riders to demonstrate responsible motorcycle riding habits and skills to new riders while having fun in the process.

Finally, we need your stories and feedback on your safety magazine — *The Combat Edge*. Send your comments directly to our editor on what you like, and what you want improved to make the command’s magazine better. As always, keep safety proactive — make it your Combat Edge!

Colonel Creid K. Johnson,
ACC Director of Safety







Night Flying Hazards of Spatial Disorientation

NIGHT FLYING

hazards of spatial D

By Capt Brian Farrar, Nellis AFB, Nev.

Night flying — for some it's the best time to be airborne (i.e., less air traffic, the concealing cover of darkness, inertial navigation system direct whenever you ask for it, and quiet radios). However, it's also the perfect time to experience spatial disorientation. Disorientation in flight is extremely hazardous because a pilot can make erroneous control inputs in response to his or her false perception and that can lead to a mishap. Even though aircrew members receive training on recognizing spatial disorientation during physiological refresher courses and routinely pre-brief the mere existence of such hazards when night flying, current statistics on nighttime aircraft accidents indicate we should review the specific nature of these pitfalls more frequently. The following visual illusions are prevalent occurrences during night flying. Let's look at each one by describing the illusion, explaining its effects, and reviewing methods to prevent or recover from visually-induced disorientation

Distance Illusions

Assuming that the dots in Figure 1 represent illumination from aircraft beacon lights, which aircraft is closer?



Actually, there isn't enough visual information available to answer the question. During the daytime, reflected light provides detail for the human brain to assess distance. However, during night flying, most of the light received by the human eye is transmitted directly from illumination sources as in the example above. If Aircraft A in the given example has low-illumination lighting and Aircraft B has very bright lighting, Aircraft B may actually be farther away.

This illusion is common when engaging or rejoining an aircraft without knowing its distance. Implementing training rules that forbid visual-only engagements and require a positive source

of range information, such as radar, has drastically reduced the potential for midair collisions. Distance illusions can cause accidents during visual formation flying. If visual lookout is the primary means of maintaining formation position, the previously described lack of distance cues may cause horizontal distance to increase without notice. If the trailing pilot maintains a continuous line of sight to the lead aircraft and if that line of sight is relatively high, then vertical separation between aircraft will also increase as horizontal separation inadvertently grows. If the trailing pilot fails to monitor actual altitude, the potential exists for "impact with the ground" or another aircraft at a lower altitude. Stacking high on the lead aircraft, cross-checking actual altitude, and ensuring a stable distance between aircraft by using radar or air-to-air tactical air navigation prevents this illusion from taking over the formation.

Visual Autokinesis

Autokinesis, sometimes called autokinetic effect, is perceived movement exhibited by a static dim light when it is stared at in the dark. Air Force Research Laboratory scientists assess that after 6 to 12 seconds of visually fixating on a light, it appears to move up to 20 degrees per second in a particular direction or several directions in succession, and that the larger and brighter the object, the less the autokinetic effect. Autokinesis is most common in very dark conditions with only one or two lights present and is uncommon with three or more lights present.

The exact physiological cause of autokinesis remains unknown, but it is believed to be related to tiny fixation movements of the eye and the loss of the surrounding references (i.e., peripheral or ambient vision), which normally stabilize visual perception. The dark, empty environment conducive to autokinesis does not allow one's ambient vision the opportunity to establish spatial orientation while the brain attempts to resolve distance to the light source. To counter or minimize the effect, a pilot should shift his gaze frequently to avoid prolonged fixation on the light; view the source beside or in reference to a relatively stationary structure such as a canopy frame; make eye, head, and body movements to destroy the illusion; and monitor flight instruments to prevent or resolve any perceptual conflict.

False Horizon Illusions

To maintain horizontal and vertical orientation, the human brain subconsciously uses the visual system to monitor the Earth's horizon or lines relative to the known horizon. These cues are compared to those encountered by the vestibular (inner ear) and somatosensory (seat-of-the-pants) systems in order to provide positional orientation. Because there is little reflective light at night to monitor the horizon, "any straight line will do." In the absence of any discernible horizon, starlight reflecting off of water can confuse the visual picture; and in northern regions, the aurora borealis causes similar disorientation.

The best defense against misinterpreting a perceived horizon cue is to depend upon the attitude indicator. A good calibration check during ground operations prior to takeoff and a continuous cross-check in flight to confirm correct operations will help you "trust your instruments" even when your eyes and brain tell you "up" is the other way.

Black Hole Effect

Night flight into an area with a lack of ambient cues is known as a black hole effect. Our ambient visual system supports correct spatial orientation by allowing the brain to monitor the relative position of objects that reflect or illuminate light around us. At night, these cues are often lost over water or near sparsely populated areas.

Many black-hole-related mishaps occur during the landing phase of flight. When few surface lights exist between a landing aircraft and the runway, pilots tend to fly too low and some have crashed short of the threshold. Countering disorientation in black hole conditions requires disciplined reliance upon flight instruments as discussed for false horizon illusions. Furthermore, in the landing environment, where much more time is spent in visual cross-check outside the cockpit, pilots must rely upon accurate glideslope indicators when available. These indicators include avionics such as instrument landing systems or visual glideslope indicators.

Vection Illusion

Vection illusion is the sensation of self-motion induced by relative movement of viewed objects. You may have experienced this when automobile traffic next to you starts moving at a stoplight. In response, you jam on your brakes harder thinking that you're moving backward. In this case, your ambient visual system has detected movement from an object at a different rate than assumed by the brain. Therefore, the brain interprets self-movement at a different than actual rate.

A common vection illusion encountered during night flying occurs when a well-lighted aircraft penetrates a cloud, haze, or precipitation. Upon penetration into the visible moisture, the pilot's ambient visual system signals a speed increase, and the natural tendency is a throttle reduction to slow the aircraft. An unwarranted power decrease could cause a dangerous sink rate or even a stall to oc-

cur. In order to prevent such error, the pilot must recognize conditions that can induce a vection illusion as described and must rely upon performance instruments (particularly the airspeed indicator) for throttle adjustment decisions. A landing light extending or retracting in visible moisture can also cause vection illusion. As the rotating light beam reflects off visible moisture, the ambient visual system assesses movement about the aircraft's pitch axis though no rotational movement actually exists. With the pilot's brain signaling a pitching moment, a dangerous nose-high or nose-low situation could develop. Again, the pilot must predict the possibility of a vection illusion in the described envi-

ronment and depend upon attitude instruments for pitch-change decisions.

Runway Illusions

Before discussing false runway perceptions in the landing environment, one must first understand the concepts of size and shape constancy. Size constancy is the human expectation for familiar things to be the same size in most situations. Shape constancy is the expectation for familiar things to be the same shape when viewed from a given position.

As a pilot practices approaches at his home airfield or at those with similar runway size and gradient, visual cues resulting in effective approaches and landings are stored in subconscious memory. If this stored mental picture is applied during a visual approach to a runway of different size or shape, a pilot may flare too high or low, land short or long, or even mistake a lighted taxiway or road for the runway environment.

Combating incorrect flare height at a strange field is difficult since the terminal portion of a landing is almost exclusively a visual event, and the visual system is being

approach angle. Similarly, a wider runway of the same length will make the approach appear shallow as illustrated by Runway C. Cross-checking instrumentation or visual glide slope indicators helps ensure the proper approach angle.

Runway With Illusions

Even if a runway is identical in size to a familiar runway, a different slope can cause dangerous illusions as well. As mentioned before, the human brain expects familiar shapes to look familiar in a given situation. Therefore, if the sight picture changes without the observer noticing, then the observer may unknowingly change his or her position in space to reestablish the normal sight picture.

For instance, if a pilot is accustomed to the sight picture represented by Runway A in Figure 3 and approaches Runway B (which is of the same size but on a downslope), the pilot may increase altitude and fly a steeper approach in order to maintain the normal picture. On the upsloping Runway C, the pilot would try to fly a more shallow approach. This illusion is particularly hazardous at night since there are few visual cues for terrain and obstacle avoidance.

Once again, cross-checking landing system instrumentation or visual glideslope indicators will help ensure the proper approach angle.

Runway Slope Illusions

The night aviation arena with its many illusions is one of the most difficult in

which to remain spatially oriented. Armed with a better understanding of distance illusions, visual autokinesis, false horizon cues, black hole effects, vection illusions, and runway illusions, as well as having an improved awareness of how the human visual system can be deceived, pilots can decrease their vulnerability to mishaps. As we have shown, our eyes often deceive us, but modern technology provides us the means to maintain or regain positional awareness with avionics, approach systems, and other mechanical means ... if we use them.

Figure 2



Figure 3



Fountains of FIRE

By Col Joe Corso, Kirtland AFB, N.M.





The recent eruption of Mt. St. Helens in Washington State and the prospects of other imminent eruptions focus needed attention on a very serious hazard: airborne volcanic ash. Normally, ash will be localized and can be avoided with careful attention and planning by aircrews and weather briefers. However, when ash is present at upper flight levels, unpredictable global dispersal can occur and play havoc with air traffic.

This happened when Mt. Redoubt erupted in Alaska in 1989. A Boeing 747-400 suffered a four-engine flameout and severe damage when it encountered an ash cloud. After Mt. Pinatubo erupted in 1991, at least 15 aircraft reported significant damage in spite of widespread warnings. Following the last Mt. St. Helens event, a C-130 inadvertently penetrated an ash plume 2 and a half hours after the second major eruption. The C-130 sustained extensive damage and recovered with only two of its engines still operating. In 1997, Mt. Popocatepetl erupted in Mexico. Several aircraft experienced minor

information should help you avoid ash.

If flight planning in the vicinity of volcanic activity, contact base weather for current and forecast ash cloud positions and stay at least 20 Nautical Miles (NM) away. If possible, maneuver upwind of a volcanic plume, even when flying outside 20 NM. Carefully review Notices to Airmen or NOTAMS and Air Traffic Control (ATC) directives for current status, to include Volcanic Ash Advisory Statements (VAAS) recently developed by International Civil Aviation Organization (ICAO). Avoid destinations in areas of ash fallout.

There are many things to consider during preflight in a volcanic ash-covered environment. Perform a careful inspection of the following areas: pitot tubes and static ports; engine and ventilation inlets; air scoops; gear struts; and hydraulic actuator chrome. It is important to not wipe, rub, or walk on ash-coated surfaces (i.e., top of fuselage, wings, and/or horizontal stabilizer). Do not use windshield wipers to remove dust. Instead,

flush off with water and wipe with a soft cloth.

For ground operations in a volcanic ash-covered environment: minimize operations; do not use the auxiliary power unit for air conditioning; restrict use

ing packs during takeoff; if odors become present, minor eye irritation can be expected; remove contact lenses and consider the use of oxygen when odors or eye irritation occur; minimize thrust during taxi; and, if possible, perform a rolling takeoff.

During flight operations don't forget that: Airborne radar will not detect volcanic dust clouds; weather forecasts are occasionally wrong; and other clouds may hide plumes. In instrument meteorological conditions or at night, it may be difficult to determine if you're in an ash cloud or in regular clouds. It is for reasons like this that the ICAO spearheaded an effort to make information on volcanic hazards to aircraft more readily available. The ICAO has established Volcanic Ash Advisory Centers or VAACs that issue VAAS to aircrews.

The VAAS provides critical information for flight; however, aircrews can still enter ash clouds inadvertently. If that does happen, one of the telltale signs that you are in one is that your windscreen will become pitted so severely that it becomes translucent. The abrasive cloud particles will also sandblast the aircraft. In addition, airspeed indication may fluctuate greatly or appear unusually high or low due to volcanic dust blocking the pitot static system. Be pre-

damage from this eruption continuing into 1998. One aircrew experienced such reduced visibility for landing that they had to use the side windows on the flight deck in order to taxi after landing. The main point is this: Volcanic ash is a formidable menace and aircrews must take deliberate avoidance measures to escape its effects. The following infor-

to engine starts; once engines are started, use engine bleed for air conditioning; run air conditioning at full cold setting if dust becomes visible; do not use air condition-





180-degree turn to get back to clear air. With prolonged exposure, engines may flame out due to erosion, blockage, or air starvation. If that happens, follow restart guidance and be prepared for delayed start and spool-up. After a suspected encounter, advise the nearest ATC agency and transmit a pilot report to the nearest military base via pilot-to-metro service. This is extremely important so that other aircrews can be warned in a timely manner.

Knowing how to land in a volcanic ash-covered environment can be quite helpful as well. Ash may act similar to dry snow or loose sand. In dry conditions, it is subject to vortices from engines, which may cause ingestion and subsequent damage. In wet conditions, ash-covered ramps, taxiways, and runways should be treated as icy surfaces with appropriate operating techniques and precautions applied. Contact base operations or weather for current runway conditions. If windshields are pitted beyond use, perform an instrument approach with a safety chase. Request the widest runway and declare an inflight emergency.

Additional precautions should also be taken. Damaged landing lights will significantly re-

duce landing light effectiveness; therefore, have the runway lights (not strobes) turned full up. Limit reverse thrust to the minimum practical after landing. Minimize ground operations and taxi thrust. Consider clearing the active runway and having the aircraft towed.

Finally, if you inadvertently fly into ash, or suspect you have, make an appropriate entry in the 781A. Record altitude, location, duration of exposure, and any related malfunctions observed.

There are several maintenance considerations to think about following exposure to volcanic ash. Aircraft inspections should be conducted in accordance with technical orders. Start with removing ash at the earliest opportunity. Do not wipe, rub, or walk on ash-coated surfaces. Instead wash them using alkaline detergent, since ash is acidic, and flood with water. It is also a good idea to frequently check air, oil and fuel filters, and electrical generators and reduce the time between oil change intervals. Clean and/or replace air conditioning water separator bags. Pitot static systems should be cleaned by reverse blow out. Externally lubricated mechanisms like control cables, actuator rods, etc., should be wiped with a soft cloth. Avoid the use of solvents. Increase sumping frequency of fuel tanks. Increase inspections for landing gear squat switch cables. Finally, consult the engine manufacturer for specific power plant maintenance items.

Periodically, we all read or hear on the news that another volcano is active somewhere in the world. As we continue operations on a global scale, it is critical that we are prepared for the hazards we encounter worldwide. Airborne volcanic ash is one of the more serious ones. As aircrew members become more familiar with the dangers and precautions outlined here, they will be better able to handle an ash cloud encounter and increase the likelihood of safely recovering their crews and aircraft. ✈

pared for this by knowing the pitch/power settings indicated in the performance manual for "Flights with Unreliable Airspeed."

Other telltale signs you are in an ash cloud include: An acrid odor similar to electrical smoke; a rise in oil temperature, indicating dust-plugged oil cooler(s); increasing exhaust gas temperature; torching from the tailpipe; and volcanic ash or dust blowing into the cockpit through the air conditioning system.

At night telltale signs can be: St. Elmo's fire and static discharges visible around the windshield; a bright orange glow in the engine inlets; landing lights that cast dark distinct shadows (unlike the fuzzy, indistinct shadows that are cast against weather clouds); engines that surge and/or lose thrust as a result of dust buildup and blockage of the high pressure turbine nozzle guide vanes and the high pressure turbine cooling holes.

When you first encounter an ash cloud, select idle power if the situation permits. This will minimize erosion, glazing, and dust buildup. Consider an immediate



The Tuskegee experience

By Maj William G. Mills, Dyess AFB, Texas
Photos by TSgt Ben Bloker, Langley AFB, Va.



Our country's heritage includes the contributions of more than 13,000 African-Americans who have come to be known as the Tuskegee Airmen. During World War II, 450 combat single-engine fighter pilots, 223 non-combat single-engine fighter pilots, 263 non-combat B-25 bomber pilots, and more than 12,500 other Tuskegee Airmen served America stateside and in the Mediterranean and European Theaters of Operations. Here is a brief synopsis of how this period of history came to be and who was involved, along with some safety insights from some of the original Tuskegee Airmen.

In 1939, mobilization pressures on the Roosevelt administration and Congress led to the passage of Public Law 18, then the Civilian Pilot Training Act. This Act, sponsored by the Civil Aeronautics Authority, established the Civilian Pilot Training Program (CPTP), which created a reserve of civilian pilots to be called in the event of a war emergency. It was out of this program that six segregated CPTP centers were established at African-American colleges in the south. The focal point of this part of the program became Tuskegee, Alabama, where pilot training centers

were created at Moton Field and Tuskegee Army Airfield (TAAF). Because of this, the term "The Tuskegee Experiment" was adopted and characterized the period of 1939 to 1949.

Forty-four classes were conducted in Tuskegee from 1942 to 1946. Each one averaged about 21 students per class. It took 36 weeks of training to make the transition from aviation cadet to certified military pilot. In basic flying training, aviation cadets flew the BT-13. In advanced flying training, fighter cadets flew the AT-6, and bomber cadets flew the AT-10. Historically, the graduates of this program have been referred to as Tuskegee Airmen.

During the early years, the TAAF commander, the director of the Tuskegee Army Flying School, all flight instructor billets and key TAAF positions were voluntarily staffed by white officers. This began to change under the command of Col Noel F. Parrish who served as the third and last commander of TAAF from 1942 to 1946. Under Col Parrish, the Tuskegee Airmen who returned from combat were placed in basic, advanced, and combat instructor positions. All the non-flying personnel who needed the ground, technical and administrative skills required to operate an Army Air Corps Field were trained at Army posts, Army Air Corps bases, civilian facilities or educational institutions throughout the United States.

After the CPTP had been established, but before the first class had started, these Airmen made history when Eleanor Roosevelt took a flight with Charles A. "Chief" Anderson who was the chief pilot at Tuskegee. Lt Gen Benjamin O. Davis, Jr., USAF (Retired), (Deceased), who was the first African-American promoted to the rank of brigadier general, graduated from the very first class, 42-C, on March 1, 1942. Lt Gen Davis went on to command the all-African-American 99th Fighter Squadron (FS) and the 332nd Fighter Group (FG) overseas. In June and July 1945, then-Col Davis and his selected staff from the

332 FG accepted command of the 477th Composite Group (CG), the Army Air Corps' only composite fighter-bomber group. It included the 99 FS, which flew P-47Ds, and two consolidated bomber squadrons, the 617th at Godman Field, Fort Knox, Kentucky, and the 618th at Atterbury Field, Columbus, Indiana. Both of these bomber squadrons flew B-25Js. Lt Gen. Davis returned to the Tuskegee Institute after retirement to teach military science.

Gen Daniel "Chappie" James, Jr., USAF (Retired), who was America's first African-American four-star general, graduated from class 43-G. In 1945, he served stateside under then-Col Davis as a twin-engine B-25 bomber pilot in the 447 CG. In 1947, he served under then-Col Davis as a single engine P-47 fighter pilot in the 332 FG. Four hundred fifty combat pilots from Tuskegee flew P-40s, P-39s, P-47s, and P-51s in the aerial war over North Africa, Sicily; and Europe under the command of then-Col Davis. When the first Tuskegee Air-

Air discipline was essential in combat operations

men were sent overseas, they were not replaced at the end of the usual tour of duty; so many of them ended up flying more than the normal 50-mission tour before returning stateside. These gallant men flew 15,553 sorties and completed 1,578 missions with the 12th Tactical U.S. Army Air Force and the 15th Strategic U.S. Army Air Force.

The Army Chief of Staff, Gen Marshall, had the Army Division of Operations (G-3) conduct an eight-month study starting in July 1943, after receiving some complaints about the 99th Fighter Squadron's performance in the Mediterranean and subsequent recommendations that they be removed from the theater. The G-3 report stated, "An examination of the record of the 99th reveals no significant general difference between this squadron and the balance of the P-40 squadrons in the Mediterranean



Theater of Operations." Official records show that the 99th Fighter Squadron and 332nd Fighter Group continued to perform admirably until their deactivation in July 1949 and October 1945, respectively. The number of unit citations they received for both the pilots and their service and support units reinforced this record. Of the 450 overseas pilots, approximately 150 received the Distinguished Flying Cross.

Their success contributed to the reputation they earned among their opponents and fellow servicemen. The Germans, who both feared and respected them, called them the "Schwarze Vogelmenschen" (Black Birdmen). White American bomber crews reverently referred to them as "The Redtail Angels" because of the identifying red paint on their tail assemblies and their reputation for miraculously not losing a single bomber to enemy fighters during escort missions over strategic targets in Europe. A few of the Tuskegee Airmen who helped contribute to this phenomenal record recently shared their thoughts on the role that safety played in achieving this record.

Lt Col Gene Carter, USAF (Retired), was a fighter pilot and squadron maintenance officer with the 99th Fighter Squadron. According to Lt Col Carter, each pilot was assigned to a particular aircraft, which was owned by a crew chief so both the pilots and maintenance personnel took personal pride in their aircraft and its performance in combat. A mission abort was a serious issue and considered unacceptable. As a maintenance officer and pilot, Lt Col Carter tried to minimize these by flight-testing all aircraft problems before returning the aircraft to service. He also related that there were no formal safety meetings like the Air Force has today. Flight safety was stressed as a part of the formation briefing. Great emphasis was placed on avoiding midair collisions and pre-planned reactions if enemy aircraft like the ME-109 jumped the formation.

Air discipline was essential in combat operations. Formation integrity was more important than the number of kills achieved and this was the responsibility of the formation leaders.



They had to decide how to rejoin the formation, which was the most critical portion of the flight, and get the formation through the cloud decks and safely on the ground.

Col Charles McGee, USAF (Retired), was also a pilot and is currently the Past National President of Tuskegee Airmen, Inc. He was assigned to the 302nd Fighter Squadron, which was under the 332nd Fighter Group. He echoed Lt Col Carter's comments on how safety was simply a part of the normal combat briefing. He felt that the safety program in those days was just in the beginning stages so regular safety meetings did not happen as they do today. According to Col McGee, he just followed the flight lead and did what had to be done to accomplish the mission. The pilots made sure their life support gear checked out correctly before takeoff. Just like today, an emergency at high altitude was not the time to find out their oxygen masks were malfunctioning.

While there was pilot fatigue at the end of the missions, this was normal and did not prevent safety from being adhered to in all ground and flight operations.

Col Harry Sheppard, USAF (Retired), (Deceased), was a fighter pilot and maintenance officer in the 302nd Fighter Squadron. He had high praises for the maintenance personnel and contributed the success of the


flying operations to them. When the squadron started flying the P-51, the maintenance personnel transitioned to the new aircraft in minimum time and sustained combat operations before the supply system was able to provide spare parts for the aircraft. Col Sheppard felt that these Tuskegee Airmen had a drive to perform well and show how much they could contribute to the Air Corps. He viewed his fellow servicemen as Americans with a high dedication to duty and country that garnered the respect of the bomber crews they escorted to the target and home again safely.

Col Fitzroy Newsum, USAF (Retired), was assigned to the 617th Bomber Squadron. Col Newsum stated that then-Col Davis was big on safety and let everyone know that it was his personal priority. The directive to maintain good air discipline came right from the top. Col Newsum related that if a pilot was caught flying too low during a dive-bombing run, that pilot would probably have a face-to-face with the colonel. That is how serious a breach of air discipline was considered. Then-Col Davis was concerned that too many of these breaches would jeopardize the Tuskegee program.

The Tuskegee Airmen were pioneers that had the dedication and love of country to overcome obstacles and make a difference. Their contributions to our military history have become a part of the fabric that holds this nation together. The Air Force today reflects their contributions well.

Legacy of

Legacy of excellence



His training as a Black Belt in Martial Arts gave Capt Otis Hooper the discipline and motivation to succeed, but a meeting with members of The Tuskegee Airmen as a US Air Force Academy (USAFA) freshman, provided the inspiration and direction.

Capt Hooper is a KC-135 Instructor Pilot, executive officer for the 344th Air Refueling Squadron commander at McConnell AFB, Kansas, and 2004 winner of the Tuskegee Airmen Inc. Capt Robert W. Williams Military Award for the Department of Defense Outstanding Company Grade Officer (CGO) of the Year. The award recognizes an Airman's achievements in the areas of professional achievement, development, and community/public service and is given in honor of Capt Williams, one of the original Tuskegee Airmen.

Meeting several surviving members during his freshman year was the catalyst that changed his life. Martial Arts gave him the discipline to succeed, but hearing their story first-hand gave him the strength and inspiration to endure and excel when the pressure was on. "Knowing what they endured gave me the strength to continue on, because what I was experiencing paled in comparison; no matter how hectic or bad I thought things were. Talking to them and hearing their flying stories inspired me to pursue a career as a pilot." Discipline, strength, and inspiration are enduring qualities in an individual, but these character traits only lay the foundation for the rest of the story behind the legacy of the Tuskegee Airmen.

Capt Hooper continued, "I took some time this weekend to put some thoughts down about what makes the Tuskegee Airmen special to me and how their story has impacted every aspect of my life. After learning their story first-hand, and developing a personal relationship with remaining members of The Tuskegee Airmen, I've developed and adopted what I call the 8 Codes of Leadership:

*First and foremost is the importance of **MENTORSHIP**. We don't have all the answers to life's challenges, but knowing where to find those answers is what makes a great leader/mentor. In turn, a good leader must take what he has learned from his predecessors and pass the torch onto the next generation. I have had the opportunity to receive outstanding guidance and direction from my Squadron and Wing Commanders. There are great people in the AF, seek them out, and you'll be amazed how willing they are to help.*

*A true Leader/Commander is **DEDICATED** to his goals and objectives. The Tuskegee Airmen never gave up, and proved that the antidote to racism was, indeed, excellence in performance. This is as true today as it was in the early 1940's when the first Tuskegee Airmen took to the air. Despite racial tension and political barriers, the original Tuskegee Airmen persevered through difficulties and against seemingly insurmountable odds.*

*The dedication shown by these men led to a word that the Tuskegee Airmen could not, and did not receive during or after World War II: **RESPECT**. Today, as in years past, if a good leader does not respect his troops, his troops will not respect him - how then are they going to achieve the goal of a successful mission? Respect must **ALWAYS** be maintained.*

***COOPERATION**...while stationed in Africa, General Benjamin O. Davis, Jr. instilled in his men the importance of cooperation and to accomplish the mission by working together regardless of the adversity they faced. Likewise, during my first year at the USAFA, my classmates and I were taught the importance of teamwork by our upperclassmen, who encouraged us to reach our objectives together, as a single, cohesive unit.*

*The Tuskegee Airmen have a very significant place in my heart when it comes to the word **DISCIPLINE** — to have the discipline to go the extra mile armed with initiative, maintaining excellence and remaining poised, even when the road may not be easily traversed. Who better than the original Tuskegee Airmen to illustrate this? The Tuskegee Airmen were all part of a program that many secretly hoped would fail, but they continued to fight and prove that they were among the best and became the closest example of perfection the Air Force has ever seen.*

*A true leader must believe in himself and be unafraid to try something new or speak out on behalf of his men; instilling true and total **CONFIDENCE** in each other. The Tuskegee Airmen learned to look within for strength, and believed in themselves even when others doubted them. General Davis was not afraid to go to Congress and speak up in support of his men, and because he believed in his men, they believed in him.*

Excellence

By Capt Otis Hooper, McConnell AFB, Ks.

Photo by TSgt Ben Bloker



ENTHUSIASM can't be overlooked. Their enthusiastic attitudes ensured the Tuskegee Airmen's amazing success. Enthusiasm is contagious, and history has shown us the good that has come out of positive thinking. When faced with a bad situation, a good commander looks for the good in the situation, even when others fail to see it.

Last but not least comes, **SELF RESPECT**. The Tuskegee Airmen stood strong in the face of adversity. Even when no one else respected them, they respected themselves. In their honor, I have always had a good sense of self respect, simply because I know that, 'Without knowing your past, you have no future.'

I feel that I owe it to the Tuskegee Airmen to continue to seek perfection in everything that I do, as there is no argument with excellence. Like those before me, I want to provide optimism and inspiration through my performance, in hope that my success will help advertise the opportunities to excel that the military offers to other minorities. I am a proud and honored member of the Virginia Tidewater Chapter of the Tuskegee Airmen, and I encourage those reading, to learn more about these great men."

— Capt Otis Hooper

Military service has always taken a special sort of person to take up arms in defense of one's ideals, freedoms, and the defenseless. It's tough, demanding work that requires knowledge, commitment, and a willingness to put service and others before themselves. To rise above, and be a trailblazer takes a special, select group, and the Tuskegee Airmen were just such a group. Their achievements fighting against both the enemy and segregation paved the way for integration of the armed services, and brought about positive change through discipline, strength, and inspiration. Capt Hooper carries on that tradition and honors their legacy, and their stories continue to inspire Airmen to this day.

And therein lays the story.

MONTHLY AWARD WINNERS

Aircrew Safety

Award of Distinction

Capt Smith and Capt Keen were the number two aircraft in an F-15E two-ship TX course Aircraft Handling Characteristics training sortie. After separating from their flight, they completed their area work uneventfully and began a strange field approach at a local military field. The crew experienced utility hydraulics failure in their aircraft, and Capt Smith elected to discontinue his approach and steer toward home base, approximately 50 miles away. Capt Smith coordinated for another F-15E in the area to rejoin for a battle damage check and chase. The chase aircraft did not see anything visually wrong with the aircraft; however, Capt Smith confirmed a lack of utility hydraulics due to a loss of numerous systems. The crew exhausted all checklist procedures with no success, and elected to dump fuel in order to land at a safe weight. With the lack of utility hydraulics, the crew completed an

emergency gear extension in order to land the aircraft safely. Capt Smith then directed the chase aircraft to visually confirm that the gear had successfully extended. Since the hydraulic failure caused the aircraft to lose all primary braking, the crew elected to do an approach-end arrestment. With only a single runway at their home base, the crew elected to hold in order to facilitate other aircraft to land that were short on fuel. The crew manually calculated safe cable engagement speeds and weight, coordinated with the supervisor of flying for a missed cable plan, and after extensive coordination with numerous agencies, the crew executed an approach and successful cable engagement. A post-flight inspection confirmed an uncorrectable utility hydraulic malfunction. Their teamwork, flying skills, and airmanship under pressure led to the successful recovery of a \$54 million Air Force asset.



**Capt Hunter Smith, Capt Carlton Keen, 344th Fighter Sqdn.,
4th Fighter Wing, Seymour Johnson AFB, North Carolina**

Flight Line Safety

Award of Distinction

On 28 October 2004, Cobra 81, a flight of two F-15s, entered the Langley AFB VFR traffic pattern for full-stop landings. Approaching the perch, Cobra 82 put his gear down and received an unsafe gear indication. Cobra 81, who had rolled off the perch in front of his wingman, went around, joined up with Cobra 82, and saw that one of the main landing gear doors was stuck open, but all three gear appeared to be down and locked. The checklist for this situation directs that the pilot make an approach-end arrestment. Cobra 82 declared an emergency with Air Traffic Control (ATC) and worked out a plan with his lead, the SOF, and ATC to extend out to

a 5-mile final to allow Cobra 81 to immediately turn final and land in front of him. Both aircraft were now low on fuel, and the tower controllers and the SOF were focused on landing both aircraft as quickly as possible. Cobra 81 turned final, called "gear down, full stop", and received landing clearance from the local controller. As Cobra 82 rolled out on 5-mile final and called his position, SSgt Osborne, the tower watch supervisor, saw that Cobra 81 was over the overrun with his landing gear up. Sgt Osborne immediately called out for the pilot to go around and check gear. Cobra 81 executed a go-around, clearing the runway by less than 20 feet. The tower controllers were then able to coordinate a closed pattern and safe full-stop landing by Cobra 81 followed very shortly by a successful approach-end arrestment for Cobra 82. SSgt Osborne's quick thinking and attention to detail saved two valuable combat assets.



**SSgt Judson W. Osborne, 1st Operations Support Sqdn.,
1st Fighter Wing, Langley AFB, Virginia**

Ground Safety

Award of Distinction

On 15 September 04, Boat Masters Anderson and Wilson distinguished themselves by captaining two of only three 120-foot drone recovery vessels in the Air Force inventory. These unique assets have saved the Air Force \$43 million in the past 5 years by recovering subscale drones from the Gulf of Mexico. The three vessels had been prepared to survive Hurricane Ivan by securing them to fixed anchors located in the bay. Vessel MR120-8802 was equipped with double 3,000 pound anchors on the mooring system, while vessels MR120-8801 and MR120-8803 were equipped with only one. With the evacuation of Tyndall's personnel in progress, Boat Masters Anderson and Wilson volunteered to stay on watch during the storm to ensure the vessels' safety. When Hurricane Ivan made landfall, extreme winds with gusts of up to 100 mph forced MR120-8801, with the single anchor, to drag towards MR120-8802 which remained secure. To keep these two vessels from colliding, Anderson and Wilson boarded the dragging vessel to put it back in its correct position in the bay. They were unable to pull the 3,000-pound anchor to get separation between the two vessels and thus needed to detach the anchor. During ideal conditions, it normally takes a crew of five to detach the anchor, so

both Anderson and Wilson created a plan and used precise coordination to safely perform this action with only one individual at the helm and the other working the anchor. After this amazing feat, it was then necessary for Anderson and Wilson to power into the wind and move MR120-8801 back into its original position. They battled Hurricane Ivan between the hours of 0200 and 0600, continuously steering and changing throttle settings due to the ever-changing winds and sea states in order to maintain the vessel's position. As the sun came up, the other single-anchored vessel, MR120-8803, was sighted at the far side of the bay dragging anchor towards the lee shore. To prevent this vessel from grounding, it was necessary for them to re-secure MR120-8801 by maneuvering toward pilings near the dock and temporarily securing it to the pilings. Using a 20-foot boat, they traveled to the far end of the bay and boarded vessel MR120-8803 before it went aground. They were able to start the engines of MR120-8803 and move it back into the center of the bay pulling the 3,000-pound anchor behind. Once located back in the correct position, they were able to reset the anchor to secure MR120-8803 in place. Due to their courage and dedication, Boat Masters Carl Anderson and Michael Wilson were able to protect these \$9-million boats from damage and allowed Air Force drone recovery operations to continue.



**Mr. Carl S. Anderson, Mr. Michael W. Wilson,
82nd Aerial Target Squadron, 53rd Wing, Tyndall AFB, Florida**

Pilot Safety

Award of Distinction

Capt Gration was number one of a two-ship of F-15C Eagles on a 2V2 night Air Combat Training (ACT) mission. On takeoff for the instrument trail departure, Capt Gration's landing gear failed to retract. Entering the weather at 2,000', Capt Gration put the gear handle back down IAW the checklist. After breaking out of the weather at around 5,000', Capt Gration continued the checklist and discovered the landing gear circuit breaker was popped. He directed his wingman to rejoin and look him over with NVGs as he reset the circuit breaker and put the gear handle back up. Once again the gear failed to retract. He checked the circuit breaker which had again popped. As Capt Gration put the gear handle back down and reset the breaker, the right main gear began to retract on its own, while the left main and nose gear stayed in the down and locked position. He pulled the breaker and successfully

regained three safe gear indications. The decision was made to reduce landing weight by dumping enough fuel to safely land on an 8,400' runway. In accordance with the checklist, Capt Gration pulled the emergency gear extension handle and placed the gear handle up to enable his centerline fuel tank to transfer and dump fuel. He quickly noticed, however, that the fuel in the centerline tank was not transferring. He now faced the problem of having 4,000 pounds of trapped fuel in addition to his gear retraction failure, at night with poor weather. Balancing his need to reduce the overall gross weight in order to safely land on a short runway while retaining enough fuel to divert, gear-down, to an alternate airfield if required, he decided to dump 9,000 pounds of total fuel (5,000 pounds usable, 4,000 pounds trapped). Capt Gration flew an uneventful ILS approach to a safe landing. Despite darkness and adverse weather conditions, his systems knowledge, airmanship, and skill allowed him to safely recover an aircraft with compound emergencies.



**Capt Jonathan Gration, 71st Fighter Sqdn.,
1st Fighter Wing, Langley AFB, Virginia**

MONTHLY AWARD WINNERS

Unit Safety

Award of Distinction

In October 2004 the 33d Maintenance Group Quality Assurance Office was tasked with the inspection of a "Utility A hydraulic return line" on an F-15 aircraft which was identified as chafing against the panel 51 stiffener. The team assessed the situation and developed a plan to inspect six aircraft without disrupting ongoing maintenance activity. The team split responsibilities to simultaneously lower panel 51 on two phase aircraft while researching supply stock for the availability of replacement line, tube stock, and fittings in the event a line needed to be replaced. They developed an innovative inspection technique using a flexible bore scope to assess the hydraulic line condition without having to lower panel 51. This inspection technique reduced the inspection time from 2 hours to only 15 minutes per aircraft, saving 94.5 man-hours to inspect the 33 FW fleet. They also shared

this technique with ACC/DRA, saving thousands of inspection hours fleet-wide. The Quality Assurance Office quickly notified 33 FW personnel supporting operations at three deployed locations, resulting in all aircraft being inspected in 1 day. Members of the team stayed well past their shift change time to accomplish 10 inspections on aircraft subject to the most immediate flying requirement, allowing aircraft to remain "on-status" in support of Operation NOBLE EAGLE. The 33 MXG Quality Assurance Office developed and published a 33 FW One-Time Inspection (OTI), closing the documentation loop to guarantee inspection and serviceability. They applied solid risk management principles and were able to inspect all 33 FW aircraft before the next scheduled flight. This inspection resulted in the discovery of major chafing of a suspect hydraulic line on an off-station aircraft. The affected aircraft was grounded, and a replacement line was sourced, shipped, and replaced in 2 days. The 33 MXG Quality Assurance Office's aggressive team effort and dedication to rigid safety standards ensured no 33 FW aircraft or pilot was ever at risk due to failure of the Utility A hydraulic system.

**Quality Assurance One-Time Inspection Team,
33rd Maint. Group, 33rd Fighter Wing, Eglin AFB, Florida**

Weapons Safety

Award of Distinction

On 18 October 2004, SSgt Davis was performing a Returned Munitions Inspection (RMI) on 6 sticks of 40 percent Ammonium Nitrate Dynamite being turned in from the Security Forces K-9 kit. During this inspection, he opened the container to verify and inspect the contents and discovered that the dynamite was starting to crystallize and exudation (oozing) was visible. Knowing that technical data states that dynamite showing the presence of exudation

and crystallization is extremely sensitive and dangerous, Sgt Davis ordered the evacuation of the Munitions Inspection bay where he was working and contacted Munitions Control and Explosive Ordnance Disposal (EOD) Flight about the hazard. When EOD arrived, Sgt Davis led them to where the dynamite was sitting. EOD agreed that the dynamite was unstable, took control of the assets, and proceeded with the emergency destruction of this hazardous dynamite. SSgt Davis' attention to detail and quick action kept the dynamite from causing damage to equipment and personnel.



**SSgt Jeremy L. Davis, 20th Equipment Maint. Sqdn.,
20th Fighter Wing, Shaw AFB, South Carolina**

ACC Safety Salutes Superior Performance

Capt Michael L. Clavenna

TU-2S Instructor Pilot
1st Reconnaissance Squadron
9th Reconnaissance Wing
Beale AFB, Calif.

Capt William J. Shnowske

Flight Lead/Squadron Scheduler
421st Fighter Squadron
388th Fighter Wing
Hill AFB, Utah

1Lt Jeffrey J. Duprez

A-10 Pilot
104th Fighter Squadron
175th Wing
Baltimore, Md.

Lt Col Mike Howry, Aircraft Commander

1Lt Richard Webb, Pilot

1Lt Raymond Dagley, Pilot

Lt Col Richard Humphrey, Instructor Pilot

Lt Col Douglas Cox, Radar Navigator

Lt Col Marty Wilson, Navigator

Maj James Jagodzinski, Instructor Radar Navigator

Capt Larry Fenner, Electronic Warfare Officer

96th Bomb Squadron

2nd Bomb Wing

Barksdale AFB, La.

Capt Chad T. Martin

1Lt Travis M. Winslow

F-16 C/G Pilots

524th Fighter Squadron

27th Fighter Wing

Cannon AFB, N.M.

Mrs. Jill K. Riggleman

Fire Inspector

1st Civil Engineer Squadron

1st Fighter Wing

Langley AFB, Va.

TSgt David H. Calhoun

Group SORTS and ART Manager

3rd Combat Communications Support Squadron

3rd Combat Communications Group

Tinker AFB, Okla.

TSgt Merle L. Norman

Security Forces

3rd Combat Communications Support Squadron

3rd Combat Communications Group

Tinker AFB, Okla.

28th Civil Engineer Squadron

28th Bomb Wing

Ellsworth AFB, S.D.



ACC FY 04 ANNUAL AWARDS



NAF/DRU SAFETY PROGRAM OF THE YEAR

12th Air Force
Davis-Monthan AFB, S.C.



WING SAFETY PROGRAM OF THE YEAR

366th Fighter Wing
Mt. Home AFB, Idaho



WING CHIEF OF SAFETY OF THE YEAR

Lt Col Craig K. King
33rd Fighter Wing
Eglin AFB, Fla.



FLIGHT SAFETY OFFICER OF THE YEAR

Capt Barry J. Lawlor
1st Fighter Wing
Langley AFB, Va.



FLIGHT SAFETY NCO OF THE YEAR

TSgt Timothy W. Powell
23rd Fighter Group
Pope AFB, N.C.



CREW CHIEF SAFETY OUTSTANDING ACHIEVEMENT AWARD

SSgt Jeffery R. Sidorowicz
1st Aircraft Maintenance Squadron
Langley AFB, Va.



FLIGHT LINE SAFETY OUTSTANDING ACHIEVEMENT AWARD

MSgt Andrew W. Friend
1st Aircraft Maintenance Squadron
Langley AFB, Va.



WEAPONS SAFETY OUTSTANDING ACHIEVEMENT AWARD

MSgt Gregory D. Nelson
366th Fighter Wing
Mt. Home AFB, Idaho



LOGISTICS SAFETY OUTSTANDING ACHIEVEMENT AWARD

MSgt Eric J. Voak
1st Logistics Readiness Squadron
Langley AFB, Va.

MSgt Peter J. Haugh
28th Logistics Readiness Squadron
Ellsworth ABB, S.D.



GROUND SAFETY OUTSTANDING ACHIEVEMENT AWARD

TSgt Robert E. Foster
366th Fighter Wing
Mt. Home AFB, Idaho



GROUND SAFETY SPECIAL ACHIEVEMENT AWARD

SSgt Mary G. Circe
28th Bomb Wing
Ellsworth AFB, S.D.



TRAFFIC SAFETY SPECIAL ACHIEVEMENT AWARD

28th Bomb Wing
Ellsworth AFB, S.D.



INDIVIDUAL SAFETY AWARD

Lt Col Mark E. Schlichte
28th Bomb Wing
Ellsworth AFB, S.D.



OUTSTANDING AIRMANSHIP AWARD

Capt Dax Hayes
74th Fighter Squadron
Pope AFB, N.C.



SPECIAL ACHIEVEMENT AWARD

27th Fighter Wing
Cannon AFB, N.M.



FLIGHT SAFETY SPECIAL ACHIEVEMENT AWARD

27th Fighter Wing
Cannon AFB, N.M.



SAFETY SPECIAL ACHIEVEMENT AWARD

SSgt Joseph W. Martin
1st Logistics Readiness Squadron
Langley AFB, Va.



SAFETY CAREER PROFESSIONAL OF THE YEAR AWARD

Ms. Karen D. Rogow
366th Fighter Wing
Mt. Home AFB, Idaho



CHIEF OF SAFETY MEDICAL ACHIEVEMENT AWARD

27th Aeromedical Dental Operations Squadron
Cannon AFB, N.M.



NUCLEAR SURETY OUTSTANDING ACHIEVEMENT AWARD

TSgt Martin P. Jackson
HQ ACC Safety
Langley AFB, Va.



NUCLEAR SURETY AWARD

509th Bomb Wing, Whiteman AFB, Mo.
2nd Bomb Wing, Barksdale AFB, La.
5th Mission Support Squadron, Minot AFB, N.D.
4th Fighter Wing, Seymour Johnson AFB, N.C.



MISSILE SAFETY AWARD

33rd Fighter Wing, Eglin AFB, Fla.
83rd Fighter Weapons Squadron, Tyndall AFB, Fla.



EXPLOSIVES SAFETY OUTSTANDING ACHIEVEMENT

TSgt Shane D. Johnson
28th Bomb Wing
Ellsworth AFB, S.D.



FAA CERTIFICATES

Barksdale Aero Club, Barksdale AFB, La.
Langley Aero Club, Langley AFB, Va.



EXPLOSIVES SAFETY AWARD

33rd Fighter Wing, Eglin AFB, Fla.
23rd Fighter Group, Pope AFB, N.C.
355th Civil Engineer Squadron, Davis-Monthan AFB, Ariz.
388th Equipment Maint. Squadron, Hill AFB, Utah
28th Bomb Wing, Ellsworth AFB, S.D.
3rd Combat Communications Group, Tinker AFB, Okla.
1st Fighter Wing, Langley AFB, Va.
7th Bomb Wing, Dyess AFB, Texas
27th Fighter Wing, Cannon AFB, N.M.
9th Munitions Squadron, Beale AFB, Calif.
2nd Bomb Wing, Barksdale AFB, La.



FLIGHT SAFETY AWARD

43rd Electronic Combat Squadron, Davis-Monthan AFB, Ariz.
33rd Fighter Wing, Eglin AFB, Fla.
27th Fighter Wing, Cannon AFB, N.M.
1st Fighter Wing, Langley AFB, Va.
9th Reconnaissance Wing, Beale AFB, Calif.
55th Wing, Offutt AFB, Neb.
2nd Bomb Wing, Barksdale AFB, La.
509th Bomb Wing, Whiteman AFB, Mo.
49th Test and Evaluation Squadron, Barksdale AFB, La.
552nd Air Control Wing, Tinker AFB, Okla.
355th Wing, Davis-Monthan AFB, Ariz.



AIRCREW AWARD OF DISTINCTION

Capt Chad M. Cartier
Lt Col Anthony J. Murch
Maj Charles R. Fetters
Capt Eric S. Patton
Capt John M. Harrison
1Lt David S. Alexander
SMSgt Susan M. Lardner
MSgt Dwayne A. Lovins
TSgt Richard D. Cook
SSgt Benjamin M. Indino
SSgt William B. Dunne
A1C Jeffrey A. Weiler
43rd Electronic Combat Squadron
Davis-Monthan AFB, Ariz.



OUTSTANDING ACHIEVEMENT AWARD FOR GROUND SAFETY

366th Fighter Wing, Mt. Home AFB, Idaho
33rd Fighter Wing, Eglin AFB, Fla.
819th RED HORSE Squadron, Malmstrom AFB, Mt.
3rd Combat Communications Group, Tinker, Okla.



pineapple juggling

By Maj Anton Komatz, Langley AFB, Va.
Photos by TSgt Ben Bloker, Langley AFB, Va.



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Like most parents, I tend to lecture my two teenage boys. It usually starts out something like, "Remember, the trouble with trouble is that it always starts out as fun." But like most people – young people in particular – they need a "For instance ..." type of story to get the point across.

For instance ... when I was 15, I used to help my brother-in-law, Gordy, do odd jobs around his family's farm. Gordy had all of the "big kid" toys that every teenager wants: rifles, hand guns, remote control airplanes, four-wheel drive trucks, and muscle cars. He was fun to hang with; but despite being 10 years older than me, he never really acted like an adult. That tendency almost got us both killed one day.

It was the day Gordy and I were cleaning out his mother's attic. We had squeezed through a small door to get into the attic that was barely 10 feet wide, 4 feet tall at its peak and over 20 feet long. There was a small four pane window covered by a storm window at the end opposite the door. Halfway into the attic, we found his father's Army footlocker. Gordy's father had served in Patton's Third

Army as a tank mechanic during the race across Europe. After the war, he joined the local National Guard unit, retiring shortly before passing away.

The footlocker had an old brass "US" lock holding it closed. Gordy kept trying different keys on an old key ring until he hit the right one and the lock popped open. We pulled the footlocker into the middle of the floor and turned on the light. Opening the footlocker was like opening a WWII time capsule.

Lying on top of the footlocker were two Nazi battle flags. One was like new, while the other was singed and had several holes in it. Along with the flags were several German and American uniforms, pictures, hats, insignia, and other mementos from his father's trek across Europe. Under the last uniform, wrapped in oil cloths, were several bayonets, a German officer's 9 mm Luger pistol, and a Colt semi-automatic pistol in its holster. Both pistols were unloaded, but the footlocker also contained several boxes of ammunition for each weapon. I could tell by Gordy's reaction that he either didn't know the footlocker existed or had never seen the contents.

I was still looking over the Luger pistol when Gordy pulled a short, black cardboard tube (like those used to mail posters) from the floor of the footlocker. Other than "Mark IIA1 10 Sec Fragmentation" stamped on the bottom of the tube, there was nothing to identify its contents. Gordy twisted the top off and dumped the contents into the palm of his hand.

To our amazement, a blackish, green WWII "pineapple" style hand grenade slid out of the tube and into Gordy's hand. It looked just like the ones in the old war movies. The spoon shaped arming lever was held in place by a metal pin that passed through the arming lever at the top of the grenade. One end of the pin was bent over the side of the grenade to keep it in place and there was a metal ring large enough to put your finger through at the other end. Gordy excitedly said, "My dad used to bring these home from the Guard all the time, it's a smoke grenade ..." Before I could stop him, Gordy had hooked his finger in the ring and pulled the pin out.

My short 15 years passed before my eyes as I reached forward and grabbed his hand holding the grenade to keep him from releasing the arming lever. "Gord, don't let go, I think it's real. Why would a smoke grenade have '10 Sec Fragmentation' printed on the tube?!" Gordy's eyes got large as he realized what he had done. His first reaction was to drop the grenade like a hot potato, but I kept a firm grip on his hand and the grenade until he calmed down.

Right at that moment, I realized how hot and small the attic was. Both of us were sweating profusely, adding another



element of concern about how good Gordy's grip was on the grenade. As long as he didn't release the arming lever, the grenade wouldn't explode.

We quickly assessed our escape options. If he dropped the grenade, arming it, we wouldn't have been able to scramble across the 10 feet or so to reach the door and exit the attic before it exploded. The odds were also pretty slim that either of us would have been able to throw the grenade through the four pane window and storm window that was about 15 feet away without hitting one of the cross braces and having it bounce back into the attic.

"I wonder if you can put these things back in?" Gordy asked slowly. The ring of the arming pin was still wrapped around his index finger. The two piece, cotter key style pin had straightened out enough to be removed from the grenade, but was bent apart just

"I wonder if you can put these things back in?"

enough to not allow the pin to slide back into place. After several failed attempts, we realized the pin had to be straightened more before it could be replaced.

"Hang on Gord, I'll go get some needle-nosed pliers and be right back," I told him as I squeezed out of the attic and went downstairs. I covered the hundred or so yards to the ma-

chine shed in seconds, but felt like I had spent an hour frantically searching through several unfamiliar tool boxes before finding the right pliers. When I returned, Gordy was soaked with sweat and looked a few years older.

I took the pin from him and bent it back into shape. Using the pliers to keep the two pieces of the pin from springing apart, we were finally able to slide the pin into place after about three tries. Once the pin was in place, I bent it over to keep it from coming out.

We then both started to breathe a little easier.

We put the grenade back into the tube, exited the attic and called the local police.

They, along with the local National Guard Explosive Ordnance Disposal team, took custody of the grenade and performed a standard de-arming procedure to render the grenade safe. The chances of us escaping the attic unhurt, much less

alive, had been small. It was plain dumb luck that the grenade hadn't exploded on its own or that my brother-in-law hadn't released the arming lever.

Each year there are news stories about people putting themselves and others in danger by mishandling "war souvenirs" that later turn out to be live munitions. As time wears on and veterans from WWII, Korea, and Vietnam become fewer in number, there's an increased chance of more war era footlockers being found in other attics, basements, and garage sales. Although the majority of items found in these will be harmless, it just takes one to maim or kill a friend or relative.

Treat all munitions you come across as live. If you are not 100 percent sure about what something is, take the following actions: Don't touch it, mark its location, evacuate the area around the munition, and report the discovery to local authorities. Remember, what you don't know could kill you.

Editor's note: Special thanks for his technical assistance in this story to Dennis P. Mroczkowski, USMCR (Ret.), Director, The Fort Monroe Museum.



Leave it to Beavers

A.K.A. - "The Professionals"

By TSgt Patrick J. Mehmert, Tinker AFB, Okla.

Photos by TSgt Ben Bloker, Langley AFB, Va.

I had just returned from 2 years at an assignment away from home. The backyard had gotten a little overgrown while I was away, so I decided it was time to purchase some tree cutting tools and take care of the problem. After completing an initial evaluation of the size and type of trees and bushes that needed some attention, I spent the next several hours walking around the monstrous home and garden stores comparing prices. With the help of a knowledgeable garden department head, I decided on a 14-inch electric chainsaw. A chainsaw was just what I was missing in my life!

Since the trees I had targeted were smaller in stature, the chainsaw I had purchased was made for cutting branches with a diameter of 4-inches or smaller; but, it had plenty of power! I spent the afternoon cutting down several small trees and a couple of shrubs my wife loved, but I felt just had to go. (Boy, did I hear about that for the next several weeks!)

After I cut the trees down, I would cut up the limbs and trunks into smaller pieces. This was turning out to be a lot of fun. Then I turned my attention to a rather large plum tree that my wife and I both hated. She had told

me over and over again to hire a professional tree-trimmer to cut it down, but I was on a winning streak and thought I'd take a look at it.

The tree appeared from ground level to be approximately 25 feet in height, so I retrieved my new 20-foot extension ladder that I'd been dying to use. I stood the ladder up and started cutting off smaller branches at the lower level. Then I said to myself, "Who needs a professional?" and "What does my wife know about trees anyhow?"

Soon I had enough of the branches off to extend the ladder to full height. That's when I realized the tree was a lot taller than it appeared from ground level. My ladder only reached about two-thirds of the way up the tree. I thought for a minute and said to myself, "No problem. I'll just cut off the top one-third of the tree." So I put on all my safety gear (as any smart Ground Safety professional would) and up I went like Paul Bunyan — this was exciting stuff!


The first problem I encountered was that I had forgotten I really don't care for heights. I became incredibly nervous. The second problem was the diameter of the tree at that level was approximately 10-inches. Remember, the saw was made to cut only 4-inch diameter branches. At this point, my inner voice was asking if this was such a good idea. I hesitated for a second, then said to myself, "I've come this far; there's no turning back now."

I turned on the chainsaw and started a horizontal cut. Initially, it went fairly well until I was about midway through the tree. At this

point the weight of the tree started to bind the chainsaw blade. Now what? I'm ashamed to say my next decision was to push the top third of the tree over while standing on top of my 20-foot extension ladder. At this point, all my fellow Ground Safety folks should be cringing.

I pushed and pushed with all my might and, although the tree shook and swayed, it would not fall. (Someone was definitely looking out for me that day!) Now I only had one option left. I would have to tie a rope around the treetop and pull it over. When I realized my wife would be home soon, I decided I had to hurry because the last thing I wanted to hear was, "I told you so."

So I tied the rope around the tree and stood in a spot off to the side, ensuring I had enough ground clearance to stay safe when the tree fell. I pulled and rocked the treetop with all my might and — to my surprise — it gradually started to lean very slowly. Of course, I continued to pull. The treetop moved in slow motion at first. Then it suddenly fell so fast I could hardly tell what happened next. As it hit the ground, it snapped up in a strange motion to the side and was coming right at me. I jumped back as fast as I could possibly react, but the extending branches still struck me, and I was knocked on the seat of my pants.

I had a few scratches from the branches, but thankfully I was fine — except of course for my pride. It was at that point that I mumbled to myself, "I should have hired a professional." 

**"Who
needs a
professional?"**



Safe Pruning Tips

If you don't hire a professional, keep in mind that safety – for you personally – should be top priority as you prune



- Be sure you are in good physical and mental health in order to operate the equipment safely.
- Do not use equipment when under the influence of alcohol, medication, or substances that can affect your vision, dexterity, and judgment.
- Before using any power equipment, be sure to thoroughly read and understand the safety and operator's manuals.
- When pruning deep in a bush or tree with hand pruners, pay attention to where your non-cutting hand is. It's easy to cut your hand when you can't see it.
- Before attempting to prune from a ladder, look up for electrical lines and dead or hanging branches.
- Consider where the branch will fall when it is cut or dropped from the tree – be sure it won't fall on anyone or knock into the ladder.
- Be safe. Use a stepladder or tie an extension ladder securely to the tree and keep one hand on it and one on the saw. Station someone on the ground as a lookout and safety checker.
- Wear nonskid rubber-soled shoes, snug clothing, and leather gloves. When using a chain saw, wear leather boots. Professionals wear hard hats and protective glasses because it is easy to bump into a branch and scratch an eye or lose a contact lens.

Editor's note: www.gardenadvice.com and <http://static.highbloom.com/> (Pruning Safety Is Top Priority by Robin Pendergrast, Arbor Age, April 1, 2000)

Fleagle

I CAN'T PUT OFF CLEANING THIS ATTIC ANY LONGER.



THERE MUST BE FOUR OR FIVE GENERATIONS OF FLEAGLE FAMILY JUNK UP HERE.



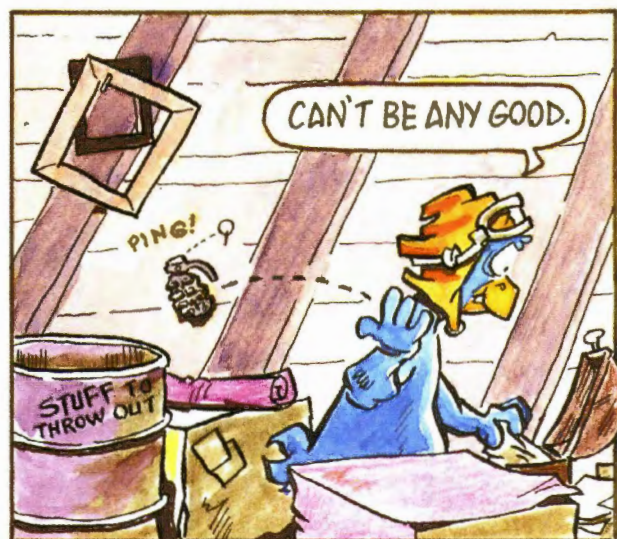
WONDER WHAT'S IN THIS OLD TRUNK?



WOULD YOU LOOK AT THIS... AN OLD GRENADE.



CAN'T BE ANY GOOD.



MUMBLE
MUMBLE
MUMBLE





WHAT DID HE SAY?

HE WANTS US TO HELP HIM FIND HIS ATTIC.

HARRISON


FY05 Aircraft

As of December 31, 2004

	Fatal	Aircraft Destroyed	Aircraft Damaged
8 AF			
9 AF			
12 AF			
AWFC			
ANG (ACC-gained)			
AFRC (ACC-gained)			

FY05 Ground

As of December 31, 2004

	Fatal	Class A	Class B
8 AF		2	0
9 AF		0	0
12 AF		0	0
DRU's		2	0

FY05 Weapons

As of December 31, 2004

	Class A	Class B
8 AF	0	0
9 AF	0	0
12 AF	0	0
AWFC	0	0

Aircraft Notes

ACC had two Class As in December. An F/A-22 crashed on takeoff, but fortunately, aviator ejected successfully. The other was a non-rate producing mishap where a B-1B nose gear collapsed post-flight. Don't become complacent! I know that sounds both simple and trite, but it's hard to recognize. Recently, I heard someone brief the local NOTAMs as "standard." Then I got to thinking ... does that mean no change from yesterday or none that apply to our sortie? So, since I didn't fly yesterday, I checked. None applied until we stepped and the operations supervisor (TOP 3) said "Have a good flight! Oh and by the way, the TACAN is out of service." Check yourself before you wreck yourself. Fly Safe!

Ground Notes

The last quarter of FY05 proved to be successful in reduced fatal mishaps. ACC suffered 2 fatalities as opposed to 8 in FY04. That's a 75 percent reduction. There were also 2 Class A property damage mishaps: one invulnerability on aircraft radar and the other a radar tower that collapsed due to winds.

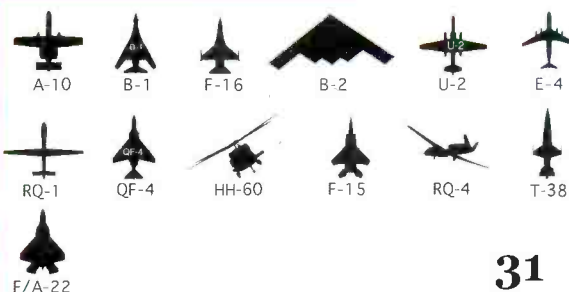
Weapons Notes

We in the weapons safety arena ended FY04 with another great year with regard to statistics. We did, however, continue to see mishaps happening as a result of not following technical data, so we requested additional emphasis to be placed on technical order usage and to focus on ensuring strict adherence to warnings, cautions, and notes. We begin FY05 with the same recurring problem. Failure to follow technical data will always result in an undesired outcome. Utilize any opportunity you have to emphasize technical order usage and understanding. Let's work together to take not following technical data as a cause of a mishap out of the equation.

Legend

Class A - Permanent Total Disability; Property Damage \$1,000,000 or more
 Class B - Permanent Partial Disability; Property Damage between \$200,000 and \$1,000,000
 Class C - Lost Workday; Property Damage between \$20,000 and \$200,000
 * Non-rate Producing

Symbols for Mishap Aircraft



Tuskegee Legacy

