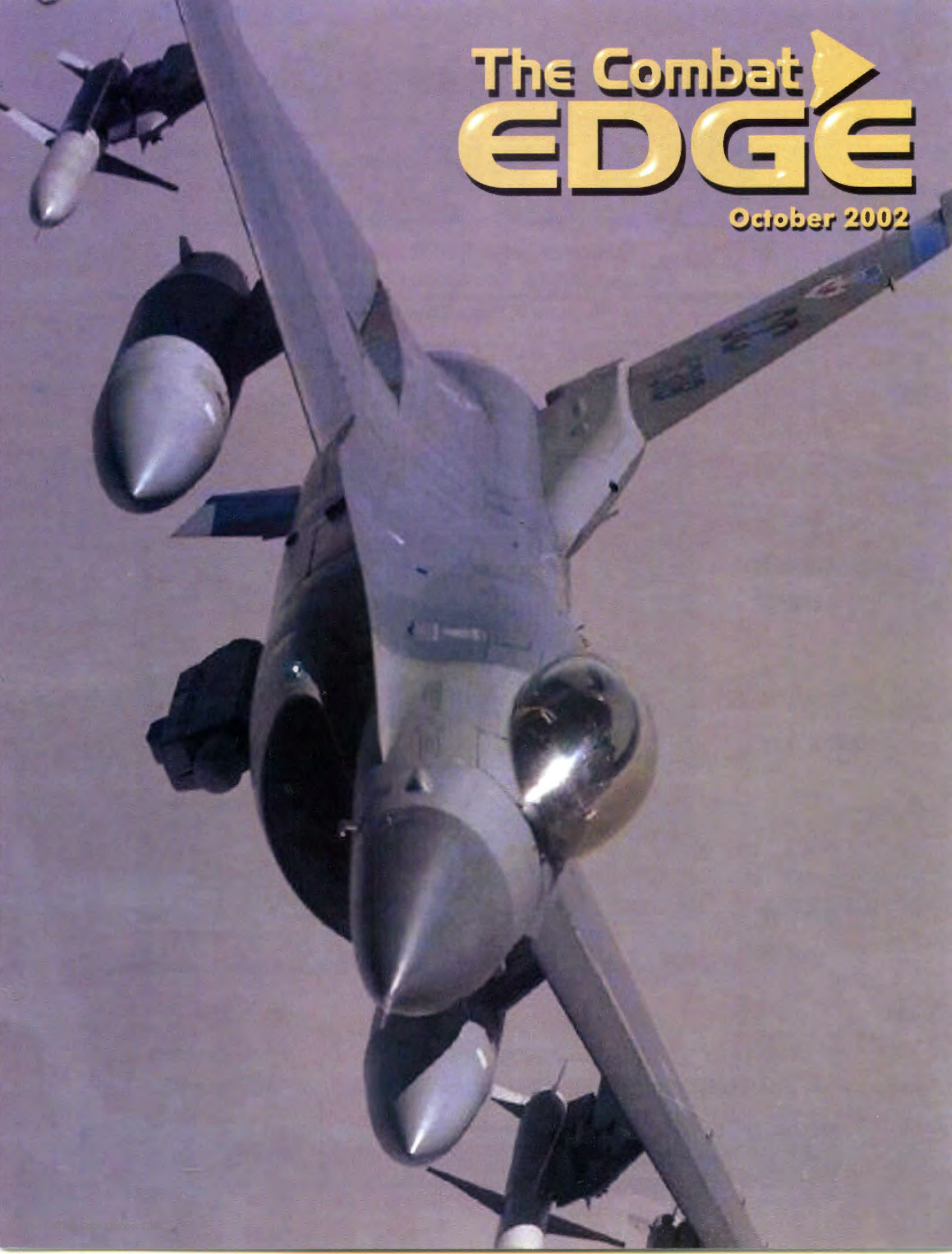
The Combat
EDGE
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The Combat EDGE

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The editors reserve the right to edit all manuscripts for readability and good taste.

Denotes images digitally manipulated.

Front Cover: USAF photo by *TSgt Jack Braden* — An F-16 from the 523rd Fighter Squadron, 27th Fighter Wing, Cannon AFB, NM departs for a mission of over southern Iraq. The 523rd is deployed to Saudi Arabia patrolling the no-fly-zone over southern Iraq in support of Operation Southern Watch.

ACCent on Safety

LET'S MAKE THE MOST OUT OF OUR FRESH START

October marks the start of a new fiscal year. It is also when we reset and restart our counting of operational and safety statistics. Many ACC wings will start operations with new organizational structures and some will be realigned to different NAFs. It behooves us to quickly seal the command and supervisory links, to regain strong supervisory oversight of our operations.

This includes direct front-line supervisory involvement in our on- and off-duty activities. We cannot afford to have a lapse in teaching safe, risk management practices to our new folks, and keeping our "old heads" fresh on safety.

FY02 was not a good year when you measure it by the number of ACC members lost. As of the time I am writing this, ACC has suffered 31 deaths, five permanent total disability injuries, and five permanent partial disabilities. We already have reached the third worst ground mishap rate in ACC's history and we still have a month to go.

So now is the time to set the course for FY03 and keep all of our ACC personnel safe, productive, and healthy. In order to do that, we have to stop off-duty 2-/4-wheel motor vehicle accidents, which continue to be the leading cause of deaths in ACC and the Air Force.

I challenge each of you to make it your Wing, Group, Squadron, Flight, and Section's goal to finish FY03 with zero fatalities or debilitating injuries. That won't happen by chance; it will take an active, personal involvement on everyone's part. Each person in an organization has to be engaged. You may be the only one that can break the link in the chain of a mishap.

Colonel Kevin W. Smith
Chief of Safety

Whoa!

By Lt Col Ezequiel Parrilla, Jr., USMILGP Colombia

Photo by SSgt Jeremiah Erickson

There we were, slipping the surlies in our "Bone." The tone dropping and "name-that-tune" portion of the flight had progressed normally, and we started an en route descent 30 miles north of Base D. At that point, the Central Integrated Test System (CITS) flagged a Multiplex (MUX) 13 message. For those not familiar with the B-1B's many acronyms, the CITS is a system that monitors aircraft systems. When a system is out of certain parameters, a message is displayed in the CITS monitor at the aft station. By using certain codes, we can also check all kinds of neat stuff such as brake temperatures, bleed air temperatures, valve positions, your astrological sign, etc. The Electric Multiplex (EMUX) system manages the aircraft's electric load through the use of several black boxes (MUX boxes), with each box having a backup (redundancy box). In some systems, when we move a switch in the jet, all we are doing is requesting permission from EMUX to use that system. If the right conditions are met (airspeed, electric load, etc.), then EMUX in its great wisdom allows us to use that system (yes, this material is testable).

Our Defensive Systems Officer (DSO) notified the crew of the message and researched codes to verify the MUX status. The CITS then flagged a MUX 13 redundancy message signaling the total loss of the MUX 13 box

We have no brakes!

and possibly some of the associated systems. We checked to see which systems might be affected. Among them were the hydraulic system and the landing gear. I immediately lowered the landing gear, and obtained good indications. The hydraulic systems showed normal pressure. We lost the Inertial Navigation System (INS). We would make one approach to a full stop. The DSO advised our command post of this and tried to get more specific information on possible effects of our problem. While the copilot flew the aircraft, I performed the necessary checklist items with the help of the Offensive System Officer (OSO) and the Instructor OSO (oh yeah, I forgot to tell you; this was back before we figured out flying six crewmembers with four ejection seats at 0.95 Mach was not such a hot idea). The DSO attempted the B-1 fix all — reset — on the MUX system to no avail. The interval between the caution lights flashing seemed to decrease, so I elected to configure the aircraft early and fly the approach at flap limiting airspeed until 2 miles from touchdown. The copilot watered my eyes with an excellent landing; and at touchdown, CITS flagged the anti-skid system. I

visually checked the anti-skid switch position and verified the anti-skid caution light was out. I had experienced this message at touchdown on several occasions with no actual malfunction, so I advised the copilot to continue with our briefed procedure of checking the brakes at the 7,000 feet remaining marker. He also added a slight forward stick pressure for aerobraking until 40 knots below approach speed, when he applied full aft stick. At 7,000 feet remaining, he checked the brakes successfully; and at the 5,000 markers he applied the brakes again, slowing down below 50 knots. With 1,500 feet remaining, the copilot attempted to slow down the aircraft to taxi speed to clear the runway. This time the brakes were inoperative and he announced, "We have no brakes!" I took command of the jet and applied the brakes with no response. I then told the copilot "Go to emergency." He placed the emergency brake switch to Emergency, calmly announced the loss of brakes to the tower, and requested fire coverage. With the emergency brake system we had no anti-skid; so I tried to be gentle applying the brakes. However, as soon as I applied pressure with my size 11s, I heard a loud bang and the aircraft started moving sideways toward the right edge of the runway with the tail skidding considerably. I released the brakes and attempted to engage the nose-wheel steering, with no result. With both the departure and the right edge of the runway rapidly approaching, I slammed on the left brake and started to reach for the engine start and shut down switches. The aircraft started to skid to the left and came to an abrupt stop about 100 feet from the departure end and 30 feet from the right edge of the runway. I was then concerned with the possibility of engine damage/fire from what I assumed would be at least one blown tire. While I questioned tower on any smoke/unusual indications, the Instructor OSO lowered the ladder and visually scanned the area. The OSO and DSO verified on CITS that the temperatures were normal. Tower personnel reported some white smoke had been seen before, but there was none now. This was verified by our fearless Instructor OSO, who also found no visible damage. We shut down the engines on the runway and the aircraft was towed to parking. All main gear tires were changed; however, there was no aircraft damage. Three were worn beyond limits and the side stress on the others had rendered them unusable. Besides scaring a few years off of my life, the incident really brought to my mind a few things that my instructors had drilled in to me and I in turn passed on to my students.

Photo by SSgt Mark Borosch

Fly the Airplane

I have to admit, I relaxed some after we touched down and checked the brakes. However, when I heard the pilot's

Photo by SSgt Sarah Webb-Frost

comment about the brakes, my adrenaline went back to where it was and then some. Even though you have landed the aircraft, there are a lot of things to be done before you can start patting yourself and your crew on the back. The brakes in this airplane work so well that nine times out of 10 you have to add power to taxi to the end of the runway. Someone a lot smarter than me once said, "There is nothing more useless than the altitude above you and the runway behind you." You might want to think twice before trying to rush to get to the end of the runway so that the airplane behind you can do a touch and go. I'd hate to think what could have happened if we had been going much faster or if the runway had been wet, especially with the rubber deposits we then had at Base D. With the loss of MUX 13, the anti-skid system malfunctioned so that it released the pressure on the brakes. By selecting the emergency brake system, we deenergized the anti-skid system. The accumulators used for emergency braking could have given us seven to 14 applications. However, in this case, the engines were running and the hydraulic systems were operating normally keeping the accumulators charged; so we had unlimited applications available.

Know Your Boldface

They are boldface items for a reason. With the end of the runway rapidly approaching, there was no time to think about the brake failure procedure. I cannot print the word that came to my mind after I stepped on the brakes with no effect, but the first words out of my mouth were the boldface I had written so many times for our beloved Stan/Eval types. Judging by the quickness of his reaction, I'm sure it was on the copilot's mind also.

When in Doubt, Get Help

Since the only system we had actually lost was the INS, I elected not to declare an emergency. The fire department responded in a short time, but it felt like an eternity for somebody sitting in a crippled jet. There are many things we have yet to learn concerning partial EMUX failures. It doesn't pay to underestimate EMUX. If some of your black boxes go TILT on you, maybe you ought to get as much help as you can.

The old adage, "Aviation in itself is not inherently dangerous; but to an even greater than the sea, it is terribly unforgiving of any carelessness, incapacity, or neglect" still applies in our electric jets just as in any other aircraft. This is true not only for actual flying but also mission planning. When you are about to run out of runway is not the time to decide who is going to do what and when. Take your time in mission planning to decide how you will handle an emergency. You owe it to yourself. FLY SAFE!

Radar-ASSIS

There was a 500-foot ceiling and 1.5 nautical miles visibility with rain — lots of it — the day our flight was scheduled to depart Aviano Air Base, Italy. The squadron commander was leading a three-ship redeployment of F-4s back to Torrejon Air Base, Spain, after a week of weapons training at Aviano. The briefing covered all the normal things, including a radar-assisted trail departure because of the bad weather. The flight lead designated my plane as the number three, Traps 03, because we had the best radar. Traps 01 had no radar while Traps 02 had an intermittent radar if the Weapons System Officer (WSO) beat the radarscope sufficiently. Once we got on top of the weather, we planned to join to route formation and fly: Bologna, Genoa, Marseille, Barcelona, and then into Madrid.

Following the brief, we went out to our planes, did our start-up inside the Tab Vs, and proceeded outside to taxi. Because of the rain, I was having a hard time keeping track of the other two aircraft in front of me while taxiing to the runway. Lacking a windshield wiper on this 40,000-pound beast, my WSO and I were reduced to getting out our "white sticks" and hoping that we did not "swap paint" with either of the aircraft in front of us as we moved into position on the runway. The runway had standing water and the rain made the visibility goat-like — "baaaad."

When we were cleared for takeoff, the flight lead checked us in on the new frequency from the tower and gave the flight a verbal engine run-up command. All three F-4s pushed the throttles to 85 percent, checking motors and gauges. Once I confirmed that everything was operating fine, I gave a "Three's ready" radio call, which was followed quickly by a "Two's ready" call. At that time, I pulled the power back to idle waiting for Traps 01 and Traps 02 to perform their takeoffs.

My next sensation was total blindness as Traps 01 lit the Afterburner (AB) and executed his takeoff. The slight downward slant on the F-4's motors caused all the water on the runway to be thrown up in the air for about 10 seconds. The rooster tail caused by the lead F-4 taking off was truly amazing and was replicated by Traps 02 as he ran up his motors and executed his takeoff role at the correct 20 seconds. Hacking my clock, I started my run up 10 seconds after Trap 02's takeoff. The motors checked fine, and I started my takeoff role.

At 20 seconds, I smoothly pushed the power to military power and then selected full AB. All five stages of the AB

TED Trail Departure

By Col Kevin G. Kenkel (Ret.), Litchfield Park, Ariz.

smoothly lit, and we rocketed down the runway watching the raindrops slide like high-speed marbles off the forward windscreen.

This was the best visibility I had had up to that point in the sortie if you didn't count the start inside the hangar. However, it was short lived as we lifted off, retracted the gear, and immediately started entering the low hanging cloud deck. Checking with my WSO, I asked him the status on contacts on the radar. He tersely stated that he had nothing yet. Shortly thereafter, Traps 01 called that he was starting his turn.

Steadying the airplane at 350 knots, I glanced quickly at my departure plate and noted that the turn started in one-half mile. After rechecking for contacts on the radar, I started my turn to the south climbing to the cleared altitude of 15,000 feet. Everything seemed to be going fine except for the bumpy weather and zero visibility. Climbing through 13,000 feet, we felt a tremendous bump that felt like jet wash from another airplane. This was extremely disconcerting since we called no contact on the radar. Almost simultaneously, Traps 01 started checking positions via Tactical Air Navigation (TACAN) cuts to get an idea of the flight's position.

"Traps 01, leveling 15,000

feet, currently on the Bologna 055 for 60."

"Traps 02, climbing through 13,000 feet, on the Bologna 053 for 63."

"Traps 03, climbing through 14, 500 feet, on the Aviano 180 for 20."

"Traps 03, this is Traps 01, change your TACAN to Bologna and give me a new position."

I couldn't believe that I had forgotten to change my TACAN station. Quickly changing to the appropriate navigation frequency, I waited for the TACAN to lock onto Bologna. At the same time, I started leveling off at 15,000 feet and maintained 350 knots. The TACAN finally locked.

"Traps 03, level at 15,000 feet, on the Bologna 055 at 57."

"Traps 03, confirm your position. Traps 01 currently on the 055 at 56."

"Roger, Traps 03, showing the Bologna 055 at 56.5. No contact."

"Traps 02, leveling at 15,000 feet, on the Bologna 055 at 59."

"Bologna, Traps 01 requests an altitude block 15,000 to 17,000 feet. Traps 02 maintain 15,000. Traps 03 maintain 16,000. Traps 01 climbing to 17,000."

What in the world was going on? I started out behind Traps 02 and now I am right behind Traps 01. The WSO still called no contact on the radar. We were truly "tumbleweeds" as we climbed to 16,000 feet maintaining 350 knots. I was doing my best to maintain appropriate altitude and airspeed in the murky mass. Our situational awareness was totally lost due to the position check. Finally, we got a call from Traps 02 stating two radar contacts less than one-half mile apart at 3 miles in front of his position. We still had no contact on our radar.

Traps 01 cajoled Bologna Radar to allow a climb to 27,000 feet and maintain a block altitude en route. Final clearance was given to climb to 27,000 feet and maintain the block from 26,000 to 27,000 feet. Traps 01 cleared himself to climb to 27,000 feet, Traps 03 to climb to 26,500 feet, and Traps 02 to climb to 26,000 feet.

Rechecking our positions, we again showed that Traps 01 was one-half mile in front of us and Traps 02 was 3 miles in trail. Starting our climb, we finally got on top of the weather passing through 26,000 feet. Accomplishing a visual search, I picked up Traps 01 at my right 2 o'clock at less than one-half mile. This proved extremely disconcerting because we had started out 4 to 6 miles in trail of Traps 01. Neither the WSO nor I had any idea what had happened. This was especially troubling since we were the only aircraft with a fully functioning radar. Our situation awareness was "in the map case" for the next 200 miles as the flight joined to route formation as Traps 01, Traps 03, and then Traps 02.

The next 20 min-

Don't take radar-assisted trail departures for granted

utes proved to be very embarrassing. We tried to reconstruct what had happened, maintain our formation, and yell at each other all at the same time. All the while, Traps 01 and 02 were giving us the "you are truly idiots" look.

Flying fighters is an extremely unforgiving environment. We found this out in more painful detail once we got close to Torrejon. Traps 02 was sent home while Traps 03 and Traps 01 practiced some close fingertip work for 20 minutes straight. This was payback for totally dropping the ball on the trail departure.

We did finally figure out what went wrong after reviewing the flight. Just after takeoff with gear and flaps up, we started focusing on the radar and getting a radar contact. When Traps 01 made his "starting my turn" call, this did not key either the WSO or me into the fact that the flight lead was 4 to 6 miles directly in front of our airplane. As a result, I did not hack my clock and fly straight ahead for 40 seconds. Rather, I looked down at the approach plate which called for a turn in one half mile during Visual Flight Rules (VFR) conditions and disregarded the note that stated to continue straight ahead in Instrument Flight Rules (IFR) conditions. Because Traps 01 did start his turn at the IFR recommended turn point and we started ours at the VFR point, this resulted in us cutting off Traps 02. The jet wash at 13,000 feet was testimony to how close we were to swapping more than "paint" on that fateful day.

So, what did I learn besides some fingertip that I had not practiced since undergraduate pilot training? First and foremost, the radar-assisted trail departure is just that. Fly the departure as depicted in the departure plate at the right airspeeds and briefed power settings. You do not need radar. If you do this correctly, you will end up 3, 6, or 9 miles in trail of your leader — even without radar.

The second lesson was equally critical. Briefing the radar-assisted trail is extremely important. Given the conditions, it was absolutely necessary to cover all the minutia associated with the departure and the calls you are going to make. The note about extending the departure leg in IFR conditions did not get covered. This almost proved fatal!

Finally, relying on a clock hack to start your turn is probably the worst thing you can do on a departure like this. First off, most of you can't remember where the clock is at in your primary aircraft. If you do remember, it probably doesn't work. And then the clock is probably not even close to being in your instrument cross check. As a result of this ride, I started giving a position report when I began my turns such as "starting turn at Aviano 050 for 7 miles." This at least puts the turn point at a distance and in your normal instrument cross-check.

Ultimately, we survived to fly again. However, whenever I think about this sortie, the hair stands up on the back of my neck, and my seat cushion always feels like the "Wicked Wedgie Monster" has made a high speed pass. Scary!!! The radar-assisted trail departure is one of those maneuvers that is practiced very little and seldom when weather is solid all the way to 26,000 feet. I encourage the pilots reading this to spend time on the departure plate, the radio calls, and techniques. Better to master the trail departure in the stale environment of a good flight brief than in a high-speed rocket, learning it on the fly!

Joelle's Story

By Mr. Robert Van Elsberg, Editor of *Road & Rec* Magazine
Air Force Safety Center, Kirtland AFB, N.M.

Mariah Venus lives alone in a home that she'd hoped to share with her husband. In "his room" — the place he kept all of his sports mementos — she keeps a picture of the two of them snuggled together on a soft chair. In a special place she keeps a polished wooden box that holds her husband's service medals and an American flag. It's a box filled with a mixture of joy, memories, and pain. Joy in having married a man she loved so much. And pain for memories that will never be because their time together came to an end far too soon.

Mariah recalled the first time she had ever noticed her husband, SSgt Joseph L. Venus — "Joelle" to his friends — a 28-year-old computer software designer assigned to Langley AFB, Va. "He was full of himself and had this smile that would eat you alive."

The magic between Joelle and Mariah worked right from the start. "From the beginning we were both incredibly enamored with each other — from the very first time we actually sat down and talked," Mariah said. The confirmed bachelor fell in love almost immediately.

Joelle proposed to Mariah in February of 2001 on the 1-year anniversary of their first date. Two months later, the two were secretly married in Hampton, Va. The newlyweds had only been in their new house, which they had purchased together, for a couple of months when the Fourth of July came. The couple planned to stretch the holiday into a 5-day weekend, but Joelle was called in to work. That evening, Joelle asked Mariah if he could go out with some friends for the 7:00 to 9:00 p.m. happy hour. "I told him it was fine," Mariah said. "He asked if I was angry and I told him, 'No, I wasn't,' we had a weekend to spend together."

Joelle borrowed Mariah's red 1997 Chevrolet Camaro, and arrived at the nearby bar by 7:30 that evening. When he showed up, he immediately bought three beers for himself. Joelle typically liked his beer at room temperature, so he would often order two or three beers, drinking one while letting the others sit and get warm.

Joelle had agreed to give Mariah a call after happy hour if he needed a ride home. The phone rang about 9:30 p.m. Joelle told Mariah he'd decided to stay later than he'd planned. "I told him 'that was fine and call me if he needed a ride," she said.

But he didn't call. At 12:41 a.m., Mariah awoke in fear,

thinking someone was in the hallway. She woke her two dogs and called out in the darkness, but the house was silent. That's when she realized Joelle had not come home.

At that same time, Virginia State Trooper Wendell K. Cosenza's radio suddenly crackled. The message from the dispatcher shook him — a motorist had made a 911 call to report a wrong-way driver in the westbound fast lane! Three miles separated the trooper from the wrong-way driver — it was Joelle. Originally thinking Joelle was on the other side of I-64, the Trooper raced to overtake him, remembering a horrific accident that happened earlier that year on I-64 where another wrong-way drunk driver slammed into a car head-on, killing its pregnant driver and two of her three passengers.

As the trooper sped down I-64, he realized something was terribly wrong. The glare of oncoming headlights flashed through his

windshield! "Oh my God — he's right there!" flashed through his mind. In an instant he realized, "He's NOT 3 miles ahead ... he's maybe a couple hundred yards and he's coming right at me!" There was nowhere to go. An 18-wheeler was blocking the lane to his right and the concrete Jersey Wall bordered on the left. The cruiser's dash-mounted video recorded the events.

A driver in the fast lane ahead of Trooper Cosenza saw the oncoming Camaro and instinctively braked and swerved to the right. The trooper turned on his siren other vehicle parts were strewn onto the roadway. Trooper Cosenza's open microphone recorded the sound of passing vehicles running over debris from the crash. The driver's side door was open and Joelle was lying partly outside the vehicle. It appeared Joelle had not been wearing his seat belt. He was unconscious and barely breathing.

Joelle wasn't carrying any kind of identification, but the troopers did find a marriage certificate in the car. The woman's name on the certificate matched brought him home and he didn't have the keys. So, I went to the door and opened it ... there was a state trooper standing there."

At the hospital, a doctor met Mariah and took her to the family room — a small, quiet room next to the Emergency Room. The news he gave Mariah was crushing. "Joelle's brain no longer worked to tell him to breathe — there was no way he was ever going to wake up. He explained to me that people would be coming to talk to me about organ donations, and to be ready for that."

... Joelle had not been wearing his seat belt. He was unconscious and barely breathing.

— his last hope for alerting the oncoming driver. As the car approached, Trooper Cosenza realized it would not hit him head-on. The Camaro was in the uncompleted carpool lane to his left. As the headlights flashed past the cruiser's left side, he watched in his rearview mirror.

The Camaro hit the end of the Jersey Wall at 79 mph and spun 180 degrees, ending up beside the concrete center median. The Camaro's left front wheel and the registered owner of the Camaro. It was likely that Joelle was her husband, but the only way to be certain was to talk to her. That responsibility fell to Trooper Vernon Smith. He went to Mariah's house and knocked on her door at 3:00 a.m.

Mariah recalled, "When I first heard it, I thought it was Joelle — that it was 3 o'clock and he was just getting home. I couldn't figure out why he was banging on the door, unless somebody had

Mariah walked to the room where Joelle was. He was intubated — meaning he had a tube going into his mouth to help him breathe — and he was on a respirator. As the hours passed that day it became clear that Joelle's injuries were irreversible. He was a registered organ donor and now that had become the only course left. "I waited for Joelle's mother," Mariah said. "She got there about 7:00 on Friday night and we both signed the paper-

work. She didn't need to — it was my decision as his wife — but I felt that she should be a part of it."

Twenty-three hours after he had shown up at the bar to party with his friends — Joelle was declared brain dead. That night Mariah went to his room to be alone with him, to lie next to him one last time and hold him. Words cannot describe the pain she felt in those empty, agonizing moments.

Now we are left with that awful question — why did Joelle die that night? Why did an airman who had a plan to get home safely never make it? Was it because he was a habitual drunk driver? Those who knew him best knew he didn't typically drink and drive — he knew better than that. Was it because the friends he met didn't look out for him? In the months that have passed, that question may have haunted their thoughts. Yet, they had no reason to believe he wouldn't call Mariah — or someone — for a ride. He'd been careful to do that in the past. Was the bar responsible for serving him alcohol when he was already intoxicated? Joelle's blood alcohol content was 0.23 that night.

Trooper Cosenza believes the real problem is what happens when alcohol influences a person's thought process. He said, "When you drink alcohol — from the very first sip — it affects your judgment. Before it changes your physical hand-eye coordination, it affects your reasoning and your thought process. If you've had a few drinks, when you're walking out to that car talking to yourself and saying, 'I can make it home this time,' remember you're talking to a drunk man. You have to understand that you will talk yourself into risking it by telling yourself, 'It'll never be *me* — I'll make it home, it's always someone else.'"

Photo by SSgt Brendan Kavanaugh

Editor's Note: *Drunk driving does not only happen to bad people. Joelle was outgoing, popular, and had a personality that attracted others like a magnet. His story should have gone on — he should have had a full life with Mariah. But in the shadow of that night she lives with a reality that so many families have learned through tragedy: Alcohol not only steals the lives of its victims, it shatters the lives and steals the dreams of those who are left behind: — don't drink and drive.*

F-16

Photo by TSgt Michael Ammons

Primary Function: Multirole fighter • Builder: Lockheed Martin Corp. • Power Plant: F-16C/D: one Pratt and Whitney F100-PW-200/220/229 or General Electric F110-GE-100/129 • Thrust: F-16C/D, 27,000 pounds • Length: 49 feet, 5 inches • Height: 16 feet (4.8 meters) • Wingspan: 32 feet, 8 inches • Speed: 1,500 mph • Ceiling: Above 50,000 feet • Maximum Takeoff Weight: 37,500 pounds • Range: More than 2,000 miles ferry range • Armament: One M-61A1 20mm multibarrel cannon with 500 rounds; external stations can carry up to six air-to-air missiles, conventional air-to-air and air-to-surface munitions and electronic countermeasure pods

Ground Safety Award of Distinction

TSgt Michael Roney always puts people and their safety at the forefront of mission completion. He is an F-16 Avionics Craftsman at Detachment 2, 28th Test Squadron, which conducts ground-based operational test and evaluations on F-15 and F-16 radar and avionics systems for Headquarters Air Combat Command's $102 million Integrated Avionics Test Facility (IATF). The high-powered radar systems combined with all the support equipment necessary for ground operations pose several potential hazards to the unit's personnel: electrical, hazardous material, and Radio Frequency (RF) energy. TSgt Roney volunteered for the Hazardous Communication section as an additional duty and revamped the entire program. He spent several months updating regulations and procedures and purchasing waste management equipment that was critical for the base's May Environmental Compliance Assessment and Management Program (ECAMP) inspection. He turned in hazardous waste materials, replaced unserviceable waste storage drums, updated the detachment's chemical authorizations listing, and labeled hazardous materials and supplies throughout the IATF with the appropriate hazardous warning labels. The detachment's program was singled out by base officials as a "benchmark program" for others to follow. In addition, to help alleviate the threats of RF exposure, TSgt Roney added danger signs and enforced the abatement plan, making sure that radar technicians notified all personnel in the test facility prior to RF transmissions so they could stay well clear of all posted radar emission zones. The efforts of TSgt Roney, working hand-in-hand with the safety NCO, were key to the unit's "above and beyond" approach to safety. As a result, the detachment received "Outstanding" ratings for the 53rd Wing and 325th Fighter Wing ground safety and base ECAMP inspections.

TSgt Michael E. Roney
Detachment 2
28th Test Squadron
Tyndall AFB, Fla.

ACC Safety is Proud of All Our Award Nominees

MSgt Sheldon L. Williams
TSgt Bill E. Ferreira
TSgt Mike Clarke
F-16 Aircraft Mechanics
144th Fighter Wing
Fresno ANGB, Calif.

Flightline Safety Award of Distinction

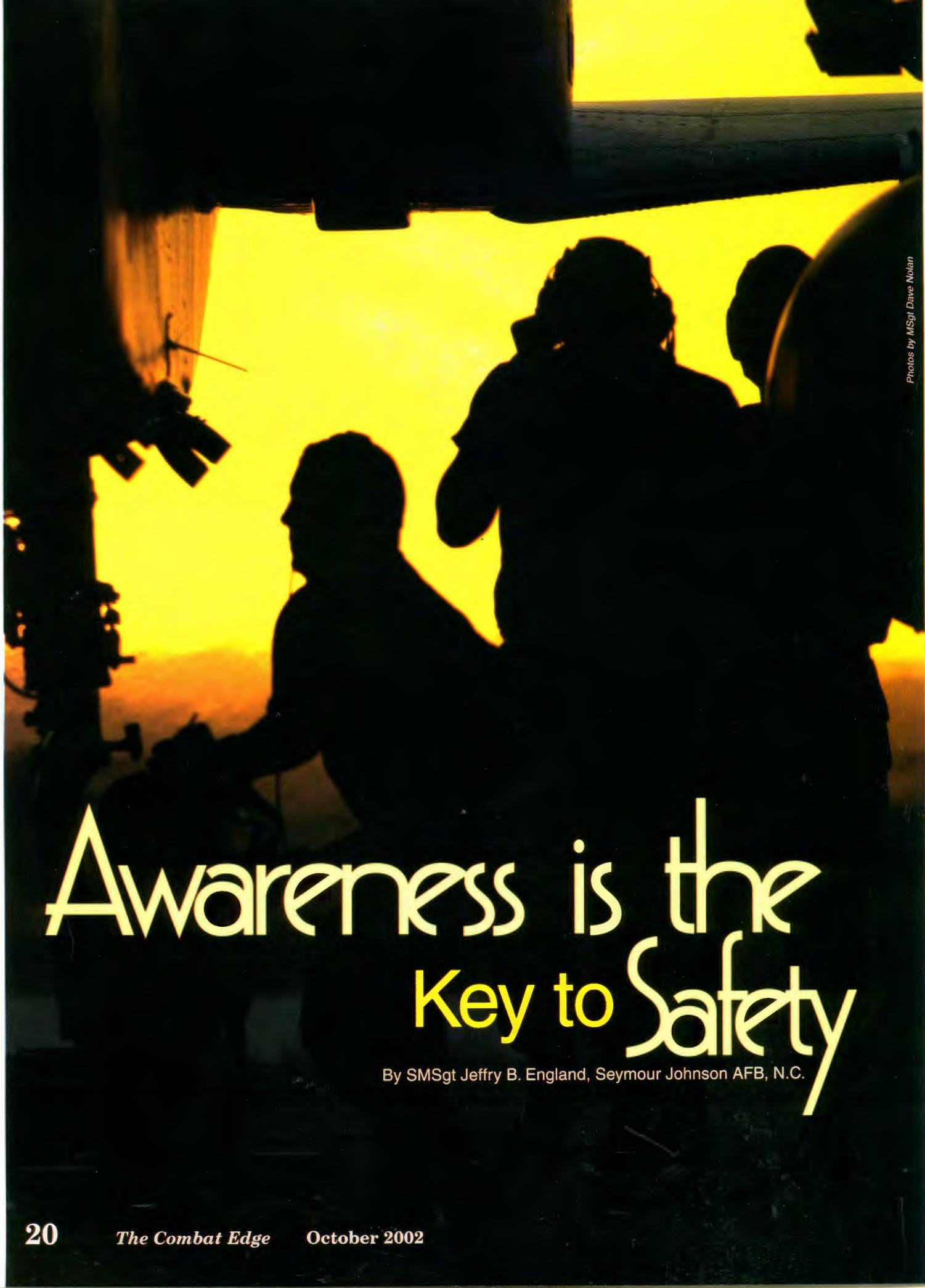
While performing systems ground maintenance on an RC-135 Rivet Joint aircraft, the maintenance team noticed a burning smell coming from the aircraft reconnaissance crew compartment. A1C Elias Carlon immediately turned off all equipment in the compartment in an attempt to locate the source of the burning smell. At the same time, Mr. Cory Edson glanced out the aft aircraft hatch and noticed smoke and fire coming from the air conditioning ground equipment cart positioned next to the aircraft. He immediately told everyone to emergency ground egress the aircraft. A1C Carlon egressed the aircraft through the crew entry chute and ran to the front of the aircraft to shut down the external ground power cart. Mr. Ernest Gentry, and A1Cs Louis Ciaramello and Colin Smith followed and assisted in the shutdown while unplugging the electrical cord from the aircraft. After egressing the aircraft, Mr. Edson ran to the air conditioning cart, immediately shut down its power, and opened the front panel so they could access the growing fire. SSgt Christopher Thomas, who had egressed last to ensure all personnel were safe, grabbed the aircraft's ground Halon fire extinguisher located in front of the aircraft and ran towards the burning cart. A1C Carlon and Mr. Edson assisted him in extinguishing the fire in the clutch section of the cart, minimizing any further damage. Mr. Darwin Tiarks, who was walking out to the aircraft to assist with the maintenance, saw what was happening and called the fire department. SSgt Thomas continued to coordinate emergency response efforts until the arrival of crash and fire response personnel. The quick actions and coordinated team effort of the ground maintenance crew minimized damage to the ground air conditioning cart and averted a potentially catastrophic mishap to a high-value reconnaissance aircraft.

Mr. Ernest G. Gentry, Mr. Cory L. Edson, SSgt Christopher D. Thomas, A1Cs Louis J. Ciaramello, Colin T. Smith, Elias S.Carlon, and Mr. Darwin G. Tiarks (not pictured), 361st Expeditionary Reconnaissance Squadron

Ground Safety Award of the Quarter

As the Quality Assurance Evaluator for the 366th Services Squadron, Ms. Sheila Fischer sought every opportunity to improve safety knowledge in the squadron. She visited 26 facilities on a regular basis; distributed numerous safety e-mails on a myriad of topics to squadron personnel; and gave safety briefings at three squadron commanders' calls and to nine newly assigned personnel. She worked diligently with three facilities to bring their Lock-Out/Tag-Out programs into compliance — all three facilities now have stellar programs, which have all been approved by the wing Safety office. Ms. Fischer provided slogans to the Services Marketing and Publicity office for posting on the front gate electronic marquee during the "101 Critical Days of Summer" campaign. Wing Safety lauded the initiative. She was also instrumental in closing 10 of 14 safety write-ups from the annual safety inspection in February — 71 percent compliance in just 3 months.

Ms. Sheila Fischer
366th Services Squadron
366th Wing
Mountain Home AFB, Idaho



Photos by MSgt Dave Nolan

Awareness is the Key to Safety

By SMSgt Jeffry B. England, Seymour Johnson AFB, N.C.

How many times have we heard that awareness is the key to remaining safe? Since we have been in the Air Force, we have all been told to be aware of our surroundings, whether it is resolving a force protection issue or completing a work center task without incident. Yet, disasters do occasionally occur because someone did not think about what they were doing and how their actions might affect others in the immediate area. This concept has a very special meaning to me because of how the lack of awareness on my coworkers' parts affected me.

In 1980, I was an avionics specialist on temporary duty at Miramar Naval Air Station, Calif. I remember a particular morning when we were preparing our six F-15C aircraft to fly against the Navy F-14 group. I volunteered to inspect the engine blades of each aircraft to look for new damage prior to engine start. This required me to climb into the intake of the F-15 and crawl down to the engine's first stage blades for visual inspection.

I had 12 engines to inspect, so I quickly got started. As I was performing these inspections, the pilots began to do walk-around inspections of their jets. I was working on the last inspection when the pilots got into their seats and were ready for engine start. The crew chief, for the jet I was inspecting, forgot I was in the number two intake and gave the pilot the go ahead to pull the Jet Fuel Starter (JFS) handle. The JFS is a small engine that turns over the main engines to begin the start sequence. When I realized what was happening, I couldn't believe it. I knew I did not want to be next to the first stage blades when the engine started and hastily began crawling in reverse while yelling to stop the start sequence. Thankfully, someone saw me in the intake and gave the pilot a shutdown command. I will never forget the look on that pilot's face as long as I live. Gratefully, I survived despite the lack of awareness of my coworkers.

You can never be too careful when working around equipment. Follow the checklist, technical order, or other guidance carefully. When operating electrical or hydraulic systems, it is imperative to know the location of everyone in the immediate area. Make a mental note of who is present and where they are working. It is the responsibility of each of us to do everything in our power to enhance the safe operation of all that we do — both on the job and off. A key to doing this is a heightened state of awareness. I hope my story illustrates how easily injury or possibly death can occur when we let our guard down and don't actively take measures to mitigate the hazards. The life you save may be a coworker's or your own.

I was in the number two intake when the crew chief gave the pilot the go-ahead to start the Jet Fuel Starter.

Surviving a Car Crash

By Col Peter B. Mapes, Randolph AFB, Texas
Reprint Courtesy of *Ashore*, Summer 2002

One person in 60 in America dies in a motor-vehicle accident, and five people in 60 are permanently disabled. I'm now one of the five in 60. I was a seat belt away from being a fatality.

My story started during the early morning darkness of June 28, as my wife, Nona, and I were northbound on Texas Loop 1604. We were going about 50 mph when a 24-year-old man ran a stop sign at the intersection of Stuart Road and hit us just ahead of where I was sitting in the driver's seat.

I didn't see him coming until he entered the intersection because he hadn't bothered to turn on his lights, which also probably explains why he ran the stop sign — he couldn't see it. Anyone who ever has had a driver's license usually does things like turning on headlights and stopping at stop signs, but this man never had bothered to get a license.

This experience reinforced four principles of crash survival. You must have a survivable compartment. One that loses integrity and impinges on your vital organs will kill you — so will a compartment that catches fire or fills with smoke. In our case, Nona's side of the car was OK. I barely got out with my life because the roof collapsed on me, removing my scalp, and the steering column broke, causing the wheel to hit me in the chest. On the bright side, the 4-gauge steel in the front-door pillar and firewall of my 1974 Dodge Dart absorbed much of the energy upon impact. The transfer case of the transmission also worked like it was supposed to; it broke, and the engine submarined downward, avoiding the crew compartment — my survivable space.

What kind of shoes do you wear in a car? Substantial footwear can make a big difference in the outcome of a crash. On the day of my wreck, I was wearing my Belleville flight boots, which have a thick, tough, rubber sole. After the crash, shorted electrical wiring caused flames to erupt under the hood. The fuel-supply system luckily wasn't breached, or I would have had an inferno on my hands. I couldn't move my left

foot because the thick metal of the firewall had deformed around my boot. Without it, my foot would have been crushed. As it was, I simply unlaced my boot, pulled out my foot, and got out of the car. I urge you to think twice about driving in sandals or other flimsy footwear.

Gradual deceleration is another essential component of crash survival. Once I saw the man's Blazer in the intersection, I had time to turn away slightly, which lessened the lateral G forces. Despite this maneuver, though, I suffered fractures of the left scapula and first left rib. The scapula is a tough bone, and breaking it usually involves accelerations in the 25-G range. This is also the force range required to separate the root of the aorta from the heart, so I was lucky.

Passenger restraint is the final principle of crash survival. Nona and I were fastened tightly in our seat belts, and, as anyone who has ridden in the Dart with me can attest, the inertial reels are more likely to lock than not. An unrestrained passenger strikes objects in a car at whatever velocity the car is traveling when an accident occurs. Needless to say, if we had hit the dash at 50 mph, I would not have been around to write this story. Your seat belt is the best lifesaving device in your car. In the case of a side impact, like Nona and I experienced, it's the only lifesaving device you have; an air bag won't deploy. Simply put, don't move your vehicle without fastening your seat belt.

I'm still not driving, so I've had to rely on other people for transportation. A few weeks after my accident, a friend picked up my son to go to Cub Scouts. She wasn't wearing her seat belt, and neither were her three children. I asked her to stop then chewed her out for endangerment. She agreed it was a good idea for everyone to buckle up and thanked me. Two days later, another driver hit her from behind at a stoplight. She had some sore neck muscles from whiplash, but she and the kids are going to be fine. If they hadn't been buckled up, there would have been some major injuries.

I'm back to working half days, and I'm busy with physical therapy as my wounds heal. I'll be disabled permanently from this mishap, but I'll probably fly again in a few months. Seat belts saved Nona and I, so do me a favor: If you're lax about using these devices, or if you don't dress like you're going to have an accident every time you get in a car, now is a great time to change your habits.

Seat belts clearly save lives!

Hunting Season

Firearms Safety Commandments

Hunting season begins in many areas around the country this month. In Air Combat Command for Fiscal Year 2002, three people were injured in hunting related or firearm activities. To be safe during this time, the Ten Commandments of Firearms Safety should be reviewed and etched into everyone's memory forever. Let the following safety practices govern your actions wherever and whenever you're involved with firearms: in the woods, on the range, or in your home.

I. Don't rely on your gun's safety.

Treat every gun as if it can fire at any time, whether or not there's pressure on the trigger.

Your firearm has been carefully designed to maximize performance and safety. However, a gun's safety is a mechanical device and, like any mechanical device, it could fail.

Human error is a more likely reason for a gun safety to fail. By mistake, you may think the safety is on when it really isn't; or the safety may have been disengaged without your knowledge; or you could think your gun is unloaded when there's actually a cartridge or shell in it. A gun's safety is not a substitute for common sense. It's merely a supplement to your proper handling of a firearm.

Don't touch the trigger on a firearm until you are ready to shoot. Keep your fingers away from the trigger when you're loading or unloading. Don't pull the trigger when the safety is engaged or positioned anywhere between safe and fire.

Read your instruction manual to understand the exact location and operation of your firearm's safety. Even when the safety is on, maintain control of your loaded firearm and control the direction of the muzzle. In other words, don't rely on your safety to justify careless handling. If your firearm's internal mechanisms are broken or have been altered, your firearm may fire even when the safety is on. Remember, you and your safe gun handling practices are your gun's best safety.

II. Firearms should be unloaded when not in use.

Load your firearm only when you're in the field or on the target range and ready to fire. Never let a loaded gun out of your sight or out of your hands. Unload it as soon as you're finished shooting — before you bring it into your car, camp, or home. Remember, unloading your firearm means unloading it completely, so there is no ammunition in the chamber or in the magazine.

Before handling a firearm or passing it to someone else, visually check the chamber, receiver, and magazine to be certain they do not contain ammunition. Always keep the gun's action open when not in use. Never assume a gun is unloaded even if you were the last person to use it. Always check for yourself.

Let common sense rule when you carry a loaded gun. If you're in any situation that could risk accidental discharge — such as crossing a fence, wading through a stream, or climbing a tree — always unload your gun. Never pull or push a loaded firearm toward yourself or another person. Never carry a loaded gun in a scabbard, detached holster, or gun case.

III. Use proper ammunition.

Every firearm is designed to use a certain caliber or gauge of ammunition. Using the wrong ammunition, mixing ammunition, or using improperly re-

loaded ammunition can cause serious personal injury or death. It only takes one cartridge or shell, of the incorrect caliber or gauge or a shell that has been improperly reloaded, to destroy your firearm.

As a gun owner, it's your responsibility to make sure the ammunition you use exactly matches the caliber or gauge of your gun. Refer to the instruction manual to find out the specific requirements of your firearm. Always read and heed the instructions on ammunition boxes. Confusing shells or cartridges can cause serious personal injury or death and destroy your firearm. Examine your shells and cartridges closely and use only the precise caliber or gauge for your specific firearm.

For example, suppose you accidentally loaded a 20-gauge shell into a 12-gauge shotgun. Because the 20-gauge shell is too small for the chamber, the 20-gauge shell could travel down the barrel and get lodged in the bore. If you then load a standard 12-gauge shell behind it and fire, the 12-gauge shot will slam into the lodged 20-gauge shell and may cause the barrel to explode right in your hands. This is commonly called a 12/20 burst, and it can kill you.

IV. Learn the mechanical and handling characteristics of the firearm you are using.

Not all guns are alike. They have different mechanical characteristics that dictate how you should carry and handle them. Anyone who plans to use a firearm should first become totally familiar with the type of firearm it is and the safe handling procedures for its loading, unloading, carrying, shooting, and storing.

Before you even unpack a firearm, read the instruction manual from cover to cover and familiarize yourself with the different component parts of the gun. Then read, understand, and follow the commandments of safety.

V. Shoot sober.

This is the other rule that must be followed when handling firearms. In fact, respect for this rule is necessary in order to effectively practice the Ten Commandments of Firearm Safety.

Alcohol, drugs, and guns are a deadly combination. Never consume anything that would even mildly impair your judgment or physical coordination when you're using a firearm. A staggering percentage of the shooting accidents that occur every year involve alcohol or drugs.

Be smart: shoot sober and stay alive.

Alcohol, drugs, and guns are a deadly com
even mildly impair your judgment or physi

VI. **Be sure the barrel is clear of obstructions before shooting.**

Before loading your gun, open the action and make sure there's no ammunition in the chamber or magazine. Check the barrel for any obstructions or debris. Even a small amount of snow, mud, excess lubricant, or grease in the bore can dangerously increase pressure and cause the barrel to bulge or burst when firing. Use a cleaning rod and patch to wipe away anti-rust compounds or any other residues or obstructions in the barrel. Never try to shoot out an obstruction by loading another shell and firing!

When firing, rely on your instincts. If the noise or recoil from your firearm seems off or weak, stop everything, unload your firearm, and be sure nothing is lodged in the barrel. Remember the 12/20 burst? That's what can happen when the barrel is obstructed. Always be sure you're using the correct ammunition in your firearm and that it's free of obstructions.

VII. If your gun fails to fire when the trigger is pulled, handle with care.

If for some reason the ammunition doesn't fire when you pull the trigger, stop and remember to always keep the muzzle pointed in a safe direction. Keep your face away from the breech, then put the safety on, carefully open the action, unload the firearm, and dispose of the cartridge safely. Any time there's a shell in the chamber, your gun is loaded and ready to use. This is true even if you tried to shoot and your gun didn't fire. Always treat your firearm as if it could still discharge.

VIII. Always wear eye and ear protection when shooting.

Your sight and hearing risk injury from shooting and should be protected at all times. Wear protective shooting glasses to guard against falling shot, clay target chips, powder residue, ruptured cartridge cases, and even twigs and branches in the

ination. Never consume anything that would
al coordination when you're using a firearm.

field. Also, be sure to wear eye protection when you're disassembling or cleaning a gun so that tensioned parts (e.g., springs) and cleaning solvents don't come in contact with your eyes.

Continued exposure to shooting noise can permanently damage your hearing. On the range, where shooting volume is the loudest, be sure to use the maximum protection of a headset. Learn to use earplugs in the field, especially in confined locations like duck blinds.

IX. Always keep the muzzle pointed in a safe direction.

This is the most important gun safety rule. A safe direction is one in which an accidental discharge will not cause injury to yourself or others. Never allow your gun to point at anything you don't intend to shoot. Be especially careful when you're loading or unloading. Treat every gun as if it were loaded. Make it a habit to know where your muzzle is pointed at all times, even when your firearm is unloaded. No one will be injured by an accidental discharge if you keep your firearm pointed in a safe direction. It's as simple as that.

X. Be sure of your target and what's beyond it.

You can't stop a shot in mid-air, so do not fire unless you know exactly where your shot is going and what it will strike. Never fire at a sound, a movement, or a patch of color. A hunter in camouflage can easily be mistaken for a target by an impulsive shooter. Before you pull the trigger, be absolutely sure of your target and what's behind it. Make sure your shot has a backstop such as a hillside or dense material like sand. Remember, bullets can travel great distances with tremendous velocity. Know how far your shot will go if you miss your target or the bullet ricochets.

Editor's Note: *Reprinted courtesy of the Remington Company. Photos courtesy of the Winchester Company. For more information, log on to www.remington.com/safety/10comm.htm*

Stop Gambling With Your Life

By MSgt Richard D. Washington, Barksdale AFB, La.

As the Ground Safety Superintendent for one of the largest installations in the United States Air Force, I have seen my share of mishaps. Military personnel continue to depend on luck when it comes to safety. It constantly amazes me that not only do people survive these mishaps, but they are able to fill out witness statements afterwards. Below are just a few examples of how military personnel have somehow avoided the grim reaper:

- Injured person was ejected out of the driver's window in automobile rollover mishap
- Injured person was trapped between the moon roof and the road as the automobile slid down the road
- Injured person slid into curb and a pole after being thrown from a motorcycle
- Injured person fell from the second floor balcony reaching for a telephone
- Injured person was run over and drug by a government vehicle as a result of horseplay
- Injured person was shot at point blank range by roommate as a result of horseplay
- Injured person shot self in the leg while cleaning a recently purchased gun
- Injured person was passenger on motorcycle and was thrown off without any personal protective equipment (helmet)
- Injured person fell asleep, rolled, and totaled sport utility vehicle
- Injured person was thrown from a boat and injured by the propeller

All of the above mishaps were preventable. They were reported as Class C mishaps, but could easily have been Class A mishaps (fatalities). Each one either failed to wear a helmet, put on a seat belt, get proper rest, or engaged in horseplay with moving vehicles and guns.

Despite shop, squadron, and wing safety efforts through newspaper articles, videos, seminars, safety fairs, mishap prevention briefs, mass briefings, and special training, military personnel continue to press their luck. My installation has gone 3 years without a fatality, but not because of our stellar safety practices. How is your base doing? Just remember, the next person that fails to follow established safety procedures may not be available for an interview. Don't gamble with your life — eventually your luck will run out.

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- The Combat Edge


Fleagle
THAT A FUEL SPILL?
HARDISON
THIS OUGHT TO WIPE SOME OF IT UP.
FIRE!
WOOOSH!
STATIC ELECTRICITY?
YEP.
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FY02 Aircraft

As of August 29, 2002

	Fatality	Class A
8 AF		
9 AF		
12 AF		
AWFC		
ANG (ACC-gained)		
AFRC (ACC-gained)		

FY02 Ground

As of August 29, 2002

	Fatal	Class A	Class B	Class C
8 AF		11	2	106
9 AF		6	2	99
12 AF		9	2	212
DRU		3	2	32

FY02 Weapons

As of August 30, 2002

	Class A	Class B
8 AF	0	0
9 AF	0	0
12 AF	0	0
AWFC	0	1

Aircraft Notes

As we closeout this year's flying, we need to take the time to reflect. A quick synopsis of this year's flying mishaps would show a big increase in pilot and maintenance errors. It used to be that parts just broke and mishaps happened. Today, it is pilots and maintenance members making mistakes, and the result is broken aircraft. This is a trend we need to stop. Whether it is flying an 8v8 or changing a motor, we all need to take the time to plan the task, assess the risk and put measures in place to prevent mishaps. We can't fight a war if we don't have any aircraft to fly. Keep checking six and remember to check twelve also.

Ground Notes

There have been 29 Class A mishaps resulting in 30 fatalities and five permanent total disabilities. Also, there have been eight Class B mishaps resulting in five permanent partial disabilities. And we still have a month to go in this Fiscal Year (FY). This is the third worst year on record and ranks behind FY93 and FY94.

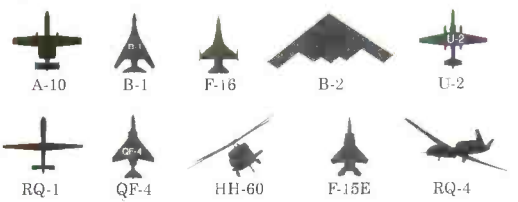
Weapons Notes

So far — so good! "Steady as she goes!" This means the overall weapons mishap rates remain low. We are approaching the end of the Fiscal Year and, so far, have kept our mishaps under control ("knock on wood!"). Now is not the time to drop your attention to the task at hand. As a matter of fact, now is a good time to recheck that checklist or revalidate that explosives operation exactly in accordance with the technical order. You may reveal some needed changes or — better yet — improve your skills.

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



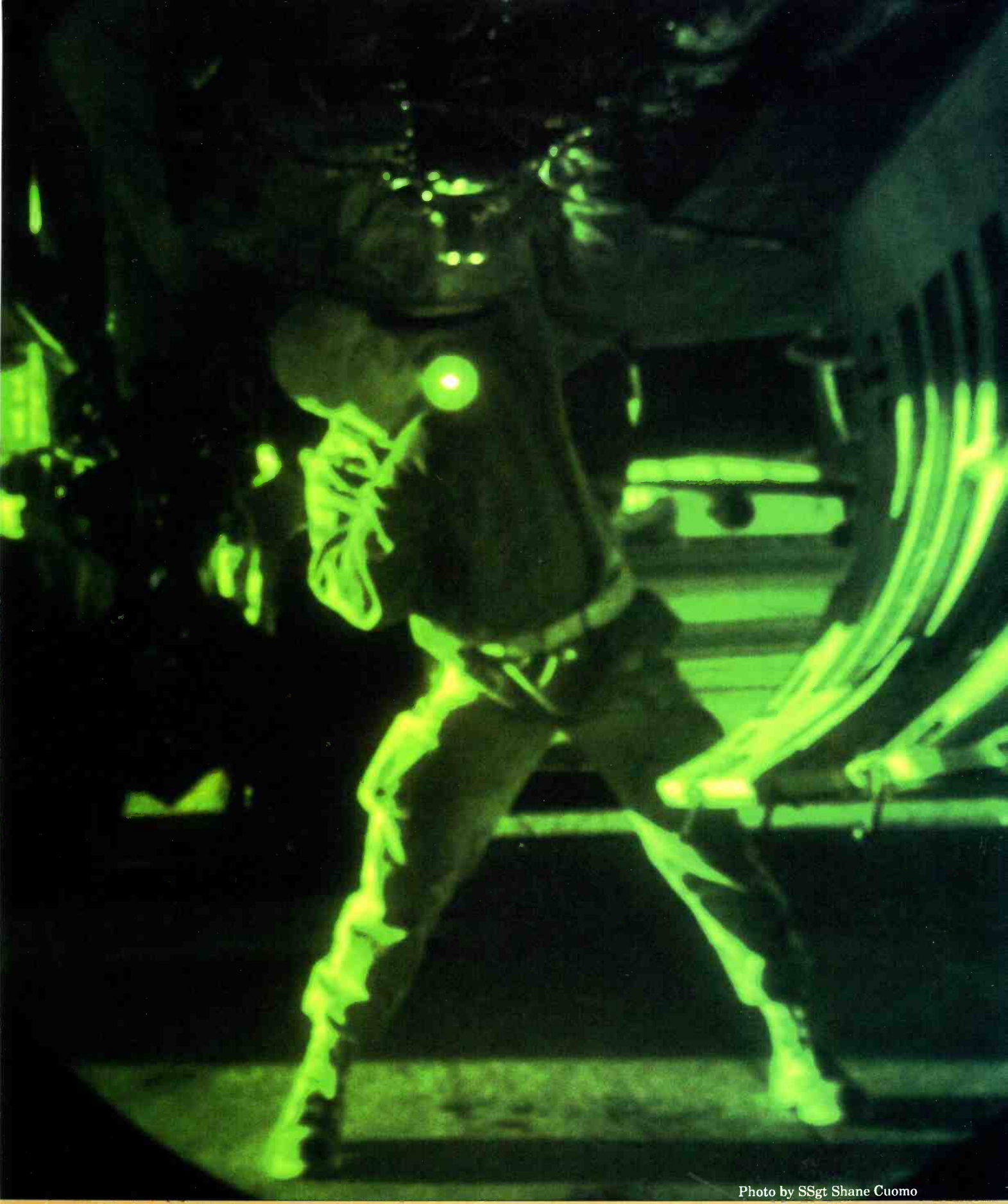


Photo by SSgt Shane Cuomo

An Air Force B-1 crew chief from the 405th Air Expeditionary Wing post checks a B-1B bomber engine after its arrival in support