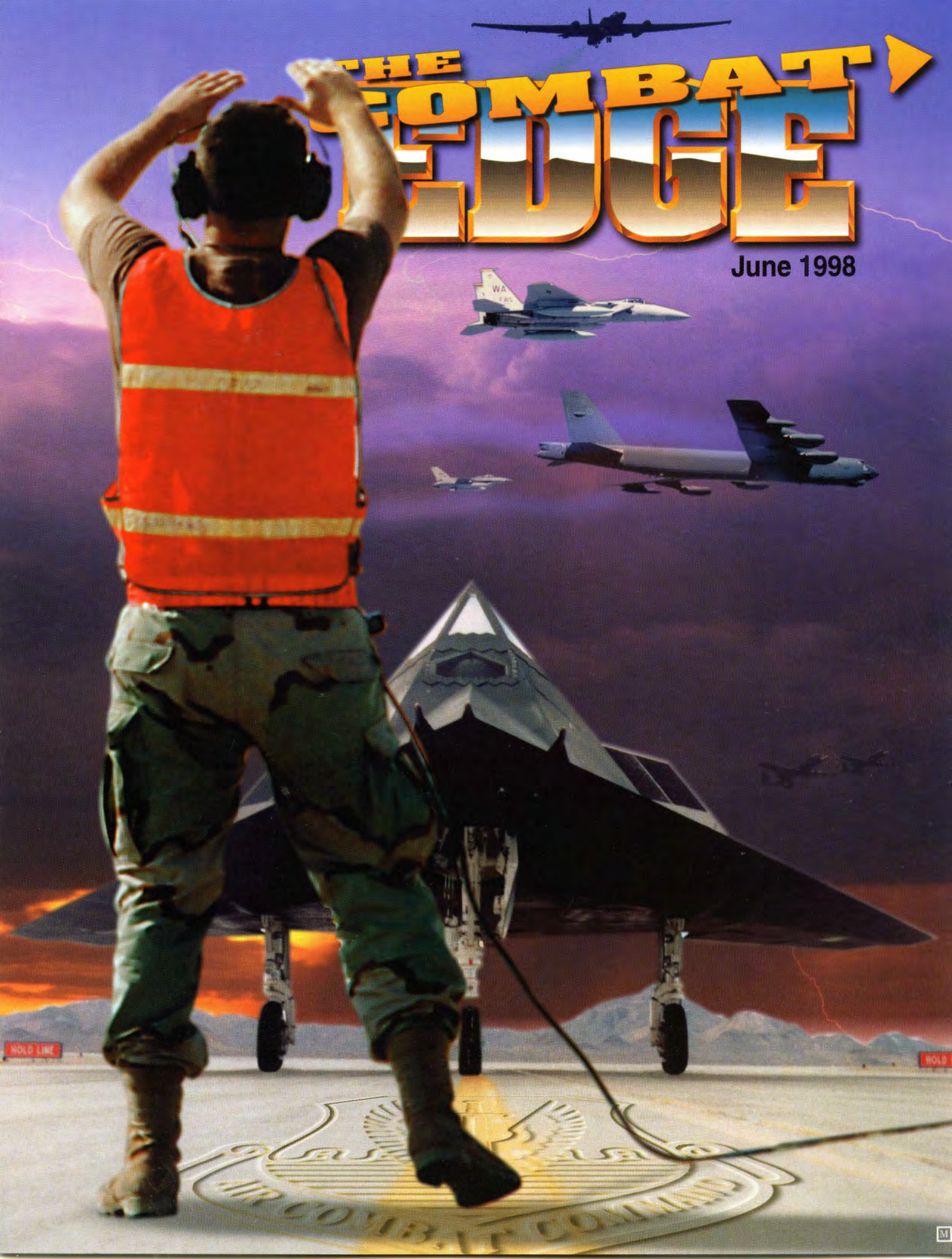


THE COMBAT EDGE

June 1998

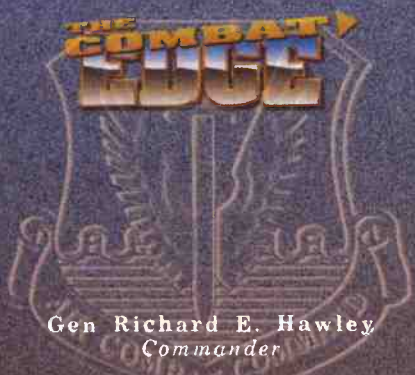


HOLD LINE

Edged June 1998

HOLD

M



Gen Richard E. Hawley
Commander

Col "Turk" Marshall
Chief of Safety

Ron Smith
Executive Director

Lt Col Adrian Robbe
Editor

Barbara Taylor
Associate Editor

SSgt Dave White
Design & Layout

The Combat Edge (ISSN 1063-8970) is published monthly by the Air Combat Command, HQ ACC/SEP, 175 Sweeney Blvd, Langley AFB VA 23665-2700. Second-class postage paid at Hampton VA and additional mailing offices.

POSTMASTER: Send address changes to *The Combat Edge*, HQ ACC/SEP, 175 Sweeney Blvd, Langley AFB VA 23665-2700.

DISTRIBUTION: F(X). OPR: HQ ACC/SEP. Distribution is controlled through the PDO based on a ratio of one copy per ten persons assigned. Air Force units should contact their servicing PDO to establish or change requirements. Other Department of Defense (DoD) units have no fixed ratio and should submit their requests to the OPR.

ANNUAL SUBSCRIPTIONS: Available to non-DoD readers for \$30 (\$37.50 outside the U.S.) from the Superintendent of Documents, PO Box 371954, Pittsburgh PA 15250-7954. All subscription service correspondence should be directed to the Superintendent, not HQ ACC/SEP.


CONTRIBUTIONS: Articles, comments, and criticisms are welcome. Write:

Editor, *The Combat Edge*
HQ ACC/SEP
175 Sweeney Blvd
Langley AFB VA 23665-2700

Telephone: (757) 726-8842
DSN 574-8842
FAX: (757) 726-8975
e-mail: adrian.robbe@langley.af.mil

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

DISCLAIMER: This magazine is an authorized publication for members of the DoD. Contents of *The Combat Edge* are not necessarily the official views of, or endorsed by, the U.S. Government, the DoD, or the United States Air Force. Information contained in any article may not be construed as incriminating under Article 31, UCMJ.

 Denotes images digitally manipulated.

CONTENTS

JUNE 1998

ACC SP 91-1

VOLUME 7

ISSUE 1

FEATURES

4 NOT QUITE A ROAD YET!

Col Vinnie Noto
HQ ACC/SEP
Langley AFB VA

10 CRM TRAINING FEEDBACK

Mr. Ray Churchill
HQ ACC Training Support Squadron
Langley AFB VA

DEPARTMENTS

FLIGHT SAFETY

6, 18

WEAPONS SAFETY

20, 28

GROUND SAFETY

22, 30, 32

ORM

16

AWARDS

14, 26

SAFETY STATS

25

FLEAGLE

9

Visit us online at:

<http://www.acc.af.mil/public/combat-edge/>



Accent on Safety

Situated on the Virginia peninsula, ACC Headquarters is surrounded by all things nautical — especially our brethren in the U. S. Navy. Despite the fact that a goodly portion of our nation's naval might is located within a 30 minute drive, I have frequently been taken to task for not having the good sense to be able to distinguish a ship from a boat or an Admiral's launch from a dinghy. It's not that I am particularly snobbish about the supremacy of airpower, it's just that I don't eat that much fish. It follows that since I don't eat fish, I don't fish for fish. Having no particular need to fish, I don't do the boating thing either. Oh sure, there was a time when I was into water skiing, but that gradually faded; now I pretty much view any contact with water beyond a hot shower as a survival situation. Apparently, I am not the only airman for which this is an apt description.

Among the many ways we have found to mangle and damage ourselves in the name of "sports and recreation," water sports continue to lead as the most deadly. To put it bluntly, we have proven time and again that we airmen are neither strong swimmers nor good floaters. I mention this now because we have typically been prompted by the heat of summer to forget our lack of gills and to venture back to the rivers, lakes, and oceans. All too often, an innocent day's outing (whether a simple bass fishing trip or the misnomered "pleasure boat" excursion) has ended in disaster. Not only have airmen demonstrated their lack of swimming skills, but they've also paid the deadly cost associated with failure to wear a life jacket. This simple precaution is what I really want to talk about.

Many of you have probably heard the old adage, "There are old pilots, and there are bold pilots; but there are no old AND bold pilots." Being one of those who have achieved the "old" stature (despite having often regarded myself as being "bold"), I've been compelled to reflect on this. What I have found is that even when I imagined myself being bold, I had always tried to leave myself a little room for error.

Whether you call it "pad," "wiggle room," or just "a way out," it still amounts to a life jacket. Yeah, that's right. A life jacket keeps a bad situation from being worse, just the same as that little room for error allowed me to be around long enough to earn the distinction of being an "old" fighter pilot. You see, it doesn't really matter what the activity is — managing the risk is an inherent part. That's why ORM can be such a powerful tool if we'll just accept and apply it. With ORM as a way of life, we will always use our "life jackets," whether on the water or in the air. ■

Ya'll be safe, and keep your life jackets on!

*Colonel Turk Marshall
Chief of Safety*

Not Quite a ROADY yet!

Col Vinnie Noto, HQ ACC/SEF, Langley AFB VA

It was hard to believe, but my retirement was right around the corner — 26 years of active duty coming to an end. My physical and TAP briefings were scheduled; even the date, time, and place for the ceremony were set. I thought the Air Force had gotten its last pound of flesh out of me and I could be a ROADY (Retired on Active Duty) for just a while — well, I was wrong!

This time, they didn't have to go very far to find a Safety Investigation Board President (BP). He was sitting right at my desk. "You're the man!" were the words my boss used when he told me I was ACC's newest BP. In my 2 years in ACC Safety, I had many, many conversations with potential as well as selected BPs. Now it was my turn again. Actually, my first was a Class B mishap ... but still! I've also been a unit representative, an investigative officer, a pilot member, and a maintenance representative. I don't think I could have been the flight surgeon; and the recorder has to work too hard — I've avoided that.

Was I prepared? Well, yes and no. I was trained for sure. In fact, according to my Safety Center Representative, I was "over-trained." However — mentally, I

was not ready. I was accepting my near change in active duty status and working towards that goal. I never expected the dreaded "there has been a crash and you've been selected" call. Usually, I'm the one making the call, not receiving it! The other members of the Safety Investigation Board (SIB) were all great professionals; they worked

I never expected the dreaded "there has been a crash and you've been selected" call. Usually, I'm the one making the call, not receiving it!

very hard and we found the elusive "golden BB." We couldn't have been more fortunate or better blessed. We wrote an excellent report with what I believe are some fine and actionable recommendations.

My thoughts on being a BP are these. Focus, focus, focus — got it! Forget everything going on in your life and job (retirement, PCS,

etc.), and put away your e-mail. You now have a critical safety, time-sensitive, media-magnet, job to do. You are working directly for the MAJCOM commander. You have the resources, the time, the people, and the equipment to get it done. If you don't, just ask for help. When you are on that airplane wondering what you will find at the crash site, get out those books ... and review, review, review.

First, when you get there, find a reasonable and usable workplace. You will be there for 30 to 45 days. We found ourselves in a small agricultural town in western Kentucky, a long way from any major DoD installation. We arranged for the use of a local National Guard Armory as our workplace. What we didn't have, we rented — from phones, to computers, color copiers, court stenographers, and places to live (deja vu ... remember my words about that contracting officer). It all can be done. We even had to build a road to get in and out of the site due to the mud.

Next, have a plan. I mean ... a big picture plan ... on how you will conduct your board. Will you be the maestro and direct everything or will you sit back and let each team work towards that common

goal, or maybe somewhere in between? I knew what I was going to do from day one. I was fortunate enough to have experience with most of the working parts of a board already. If you initially don't know what to do (as is the case in most instances), let your Safety Center Representative take the lead. They can run all the early meetings until you get the hang of it. They all have lots of board experience; and after a few days, you will know what your team's directional needs are.

Expect your board to grow, and plan accordingly. That means finding adequate workspace, places to live, and equipment for everyone. Keep track of your board; they may be at numerous locations around the country. Make your team feel and act like a team; give them some identity. Discuss together, eat together, and (if the opportunity presents itself) play together. You will be working plenty of long hours and days without a break. Take a day off sometime. Your team will appreciate it; and take my word, you will know when to do it! Be flexible, and change your work schedule now and then. Your team is giving you 110%; so let them get some personal needs taken care of, like washing clothes, etc.

Remember that you set the pace; your briefing date is just a guess. You don't have to do it in 30 days; if you need more time — just ask! You will be able to tell within 10 days or so if 30 days is a realistic goal. Don't live in a vacuum; many of us have faced similar obstacles — ask for advice and “phone home” so to speak. My boss and I have spent many hours in discussion with other BPs. We are your sounding boards; we have flack jackets next to our desks, so

don't hold back. I even called my boss and asked for a bit of guidance, and I got it after the laughing subsided. Other BPs are a great source of information and help, too. Let us direct you to them as necessary. Also, don't forget the Air Force has lots of research labs and highly trained specialists that you may not even know exist. They range from fire pattern experts to TERPS specialists to human factor psychologists. Let your Safety Center Representative know what you need; we've even used submarines when required.

Now that everything is in place and working, sit back and let your work groups get it done. In a well-run board, the BP should have little to do until near the end when your stamp of approval is required on everything. Don't get me wrong; you will have plenty to think about and read and lots of decisions to make, but the knuckle crunching work should be done by the board — not you. Therefore, if you want to spend the day walking the crash site looking for a particular part, digging in the mud, interviewing a witness, or even flying the mishap profile in the simulator, you can and should. What the board needs more than anything is your leadership. If you've done it right, the books, final message, and briefing should all be done for you by your team.

Lastly, but certainly not required and maybe unnecessary in most cases, I realized I needed to visit with the local community. There was considerable apprehension in this small agricultural community on how this mishap could happen. Wherever we went, we stood out. Therefore, we spent time “mending fences.” We worked hard to turn around a near disastrous event into a positive

happening. We visited with town leaders and the hospital that treated our crew. We even visited several local schools, talked about the Air Force, and showed some great videos, too. We gave out lots of pictures wherever we went. We also showed our appreciation to all the folks who helped us — from the emergency services response crews to the Red Cross. We sent them thank you letters and even some small gifts whenever we could. This didn't take much time, and we especially liked visiting the schools. No requirement exists to do all this. But in my case, I was the senior Air Force representative and felt the need was there. The result was a community who saw the Air Force as real people. They didn't view us as part of a big and impersonal government organization. We were Americans just like them, but wearing a different pair of coveralls — that's all. Keep in mind that you don't and should not talk about the mishap. People will ask, but they understood when we told them we couldn't talk about the event. Let them know your purpose and why you are there. A better and more interesting topic was the past deer hunting season or how the Kentucky Wildcats would do in the upcoming “March Madness” basketball tournament.

By the way, don't forget to be a mentor. Many board members have never had the opportunity to put together a Staff Summary Sheet, so be a good teacher. As a last and final thought, the SIB process is critical to the Air Force and our preservation of resources. Take the time, and do it well. Our nation is depending on your leadership and skill to find the causes and make the proper recommendations to prevent this from happening again. ■

Flying Safe for the fun of it!

Capt Lawrence J. Spinetta, 493 FS/DOV, RAF Lakenheath UK

My friend died recently. He was young, ambitious, and at the start of his Air Force career. He died in a flying accident. He didn't die in the line of duty, flying a training mission or combat sortie. He died when his civilian, light aircraft crashed.

Pilots love to fly—on or off duty. Even though a good proportion of our professional lives are spent in the wild blue yonder, it's no surprise that many of us choose to spend our leisure time chasing clouds, hopping from strip to strip, and flying high above the countryside contemplating life from a different perspective. A large number of non-rated folks and family

members also take to the skies each weekend. Hearing about my friend's unfortunate, early death prompted me to consider how we can work towards minimizing the risks associated with general aviation flying. Here are some things to think about before you strap into your Cessna or Piper this weekend.

Are you ready to fly? Check yourself just as carefully as you would your plane during the pre-flight. The Private Pilot Manual recommends using the "I'm Safe" Checklist:

- **I**llness?
- **M**edication?
- **S**tress?
- **A**lcohol?
- **F**atigue?
- **E**ating?

The key here is to be physically and mentally ready to fly. Your

decision-making skills will suffer if your mind is preoccupied with family problems, if you're worried about financial matters, or if you're too hungry or tired to concentrate. Your piloting prowess (i.e., physical ability to maintain aircraft control) suffers if you're battling a cold, a hangover, or the side effects of over-the-counter drugs. Active duty pilots know self-medication and flying do not mix. If you're taking any medication, you probably should be home in bed resting rather than operating heavy machinery.

Examine your proficiency and currency. To start with, make sure your pilot's license and medical certificate are current and appropriate for the privilege you intend to exercise. You need additional sign-offs in your logbook if you are going to fly a complex



Flying safe for the fun of it!

aircraft or a taildragger.

Remember, flying is a perishable skill. It isn't like riding a bicycle. Once you get airborne, you won't suddenly remember how to land. Without recency of experience, you simply won't be safe. The Federal Aviation Administration (FAA) Regulations specify minimums for you to be legal. However, adhering to minimums does little to maximize safety. Why take a chance? Book an instructor to sit in your right seat, and have him make sure you do things right. I'm sure you'll feel a whole lot more comfortable having an instructor as a backup, an extra pair of hands and eyes to reduce the risk of error while you regain your proficiency. Keep in mind flying a light, civilian aircraft presents different challenges than larger, faster military jets. For example, you have a different landing picture flying a Cessna than when you're flying an Eagle. Most likely, you will have considerably less accurate navigational aids and performance indicators as well.

Know your aircraft. Take the time to read and

study your aircraft's systems and emergency procedures. If you fly multiple types, make it a point to read more of the owner's manual than just the rotation and approach speeds. Realize that different aircraft have different instrument panel layouts. You will have to adjust your instrument cross-check. Being familiar with your aircraft's procedures and checklists will help you reduce "craniums-down" time and effectively increase the amount of visual scan time to deconflict with other aircraft. When faced with an emergency, you will be a lot less stressed if you know the manufacturer's approved solu-

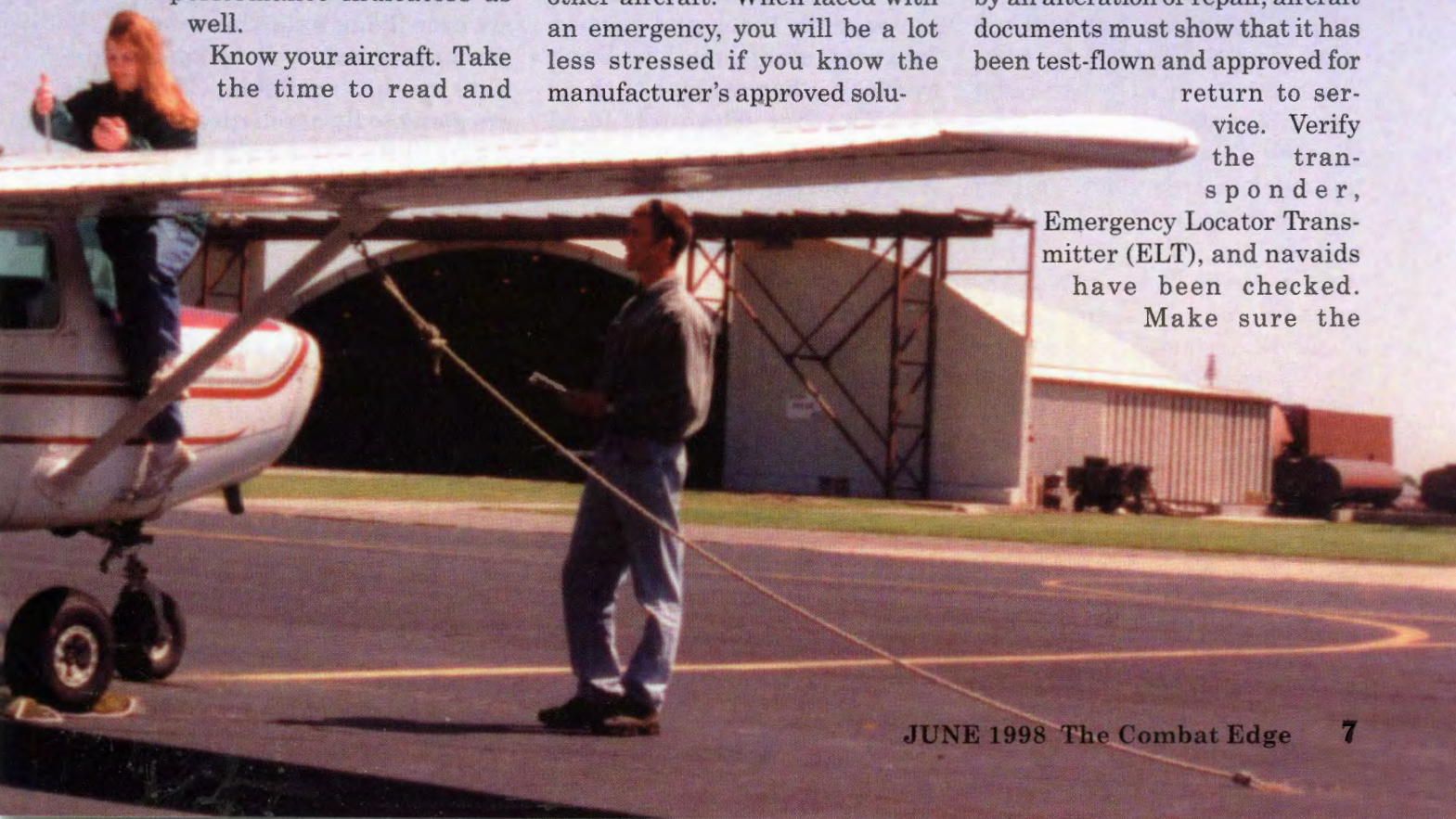
tion rather than just winging it.

Perform a good preflight. A good preflight entails more than just walking around the aircraft looking for broken parts. A good preflight starts with an examination of the aircraft's maintenance records. Don't be afraid to ask the owner to supply them to you. The aircraft should have had an annual inspection. Training aircraft are required to have an additional inspection every 100 hours. If the aircraft flight characteristics were substantially affected by an alteration or repair, aircraft documents must show that it has been test-flown and approved for

return to service. Verify the transponder,

Emergency Locator Transmitter (ELT), and nav aids have been checked.

Make sure the



aircraft has an Airworthiness Certificate, has complied with all FAA safety directives, has a current registration, and has an Owner's Operating Guide on board. Next, calculate the aircraft's weight and balance. You must adhere to both the maximum weight and center of gravity restrictions.

Develop a plan. Figure out where you are going and how you are going to get there. For a local flight, figure out an objective. On active duty, we use an AF Form 70 for route and fuel calculations. Similar flight planning makes sense for civilian flying. Calculate the direction, distance, and fuel used for each leg. Ensure you have the appropriate fuel reserves. Don't forget to visually verify full fuel tanks during your walk-around. More than one pilot has believed a faulty fuel gauge and has had their flight come to an abrupt, unexpected end.

Use this information to file a flight plan. Unlike a military airbase, a civilian field will not open your flight plan for you. You must contact the servicing Flight Service Station (FSS) either by telephone or on the appropriate frequency. Filing and opening a flight plan is definitely a good idea. If you were going on an extended hiking trip, you wouldn't think about departing without telling someone where you were hiking and what time you were expecting to be back. Similarly, filing and opening a flight plan will help the rescue folks find you if you don't manage to make it to your intended point of arrival. If your route of flight changes

significantly, don't forget to call the FSS and advise them. Once you reach your destination, make sure you close your flight plan to avoid sending the Civil Air Patrol on a wild goose chase.

Review your plan. After determining your destination and route, figure out if external factors will permit your flight. Weather will be a major concern. You can obtain forecasts from many sources. If your home field is an Air Force base, you can conveniently take advantage of the base weather (WX) shop resources in Base Operations. Ask them to prepare a "Dash One." If stuck off-station, call 1-800-WX-BRIEF and ask for a "standard" or "outlook" WX briefing. Many Fixed Base Operators offer computer terminals that connect directly to internet WX service providers. You can give yourself a WX brief. If you are confused over an abbreviation or how to read a chart, either reference the accompanying legends or ask. Experienced pilots are often eager to teach and pass-on "nuggets" of information. Don't overlook other sources such as the Weather Channel, local news programs, and the radio. A WX brief isn't complete unless you not only check your primary destination, but also the WX along your route and potential alternates. If the WX is bad when you arrive, you'll be thankful that you've explored your options beforehand.

Notices to Airmen (NOTAMs) should also be reviewed. The civilian NOTAM system contains both "L" and "D" class NOTAMs. "L" NOTAMs will only be given to you if you call the servicing

FSS. "L" NOTAMs may not prevent you from landing at an airport, but they still are important. Check applicable Flight Data Center (FDC) NOTAMs for changes in regulatory information issued by the National FDC. Don't forget to review the Class II NOTAMs booklet. This contains notices that are more permanent in nature; for example, standard arrival procedures for airshow fly-ins. If you're at a military field, you can check whether a civilian field is covered by the US Military NOTAM system by looking at the Instrument Flight Rules (IFR) Supplement. The field is covered if it has a diamond listed next to its name.

Be prepared. Before you take to the runway, review your route, approach plates, charts, airspace restrictions, and divert fields. Double check that you have all the Flight Information Publications (FLIPs) you'll need in your flying kit. Make sure appropriate survival equipment is on board and works. If you are over-flying water, make sure you have a raft or flotation devices readily available. If you are going to fly aerobatics, wear a parachute.

Summary

Whew! That sounds like a lot to think about before each flight. But, I guarantee you'll feel a whole lot more prepared and confident. The whole key is knowing when to say knock-it-off. If you heed this advice, you'll always have the opportunity to fly another day under more favorable circumstances. ■

Fleagle



© STAN HARRISON 1996



HARRISON

CRM Training Feedback



Mr. Ray Churchill, HQ ACC Training Support Squadron, Langley AFB VA

In the July 1997 article "CRM - Mobile Training ... On the Road Again," we asked you to give us feedback on the new Crew Resource Management (CRM) training course that helps ACC aircrew members better manage the resources that are available to them when they fly and fight. Boy, did we ever get it! Feedback has been pouring in, and the ACC CRM team is working every bit of the feedback that you have provided. The purpose of this article is to provide you — the ACC aircrew member — overall feedback about what aircrews are saying about their CRM training program.

First, I'd like to show how people are responding to the end of course surveys that are presented. Some people say, "Aircrews won't tell you what they're really thinking." Well, that's not the case with this program! I was both astonished and pleased as I worked some stats for the FY98-1 courses and realized the amount of students who wrote specific comments about the program. This includes constructive, non-constructive, frivolous, and neutral comments.

Simply stated, 449 of the 553 students that took the course during FY 98-1 made at least one written comment about some portion of the course. That's over 80% of the aircrew members taking the course during the quarter. There were a total of 911 written comments made during this quarter in which 872 were considered constructive. Of the 553 students taking the course, 406 (73%) responded about "What they liked most about the course" and 332 (60%) gave suggested improvements that could be made about the course.

We know you've given us feedback; we hear you loud and clear! What is that feedback telling us? You might be surprised. For example, among the many questions that were asked of each aircrew member at the end of the Continuation Training Course (CT), two of them addressed the course impact



on the student's mission effectiveness and flying safety. The results of these two survey questions are shown below and are broken down between fighter, bomber, recce (reconnaissance and surveillance), and helicopter aircraft.

Effect CRM Training will have on my mission effectiveness:

Answer Scale: 1=Adverse 3=Neutral 5=Very Positive

Class	Fighter	Bomber	Recce	Helicopter
CT	3.8	4.2	4.4	4.3

Effect CRM Training will have on my flying safety.

Answer Scale: 1=Adverse 3=Neutral 5=Very Positive

Class	Fighter	Bomber	Recce	Helicopter
CT	3.8	4.2	4.3	4.3

These two questions sum up how ACC aircrews feel about CRM training's effect on their mission effectiveness and flying safety. Both areas are critical to any mission's success. As the scores indicate, all weapon systems show positive results in CRM training in both mission effectiveness and flying safety. However, some people may say that these statistics aren't necessarily the opinion of the ACC CRM course, but more the opinion of taking CRM training in general. With that in mind, let's now look at the survey feedback regarding the way aircrews rated the overall value of the ACC course for fighter, bomber, recce, and helicopter aircraft and compare it to the two previous quarters:

After attending CRM training, rate the value of this course.

Answer Scale: 1=No Value 3=Neutral 5=Very Valuable

Weapon System	FY97-3	FY97-4	FY98-1
Fighter	3.0	3.0	3.5
Bomber	3.7	3.7	4.2
Recce	3.5	4.0	4.1
Helicopter	3.9	3.3	4.0

The course instructors have excelled in establishing feedback systems for evaluation of student inputs and continually monitor the performance of CRM training against established goals and



objectives. As a whole, their observations include a steady improvement in most of the survey areas — especially in how aircrews rate the value of the course. There could be several reasons for this. First, the contractor continuously updates and improves the current course based on student feedback. For example, the CT course given during the current training cycle has been modified several times over the past year. Next, the CT course that is currently being given this year will be different than what aircrews take during the

succeeding training cycle. Next year's course will be more challenging and will have a peace-time Situational Trainer scenario as opposed to this year's war-time scenario. Lastly, after two training cycles, we must assume that some aircrews are beginning to understand the benefits of CRM training.

The survey questions that received the most written feedback during quarter FY98-1 were: (1) "What do you like most about the course?" and (2) "What can we do to improve this training?" Aircrews bombarded (excuse the pun) their keyboards with kudos, criticisms, and suggestions for improvements. Listed below are only a few of the written comments given from the over 700 inputs received relative to "what they liked most" and "how to improve" the CRM CT course. Each comment is printed as it was written by the student with brackets indicating the aircrew member's particular weapon system.

"What did you like most about the course?"

- "It was relatively short, and to the point." - (A-10)
- "War stories, actual footage, and discussion of ways to stop problems helps to demonstrate how CRM is applicable." - (F-117)
- "The large block of time we made available allowed me to think through the communication process and where I make these mistakes in real life." - (F-15C)
- "Good refresher on the back to basics of flying safely while executing the mission." - (F-15E)
- "The real world examples and how we can improve our performance based on past mistakes." - (F-16)
- "The situational exercises are good — use more of those rather than lecture to get your point across." - (U-2)
- "The interaction with other aviators." - (B-1)
- "It was a good refresher in a non-threatening environment. I felt like I could express my opinions freely." - (B-52)
- "The relative examples and the cross section of the class led to a great info flow and experience to be shared." - (E-3)
- "Actual examples of CRM successes and failure." - (RC-135)
- "The HH-60 Situational Exercise at the end was very helpful and a great way for helo types to examine their CRM skills." - (HH-60)

“What can we do to improve the training?”

- “More hands on, less brief.” - (A-10)
- “Some of the scenarios were a little unrealistic. Make them match the ‘real world’ a little more closely.” - (EF-111)
- “Try to focus on things we don’t already know. More real world examples and case studies so that we can react and then see how it turned out.” - (F-117)
- “This should not be a yearly requirement. 2 years minimum.” - (F-15C)
- “Don’t present this as a ‘program.’ It is a part of what we do everyday. Present to new guys that we use these techniques on every flight, and reinforce to the old guys about remembering to use this.” - (F-15E)
- Add some more real life examples from accidents, or better yet from accidents that were avoided due to good execution of CRM.” - (F-16)
- “Add more stress to the point of failure. Show how this stuff can really kill me.” - (U-2)
- “Use the WST (Weapon System Trainers) and allow more time.” - (B-1)
- “Expand the Situational Trainer (ST) scenario, and go more in depth on the debriefing/analysis of the simulation to see the behaviors being displayed.” - (B-52)
- “Expand the time for the ST and perhaps utilize more examples of aircraft incidents with CRM.” - (E-3)
- “More film demonstrating actual CRM successes and failures.” - (RC-135)
- “Use more case studies.” - (HH-60)

From the surveys and written responses, the ACC CRM team has drawn some conclusions on where ACC is with the current training program:

- Even though there is much criticism about the frequency of training, students rate the course length about right.
- Students rate course scenarios and exercises helpful toward applying CRM.
- Instructor preparation and presentation are rated excellent.
- Students predict positive impact on mission effectiveness and flying safety.
- Students rate course valuable.

There have been some concerns on the validity of the survey feedback. Some have stated, “I filled out the survey by just putting a ‘3’ for every question in order to get out of the class as quickly as possible.” However, if you think the course is too long, why would your response be any other than “#5 - Too Much Time?” If ACC aircrews do not fill out the survey to reflect exactly how they rate the course, then they are not helping the program, only hurting it. If aircrews think the course is not beneficial, then score the survey accordingly. If enough people think the course is not hitting the mark, changes will be made. In closing, I’d like to share one more comment that was written by an F-15E crewmember. **“Get everyone to buy into it (CRM). I feel there is still some resistance in the fighter world to this subject.”**

CRM is not a “once-a-year training requirement.” CRM should be involved in all aspects of your mission execution, from mission planning to mission debrief. This training course was not designed so that the instructor does all the talking and the student only listens. It is a course that allows you to really get out of it what you put into it. If you resist the training, then most likely you will not get much from the training. However, if you open yourself up to new ideas and new techniques, you might be amazed by what you can take away from the course for your future use.

If you have any questions or comments regarding CRM, you can contact the author at the following e-mail address: raymond.churchill@langley.af.mil ■

FY 97 USAF

SYSTEM OF COOPERATION AMONG THE AIR FORCES OF THE AMERICAS (SICOFAA) FLIGHT SAFETY AWARD

The SICOFAA Flight Safety Award was set up by the Chiefs of the American Air Forces at their annual meeting (CONJEFAMER) in the United States in May 1976. The purpose of the award is to promote safety in the air forces of Western Hemisphere countries by recognizing flight safety accomplishments of military organizations.

552 ACW, Tinker AFB OK

EXPLOSIVES SAFETY PLAQUE

Awarded to the following organization for their outstanding achievement and contribution to explosives safety:

366 WG, Mountain Home AFB ID

FLIGHT SAFETY PLAQUES

Awarded to the following organizations for outstanding mishap prevention:

366 WG, Mountain Home AFB ID

33 FW, Eglin AFB FL

20 FW, Shaw AFB SC

1 FW, Langley AFB VA

Safety Awards

MISSILE SAFETY PLAQUE

Awarded to the following organization for their outstanding achievement and contribution to missile safety:

366 WG, Mountain Home AFB ID

NUCLEAR SURETY PLAQUES

Awarded to the following organizations for their outstanding achievement and contribution to nuclear surety:

**27 FW, Cannon AFB NM
55 WG, Offutt AFB NE**

AERO CLUB CERTIFICATES

Awarded to the following bases for flight safety achievements:

**Barksdale AFB LA
Beale AFB CA
Davis-Monthan AFB AZ
Holloman AFB NM
Langley AFB VA
Offutt AFB NE
Shaw AFB SC**



Our letter this month is actually a suggestion, an exceptional proposal I might add. The energetic soul who conveyed the idea writes,

Dear Orville:

The honor and responsibility for Operational Risk Management (ORM) within our organization was bestowed upon me late last month, when our existing and fully trained ORM expert unexpectedly departed. That leaves me, a minimally trained novice, to get ORM on track between now

and 1 Oct 98 (the date by which ORM must be fully implemented in the Air Force). A specific tasking by my commander is to make certain that all newly assigned personnel receive ORM training. To this end, I prepared a 1-hour "new guy" briefing (a fairly decent masterpiece if I do say so my-

self). However, there's a problem. Using the briefing technique is costing me about 4 hours each week, and this is time I desperately need to spend on other tasks. So I have a suggestion. You released the Computer-Based ORM Familiarization Course last spring. Although the

course may now be somewhat outdated, because it was initially intended to train existing personnel by Jul 97, do you think that I can still use it to train new unit personnel?

Major Mae I. Proffer

Dear Major Proffer:

As my daughter Mindy would say when asked a question to which she thought the answer was intuitively obvious — DUH!!! Of course you can use the Computer-Based Course. Use it for the new guys, use it to refresh those that had the training last year, and dare I say it — use it to train those folks who failed to take the training as required in Jul 97 (sources tell me that one or two of these Neanderthal, training avoidance experts may continue to exist within ACC units today).

And speaking of Neanderthals, don't worry about the course being "dated." ORM principles have remained relatively unchanged for eons. In fact, word has it that archeologists recently unearthed evidence of the ORM Six-Step Process in prehistoric cave dwellings like that of "Thag's" pictured here with me. Seems that managing risks was every bit as critical to one's survival back then as it is today. Can you just picture Thag

*In fact, word has it
that archeologists
recently unearthed
evidence of the
ORM Six-Step
Process in
prehistoric cave
dwellings like that
of "Thag's" pictured
here with me.*

and Thor sitting on the cave floor trying to figure out which "Woolly Mammoth" control measures to implement for their next berry gathering mission? It boggles the mind.

But Mae, I'm going to make a special offer to you and others like you, who have the gargantuan and largely thankless task of ensuring ORM implementation by Oct 98.

I am going to re-release the historically famous ACC Computer-Based ORM Familiarization Course, complete with questions and answers, on June 1st. That's right, "Grease" and "Gone With The Wind" move over! The ACC/SE Directed, ACC/DO Produced, Jul 97 Computer-Based Thriller is coming to a Wing Safety Theater near you in early June. Do not miss this once-in-a-career opportunity. Whether you are viewing this production marvel for the first time, or reliving the Six-Step thrills and spills of yesteryear, this ORM Computer-Based Familiarization extravaganza is bound to go down in history as an all-time ACC box office hit. And Mae, pay attention here; come Oct 98, don't let your unit be the only one in ACC that can't spell ORM. ■

Keep those cards and letters flying in,

Orville R. Mudd
ORM Dogfight Veteran
ACC Office of Safety

If you have any questions or comments regarding ORM, send them to:

"Ask Orville!"
HQ ACC/SEO
175 Sweeney Blvd
Langley AFB VA 23665-2700

DSN 574-8800, Fax DSN 574-8975
e-mail: ronald.garhart@langley.af.mil

Is Bird Awareness Mission Essential?

It is at Aviano!

TSgt C. Metzger, 31 FW/SEF, Aviano AB, Italy

We are now in one of the busiest times of the year for bird activity. And guess what — whether you're a pilot, a security police officer on patrol, TDY to the local area, or a maintainer who discovers a bird strike during an inspection, you can make the airfield and surrounding community a safer environment for your installation's aircraft and pilots. I'm sure you're probably thinking to yourself, "Me? How can I be of any help?" Well, consider what we do here at Aviano. Anytime someone sees large bird gatherings around the area of our base, we encourage them to contact the Flight Safety Office or Base Operations. This type of information can be very helpful in reducing the hazards of bird strikes at any air base. This is because identifying and plotting the type as well as location of birds are key to developing an effective Bird Control Program.

Notification is the first and most important step in the bird control process. Although it might not appear to play an important role in bird control, it does play a major role in bird avoidance. Notifying the appropriate personnel will increase the odds of removing the hazard (such as changing the airfield habitat so it is no longer attractive to that species) which ultimately will reduce the probability

of a bird strike. Reducing bird strikes to the aircraft in your surrounding area is the main objective.

By now, I'm sure you're also probably thinking, "How does my notification of birds in Area-1, Area-2, or other locations around my base affect the aircraft in the flight line area?" Well, let me tell you how. Take for example the situation here at Aviano; we are still in the process of identifying the types of birds in the area and factors that attract local birds. When we are notified of the presence of birds, we immediately respond by identifying the birds and collecting data as to what type of area is attracting the bird (i.e., the feeding and nesting peculiarities, characteristics of that particular species, as well as the habitat). This data is used to develop a Bird Avoidance Model for Aviano Air Base. Along with that, we are concerned with bird movement in the area over the airfield.

The total number of bird strikes in the Air Force since 1985 has been over 30,000. Total damage cost was \$457 million, a 12-year average of \$38 million per year. Ninety-eight percent of all bird strikes occur at or below 2,000' AGL, and most of these are at or below 500' AGL. Aviano had 16 bird strikes last fiscal year; fortunately only two of those were

damaging. There are several man-hours spent removing, cleaning, and inspecting areas where the birds impact. Likewise, when an engine ingests a bird, there are considerably more man-hours spent borescoping the internal workings of the engine.

Since a goal of the BASH Plan is to eliminate the bird strike hazard, we need to focus our efforts on the airfield itself. Air Force instructions and pamphlets suggest keeping the grass height at 7 - 14" on and around the aircraft movement area. If you should see an area growing out of control, contact your local Safety Office. Building custodians should keep their areas within the recommended requirements set forth by HQ Air Force Safety Center (AFSC). If possible, reduce overgrowth, grade and seed bare areas, and eliminate standing water by filling in low lying areas.

We all play a key role in an effective Bird Aircraft Strike Hazard (BASH) Plan. You're the eyes and ears of the base. Each of us can only be in one spot at a time; but as a whole, we can effectively cover a much larger area. Your base Flight Safety Office will appreciate any service or contribution you provide the BASH Program. Remember — no matter how much work is done to get our aircraft mission ready, it only takes one bird to impact mission effectiveness. ■

Your children are invited to participate in . . .

"Fire Prevention Poster Contest"



with **Scorch**
"the nasty little flame"

In observance of the upcoming National Fire Prevention Week (4-10 October 1998), *The Combat Edge* safety magazine is sponsoring a Fire Safety Poster Contest. Young boys and girls -- as well as teens -- can participate. The three age group divisions are as follows:

- Division I (5-8 years)
- Division II (9-12 years)
- Division III (13-16 years)

Each division has two separate categories of poster awards; they are - (1) best art and (2) best theme. In addition, a single "best overall poster" among all entries received will be selected. All winners will receive a certificate, and their poster will be published in the October 1998 issue of *The Combat Edge*.

All poster entries must be hand-drawn in color on 8 1/2" x 11" paper. Entries must be received at the office of *The Combat Edge* staff no later than 20 August 1998. The following mailing address is to be used:

Note: Please ensure that the contestant's name, age, and complete mailing address are printed clearly on the back of the poster. Parents' daytime phone number would be appreciated. All entries become the property of the ACC Office of Safety and cannot be returned.

**Safety Poster Contest
HQ ACC/SEP
175 Sweeney Blvd
Langley AFB VA 23655-2700**

Please make a copy of this and take it home to your children. Parents are encouraged to help their children understand the benefits of fire prevention and come up with an appropriate fire prevention theme -- but don't forget to let the children do the work. The 20 August deadline will be here before you know it, so "make plans now" to get started!

Is That Mishap "V

Lt Col Bruno R. Eddy
HQ ACC/SEW
Langley AFB VA

It is human nature not to want to highlight our mistakes or "air our dirty laundry"; but in regards to safety, that is exactly what we want to do as a form of education and prevention.



Recent discussions around the office regarding conventional weapons safety accidents and incidents in the command got me thinking about the issue of reportable mishaps and the classification by cost. So, I dug out AFI 91-204, Safety Investigations and Reports, to review current guidance. My interest centers around what I perceive as an increased concern over the determination of the "assessed" repair value as it pertains to the reporting classification threshold of accidents or incidents. Clearly, the AFI stipulates the cost criteria for the field to use in determining whether an event is to be classified for formal reporting as a MISHAP.

I remember observing several years ago some senior leaders worrying about damage thresh-

Worth Reporting?

olds. At that time, the command briefing charts broke those types of statistics out in colorful ways by organization. The impact of being a unit whose statistics broke the "norm" usually met with immediate and often unwanted attention. Unfortunately, this often resulted in a lot of pressure to keep the "cost" below established thresholds to avoid negative attention. Yes ... been there, done that, got the T-shirt!

As I read further into the AFI (specifically chapters 8 and 10), I clearly saw there were other mechanisms to properly identify those incidents or accidents which fall below the MISHAP dollar value threshold. High Accident Potential (HAP) reporting is a vehicle specifically for use when the incidents still warrant reporting but do not meet established dollar value criteria. In addition, many of these weapons safety reports could and should be combined with materiel deficiency reports (T.O. 35D-54) when appropriate.

I feel more comfortable now knowing that mechanisms are in place to clearly report those


incidents where damage does not meet the reporting criteria. However, these incidents and accidents have the potential to recur with more catastrophic results. They should be reported and crossfed to everyone as a mishap prevention message (i.e., a lesson learned).

It is human nature not to want to highlight our mistakes or "air our dirty laundry"; but in regards to safety, that is exactly what we want to do as a form of education and prevention. Let's not allow the "It's non-reportable because it is below the dollar threshold!" mentality keep us from reporting items that may have considerable crossfeed potential. Virtually, all accidents and incidents are important from the standpoint of trends and analyses. The Air Force Safety Center, MAJCOMs, NAFs, and unit level safety offices review our reports with the specific goal of being more proactive in seeking and instituting preventive measures ... not just to be a repository of reports. As for senior leadership, we have to ensure we create a climate that encourages the "airing of

our dirty laundry" in order to help prevent future accidents and incidents. So now ... is that mishap worth reporting? You bet it is!

About the Author

Lt Col Bruno R. Eddy is the new Chief of Weapons Safety at Headquarters Air Combat Command, Langley AFB, Virginia. He has over 27 years of munitions experience. His weapons background includes assignments in missile, munitions, and aircraft maintenance, as well as Explosive Ordnance Disposal (EOD). In addition to his MAJCOM headquarters logistics staff officer experience and tenure as an Air Logistics Center liaison, his command experience includes service as an EOD Flight Commander and Equipment Maintenance Squadron (EMS) Commander. Supplementing his CONUS based assignments at Langley AFB VA and Seymour Johnson AFB NC, he has several overseas tours to his credit including Ramstein AB GE; Aviano AB IT; Cairo, Egypt; and Riyadh, Saudi Arabia. ■



Elaine Dickinson
Reprinted with permission from
BOAT/U.S. Magazine, Vol. III, Jan 98

Clearing the Air Ab

Even though there are only a handful of deaths each year reported as boating accidents that are attributed to CO poisoning, there are likely to be many more that aren't accounted for.

day out on the water is filled with sensations — the constant bouncing movement of the boat, the spray in your face, the hot sun, and the engine's vibration. At some point, these stimuli can make a person feel a little woozy, develop a headache, and feel a bit dizzy ... perhaps even nauseous. It's probably just a little seasickness, right? [Well, maybe it is ... but then again, maybe it's not.]

How many of us have felt this way and never once considered that these are the exact same symptoms of carbon monoxide (CO) poisoning? While carbon monoxide fatalities are not numerous compared to drowning from boats, they do occur and are most often

preventable. Carbon monoxide is an ever present factor in boating that should be respected when someone is in the proximity of a running gasoline powered inboard/outboard motor, generator, or appliance such as a propane heater.

Since carbon monoxide is odorless, colorless, and tasteless, its presence often goes unnoticed. This is one reason it's called the "silent killer." Even though there are only a handful of deaths each year reported as boating accidents that are attributed to CO poisoning, there are likely to be many more that aren't accounted for. A 10-year study in Seattle found 39 carbon monoxide deaths on boats reported by one medical center. In

the United States, an average of 3,500 people die each year from all types of CO poisoning; this includes accidents and suicides, making it the most common cause of fatal poisoning.

But what safety experts cannot determine is how many boaters get sick from CO exposure and may not even know it because they thought they were seasick or had the flu. Neither does anyone else know how many boaters have been saved because their detectors worked.

That Annoying Alarm

A meeting of boating industry representatives last year focused on an "alarming" problem — carbon monoxide detectors going off.



ut Carbon Monoxide

Boat dealers were hearing numerous complaints from new boat owners that their CO alarms were going off so much that they were disconnecting the units. This led to some obvious concerns. Were the detectors going off because of measurable levels of CO, or were the sensors contaminated and, therefore, too sensitive? Were boaters choosing to put themselves and their families at risk by disregarding or disconnecting their carbon monoxide detectors?

"The data we're seeing says that new detectors on new boats — boats that are in the final fiberglass curing process — may have their sensors contaminated. This can make them too sensitive and prone to 'false' alarms," said Charlie Game of E. C. Game Engineering. He is a former executive of Hatteras Yachts and served on the Carbon Monoxide Detector Committee of the American Boat

and Yacht Council (ABYC).

"Unfortunately, many people think their detector is giving a false alarm when it may not be," he noted. That concern was echoed by Hank Grilk, who is current chair of the ABYC committee. "I'm afraid the perception of false alarms won't go away. But ... CO [is still] present in any kind of marine application. The question is: Have people been exposed to high enough levels over a long enough time to constitute a health hazard?" he said.

ABYC, a group that sets voluntary construction standards for recreational boats, has committees looking at detectors as well as standards for the proximity of exhaust vents and ventilation systems.

Grilk, Vice President of Engineering for Datcon Instruments Co., agreed that there was certainly a "new boat" problem. In addition to the curing of the fiber-

glass, new upholstery and carpeting can give off formaldehyde; and batteries can give off hydrogen — all of which can over-sensitize a new detector. To avoid this "out-gassing," many manufacturers are now sending the detectors separately to the boat dealerships so they can be installed later on.

Better Detectors

"The better CO detectors on the market do not just measure carbon monoxide at certain parts per million (PPM) and then go off," Grilk said. They also calculate exposure time to exposure level and will go off when the exposure has been long enough to constitute a health hazard. "These 'fully integrated' detectors are the best to use and are less prone to false alarming," he said. They cost in the range of \$80 to \$100, depending upon the features.

Exposure is extremely impor-

tant with carbon monoxide. CO is absorbed by the lungs and reacts with blood hemoglobin to reduce the amount of oxygen blood can carry. Lack of oxygen for human tissue and organs can ultimately be fatal. A very high concentration of carbon monoxide can be fatal within minutes, but exposure to low levels over a long period of time can also be fatal or result in permanent disability such as brain damage.

ABYC has issued a new standard calling for carbon monoxide detectors on any new gasoline powered or gas generator equipped boat built after July 1, 1998, with an "enclosed accommodation compartment" that includes sleeping berths, a galley with a sink, and a head.

A skipper in one accident lost his wife to CO poisoning when the duct tape he used as a temporary repair on an exhaust leak failed after a few hours, while his wife slept in the vee-berth. A detector alarm might have prevented this tragedy.

Another boater nearly perished from the back draft, or "station wagon" effect. This occurs when a boat is motoring forward while the exhaust fumes astern are flowing up into the cockpit or even the cabin. Opening a forward hatch avoids this problem.

News reports on a Florida professor's death indicate that the fully integrated CO detector on his 34-foot cabin cruiser was alleged not to be calibrated properly. How is a boat owner to know if a detector is working?

Grilk has a fairly simple suggestion, aside from checking with the manufacturer and asking to see their test data: "Take the detector; put it on a table next to a lit object (such as a small candle or

cigarette in an ashtray); put a box over both ... and wait. If the alarm sounds, it's working."

"Carbon monoxide is a fact of life with any internal combustion process," Grilk said. "A detector that's going off is trying to tell you something, and you should believe it." ■

Facts About Carbon Monoxide

Symptoms of Exposure:

- Watery and itchy eyes
- Flushed appearance
- Throbbing temples
- Inattentiveness
- Ringing in the ears
- Tightness across the chest
- Headache
- Drowsiness
- Incoherence
- Nausea
- Dizziness
- Fatigue
- Vomiting
- Collapse
- Convulsions

Possible Sources:

- Internal combustion engines.
- Any open flame device: cooking range, space heaters, water heaters, fireplaces, grills, as well as central heating plants.

Measures to Take:

- Move person to fresh air.
- Call for help.
- If not breathing, administer resuscitation or CPR.
- Ventilate area.
- Eliminate source of CO.

On Your Boat:

- Look for leaks on generator and engine exhaust systems — indicated by discoloration around joints, soot, or rust streaks.
- See that all exhaust hose clamps are in place and secure.
- Check for gaps around engine room plumbing, cableways, exhaust systems, doors, hatches, and access panels.
- Avoid "station wagon effect" backdraft by opening a forward hatch when motoring.
- Make sure open vents, hatches, and portholes are not bringing in carbon monoxide from other boats docked nearby or trapped along a seawall.
- Don't swim near a boat that is running an engine or generator.
- Don't block a vent on a portable water heater or space heater.
- Don't run a boat engine or generator inside a boat house.





Ground Safety Stats

ACC Losses for FY 98

(1 Oct 97 - 31 Mar 98)

*Help protect our
Air Force
resources by
reducing the risk
associated with
on and off-duty
activities.*

Ground Mishap Fatalities

8 AF	
9 AF	
12 AF	
DRU	

Number of Ground Mishaps/Dollar Losses

	Class A	Class B	Class C
8 AF	1/\$1,100,000	1/\$180,000	84/\$362,097
9 AF	2/\$250,000	1/\$345,309	80/\$487,209
12 AF	3/\$865,000	NONE	168/\$493,602
DRU	1/\$125,000	NONE	25/\$204,554
Total	7/\$2,340,000	2/\$525,309	357/\$1,547,462

Class A - Fatality; 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 \$10,000 and \$200,000

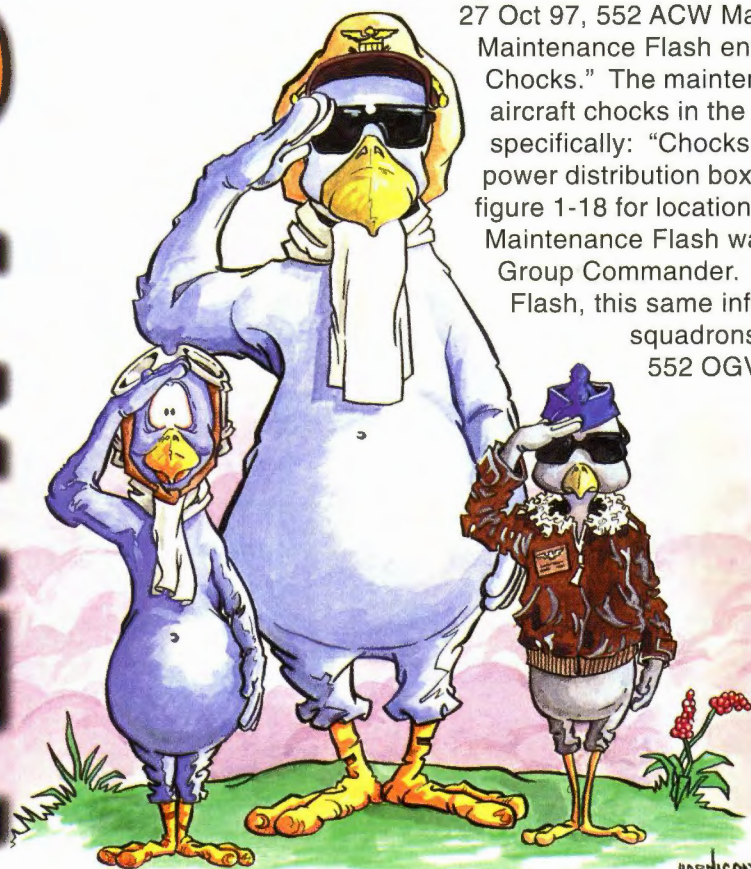
The HQ ACC TEAM SALUTE recognizes a person, group of people, or unit for notable displays of quality performance in the area of mishap prevention. Recipients are selected by the ACC Safety Awards Board from the monthly nominees for ACC safety awards and are featured periodically in *The Combat Edge* magazine. Our congratulations to these superior performers.

SrA Rebecca C. Bower, 965 AACS, 552 ACW, Tinker AFB OK

On 8 Aug 97, during a 552 ACW aircraft generation exercise, SrA Bower was conducting an aircraft preflight prior to cocking the aircraft. During the preflight, Amn Bower noticed that the aircraft wheel chocks, tied down in the aft lower lobe of the E-3, impeded access to a circuit breaker panel. When she questioned maintenance personnel, they produced a policy letter that directed the chocks be stored in that location. Not satisfied, Amn Bower called the 552 ACW safety office, which immediately dispatched safety personnel to the aircraft. Upon inspecting the aft lower lobe, safety personnel agreed with Amn Bower that the chocks could prevent access to the circuit breaker panel in flight. This could lead to a hazardous situation in the event of an electrical fire. A discussion between Amn Bower, maintenance personnel, and safety personnel determined that the maintenance policy letter allowed enough flexibility to position the chocks in such a way as to still allow access to the circuit breaker panel. Further discussion determined that the policy letter could lead to confusion and should be re-written to prevent storage of the chocks. Based on Amn Bower's report, 552 ACW/SE contacted 552 OGV to implement more specific guidance on

storage in the aft lower lobe. As a result of all these efforts, on 27 Oct 97, 552 ACW Maintenance Quality Flight issued a Maintenance Flash entitled "Proper Stowage of (E-3 Acft) Chocks." The maintenance flash standardizes storage of aircraft chocks in the aft lower lobe. The flash states specifically: "Chocks must...allow access...to the standby power distribution box (3A17). See T.O. 1E-3A-43-2-93-3 figure 1-18 for location of the power distribution box." The Maintenance Flash was signed by the 552d Logistics Group Commander. In addition to the Maintenance Flash, this same information was incorporated into the squadrons' flight crew information read files by 552 OGV. Amn Bower's professionalism,

conscientious attention to detail, and concern for safety motivated her to advise wing leadership of a potential hazard. Her initiative and resolve are especially commendable when one considers the high-stress environment of a major exercise and the pressure to perform within limited time constraints. Faced with all these factors, Amn Bower made the right decision and chose safety over expediency.



HARDISON

4th Transportation Squadron, 4 FW, Seymour Johnson AFB NC

Members of the 4 TRNS significantly contributed to mishap prevention through outstanding support to the 4 FW before, during, and after the 5 Jan 98 ACC-sponsored Safety Day. Two meaningful displays could not have been possible without the help of Transportation.

During the holidays, Ground Safety wanted to remind Seymour Johnson AFB personnel of the dangers associated with drinking and driving, driving without adequate rest, and the hazards associated with driving during such a busy time. Deciding upon a wrecked automobile, transporters coordinated with a local salvage yard and Ground Safety to select an appropriately damaged vehicle. The car had to be forklifted onto a flatbed trailer and then downloaded in a similar manner once brought onto the base on 17 Dec 97. Parked in front of the hospital near the main gate, the heavily damaged, late model Cadillac sedan greeted passing personnel with the warning, "This could happen to you! Drive Safely!" Again utilizing the 10K All Terrain (AT) forklift and flatbed trailer, the wreck was returned to its auto graveyard on 7 Jan 98, having served us all well. No documented vehicle accidents or drinking and driving incidents involving 4 FW personnel occurred during the period.

The 4 FW/CC, Col Randall K. Bigum, also requested an aircraft display for the first Safety Day of the new year. Large pieces of the F-15E which crashed near the Dare County Bomb Range in Jul 97 were to be arranged on a flatbed trailer. Parking this trailer on the flight line under a considerable veil of secrecy, the display was to remind aircrews of the dangers they face each day and the importance of attention to details.

Coordinating with base agencies preceded any physical labor, as the Legal Office held responsibility of securing the remains of the aircraft inside a facility owned by the 4 LSS. Specialists from Ground and Flight Safety consulted members of 4 TRNS with a plan identifying which parts would present a graphic visual image while exposing workers and equipment to the least amount of risk due to sharp, heavy aircraft pieces. Taking advantage of the light workload during the holiday season, all concerned parties converged at the LSS facility on 30 Dec 97 to assemble the display. Transporters cleared the hangar of small parts, carving a path for the 10K AT forklift to safely operate inside the hangar. Large, awkward pieces of the destroyed aircraft were placed onto the flatbed trailer in close approximation to their original configuration. Once placed, transporters secured the load utilizing chains, binders, and straps to ensure the display remained in place. Upon completion, the tractor-trailer was backed into the hangar, doors closed, and secured until Safety Day.

On the morning of 5 Jan 98, members of the 4 TRNS drove the tractor-trailer to the prescribed location on the flight line. The poignant display of aircraft wreckage undoubtedly led aircrews to think about safety as they taxied past. Very few people ever get the opportunity to see aircraft wreckage; and this display gave the entire wing a look at the very real, often unobserved results of an aircraft mishap.

The 4 TRNS took great pride in contributing to the 4 FW Safety Program during the holidays and will continue to deliver vital support to wing safety in the future.

SSgt Melvin D. Fluellen, 20 OSS, 20 FW, Shaw AFB SC

While working as watch supervisor in the Shaw AFB Radar Approach control, SSgt Fluellen observed a civilian aircraft deviate from its approach clearance and lose radio contact near the town of Camden SC. Sgt Fluellen immediately spearheaded procedures for a suspected downed aircraft. Upon coordination with the Camden-Woodward Field Airport, he intuitively went beyond required checklist items and personally contacted a local Civil Air Patrol member. Sgt Fluellen provided the Civil Air Patrol member an updated position to search for the downed and missing aircraft. His valorous call and accurate search area description led to the location of the aircraft, which saved hours of response time and aided in the recovery of two severely injured individuals. ■

SMSgt William A. Hodgson
HQ ACC/IGIL-S
Langley AFB VA

Weapon System

The recoding of the W84s loaded on missiles was accomplished just like clockwork

When you think about nuclear safety, are the Weapon System Safety Rules (WSSRs) the first things that come to mind? For most of us, our answer is "Probably not." Usually, people first think of the Personnel Reliability Program (PRP), two-person concept, security, or doing the task by the approved technical procedures — unless, of course, you have violated one of those safety rules. For instance, I remember when my maintenance team unknowingly violated one of the ground-launched cruise missile WSSRs.

Being stationed at a remote site and TDY to our duty location 3 weeks a month, we read technical data and trained daily. To keep from becoming bored with our practice drills, we trained on different operations during the week. Permissive Action Link (PAL) code and recode procedures in the technical order were reviewed and performed at least weekly. We knew our weapon system technical data and nuclear safety requirements by

heart — or so we thought. Boy, were we ever wrong!

During the PAL recode of our W84 nuclear warheads, my maintenance team opened the storage structures, performed the required safety checks, as well as connected and disconnected the PAL equipment for the USAFE PAL team. I assembled my crew, accomplished the pretask safety briefing, and got cleared into the structures. The recoding of the W84s loaded on missiles was accomplished just like clockwork — connect, perform operation, disconnect — right down the line. However, once we entered the structure with W84s packaged in H1408 shipping containers, things started to happen. I read the steps, and my crew proceeded to connect the PAL equipment cable connector to the weapon container cable ... instead of removing the container cover and connecting to the warhead connector. The operation was quick, safe, and easy. These last few weapons would be coded faster than the ones loaded in missiles. Everything went ac-

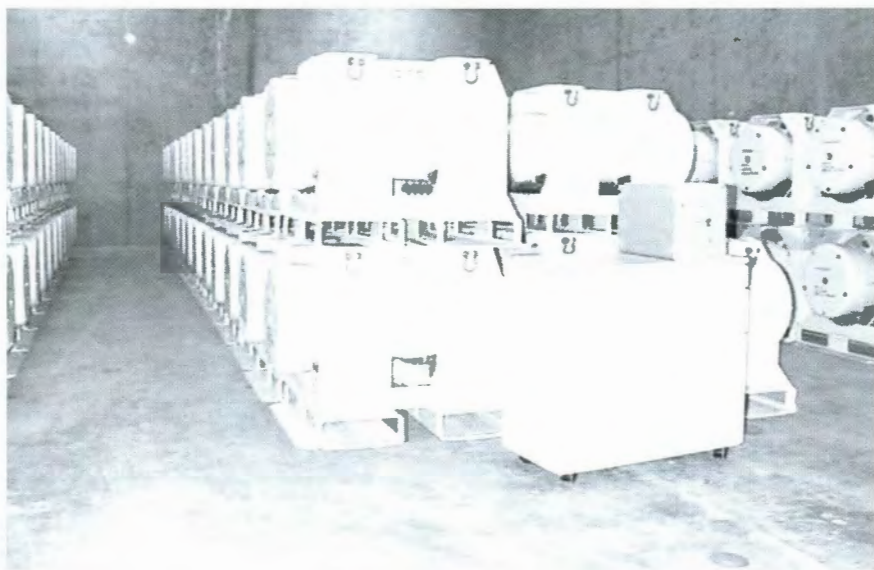
cording to plan. It had gone just the way we trained for the last 10 or so months. We had completed the recode operation on three W84s in the containers before a USAFE PAL team member asked if the procedure we were using was correct. "No problem," I said. "My tech data says to do it this way." I proceeded to show him the checked off steps in the technical order. He said, "There is other guidance which needs to be considered, and you have violated it."

He stopped the operation, and we headed to different phones and started making calls. I called my NCOIC, explained what happened, and told him not to worry. Violate the Weapons System Safety Rules? He had to be kidding! We're nuclear weapons technicians! We don't violate nuclear/missile/explosive safety rules or nuclear safety/security standards!

To my astonishment, the USAFE PAL team member was right. He had a copy of the WSSRs faxed to me, and we had violated the rule requiring the removal of

m Safety Rules

— connect, perform operation, disconnect — right down the line. However . . .



W84 nuclear warheads packaged in H1408 shipping containers placed in storage.

the container cover when performing PAL operations. I knew about the WSSRs but had not seen a copy since my nuclear surety training class.

HQ USAFE directed us to remove the container cables, place them under two-person control, and order three replacements. The cables would stay under two-person control until the next recode operation. I learned a very valu-

able lesson that day. The WSSRs are as important as our technical data and need to be followed. WSSRs apply even if there is no reference from the basic technical data to the procedural restrictions in the WSSRs.

The WSSRs play a major role in the Nuclear Surety Program and are mandatory in all nuclear weapon operations throughout the stockpile-to-target sequence. The

WSSRs decrease the possibility of a nuclear weapon or nuclear weapon system being exposed to an abnormal condition and prevent a nuclear yield or plutonium dispersal during a fire or accident. This is the reason they need to be followed. Granted — during an emergency, a commander may deviate from a specific rule. However, emergency situations do not constitute “blanket” authority to ignore approved weapon system safety rules or other nuclear surety procedures. Remember, WSSRs are not waived — even in time of war.

Here’s the bottom line — ensure the WSSRs are easily available, well understood, and closely observed at all times by your crew. The WSSRs play a major role in nuclear surety and allow for maximum safety consistent with operational requirements. Safety rules exist for good reasons, and our excellent nuclear surety record proves they are effective. So the next time you think about nuclear safety, don’t forget the WSSRs. ■



Rage and the

SSgt Steve Sinatra
1 FW/SEG
Langley AFB VA

Most of us handle a deadly weapon everyday. Can you guess what it is? It's not a handgun, and it's not a rifle. Give up? Well, it's our cars, trucks, and motorcycles. Tons of steel, rubber, and fiberglass cruising down the highway at high rates of speed can be deadly if not used safely and properly.

Since we spend a good amount of time in our vehicles everyday, it's fair to say that we have the potential for getting angry while operating these machines. The actions of other drivers, personal problems, or even pressure from the job can all contribute to the frustrations of driving. This expression of frustration, aggressive driving, is commonly referred to as "Road Rage."

To many of us, our vehicles

are our prized possessions — the most expensive or significant "toy" we have. This was the case with my friend John. John took great pride in detailing his '62 Corvette (yup, it was metallic cherry red with black leather interior). He spent hours scrubbing, waxing, and polishing each square millimeter of paint, chrome, and glass. The interior and the engine compartment as well were always immaculate. After inspecting his finished product, he always enjoyed taking his pride and joy out for a "look at my car" drive.

During one of his joy rides, as he adjusted the volume on his CD player, he started to accelerate and moved over into the fast (left) lane. Suddenly, another driver cut in front of him without using a turn signal or looking behind for other traffic. He seemed to be

totally unaware that he had almost sideswiped John's car. After taking a deep breath, John proceeded to drive straight ahead. Yes, he did get a little miffed; but he continued to stay on course.

While scanning the roadway, John observed the wreckage of an automobile accident across the median that was in the process of being cleared. At the same time, the driver who previously cut in front of him started to gain an interest in what was going on. Intent on doing some serious rubber-necking, he hit his brakes to get a better view of the situation on the other side of the road. This, in turn, caused John to also slam on his brakes — stopping only within inches of the other driver's rusted out 1974 Ford Maverick. John was nice the first



ne Machine

...John and the other driver continued to taunt each other in an effort to put the other to shame. John's attention had now shifted from "safe driving" to "pure revenge."

time, but now he was tempted to give this driver a piece of his mind. John raised his fist and shouted at him!!! Moving over to the right lane; the other driver looked back at John and returned the same gestures. The tension between them skyrocketed and was like a high pressure steam line about to burst.

As seconds went on, John and the other driver continued to taunt each other in an effort to put the other to shame. John's attention had now shifted from "safe driving" to "pure revenge." John rolled down his window and picked up the nearest small object in his car capable of inflicting damage — in this case, a CD jewel case. He took aim and fired, but missed the other car.

However, at this point John had another problem — he hadn't noticed that the traffic in front of him happened to be at a full and complete stop. Confronted with the situation before him, John immediately slammed on his brakes and stopped within inches of the vehicle in front of him. Then John realized something; in the midst of his rage, his inattentiveness could have brought an end to his life and possibly the lives of others as well.

John learned the following lessons in driving safety that day: (1) Don't take other drivers' mistakes personally, (2) be polite and courteous when driving (even if the other driver is not), and (3) if another driver challenges you,

take a deep breath and get out of the way — avoid all conflict if possible. Our carnal, human nature occasionally reacts in a hostile manner when people do something that makes us angry. Many times, this anger is brought to bear without thinking of the consequences. When you're tempted to get even with another driver, curb your road rage. If necessary, take time to stop, get out of your vehicle, and get your head on straight. It'll be worth it in the long run. Think of it this way — besides saving the awesome amount of labor and money you've put into your vehicle, you could also be saving your life and the lives of others as well. Drive cool; don't duel! ■

Children & AIR BAGS

It's as easy
as 1-2-3

1

Never put a rear-facing child seat (those used with infants) in the front seat of a car with an air bag.

2

Make sure all children are buckled up no matter where they sit. Unbuckled children can be hurt or killed by an air bag.

3

The rear seat is the safest place for children of any age to ride.